ITC Midwest LLC • 444 Cedar Street, Suite 1020 • St. Paul, MN 55101

March 22, 2013

Dr. Burl W. Haar
Executive Secretary
Minnesota Public Utilities Commission
121 7th Place East, Suite 350
St. Paul, MN 55101

RE: *In the Matter of the Application of ITC Midwest for a Certificate of Need for the Minnesota-Iowa 345 kV Transmission Project in Jackson, Martin, and Faribault Counties*, Docket No. ET6675/CN-12-1053

Dear Dr. Haar:

ITC Midwest hereby submits to the Minnesota Public Utilities Commission via e-filing its Application for a Certificate of Need for its Minnesota - Iowa 345 kV Transmission Project ("MN-IA Project").

In Minnesota, ITC Midwest proposes constructing a 345 kV line from its existing Lakefield Junction Substation in Jackson County, Minnesota to a new Huntley Substation, south of the existing Winnebago Junction Substation, in Faribault County. From Huntley, the 345 kV transmission line will run south to cross the Minnesota - Iowa border to interconnect with new 345 kV facilities proposed to be built in Iowa. The Minnesota portion of the MN-IA Project is approximately 75 miles long, and the Iowa portion approximately 25 miles long.

The Minnesota – Iowa 345 kV Transmission Project comprises a portion of a MVP Project 3, part of the portfolio of multi-value projects developed by the Midwest Independent Transmission System Operator, Inc. Other portions of MVP Project 3 will be constructed in Iowa by MidAmerican Energy Company.

MVP Project 3 will alleviate constraints on the transmission system in southern Minnesota and significantly increase the outlet capacity for new generation, specifically including wind generation, in southern Minnesota and northern Iowa. MVP Project 3 will also improve the reliability of the transmission system in southern Minnesota and the region. These capacity and reliability improvements will facilitate more efficient, cost-effective delivery of energy.

Copies of this application are being served on the persons on the attached distribution list as provided in Minnesota Rules 7849.0200, subp. 2. A short summary of our application is being distributed as required by Minnesota Rules 7829.2500, subp. 3.

A Route Permit application for the MN-IA Project will also be filed this month. (Docket No. ET6675/TL-12-1337). Pursuant to Minn. Stat. § 216B.243, subd. 4, ITC Midwest requests that the Certificate of Need and Route Permit proceedings be combined because it would be feasible, more efficient, and in the public interest.

If you have any questions regarding this filing, please call David Grover at (651) 222-1000, extension 2308. His email address is dgrover@itctransco.com. You can send mail to him at this address: ITC Midwest, 444 Cedar Street - Suite 1020, St. Paul, MN 55101.

Also enclosed with this letter is our Certificate of Need filing fee in accordance with Minnesota Rules 7849.0210. ITC Midwest looks forward to working with all interested parties in this proceeding. Our goal is to cooperatively develop the transmission facilities needed to reliably serve Minnesota and surrounding states.

Sincerely,

Douglas C. Collins
President
ITC Midwest LLC

5298576v1

STATE OF MINNESOTA
BEFORE THE
MINNESOTA 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 PROJECT IN JACKSON, MARTIN, AND FARIBAULT COUNTIES, MINNESOTA	MPUC Docket No. ET6675/CN-12-1053 **SUMMARY OF CERTIFICATE OF NEED FILING**

On March 22, 2013, ITC Midwest LLC filed an application with the Minnesota Public Utilities Commission for a Certificate of Need to construct its Minnesota - Iowa 345 kV Transmission Project. In Minnesota, ITC Midwest proposes to build a 345 kV line from its existing Lakefield Junction Substation in Jackson County, Minnesota to a new Huntley Substation, to be located south of the existing Winnebago Junction Substation, in Faribault County. From the Huntley Substation, the 345 kV transmission line will continue south across the Iowa border, near Elmore, Minnesota, and into Kossuth County to interconnect with new 345 kV facilities proposed to be built in Iowa. The Minnesota portion of the Minnesota – Iowa 345 kV Transmission Project is approximately 75 miles long, and the Iowa portion is approximately 25 miles long.

The Minnesota – Iowa 345 kV Transmission Project comprises a portion of MVP Project 3, part of the portfolio of multi-value projects ("MVP") proposed by the Midwest Independent Transmission System Operator, Inc. Other portions of MVP Project 3 will be constructed in Iowa by MidAmerican Energy Company.

MVP Project 3 will alleviate constraints of the transmission system in southern Minnesota and significantly increase the outlet capacity for new generation, specifically including wind generation, in southern Minnesota and northern Iowa. MVP Project 3 will also improve the reliability of the transmission system in southern Minnesota and the region. These capacity and reliability improvements will facilitate more efficient, cost-effective delivery of energy.

A copy of ITC Midwest's Application for a Certificate of Need for the Minnesota – Iowa 345 kV Project is available at the Commission's website:

http://www.puc.state.mn.us/PUC/index.html

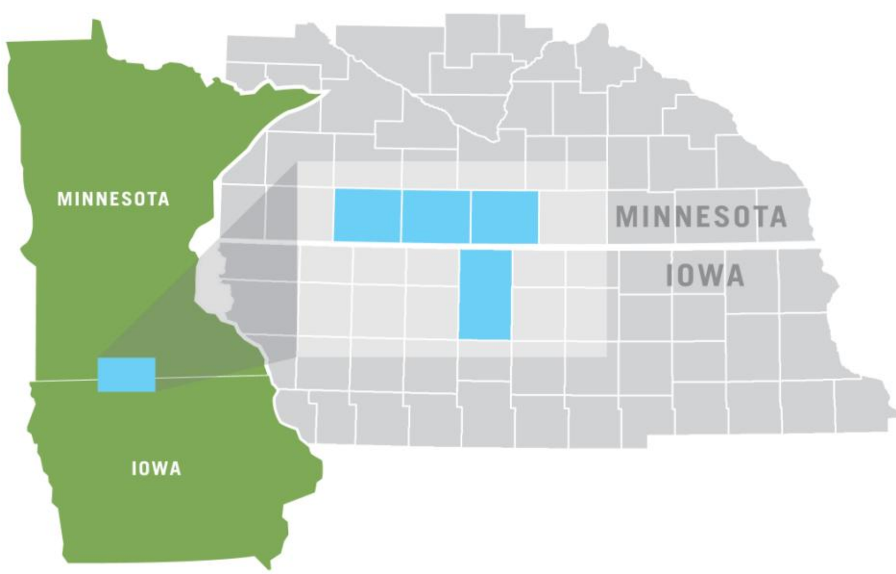
On the Commission's homepage, click on the "Search e-Dockets" link, and then enter the docket number "12-1053" in the docket look up box. A copy of this Application is also available on ITC Midwest's website:

www.itctransco.com/minnesota-iowa-project

ITC Midwest LLC

Application to the
Minnesota Public Utilities Commission
for a Certificate of Need

Minnesota – Iowa 345 kV
Transmission Project in Jackson, Martin, and Faribault Counties



Docket No. ET6675/CN-12-1053

March 22, 2013

This Page Intentionally Left Blank

Table of Contents

Page

Table of Contents

Page

Table of Contents

Page

Table of Contents

Page

Table of Contents

LIST OF APPENDICES

LIST OF FIGURES

LIST OF TABLES

LIST OF ACRONYMS

161 kV Rebuild Alternative	Fox Lake – Rutland – Winnebago Junction 161 kV Rebuild
AC	Alternating Current
ACSR	Aluminum Conductor Steel Reinforced
ACSS	Aluminum Conductor Steel Supported
AIMP	Agriculture Impact Mitigation Plan
ALP	Airport Layout Plan
Brookings Project	Brookings County – Hampton 345 kV Project
CARP	Cost Allocation and Regional Planning Group
Commission	Minnesota Public Utilities Commission
DC	Direct Current Lines
DIR	Dispatchable Intermittent Resources designation
DPP	Definitive Planning Phase
DRG	Dispersed Renewable Generation
EFP	Minnesota Department of Commerce, Energy Facility Permitting
EFs	Electric Fields
EHV	Extra High Voltage
EIS	Environmental Impact Statement
ELF	Extremely Low Frequency
EMF	Electromagnetic Fields

END	Endangered Species
EPAct 2005	Energy Policy Act of 2005
ERO	Electric Reliability Organization
FERC	Federal Energy Regulatory Commission
FPA	Federal Power Act
FAA	Federal Aviation Administration
GBCA	Grassland Bird Conservation Areas
ICNIRP	International Commission on Non-Ionizing Radiation Protection
IEEE	Institute of Electrical and Electronic Engineers
IPL	Interstate Power & Light Company
ITC Midwest	ITC Midwest LLC
ITC Midwest Project Planning Study	ITC Midwest's MVP Project 3 Planning Study
kV	Kilovolts
kV/m	Kilovolts per Meter
L Level Descriptors	Statistical Sound Levels
Lakefield to Border 161 kV line	161 kV transmission line connecting Lakefield Junction – Fox Lake – Rutland – Winnebago Junction – Faribault and continuing onto the Iowa Border
LGS	Lakefield Generating Station
LMP	Locational Marginal Pricing
LSE	Load-Serving Entity

MCBS	Minnesota County Biological Survey
MFs	Magnetic fields
mG	milliGauss
MidAmerican	MidAmerican Energy Company
Minnesota NCA	Southeast Minnesota, Northern Iowa, and Southwest Wisconsin Narrowly Constrained Area
MISO	Midwest Independent Transmission System Operator, Inc.
MN-IA Project	Minnesota – Iowa 345 kV Transmission Project
MnDNR	Minnesota Department of Natural Resources
MnDOT	Minnesota Department of Transportation
MPCA	Minnesota Pollution Control Agency
MRO	Midwest Reliability Organization
MTEP	Midwest ISO Transmission Expansion Plan
MVP	Multi-Value Projects
MW	Megawatts
MWh	Megawatt hours
NAC	Noise Area Classification
NERC	North American Electric Reliability Corporation
NESC	National Electric Safety Code
NHIS	Natural Heritage Information System
NLCD	USGS National Land Cover Database

NO_2	Nitrogen Dioxide
NOx	Oxides of Nitrogen
NPDES	National Pollution Discharge Elimination System
NRCS	Natural Resources Conservation Service
NREL	National Renewable Energy Laboratory
NRHP	National Register of Historic Places
NWI	National Wetland Inventory
NWRs	National Wildlife Refuges
OATT	Open Access Transmission Tariff
OMS	Organization of MISO States
PEM	Palustrine Emergent
PFO	Palustrine Forested
Project	Minnesota – Iowa 345 kV Transmission Project
PSS	Palustrine Shrub/Scrub
PUB	Palustrine Unconsolidated Bottom
PWI	Public Waters Inventory
Res	Regional Entities
RGOS	Regional Generator Outlet Study
RIM	Reinvest in Minnesota
RPS	State Renewable Portfolio Standards, including Renewable Energy Standards

RTO	Regional Transmission Organization
SF_6	Sulfur Hexafluoride
SHPO	Minnesota State Historic Preservation Office
SNA	Scientific and Natural Area
SPA	System Planning & Analysis Phase
SPC	Species Special Concern
SPCC	Spill Prevention, Control and Countermeasure
SPSs	Special Protection Systems
SWPPP	Stormwater Pollution Prevention Plan
TEMT	Open Access Transmission and Energy Markets Tariff
THR	Threatened Species
UMTDI	Upper Midwest Transmission Development Initiative
USACE	United States Army Corps of Engineers
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Service
WHO	World Health Organization
WMA	Wildlife Management Area
Working Group	Minnesota Interagency Working Group
WPA	Waterfowl Production Area

1.0 EXECUTIVE SUMMARY

1.1 INTRODUCTION

ITC Midwest LLC ("ITC Midwest"), a Michigan limited liability company, proposes to construct its Minnesota – Iowa 345 kilovolt ("kV") Transmission Project ("Project" or "MN-IA Project"), creating a new 345 kV transmission tie line between Minnesota and Iowa, that will enhance the regional electrical system and relieve a constrained 161 kV line in Minnesota. The Project will also contribute to a portfolio of regional projects with significant reliability, economic, and public policy benefits in Minnesota and the greater region. ITC Midwest submits this Application for a Certificate of Need for the Project pursuant to Minnesota Statutes Section 216B.243 and Minnesota Rules Chapter 7849.[1] In a companion filing, ITC Midwest is applying for a Route Permit for the Project (MPUC Docket No. ET6675/TL-12-1337). ITC Midwest requests that the Minnesota Public Utilities Commission ("Commission") order that the two proceedings be coordinated pursuant to Minnesota Statutes Section 216B.243, subdivision 4.

1.2 PROJECT DESCRIPTION

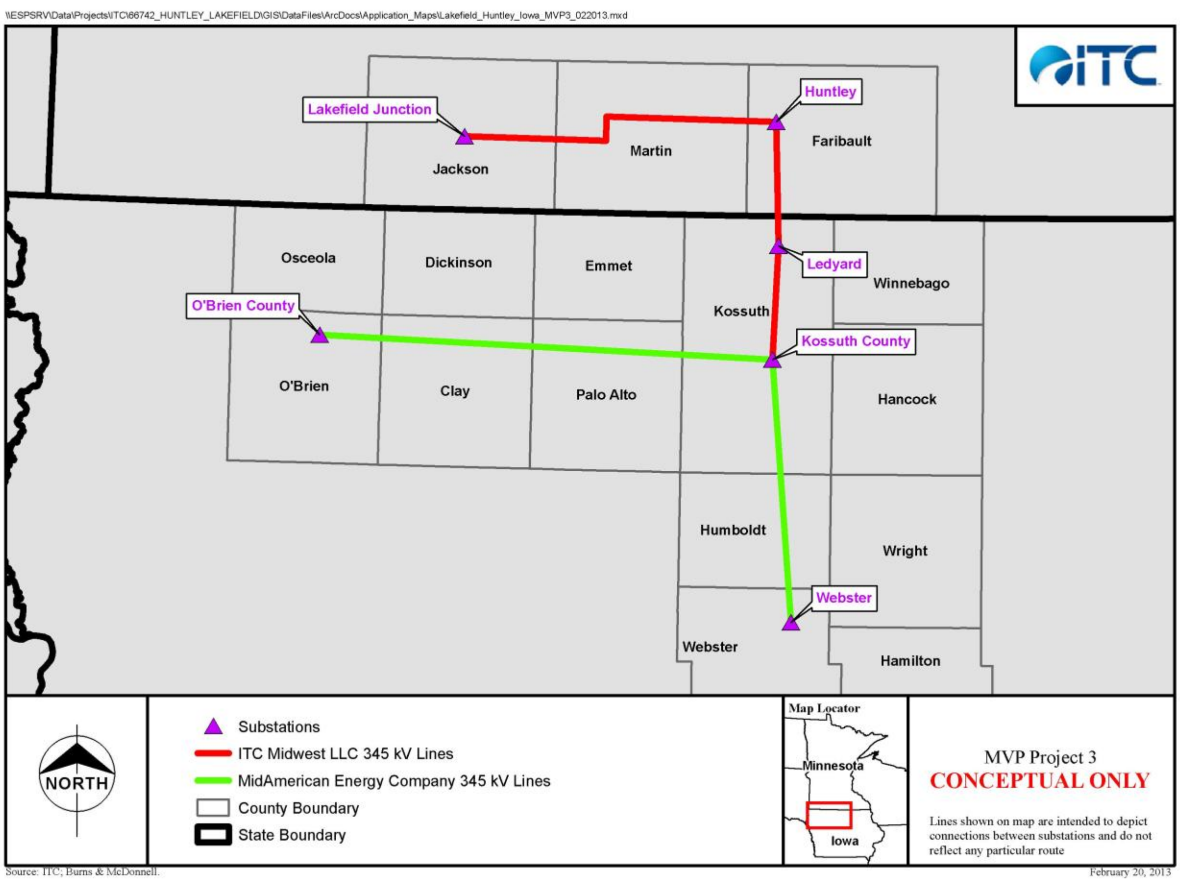
The MN-IA Project consists of a 345 kV transmission line and associated facilities located in Jackson, Martin, and Faribault counties in Minnesota, and Kossuth County in Iowa. In Minnesota, ITC Midwest's existing Lakefield Junction Substation will be expanded for a new 345 kV line to be constructed between the substation and a new Huntley Substation, proposed to be located south of the existing Winnebago Junction Substation. The Winnebago Junction Substation will be removed and the four existing 161 kV lines connecting to Winnebago Junction will be re-connected to the Huntley Substation. From Huntley, the 345 kV transmission line will run south to cross the Minnesota/Iowa border and connect first to a new ITC Midwest Ledyard Substation, and then to a new Kossuth County Substation owned by MidAmerican Energy Company ("MidAmerican"), both in Kossuth County, Iowa.

From the Kossuth County Substation, MidAmerican proposes to construct a 345 kV connection south to its existing Webster Substation, near Fort Dodge, Iowa. MidAmerican also proposes to construct a 345 kV line running west from

[1] A Completeness Checklist identifying the informational requirements for a Certificate of Need Application and where those requirements are addressed in this Application is included in **Appendix A**.

the Kossuth County Substation to its new O'Brien Substation, near Sanborn, Iowa. ITC Midwest's Project and MidAmerican's proposed 345 kV facilities are part of the Multi-Value Projects ("MVP") Portfolio of the Midwest Independent Transmission System Operator, Inc. ("MISO"), and are collectively called "MVP Project 3." In this application, the following terms will be used to describe portions of MVP Project 3. MVP Project 3 refers to all facilities included in MVP Project 3 shown in **Figure 1** below. The "MN-IA Project" or "Project" refer to all facilities that ITC Midwest will construct and own in Minnesota and Iowa. The "Minnesota portion of the Project" refers to those portions of the MN-IA Project to be constructed in Minnesota.

Figure 1. MVP Project 3



ITC Midwest will construct and own the 345 kV transmission line from the Lakefield Junction Substation in Minnesota to the Kossuth County Substation in Iowa, as well as the Lakefield Junction, Huntley, and Ledyard substations.

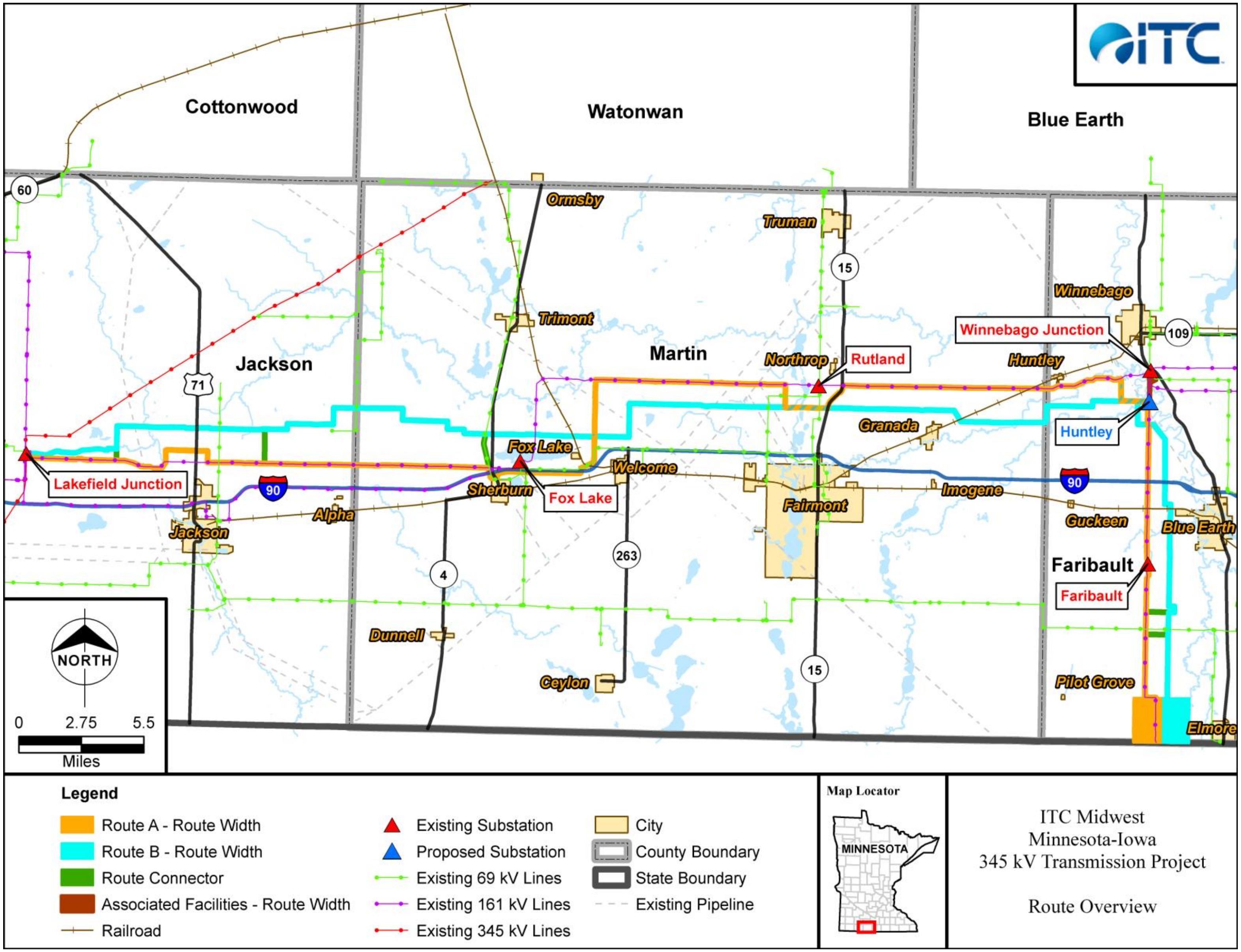
MidAmerican will construct and own all other facilities in Iowa. All Iowa facilities must be approved by the Iowa Utilities Board.

ITC Midwest will also construct and own all 161 kV facilities that will be relocated to connect at the Huntley Substation, with the exception of the N.B.E.I. – Winnebago Junction 161 kV transmission line. That line is owned by Northern States Power Company, doing business as Xcel Energy. ITC Midwest will construct the N.B.E.I. line on common structures and Xcel Energy will own the conductor and insulators between Winnebago Junction and Huntley. None of the Project's 161 kV associated facilities requires a Certificate of Need because no new 161 kV segment is longer than 10 miles or crosses a state border.[2]

An overview map of the two routes ITC Midwest is proposing is shown in **Figure 2**. More detailed maps of the routes can be found in ITC Midwest's Route Permit Application for the Project at Appendix D (Route A and Route B) and Appendix F (associated facilities).

[2] See Minn. Stat. § 216B.243, subd. 2 (requiring a certificate of need for a large energy facility) and Minn. Stat. § 216B.2421, subd. 2(1) (defining a "large energy facility" as, among other things, a transmission line with a capacity of 100 kV that (i) has more than ten miles of its length in Minnesota; or (ii) crosses a state line).

Figure 2. Proposed Routes for the Minnesota Portion of the MN-IA Project



Route A primarily follows the right-of-way of an existing ITC Midwest 161 kV transmission line. The existing 161 kV transmission line currently has terminations in Minnesota as follows: Lakefield Junction Substation – Fox Lake Substation – Rutland Substation – Winnebago Junction Substation – Faribault Substation. From the Faribault Substation, the 161 kV line continues to the Iowa border and terminates at the Winnco Substation in Kossuth County, Iowa. This ITC Midwest 161 kV transmission line will be referred to in this Application as the "Lakefield to Border 161 kV line". Route B primarily runs on new transmission right-of-way along existing road rights-of-way and agricultural field lines from the Lakefield Junction Substation to the Huntley Substation and then down to the Iowa border, a route which is separated from Route A by approximately two miles.

As required by the routing rules, ITC Midwest has stated a preference in its Route Permit Application for Route A. This is because Route A makes the greatest use of existing transmission right-of-way, has fewer new impacts to agricultural production lands, and minimizes impacts to the natural and cultural environment.

The proposed configuration along Route A is a 345 kV/161 kV line design, with the new 345 kV line largely co-located with the existing Lakefield Junction to Border 161 kV line, with the exception of a few locations where co-location is not feasible. ITC Midwest proposes to construct the entire length of Route A to 345 kV/161 kV standards, even where Route A is proposed to be co-located with a 69 kV transmission line or where no co-location is proposed.

If Route B were selected, the Project would not be co-located with the Lakefield Junction to Border 161 kV line except for a short portion of the 161 kV line that must be relocated from the Winnebago Junction Substation to the Huntley Substation. For Route B, ITC Midwest proposes a double circuit capable 345 kV/161 kV line configuration to accommodate future expansion. The 345 kV side of the structures would be used for the Project, while the 161 kV side would be available for a new 161 kV line in the area when conditions warrant. Only the 345 kV arms would be installed initially. The 161 kV arms would not be added until such time as a 161 kV line was proposed to be located on the structures and had received all required regulatory approvals. The Lakefield to Border 161 kV line would remain in its current location except for a short portion that must be relocated to the Huntley Substation.

1.3 PROJECT LENGTH, TIMING, AND COST

The Minnesota portion of the Project - from the Lakefield Junction Substation to the Iowa border - is estimated to be approximately 75 miles long. The right-of-way for the 345 kV line would be 200 feet wide, with spans between structures of approximately 600 to 1,000 feet, and an average span of approximately 900 feet. The new right-of-way needed for the 161 kV transmission lines relocated from the Winnebago Junction Substation to the Huntley Substation, other than the area where the Rutland – Winnebago Junction line will be co-located with the 345 kV Project, will be 150 feet. Where ITC Midwest proposes to locate multiple 161 kV rights-of-way in parallel between the Winnebago Junction and Huntley substation sites, a right-of-way up to 250 feet will be required. The 161 kV transmission lines will be constructed with spans between structures of approximately 400 to 700 feet. The Iowa portion of the Project, from the Iowa border to the Kossuth County Substation, is estimated to be approximately 25 miles long, and is also proposed to be constructed using 345 kV/161 kV design. The MidAmerican portions of MVP Project 3 are approximately 120 miles long.

ITC Midwest has estimated costs for the MN-IA Project. The estimates, which are subject to revision based on the final route and design of the line, include (i) expansion of the Lakefield Junction Substation and construction of the new Huntley Substation; (ii) reconfiguration of four existing 161 kV lines and three 69 kV lines to terminate at the Huntley Substation; and (iii) decommissioning/removal of the Winnebago Junction Substation.

The estimated cost for the Minnesota portion of the MN-IA Project using Route A is approximately $206 million, plus/minus 30 percent. The estimated cost for the Project using Route B is $194 million plus/minus 30 percent. The cost for Route B does not include the cost to install the 161 kV arms and conductor at some time in the future if Route B were selected for the Minnesota portion of the Project.

The projected in-service date for the Project is mid-year 2017. The first segment of the Minnesota portion of the Project, connecting the Lakefield Junction and Huntley substations, is expected to be completed by early 2017. The second segment of the Project, from the Huntley Substation to the Iowa border, is expected to be completed by mid-year 2017. The Iowa Border to Kossuth County Segment is estimated to cost $77 million, plus/minus 30 percent. The total estimated cost for ITC Midwest's MN-IA Project, based on the two routes proposed in the Route Permit application ranges from $271 to $283 million, plus/minus 30 percent.

The final length, cost, and in-service date for the Project are dependent on various factors. These include: the final route selected; the amount of double-circuiting required; permitting delays; changes in component costs, including steel pricing; and various other contingencies inherent in estimating costs for a major infrastructure project several years in advance of construction.

Based on an estimated MN-IA Project cost of $283 million and the MISO cost allocation methodologies, the estimated first year Project revenue requirement to be collected from Minnesota energy customers would be approximately $7 million for the ITC Midwest portion of MVP Project 3. **Appendix E.**

1.4 NEED FOR THE PROJECT

MVP Project 3 is needed to remove Minnesota and regional transmission system constraints which currently limit the ability to reliably deliver generation throughout the MISO footprint. In Minnesota, MVP Project 3 will alleviate constraints on the transmission system in southern Minnesota, including the Fox Lake – Rutland -- Winnebago 161 kV constraint, and result in three benefits. First, MVP Project 3 will significantly increase the transmission system's ability to reliably transfer generation, specifically including wind generation, throughout the MISO footprint, including Minnesota. Right now, available wind energy from existing wind generators in southwest Minnesota cannot always be delivered to load due to the existing system's constrained capacity. MVP Project 3 will enable this existing generation to be delivered while also adding an additional 1,000 megawatts ("MW") of capacity in off-peak times and 2,500 MW of capacity in peak times.

Second, MVP Project 3 will improve system reliability by relieving heavy loading on the existing 161 kV system in southern Minnesota. In southern Minnesota, MVP Project 3 will eliminate reliance on complicated system operating procedures, called Special Protection Systems ("SPSs"). These operational procedures have been necessary to enable new generators, including gas and wind generators to interconnect to the grid in the absence of needed transmission upgrades. The SPSs prevent line overloading in the case of critical contingencies.

Third, MVP Project 3 and MVP Project 4 will result in lower cost energy for Minnesota consumers. To calculate economic benefits to Minnesota, ITC Midwest had a PROMOD analysis conducted of the impact of MVP Projects 3 and 4 on the locational marginal prices ("LMP") for energy in the state. Using inputs from MISO's MVP Portfolio analysis, the PROMOD model calculated that construction of these two MVP projects will cause the average Minnesota LMP to drop by $0.61 and $0.70 per megawatt hour ("MWh") in 2021, depending on studied market conditions. In 2026, the reductions are $0.71 and $0.090 per MWh depending on market conditions. For Minnesota, these LMP reductions result in a reduction in annual LMP payments of between $48.3 million to $76.6 million across the cases evaluated. The details of this analysis are included in **Appendix M**. ITC Midwest is continuing to evaluate the economic benefits of these MVP projects.

1.5 ALTERNATIVES TO THE PROJECT

ITC Midwest evaluated several alternatives to confirm that MVP Project 3 is the best solution to meet the identified needs in Minnesota and within the MISO footprint. These alternatives included generation, a higher voltage line, and a new 345 kV line at the Lakefield Junction Substation that terminated at three different eastern end-points: 1) the Rutland Substation immediately north of Fairmont, Minnesota; 2) the Adams Substation, southeast of Austin, Minnesota; and 3) Mitchell County Substation northeast of Osage, Iowa. ITC Midwest also analyzed whether re-conductoring the existing 161 kV line between the Lakefield Junction and Winnebago Junction substations with higher capacity 161 kV conductor could address the needs. ITC Midwest determined that none of the alternatives performs as well as the proposed Project for Minnesota.

ITC Midwest and MISO also evaluated alternatives to address the identified regional needs and determined that MVP Project 3 is the best performing alternative to provide the transmission capacity necessary for the region.

1.6 POTENTIAL ENVIRONMENTAL EFFECTS

Chapter 9 of this Application is an inventory of the natural environment and land use features in the Project Study Area, which is shown in **Figure 24** in that chapter. The Study Area consists primarily of agricultural land. It is not anticipated that any homes or businesses would be displaced by the Project.

The right-of-way for the Project totals approximately 1,770 acres of land in Minnesota whether Route A or Route B is selected (200 feet wide for the 345 kV line, and 150 feet wide for each 161 kV line to be relocated from the Winnebago Junction Substation to the Huntley Substation—although where 161 kV lines are constructed in parallel, a total right-of-way up to 250 feet will be required). Route A's right-of-way includes at 540 acres of existing right-of-way. Another 2.2 acres of land will be added to the fenced area of the expanded Lakefield Junction Substation. The fenced area for the new Huntley Substation will be approximately nine acres. At the proposed Huntley Substation site, ITC Midwest owns 40 acres. At the Lakefield Junction Substation site, a minimum of approximately three acres of additional land will be needed for a buffer and for transmission line connections.

The major lakes and rivers in the Project Study Area include Fox Lake, the Chain of Lakes (*i.e.*, a series of lakes located in a north-south line in Martin County, including Lake Charlotte), the Des Moines River, and the Blue Earth River. ITC Midwest's proposed routes do not cross Fox Lake or Lake Charlotte. Where crossing of the Des Moines River and the Blue Earth River is required, appropriate mitigation measures will be determined in consultation with state and federal agencies to minimize the Project's impacts.

No other significant environmental conditions or land use issues have been identified that would prevent construction of the Project. With appropriate construction practices, all environmental impacts can be properly mitigated.

1.7 PUBLIC INVOLVEMENT

The public can review this Application and submit comments on the Project to the Commission. A copy of the Application is available at the Commission's website:

http://www.puc.state.mn.us/PUC/index.html

On the Commission's homepage, click on the "Search e-Dockets" link, and then enter the docket number "12-1053" in the docket look up box. A copy of this Application is also available on ITC Midwest's website:

www.itctransco.com/minnesota-iowa-project

In addition to determining whether the Project should be granted a Certificate of Need, the Commission must also issue a Route Permit to the Project before it can be constructed. Once filed with the Commission, the Project's Route Permit Application will also be available on the Commission website by searching docket number "12-1337" and on the ITC Midwest website.

ITC Midwest held open houses in September 2012 to provide information to members of the public who live and work in the Project area. As part of the Certificate of Need proceedings, the Commission will also hold one or more public hearings in the Project area to answer questions about the Project.

Comments from all interested persons, both oral and written, will be solicited on the Project's necessity, route, and the environmental impact.

The Minnesota Department of Commerce Energy Facility Permitting ("EFP") is responsible for conducting environmental review of the Project. The Certificate of Need rules require EFP to prepare an Environmental Report for the Certificate of Need proceeding. EFP will also prepare an Environmental Impact Statement ("EIS") for the Route Permit proceeding. EFP may elect to combine these two documents and issue one document, an EIS, which satisfies the environmental review requirements of both the Certificate of Need and Route Permit proceedings. In the course of its environmental review, EFP will conduct one or more public meetings in the Project area where interested persons may ask questions, present comments, and suggest alternatives and possible impacts to be evaluated in the EFP's environmental review. Interested persons will also be able to submit written comments to the EFP regarding the Project.

Persons interested in receiving notices and other announcements about these meetings and hearings can register their names and addresses with the Commission. Persons can register electronically at:

http://energyfacilities.puc.state.mn.us/mailinglist.html.

The Minnesota regulatory staff members listed below can also address questions about the regulatory review process for the Project:

Minnesota Public Utilities Commission
Scott Ek
121 7th Place East, Suite 350
St. Paul, Minnesota 55101
651.201.2255
800.657.3782
scott.ek@state.mn.us

Minnesota Department of Commerce
Ray Kirsch, Environmental Review Manager
85 7th Place East, Suite 500
St. Paul, Minnesota 55101
651.296.7588
800.657.3794
raymond.kirsch@state.mn.us

1.8 PROJECT MEETS CERTIFICATE OF NEED CRITERIA

The Commission must apply specific criteria to determine whether a proposed high voltage transmission line is needed. Those criteria are found in Section

216B.243 and the rules promulgated by the Commission.[3] Section 216B.243 requires the Commission to consider conservation, state energy needs, benefits of the project, alternatives, and compliance with policies of state, federal and local governmental entities. For a high voltage transmission line, the Commission must also consider "the benefits of enhanced regional reliability, access, or deliverability to the extent these factors improve the robustness of the transmission system in Minnesota or lowers the cost of electricity for Minnesotans." Minn. Stat. § 216B.243, subd. 3(9).

Pursuant to Minnesota Rule 7849.0120, an applicant for a Certificate of Need must show that: (i) the probable result of denying the request would have an adverse effect on the future adequacy and reliability of the system or efficiency of energy supply to the people of Minnesota and neighboring states; (ii) a more reasonable and prudent alternative has not been demonstrated; (iii) the proposed facility will provide benefits to society compatible with protecting the environment; and (iv) the Project will comply with all applicable standards and regulations.

This Application demonstrates that the Project satisfies these four criteria:

A. 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:

- MVP Project 3 will increase the transfer capacity of the transmission system in southern Minnesota, enabling transfer of existing wind generation that is currently being curtailed, and supporting development of new wind generation to serve Minnesotans and the region. It will also facilitate compliance with State Renewable Portfolio Standards or State Renewable Energy Standards ("RPS") throughout the MISO footprint.

- MVP Project 3 will remove the Fox Lake – Rutland – Winnebago 161 kV constraint on the 161 kV transmission system serving southwest Minnesota.

[3] There are additional statutory requirements that also must be met relating to renewable energy, distributed generation, and community-based energy projects. A table identifying these statutory requirements and where they are addressed in this Application is included in **Appendix A.**

- MVP Project 3 will create a more robust 345 kV system connecting Minnesota and Iowa.

- MVP Project 3 will enhance the operational flexibility and reliability of the electrical system in the region, including southwest Minnesota where it will eliminate the need for two SPSs.

- In Minnesota, the construction of MVP Project 3 and MVP Project 4 will lower the cost of electricity for Minnesotans by reducing wholesale energy prices.

- If MVP Project 3 is not built, the generation outlet capacity of the transmission system in southern Minnesota will continue to be inadequate to handle existing renewable generation, and new generation needed to meet regional RPS standards will be hampered. SPSs will also have to remain in place, and energy prices will not be reduced.

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

- ITC Midwest has evaluated generation and transmission alternatives and the analysis shows that MVP Project 3 is the best performing alternative.

C. A preponderance of record evidence shows 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.

- No land use or environmental factor would prevent the proposed facilities from being constructed and operated in a manner consistent with Minnesota's strong environmental and natural resource laws.

- MVP Project 3 will facilitate economic development in southwest Minnesota by supporting new generation.

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.

- All rules and regulation applicable to the construction and operation of the Project have been identified by ITC Midwest, and ITC Midwest can comply with all of them.

1.9 APPLICATION ORGANIZATION

The remaining eight chapters of the Application are organized as follows:

Chapter 2 – Project Description and Regulatory Review

Chapter 3 – Transmission Planning

Chapter 4 – Description of Need

Chapter 5 – Need Analysis

Chapter 6 – Alternatives Analysis

Chapter 7 – Construction, Restoration, and Maintenance

Chapter 8 – Operating Characteristics of Transmission Lines

Chapter 9 – Environmental Information

1.10 APPLICANT'S REQUEST AND CONTACT INFORMATION

ITC Midwest requests that the Commission find this Application complete and, upon concluding its review of the proposal, grant a Certificate of Need for the MN-IA Project. All correspondence relating to this Application should be directed to:

David Grover
Manager, Regulatory Strategy
ITC Midwest LLC
444 Cedar Street, Suite 1020
St. Paul, MN 55101
dgrover@itctransco.com
651-222-1000

Lisa Agrimonti
Briggs and Morgan, PA
2200 IDS Center
80 South Eighth Street
Minneapolis, MN 55402
lagrimonti@briggs.com
612-977-8400

This Page Intentionally Left Blank

2.0 PROJECT DESCRIPTION AND REGULATORY REVIEW

2.1 INTRODUCTION

ITC Midwest is applying for a Certificate of Need to construct the MN-IA Project. In Minnesota, ITC Midwest proposes to construct approximately 75 miles of new 345 kV facilities from the Lakefield Junction Substation to a new Huntley Substation, south of its existing Winnebago Junction Substation, to the Iowa border near Elmore, Minnesota. The Project also includes connecting the four existing 161 kV lines that presently terminate at the Winnebago Junction Substation to the new Huntley Substation, along with three existing 69 kV lines that will be constructed to 161 kV standards. All of the 161 kV and 69 kV equipment at the Winnebago Junction Substation will also be moved to the Huntley Substation. At the Iowa border, the 345 kV line will continue south to connect to a new ITC Midwest Ledyard Substation located near Ledyard, Iowa, and then to a new Kossuth County Substation to be constructed and owned by MidAmerican near Burt, Iowa.

In Iowa, MidAmerican will build a 345 kV line south from the Kossuth County Substation to the existing Webster Substation, near Fort Dodge, Iowa. MidAmerican will also construct a 345 kV line that runs west from the Kossuth County Substation to a new O'Brien Substation, near Sanborn, Iowa.

The Minnesota portion of the Project requires ITC Midwest to obtain a Certificate of Need and Route Permit from the Commission. The Iowa portion of the Project requires ITC Midwest and MidAmerican to obtain Electric Transmission Franchises from the Iowa Utilities Board.

2.2 PROJECT OWNERSHIP

ITC Midwest is a transmission-only utility that owns approximately 6,600 circuit miles of transmission lines and more than 200 transmission substations in Iowa, Minnesota, Illinois, and Missouri. ITC Midwest is a "transmission company" pursuant to Minnesota Statutes Section 216B.02, subd. 10. ITC Midwest is a public utility under Section 203 of the Federal Power Act ("FPA"). As such, ITC Midwest is subject to rate and other regulatory oversight by the Federal Energy Regulatory Commission ("FERC"). ITC Midwest is a transmission-owning member of MISO, with headquarters in Cedar Rapids, Iowa, and operating locations in Dubuque, Iowa City, and Perry, Iowa; and Albert Lea and Lakefield, Minnesota. In December 2007, ITC Midwest acquired the electric transmission assets previously owned by Alliant Energy's subsidiary, Interstate Power &

Light Company ("IPL") (MPUC Docket No. E001/PA-07-540). ITC Midwest connects more than 700 communities over almost 54,000 square miles in Iowa, southern Minnesota, and northwestern Illinois. **Figure 8** in **Section 4.1** of this application is a map of ITC Midwest's transmission system in Minnesota and Iowa.

ITC Midwest is not a retail load serving entity, however, and does not have retail rate tariffs on file with the Commission. It neither owns generation nor buys capacity and energy to serve electric service end-users. Because of this, ITC Midwest does not engage in the energy power planning that retail load serving utilities engage in to ensure they have the right resources available at the right times to serve the power needs of their customers.[4]

ITC Midwest will construct and own the Minnesota portion of the Project requiring a Certificate of Need. ITC Midwest will also be relocating certain 161 kV lines from the Winnebago Junction Substation to interconnect with the new Huntley Substation. ITC Midwest will construct all these facilities. ITC Midwest will own all the facilities that are part of the Minnesota Portion of the Project, with the exception of the circuit of the Xcel Energy N.B.E.I.-Winnebago Junction 161 kV transmission line, which will be re-routed to terminate at the Huntley Substation on structures to be owned by ITC Midwest.

ITC Midwest will also construct and own the Project facilities from the Iowa border to the Kossuth County Substation. MidAmerican will construct and own the Kossuth County Substation and all other MVP Project 3 facilities in Iowa.

2.3 PROJECT COMPONENTS

2.3.1 345 kV Transmission Line

A high voltage transmission line consists of three electrical paths known as phases. Each phase (conductor) is installed at the end of an insulator. Insulators are attached to support structures that are available in different configurations. Design constraints, voltage of the transmission line, and other considerations determine what structure configuration is used for the construction of any portion of a high voltage transmission line.

[4] For this reason, ITC Midwest does not maintain the information sought in Minnesota Rule 7849.0280 A (power planning programs) and H (monthly adjusted net demand/capability data, and the correlation of that data with planned maintenance outages).

Each phase of a high voltage transmission line consists of one or more conductors. When more than one conductor is used to make up a phase, it is referred to as a "bundled" conductor. Conductors are metal cables with an inner core usually consisting of multiple steel strands with multiple aluminum strands wound around the steel strands. Shield wires are typically less than one inch in diameter and are strung above the electrical phases to prevent damage from lightning strikes. The shield wire may also include fiber optic cable to provide a communication path between substations.

A single circuit transmission line carries three phases (conductors) and shield wire(s). A double circuit transmission line carries six phases (conductors) and two shield wires. Structure variations can include single pole structures, H-Frame structures, and other multiple pole structures. Transmission lines are constructed within a right-of-way, the width of which is dependent on the voltage of the high voltage transmission line, the structure type selected for its construction, and vegetation management requirements.

ITC Midwest proposes to primarily use single pole, weathering or galvanized steel double-circuit 345 kV/161 kV structures for the Project on a 200-foot right-of-way. The single pole structures would be placed using spans that range between approximately 600 to 1,000 feet, with an average span of approximately 900 feet. Single pole structures are typically installed on a concrete foundation. Where the 345 kV line is double-circuited with the Lakefield to Border 161 kV line or other transmission facilities, ITC Midwest proposes to use double-circuit structures with six conductors installed. Specialty structures may also be used in areas of environmental sensitivity or where construction conditions require their use. If a route not primarily following the existing Lakefield to Border 161 kV line is not selected by the Commission for the Minnesota Portion of the Project, ITC Midwest proposes to construct double-circuit 345 kV/161 kV capable facilities, but with only the 345 kV arms and conductors installed. The other side would be fitted with 161 kV arms, insulators, and conductor when future conditions warrant addition of a 161 kV line.

Each phase will consist of two twisted pair Drake (2-795) Aluminum Conductor Steel Reinforced ("ACSR") cables, or cables of comparable capacity in a bundled configuration. Each conductor is approximately 1.8 inches in diameter (795 kcmil). Each ACSR cable consists of a core of seven steel conductors surrounded by 26 aluminum strands. ITC Midwest proposes to use the same conductor and bundled configuration for all the 345 kV sections of the transmission line in

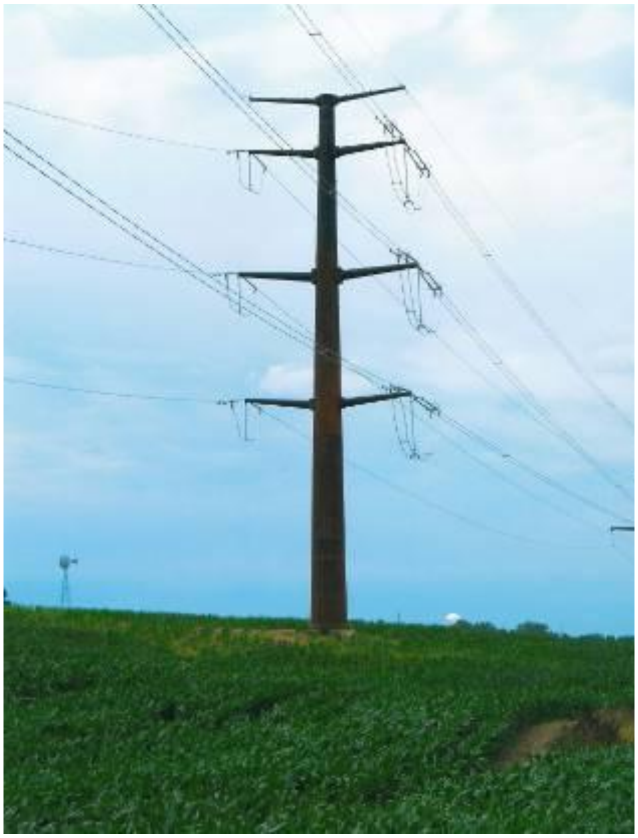
Minnesota and in Iowa. The 345 kV twisted pair conductors (two sets of three conductors) will have a capacity equivalent to 3,000 amps.

This conductor is ITC Midwest's standard conductor in areas where there is wind generation, and is preferred for the following reasons:

- Anti-galloping characteristics - The design of two twisted pair conductors in a bundled configuration reduces ice buildup on the conductor, therefore reducing galloping during windy and icy conditions.
- Higher ampacity ratings - bundled conductors. increase the ampacity capability by increasing the surface area of the conductor which provides greater dissipation of heat.
- Vibration Resistance – twisted pair conductors reduce low frequency vibration (Aeolian vibration) produced at relatively low wind conditions, thereby increasing service life of the conductor.

Figure 3 provides sample photos of the double-circuit 345 kV/161 kV structures that ITC Midwest will primarily use for the Project.

Figure 3. 345 kV/161 kV Double-Circuit Sample Photos



345 kV/161 kV Double-Circuit

345 kV/161 kV Low Profile Double-Circuit

Technical drawings of all the 345 kV/161 kV structure types that are proposed to be used for the Project are included in **Appendix D-1**.

ITC Midwest will design the Project to meet or surpass all applicable local and State building codes and the National Electric Safety Code ("NESC") requirements, and additional standards developed by ITC Midwest. Appropriate safety protocols, procedures, and standards will be followed during design and construction, and after installation.

2.3.2 Associated Facilities

<u>The 161 kV Transmission Lines</u>

The Rutland – Winnebago Junction portion of the existing Lakefield Junction to Border 161 kV line, three other 161 kV lines that currently terminate at the Winnebago Junction Substation (two of which are owned by ITC Midwest and the other by Xcel Energy), and three 69 kV transmission lines (proposed to be constructed to 161 kV standards) will need to be reconfigured to terminate at the new Huntley Substation as part of the Project. **Figure 4** shows the current locations of the existing 161 kV and 69 kV lines connecting at the Winnebago Junction Substation. The four 161 kV transmission lines that would be reconfigured are:

a. Rutland – Winnebago Junction;

b. N.B.E.I. – Winnebago Junction (owned by Xcel Energy);

c. Faribault – Winnebago Junction; and

d. Freeborn – Winnebago Junction.

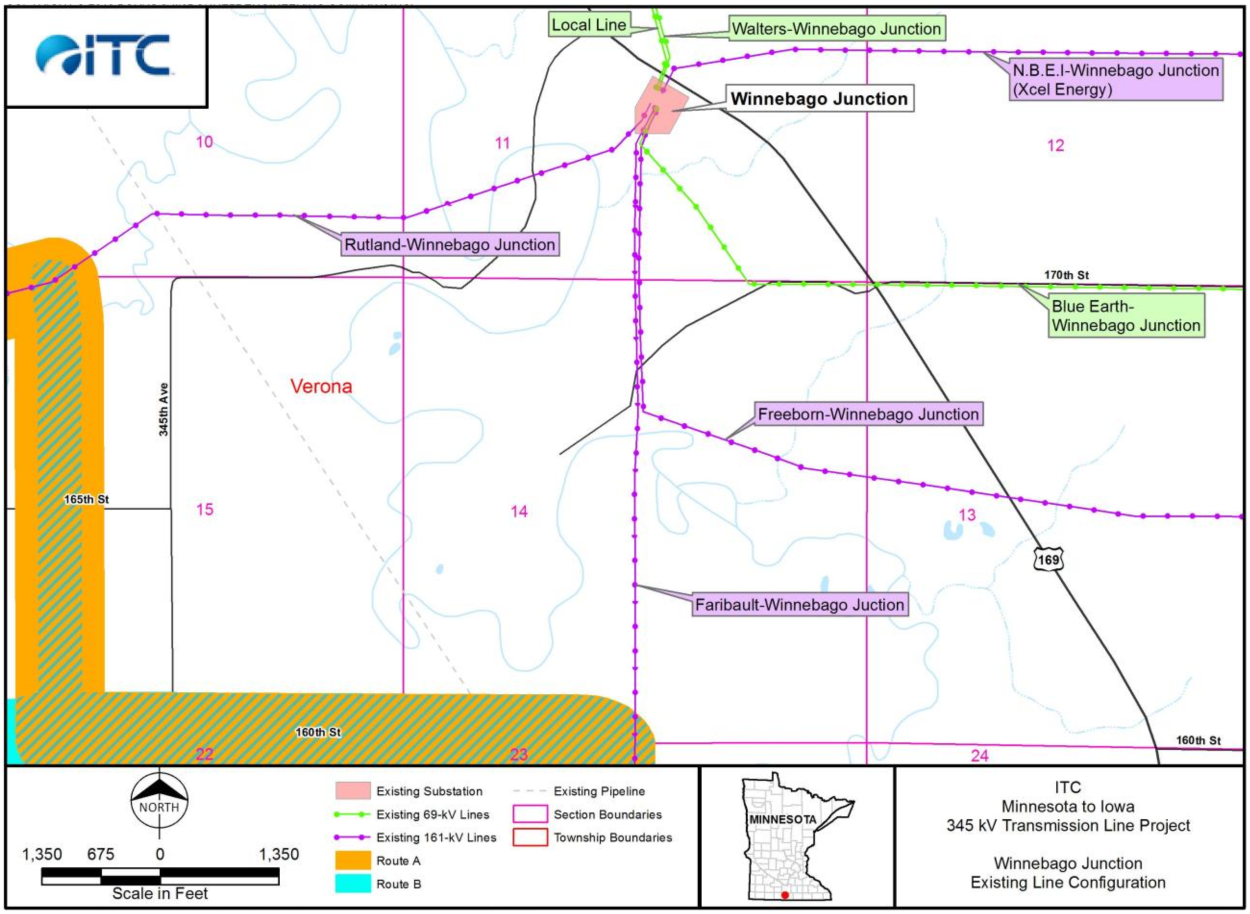
The three 69 kV transmission lines that would be reconfigured and constructed to 161 kV standards as part of the Project are:

a. Winnebago Junction – Winnebago Local;

b. Blue Earth – Winnebago Junction; and

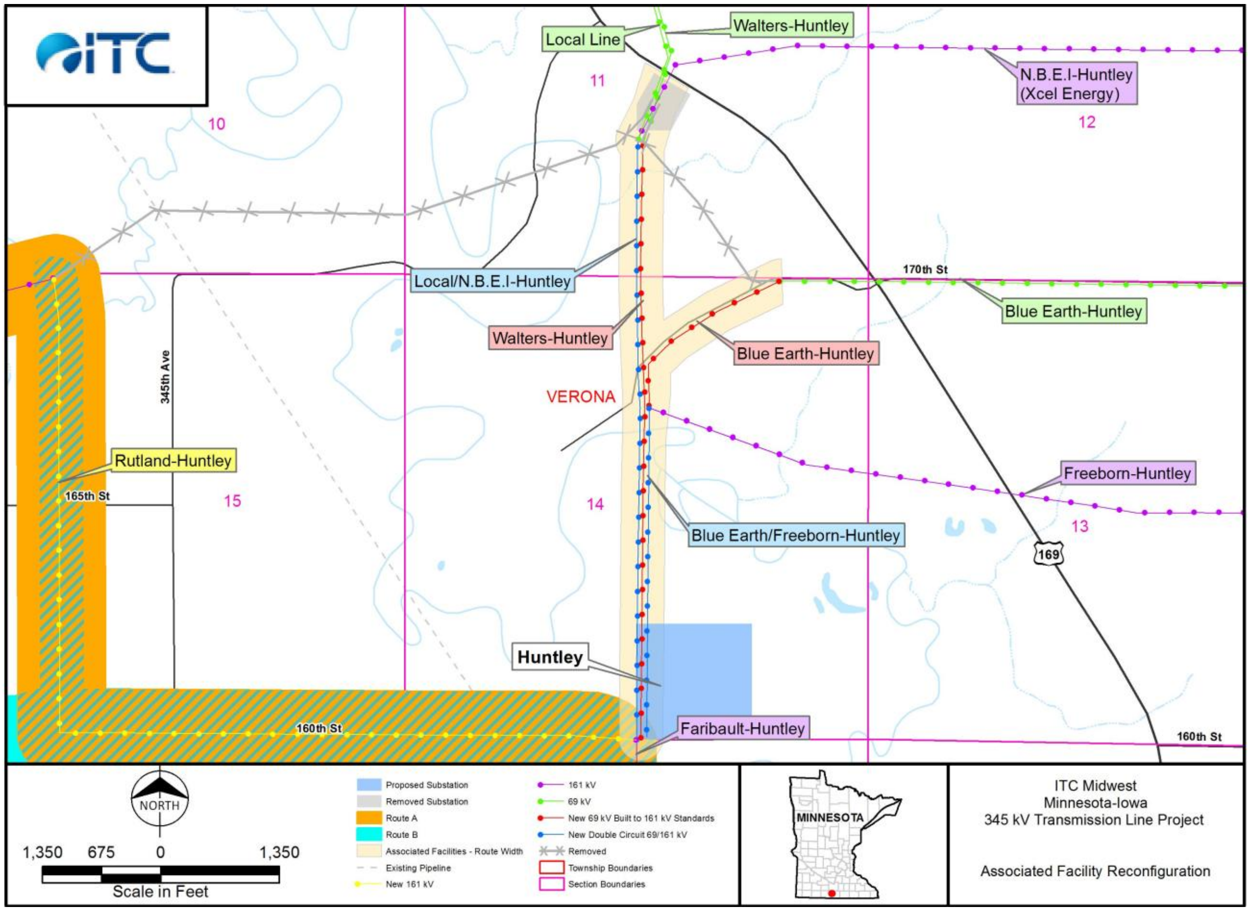
c. Walters – Winnebago Junction.

Figure 4. Current Configuration of 161 kV Associated Facilities Terminating at the Winnebago Junction Substation



The proposed routes and configurations to relocate the 161 kV associated facilities to connect at the new Huntley Substation are shown in **Figure 5**. The three 69 kV transmission lines that are proposed to be constructed to 161 kV standards will continue to be operated at 69 kV until conditions warrant an increase in operational voltage. These lines are proposed to be constructed to 161 kV standards to minimize future ground disturbance along the right-of-way and to minimize the need for future outages should the need to increase the operating voltage arises.

Figure 5. Proposed 161 kV Associated Facility Relocations



More detailed information on the proposed relocation and construction of the transmission lines currently terminating at the Winnebago Junction Substation can be found in the Project's Route Permit Application (Docket No. ET6675/TL-12-1337).

Where the Lakefield Junction to Border 161 kV line is co-located with the 345 kV line, ITC Midwest proposes to primarily use single pole, double-circuit capable weathering or galvanized steel structures. Single pole, single- and double-circuit structures will primarily be used for the four relocated 161 kV line and three 69 kV lines, subject to a determination in final design. ITC Midwest proposes to co-locate these associated facilities to the greatest extent feasible to minimize the right-of-way needed for their construction. For the associated transmission facilities, ITC Midwest will acquire and maintain a 150-foot right-of-way, except where multiple trans mission lines are proposed to be located in parallel between the Winnebago Junction and Huntley substations, where a right-of-way up to 250 feet may be acquired. **Figure 6** provides photograph examples of similar 161 kV facilities.

Figure 6. 161 kV Associated Facilities Sample Photographs

161/161 kV Double Circuit

161 kV Single Circuit

Technical drawings of all the 161 kV structures types that are being considered for the Project are included in **Appendix D-2**.

ITC Midwest proposes to use twisted pair Drake (2-795) ACSR, or equivalent 1600 amp, cable. The N.B.E.I.—Huntley 161 kV transmission line will be constructed using Aluminum Conductor Steel Supported ("ACSS") 565 kcmil Calumet, or equivalent 1400 amp, cable per Xcel Energy's specifications.

Other specialty structures may be necessary due to environmental conditions developed in cooperation with other State or federal agencies or to accommodate particular design considerations that cannot be identified until detailed survey work and soil sampling has been performed for the Project. Such detailed work will not likely be performed until after the Commission has issued a Route Permit for the Project to ensure that the areas where these activities are undertaken are those covered by the final route selected by the Commission.

ITC Midwest will design the 161 kV associated facilities to meet or surpass all applicable local and State building codes and NESC requirements, and additional standards developed by ITC Midwest. Appropriate safety protocols, procedures, and standards will be followed during design and construction, and after installation.

Substations

The Project includes expanding the existing Lakefield Junction Substation, removing the existing Winnebago Junction Substation, and constructing the new Huntley Substation.

(a) Lakefield Junction Substation (existing)

ITC Midwest owns the Lakefield Junction Substation. A location plan for the expansion of the Lakefield Junction Substation is available in the Route Permit Application at Appendix E.

(i) Current Equipment and Operation

Currently, four 345 kV transmission lines terminate at the Lakefield Junction Substation: one 345 kV transmission line owned by ITC Midwest (Lakefield Junction—Raun), two 345 kV transmission lines owned by Xcel Energy (Lakefield Junction—Nobles and Lakefield Junction—Lakefield Generation), and one 345 kV transmission line that connects the collector substation for the Lakefield Wind Project to the Lakefield Junction Substation (Hunter—Lakefield Junction). Additionally, there are four 161 kV transmission lines owned by ITC Midwest that currently terminate at the Lakefield Junction Substation. In 2011, ITC Midwest rebuilt the 345 kV portion of the substation, including a three-bay breaker-and-a-half configuration, providing six breaker positions. The 161 kV equipment is positioned on the west side of the substation with the 345 kV equipment on the east side and the 345 kV/161 kV transformers located between the two voltage bays.

(ii) Substation Expansion Requirements

ITC Midwest is proposing to expand the Lakefield Junction Substation to the east as part of the Project. In-depth investigations into the site and existing transmission line infrastructure determined that expansion in any other direction at the site is not a reasonable alternative. The new 345 kV transmission equipment necessary for the Project is anticipated to include one additional 345 kV bay using one position, and a future bay position to allow for three future connections. This equipment must be located on the east side of the substation to avoid a costly reconfiguration of the entire substation. If the new 345 kV equipment is not located on the east side, the two 345 kV/161 kV transformers and the entire existing 161 kV bay, along with two control buildings, would need to be reconfigured and relocated within the substation. This substantial work would require many extended transmission system outages, and coordinating those outages with the overall system would be challenging and costly.

The proposed expansion east of the Lakefield Junction Substation would require ITC Midwest to acquire an additional 160 feet of property for the length of the eastern side of the existing substation. In total, ITC Midwest proposes to acquire approximately three acres of property east of the current substation to accommodate the Project. ITC Midwest anticipates that grading will be necessary over the full area acquired, but that the fenced area will be expanded by approximately 2.2 acres to accommodate the new 345 kV equipment.

(b) Huntley Substation (new)

As part of the Project, ITC Midwest proposes to construct a new substation approximately 1.2 miles south of the current location of the Winnebago Junction Substation. ITC Midwest owns the property where it proposes to construct the new Huntley Substation. A detailed location plan for the Huntley Substation has not yet been prepared.

(i) New Substation Equipment and Operation

ITC Midwest will install two 345 kV breaker-and-a-half bays with three 345 kV breakers, associated switches, steel, foundations, and dead end structures. A 345 kV/161 kV transformer will also be installed at the Huntley Substation, along with four 161 kV breaker-and-a-half bays with eleven 161 kV breakers, associated switches, steel, foundations, and dead end structures. Certain 69 kV equipment will also be installed, including two 161 kV/69 kV transformers, three 69 kV breakers, and associated switches, steel, foundations, and dead end structures. A control building and road access will also be constructed at the site.

(ii) New Substation Land Requirements

ITC Midwest purchased 40 acres of land for the Huntley Substation in December 2012. Within this area, ITC Midwest proposes to construct an approximately nine-acre fenced area for the Huntley Substation. ITC Midwest intends to design and grade the Huntley Substation to provide sufficient space for two additional 345 kV breaker-and-a-half bays and one additional 161 kV breaker-and-a-half bay. Additionally, this site will allow ITC Midwest to maintain a substantial buffer between the boundaries of the substation and adjacent landowners.

(c) Winnebago Junction Substation (existing)

ITC Midwest proposes to remove all existing equipment from the Winnebago Junction Substation and remove all foundations and fenced area as part of the Project. The substation is currently covered by an easement between ITC Midwest and IPL. ITC Midwest and IPL are in the process of transferring ownership of the Winnebago Junction Substation site to ITC Midwest. At the time of this Application, ITC Midwest intends to retain ownership of the Winnebago Junction Substation site, but after the existing substation equipment is removed will allow the site to return to a natural state in areas not crossed by transmission line rights-of-way. One 161 kV transmission line (N.B.E.I.—Winnebago Junction) and two 69 kV transmission lines will remain on the property after the Winnebago Junction Substation is removed.

(i) Current Equipment and Operation

ITC Midwest initially investigated the possibility of expanding the Winnebago Junction Substation site as part of the Project. ITC Midwest determined that the property it owns at this location is not sufficient in size to allow for the expansions necessary for the Project. Additionally, because of the site's proximity to the Blue Earth River, a heavily treed area, US Highway 169, and a perpetual conservation easement, the ability to acquire additional land rights was limited. Therefore, ITC Midwest determined it was appropriate to investigate a new location for the 345 kV substation and removal of the Winnebago Junction Substation.

The age of the equipment at the Winnebago Junction Substation was also of concern. The Winnebago Junction Substation was constructed in the 1950s and contains equipment, including 69 kV breakers and 161 kV breakers, of 1950s vintage. Before MVP Project 3 was approved by MISO, ITC Midwest planned to replace this equipment as it was approaching the end of its operational life. ITC Midwest has now put these replacement projects on hold in light of this Project. Additionally, the control building on site is over 60 years old and would need to be updated if the Winnebago Junction Substation were to continue operation. ITC Midwest determined that the cost to construct a new substation with equipment to support the existing transmission infrastructure and the proposed Project was less expensive than the cost to upgrade the aged equipment at the Winnebago Junction Substation to meet the Project needs.

Based on these land and equipment replacement issues, ITC Midwest concluded that construction of a new substation south of the Winnebago Junction Substation and removal of the existing substation was the best option for the Project.

(ii) Substation Decommissioning

Although ITC Midwest will continue to own and operate transmission lines across this parcel, ITC Midwest proposes to remove all substation infrastructure at the Winnebago Junction Substation site. This includes the electrical equipment at the substation, foundations, gravel, fencing, and other materials that would no longer be necessary after the substation is removed from operation. At this time, ITC Midwest intends to own the Winnebago Junction Substation property and allow it to return to a more natural state by reestablishing vegetation on the site after removing all current substation infrastructure.

2.4 PROJECT SCHEDULE

Table 1 provides the permitting and construction schedule currently anticipated for the Minnesota portion of the Project and for the facilities between the Iowa border and the Ledyard Substation.

Table 1. Estimated Schedule for MN-IA Project

Activity	Estimated Activity Dates
Minnesota Certificate of Need Issued	Spring 2014
Minnesota Route Permit Issued	Spring 2014
Franchise from Iowa Utilities Board Issued	Third Quarter 2015
State/Federal Environmental Permits Issued for MN portion of MN-IA Project	Third Quarter 2015
Other State/Local Permits Issued for MN portion of MN-IA Project	Third Quarter 2015
Land Acquisition for MN portion of MN-IA Project	Third Quarter 2014 to Second Quarter 2015
Survey and Transmission Line Design for MN portion of MN-IA Project	Fourth Quarter 2014 to Fourth Quarter 2015
Right-of-Way Clearing for MN portion of MN-IA Project	Fourth Quarter 2015
Construction for MN portion of MN-IA Project	First Quarter 2016 to Second Quarter 2017
Construction for IA portion of MN-IA Project	First Quarter 2016 to Second Quarter 2017
In-Service (Lakefield – Huntley)	First quarter 2017
In-Service (Huntley – Ledyard)	Second quarter 2017
In-Service (Ledyard-Kossuth)	Second quarter 2017

2.5 PROJECT COST ANALYSIS

The estimated costs for the Project include costs to obtain additional environmental permits, obtain road sharing and crossing permits and licenses, complete survey work, complete line and substation design work, obtain materials, acquire property for substations and transmission line rights-of-way, complete construction of the Project, complete restoration of the Study Area, and obtain a Certificate of Need and Route Permit from the Commission.

Project costs are considered to have a +/- 30 percent accuracy because the cost of a project of the size proposed in this Application can be affected considerably by timing of construction, availability of construction crews and components, and the final design that can only be determined once a route is selected by the Commission in the Route Permit proceedings. Based on the information gathered to date, and assumptions about likely structure types and line lengths, the total cost of the Project from Lakefield Substation to the Iowa border is estimated to range from $194 million to $206 million. **Table 2** below provides the estimated costs for the Minnesota portion of the Project.

Table 2. ITC Midwest Estimated Costs for the Minnesota Portion of the MN-IA Project

Project Facility	Estimated Cost ($ millions)
Lakefield Junction – Iowa Border 345 kV Transmission Line	$152-164[5]
161 kV Line Relocations	$3
Lakefield Junction Substation	$6
Huntley Substation[b]	$33
Total	$194-206

[a] The estimated cost for the Lakefield – Iowa Transmission line includes the estimated cost to remove the existing Lakefield to Border 161 kV line, where necessary.

[b] The estimated cost for the Huntley Substation includes the cost to remove the Winnebago Junction Substation infrastructure and the cost of construction of equipment to support the 345 kV, 161 kV, and 69 kV systems at the Huntley Substation.

The IA Border to Kossuth County Segment is estimated to cost an additional $77 million, plus/minus 30 percent. Adding this amount to the totals above yields a total cost in both states for the MN-IA Project ranging from $271 million to $283 million (based on the two routes identified), plus/minus 30 percent to account for other uncertainties.

2.6 ALLOCATION OF COST UNDER MISO

The recovery of all but approximately $7.4 million of the Project's costs from Minnesota ratepayers will be governed by Schedule 26-A, Multi-Value Project Usage Rate, in MISO's Tariff. The annual revenue requirement is determined pursuant to the formula rate in Attachment MM-MVP Charge in the MISO Tariff. This annual revenue requirement collected under Schedule 26-A is then paid by all MISO network and point-to-point transmission customers based on their annual energy consumption. Minnesota ratepayers share of the annual revenue requirement is determined by the percent of total MISO energy used in

[5] The $152 million estimate is for Route B, where 345 kV/161 kV double-circuit capable structures would be used but only the 345 kV arms, insulators, and conductors would be installed. The $164 million estimate is for Route A, which includes 345 kV/161 kV double-circuit capable structures with the arms, insulators, and conductors installed for both circuits.

Minnesota, which has been estimated at approximately 13.3 percent based on MISO's posted 2010 Energy withdrawal data. Based on the high end of the cost range for the Project of $283 million, less the cost of 69 kV work not included in MVP Project 3 of $7.4 million, the estimated annual first year revenue requirement for the Project would be approximately $51 million. Of this total, $6.8 million would be collected from Minnesota transmission customers annually. The estimated first year revenue requirement for the 69 kV facilities, recovered through the ITC Midwest zonal rate is about $200,000, making the total cost of the Project recovered from Minnesota customers approximately $7 million. The calculation of the annual revenue requirement and the amounts to be recovered from Minnesota utilities can be found in **Appendix E**.

2.7 MIDAMERICAN'S CONNECTING 345 KV FACILITIES IN IOWA

MidAmerican's 345 kV facilities in Iowa will interconnect with ITC Midwest's Project at the new Kossuth County Substation that will be constructed and owned by MidAmerican. MidAmerican will build a new 120-mile 345 kV line from its new O'Brien County Substation near Sanborn, in west central Iowa, east to the Kossuth County Substation, and additional 345 kV transmission south to MidAmerican's existing Webster Substation outside Fort Dodge, Iowa. **Figure 1** in **Section 1.2** of this Application shows MidAmerican's proposed 345 kV facilities in relation to the facilities of the MN-IA Project. It is anticipated that the MidAmerican facilities will be in service by fourth quarter 2016.

2.8 CERTIFICATE OF NEED REQUIREMENT AND CRITERIA

Minnesota Statutes Section 216B.243, Subdivision 2 provides that "[n]o large energy facility shall be sited or constructed in Minnesota without the issuance of a certificate of need by the commission pursuant to Minnesota Statutes Sections 216C.05 to 216C.30 and this section and consistent with the criteria for assessment of need." A large energy facility is defined to include "any high-voltage transmission line with a capacity of 200 kilovolts or more and greater than 1,500 feet in length."[6]

The Minnesota portion of the Project includes a 345 kV transmission line approximately 75 miles long. A Certificate of Need to construct the Project is, therefore, required.

[6] Minn. Stat. § 216B.2421, subd. 2(2).

Minnesota Rule 7849.0120 sets forth four criteria that must be met for the Commission to grant a Certificate of Need:

- denial would likely have an adverse effect on the future adequacy, reliability, or efficiency of the supply of energy for the applicant, the applicant's customers, or the people of Minnesota and neighboring states;
- a more reasonable and prudent alternative to the proposed facility has not been demonstrated;
- the proposed facility will provide benefits to society in a manner compatible with protecting the natural and socioeconomic environments, including human health; and
- the design, construction, operation of the proposed facility will comply with relevant polices, rules, and regulations of other state and federal agencies and local governments.

Pursuant to Minnesota Statutes Section 216B.243, subdivision 3(9), the Commission must also consider whether the proposed project enhances regional reliability, access, or deliverability to the extent these factors improve the robustness of the transmission system in Minnesota or lowers the cost of electricity for Minnesotans. And there are other statutory criteria relating to Renewable Energy Portfolio standards and certain generation alternatives that must be considered. A completeness checklist of the informational requirements set out in Minnesota Rules for Certificate of Need applications is available in **Appendix A-1** and a table of the additional informational requirements set out in Minnesota Statutes is included in **Appendix A-2**. The checklist and table identify where the various informational requirements are addressed in this Application.

2.9 CERTIFICATE OF NEED DATA EXEMPTIONS

On December 4, 2012, ITC Midwest filed a request for an exemption from certain of the data requirements in Minnesota Rules, Chapter 7849 because the data would not assist the Commission in making its determination of whether the Project is needed. For some of the data requirements, ITC Midwest proposed submitting substitute information that would be helpful to the Commission in making its Certificate of Need determination.

The Commission issued its order on ITC Midwest's request on February 8, 2013. It its order, the Commission granted all the requested exemptions from data requirements with the exception of one, relating to environmental data. A copy of ITC Midwest's Request for Exemption from Certain Certificate of Need

Application Content Requirements and the Commission's order on ITC Midwest's request are included in **Appendix C**. The completeness checklist in **Appendix A-1** identifies all the data requirements from which ITC Midwest is exempted, and all the substitute information that it is providing instead of the exempted data.

2.10 ROUTE PERMIT REQUIREMENT

Minnesota Statutes Section 216E.03, Subdivision 3 provides that "any person seeking to construct a . . . high voltage transmission line must apply to the commission for a . . . route permit." For the purposes of this statutory requirement, a high voltage transmission line is defined as one "designed for and capable of operation at a nominal voltage of 100 kilovolts or more and is greater than 1,500 feet in length."[7]

The Minnesota portion of the Project includes a 345 kV transmission line that is approximately 75 miles long. A Route Permit to construct the Minnesota portion of the Project is, therefore, required.

A Route Permit application is being filed with the Commission concurrently with this Certificate of Need Application (Docket No. ET6675/TL-12-1337). The Commission may consider the Certificate of Need and Route Permit applications together. A description of how the Commission could consider the two applications together is provided in **Section 2.11** of this Application.

2.11 POTENTIAL COMBINED CERTIFICATE OF NEED AND ROUTE PERMIT PROCEEDINGS

While the Certificate of Need proceedings for a proposed facility may be handled separately from the facility's Route Permit proceedings, the Legislature has directed that they be handled together where appropriate. Minnesota Statutes Section 216B.243, Subdivision 4 provides that "[u]nless the commission determines that a joint hearing on [routing] and need under [the Certificate of Need statute] and the [Route Permit statute] is not feasible or more efficient, or otherwise not in the public interest, a joint hearing under those [statutes] shall be held." ITC Midwest has requested that the Certificate of Need and Route Permit proceedings for the Project be combined because it is feasible, more efficient, and in the public interest.

---

[7] Minn. Stat. § 216E.01, subd. 4.

As required under Minnesota Rule 7829.2550, ITC Midwest filed a proposed plan for providing notice to local government officials, and landowners and residents reasonably likely to be affected by the Proposed Project of ITC Midwest's intention to file an application for a Certificate of Need for the Project. The Commission issued an order on December 31, 2012 approving the plan as modified by ITC Midwest and Commission staff based on comments from EFP.[8] A copy of the Commission's Order Approving Notice Plan and Granting Variances is included in **Appendix B-1** of this Application. **Appendix B-2** also contains a copy of ITC Midwest's Notice Plan compliance filing, including affidavits of mailing and publication.

An electronic version of this Application and the Project's Route Permit Application are available on the Commission's website:

http://www.puc.state.mn.us/PUC/index.html.

At the Commission's homepage, click the "Search e-Dockets" link and enter the docket number "12-1053" in the docket look up box to access the Certificate of Need docket. Searching for "12-1337" will retrieve the Route Permit docket. Electronic versions of the applications are also available on ITC Midwest's website:

www.itctransco.com/minnesota-iowa-project

Upon filing, the Applications will be reviewed by the Commission for completeness.[9] At the time it determines the applications are complete, the Commission will determine whether the Certificate of Need and Route Permit proceedings should be handled separately or together. Within 60 days of finding the applications complete, the Commission must hold one or more public meetings on each proceeding. If the Commission chooses to combine the Certificate of Need and Route Permit proceedings, these meetings will be held together. The purpose of the meeting(s) for the Certificate of Need proceeding is to obtain public opinion on the necessity of granting a certificate for the Project.[10] The purpose of the meeting(s) for the Route Permit proceeding is to provide information to the public about the Project, answer questions, and obtain information regarding the appropriate scope of the EIS required for the Project.[11]

[8] The Commission determined, in its order, that no notification to tribal officials was necessary.
[9] Minn. R. 7849.0200, subp. 5 and 7850.2000, subp. 1.
[10] Minn. Stat. § 216B.243, subd. 4.
[11] Minn. Stat. § 216E.03, subd. 6 and Minn. R. 7850.2300, subp. 1.

EFP is responsible for conducting environmental review of the Project. This involves preparing an Environmental Report for the Commission for the Certificate of Need proceeding, and an EIS for the Route Permit proceeding.[12] EFP may elect to combine these two documents and issue one document, an EIS, which satisfies the environmental review requirements of both the Certificate of Need and Route Permit proceedings.

In the course of its environmental review of the Project, EFP will conduct one or more public meetings to develop the scope of that review, during which interested persons may ask questions and provide comments on the scope of the environmental review, and suggest that alternative routes and possible impacts be evaluated in the review. Interested persons will also be able to submit written comments to the Department regarding the Project. These scoping meeting(s) may be combined with the Commission's public meeting(s) on the scope of the EIS.[13]

Based on the Applications and public input, EFP will determine the scope of the environmental review and complete a Draft EIS for public review. This review includes public informational meetings on the Draft EIS where the public has the opportunity to provide oral and written comments. The Final EIS must include the EFP's response to all substantive comments received on the Draft EIS.[14]

The Certificate of Need and Route Permit applications will be the subject of either separate or combined contested case hearing(s), during which interested persons can submit evidence supporting or challenging the Project as proposed. Upon closing the record for the contested case(s), the administrative law judge will submit a report and recommendation to the Commission on the applications.[15] The Commission will consider the administrative law judge's report and recommendation in reaching its determination whether to grant the Applications with or without modifications, or deny them.[16]

The Legislature has directed that a final decision on a Certificate of Need or Route Permit Application must be made within one year of the Commission's

[12] Minn. R. 7849.1200; Minn. Stat. § 216E.03, subd. 5.

[13] Minn. R. 7849.1400, subps. 3-6; Minn. R. 7850.2500, subps. 2-3.

[14] Minn. R. 7850.2500, subps. 6-9.

[15] Minn. Stat. §§ 216B.243, subd. 4 and 216E.03, subd. 6; Minn. R. 7849.0230, subp. 2 and 7850.2600.

[16] Minn. R. 7850.2700.

determination that the application is complete, unless the applicant agrees more time may be taken or the Commission finds that there is good cause to do so..[17]

The regulatory proceedings outlined above satisfy all the requirements of Minnesota Statutes Sections 216B.243 and 216E.03, and the Commission's rules for Certificate of Need and Route Permit proceedings, Minnesota Rule Chapters 7849 and 7850.

[17] Minn. Stat. §§ 216B.243, subd. 5 and 216E.03, subd. 9.

This Page Intentionally Left Blank

3.0 TRANSMISSION PLANNING

3.1 TRANSMISSION SYSTEM OVERVIEW

The electric transmission system in the United States is comprised of a highly decentralized interconnected network of generating plants, high voltage transmission lines and distribution facilities. Electricity uses all available paths as it flows from generation to consumers. Since the electricity from all sources is commingled in the transmission system, it is impossible to know exactly where the electric power came from that lights the room of a home. Designing the transmission network and the proper implementation of new transmission facilities requires complex analysis, including modeling of power system steady-state and dynamic performance.

Today, there are 211,000 miles of extra high voltage transmission lines (230 kV and greater) in the North American bulk power system (United States and Canada).[18] There are also many hundreds of thousands of miles of additional transmission lines between 100 and 200 kV. Transmission facilities also include both alternating current lines ("AC") and direct current lines ("DC").

The United States (excluding Alaska and Hawaii) electric transmission grid is divided into three major subsystems, called interconnections: The Eastern Interconnection, the Western Interconnection, and the Electric Reliability Council of Texas Interconnection. While very little power is exchanged across the interconnections, power is readily transferred within an interconnection.

Minnesota is a part of the largest subsystem – the Eastern Interconnection. This means that Minnesota's electric system is not only interconnected with neighboring states of North Dakota, South Dakota, Iowa and Wisconsin, but also indirectly with virtually all of the other states and Canadian provinces in the eastern two-thirds of North America. The entire electric system in the Eastern Interconnection operates as a single integrated electrical machine. The dynamics of the electrical system are also extremely complicated, and require moment-by-moment matching of generation resources and load requirements at the proper voltage across the interconnection. If the load balance or voltage is disturbed by a sudden change in generation output, transmission line availability, or customer usage, the bulk transmission system provides capacity for other generation to adjust and keep the system in balance. As a result, the operation of electrical

[18] *See* NERC Company Overview, *Fast Facts*, at: http://www.nerc.com/page.php?cid=1/7/10.

generators and transmission facilities in Ohio or Nebraska can potentially impact the reliability of electric service to customers in Minnesota, or vice versa.

3.2 EXISTING UPPER MIDWEST 345 KV TRANSMISSION SYSTEM

The bulk transmission system in Minnesota and surrounding states consists predominantly of 230 kV and 345 kV AC voltage facilities, with some 500 kV and DC facilities. In Minnesota, the foundation for the bulk network is a 345 kV ring around the Twin Cities developed in the 1960s along with three lines that connect the Twin Cities to adjacent regions. With the advent of larger generation plants in excess of 500 MW , transmission planners selected the 345 kV voltage class to reliably provide service in place of an overtaxed 115 kV system. In the 1960s, 345 kV transmission ties were built to connect the Twin Cities to major load centers in other states, including St. Louis, Missouri, Chicago, Illinois and Omaha, Nebraska. In the late 1970s, a 345 kV and 500 kV tie to Manitoba, Canada was constructed. These regional connections created a more robust electrical system that could better withstand outages of transmission lines and large-scale generators. In 2011, there were more than 3,000 miles of 200 kV and above transmission in the state.[19]

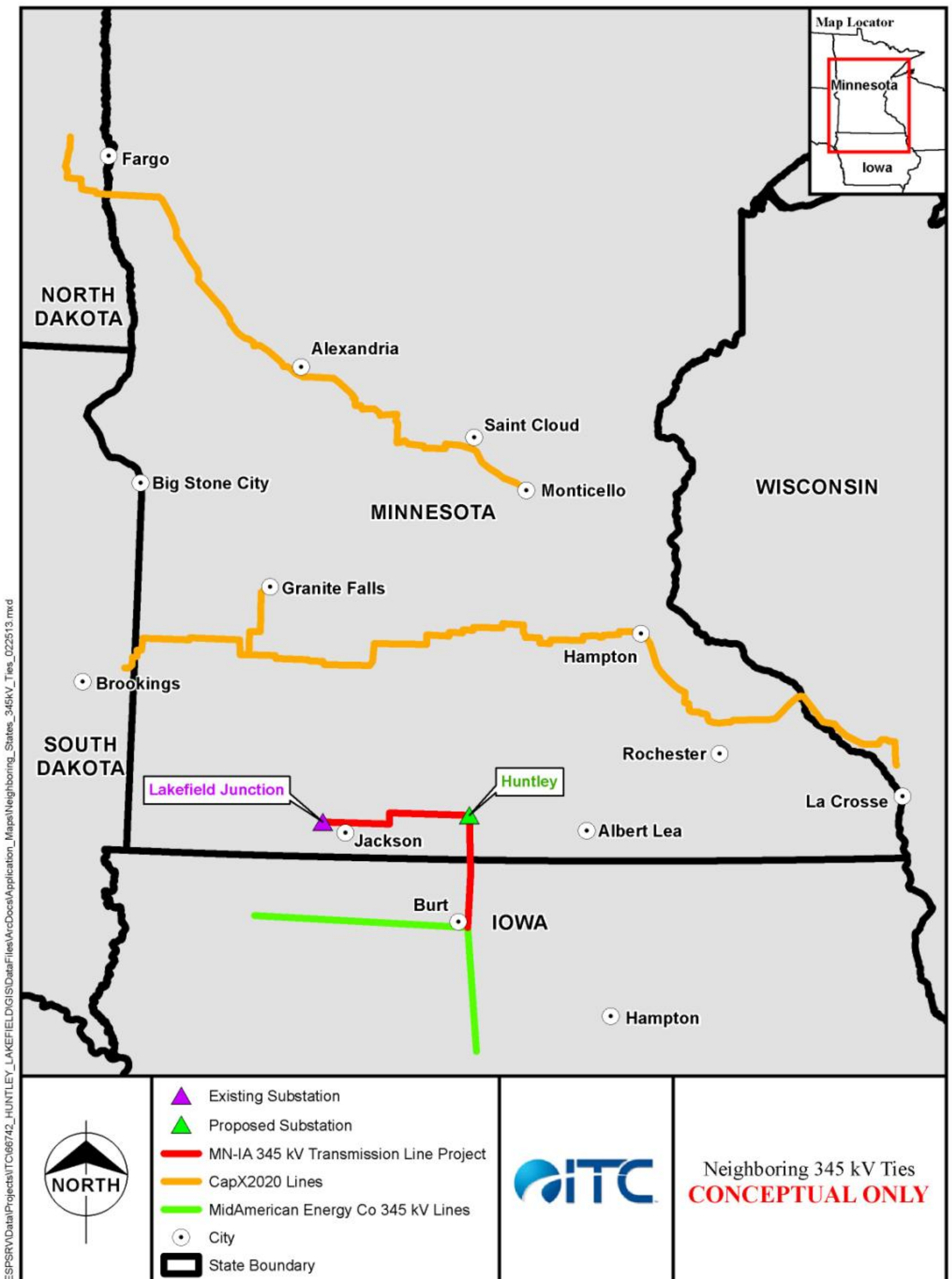
The next significant addition of 345 kV bulk transmission facilities in Minnesota is now underway. This phase of 345 kV development began in 2004 and 2005 with study work undertaken by the CapX2020 group of utilities. In 2007, the CapX2020 utilities proposed three 345 kV line projects: (i) Brookings County – Hampton 345 kV Project; (ii) Fargo – Monticello 345 kV Project; and (iii) the Hampton – La Crosse 345 kV Project. The CapX2020 utilities also proposed a 230 kV transmission line between Bemidji and Grand Rapids, Minnesota. These projects were designed to enhance regional reliability, meet local load serving needs, and increase generation outlet. In 2009, the Commission granted Certificates of Need for the projects, and Route Permits were issued in subsequent proceedings. The Monticello – St. Cloud 345 kV line segment (Docket No. ET2, E002/TL-09-246) of the Fargo – Monticello 345 kV Project and the Bemidji – Grand Rapids 230 kV line have been completed and are in service. The remaining facilities (Docket Nos. ET2/TL-08-1474; ET2, E002/TL-09-1056; E002/TL-09-1448) are all under construction and expected to be in-service by 2015.

One of the substantial benefits of the CapX2020 345 kV projects is that they create additional 345 kV ties between Minnesota and North Dakota, South Dakota, and

[19] 2011 Biennial Transmission Report, at 79.

Wisconsin. A new 345 kV tie between Minnesota and Iowa is also necessary to address the transmission system congestion in southern Minnesota and northern Iowa. **Figure 7** illustrates the Project's proposed expansion of the 345 kV connections with Minnesota's neighboring states.

Figure 7. MN-IA Project's Expansion of Upper Midwest 345 kV Transmission System



Source: ITC; Burns & McDonnell. February 25, 2013

3.3 REGULATORY SYSTEM OVERVIEW

Because of the importance of providing safe, adequate and reliable service to customers and the important role electric transmission plays in that service, matters pertaining to electric transmission are highly regulated. Regulatory oversight of transmission in Minnesota occurs at several levels and by several different regulatory bodies:

The Commission has authority over Certificates of Need, which must be obtained to build high voltage transmission facilities in Minnesota. If the Commission determines a transmission facility is needed, it must also determine the route for the line by issuing a Route Permit before construction can begin.

The FERC has authority over the transmission of electric energy in interstate commerce and wholesale sales of electricity, including regulating transmission rates and practices and authorizing and overseeing the operation of regional transmission organizations. Under the Energy Policy Act of 2005 ("EPAct 2005"), FERC is also responsible for oversight of mandatory electric reliability standards and for designating the Electric Reliability Organization ("ERO") for the United States.

Regional transmission organizations ("RTOs"), including MISO, oversee and coordinate regional transmission planning and regional transmission services and manage access to the transmission grid to facilitate fair and competitive wholesale electric markets.

The North American Electric Reliability Corporation ("NERC") has been designated as the ERO by FERC, aided by Regional Entities ("REs") that set standards for grid planning and operations, and monitor compliance with reliability standards. Recently the NERC reliability standards, which previously were merely voluntary, became mandatory pursuant to EPAct 2005 and FERC Order No. 693.[20] Electric utilities in Minnesota must now plan, construct, operate and maintain their electric systems (both transmission and generation) in compliance with the mandatory reliability standards.

The Midwest Reliability Organization ("MRO") is the RE that implements the NERC standards for Minnesota and surrounding states. The MRO develops standards, monitors compliance, enforces standards, and assesses the reliability

[20] *Mandatory Reliability Standards for the Bulk-Power System*, Order No. 693, 72 Fed. Reg. 16,416 (Apr. 4, 2007), FERC Stats. & Regs. ¶ 31,242 (2007); *order on reh'g,* 120 FERC ¶ 61,053 (July 19, 2007).

of the bulk power system. The MRO operates independently of the entities subject to its jurisdiction, thus ensuring that the reliability standards developed and enforced by the MRO are fair.

3.4 FERC TRANSMISSION ORDERS

FERC has issued a number of orders over the last 15 years that affect planning for the transmission system in Minnesota. An important change has been the functional separation of transmission from generation to ensure equal access to the grid, which FERC mandated in 1996 when it issued its Order No. 888 (as recently updated by FERC Order No. 890).[21] Transmission planning must now be performed separate from other utility functions in a non-discriminatory manner and transmission planning and development must be prepared to meet the needs of all regional market participants rather than just those of the individual utility's customers or a specific generation resource type.

As part of its open access policy, FERC in Order No. 888 encouraged utilities to join regional independent transmission system operators, or Independent Transmission System Operators. To that end, MISO was founded in 1998 as a voluntary association of electric transmission owners in the Midwest.

In 1999, FERC issued a second order – Order No. 2000 – further encouraging competition in the wholesale power supply market by encouraging transmission-owning utilities to voluntarily join large regional transmission organizations, or RTOs. On December 20, 2001, MISO became the first RTO in the nation to be approved by FERC. On February 1, 2002, MISO began providing "Day 1" regional transmission services under the MISO Open Access Transmission Tariff ("OATT"). On April 1, 2005, MISO implemented its Day Ahead, Real Time and Financial Transmission Rights Markets pursuant to its Open Access Transmission and Energy Markets Tariff ("TEMT"). ITC Midwest is a transmission-owning member of MISO, and is subject to the terms and conditions of MISO's tariffs.

During this same time frame, there were also new FERC policy initiatives relating to transmission planning. In 2007, FERC issued Order 890, clarifying and expanding the obligations of transmission providers to provide transmission service on a non-discriminatory basis. To remedy the potential for undue discrimination in transmission planning activities, FERC directed all

[21] *Preventing Undue Discrimination and Preference in Transmission Service*, Order No. 890, 72 Fed. Reg. 12,266 (March 15, 2007), FERC Stats. & Regs. ¶ 31,241 (2007).

transmission providers to develop a transmission planning process that satisfies nine principles: (1) coordination; (2) openness; (3) transparency; (4) information exchange; (5) comparability; (6) dispute resolution; (7) regional participation; (8) economic planning studies; and (9) cost allocation for new projects.[22]

The eighth principle - economic planning studies - requires transmission providers to account for economic considerations in the transmission planning process.[23] FERC determined that good utility practice requires transmission providers to focus on system upgrades that can reduce the overall costs of serving load, as well as those required to maintain the reliability of the transmission network.[24]

In Order No. 1000, issued in 2011, FERC expanded these planning principles to require 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 public policy requirements established by state or federal laws or regulations.[25]

3.5 OVERVIEW OF MISO FUNCTIONS

MISO is a non-profit RTO responsible for the independent planning and operation of the transmission grid and wholesale energy market across 11 states and the province of Manitoba. MISO administers and manages the transmission of electricity within its footprint – approximately 53,200 miles of transmission lines.[26]

[22] *Preventing Undue Discrimination and Preference in Transmission Service*, Order No. 890, 118 FERC ¶ 61,119 (2007), *order on reh'g*, Order No. 890-A, 121 FERC ¶ 61,297 (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 (2009), *order on clarification*, Order No. 890-D, 129 FERC ¶ 61,126 (2009).
[23] MTEP 2009 ("MTEP09") at 52.
[24] *Id*.
[25] *Transmission Planning and Cost Allocation by Transmission Owning and Operating Public Utilities*, Order No. 1000, 136 FERC ¶ 66,051 (2011), *order on reh'g*, Order No. 1000-A, 139 FERC ¶ 61,132 (2012), *order on reh'g and clarification*, Order No. 1000-B, 141 FERC 61,044 (2012).
[26] MISO Transmission Expansion Plan 2012 at page 17, which can be found at: https://www.midwestiso.org/Library/Pages/Results.aspx?q=MISOTransmissionExpansionPlan2012.

ITC Midwest is one of 35 transmission owning members of MISO.[27] There are also 98 members of MISO in other sectors, including independent power producers, transmission dependent utilities, power marketers, and state regulatory authorities.[28]

As noted, the dynamics of the electrical system are extremely complicated, requiring moment-by-moment matching of generation resources and load requirements at the proper voltage. If the load balance or voltage is disturbed by a sudden change in generation output, transmission line availability, or customer usage, the bulk transmission system provides capacity for other generation to adjust and keep the system in balance. Projecting the movement of power in real-time, MISO's control room staff of Reliability Coordinators and Reliability Analysts monitor and manage activity on the electric transmission system 24/7.

MISO also oversees both generation interconnection requests and transmission service requests. It is obligated to provide generators and transmission customers non-discriminatory access to the grid in accordance with its Open Access Transmission Energy and Operating Reserve Markets Tariff, on file with FERC.

3.5.1 MISO Wholesale Energy Market

For Summer 2012, MISO projected that it had 127,493 MW of nameplate electric generating capacity within its footprint.[29] This generation is used primarily by load-serving entities that either own and operate the generators or have long-term bilateral supply arrangements with generators or other utilities, to serve their native load customer requirements.

In April 2005, MISO began operations of a centralized regional wholesale energy market, known as the "Day 2" market, where short-term and spot market transactions are available to utilities to acquire energy supply to meet load demands at lower cost than operating their own longer-term resources. Under

---

[27] ITC Midwest is a transmission-only utility. As such, ITC Midwest does not own generation, and it does not have a "service area" in which it provides retail electric service to end-users. Rather, ITC Midwest provides transmission service across a multi-state area to investor owned public utilities, electric cooperatives, and municipal utilities, who in turn provide retail electric service in their respective service areas.

[28] A list of current MISO members can be found at: http://www.midwestiso.org/StakeholderCenter/Members/Pages/MembershipList.aspx.

[29] MISO 2012 Summer Resource Assessment at pages 15-17, which can be found at: https://www.midwestiso.org/Library/Pages/Results.aspx?q=2012%20Summer%20resource%20assessment.

the MISO TEMT, participating utilities are required to purchase and sell energy within the MISO Day-Ahead and Real Time markets. MISO uses a security constraint economic dispatch that employs LMP to take into account the costs of the resources and the capacity limitations (referred to as "congestion") on the transmission system so that the least cost available generation is used to serve loads on a regional basis within MISO.

Congestion in areas of the existing transmission system in the MISO region not only decreases the operational flexibility of the system, which impacts reliability, but also results in the dispatch of higher priced generation due to the constraint. FERC approved the establishment of the Southeast Minnesota, Northern Iowa, and Southwest Wisconsin Narrowly Constrained Area ("Minnesota NCA") in 2007 because of concerns identified by MISO's independent market monitor that generators within the constrained area could exercise local market power by offering constraint-easing generation into the MISO Day 2 market at higher prices. The net result is that market energy prices in a constrained area can be higher than in neighboring areas that are not subject to such transmission constraints.

An NCA designation alters the operation of the Day Ahead and Real Time energy market in that area. Generators in an NCA face restrictions on their offer price into the MISO energy markets because they can impact the affected transmission constraints in the NCA.

NCA designation indicates the need for additional transmission to alleviate congestion and allow lower cost energy supplies to be delivered.

3.5.2 MISO Transmission Planning

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. Pursuant to the directives in FERC Order Nos. 890 MISO's transmission planning process has broadened to identify and recommend those projects that increase system efficiency and reduce costs, as well as those projects that meet specific state and federal public policy objectives. MISO reports on its recommended transmission projects in its annual MISO Transmission Expansion Plan ("MTEP").

MISO uses a "bottom up, top down" approach in its transmission expansion planning process. It relies on individual transmission owners to identify and report the projects they have determined are needed for their systems. MISO then reviews all the various projects in relation to one another and the MISO system as a whole to prioritize projects based on their ability to effectively address system reliability, market efficiency, and evolving federal and state energy policy issues.

MISO's process for identifying and recommending Multi Value Projects in its annual MTEP was specifically reviewed and approved by FERC.[30] In finding that the MVP process is the best way to overcome the challenges inherent in maintaining and expanding the region's grid, FERC analyzed the proposal using three interrelated factors required by its previous Order No. 890: (1) whether the proposal fairly assigns costs equitably; (2) whether the proposal presents incentives (and removes disincentives) to construct new transmission; and (3) the level of support from state regulators.[31] Based on their regional nature, MISO proposed that MVP costs be allocated on a regional basis to all customers taking energy off the grid.[32] FERC agreed, recognizing that broad support from state regulatory authorities was important because states may be reluctant to site regional transmission projects if they believe that costs are not being fairly allocated.[33]

The MVP proposal garnered broad support from state authorities, including the Organization of MISO States ("OMS"), and other stakeholders.[34] The state authorities' effort was led by the OMS's Cost Allocation and Regional Planning Group ("CARP"), which worked closely with the MISO RECB Task Force.[35] The result was that nine of the then-13 OMS states, including Minnesota, supported MISO's MVP proposal before FERC.[36]

[30] *Midwest Indep. Transmission Sys. Operator, Inc.*, 137 FERC ¶ 61,074 (2011) ("Rehearing Order") and *Midwest Indep. Transmission Sys. Operator, Inc.*, 133 FERC ¶ 61,221 (2010) ("MVP Order").
[31] Rehearing Order at ¶ 116.
[32] MVP Order at ¶ 28.
[33] Rehearing Order at ¶ 173.
[34] Rehearing Order at ¶ 174.
[35] Rehearing Order at ¶ 175.
[36] Rehearing Order at n. 369; "Therefore, Minnesota recommends that [FERC] approve MISO's proposal of charging 100 percent of the cost of MVP projects to the load across MISO's system . . . ." Joint Comments of the Commission and Minnesota Department of Commerce, Sept. 10, 2010.

This Page Intentionally Left Blank

4.0 DESCRIPTION OF NEED

4.1 INTRODUCTION

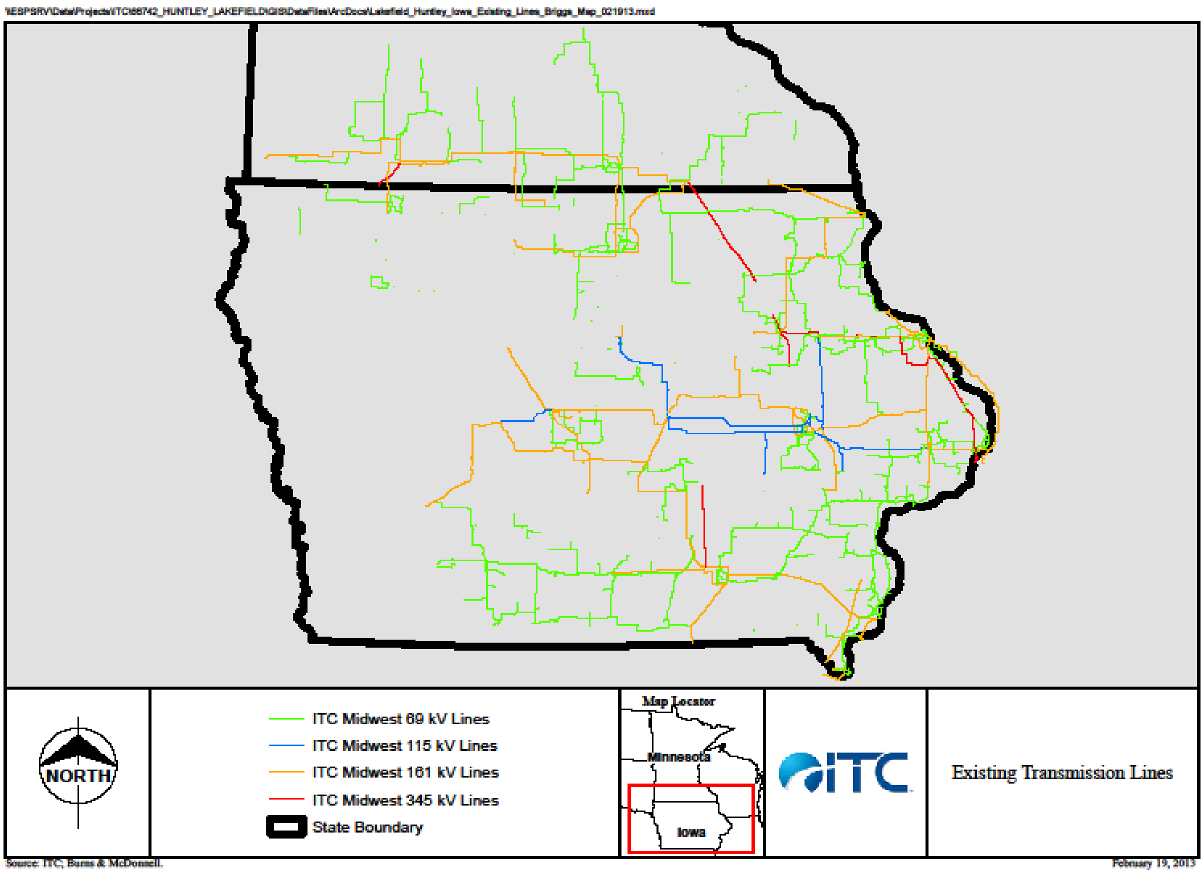
Constraints on the bulk transmission system affect the transmission system's reliability. Because a contingency or combination of contingencies can lead to dramatic power swings on the system, the adequacy of the system can be measured at any given time by the unused transmission line capacity remaining. Thus, if there is a large amount of available capacity on the system – i.e., the system is not constrained – an outage of certain element(s) can be handled due to the available capacity on the remaining elements. But if there is a low amount of available capacity due to constraints, the loss of certain element(s) could result in the remaining elements, which are already nearly fully utilized, to become more heavily loaded.

The system's ability to provide adequate and reliable service is at risk when equipment is heavily loaded, equipment is at risk of failing, which in turn can cause brownouts or even blackouts. In addition, the repetition of the heavy loading over time reduces its service life.

Constraints also lead to congestion which impacts the economic efficiency of the bulk electric system. When the system is sufficiently congested, the congestion will cause the re-dispatch of generation in the area to relieve the loading on the line(s) within the congested area. Re-dispatching generation – which can involve hundreds or thousands of MW depending on the situation – can result in less efficient, more costly generation being dispatched to relieve the stress on the loaded line(s).

The need for the MVP Project 3 arises from constraints on the transmission system in southern Minnesota and northern Iowa leading to congestion on the 161 kV transmission system in the area. See **Figure 8**.

Figure 8. Southern Minnesota/Iowa 161 kV Transmission System



There are three distinct aspects of the need arising from the current constraints and congestion of the transmission system in southern Minnesota and northern Iowa:

- Insufficient generation outlet capacity, specifically including outlet capacity for existing and planned wind generation, all of which cannot currently be reliably delivered and thus impacts the ability of Minnesota and the other states within the MISO footprint to achieve their renewable energy mandates and goals;

- Reduced operational flexibility and reliability of the transmission system due to reliance on SPSs currently in place to prevent overloading of ITC

Midwest's Fox Lake-Rutland-Winnebago 161 kV line in the event of critical contingencies; and

- Inefficient and less cost effective delivery of energy.

Each of these aspects of the need for the Project is discussed below.

4.2 INSUFFICIENT GENERATION OUTLET CAPACITY

4.2.1 Renewable Generation Needed to Meet Minnesota RPS

Minnesota is a national leader in wind energy production. It currently ranks seventh for the most installed wind capacity in the nation (2,986 MW). In 2011, approximately 12 percent of Minnesota's electric energy came from wind, ranking it fourth in the nation for the percentage of electricity consumption from wind.

Minnesota utilities also lead the nation in wind energy purchases. For investor-owned utilities, Xcel Energy currently has more wind energy purchases than any other utility (4,047 MW), while Great River Energy (465 MW) and Minnkota Power Cooperative (359 MW) rank second and third, respectively, for cooperatives.

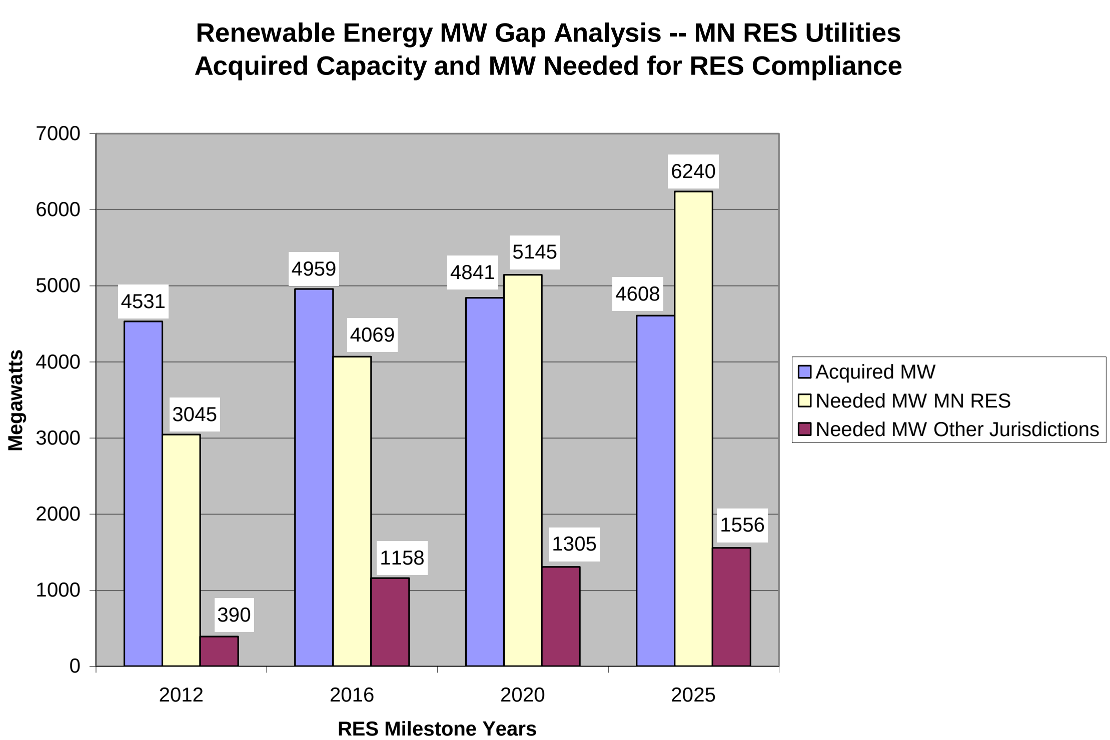
Minnesota's success in this area has been heavily driven by the availability of abundant wind resources and strong policies to boost renewable energy use over the next 15 – 20 years. Minnesota Statutes Section 216B.1691, Subdivision 2a requires that utilities serving retail load in the state must provide 25 percent of their total retail electric sales from eligible renewable resources by 2025, and Xcel Energy, the state's largest utility, must provide 30 percent of its load from renewable resources by 2020, with 25 percent coming specifically from wind generation, as shown in **Table 3**.

Table 3. Renewable Energy Standard Milestones

Year	Non-Nuclear Utility Requirement	Xcel Energy Requirement
2012	12%	18%
2016	17%	25%
2020	20%	30% (25% from wind)
2025	25%	30% (25% from wind)

Minnesota's 2011 Biennial Transmission Projects Report includes an update on the status of Minnesota utilities' efforts to meet their short- and long-term renewable energy requirements. As shown in **Figure 9** below, Minnesota utilities project that they have procured adequate renewable capacity to meet Minnesota RPS needs through the 2016 statutory milestone. In 2020, however, Minnesota utilities estimate they will need to acquire approximately 1,600 MW to meet their Minnesota RPS and other states' RPS requirements. By 2025, the estimated gap increases to approximately 3,200 MW.

Figure 9. Renewable Energy MW Gap Analysis



According to recent utility reports, a number of Minnesota utilities have added renewable resources in 2012. Most Minnesota utilities continue to report having adequate renewable resources to meet the 2016, and in some cases, 2020 milestones. Significant additional renewable resources will still be required to meet the 2020 and 2025 RPS milestones.

Utilities are unlikely to procure all of the additional capacity in even increments, and there may be cost benefits for some utilities to acquire additional renewable resources ahead of the milestone dates. Thus, while significant additional wind resources need to be constructed to meet Minnesota utilities' RPS requirements for 2020 and 2025, utilities may choose to bring additional renewables online ahead of these milestone dates to take advantage of tax incentives, favorable pricing, or other advantages.

4.2.2 Southern Minnesota/Northern Iowa Premier Wind Resource

The MN–IA Project is strategically located in and adjacent to some of the region's strongest wind resources. **Figure 10** and **Figure 11** are 80-meter (m) height wind resource maps for Minnesota and Iowa published by the U.S. Department of Energy's Wind Program and the National Renewable Energy Laboratory ("NREL").

Figure 10. Minnesota Average Wind Speed

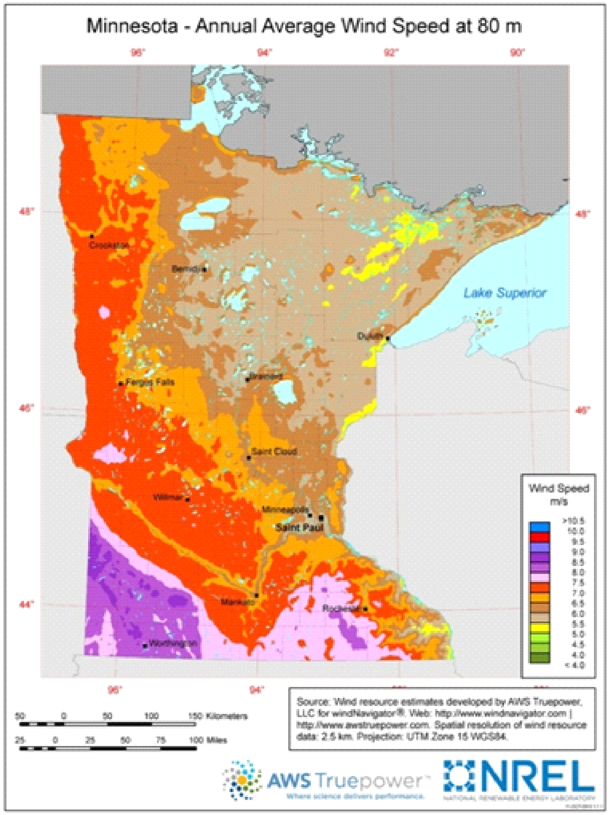
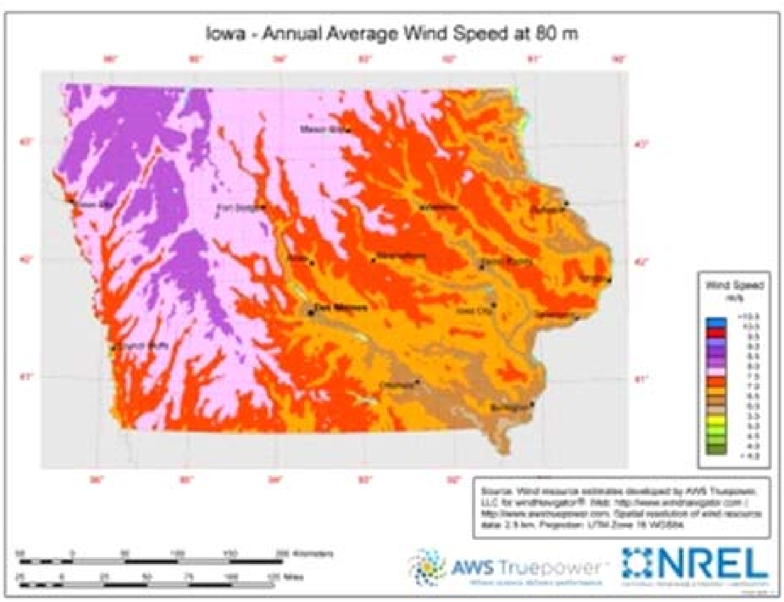


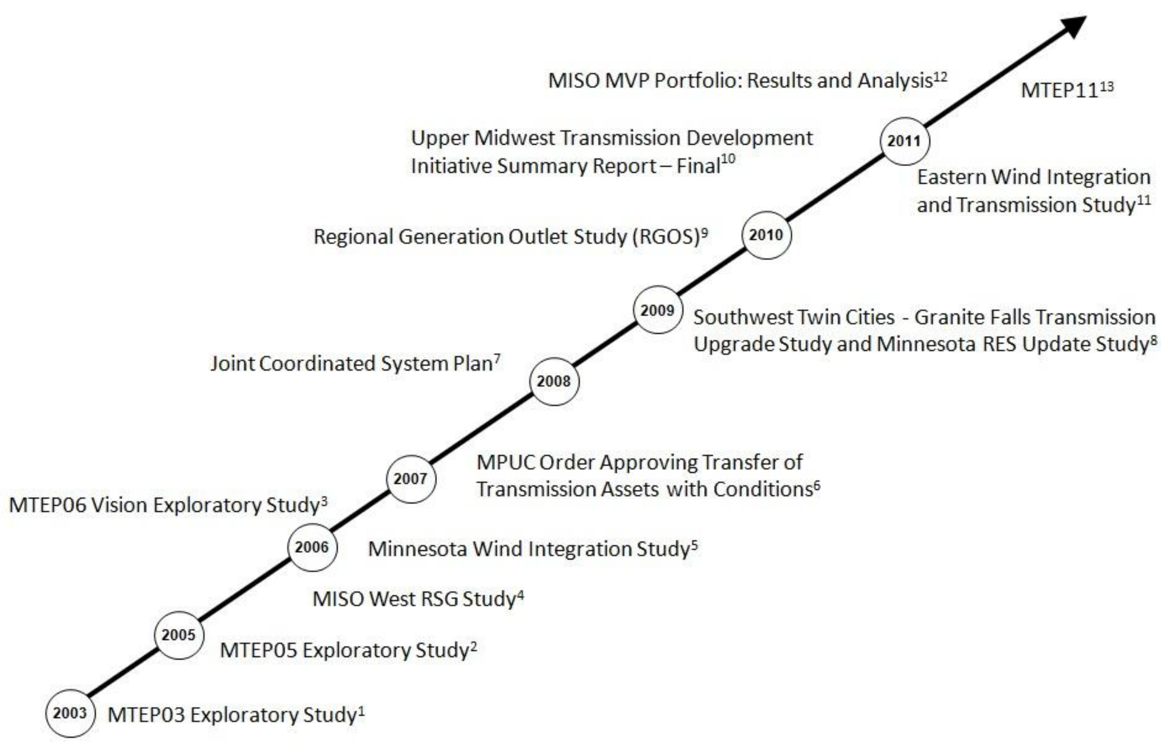
Figure 11. Iowa Average Wind Speed



As a result of the strong wind resources, southern Minnesota and northern Iowa have been consistently identified as a key region for the development of additional renewable generation.

To take advantage of this resource, stakeholders in the regional transmission system have been looking at transmission expansion scenarios for more than 10 years. **Figure 12** below summarizes the various transmission planning efforts that have identified the need to build an additional 345 kV or larger bulk transmission line through this region to enable the interconnection of additional wind resources.

Figure 12. Studies Identifying Need for 345 kV+ Bulk Transmission Lines in Southern Minnesota and Northern Iowa

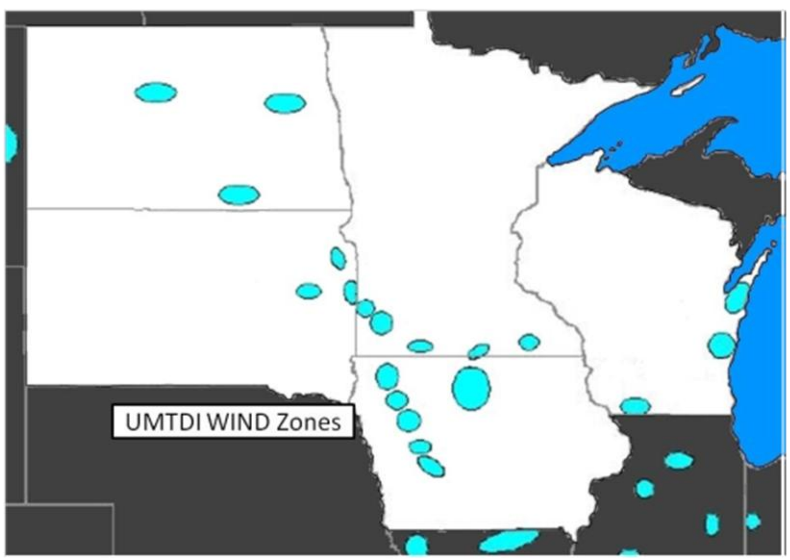


Many of the studies identified in **Figure 12** were conducted as long-range planning exercises to determine the most cost effective solutions for moving high volumes of wind from Midwest states with strong wind resources to larger load centers to the east. A bulk transmission line in southern Minnesota or northern Iowa, such as the MN–IA Project, has consistently been identified among the projects critical for facilitating the transportation of wind from the Buffalo Ridge area. **Appendix F** contains the citations to all studies listed in **Figure 12**.

UMTDI Final Report

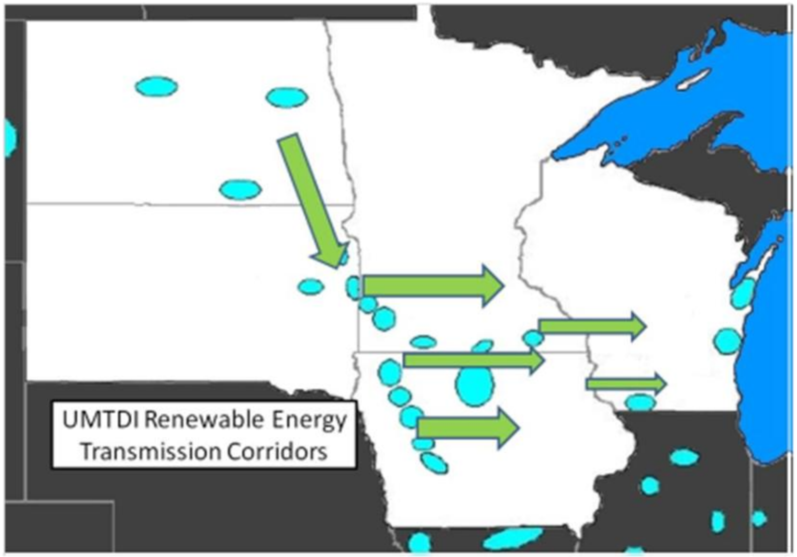
The Upper Midwest Transmission Development Initiative ("UMTDI") was formed in 2008 by the governors of Iowa, Minnesota, North Dakota, South Dakota, and Wisconsin to identify regional transmission planning and cost allocation issues associated with the delivery of renewable energy from wind rich areas within its five-state footprint. UMTDI published its Executive Committee Final Report ("UMTDI's Final Report") on these issues on September 29, 2010, a copy of which is included as **Appendix G** to this Application. UMTDI's Final Report identified 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. It 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. UMTDI's wind zones are illustrated in **Figure 13**.

Figure 13. UMTDI Wind Zones



UMTDI also identified, among others, a likely west to east EHV transmission path along the border between Minnesota and Iowa to deliver the generation from the UMTDI wind zones to load. UMTDI's EHV transmission paths are shown in **Figure 14**.

Figure 14. UMTDI EHV Transmission Paths

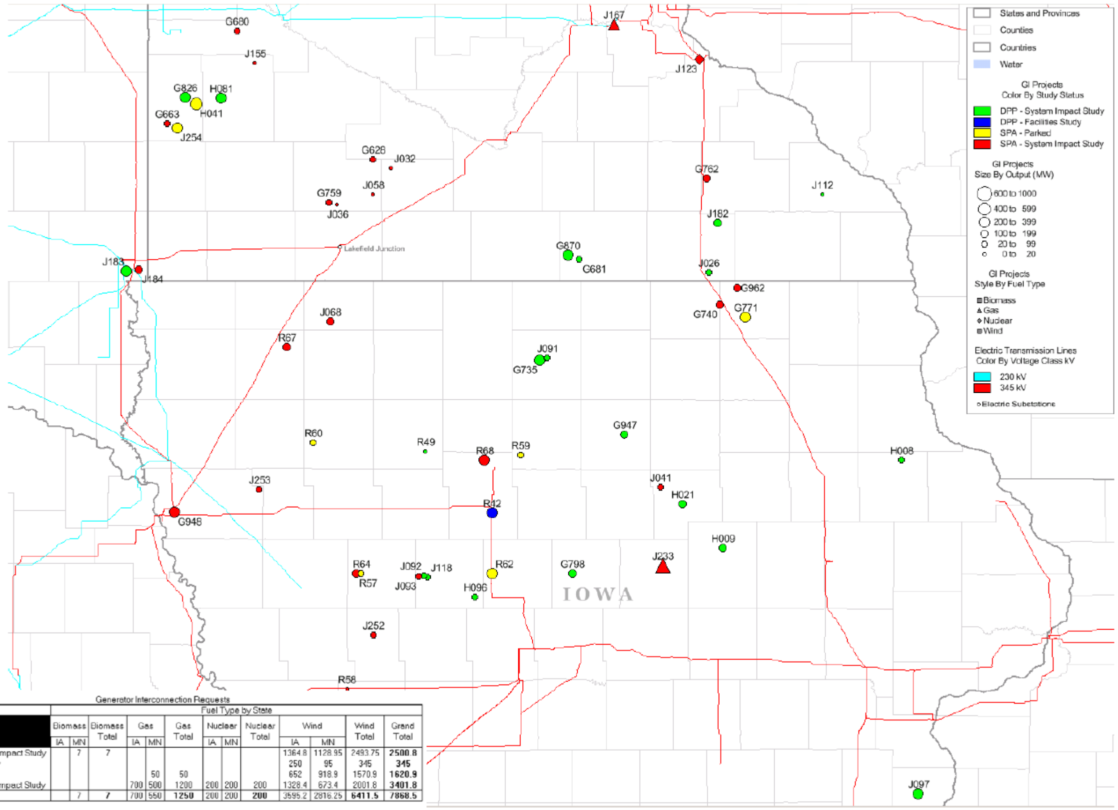


UMTDI noted that this transmission corridor generally coincided with a Lakefield Junction, MN to Mitchell County, IA 345 kV transmission line that MISO had identified as a potential project in its contemporaneous regional generation outlet capacity study discussed in Section 4.2.6 below. While UMTDI 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 of the identified transmission projects and corridors because they "appear to have value in all identified reasonable futures."

MISO Generator Interconnection Request Queue

Analysis of the current MISO generator interconnection queue requests also supports the assertion that more wind energy will be developed in southern Minnesota and northern Iowa if adequate transmission is available to deliver this power to load. **Figure 15** presents the geographic dispersion of the approximately 2,500 MW of current wind interconnection requests in Minnesota and Iowa that are in MISO's Definitive Planning Phase ("DPP"). Projects within the DPP are considered "late stage" projects likely to be built, as interconnection customers have made significant, largely nonrefundable, deposits to complete final interconnection studies.

Figure 15. MISO Interconnection Request Queue



Generator Interconnection Requests

Study Status	Fuel Type by State												
	Biomass		Biomass Total	Gas		Gas Total	Nuclear		Nuclear Total	Wind		Wind Total	Grand Total
	IA	MN		IA	MN		IA	MN		IA	MN		
DPP - System Impact Study		7	7							1364.8	1128.95	2493.75	**2500.8**
Facilities Study										250	95	345	**345**
SPA - Parked					50	50				652	918.9	1570.9	**1620.9**
SPA - System Impact Study				700	500	1200	200	200	200	1328.4	673.4	2001.8	**3401.8**
Grand Total		7	**7**	700	550	**1250**	200	200	**200**	3595.2	2816.25	**6411.5**	**7868.5**

As shown on **Figure 15**, a significant number of generator interconnection queue requests are located in southern Minnesota and northern Iowa. In addition, approximately 3,400 MW of wind remain in MISO's intermediary System Planning and Analysis Phase ("SPA"), waiting until adequate transmission is available to efficiently and economically connect to the grid before they move forward. The MVP Project 3 will enable some of these additional wind power projects in wind-rich Minnesota and Iowa to be developed.

4.2.3 Transmission Needed to Integrate Wind into Grid

Integration of large amounts of intermittent renewables requires a robust and flexible regional transmission system. While variability and uncertainty are common characteristics of all power systems (e.g., due to continually changing loads, imports and exports, etc.), wind generation adds to the variability and uncertainty of the power system. Numerous peer-reviewed studies have shown that power systems have much greater ability to handle variable renewable energy than commonly understood. Importantly, wind integration impacts are significantly reduced with:

- Large, liquid, and fast markets (e.g., sub-hourly, co-optimized energy and ancillary service markets);
- Large balancing areas with a strong grid that captures significant benefits from diversity (geographic, resource, load) and enables access to the physical flexibility that exists in the regional power system; and
- Forecasting wind generation to reduce uncertainty and costs.

Minnesota regulators have long-recognized that building sufficient transmission is an essential component to reliably integrate the wind generation needed to meet Minnesota's RPS. For example, the 2006 Wind Integration Study focused on the operational impacts of the variability of wind generation. The study found that the addition of wind generation to supply 20 percent of Minnesota retail electric energy sales can be reliably accommodated by the electric power system, but only if sufficient transmission investments are made to support it.

In support of this finding, the Wind Integration Study incorporated the MISO West Regional Study Group Study, which specifically assumed that additional 345 kV transmission lines would be built in southern Minnesota and northern Iowa. In particular, a 345 kV upgrade between the Lakefield and Winnebago substations was listed among the assumed transmission facilities supporting integration of a 20 percent wind scenario.

The 2008 and 2009 Minnesota Dispersed Renewable Generation ("DRG") studies focused on power flow for dispersed renewable generation (wind plants of 10 to 40 MW). The DRG studies found that the Minnesota transmission system is at its design capacity and that there are limited opportunities to interconnect new wind generation, even if it is dispersed around the state in smaller projects, without significant additional transmission investments.

In combination, these and other studies have shown that interconnection and integration of large amounts of wind generation for Minnesota and regional customers requires the addition of new high voltage transmission lines.[37]

[37] *See, e.g.,* "Joint Coordinated System Plan (JCSP),"Volume 1: Economic Assessment at 8-9 (2008) and EnerNex Corporation (for National Renewable Energy Laboratory), "Eastern Wind Integration and Transmission Study" at 38 (rev. Feb. 2011), available at: http://www.nrel.gov/docs/fy11osti/47078.pdf (accessed Mar. 4, 2013).

Within MISO, there are a number of efforts underway to make sure wind is appropriately integrated into the market. For example, MISO market rules for wind generation are evolving to reflect the significant role that wind generation now has in the Midwest. An example of a new rule that more fully integrates wind generation into the MISO market is the Dispatchable Intermittent Resources designation ("DIR"), implemented in June 2011. DIR is designed to provide many system benefits, including improved market efficiency through economic dispatch and better market signals, improved system reliability through better congestion management, by enabling wind generation to more fully participate in the real time market. What DIR does not do, however, is solve the fundamental problem of congestion-driven wind curtailments. Solving this problem requires new and expanded regional transmission.

4.2.4 Transmission Needed to Reduce Curtailment of Existing Wind Generation

In addition to helping to reliably interconnect new wind generation to the grid, high voltage transmission is also needed to relieve constraints that prevent existing generators from fully delivering wind energy to the market. The Fox Lake – Rutland 161 kV line has historically been one of the most frequent sources of manual curtailment for wind facilities. While the implementation of DIR has made it more difficult to pinpoint problem constraints, existing wind generators continue to report significant curtailment in the area of southern Minnesota and northern Iowa.

MISO has analyzed the ability of the existing transmission system to support the generation needed for utilities to comply with states' respective RPS mandates and goals. The analysis showed that without the 17 projects in MISO's MVP Portfolio, 34,711,578 MWh of wind energy would need to be 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.[38]

When existing wind generation is curtailed, ratepayers lose the benefit of cost-effective renewable energy. In addition, Minnesota landowners and local governments receive less revenue in the form of wind lease and easement payments and wind energy production taxes. Another consequence of congestion in areas of high wind energy production is that offsetting generation

[38] MISO Candidate MVP Reliability Analysis Wind Curtailment at 7. This curtailment analysis can be found in **Appendix L** to this Application.

must be run, typically fossil fuel generation, thereby reducing the potential environmental benefits associated with wind generation.

The existing system limitations have a negative effect on the local economies in the wind-rich areas of southwestern Minnesota; in 2012, the constraint resulted in nearly $500,000 of additional generation costs that ratepayers paid as a result of the constraint.[39]

4.2.5 Socioeconomic Benefits of Enhancing Outlet Capacity for Wind Generation

States have recognized that investment in wind energy is an investment in jobs and increases family incomes, particularly in rural areas. In Minnesota alone, 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. In Jackson County, for example, wind production taxes enabled a property tax cut for the 2012 budget. According to Jackson County Coordinator Jan Fransen, Jackson County is currently planning to issue bonds for construction of a new highway department facility based on the expected revenue the county will receive from wind energy production taxes.[40] In Iowa, the statistics are even more impressive: approximately 7,000 jobs, annual property tax payments of $19.5 million, and annual lease payments approaching $13 million. Other MISO states share similar success stories.

4.2.6 Insufficient Transmission Support for State RPS Mandates and Goals Within MISO Footprint

Looking beyond Minnesota, ten of the eleven MISO states have established policies supporting renewable or other forms of clean generation. For instance North Dakota, South Dakota, and Wisconsin each have 10 percent renewable portfolio goals. Ohio has a 12.5 percent requirement by 2024, and Illinois has a 25

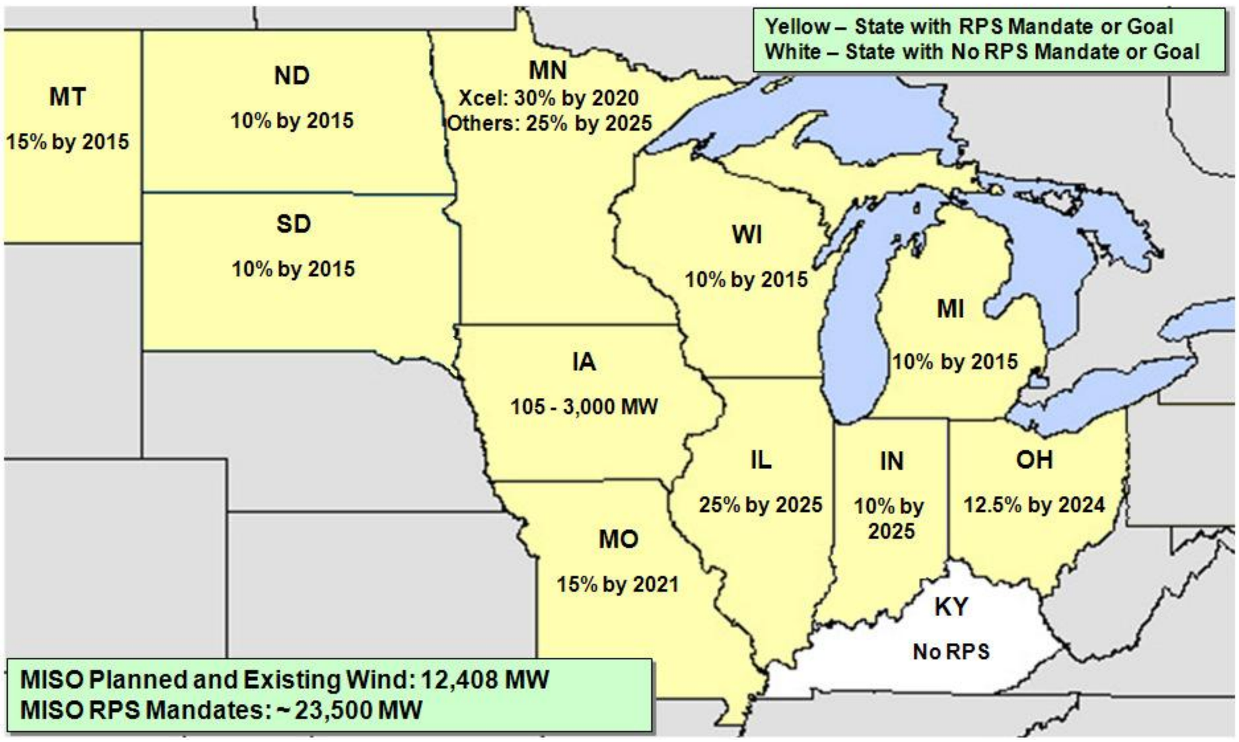
---

[39] For a twelve-month time period in 2011-2012, MISO reported $469,130 in market uplift costs associated with infeasible Long Term Transmission Rights relating to the Fox Lake-Rutland-Winnebago 161 kV constraint. See **Appendix I** of this Application, MTEP 2011 ("MTEP11") at 117. This was the third highest uplift cost in MISO's footprint for the 2011-2012 period reviewed.

[40] Julie Buntjer, "Wind Turbines Create Windfall for Counties, Townships," Worthington Globe (April 1, 2012), available at: http://www.dglobe.com/event/article/id/56283/ (accessed March 1, 2013).

percent requirement by the year 2025. **Figure 16**[41] below provides a summary of the MISO states' renewable portfolio requirements analyzed in MTEP11.[42]

Figure 16. MISO State Renewable Portfolio Requirements.



To meet the collective renewable portfolio standards within the MISO states, MISO estimates that an additional nearly 48 million MWh of renewables will need to be added by 2021, and approximately 55 million MWh will be needed by 2026.[43] The MISO states continue to add new renewable generation to meet this demand. On November 23, 2012, MISO reported that it reached a new wind peak, with a peak output of 10,012 megawatts.[44] This peak represented more than 25 percent of the generation output being used at that time.[45]

---

[41] MISO MVP Portfolio Results and Analyses (January 10, 2012) at 3.
[42] At the time MTEP11 was completed, Ohio utilities First Energy and Duke were members of MISO. Duke Energy and FirstEnergy have since left MISO and joined PJM Interconnection LLC.
[43] MISO MVP Portfolio Results and Analysis at 19.
[44] MISO. "Wind Output in MISO Surpasses 10GW; Nov. 23 peak represented 25 percent of total output" Press Release, (November 27, 2012), available at:

Regional Generation Outlet Study

Beginning in 2008, MISO, in conjunction with state utility regulators and industry stakeholders, initiated a collaborative 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. This study, the Regional Generator Outlet Study ("RGOS"), laid the primary foundation for the portfolio of MVP projects approved by the MISO Board of Directors in December 2011, including MVP Project 3.

A key early task of the RGOS process was the identification of areas where wind generation would likely be sited, in turn pointing to where development of additional high voltage transmission lines should be focused. In addition to looking at areas with the highest wind speeds, other factors were considered, such as the existing available transmission capacity, types of turbines likely to be used, transportation considerations, and individual states' desires to ensure that at least some (and in some cases all) wind development occur within its borders.[46]

RGOS identified "wind zones" in each state utilizing a ranking system consisting of weighted capacity factors, the distance of the zone to a significant load center, wind variability, and the distance of the zone to existing infrastructure (e.g., existing transmission railroads, major highways, etc.). With input from UMTDI and other stakeholders, MISO then evaluated how the MISO states' RPS could be met effectively and cost-efficiently from generation development within (i) "local" wind zones where the wind would serve in-state or localized load; (ii) "remote" or "regional" zones that would utilize higher capacity factor areas along longer transmission corridors to serve larger, more distant load; and (iii) a combination of wind zones that would serve both local and more remote load.[47] **Figure 17** shows the regional wind zones that MISO identified.[48]

https://www.midwestiso.org/AboutUs/MediaCenter/PressReleases/Pages/WindOutputSurpasses10GW.aspx (accessed February 21, 2013).

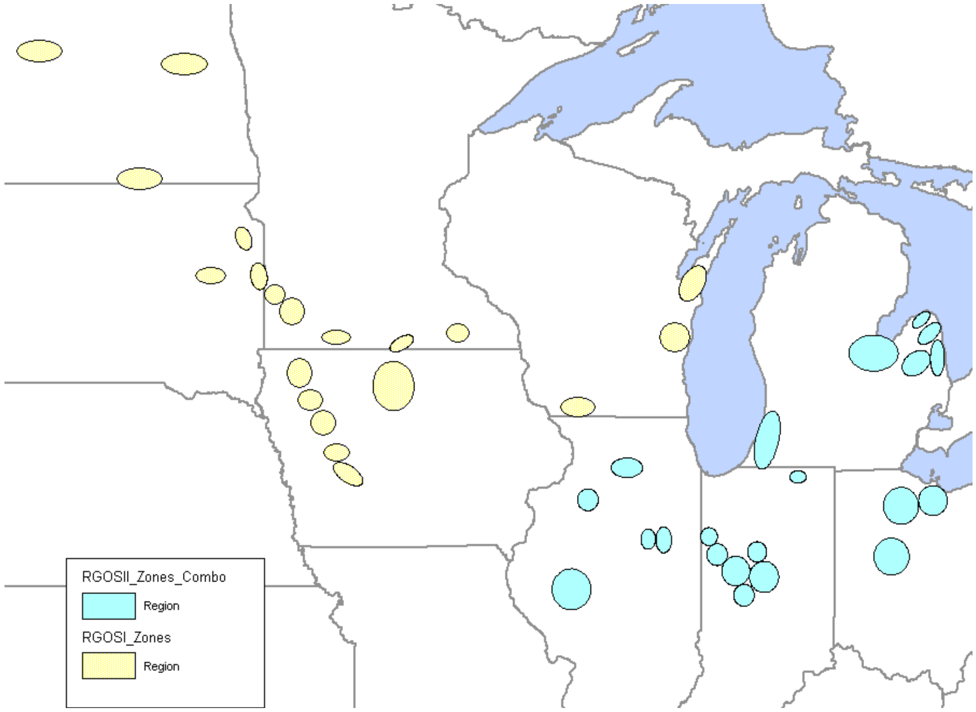
[45] *Id.*

[46] RGOS at 25.

[47] RGOS at 27.

[48] RGOS at 27.

Figure 17. Regional Wind Zone Identification[49]



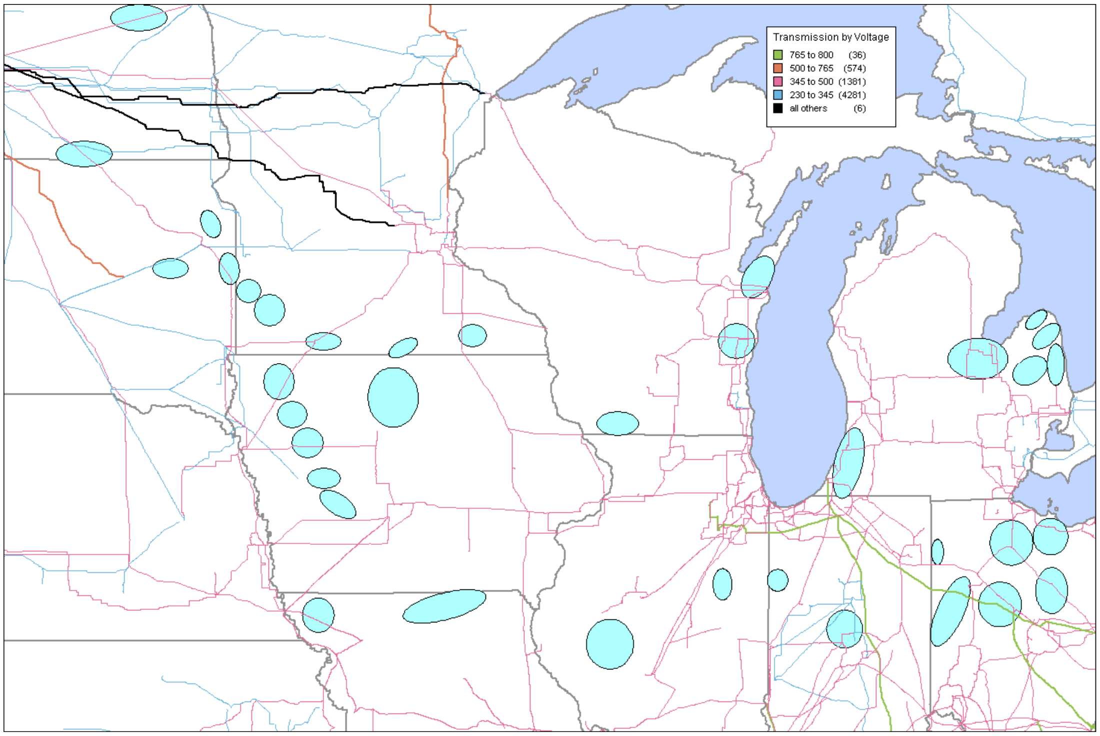
The RGOS identified a 345 kV line running from Lakefield Junction Substation in Minnesota to Mitchell County Substation in Iowa, and another 345 kV line running from the Sheldon to the Hazleton Substations in Iowa as two of five transmission lines in the Upper Midwest which were considered "no regrets" projects because they would meet identified needs and provide ancillary benefits in a variety of likely future generation scenarios.[50]

MISO's MTEP11

The wind zones MISO identified in RGOS were then subjected to further analysis in MISO's 2011 transmission planning process. That analysis concluded that the distribution of wind zones (re-labeled "energy zones") across the region provided the best method of meeting the RPS requirements at the least overall cost to the system.[51] MISO's MVP energy zones are depicted in **Figure 18** below.

[49] RGOS at 28.
[50] **Appendix G**, UMTDI at 9. The other four projects are (i) Big Stone – Brookings 345 kV line; (ii) Brookings – Twin Cities [Hampton] 345 kV line; and (iii) La Crosse – Madison – Dubuque – Spring Green – Cardinal 345 kV line.
[51] MISO MVP Portfolio Results and Analysis at 18.

Figure 18. MISO MVP Energy Zones



MISO also analyzed the project recommendations that came out of the RGOS process to ensure they met the criteria to be included in MISO's MVP Portfolio.[52] MISO's analysis determined that the Lakefield Junction – Mitchell County 345 kV line in combination with the Sheldon – Webster – Hazleton 345 kV line could be modified to more effectively enable the states to meet the state RPSs as set forth below:

- a 345 kV line running east from Lakefield Junction to Winnebago Junction in Minnesota, which then turns south to run through Winnco, Iowa to Burt, Iowa, where it interconnects with a new 345 kV line that runs east from Sheldon, Iowa to Burt, and then turns south and runs to Webster, Iowa;[53] and

[52] **Appendix I,** MTEP11 at 46. Candidate MVPs from RGOS were evaluated to determine whether they could reliably enable MISO states to meet their renewable energy mandates. *Id.* at 49.

[53] ITC Midwest has conferred with MISO regarding the move to Huntley Substation and understand that MISO agrees that running the 345 kV line from Lakefield Junction to the new Huntley Substation is not electrically different than running it from Lakefield Junction to the existing Winnebago Substation.

- a 345 kV line that runs east from Winnco to Lime Creek, Iowa, and then turns south to run through Emery to Franklin, Iowa, where it turns east again to run through Blackhawk to Hazleton, Iowa.

As a result, MISO recommended - and its Board of Directors approved – the above combination of 345 kV lines for construction as MVP Projects 3 and 4, respectively.[54]

4.3 CONGESTION ON FOX LAKE-RUTLAND-WINNEBAGO 161 KV LINE

The Fox Lake – Rutland – Winnebago 161 kV line constraint results from the line being heavily loaded with power generated by area power plants, including wind farms. When this line is constrained, the ability of wind generated in southwest Minnesota to reach market is limited. The loading of the Fox Lake – Rutland – Winnebago line has increased over time as new wind farms have come into service. At times, the loading is so high that some wind generated power needs to be curtailed to maintain the safe operation of the electrical system. This means that not all power that is produced is able to reach the market. For example, prior to the implementation of DIR, there were 8,005 curtailment hours in 2009, and 20,365 hours in 2011. In 2012, with DIR, there were 10,430 curtailment hours.[55]

The limited capacity of the transmission system has a negative effect on the local economies in the wind-rich areas of southwestern Minnesota; more wind generation could be interconnected to the grid if the transmission infrastructure necessary to handle it was in place.

The Fox Lake – Rutland – Winnebago 161 kV constraint also contributes to increased system operational costs. In 2012, the constraint resulted in nearly $500,000 in market uplift costs for infeasible Long Term Transmission Rights relating to the Fox Lake-Rutland-Winnebago constraint. This was the third highest uplift cost in MISO's footprint for the time period of summer 2011 through winter 2012.[56] In 2011, this constraint also resulted in 1,981 binding hours which impacted MISO's Day-Ahead Energy Market.[57] The problem did not

---

[54] **Appendix I**, MTEP11 at 43.

[55] https://www.midwestiso.org/Library/Repository/Meeting%20Material/Stakeholder/RSC/2013/20130129/20130129%20RSC%20Item%2014%20Wind%20Curtailment%20Data.pdf.

[56] **Appendix I**, MTEP11 at 117.

[57] See **Appendix H** of this Application, MISO Response to ITC Midwest LLC Regarding Commission Order Requesting Data Dated May 15, 2012 ("MISO Response to May 2012 MPUC

diminish in 2012; binding hours for the Fox Lake – Rutland constraint totaled 1,222 through July 2012.[58]

The Commission has recognized the need for additional transmission facilities to relieve the constraints on ITC Midwest's system in Minnesota. In its order approving the transfer of IPL's transmission facilities to ITC Midwest, the Commission ordered that ITC Midwest "shall abide" by the commitments, terms, and conditions set forth in its December 12, 2007 Settlement Agreement with the Department, which included condition 13.d: "That ITC Midwest will resolve the system constraints in the IPL service territory as reported by MISO."[59] And in May 2012, the Commission identified the specific need to address the constraint associated with the Fox Lake – Rutland – Winnebago 161 kV line:

> ITC shall file the following . . . :
>
> * * *
>
> b. A report on MISO projects that address constraints in the MN NCA and ITC's plans to implement such projects, including its plans for the Lakefield-Fox Lake-Rutland-Winnebago-Hayward-Adams 161 kV line.[60]

In its compliance filing, ITC Midwest reported that MISO is recommending construction of the MN-IA Project, among others, to address constraints in the Minnesota NCA.[61]

4.4 REDUCED SYSTEM RELIABILITY DUE TO SPSS FOR CONGESTED FOX LAKE-RUTLAND-WINNEBAGO 161 KV LINE

ITC Midwest's 161 kV system in southwest Minnesota is highly congested, particularly the Fox Lake – Rutland – Winnebago 161 kV line, which MISO has

Order"), Table of ITC Midwest Binding Constraints Impacting Minnesota Nodes ("Constraint Table") at 1-5.

[58] **Appendix H**, MISO Response to May 2012 MPUC Order, Constraint Table at 6-7.

[59] *In the Matter of the Joint Petition for Approval of Transfer of Transmission Assets of Interstate Power and Light Company to ITC Midwest LLC*, Docket No. E001/P A-07-540, ORDER APPROVING TRANSFER OF TRANSMISSION ASSETS, WITH CONDITIONS at 7 (Feb. 7, 2008).

[60] *Id.*, ORDER REQUIRING FILINGS at ordering point 1.b (May 15, 2012).

[61] *Id.*, ITC Midwest's Compliance Filing at 2 (June 28, 2012).

identified as one of the most constrained lines on ITC Midwest's system.[62] There is no 345 kV path to handle the flow of west-to-east energy from Jackson County to Mower County in southern Minnesota, causing heavy loading on the 161 kV line. And because the Fox Lake-Rutland-Winnebago line is so heavily loaded, a series of SPSs have had to be put in place to prevent overloading the line in the event of certain contingencies.

4.4.1 Special Protection System

Generally, a SPS is a remedial solution to a transmission reliability violation, often resulting from the installation of new facilities which either aggravate or initiate the violation. NERC defines a SPS as:

> An automatic protection system designed to detect abnormal or predetermined system conditions, and take corrective actions other than and/or in addition to the isolation of faulted components to maintain system reliability. Such action may include changes in demand, generation (MW and MVAr), or system configuration to maintain system stability, acceptable voltage, or power flows. An SPS does not include (a) underfrequency or undervoltage load shedding or (b) fault conditions that must be isolated or (c) out-of-step relaying (not designed as an integral part of an SPS). Also called a "Remedial Action Scheme".

SPSs can function well as operational solutions to address certain transmission deficiencies, but do not obviate the underlying need for new transmission facilities. Historically, ITC Midwest viewed SPSs as appropriate temporary solutions to a reliability problem until such time as infrastructure improvements could be built. As discussed below, ITC Midwest no longer views SPSs as appropriate solutions to reliability problems.

4.4.2 Limitations of SPSs

ITC Midwest's experience is that SPSs are generally undesirable for two reasons. First, their design and implementation places significant demands on a utility's

[62] 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. MTEP 2010 ("MTEP10") at 198-99.

transmission staff. Second, SPSs can greatly expand the complexity of operating the transmission system.

The strain on resources associated with developing and managing SPSs has been significant for ITC Midwest. As more wind farms began to connect to the transmission grid in northwest Iowa and southwest Minnesota, ITC Midwest began receiving additional requests from wind farm developers to add SPSs to the system to disconnect their wind farm from the grid in the event of various transmission line contingencies. Many of the SPSs were driven by timing concerns as wind farm projects, even those as large as 100-300 MW, can be constructed within a year of signing a Generation Interconnection Agreement, while upgrading or constructing the transmission lines necessary to accommodate the increased MW loaded onto the system can take several years.

Significant engineering resources are required to establish the SPSs. First, ITC Midwest must design an SPS that addresses the reliability issue that has been identified without creating new reliability issues. Second, there are NERC standards that directly relate to SPSs. These require the MRO, as the regional reliability authority, to review and approve the SPS.[63] There are also NERC standards that require ITC Midwest to demonstrate the functionality of the SPS and how its implementation would be coordinated with other existing SPSs. SPS's design must be fully redundant such that the loss of any one SPS component, including the communications scheme, will not prevent the transmission system from meeting reliability criteria. ITC Midwest is required to provide block diagrams, modeling assumptions, and performance analysis to the MRO for review and approval before an SPS can be implemented. Third, there are also various reporting requirements and yearly compliance activities that have to be recorded for each SPS.[64] These procedures have been determined to be essential since SPSs must operate as intended when called upon since their purpose generally is to mitigate reliability violations observed in the study horizon.

[63] The relevant NERC standards for the MRO are Standard PRC-012-1 (requiring review procedures for planning and using an SPS); Standard PRC-013-0 (requiring records of each SPS's objective, operation and modeling); and Standard PRC-014-0 (requiring assessment of the operation, coordination, and effectiveness of all installed SPSs).

[64] The relevant NERC standards for the transmission owner are Standard PRC-015-0 (requiring SPS data and documentation); Standard PRC-016-0.1 (requiring analyses and records of all SPS operations and misoperations); and Standard PRC-017-0 (requiring SPS maintenance and testing).

4.4.3 Complexity of Existing SPSs for Fox Lake-Rutland-Winnebago 161 kV Line

There are currently two SPSs that have been implemented to prevent overloading of the Fox Lake-Rutland-Winnebago Junction 161 kV line: the Fieldon Capacitor Bypass SPS, and the Nobles County – Wilmarth SPS. The history of these SPSs began in 2001. At that time, Great River Energy's Lakefield Generating Station ("LGS") power plant connected to the grid on Xcel Energy's Lakefield-Wilmarth 345 kV line. A loss of the 345 kV line from LGS to Wilmarth would result in all of the output power being directed to ITC Midwest's Lakefield Junction Substation, which overloads ITC Midwest's Lakefield-Fox Lake-Rutland-Winnebago 161 kV line sections. To alleviate this concern, GRE initially configured the LGS substation to be connected to the system via an unprotected tap off the 345 kV line so that a line fault on either the Lakefield – LGS 345 kV line or LGS – Wilmarth 345 kV line would trip both line sections and effectively isolate the LGS from the grid. But this configuration had the undesirable effect of causing the plant to lose station power during a contingency. To correct this, an SPS was then installed to trip the LGS generators if there was a fault on the LGS – Wilmarth.

After this, a series capacitor was installed on LGS – Wilmarth 345 kV line section to increase flows on the line which, by reducing flows to the south, mitigated power flows on transmission lines in Nebraska resulting from the generation additions at Buffalo Ridge**.** But the series capacitor could produce sub-synchronous resonance oscillations due to the interaction of the series capacitor with the generation at LGS if LGS were radially fed from the LGS – Wilmarth 345 kV line. This led to the Fieldon SPS being installed to bypass the series capacitor if the Lakefield – LGS 345 kV line were lost.

When Xcel Energy installed the Split Rock – Lakefield 345 kV line in 2007 to transfer more wind generation from southwest Minnesota and eastern South Dakota to the Twin Cities metropolitan area, the new line further aggravated the loading on ITC Midwest's 161 kV facilities. To address this, Xcel Energy implemented the Wilmarth/Nobles SPS to open the Split Rock – Lakefield 345 kV line if any line section is open between Lakefield and Wilmarth. When the Elm Creek and Elm Creek II wind farms were then constructed in 2009 and 2011, respectively, they were added to Wilmarth/Nobles SPS, as was the existing Trimont wind farm. Now there is a condition that if the LGS – Wilmarth 345 kV line trips, the SPS will trip any units at the LGS, as well as the Trimont and Elm Creek Wind Farms, as well as the Split Rock – Lakefield 345 kV line.

4.4.4 ITC Midwest's New SPS Policy

ITC Midwest has experienced increasing SPS requests in recent years and concluded that implementing additional SPS would lead to exponential growth in the demands placed on its engineering resources. Not only is upfront engineering and maintenance work required for the establishment of the SPS, but transmission operations staff needs to make sure the SPS is incorporated into their real-time security operations. Because of this, and the inherent risks associated with operating its transmission system with many SPSs, ITC Midwest has revised its policy on SPSs and will no longer support the addition of new SPSs on its system or on adjacent systems to address ITC Midwest loading issues:

> It is ITC Midwest policy that new Special Protection Schemes ("SPS") not be installed on the ITC Midwest system. ITC Midwest will not support the installation of an SPS on a neighboring system whose purpose is to mitigate potential issues on the ITC Midwest system. For those SPS's that have already been placed in service, periodic reviews should be performed to ensure that the scheme is deactivated when the conditions requiring its use no longer exist or system improvements to remove the SPS are warranted.[65]

[65] ITC Midwest Transmission Planning Criteria- 100 kV and Above at page 16. A copy of ITC Midwest's Transmission Planning Criteria is included as Appendix 54 of ITC Midwest's MN-IA Project Planning Study, located in **Appendix J** of this Application.

This Page Intentionally Left Blank

5.0 NEED ANALYSIS

The need for MVP Project 3 has been evaluated on a regional and local level by both MISO and ITC Midwest. This chapter summarizes those study efforts, starting first with the engineering and economic analysis undertaken by MISO, then turning to ITC Midwest's evaluation confirming that MVP Project 3 as the best alternative to address persistent transmission deficiencies in south central and southwest Minnesota caused by the increasing demands for generation outlet capability. The last part of this chapter describes a separate economic analysis ITC Midwest undertook in support of this application.

5.1 MISO's Analysis of MVP Projects 3 and 4

As noted in **Section 5.0**, MISO analyzed the project recommendations that came out of the RGOS process to ensure they met the criteria to be included in its 2011 MVP Portfolio. The candidate MVPs from RGOS were premised on the MVP criteria contained in Attachment FF of MISO's OATT:[66]

- Criterion 1 - the MVP must enable the transmission system to deliver energy reliably and economically in support of documented federal or state energy policy mandates or laws.

- Criterion 2 - the MVP must provide multiple types of economic value across multiple pricing zones with a total cost/benefit ratio prescribed in Attachment FF of the MISO Tariff; and

- Criterion 3 - the MVP must address at least one transmission issue associated with a projected violation of a NERC or Regional Entity standard and at least one economic based transmission issue that provides economic value across multiple pricing zones.

With respect to Criterion 1 - public policy needs - RGOS analyzed whether candidate MVPs could reliably enable MISO member states meet their respective RPSs.[67] But the ultimate goal of the MISO planning process is to reliably deliver energy to load at the lowest possible cost.[68] RGOS therefore sought to identify

[66] **Appendix I**, MTEP11 at 49.
[67] **Appendix I**, MTEP11 at 49.
[68] **Appendix I**, MTEP11 at 50.

transmission options that met RPS mandates at the lowest delivered wholesale cost:

> The cost calculation combined the expenses of the new transmission portfolios with the capital costs of the new renewable generation, balancing the trade offs of a lower transmission investment to deliver wind from low wind availability areas, typically closer to large load centers; against a larger transmission investment to deliver wind from higher wind availability areas, typically located further from load centers.[69]

Through this process RGOS identified three potential transmission portfolios.

MISO then selected projects for further evaluation in its 2011 Candidate MVP Portfolio Analysis that were common to all three RGOS portfolios and where previous reliability, economic, and generation interconnection analyses had been performed. This analysis evaluated the candidate projects against MISO's MVP cost evaluation criteria to determine whether they were indeed high value transmission projects with benefits that were widely distributed across MISO's footprint.[70]

Approximately 11 months of intensive studies were performed on the candidate portfolio, with heavy review and involvement by stakeholders, including the MISO states. The resulting 17-project MVP Portfolio:

> combines reliability, economic and public policy drivers to provide a transmission solution that provides benefits in excess of its costs throughout the MISO footprint. This portfolio, when integrated into the existing and planned transmission network, resolves about 650 reliability violations for more than 6,700 system conditions, enabling the delivery of 41 million MWh of renewable energy annually to load. The portfolio also provides strong economic benefits; all zones within the MISO footprint see benefits of at least 1.6 to 2.8 times their cost.[71]

---

[69] **Appendix I**, MTEP11 at 44-45.
[70] **Appendix I**, MTEP11 at 46.
[71] **Appendix I**, MTEP11 at 7.

Importantly, the MVP Portfolio also results in a transmission network that is able to respond to evolving reliability, generation, and policy needs within its footprint.

> [A]lthough the study was premised on a set of energy zones created to distribute wind capacity throughout the footprint in a least-cost pattern, these energy zones were also located with respect to existing infrastructure, such as transmission lines and natural gas pipelines. As a result the transmission will support a variety of different generation fuel sources, and with the fuel sources, a variety of generation policies.[72]

As noted above, RGOS identified the Spencer – Hazelton 345 kV line and Lakefield Junction – Mitchell County 345 kV line as candidate MVPs to mitigate the constraints on the transmission system in southern Minnesota/northern Iowa. MISO's analysis of these candidate MVPs showed, however, that they did not perform as well as the alternative MVPs that became MVP Project 3 and Project 4.[73]

MISO's analysis showed that the combination of the Spencer – Hazelton and Lakefield Junction – Mitchell County 345 kV lines relieved the majority of congestion on the 161 kV system in southern Minnesota. But it did not fully mitigate a critical constraint on the Iowa 161 kV system that prevents the flow of energy south from Minnesota into Iowa. Specifically, the Lime Creek – Emery portion of the Lime Creek – Emery – Floyd – Blackhawk constraint in northern Iowa was not mitigated, and the mitigation of the Emery – Floyd – Blackhawk portion of the constraint was only a 20 percent loading reduction.[74]

In addition, the Lakefield Junction – Mitchell County 345 kV line actually reduced the transfer capability of the existing Mitchell County – Hazelton 345 kV line, from 4,200 MW to 4,000 MW.[75] Thus the Lakefield Junction – Mitchell County 345 kV line would require the Mitchell County – Hazelton 345 kV line to be rebuilt, increasing the overall cost to relieve the congestion.

[72] **Appendix I**, MTEP11 at 8.
[73] **Appendix K** of this Application contains an excerpt of MISO's September 16, 2011 PowerPoint summarizing its analysis of the RGOS candidate MVPs for Iowa and MVP Projects 3 and 4 ("MISO Iowa MVP Analysis").
[74] **Appendix K**, MISO Iowa MVP Analysis at 16, 18, and 19.
[75] **Appendix K**, *Id*.

The combination of MVP Project 3 and Project 4 resolved these problems. The entire Lime Creek – Emery – Floyd – Blackhawk 161 kV line constraint was mitigated, with the reduction in loading along the line within a range of 45-60 percent.[76] And the transfer capability of the Mitchell County – Hazelton 345 kV line increased from 4,200 MW to 8,500 MW.[77]

5.2 ITC Midwest's Analysis of MVP Project 3

While MISO's analysis focused on the need for MVP Project 3 and Project 4 to reliably and cost effectively serve the entire MISO footprint to meet RPS requirements, ITC Midwest conducted its own transmission planning study focused on the local transmission system in southern Minnesota and northern Iowa to complement MISO's analysis, which confirmed the benefits of MVP Project 3 on a stand-alone basis. ITC Midwest's MVP Project 3 Planning Study ("ITC Midwest Project Planning Study") is in **Appendix J** of this Application.

The ITC Midwest Project Planning Study focuses on how MVP Projects 3 and 4, and a 161 kV transmission alternative, impact ITC Midwest's system in Minnesota under a range of wind generation scenarios. These scenarios identified the existing "base case" summer peak outlet capacity to be approximately 425 MW–445 MW , and summer shoulder (70 percent of peak) transfer capacity to be approximately 2,040–2,700 MW , depending on three different generation development scenarios.

The study's transfer capability and contingency analyses show that MVP Project 3 is the best alternative, alone and in combination with MVP Project 4, to (i) relieve constraints on the existing 161 kV system (including the Fox Lake-Rutland-Winnebago Junction 161 kV constraint); (ii) increase the incremental generation transfer capability of the transmission system in southern Minnesota and northern Iowa to support wind and other generation resources; (iii) increase the reliable operation of the transmission system in southern Minnesota by eliminating the need for two SPSs on the existing system; and (iv) reduce the level of energy losses on the bulk transmission system.

5.2.1 Background

ITC Midwest's transmission system in southwest Minnesota and northwest Iowa is comprised primarily of 161 kV and 69 kV facilities. This system was initially

[76] **Appendix K**, MISO Iowa MVP Analysis at 23-25.
[77] **Appendix K**, *id*.

designed to serve load but has increasingly been called upon to support generation outlet. The primary generation source is wind, with developers seeking out the high wind speeds available in the Buffalo Ridge region. As detailed in **Chapter 4**, constraints on the system, including the Fox Lake – Rutland – Winnebago 161 kV line constraint, have limited the delivery of wind energy output from generation currently installed in the Buffalo Ridge region and prevented additional generation from being developed in this wind rich area. Because of the quality of the wind resource in southwest Minnesota and the renewable portfolio requirements of Minnesota and states throughout the MISO footprint detailed above, the demand for additional capacity to deliver wind energy is expected to continue to grow, further straining the existing 161 kV system absent additional improvements. Currently, there are approximately 7,868 MW of planned wind generation in the study area, as evidenced by projects participating in MISO's SPA and DPP studies in Minnesota and Iowa.

5.2.2 Geographic Scope

ITC Midwest analyzed alternatives based on their performance in southern Minnesota and northern Iowa. Alternatives were also analyzed with respect to how they resolved and/or created constraints on the existing transmission system. The general transmission study area is shown in **Figure 19** below. Elements within this study area and on neighboring systems were monitored.

Figure 19. Transmission Study Area

5.2.3 Alternatives

Planning engineers evaluated MVP Project 3 alone and in conjunction with MVP Project 4 as well as a 161 kV rebuild alternative. This alternative was considered because 161 kV is the primary transmission voltage in the study area, and an upgraded 161 kV transmission line would have some potential to address the need for greater generation outlet capacity, as well as reduction of existing system constraints in the study area. Further, the main constraint on the electrical system has historically been the Fox Lake – Rutland – Winnebago Junction 161 kV line. As noted in Minnesota's biennial transmission report for 2009, replacing just the conductor of the line is impractical because of the age of the line's structures. The existing structures cannot support heavier conductors. Accordingly, a 161 kV rebuild alternative that upgraded the Fox Lake – Rutland – Winnebago Junction 161 kV ("161 kV Rebuild Alternative") was studied. The current rating on this line is 168 MVA. In this study, the line was upgraded to

795 ACSR conductor with a rating 446 MVA, which is ITC Midwest's standard 161 kV conductor used in wind generation areas.

5.2.4 Generation Development Scenarios

Due to the uncertainty of predicting the location of actual generating facility locations, several different scenarios where analyzed to determine the effects of the MVPs on the transmission system. The wind zones where divided into two different groups, a Buffalo Ridge North group (the Lakefield, Split Rock, White, and Brookings areas), and a Buffalo Ridge South group (Sheldon, Sioux City, Raun, and Webster areas). Modeling scenarios were then developed to reflect different levels of generation from the North and South zones being delivered to two different sinks to provide alternative scenarios where wind generated energy is consumed in Minnesota and another where it is primarily exported. One sink consisted of the Minnesota utility areas and the other consisted of the utility areas located farther south and east in the MISO footprint, including Illinois, Missouri, Michigan, and Indiana. The resulting generation scenarios that were analyzed in the study are set out below:

- Base Case
  The Base Case represents the anticipated transmission system and generation that will exist in 2017 with no wind zone generation.

- Buffalo Ridge 25%N / 75%S Wind Zones – Minnesota Transfer
  simulates a 5,000 MW transfer from Buffalo Ridge generation to the Minnesota areas with the generation in the Buffalo Ridge north zone increased by 25 percent of the total transfer while generation in the south zone is increased by 75 percent of the total transfer.

- Buffalo Ridge 50%N / 50%S Wind Zones – Minnesota Transfer
  simulates a 5,000 MW transfer from Buffalo Ridge to the Minnesota areas with generation in the Buffalo Ridge north and south zones each increased by 50 percent of the total transfer.

- Buffalo Ridge 75%N / 25%S Wind Zones – Minnesota Transfer
  simulates a 5,000 MW transfer from the Buffalo Ridge generation to the Minnesota areas with the generation in the Buffalo Ridge north zone increased by 75 percent of the total transfer while generation in the south zone is increased by 25 percent of the total transfer.

- Buffalo Ridge 25%N / 75%S Wind Zones – MISO East Transfer
  simulates a 5,000 MW transfer from Buffalo Ridge generation to the areas located south and east in the MISO footprint with the generation in the Buffalo Ridge north zone increased by 25 percent of the total transfer while generation in the south zone is increased by 75 percent of the total transfer.

- Buffalo Ridge 50%N / 50%S Wind Zones – MISO East Transfer
  simulates a 5,000 MW transfer from Buffalo Ridge generation to the areas located south and east in the MISO footprint with generation in the Buffalo Ridge north and south zones each increased by 50 percent of the total transfer.

- Buffalo Ridge 75%N / 25%S Wind Zones – MISO East Transfer
  simulates a 5,000 MW transfer from Buffalo Ridge generation to the areas located south and east in the MISO footprint with generation in the Buffalo Ridge north zone increased by 75 percent of the total transfer while generation in the south zone is increased by 25 percent of the total transfer.

5.2.5 AC Contingency Analysis

ITC Midwest undertook an AC contingency analysis to determine whether the addition of any of the alternatives would resolve existing thermal violations on the transmission system without creating an unacceptable level of new violations. NERC Category C contingencies, which include common tower outages, were included in the analysis. While all three alternatives provided acceptable performance, the 161 kV Rebuild Alternative did the poorest job of alleviating or eliminating violations.[78]

5.2.6 Incremental Transfer Capability Analysis

ITC Midwest also performed an analysis of the increase in the incremental transfer capability of the transmission system for MVP Project 3, MVP Projects 3 and 4 together, and an upgraded Fox Lake – Rutland – Winnebago Junction 161 kV line. This involved establishing what the anticipated transfer capability of the system would be under the various generation scenarios discussed above, given the expected 2017 load demands and anticipated system upgrades discussed in **Section 2.1** above, without MVP Projects 3 or 4, or the upgraded 161 kV line in service. The first step was to establish the base case for system transfer capability for each of the six generation scenarios during peak and shoulder conditions without any of the studied transmission options.. Then modeling was done to determine the level of incremental gain or loss in system transfer capability for the scenarios when: (i) MVP Project 3 alone was added to the system; (ii) MVP Projects 3 and 4 were both added to the system; and (iii) the upgraded 161 kV line alone was added to the system.[79]

This analysis showed that MVP Project 3 was superior to an upgraded Fox Lake-Rutland-Winnebago Junction 161 kV line in increasing outlet capacity within Minnesota and the region, and that the combination of MVP Projects 3 and 4 was the best at doing so.

---

[78] **Appendix J**, ITC Midwest Project Planning Study at 10-11.

[79] **Appendix J**, ITC Midwest Project Planning Study, Appendices 3-50 contain the complete FCITC results for each case under each generation scenario. Appendices 3-10 contain the results for the Buffalo Ridge 25%N / 75%S Gen – Minnesota scenario; Appendices 11-18 contain the results for the Buffalo Ridge 50%N / 50%S Gen – Minnesota scenario; Appendices 19-26 contain the results for the Buffalo Ridge 75%N / 25%S Gen – Minnesota scenario; Appendices 27-34 contain the results for the Buffalo Ridge 25%N / 75%S Gen – MISO East scenario; Appendices 35- 42 contain the results for the Buffalo Ridge 50%N / 50%S Gen – MISO East scenario; and Appendices 43-50 contain the results for the Buffalo Ridge 75%N / 25%S Gen – MISO East scenario.

Figures showing the performance of each of the alternatives in the summer peak and shoulder seasons are provided below. **Figure 20** and **Figure 21** show that both MVP Project 3 alone and MVP Project 3 and Project 4 together outperform the upgraded 161 kV alternative in improving generation outlet capacity in Minnesota.

Figure 20. Incremental Transfer Capability of Transmission Options Minnesota Summer Shoulder

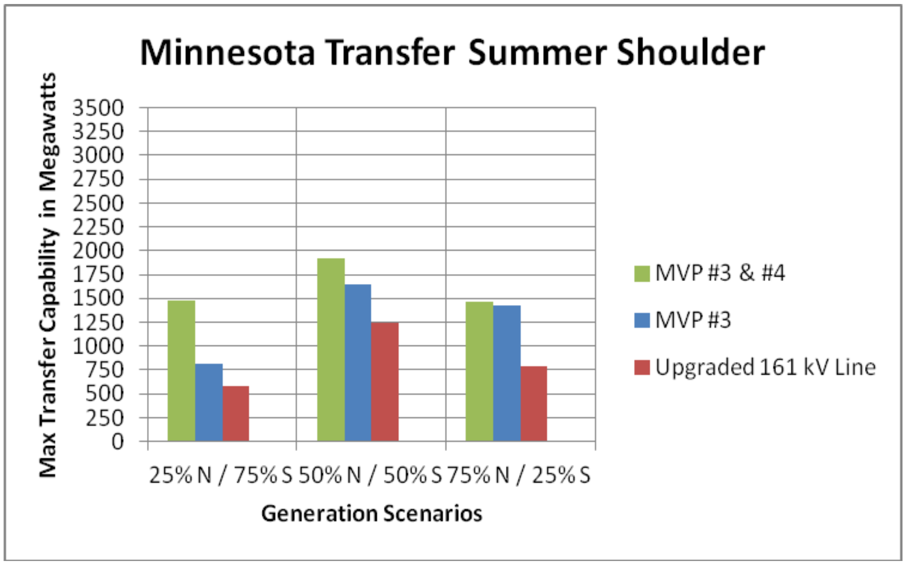


Figure 21. Incremental Transfer Capability of Transmission Options Minnesota Summer Peak

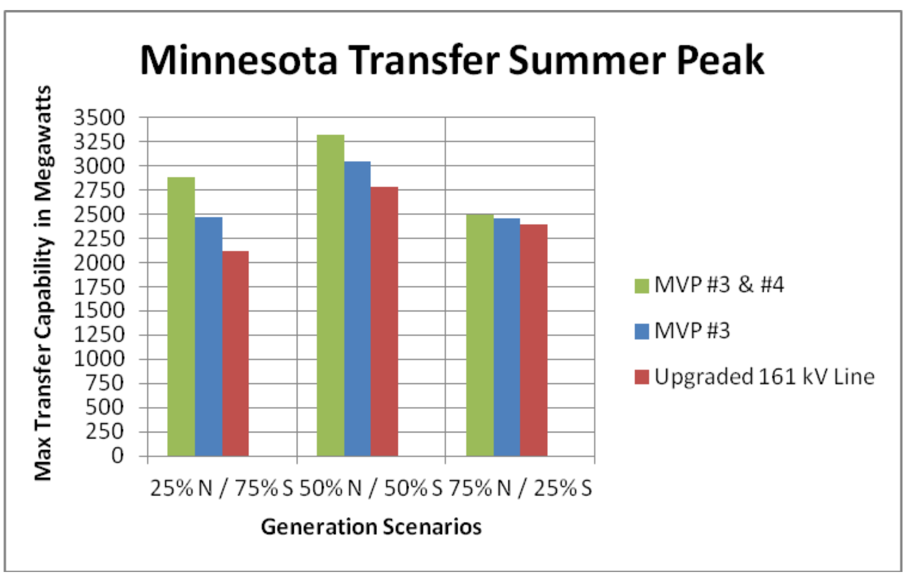


Figure 22 shows that neither MVP Project 3 nor an upgraded 161 kV line between Fox Lake – Rutland – Winnebago Junction significantly increase

generation outlet capacity to the eastern portion of the MISO footprint under two of the three generation scenarios during the high wind season. However, a significant increase in generation outlet capacity is achieved under all generation scenarios by a combination of MVP Projects 3 and 4.

Figure 22. Incremental Transfer Capability of Transmission Options MISO East Summer Shoulder

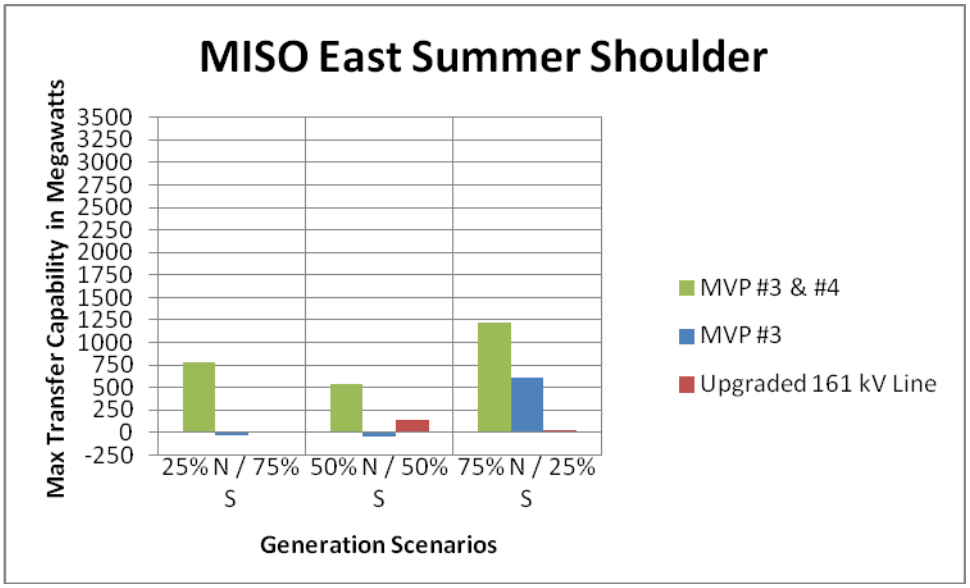
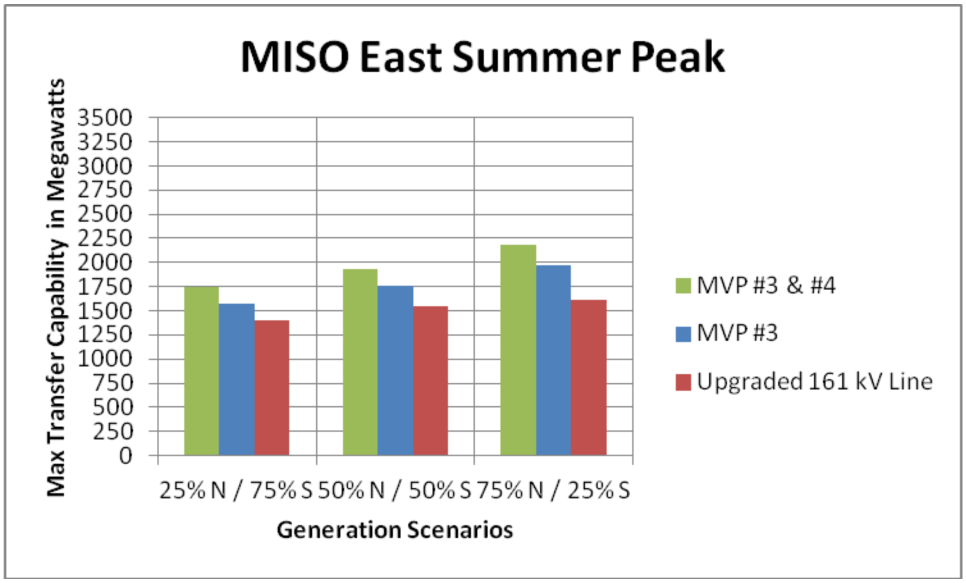


Figure 23 shows that while all three options significantly increase transfer capacity during summer peak, MVP Project 3 alone and in combination with MVP Project 4 again outperform an upgraded Fox Lake – Rutland – Winnebago Junction 161 kV line.

Figure 23. Incremental Transfer Capability of Transmission Options MISO East Summer Peak



5.2.7 Fox Lake-Rutland-Winnebago Junction 161 kV Constraint

All three alternatives relieved the Fox Lake – Rutland – Winnebago Junction 161 kV line constraint.[80]

5.2.8 Special Protection Schemes

ITC Midwest performed an analysis to determine whether the addition of MVP Project 3 would allow for the Fieldon Capacitor Bypass and Nobles County – Wilmarth SPSs to be retired. ITC Midwest developed a model that recreated the scenario, described above, for both the Fieldon Capacity Bypass and the Nobles County – Wilmarth SPSs that drove the need for the installation of the SPSs. MVP Project 3 was then added to the model and the scenario was again recreated. The results of the analysis indicate that the impact of MVP Project 3 on the transmission system would allow for the retirement of both SPSs.[81] In the end it will be MISO, however, that makes the final determination whether the SPSs can be retired once MVP Project 3 is in service.

5.2.9 Special Considerations

One important factor in wind generation development is the ultimate location of the generators. The wind zones and scenarios analyzed above capture, at a

[80] **Appendix J**, ITC Midwest Project Planning Study at Section 4.3.
[81] **Appendix J**, ITC Midwest Project Planning Study at Section 5.

system level, the different transfer capabilities that would be present under those scenarios. Further sensitivity analyses were undertaken to evaluate how the 161 kV Rebuild Alternative and MVP Project 3 alternatives would perform on a more micro level. Specifically, how would each alternative perform if generation were geographically concentrated near the existing 161 kV system. This scenario is particularly realistic in evaluating wind generation areas because existing wind generators seek to take advantage of the best wind resources which can be geographically limited. Existing wind generators also seek to take advantage of existing interconnection points by expanding their wind farms, creating additional demands on the interconnection facilities.

An analysis was performed to determine how much generation could be connected to the area transmission system before the capacity provided by the 161 kV Rebuild Alternative would be depleted. Using the Summer Peak base for the Fox Lake – Rutland – Winnebago Junction line,[82] the 161 kV Rebuild Alternative was monitored under contingency conditions while generation was increased in the surrounding area. The results showed that directly connecting 500 MW to the rebuilt line would consume all the capacity provided by the line's upgrade. The MVP Project 3 alone and in combination with MVP Project 4 is more efficient at supporting generation development in southwest Minnesota.

Another important consideration when evaluating the 161 kV Rebuild Alternative is its effect on overall regional reliability. MVP Project 3 establishes a new 345 kV connection between the Minnesota and Iowa 345 kV systems. The 345 kV voltage is the most efficient voltage in the region for moving large amount of energy long distances to load centers in the Twin Cities, Iowa metropolitan areas, and points east. This connection also provides system operators with flexibility in reliably operating the electrical grid by enabling more transfers between states when conditions warrant. While the 161 kV Rebuild Alternative could potentially resolve local overloading problems on the 161 kV system in southwest Minnesota, it provides little in the way of regional reliability benefits.

5.2.10 Energy Loss and Emissions Reduction

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. This not only reduces the costs ratepayers

[82] **Appendix J**, ITC Midwest Project Planning Study at Section 2.2.

incur for energy generation, but also reduces the emissions associated with the reduced generation.

The loss effects of MVP Project 3, MVP Project 3 and MVP Project 4, and the 161 kV Rebuild Alternative were analyzed.[83] The analysis showed that the loss reduction MVP Project 3 alone provides is more than double what the 161 kV Rebuild Alternative provides. The combination of MVPs Project 3 and Project 4 provides more than double the loss reduction of MVP Project 3 alone, and more than six times that of the 161 kV Rebuild Alternative. Based on this, MVP Project 3 and Project 4, together, would reduce emissions the most, followed by MVP Project 3. The 161 kV Rebuild Alternative would reduce emissions the least.

5.2.11 ITC Midwest Planning Study Conclusion

While MTEP11's analysis focused on MVP Projects 3 and 4 together, ITC Midwest's MVP Project 3 Planning Study confirms that construction of MVP Project 3 alone would address long-standing transmission needs in Minnesota. Specifically, MVP Project 3 would effectively relieve constraints on the existing 161 kV system. MVP Project 3 would also provide a critical addition to the 345 kV bulk transmission system serving Minnesota, Iowa and the region. ITC Midwest's planning study also confirms the conclusion in MTEP11 that the combination of MVP Project 3 and Project 4 as additions to the 345 kV bulk transmission system provides the most robust and efficient means of delivery for thousands of megawatts of new generation from the Buffalo Ridge to points in Minnesota and further south and east.

5.3 ECONOMIC ANALYSIS

To evaluate the economic impact of MVP Project 3, ITC Midwest engaged a consultant, the Analysis Group, to conduct a PROMOD analysis to estimate the impact of MVP Projects 3 and 4 on Minnesota LMPs.[84] The PROMOD model simulates the operation of the regional generation and transmission system, capturing the effect of transmission constraints on the ability to flow power from generator to load, and calculating the resulting LMPs at individual nodes within the system. The PROMOD market simulation model and data set employed in

[83] **Appendix J**, ITC Midwest Project Planning Study at Section 7.

[84] A copy of the Analysis Group's report, LMP Impacts of Proposed Minnesota-Iowa 345 kV Transmission Project ("LMP Analysis"), can be found in **Appendix M**.

the analysis were identical to those used by MISO in the MISO MVP Report assessing the 17 projects in the MVP Portfolio package.[85]

The PROMOD analysis used a "base case" in which all projects in the MVP Portfolio except MVP Projects 3 and 4 are in service, and computed the difference in LMPs between the base case and the "study case," in which all 17 MVP projects including Projects 3 and 4 are in service. The analysis was run for two future years, 2021 and 2026, using two scenarios: (i) Business As Usual-Low Demand, which assumes continuing "recession level" demand and energy growth; and (ii) Business As Usual-High Demand, assuming a return to pre-recession demand and energy growth levels.[86]

The study results show that when MVP Projects 3 and 4 are added to the transmission system, the average LMPs for Minnesota fall by $0.70 per MWh (2.4 percent) in 2021 and $0.71 per MWh (2.2 percent) in 2026 under the Business As Usual-Low Demand scenario. Under the Business As Usual-High Demand scenario, the LMP price reductions are similar: $0.61 per MWh (1.7 percent) in 2021, and $0.90 per MWh (2.0 percent) in 2026. These LMP changes result in annual reductions in wholesale energy payments for Minnesota load ranging from $48.3 million (2021 Business As Usual—High Demand) to $76.6 million (2026 Business As Usual-High Demand).[87]

LMP reductions from the implementation of MVP Projects 3 and 4 are also estimated to be widespread across the eight individual load-serving entities ("LSEs") in Minnesota included in the PROMOD analysis. Average LMPs decline for all eight LSEs in 2021, and for seven of the eight LSEs in 2026.[88]

ITC Midwest's economic evaluation based on wind curtailment estimates is on-going.

---

[85] **Appendix M**, LMP Analysis at 3.
[86] **Appendix M**, LMP Analysis at 3-4.
[87] **Appendix M**, LMP Analysis, Executive Summary.
[88] **Appendix M**, LMP Analysis, Executive Summary.

This Page Intentionally Left Blank

6.0 ALTERNATIVES ANALYSIS

ITC Midwest evaluated multiple alternatives in determining that the Project is the best solution to meet the identified needs, including generation, a higher voltage line; a lower voltage 161 kV alternative; and three different eastern terminations for a Lakefield Junction 345 kV line: at Rutland Substation near Fairmont, Minnesota; at the Adams Substation, southeast of Austin, Minnesota; and at Mitchell County Substation northeast of Osage, Iowa. ITC Midwest also analyzed whether re-conductoring the existing 161 kV line between the Lakefield Junction and Winnebago Junction substations could address the needs in its engineering analysis detailed in **Chapter 5**. MISO also evaluated alternatives, specifically different 345 kV configurations, before selecting MVP Project 3 as the best alternative. As discussed below, none of the alternatives performed as well as the proposed Project.

6.1 GENERATION ALTERNATIVE

During the evaluation of alternatives to MVP Project 3, ITC Midwest considered the addition of generation resources instead of transmission facilities and concluded generation was not a reasonable alternative. Generation cannot eliminate a deficit of generation outlet capacity on a transmission system, which is the problem in southern Minnesota/northern Iowa. Any generation additions would require further transmission system build out. As a result, neither fossil fueled nor renewable generation would meet the identified need, regardless of whether it was distributed generation or C-BED.

6.2 SYSTEM CONFIGURATION ALTERNATIVES

6.2.1 Upgrading Existing Transmission Lines

The 161 kV Rebuild Alternative was evaluated in the ITC Midwest study and determined not to be a reasonable alternative, as detailed in **Chapter 5**. While it provided acceptable performance in alleviating or eliminating contingency violations, the 161 kV Rebuild Alternative was nevertheless less effective than MVP Project 3, or MVP Projects 3 and 4 combined. The MVP Project alternatives also outperformed the 161 kV Rebuild Alternative with respect to increasing the outlet capacity of the local transmission system. Finally, the 161 kV Rebuild Alternative is less robust than the other alternatives. It will reach its capacity limits sooner in the face of growing generation than will the 345 kV alternatives, and it cannot maximize the performance of already existing 345 kV transmission in the area as the 345 kV alternatives do.

6.2.2 Transmission With Different Voltages/Conductor Arrays

Transmission lines in this region are operated at 69 kV and above. The standard transmission voltages in this area under the Project's 345 kV voltage are 69 kV, 115 kV, 161 kV, and 230 kV. The standard transmission voltages over 345 kV are 500 kV and 765 kV. Both higher and lower voltage transmission lines were considered as alternatives to the Project.

For higher voltage lines, ITC Midwest considered 765 kV and 500 kV. Since there are no existing transmission lines operated at those voltages in southwest Minnesota or northern Iowa, any additions at either of these voltages would require significant substation upgrades and costs for interconnection. In addition, no conditions have been identified that warrant a higher voltage in the study area. Therefore voltages above 345 kV were eliminated from further analysis.

Lower voltage transmission lines (230 kV, 161 kV, 138 kV, 115 kV, or 69 kV) were also considered. The 230 kV and 138 kV voltages were eliminated because there are no existing transmission lines operated at 230 kV or 138 kV in the immediate area. As a result, use of these voltage would be non-standard and require significant substation upgrades and costs for interconnection. The lower voltages of 115 kV and 69 kV would not provide enough capacity to address the identified outlet and delivery needs for existing and future generation in Minnesota and the region. As noted in **Section 6.2.1** above, an upgraded Fox Lake — Rutland — Winnebago Junction 161 kV transmission line did not meet the identified needs as well as MVP Project 3 alone or MVP Projects 3 and 4 in combination.

6.2.3 Transmission With Different Terminals/Substations

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 RPS obligations. These studies include the MTEP03 Exploratory Studies, Minnesota's Wind Integration Study, UMTDI's Executive Committee Final Report, and MISO's RGOS, undertaken by MISO, the UMTDI, and OMS. *See* **Figure 9**. Alternative transmission projects have been identified in these and other studies to meet the transmission constraint and generation outlet needs that the Project will meet. These alternatives are discussed below.

Spencer - Hazelton and Lakefield Junction - Mitchell County 345 kV Lines

These lines were candidate MVPs coming out of MISO's RGOS process. They did not do as good a job as MVP Projects 3 and 4 in alleviating existing constraints on the Iowa 161 kV system, and increasing the transfer capability of the Iowa 345 kV system, as discussed in detail in **Section 5.1**. They were therefore dropped by MISO in favor of MVP Projects 3 and 4.

Lakefield Junction – Rutland 345 kV Line

This line was identified in MTEP09 as a transmission option that would mitigate the constraints on the Fox Lake – Rutland – Winnebago Junction 161 kV line.[89] While it is true that a Lakefield Junction – Rutland 345 kV line would help relieve constraints on the Fox Lake to Rutland section of the 161 kV line, it resulted in constraints elsewhere. Specifically, the termination of the 345 kV line at Rutland resulted in constraints farther east on the 161 kV system, increasing loading on the 161 kV line between Rutland and Winnebago Junction.

Lakefield Junction – Adams 345 kV Line

In the 2009, Minnesota transmission owners identified the Lakefield Junction — Adams 345 kV line as a project that would alleviate the transmission constraint on the 161 kV system in southern Minnesota.[90] This line would run along a path north of and parallel to the path of the Lakefield Junction – Mitchell County 345 kV line that was a candidate MVP coming out of the RGOS process. And the line's termination at Adams would interconnect it with the north-to-south Adams – Mitchell County -- Hazelton 345 kV line with which the Lakefield Junction – Mitchell County also connected. Thus, the Lakefield Junction – Adams 345 kV line has the same problems as the Mitchell County – Hazelton 345 kV line, namely, it will not mitigate the Lime Creek – Emery 161 kV line constraint, and will reduce the transfer capability of the Adams – Mitchell County – Hazelton 345 kV line.[91]

6.2.4 Double-Circuiting Existing Transmission/Upsizing

ITC Midwest analyzed the potential to co-locate portions of the Project on the same structures as existing electric facilities.

[89] MTEP09 at 182.

[90] 2009 Minnesota Biennial Transmission Report at 246

[91] See Section 5.1 of this Application, and **Appendix K** at 16, 18, 19.

With respect to double circuiting with existing lines, the Company evaluated the electrical system performance if the Project were constructed using common towers. Specifically, ITC Midwest evaluated performance under a common tower outage (NERC category C contingency). The analysis showed that the system could withstand the outage of both the 345 kV line and the 161 kV line. As a result, the Company proposed Route A, co-locating the Project with the Lakefield Junction to Border 161 kV line in its existing right-of-way and alignment for the majority of the route.

ITC Midwest also considered whether the Project should be designed to be capable of operation at a higher voltage, *i.e.*, 345 kV/345 kV or capable of carrying a second circuit if a greenfield route were selected, i.e. 345 kV/161 kV. ITC Midwest concluded that the characteristics of the existing system and costs favor a 345 kV/161 kV configuration over a 345 kV/345 kV configuration. The existing 161 kV facilities form the backbone of the transmission system in the study area, and provide the principal source for the underlying load serving 69 kV system across southern Minnesota and northern Iowa. Removing these 161 kV sources from the underlying 69 kV system would cause reliability and voltage issues affecting the majority of the load on the system. Further, to uprate the existing 161 kV system to 345 kV would require costly upgrades to many of the existing 161 kV facilities. As a result, it appears there will be a need for the existing 161 kV system for the foreseeable planning horizon. Future generation and transmission needs may also call for future expansion of the 161 kV system.

Moreover, while MVP #3 provides significant outlet capability for generation in the study area, future generation may develop beyond the capacity provided for by the Project. In that event, and even if a new 345 kV line were to be determined to be the best alternative to meet the increased outlet need, it would not be prudent to double-circuit the new 345 kV line with the Project because that would create a NERC Category C contingency (common tower 345 kV/345 kV). Because two 345 kV lines on a common tower poses the risk that a single incident results in the outage of both circuits, the system must be able to reliably withstand the outage of both circuits under contingency. Therefore the capacity of the system would be limited to the amount of capacity available in the event both circuits were out of service and would not create significant additional capacity.

As a result of this analysis, ITC Midwest has proposed as an alternative that the Project could be built double-circuit-capable if located in new right-of-way. *See* Route B in **Figure 2** (**Section 1.2**). If Route B were selected, the Project would be placed on double-circuit 345/161 kV structures. The 345 kV side of the structures would be used for the Project, while the 161 kV side of the poles would be available for a new 161 kV line in the area when conditions warrant.

6.2.5 DC Lines

ITC Midwest does not have any DC lines in its system. An AC transmission system provides a high voltage backbone that is capable of gathering energy resources (including abundant renewable energy sources in the Buffalo Ridge area) from disparate and rural areas and transporting those resources to multiple load centers throughout the transmission system. In contrast, a DC transmission line's primary purpose is to deliver energy from a distant generation location (typically located several hundred miles away) to a load center without intermediate substation connections along its path. Without intermediate substations, DC lines cannot provide service reliability support to the many and various communities on a typical AC system. Nor can they facilitate the integration of renewable generation resources, which are developed in multiple locations and would interconnect at multiple points along the line.

A DC transmission line is also not an economically viable alternative here. Industry experience indicates that the total cost of a DC system becomes equal to an AC system at about 300 miles of untapped line length. This is primarily due to reduced energy losses on DC transmission. Depending on design constraints, there may also be a slight cost savings resulting from the need for only two conductors and the corresponding simplification of supporting structures. The advantages of long distance transmission capability and slightly lower line costs are countered by the increased expense of converting AC to DC or DC to AC at each end of the line as well as any intermediate substation. These conversion stations are costly, and historically the expense of conversion stations is only justifiable when power is transmitted over long, uninterrupted distances.

6.2.6 Underground Construction

The alternative of placing the proposed 345 kV transmission line underground was also considered, but ultimately rejected because of cost, construction, and maintenance considerations. Generally, overhead construction is the preferred configuration for transmission voltages of 115 kV or greater due to cost. Underground transmission lines also take longer to construct and more time to repair than equivalent overhead lines. In ITC Midwest's experience, underground transmission lines can cost anywhere from five to 10 times the cost of overhead lines of the same voltage.

This cost differential is based on the different design requirements for overhead and underground installations. Overhead transmission lines rely on the dielectric properties of air to provide insulation, thereby preventing the occurrence of short circuits. The properties of the air also efficiently dissipate heat away from the conductor surface.

When a transmission line is placed underground, the conductors must be adequately insulated from the ground and each other, and adequately cooled to prevent equipment failure. Thus, the conductors are wrapped with insulating materials and often placed inside oil filled pipes. The oil is circulated through cooling stations every few thousand feet along the line. Some electric cables have been designed with a specially-formulated plastic covering that does not require circulating oil to dissipate heat. However, the amount of current that can be applied to such conductors is limited.

Technologies for construction of underground lines include surface-cut open trenching, horizontal boring, and horizontal directional drilling. Trenching is usually the preferred method of underground construction because it is easily controlled and the most cost effective method for construction. Construction of a trench for the underground transmission line would result in greater temporary construction impacts than the proposed overhead line. Underground transmission construction as compared to overhead line construction increases noise, dust, traffic disruption, and requires more clearing and grading, and increases construction time.

Underground transmission lines present challenging service issues. They are subject to fewer outages because underground cables do not have temporary faults such as branches falling or ice breakage. When outages do occur, they are typically longer in duration because they are more difficult to isolate and require special expertise and equipment. As a result, the downtime associated with an underground transmission line fault will be longer in duration than the equivalent overhead line failure.

Because of the significantly greater expense associated with underground transmission, the use of underground technology is limited to locations where the impacts of overhead construction are unacceptable or where physical circumstances allow for no other option. Typical examples include congested downtown centers where there is no space available between city streets and adjacent buildings for adequate clearance, or airport approaches where an overhead transmission line cannot be constructed for safety reasons. No circumstance warrants underground construction based on ITC Midwest's examination of the environmental and land use setting associated with the proposed Project.

6.3 NO-FACILITY ALTERNATIVE

In accordance with its data exemption request, ITC Midwest has provided a discussion of the congestion on its 161 kV system in southern Minnesota which affects the area's transmission system reliability, economic efficiency, and ability to provide needed outlet capacity for renewable generation. None of the problems associated with this congestion will be addressed if the Project is not built.

This Page Intentionally Left Blank

7.0 CONSTRUCTION, RESTORATION, AND MAINTENANCE

SEQUENCE OF CONSTRUCTION OF NEW TRANSMISSION FACILITIES

Construction, after acquisition of property or rights-of-way, is anticipated to progress generally as follows: survey marking of the right-of-way, right-of-way clearing and preparation, grading or filling where necessary, installation of concrete foundations, installation of poles with insulators and hardware attached, conductor stringing, and installation of any markers required by state or federal permits on conductors. Right-of-way restoration will follow the completion of construction activities.

ENGINEERING DESIGN AND REGULATORY APPROVALS

Detailed transmission line and substation engineering design work generally begins after a route permit is obtained. The design of a transmission line is refined as more site-specific information is gathered for properties along the approved route. Throughout the design process, utilities work with landowners to design facilities to minimize impacts and ensure that all permit conditions are satisfied.

Plan and profile documents are prepared for each new high voltage transmission line and associated substation work. These plans provide a detailed descriptions of the facilities, including pole placement, and are submitted to the Commission and reviewed by the Department of Commerce staff before construction begins.

7.1 RIGHT-OF-WAY EVALUATION AND ACQUISITION

The right-of-way acquisition process for the transmission lines, associated facilities, and substations is discussed below.

7.1.1 Transmission Line

ITC Midwest plans to begin the transmission line right-of-way acquisition process early in the detailed design phase of the Project, which primarily occurs after a Route Permit has been issued by the Commission, although some right-of-way acquisition may begin earlier if circumstances allow. ITC Midwest typically acquires easements for transmission line right-of-way. The right-of-way evaluation and acquisition process includes title examination, initial owner contacts, survey work, document preparation, and easement negotiation and purchase. Each of these activities is described in more detail below. Generally, the existing right-of-way for the Lakefield to Border 161 kV line that would be followed by Route A measures 100 feet to 150 feet in width, with some variations. In the areas where the existing right-of-way can be used for the Project, ITC Midwest will seek permission to increase the width of the right-of-way through an easement.

Prior to contacting landowners, ITC Midwest will conduct a title search to identify all persons and entities that have a recorded interest in the affected real estate. A title company will be engaged to complete the public records search. A title report for each parcel will be prepared to document the legal description and the owners of record, and to report information regarding easements, liens, restrictions, encumbrances and other conditions of record.

After owners are identified, a right-of-way agent will contact each landowner or the landowner's representative. The right-of-way agent will describe how the Project may affect the landowner's property. At this time, the right-of-way agent will ask the landowner for information about any specific concerns related to construction of the Project on the landowner's property.

The right-of-way agent will also request the landowner's permission for survey crews to enter the property to conduct any necessary preliminary surveys and examinations. Surveys are conducted to establish right-of-way corridors, natural and manmade features, and associated elevations, which are used during detailed engineering of the transmission line. Soil borings may be taken by an independent geotechnical testing company to assess soil conditions and determine appropriate foundation design. During or before initial contact with a landowner after a Route Permit has been issued by the Commission, ITC Midwest will provide landowners with a copy of the Route Permit and any other materials the Commission determines are necessary.

The right-of-way agent will discuss with the landowner where the structure(s) will be located on the property, as well as the boundaries of the easement area. If requested by the landowner, ITC Midwest will stake the proposed transmission line's location (i.e., the survey crew will identify the proposed boundary of the easement and the approximate location of the structure or pole on the ground with a surveyor's stake).

The right-of-way agent will collect area land value data to determine the amount of just compensation to be paid for the rights to build, operate, and maintain the transmission facilities within the easement area and reasonable access to the easement area. The agent will provide the landowner with a map of the transmission line route across the landowner's parcel and will negotiate with the landowner regarding compensation for the transmission line easement. An appraisal may be obtained to resolve any complicated valuation issues. The landowner will be allowed a reasonable amount of time to consider the offer and to present any information that the owner believes is relevant to determining the property's value.

ITC Midwest is committed to working with the landowners to address their concerns. In most cases, an agreement can be reached to purchase the land rights. The right-of-way agent will prepare the documents required to complete each transaction, which may include an easement, a purchase agreement, and subordination agreements.

If a negotiated settlement cannot be reached, ITC Midwest will acquire real property rights through exercise of the power of eminent domain pursuant to Minnesota Statutes Chapter 117, including the "quick-take" process set forth in Minnesota Statutes, Section 117.042. The process of exercising the power of eminent domain is called condemnation.

In the event of condemnation, ITC Midwest will provide the landowner with a copy of each appraisal it has obtained for the property interests to be acquired. To initiate the condemnation process, ITC Midwest files a petition in the district court in the county where the property is located. If the court approves the petition, the court appoints a three-person condemnation "commission." The three people appointed must be knowledgeable of applicable real estate values. Once appointed, the commissioners schedule a viewing of each parcel identified in the petition. Next, the commissioners schedule a valuation hearing, where the utility and landowners present testimony and evidence regarding the just compensation for acquisition of the easement. The commission then makes an award of just compensation and files it with the court. Each party has 40 days from the filing of the award to appeal to district court for a de novo jury trial. In the event of an appeal, the jury would hear land value evidence and render a verdict. At any point in this process, the case can be dismissed if the parties reach a settlement.

Once right-of-way is acquired and prior to construction, the right-of-way agent will contact each owner to discuss the construction schedule and requirements. To ensure safe construction, special consideration may be needed for fences, crops, or livestock. For instance, fences or livestock may need to be moved, or temporary or permanent gates may need to be installed. In each case, the right-of-way agent would coordinate with the landowner, who would be compensated for Project-related construction damages, including crop losses.

7.1.2 Substations

When acquiring property for new substations or substation expansions, ITC Midwest typically follows the same general steps outlined above. The exception is that ITC Midwest acquires a fee interest, rather than an easement, in the land required for substations. ITC Midwest will generally seek to acquire a parcel of sufficient size to construct the fenced area of the substation and to provide a buffer between the substation and neighboring properties.

As the regulatory review process proceeds, ITC Midwest's representatives will consult with the owners of each proposed substation site to discuss the Project in detail and to obtain permission to access the site to conduct any surveys and soil borings required to finalize the substation's design. During the acquisition phase, landowners will be advised of construction schedules, needed access to the site, and required vegetation clearing. Where possible, ITC Midwest will negotiate and obtain necessary property rights through voluntary sale. If a voluntary sale agreement cannot be reached, ITC Midwest would acquire the substation parcel through condemnation.

ITC Midwest purchased 40 acres of property at the site proposed for its Huntley Substation in December 2012. At the time of the purchase, the selling landowner was aware of ITC Midwest's plans to use the site for the Huntley Substation if the Commission approves its proposal. Although ITC Midwest has purchased this site and believes that it is the most reasonable site for the Project to address all system needs, ITC Midwest understands that the Commission may identify a different site that it believes is more appropriate for the Huntley Substation. If the Commission grants a Route Permit that approves the 40-acre parcel owned by ITC Midwest for the Huntley Substation, the only additional fee interest ITC Midwest will need to obtain for the Project for a substation site in Minnesota will be for the expansion of the Lakefield Junction Substation. At this location, ITC Midwest will need to acquire at least three acres for the proposed expansion.

7.2 TRANSMISSION LINE CONSTRUCTION

Project construction will not begin until all necessary federal, State, and local approvals are obtained, property and rights-of-way are acquired, soil conditions are established, and final design is completed. Construction in areas where State, federal, or local approvals are not needed or have already been obtained may proceed while approvals for other areas of the Project, right-of-way acquisition, surveys, or design are still pending or in process. Precise timing and phasing of right-of-way clearing and construction will be dependent on permit conditions, system loading issues, when existing transmission lines can be taken out of service for construction to proceed, and workforce availability.

Construction, after acquisition of property or rights-of-way, is anticipated to progress generally as follows: survey marking of the right-of-way, right-of-way clearing and preparation, grading or filling where necessary, installation of concrete foundations, installation of poles with insulators and hardware attached, conductor stringing, and installation of any markers required by state or federal permits on conductors. Construction will follow ITC Midwest's standard construction and mitigation best practices developed from past project construction experience. ITC Midwest has developed best practices to address right-of-way clearing, staging, erecting transmission line structures, and stringing transmission lines. Construction and mitigation practices will also be developed specific to the Project based on the proposed schedule for activities, permit requirements, prohibitions, maintenance guidelines, inspection procedures, terrain, and other practices. For construction across agricultural lands, ITC Midwest is also in the process of developing an Agriculture Impact Mitigation Plan ("AIMP") that will be reviewed with the Minnesota Department of Agriculture to minimize impacts to these lands. ITC Midwest will also take advantage of weather conditions (e.g. frozen ground in wet areas for construction, etc.) when feasible to minimize impacts to lands.

ITC Midwest intends to design the transmission line structures for installations at the existing grades. As a standard design parameter, ITC Midwest will not generally grade or level structure sites with a slope of 10 percent or less. Where a site slope exceeds 10 percent, working areas will be graded or leveled with fill. If acceptable to the landowner, ITC Midwest proposes to leave the graded/leveled areas after construction for future maintenance activities. If not acceptable to the landowner, ITC Midwest will, to the best of its ability, return the grade of the site back to its original condition. Based on initial review, grades exceeding 10 percent are not anticipated as part of the Project.

ITC Midwest anticipates that construction of the Project will require the use of many different types of construction equipment including, tree removal equipment, mowers, cranes, backhoes, digger-derrick line trucks, track-mounted drill rigs, dump trucks, front-end loaders, bucket trucks, bulldozers, flatbed tractor-trailers, flatbed trucks, pickup trucks, concrete trucks, and various trailers or other hauling equipment. Excavation equipment is often set on wheel or track-driven vehicles. Construction crews will attempt to use equipment, when opportunities are available, that minimizes impacts to lands. Poles will be transported on tractor-trailers to staging areas or construction sites.

Staging areas will be required for the Project. Staging areas will be identified after a route is selected and are typically set up at intervals of approximately 25 miles along the route. These staging areas will be used as receiving locations for the delivery and storage of construction materials and equipment for the Project. For staging areas outside the transmission line right-of-way or not located on property owned by ITC Midwest, rights to use these areas will be obtained from affected landowners through individual agreements.

After a Route Permit is granted by the Commission, ITC Midwest will evaluate construction access opportunities by identifying existing transmission line rights-of-way, roads, or trails that run parallel or perpendicular to the transmission line. Where feasible, ITC Midwest intends to traverse the right-of-way acquired for the Project to access construction areas. This method of access will minimize impacts to landowners and adjacent properties. In some situations, private field roads, trails, or fields must be used to gain access to areas for construction. Additionally, where no current access is available or existing access is inadequate to cross roadway ditches or other features, new access roads may be constructed. Permission from landowners will be obtained prior to using any of these areas to access the right-of-way for construction. Where necessary to accommodate heavy construction equipment, including cranes, cement trucks, and hole-drilling equipment, existing roads may be upgraded or new roads may be constructed. If new roads must be constructed, in addition to permission from landowners, ITC Midwest will also obtain permissions necessary from the local road authority. During construction activities, ITC Midwest will work with appropriate road authorities to ensure proper maintenance of roadways traversed by construction equipment.

After right-of-way clearing and grading or filling, where necessary, has been completed, pole installation will begin. Most structures for the Project will have concrete foundations. To install a foundation, a hole is drilled that measures approximately eight feet in diameter for a 345 kV transmission structure and 25 or more feet deep. An angle or deadend structure may require a foundation up to 12 feet in diameter. A foundation for a 161 kV transmission structure typically measures eight to ten feet in diameter. The diameter and depth of the hole (and foundation) depend on soil conditions that are established during the initial survey and soil testing phases. Concrete is brought to the site by concrete trucks from a local concrete batch plant and filled around a steel rebar support cage. Once the foundation is set, installation of the actual pole can begin.

Poles will be moved from staging areas and delivered to the foundation. Insulators and other hardware are attached while the pole is still on the ground at the installation location. Using a crane, the pole is lifted, placed, and secured to the set concrete foundation. Some 161 kV poles may be directly embedded into the ground instead of set on concrete foundations for the Project. Direct embedding requires drilling a hole that measures approximately six to eight feet in diameter and 15 to 20 feet in depth, with some soil conditions requiring a deeper drilled hole.

Some soil conditions will require that construction mats be placed along the right-of-way or at a pole location to minimize soil disturbances. These mats can also be used to provide access across sensitive areas to minimize impacts including soil compaction, rutting, or damage to plant species.

Once the pole has been set, any remaining holes are back-filled with the excavated material or crushed rock. ITC Midwest prefers to spread any remaining excavated material in the area from which it was removed if landowner permission is obtained. If spreading of the excavated material is not permitted by the landowner, the material will be offered to the landowner for other use or completely removed from the site.

Conductor stringing is the last major component of transmission line construction. Stringing setup areas within the right-of-way or on temporary construction easements outside the right-of-way are established. Conductor stringing setup areas are typically located at two-mile intervals along a route. These operations require brief access to each structure to secure the conductor wire to the insulator hardware and the shield wire to clamps once final conductor sag, compliant with ITC Midwest procedures and NESC minimum clearances, is established. Where the transmission line crosses streets, roads, highways, or other energized conductors or obstructions, temporary guard or clearance poles may be installed during conductor stringing. These guard or clearance poles would not be installed in road rights-of-way without road authority approval. The temporary guard or clearance poles ensure that conductors will not obstruct traffic or contact existing energized conductors or other cables during stringing operations and also protect the conductors from damage. ITC Midwest intends to use compression splices for the conductor installation.

Special construction techniques may be necessary in environmentally sensitive and wetland areas. The most effective way to minimize impacts to these areas during construction is to span them where feasible. ITC Midwest will restrict construction traffic from waterways except under special circumstances and only after discussion with, and approval from, the appropriate resource agency. Where waterways must be crossed during conductor stringing, workers may walk across, use boats, or drive equipment across ice in the winter or use helicopters to facilitate installation of stringing equipment. ITC Midwest will attempt to complete construction and conductor stringing operations in these areas when the ground is frozen. When completing these activities under frozen conditions is not feasible, the methods discussed above and use of construction matting, where practicable, will be implemented.

Equipment fueling and other maintenance will occur away from environmentally sensitive and wet areas. These construction practices help prevent soil erosion and ensure that fuel and lubricants do not enter waterways or impact environmentally sensitive areas.

7.3 SUBSTATION CONSTRUCTION

The Project will require construction of the new Huntley Substation and expansion of the Lakefield Junction Substation. Construction of a substation facility begins with site preparation work, which involves grading and leveling the site to support electrical equipment and the control house. Site soils may or may not need to be replaced, depending largely on the existing soil conditions. As with transmission line construction, a construction plan will be developed and followed for substation projects. The construction plan would address the site preparation work that precedes substation construction. Much of what is referenced in the plan is a result of requirements for stormwater pollution prevention plans by the state in which the facility is being constructed.

Once substation grading has been completed, concrete foundations are then placed throughout the substation for pad-mounted substation equipment. Substation perimeter fencing (*i.e.*, chain link fence) will then be installed, likely after initial installation of concrete foundations. All substation equipment will be contained within the fenced area. Construction of the substation control house also takes place during this time. The control house encloses protective relaying and control equipment. Erection of steel structures follows the installation of foundations. These steel structures consist of rolled or tubular steel columns. Beams are used for mounting the electrical conductors and disconnect switches. Large high voltage equipment such as circuit breakers and transformers are installed following completion of the steel structures.

7.4 RESTORATION PROCEDURES

Crews will attempt to minimize ground disturbance whenever feasible during right-of-way clearing for, and construction of, the Project. Although these attempts will be made, areas will be disturbed during the normal course of work. Once construction is completed in an area, disturbed areas will be restored to their original condition to the maximum extent feasible. Temporary restoration in some areas may be required per National Pollution Discharge Elimination System ("NPDES") and Minnesota Pollution Control Agency ("MPCA") construction permit requirements.

After construction activities have been completed, a representative of ITC Midwest will contact a property owner to discuss any damage that has occurred as a result of the Project. This contact may not occur until after ITC Midwest has started restoration activities. If, during the course of construction of the Project, crops, fences, or drain tile have been damaged, ITC Midwest will repair damages or reimburse the landowner to repair the damages.

Ground-level vegetation disturbed or removed during construction of the Project will naturally reestablish to pre-construction conditions. Areas where significant soil compaction or other disturbance from construction activities occur will require additional assistance to reestablish the vegetation stratum and control soil erosion. Various best management practices to be used during the construction of the Project will be identified in the Stormwater Pollution Prevention Plan ("SWPPP") that will be prepared when ITC Midwest applies for an NPDES permit from the Minnesota Pollution Control Agency, but some commonly-used methods to control soil erosion are:

- Erosion control blankets with embedded seeds;
- Silt fences; and
- Straw bales.

Another aspect of restoration after completion of construction relates to the roads used to access staging areas or construction sites. After construction activities have been completed, ITC Midwest will ensure that township, city, and county roads used for purposes of access during construction will be returned to either the condition they were in, or to better condition than they were in before right-of-way clearing began. ITC Midwest will meet with township road supervisors, city road personnel, or county highway departments to address any issues that arise during construction with roadways to ensure the roads are adequately restored, if necessary, after construction is complete.

7.5 SOCIO-ECONOMIC IMPACTS OF CONSTRUCTION

The primary purpose of the Project is to maintain the reliability of electric service throughout the State and region, which will have overall positive impacts on the economy. Increasing transmission capacity in southwestern Minnesota and the rest of the State will provide long-term economic opportunities for further renewable energy development.

There also will be short-term impacts to community services as a result of construction activity and an influx of contractor employees during construction of the various projects. Utility personnel or contractors will be used for all construction activities. The communities near the various projects should experience short-term positive economic impacts through the use of area hotels, restaurants and other services by the various workers.

ITC Midwest employees, consultants and contractors will design, construct and maintain the proposed facilities. All workers will either be employees of the ITC Midwest or contract employees. Contractors may hire local workers on a temporary basis. It is estimated that 100 to 125 workers will be employed to construct the Project in Minnesota. These workers would be spread across the various worksites for the Project.

It is not expected that additional permanent jobs will be created. The construction activities will provide a seasonal influx of additional dollars into the communities during the construction phase, and materials such as concrete may be purchased from local vendors where feasible.

Long-term beneficial impacts from the proposed Project include increased local tax base resulting from the incremental increase in revenues from utility property taxes. Additional wind generation, enabled by the Project, will pay production taxes.

7.6 MAINTENANCE PROCEDURES

ITC Midwest and other utilities design transmission lines and substations to operate for decades while requiring minimal maintenance, particularly in the first few years of operation. Substantial work on an existing transmission line is typically only required after it has been exposed to the elements for a long period of time (55-plus years) or after a storm event has caused damage to the transmission line.

ITC Midwest estimates the service life of its transmission lines at approximately 55-60 years. Practically speaking, however, high voltage transmission lines are seldom retired. This infrastructure has very few mechanical elements and is designed and constructed to withstand weather extremes typical for the region. With the exception of severe weather, transmission lines rarely fail. Protective relaying equipment will automatically take these facilities out of service when a fault is sensed on the system, and these interruptions are usually only momentary. Outages necessary for scheduled maintenance are also infrequent. Because of these general operational characteristics, the average annual availability of transmission infrastructure is in excess of 99 percent.

Costs associated with the operation and maintenance of transmission facilities include the cost of inspections, usually done semi-annually by helicopter with a forester, vegetation planner, and line inspector; annually by ground with a forester; and once every four years by ground with a line inspector. Recent experience has shown that annual operation and maintenance costs for 345 kV transmission lines in the ITC Midwest system are approximately $2,000 per mile, including vegetation removal and maintenance, the previously-mentioned helicopter and ground patrols, and line and tower maintenance activities. The actual cost of transmission line maintenance depends on the setting, the amount of vegetation management necessary to ensure and maintain required safety clearances, the frequency of storm damage, structure types and materials, and the overall age of the transmission infrastructure.

Certain maintenance is required at substations to ensure proper operation within NESC and NERC requirements. Various equipment, including transformers, circuit breakers, batteries, and protective relays, must be periodically serviced according to the manufacturers' guidelines. Circuit breakers proposed to be installed as part of the Project will contain sulfur hexafluoride ("SF_6"), a greenhouse gas, as an insulator. Newer circuit breakers contain less SF_6 at lower pressures than older designs and do not sustain the releases associated with older circuit breakers. ITC Midwest intends to install dead-tank Mitsubishi Electric Power Products circuit breakers at the Lakefield Junction and Huntley substations.

8.0 OPERATING CHARACTERISTICS OF ELECTRIC TRANSMISSION LINES

8.1 OPERATING CHARACTERISTICS OVERVIEW

Overhead transmission line components typically include: (1) an above ground structure, often referred to as a pole or tower; (2) the wires carrying the electricity, called conductors; (3) insulators that connect the conductors to the structures and provide structural support and electrical insulation; (4) ground rods located below ground and connected to each structure; and (5) grounded shield wires to protect the line from direct lightening strikes. Transmission poles are generally made of either steel or wood. Overhead conductors are typically comprised of aluminum and steel strands.

During operation, transmission lines are for the most part passive elements of the environment. Their primary impact is aesthetic, i.e., a man made structure in the landscape. Because of the line's electrical characteristics, some chemical reactions occur around conductors in the air; noise can occur in some circumstances; interference with electromagnetic signals can occur; and electrical and magnetic fields are created around the conductors. All of these operating characteristics are considered as part of the design of a transmission line to prevent any significant impacts to its operation and, generally, to the overall environment.

8.2 OZONE AND NITROGEN OXIDE EMISSIONS

Corona consists of the breakdown or ionization of air within a few centimeters of conductors. Usually some imperfection such as a scratch on the conductor or a water droplet is necessary to cause corona. Corona can produce ozone and oxides of nitrogen in the air surrounding the conductor. Ozone also forms in the lower atmosphere from lightning discharges, and from reactions between solar ultraviolet radiation and air pollutants, such as hydrocarbons from auto emissions. The natural production rate of ozone is directly proportional to temperature and sunlight, and inversely proportional to humidity. Thus humidity or moisture, the same factor that increases corona discharges from transmission lines, inhibit the production of ozone. Ozone is a very reactive form of oxygen molecules and combines readily with other elements and compounds in the atmosphere. Because of its reactivity, it is relatively short-lived.

Currently, both state and federal governments have regulations regarding permissible concentrations of ozone and oxides of nitrogen ("NOx"). The national ambient air quality standards for ozone are 0.075 parts per million "ppm" on an eight hour averaging period. The state standard is 0.08 ppm based upon the fourth highest eight hour daily maximum average in one year. A small amount of ozone, however, is created due to corona from the operation of transmission lines (EPRI Transmission Line Reference Book 1982). The production rate of ozone depends on a number of operational parameters. The production rate of ozone due to corona discharges decreases with humidity and less significantly with temperature. The production rate decreases significantly as the conductor diameter increases and is greatly reduced for bundled conductors over single conductors. The production rate of ozone increases with applied voltage. Rain causes an increase in ozone production, but rain also accelerates the decay of ozone. Ozone production by high voltage transmission lines is not detectable during fair weather conditions. Ozone production under wet-weather conditions is detectable with special efforts, but is still considered insignificant. Studies designed to monitor the production of ozone under transmission lines have generally been unable to detect any increase due to the transmission line facility. The emission of ozone from the operation of transmission lines of the voltages proposed for the Project is not anticipated to have a significant impact on the environment.

There is not a state or national standard for general NOx. The national standard for nitrogen dioxide ("NO_2"), one of several oxides of nitrogen, is 0.053 ppm on an annual basis and the Minnesota State Air Quality Standard for NO_2 is 0.08 ppm. The operation of the proposed transmission lines would not create any potential for the concentration of these pollutants to exceed the nearby (ambient) air standards.

8.3 NOISE

Transmission Line Noise

Transmission conductors produce noise under certain conditions. The level of noise depends on conductor conditions, voltage level, and weather conditions. Generally, activity-related noise levels during the operation and maintenance of substations and transmission lines is minimal.

Noise emission from a transmission line occurs during certain weather conditions. In foggy, damp, or rainy weather, power lines can create a crackling sound due to the small amount of electricity ionizing the moist air near the wires. During heavy rain, the background noise level of the rain is usually greater than the noise from the transmission line. As a result, people do not normally hear noise from a transmission line during heavy rain. During light rain, dense fog, snow and other times when there is moisture in the air, transmission lines will produce audible noise equal to approximately household background levels. During dry weather, audible noise from transmission lines is barely perceptible. At substations, noise is created primarily by transformers.

Since human hearing is not equally sensitive to all frequencies of sound, the most noticeable frequencies of sound are given more "weight" in most measurement schemes. The A-weighted scale corresponds to the sensitivity range for human hearing. Noise levels capable of being heard by humans are measured in "dBA," which is the A-weighted sound level recorded in units of decibels. A noise level change of 3 dBA is barely perceptible to human hearing. A 5 dBA change in noise level, however, is clearly noticeable. A 10 dBA change in noise level is perceived as a doubling of noise loudness, while a 20 dBA change is considered a dramatic change in loudness. **Table 4** below shows noise levels associated with common, everyday sources.

Table 4. Typical Sound Pressure Levels Associated with Common Noise Sources

Sound Pressure Level (dBA)	Subjective Evaluation	Outdoor Environment	Indoor Environment
140	Deafening	Jet aircraft at 75 feet	
130	Threshold of pain	Jet aircraft during takeoff at 300 feet	
120	Threshold of feeling	Elevated train	Hard rock band
110		Jet flyover at 1000 feet	Inside propeller plane
100	Very loud	Power mower, motorcycle at 25 feet, auto horn at 10 feet	
90		Noisy urban street	Full symphony or band, food blender
80	Moderately loud	Diesel truck (40 mph) at 50 feet	Garbage disposal, dishwasher
70	Loud	B-757 cabin during flight	Vacuum cleaner, electric typewriter
60	Moderate	Air-conditioner condenser at 15 feet	General office
50	Quiet		Private office
40		Farm field with light breeze, birdcalls	Soft stereo music in residence
30	Very quiet	Quiet residential neighborhood	Bedroom, average residence (without TV and stereo)
20		Rustling leaves	Whisper
10	Just audible		Human breathing

Source: Adapted from Egan 1988 and Ramsey and Sleeper 1994

In Minnesota, statistical sound levels ("L Level Descriptors") are used to evaluate noise levels and identify noise impacts. The standards are expressed as a range of permissible dBA within a one hour period; L_{50} is the dBA that may be exceeded 50 percent of the time within an hour (i.e., 30 minutes), while L_{10} is the dBA that may be exceeded 10 percent of the time within the hour (i.e., 6 minutes).

Land areas, such as picnic areas, churches, or commercial spaces, are assigned to an activity category based on the type of activities or use occurring in the area. Activity categories are then categorized based on their sensitivity to traffic noise. The Noise Area Classification ("NAC") is listed in the MPCA noise regulations to distinguish the categories. **Table 5** identifies the MPCA established daytime and nighttime noise standards by NAC

Table 5. Noise Standards by Noise Area Classification (dBA)

Noise Area Classification	Daytime		Nighttime	
	L_{50}	L_{10}	L_{50}	L_{10}
1	60	65	50	55
2	65	70	65	70
3	75	80	75	80

Source: Minn. R. 7830.0050

The proposed Project is anticipated to have maximum calculated noise levels during rainy conditions. It is likely however, the sound of falling rain would result in inaudible noise from the Project. Noise during fair conditions is anticipated to be inaudible. Calculated noise levels are summarized in **Table 6**.

Table 6. Calculated Audible Noise for Proposed Transmission Line Designs

Operating Voltage	L_{50} Rain (dBA)		L_{50} Fair (dBA)	
	0′	100′	0′	100′
345 kV/161 kV	41	38	16	13
345 kV/161 kV Low Profile	43	39	18	14
345 kV/69 kV	41	38	16	12
345 kV	40	37	16	12
161 kV/161 kV	30	23	5	0
161 kV/69 kV	33	27	8	2
161 kV	24	17	1	0

Transformer Substation Noise

Transformer "hum" is the dominant noise source at substations. All of the substation modifications required for the Project will comply with the MPCA NAC noise standards.

8.4 RADIO, TELEVISION, CELLULAR PHONE, AND GPS

Corona from transmission line conductors can generate electromagnetic "noise" at the same frequencies that radio and television signals are transmitted. Minor interference with AM radio may occur immediately under or adjacent to a transmission line. Any interference would be expected to cease outside the 200-foot right-of-way. Care was taken during the routing process to ensure that transmission lines would be placed an adequate distance away from any towers associated with these facilities to avoid any safety or quality problems that could be a concern.

ITC Midwest does not anticipate that the Project will impact radio, television, cellular phones, or GPS units.

8.5 SAFETY

The Project will be designed in compliance with local, state, and NESC standards regarding clearance to ground, clearance to crossing utilities, clearance to buildings, strength of materials, and right-of-way widths. Appropriate standards will be met for construction and installation, and all applicable safety procedures will be followed during and after installation.

The proposed transmission lines will be equipped with protective devices to safeguard the public from the transmission lines if an accident occurs, such as a structure or conductor falling to the ground. The protective devices include breakers and relays located where the line connects to the substation(s). The protective equipment will de-energize the line should such an event occur. Proper signage will be posted on substations warning the public of the risk of coming into contact with the energized equipment.

8.6 ELECTRIC AND MAGNETIC FIELDS

The term electromagnetic fields ("EMF") refer to electric and magnetic fields that are coupled together, such as in high frequency radiating fields. For lower frequencies associated with power lines (referred to as "extremely low frequencies" or "ELF"), EMF should be separated into electric fields ("EFs"), measured in kilovolts per meter ("kV/m"), and magnetic fields ("MFs"), measured in milliGauss ("mG"). EFs are dependent on the voltage of a transmission line and MFs are dependent on the current carried by a transmission line. The intensity of an EF is proportional to the voltage of the line, and the intensity of an MF is proportional to the current flow through the conductors. Transmission lines in the United States operate at a power frequency of 60 hertz (cycles per second).

8.6.1 Electric Fields

There is no federal standard for transmission line electric fields. The Commission, however, has imposed a maximum electric field limit of 8 kV/m measured at one meter above the ground. *In the Matter of the Route Permit Application for a 345 kV Transmission Line from Brookings County, South Dakota to Hampton, Minnesota*, Docket No. ET-2/TL-08-1474, ORDER GRANTING ROUTE PERMIT (*adopting* ALJ Findings Of Fact, Conclusions and Recommendation at Finding 194 (Apr. 22, 2010 and as amended Apr. 30, 2010)) (Sept. 14, 2010). The standard was designed to prevent serious hazards from shocks when touching large objects parked under AC transmission lines of 500 kilovolt or greater. The standard was designed to prevent serious hazards from shocks when touching large objects parked under AC transmission lines of 500 kV or greater. The maximum electric field, measured at one meter above ground, associated with the Project is calculated to be 4.71 kV/m. Calculated EFs for the various structure types proposed for the Project are provided in **Table 7**.

Table 7. Calculated Electric Fields (kV/m) (3.28 feet above ground)

Structure Type	Maximum Conductor Voltage	Distance to Proposed Centerline												
		-300′	-200′	-100′	-75′	-50′	-25′	0′	25′	50′	75′	100′	200′	300′
Single Pole Davit Arm 345 kV/ 161 kV	362.25 kV/ 169.05 kV	0.05	0.10	0.30	0.57	1.67	4.45	3.33	0.74	0.37	0.21	0.12	0.03	0.02
Single Pole Davit Arm 345 kV/ 161 kV at Initial 345 kV/69 kV Operation	362.25 kV/ 72.45 kV	0.05	0.11	0.31	0.57	1.72	4.64	3.86	1.00	0.14	0.09	0.09	0.06	0.03
Single Pole Davit Arm 345 kV/161 kV with only one 345 kV circuit in service	362.25 kV	0.08	0.15	0.31	0.53	1.70	4.71	4.12	1.28	0.25	0.21	0.24	0.13	0.07
Single Pole Davit Arm Low Profile 345 kV/161 kV	362.25 kV/ 169.05 kV	0.03	0.09	0.83	2.00	4.36	3.55	2.46	0.27	0.92	0.51	0.21	0.03	0.02
Single Pole Davit Arm Low Profile 345 kV/161 kV with only 345 kV circuit	362.25 kV	0.05	0.11	0.82	1.97	4.34	3.66	3.32	1.68	0.89	0.57	0.39	0.13	0.06
Single Pole Braced Post 161 kV/ 161 kV	169.05 kV/ 169.05 kV	0.00	0.01	0.03	0.02	0.12	0.96	1.38	0.96	0.12	0.02	0.03	0.01	0.00
Single Pole Braced Post 161 kV/161 kV with 161 kV/69kV Initial Operation	169.05 kV 72.45 kV	0.01	0.02	0.06	0.05	0.12	1.14	1.61	0.20	0.05	0.03	0.02	0.01	0.01
Single Pole Braced Post 161 kV	169.05 kV	0.01	0.03	0.12	0.22	0.45	0.92	1.96	1.35	0.37	0.19	0.12	0.03	0.01

8.6.2 Magnetic Fields

There are presently no Minnesota regulations pertaining to MF exposure. ITC Midwest provides information to the public and employees so they can make informed decisions about MFs.

The maximum MF profiles around the transmission lines for each structure and initial operation being considered for the Project is shown in **Table 8**. MFs were calculated under normal system conditions (system intact) for the expected peak and average current flows. The peak MF values are calculated at a point directly under the transmission line and where the conductor is closest to the ground. The same method is used to calculate the MF at the edge of the right-of-way. The MF profile data show that MF levels decrease rapidly as the distance from the centerline increases (proportional to the inverse square of the distance from source).

Table 8. Estimated 2017 Magnetic Fields (mG)

Structure Type	System Condition	Current (Amps)	Distance to Proposed Centerline (feet)												
			-300	-200	-100	-75	-50	-25	0	25	50	75	100	200	300
Single Pole Davit Arm 345 kV/161 kV	Peak	215/29	0.8	1.7	5.9	9.2	15.3	23.3	21.3	12.5	7.1	4.4	3.0	1.1	0.6
	Average	144/19	0.5	1.1	4.0	6.2	10.2	15.6	14.3	8.4	4.7	3.0	2.0	0.7	0.4
Single Pole Davit Arm 345 kV/161 kV at Initial 345 kV/69 kV Operation	Peak	215/75	0.6	1.4	5.2	8.3	14.0	22.0	20.6	11.9	6.1	3.4	2.2	0.7	0.4
	Average	144/50	0.4	0.9	3.5	5.6	9.4	14.7	13.8	8.0	4.1	2.3	1.5	0.5	0.3
Single Pole Davit Arm 345 kV/161 kV with only one 345 kV circuit	Peak	215	0.8	1.8	6.3	9.8	16.1	24.2	22.0	13.6	8.3	5.4	3.7	1.3	0.6
	Average	144	0.6	1.2	4.2	6.6	10.8	16.2	14.7	9.1	5.6	3.6	2.5	0.9	0.4
Single Pole Davit Arm Low Profile 345 kV/161 kV	Peak	215/29	0.9	1.8	7.0	12.0	21.8	28.6	21.2	10.6	5.0	3.2	2.3	0.7	0.4
	Average	144/19	0.6	1.2	4.7	8.1	14.6	19.2	14.2	7.1	3.4	2.2	1.5	0.5	0.2
Single Pole Davit Arm Low Profile 345 kV/161 kV with only 345 kV circuit	Peak	215	0.9	1.9	7.3	12.5	22.6	29.8	22.3	12.5	7.1	4.3	2.8	0.9	0.4
	Average	144	0.6	1.3	4.9	8.4	15.1	19.9	14.9	8.4	4.7	2.9	1.9	0.6	0.3
Single Pole Braced Post 161 kV/161 kV	Peak	55/68	0.0	0.1	0.2	0.4	0.9	3.3	8.2	4.9	1.9	0.9	0.5	0.1	0.1
	Average	37/46	0.0	0.0	0.1	0.2	0.6	2.2	5.5	3.3	1.3	0.6	0.3	0.1	0.0
Single Pole Braced Post 161 kV/161 kV with 161 kV/69 kV Initial Operation	Peak	55/191	0.3	0.5	1.6	2.4	4.1	9.3	24.2	18.3	8.2	4.2	2.5	0.6	0.3
	Average	37/128	0.2	0.3	1.0	1.6	2.8	6.2	16.2	12.3	5.5	2.8	1.6	0.4	0.2
Single Pole Braced Post 161 kV	Peak	94	0.2	0.4	1.2	2.0	3.7	7.9	14.6	9.6	4.2	2.2	1.3	0.3	0.1
	Average	63	0.1	0.2	0.8	1.3	2.5	5.3	9.8	6.4	2.8	1.4	0.9	0.2	0.1

The actual MF when the Project is placed in service will likely typically less than that illustrated in the table provided herein, and for certain segments of the Project, the calculated values are less than what is shown in the table. This is because the charts represent the MF with current flow at expected normal peak based on projected regional load growth through 2017, when the last segment of the Project is anticipated to be placed in service. Actual current flow on the line will vary, so magnetic fields will be less than peak levels during most hours of the year.

Extensive research has been conducted over the past three decades to evaluate whether exposure to ELF-MFs causes biological responses and health effects. Epidemiological and toxicological studies have not shown statistically significant associations or have shown only weak associations between ELF-MF exposure and health risks. Public health professionals have also investigated the possible impact of exposure to EFs and MFs upon human health for the past several decades. While the general consensus is that EFs pose no risk to humans, the question of whether exposure to MFs can cause biological responses or health effects continues to be debated.

In 2007, the World Health Organization ("WHO") concluded a review of the health implications of electromagnetic fields. In this report, WHO stated:

> Uncertainties in the hazard assessment [of epidemiological studies] include the role that control selection bias and exposure misclassification might have on the observed relationship between magnetic fields and childhood leukemia. In addition, virtually all of the laboratory evidence and the mechanistic evidence fail to support a relationship between low-level [extremely low frequency] magnetic fields and changes in biological function or disease status. Thus, on balance, the evidence is not strong enough to be considered causal, but sufficiently strong to remain a concern. (Environmental Health Criteria Volume N°238 on Extremely Low Frequency Fields at p. 12, WHO (2007)).

WHO did not recommend these levels as an exposure limit but instead provided: "The best source of guidance for both exposure levels and the principles of scientific review are international guidelines." *Id*. at pp. 12-13. The international guidelines referred to by WHO are the International Commission on Non-Ionizing Radiation Protection ("ICNIRP") and the Institute of Electrical and Electronic Engineers ("IEEE") exposure limit guidelines to protect against acute effects. *Id*. at p. 12. The ICNIRP-1998 continuous general public exposure guideline is 833 mG and the IEEE continuous general public exposure guideline in 9,040 mG.

In 2010, ICNIRP revised its continuous general public exposure guideline increasing it from 833 mG to 2,000 mG. The WHO has not provided any analysis of the ICNIRP-2010 continuous general public exposure guideline to date.

The Commission, based on a Minnesota Interagency Working Group ("Working Group") report and the WHO findings, has found that "there is insufficient evidence to demonstrate a causal relationship between EMF exposure and any adverse human health effects." *In the Matter of the Application of Xcel Energy for a Route Permit for the Lake Yankton to Marshall Transmission Line Project in Lyon County*, Docket No. E-002/TL-07-1407, FINDINGS OF FACT, CONCLUSIONS OF LAW AND ORDER ISSUING A ROUTE PERMIT TO XCEL ENERGY FOR THE LAKE YANKTON TO MARSHALL TRANSMISSION PROJECT at p. 7-8 (Aug. 29, 2008); *See also In the Matter of the Application for a HVTL Route Permit for the Tower Transmission Line Project*, Docket No. ET-2, E015/TL-06-1624, FINDINGS OF FACT, CONCLUSIONS OF LAW AND ORDER ISSUING A ROUTE PERMIT TO MINNESOTA POWER AND GREAT RIVER ENERGY FOR THE TOWER TRANSMISSION LINE PROJECT AND ASSOCIATED FACILITIES at p. 23 (Aug. 1, 2007).

This finding was recently confirmed in the Brookings County – Hampton 345 kV Route Permit proceeding ("Brookings Project"). In the Brookings Project Route Permit proceeding, applicants and one of the intervening parties provided expert evidence and testimony on the potential impacts of EFs and MFs on human health. The administrative law judge in that proceeding evaluated written submissions and a day-and-half of testimony from these two expert witnesses. The administrative law judge concluded:

> there is no demonstrated impact on human health and safety that is not adequately addressed by the existing State standards for [EF or MF] exposure.

In the Matter of the Route Permit Application by Great River Energy and Xcel Energy for a 345 kV Transmission Line from Brookings County, South Dakota to Hampton, Minnesota, Docket No. ET-2/TL-08-1474, ALJ FINDINGS OF FACT, CONCLUSIONS

AND RECOMMENDATION at Finding 216 (Apr. 22, 2010 and as amended Apr. 30, 2010). The Commission adopted this finding on July 15, 2010. Id., ORDER GRANTING ROUTE PERMIT at 12 (Sept. 14, 2010); *In the Matter of the Route Permit Application by Great River Energy and Xcel Energy for a 345 kV Transmission Line from Brookings County, South Dakota to Hampton, Minnesota*, Docket No. ET2/TL-08-1474, FINDINGS OF FACT, CONCLUSIONS OF LAW, AND ORDER ISSUING AN HVTL ROUTE PERMIT TO GREAT RIVER ENERGY AND XCEL ENERGY FOR A 345 KV TRANSMISSION LINE FROM BROOKINGS COUNTY, SOUTH DAKOTA TO HAMPTON, MINNESOTA at 1 and 8 (Sept. 14, 2010).

8.7 STRAY VOLTAGE

"Stray voltage" is a condition that can occur on the electric service entrances to structures from distribution lines—not transmission lines. The term generally describes a voltage between two objects where no voltage difference should exist. More precisely, stray voltage exists between the neutral wire of the service entrance and grounded objects in buildings such as barns and milking parlors. Typically, high voltage transmission lines do not create stray voltage issues. Stray voltage is not a feature generally attributed to the operation of a transmission line and is, therefore, not expected from the proposed transmission line.

Appropriate measures, however, will be taken to prevent stray voltage problems when the transmission lines proposed for the Project parallel or cross distribution lines. ITC Midwest does not anticipate that the Project will be responsible for any stray voltage problems.

To design a project to avoid stray voltage, certain measures can be taken in the engineering phase. Recommended clearances within the NESC are designed to accommodate a relative vehicle height of 14 feet. ITC Midwest's minimum clearance design is greater than the NESC recommended clearances. The portions of the Project where either a single-circuit 345 kV line is constructed or a 345 kV line is double-circuited with another line, the facility will be designed to maintain a clearance of 35 feet and the 161 kV associated facilities will be designed to maintain a clearance of 25 feet.

Another question that arises when operating vehicles near power lines is whether vehicles can be safely refueled. The possibility of fuel ignition near a high voltage transmission line of the voltage and design proposed for the Project is extremely unlikely and ITC Midwest is unaware of any safety issues related to vehicle refueling near its existing power lines.

Buildings are permitted near transmission lines, but are generally prohibited within the Easement Area because a structure under a transmission line may interfere with safe operation. For example, a fire in a building located within the right-of-way could damage a transmission line. As a result, NESC guidelines establish clear zones for transmission facilities. Metal buildings may have unique issues. For example, metal buildings near transmission lines of 200 kV or greater must be properly grounded. People who have questions about a new or existing metal structure can contact ITC Midwest for further information about proper grounding requirements. ITC Midwest may allow certain structures to be constructed within the Ancillary Easement Area, but any such construction in this area is subject to ITC Midwest review and approval.

9.0 ENVIRONMENTAL INFORMATION

The Certificate of Need rules require ITC Midwest to provide environmental information relating to the major features of the region likely encompassed by the routes between the proposed facilities' endpoints. Specifically, ITC Midwest must present information regarding hydrologic features, natural vegetation and wildlife, topography and land use types (including human settlement, recreation, agricultural production, forestry production and mineral extraction). Minn. R. 7849.0330. Additional environmental information is compiled by the Department of Commerce, which is responsible for preparing an Environmental Report on these projects as part of the Certificate of Need process. Minn. R. 7849.1400. The content of the Environmental Report is dictated by Minn. R. 7849.1500.

The primary way to address the potential impacts of transmission line and substation projects is during the routing and siting process. Through these processes, a variety of forums with the public, local government units, and state and federal agencies are created to gather information regarding the potential impacts on environmentally sensitive areas and to develop strategies to address those issues. Such strategies could include selecting a route that avoids these areas or sharing rights-of-way with an existing transmission line. Where sensitive areas cannot be avoided, impacts can be mitigated by design and construction methods. These methods could include using special structures that span longer distances where necessary, scheduling construction in wetlands areas when the ground is frozen or using shorter structures where required to avoid interference with aviation.

Based on the current level of review, the Project's anticipated design and approximate routing do not present any environmental issues that would preclude construction of the facilities. While there may be environmental factors that will influence the ultimate location of the Project, these impacts can be mitigated through the routing and siting processes and construction techniques.

In this section, ITC Midwest provides a general overview of the environmental concerns common to all projects and general mitigation measures to address those concerns, discusses the more significant environmental issues for the Project, and lists the potential additional approvals needed for construction. A thorough compilation of this information as mandated by Minnesota Rule 7849.0330, is contained in this chapter.

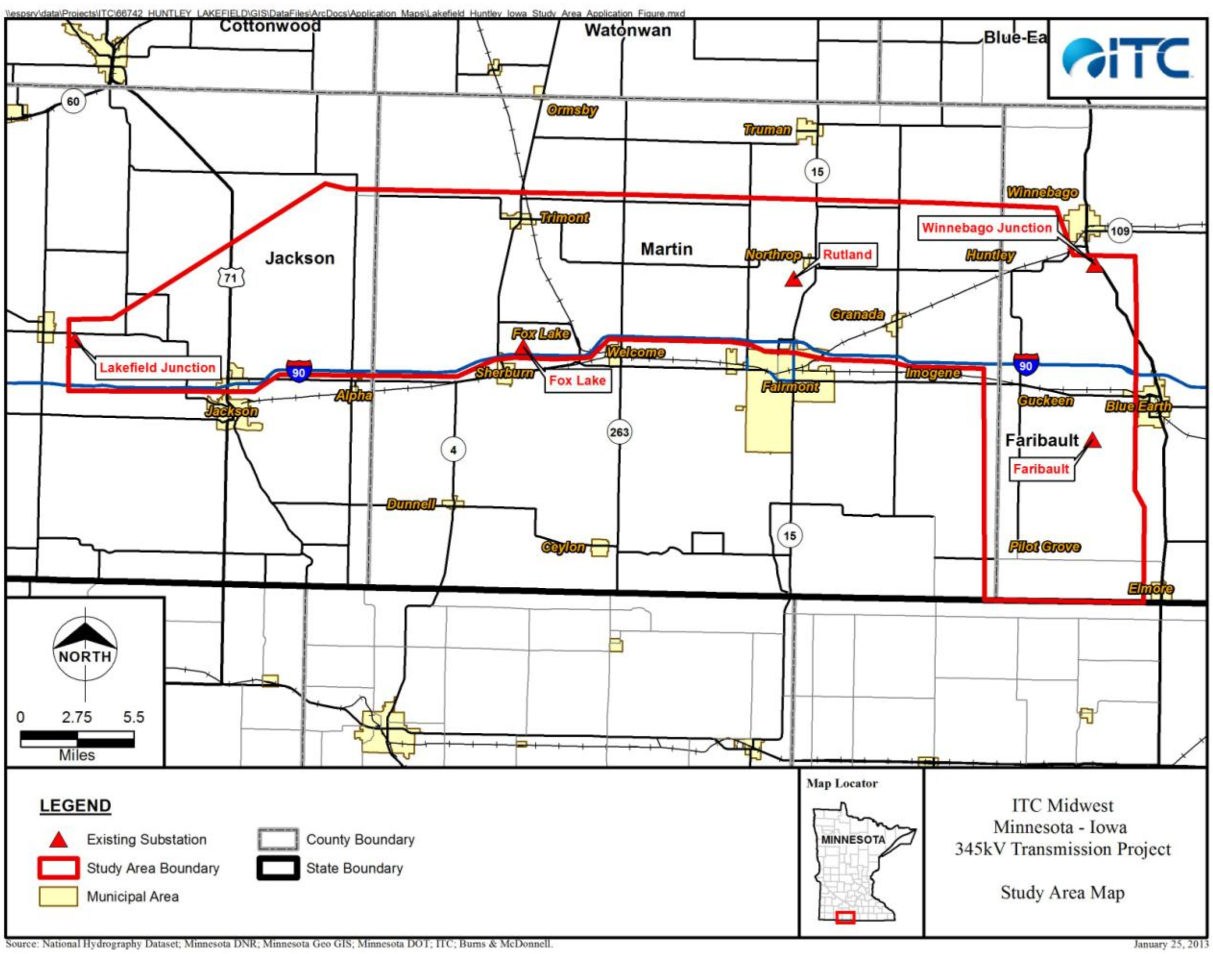
Overall environmental information on the region between the endpoints of the Minnesota portion of the Project is provided. Specific information related to the three proposed endpoints of the Project, the Lakefield Junction Substation, the new Huntley Substation, and the point at which the Project crosses the Iowa border, follows the general study area information.

9.1 MINNESOTA PROJECT STUDY AREA

9.1.1 Description of Environmental Setting

The Project Study Area, shown in **Figure 24**, encompasses portions of Jackson, Martin, and Faribault counties. Portions of the cities of Blue Earth, Jackson, Sherburne, and Fairmont, and the cities of Huntley, Granada, Northrop, and Trimont, are within the Project Study Area. Additionally, ITC Midwest investigated environmental features within three miles of each substation and the Minnesota side of the Iowa border.

Figure 24. Project Study Area – Environmental



9.1.2 Geomorphology and Physiography

Geologic and topographic information from the Minnesota Department of Natural Resources ("MnDNR") and the United States Geological Survey ("USGS") was analyzed to determine the existing conditions within the Project Study Area. Jackson, Martin, and Faribault counties are within the Prairie Parklands ecological province in Minnesota. This province traverses western Minnesota, Manitoba, North Dakota, South Dakota, Iowa, Nebraska, Kansas, Oklahoma, Missouri, Illinois, and Indiana. The Prairie Parkland Province in southern Minnesota receives approximately 33 inches of precipitation each year, but is prone to spring fire seasons due to its low levels of winter precipitation, short snow cover season, and western winds. The land in this region was shaped by the Wisconsin glaciations, during which ice sheets crossed the area several times and deposited a mantle of drift hundreds of feet thick in places.

The Project Study Area is located within two subsections of the North Central Glaciated Plains Section of the Prairie Parklands Province: the Minnesota River Prairie Subsection and the Coteau Moraines Subsection. The Project Study Area is located primarily in the Minnesota River Prairie Subsection, where loamy ground moraine is the dominant landform and the topography is level to gently rolling. The western portion of the Project Study Area is located in the Coteau Moraines Subsection, which ranges from gently undulating to steeply rolling and hilly terrain. This subsection is made up of rolling moraine ridges, terminal and end moraines, and ground moraines with glacial till covering bedrock from 600 to 800 feet in depth.

The Project Study Area is primarily made up of agricultural, rural, lands. Primary water features in the Project Study Area include the Des Moines River in Jackson County, Fox Lake and the Chain of Lakes (*i.e.*, an assemblage of lakes) in Martin County, and the Blue Earth River in Faribault County.

9.1.3 Land Use and Human Settlement

(a) Commercial, Industrial, Residential Land Use

Land use within the Project Study Area is primarily agricultural and undeveloped open space. Typical crops in the Project Study Area include corn, soybeans, wheat, and alfalfa. Grassland, burr and white oak forests, and lowland deciduous forests also make up a portion of the Project Study Area. Typical prairie vegetation in the Project Study Area include big bluestem (*Andropogon gerardii*), little bluestem (*Schizachyrium scoparium*), indiangrass (*Sorghastrum* *nutans*), sideoads grama (*Bouteloua curtipendula*), prairie june-grass (*Koeleria macrantha*), and sun sedge (*Carex heliphila*). Less prevalent in the Project Study Area are low and high density urban areas, sedge meadows, maple and basswood forests, upland shrub land, broadleaf sedge and cattail areas, and cottonwood forests.

(b) Displacement

No displacement of residential homes or businesses will occur as a result of the Project. NESC and ITC Midwest standards require certain minimum clearances between transmission line facilities and buildings to ensure the safe operation of transmission line facilities. ITC Midwest will acquire a 200-foot right-of-way for 345 kV transmission line facilities and 150-foot right-of-way for 161 kV transmission line facilities as part of the Project to maintain these clearances. In the area between the Winnebago Junction Substation and Huntley Substation sites, where 161 kV and 69 kV transmission lines need to be reconfigured to allow removal of the Winnebago Junction Substation, a right-of-way up to 250 feet in width may be acquired. A wider right-of-way in this area will allow for the construction of several 161 kV circuits in one right-of-way while maintaining necessary clearances and separation between the facilities.

The Project will be designed in compliance with State, NESC, and ITC Midwest standards for clearance to ground, clearance to crossing other utilities, clearance to buildings, strength of materials, and clearance to vegetation and other obstructions. ITC Midwest, NESC, and Occupational Safety and Health Administration standards for construction practices will also be complied with for construction of the Project.

(c) Aesthetics

Overhead transmission lines and multiple wind turbine installations occur throughout the Project Study Area. The route for the Project preferred by ITC Midwest primarily follows the existing Lakefield to Border 161 kV line. In these areas, the existing H-frame structures will be removed and replaced by, primarily, single pole structures. There are areas along the route ITC Midwest prefers for the Project and elsewhere throughout the Project Study Area where an existing transmission line is not present. The 345 kV structures for the Project will range in height from 160 feet to 190 feet where low profile structures are not proposed with an average span length of 900 feet. Where low profile 345 kV structures would be necessary, structure heights would range from 130 to 160 feet, but could be as short as 100 feet. The 161 kV structures for the Project will range in height from 70 to 120 feet with an average span length of 700 feet. Poles will be galvanized or self-weathering steel.

The structures proposed for the Project will be greater in height than current overhead transmission structures in the Project Study Area. These structures, however, would be considerably shorter in height than the wind turbines throughout the area and would not create a new type of feature to the landscape and transmission and distribution lines are prevalent within the visual landscape of the Project Study Area.

(d) Socioeconomics

The Project Study Area encompasses portions of Jackson, Martin, and Faribault counties. The median household income for the counties within the Project Study Area are lower than the State of Minnesota median household income (**Table 9**).

Table 9. Economic Characteristics for the Project Study Area

Location	Median Household Income	Unemployment Rate	Percent of Population Below Poverty
Faribault County	$41,631	4.8%	10.9%
Martin County	$43,960	3.4%	9.0%
Jackson County	$46,869	3.3%	9.1%
Minnesota	**$57,243**	**6.4%**	**10.6%**

Source: U.S. Census Bureau, 2006-2010 American Community Survey 5-Year Estimates.

The three counties in the Project Study Area have small populations compared to the State of Minnesota as a whole, combined comprising less than one percent of the State's total population. A large majority of the population in the Project Study Area is Caucasian (**Table 10**). The percentage of total minority[92] residents is lower in the Project Study Area counties as compared to the State of Minnesota as a whole, although Faribault County has a slightly higher percentage of Hispanic residents when compared to the State as a whole.

[92] Total minority is calculated by adding the populations for all non-white races and the population for white-Hispanics.

Table 10. Population Characteristics for the Project Study Area

Location	Total Population	Caucasian	Black or African American	Asian	Other	Hispanic	Total Minority
Faribault County	14,553	96.5%	0.3%	0.3%	2.9%	5.6%	7.1%
Jackson County	10,266	95.8%	0.5%	1.4%	2.4%	2.7%	5.5%
Martin County	20,840	96.7%	0.3%	0.5%	2.5%	3.6%	5.2%
Minnesota	**5,303,925**	**85.3%**	**5.2%**	**4.0%**	**5.5%**	**4.7%**	**16.9%**

Source: U.S. Census Bureau, 2010 Census

Short-term impacts to community services as a result of Project construction activities and an influx of contractor employees during construction are anticipated. ITC Midwest anticipates using both utility personnel and contractors for construction activities. Socioeconomic impacts resulting from the Project are anticipated to be short-term but positive with increased expenditures at local businesses during construction of the Project. No additional permanent staff are expected for line operations and maintenance. Therefore, the transmission line is not expected to change population trends, economic indicators, or employment.

(e) Cultural Values

Cultural values include those perceived community beliefs or attitudes in a particular area, which provide a framework for community unity. The Project Study Area is rural in nature with an agriculture-based economy. Farming and protection of agriculture, the land, and the ability to continue to farm and support livelihoods through agriculture are strong values within the Study Area. Examples of regional cultural events in the Project Study Area include the Martin County Fair, referred to as Minnesota's "Other Big Fair", Annual Sprint Car Jackson Nationals at the Jackson Speedway, and the Annual Upper Midwest Woodcarvers and Quilt Expo held in Blue Earth.

Construction of the Project is not expected to conflict with cultural values of the Project Study Area.

(f) Recreation

Recreational opportunities within the Project Study Area include hunting and trapping, wildlife viewing, fishing, canoeing and kayaking, and snowmobiling. There are several State Wildlife Management Areas ("WMAs") in the Project

Study Area that provide outdoor recreational opportunities and wildlife protection. In Martin County, there is also a large game refuge managed by the MnDNR for the protection of waterfowl. Hunting by firearms and archery, and trapping, for deer and bear is allowed in the refuge, although waterfowl hunting and trapping is prohibited. Waterfowl Production Areas ("WPAs"), public lands managed by the United States Fish and Wildlife Service ("USFWS") for the purpose of waterfowl habitat protection, are also found in the Project Study Area. Snowmobile trails groomed and maintained by local snowmobile club volunteers are also located in the Project Study Area. Watercraft recreational opportunities are also available on rivers and lakes in the Project Study Area, including the Des Moines River, the Blue Earth River, Fox Lake, and the Chain of Lakes.

Construction of the Project is not anticipated to change available recreational opportunities in the Project Study Area, although vegetation removal will be required in some recreational areas and use of certain recreational areas may be restricted or limited during construction activities. The Project is anticipated to reduce the number of crossings of the Blue Earth River because of the reconfiguration of facilities to terminate at the proposed Huntley Substation.

(g) Public Services and Transportation

In rural areas found in the Project Study Area residences often utilize privately-owned septic systems and wells, although some residence may have access to rural water distribution facilities. More urbanized areas, like the cities of Blue Earth, Jackson, Fairmont, and Trimont, are serviced by municipal public works for water, sewer, and electrical services. Outside these more urbanized areas, many residents receive their electric services from various electric cooperatives.

Many State and County highways are within the Project Study Area, including State Highway 4 and State Highway 15. US Highway 169, US Highway 71, and Interstate 90 are also located within the Project Study Area, although US Highway 169 is located further east than the easternmost proposed endpoint for the Project. A rail line owned by Union Pacific and one owned by Canadian Pacific are located in the Project Study Area and will each likely be crossed at least once by the Project.

There are three airports within or near the Project Study Area: the Jackson Municipal Airport, the Fairmont Municipal Airport, and the Blue Earth Municipal Airport. Only the Jackson Municipal Airport is within the Project Study Area. On December 4, 2012, the Federal Aviation Administration ("FAA") approved the most current Airport Layout Plan ("ALP") for the Jackson Municipal Airport expansion, including a new and longer runway and upgraded instrumentation to accommodate additional aircraft types, including small jets. The FAA is initiating an EIS process for the Jackson Municipal Airport ALP. The FAA estimates the process to complete the EIS and construct the new facilities at the Jackson Municipal Airport to be a ten-year process.

Construction of the Project is not anticipated to impact public services or transportation, other than temporary impacts to roadways if closures or diversions are necessary to accommodate construction equipment. The Project will be designed so that structures and overhead conductors will not interfere with public service and transportation activities.

9.1.4 Land-Based Economies

(a) Agriculture

Almost all of the land area in Faribault and Martin counties, and a large majority of the land in Jackson County, is agricultural. By comparison, only about half of the land in Minnesota is agricultural. Average farm size in the three counties is very similar, and the farms are generally larger, than the average size of farms in Minnesota. Crop sales account for a larger percentage of total market value of agricultural products compared to livestock sales in Faribault ($197 million/$93 million, annually) and Jackson ($153 million/$114 million, annually) counties. In Martin County, however, livestock sales ($218 million, annually) account for a slightly larger percentage of total market value of agricultural products compared to crop sales ($185 million, annually). Agriculture statistics for the three counties within the Project Study Area are summarized in **Table 11**.

Table 11. Agriculture Statistics

Location	Number of Farms	Average Farm Size	Land in Farms	Crop Sales	Livestock Sales
Faribault County	952	477 acres	453,761 acres (99.5 percent of county)	$197 million (68 percent)	$93 million (32 percent)
Jackson County	969	413 acres	400,531 acres (89.3 percent of county)	$153 million (57 percent)	$114 million (43 percent)
Martin County	960	468 acres	449,655 acres (99.1 percent of county)	$185 million (46 percent)	$218 million (54 percent)
Minnesota	**80,992**	**332 acres**	**27 million acres (52.9 percent of State)**	**$7 billion (53 percent)**	**$6 billion (47 percent)**

Source: USDA 2007 Census of Agriculture

Permanent impacts to agriculture activities in the Project Study Area are anticipated to be minimal and concentrated at pole and substation locations. Both crop and livestock activities will be able to continue around Project facilities after construction.

(b) Forestry

The Project Study Area is dominated by agricultural lands and minimal forestland. No commercial forestry operations have been identified in the Project Study Area and no impacts to commercial forestry operations are anticipated for the Project.

(c) Tourism

Tourism in the Project Study Area centers around outdoor recreational opportunities, such as fishing, hunting, and water sports. Many out-of-State hunters and fishermen visit Minnesota every year to take advantage of these tourism activities. Impacts to tourism in the Project Study Area are not anticipated during construction or operation of the Project.

(d) Mining

Mining does not comprise a major industry in the Project Study Area. Sand and gravel operations are found throughout Jackson, Martin, and Faribault counties. Sand and gravel are primarily mined for local use such as making concrete for highways, roads, bridges, and buildings. Gravel pits (active, depleted, or unexcavated deposits) leased or owned by the Minnesota Department of Transportation ("MnDOT") are scattered throughout the Project Study Area. Transmission lines are anticipated to be routed around these mining resources and no impacts to mining are anticipated.

9.1.5 Archaeological and Historical Resources

Background research on known cultural resources was conducted in July 2012, in the Minnesota State Historic Preservation Office ("SHPO") Archaeology Inventory and in the Standing Structures Inventory in St. Paul. This initial investigation was based on the Project Study Area. In November 2012 and January 2013, the data were further analyzed based on specific routes retained for the analysis and additional research was conducted in public online records. Archaeological sites and historic structures or properties, and resources were included in the analysis.

There are 43 National Register of Historic Places ("NRHP")-listed sites, structures, properties, or districts in Jackson County. There are 23 NRHP-listed sites, structures, or properties, or districts in Martin County. There are 13 NRHP-listed sites, structures, properties, or districts in Faribault County. Historic properties, such as archaeological sites, are designated as location restricted, for reasons of preservation, protection, or privacy.

Minnesota laws protect resources in conjunction with federal laws. The Minnesota Field Archaeology Act (Minn. Stat. §§ 138.31-138.42) requires State agencies to submit development plans to the State Archaeologist, the Minnesota Historical Society, and the Minnesota Indian Affairs Council for review when there are known or suspected archaeological sites in the area. The Minnesota Historic Sites Act (Minn. Stat. §§ 138.661-138.669) established the State Historic Sites Network and the State Register of Historic Places. As necessary, ITC Midwest will contact the Historical Society before undertaking activities that may affect properties on the network or on the State or National Registers of Historic Places.

The Minnesota Historic District Acts (Minn. Stat. §§ 138.71-138.75) designates certain historic districts and enables local governing bodies to create commissions to provide architectural controls in these areas. No communities within the three counties in the Project Study Area have achieved the status of Certified Local Government or have Heritage Preservation Commissions.

ITC Midwest does not anticipate any material impacts to any archaeological or historic resources as part of the Project. If high potential areas are identified along a selected route, ITC Midwest will work with the State Archaeologist to develop survey protocol to ensure no material impacts result from construction of the Project. If, during construction, crews discover cultural resources, further survey work will be completed in cooperation with the Minnesota SHPO. Additionally, if any unmarked burials, human remains, or grave goods are discovered during construction, they will be reported to the State Archaeologist per Minnesota Statutes Section 307.08 and construction will be suspended in that area until adequate mitigation measures have been developed between ITC Midwest and the State Archaeologist.

9.1.6 Hydrologic Features

The Project Study Area is part of the Minnesota River Watershed. The Minnesota, Des Moines, and Blue Earth sub-watersheds are all within the Project Study Area. Wetlands, lakes, and streams intersect the Project Study Area at several locations, including the Des Moines River, Fox Lake, the Chain of Lakes, and the Blue Earth River, from west to east.

(a) Water Quality

Groundwater

In Jackson, Martin, and Faribault counties, within the Project Study Area, groundwater exists in unconsolidated glacial deposits and in the underlying bedrock. This water is held in bedrock aquifers in hydraulically isolated layers under high pressure.

Karst topography developed from mildly acidic groundwater slowly dissolving carbonate bedrock, which formed areas of "karst". Karst aquifers are susceptible to groundwater contamination as sinkholes in these areas form passageways that funnel water from the surface into the groundwater system. Portions of Faribault County determined to be either Covered Karst or Transition Karst lands are within the Project Study Area. Covered Karst lands are areas underlain by carbonate bedrock with more than 100 feet of sediment cover. Transition Karst lands are those underlain by carbonate bedrock with 50 to 100 feet of sediment cover.

Floodplains

The Project Study Area crosses 100-year floodplains associated with the Blue Earth River and Center Creek. Floodplain crossings of these waters and tributaries occur primarily in agricultural land.

Wetlands, Waters, and Watercourses

GIS data from the USFWS National Wetlands Inventory ("NWI") was reviewed to assess wetlands present with the Project Study Area. Wetland complexes and small isolated wetlands are scattered throughout the Project Study Area. Many of these wetlands are associated with the Blue Earth River, the Chain of Lakes, Elm Creek, and Center Creek.

Of the NWI wetlands present in the Project Study Area, most are palustrine type wetlands. Riverine type wetlands, associated with rivers, are also found in the Project Study Area. Palustrine type wetlands in the Project Study Area include emergent, forested, unconsolidated bottom, and scrub-shrub.

The MnDNR Public Waters Inventory ("PWI") was also reviewed to identify Public Wetlands, Waters, and Watercourses. Notable watercourses in the Project Study Area include the Des Moines River, Elm Creek, Center Creek, and the Blue Earth River. Notable Public Waters include the Chain of Lakes, Cedar Lake, Big Twin Lake, and Fox Lake.

ITC Midwest will design the Project to minimize or avoid impacts to surface water resources to the extent feasible. The Project will also be designed to span surface water resources where practicable and to minimize the number of structures in surface water resources where these resources cannot be spanned.

The Project will have minor, mostly short-term, effects on surface water resources. Waters and wetlands permits and licenses, letters of no jurisdiction, or exemptions may be required from the United States Army Corps of Engineers ("USACE"), MnDNR Division of Waters, and local units of government that administer the Wetland Conservation Act. No alteration in the course, current, or cross-section below the ordinary high water level of a Public Water or Watercourse, which would require a Public Waters Work Permit from the

MnDNR Division of Waters, is anticipated. It is likely that the work proposed for the Project would fall under a Letter of Permission (LOP-05-MN) or the Regional General Permit (RGP-3-MN) utility line discharge provision under the USACE.

The MPCA, through the NPDES under the Clean Water Act, regulates construction activities that may impact stormwater runoff. An NPDES permit is required for construction activity disturbing: 1) one acre or more of soil; 2) less than one acre of soil, but part of a "larger common plan of development or sale" that is greater than one acre; or 3) less than one acre of soil, but that the MPCA determines poses a risk to water resources. As part of the NPDES requirements, a SWPPP must be prepared to identify best management practices (which may include biodegradable erosion matting), inspection protocol in compliance with MPCA requirements, and stabilization measures to minimize impacts of stormwater runoff.

9.1.7 Vegetation and Wildlife

(a) Vegetation

The Project Study Area was historically dominated by tallgrass prairie. The area is now, primarily, agricultural land with few remnants of presettlement vegetation remaining. Common crops in the Project Study Area include corn, soybean, alfalfa, and winter wheat. Prairie vegetation in this area includes big bluestem, little bluestem, indiangrass, sideoats grama, prairie june-grass, and sun sedge.

Impacts to trees and woodlands in the Project Study Area will occur only where clearing is necessary for construction and maintenance of the Project, including substations and transmission lines. Minimal tree removal is anticipated because of the primarily agricultural and open nature of the Project Study Area.

(b) Wildlife

Resident and migratory wildlife species found in agricultural landscapes, prairie remnants, wetlands, and riverine habitats are commonly found in the Project Study Area. These species include large and small mammals, songbirds, waterfowl, raptors, fish, reptiles, mussels, and insects. These species us the Project Study Area for forage, shelter, breeding, or as stopover during migration.

The Project Study Area also includes eight Grassland Bird Conservation Areas ("GBCA"). All GBCA within the Project Study Area are of the most narrow types, (at least 44 acres of grassland, at least 0.25 mile wide). There are no Important Bird Use Areas in the Project Study Area.

Avian interactions with transmission lines can occur in proximity to agricultural fields that serve as feeding areas, wetlands and water features, and along riparian corridors used during migration. Electrocution of avian species is most often associated with distribution lines and not with transmission lines, which achieve much larger spacing between the conductors (phases). ITC Midwest will work with MnDNR and USFWS to identify areas where marking transmission shield wires with bird flight diverters, which minimize avian collisions, may be appropriate once a route for the Project has been selected by the Commission.

9.1.8 Rare and Unique Natural Resources

The MnDNR Natural Heritage Information System ("NHIS") was reviewed to identify known occurrences of rare and unique natural resources. Multiple rare species, including endangered species ("END"), threatened species ("THR"), and species of special concern ("SPC") occur in Jackson (**Table 12**), Martin (**Table 13**), and Faribault (**Table 14**) counties.[93] Multiple ecological and animal assemblages are also located in these counties and in the Project Study Area (**Table 15**). The assemblages are grouped into two categories: zoological assemblages and ecological assemblages. Zoological assemblages are communities made up of animal species. Ecological assemblages are communities that are comprised of plant species. There are numerous Minnesota County Biological Survey sites in the Project Study Area. There are also several WMAs and WPAs in the Project Study Area.

[93] On December 10, 2012, the MnDNR proposed amendments to Minnesota Rules Chapter 6134 to alter the designation of certain species in Minnesota. The lists and discussions contained herein refer only to the designations identified in the adopted rules and not those proposed by the MnDNR.

Table 12. State- and Federally-Listed Species: Jackson County

Common Name	Scientific Name	Occurs in Study Area?	Status	
			State	Federal
A Jumping Spider	*Marpissa grata*	–	SPC	–
American Ginseng	*Panax quinquefolius*	–	SPC	–
Bald Eagle	*Haliaeetus leucocephalus*	–	SPC	–
Black Sandshell	*Ligumia recta*	Yes	SPC	–
Common Gallinule	*Gallinula galeata*	–	SPC	–
Fescue Sedge	*Carex festucacea*	–	THR	–
Forster's Tern	*Sterna forsteri*	–	SPC	–
Franklin's Gull	*Leucophaeus pipixcan*	–	SPC	–
Hair-like Beak-rush	*Rhynchospora capillacea*	–	THR	–
Henslow's Sparrow	*Ammodramus henslowii*	Yes	END	–
Iowa Skipper	*Atrytone arogos iowa*	Yes	SPC	–
King Rail	*Rallus elegans*	–	END	–
Loggerhead Shrike	*Lanius ludovicianus*	Yes	THR	–
Monkeyface	*Quadrula metanevra*	–	THR	–
Mucket	*Actinonaias ligamentina*	Yes	THR	–
Ottoe Skipper	*Hesperia ottoe*	–	THR	–
Powesheik Skipper	*Oarisma Poweshiek*	–	SPC	–
Prairie Bush Clover	*Lespedeza leptostachya*	Yes	THR	THR
Rattlesnake-master	*Eryngium yuccifolium*	–	SPC	–
Regal Fritillary	*Speyeria idalia*	Yes	SPC	–
Round Pigtoe	*Pleurobema sintoxia*	Yes	THR	–
Small White Lady's-slipper	*Cypripedium candidum*	–	SPC	–
Snow Trillium	*Trillium nivale*	–	SPC	–
Spike	*Elliptio dilatata*	Yes	SPC	–
Sullivant's Milkweed	*Asclepias sullivantii*	–	THR	–
Trumpeter Swan	*Cygnus buccinators*	–	THR	–
Whorled Nut-rush	*Scleria verticillata*	–	THR	–
Wilson's Phalarope	*Phalaropus tricolor*	–	THR	–

Source: MnDNR

Table 13. State- and Federally-Listed Species: Martin County

Common Name	Scientific Name	Occurs in Study Area?	Status	
			State	Federal
American White Pelican	*Pelecanus erythrorhynchos*	Yes	SPC	–
Blanding's Turtle	*Emydoidea blandingii*	–	THR	–
Burrowing Owl	*Athene cunicularia*	Yes	END	–
Eared False Foxglove	*Agalinis auriculata*	Yes	END	–
King Rail	*Rallus elegans*	Yes	END	–
Prairie Bush Clover	*Lespedeza leptostachya*	Yes	THR	THR
Rattlesnake-master	*Eryngium yuccifolium*	Yes	SPC	–
Regal Fritillary	*Speyeria idalia*	–	SPC	–
Round Pigtoe	*Pleurobema sintoxia*	Yes	THR	–
Small White Lady's-slipper	*Cypripedium candidum*	Yes	SPC	–
Sullivant's Milkweed	*Asclepias sullivantii*	Yes	THR	–
Tuberous Indian-plantain	*Arnoglossum plantagineum*	Yes	THR	–

Source: MnDNR

Table 14. State- and Federally-Listed Species: Faribault County

Common Name	Scientific Name	Occurs in Study Area?	Status	
			State	Federal
Bald Eagle	*Haliaeetus leucocephalus*	Yes	SPC	–
Black Sandshell	*Ligumia recta*	Yes	SPC	–
Creek Heelsplitter	*Lasmigona compressa*	Yes	SPC	–
Fluted-shell	*Lasmigona costata*	Yes	SPC	–
Iowa Skipper	*Atrytone arogos iowa*	–	SPC	–
Mucket	*Actinonaias ligamentina*	Yes	THR	–
Rattlesnake-master	*Eryngium yuccifolium*	–	SPC	–
Regal Fritillary	*Speyeria idalia*	–	SPC	–
Round Pigtoe	*Pleurobema sintoxia*	Yes	THR	–
Small White Lady's-slipper	*Cypripedium candidum*	Yes	SPC	–
Sullivant's Milkweed	*Asclepias sullivantii*	–	THR	–
Trumpeter Swan	*Cygnus buccinators*	–	THR	–
Tuberous Indian-plantain	*Arnoglossum plantagineum*	–	THR	–
White Wild Indigo	*Baptisia lactea var. lactea*	–	SPC	–

Source: MnDNR

Table 15. Ecological and Animal Assemblages in Jackson, Martin, and Faribault Counties

Name	Type of Assemblage	County of Occurrence	Found in Study Area?
Colonial Waterbird Nesting Site	Zoological	Faribault	Yes
Dry Sand - Gravel Prairie (Southern)	Ecological	Faribault	–
Mesic Prairie (Southern)	Ecological	Faribault	–
Native Plant Community, Undetermined Class	Ecological	Faribault	Yes
Wet Prairie (Southern)	Ecological	Faribault	–
Calcareous Fen (Southwestern)	Ecological	Jackson	–
Colonial Waterbird Nesting Site	Zoological	Jackson	–
Dry Hill Prairie (Southern)	Ecological	Jackson	Yes
Mesic Prairie (Southern)	Ecological	Jackson	Yes
Native Plant Community, Undetermined Class	Ecological	Jackson	Yes
Southern Seepage Meadow/Carr	Ecological	Jackson	–
Wet Prairie (Southern)	Ecological	Jackson	–
Wet Seepage Prairie (Southern)	Ecological	Jackson	Yes
Calcareous Fen (Southeastern)	Ecological	Martin	–
Colonial Waterbird Nesting Site	Zoological	Martin	Yes
Dry Hill Prairie (Southern)	Ecological	Martin	Yes
Mesic Prairie (Southern)	Ecological	Jackson, Martin	Yes
Wet Prairie (Southern)	Ecological	Martin	Yes

Source: MnDNR

The Project will be designed to avoid impacts to known occurrences of rare and unique natural resources to the extent practicable. ITC Midwest will coordinate with the appropriate natural resource agency if rare species or unique natural resources will be affected to modify the Project or implement construction practices to minimize impacts. In the event MCBS sites are crossed by the Project, attempts will be made to design the Project to span these natural resource sites, where feasible. There are no Scientific and Natural Areas ("SNAs") within the Project Study Area. If WMAs or WPAs are crossed by the Project, attempts will be made to design the Project to be located along site boundaries or parallel to existing infrastructure. Additionally, if work is to be performed in the Pilot Grove Lake WPA as part of the Project, it would be limited to the existing right-of-way and ITC Midwest will work with USFWS to address any agency-specific concerns.

9.2 LAKEFIELD JUNCTION SUBSTATION

The Lakefield Junction Substation is located in Jackson County, Section 3 of Hunter Township. It is within the Western Corn Belt Plains ecoregion of Minnesota as defined by the USGS. This ecoregion is typically flat with gently rolling topography, with an average elevation of 1,500 feet above sea level, and averages 24 to 36 inches of precipitation annually. Agricultural land accounts for the vast majority of this ecoregion, with typical crops including corn, soybeans, wheat, and alfalfa. The USGS National Land Cover Database ("NLCD") lists two land cover types (Developed, Medium Intensity and Cultivated Crops) for the Lakefield Junction Substation vicinity. The substation is surrounded by cropland on all sides, with the exception of the access driveway.

Specific soil classifications are called soil map units. Soil map units describe the soil characteristics in a specific geographic area. The Lakefield Junction Substation area is dominated by Canisteo, Clarion, Crippin and Nicollet soil units. These soil units are typically considered to be loamy or a clay loam, are typically used for agricultural purposes, are moderately well drained to poorly drained, and are considered prime farmland according to the Natural Resources Conservation Service ("NRCS").

The Lakefield Junction Substation area lies within the Lower Mississippi River Basin watershed. The nearest perennial waterway is the Des Moines River, approximately five miles east of the Lakefield Junction Substation. There are various unnamed tributaries/drainages in addition to three nearby lakes (Boot, Heron, and Clear). The Des Moines River and all three lakes are listed under the Public Waters Inventory Program, which protects specific waters in Minnesota under the jurisdiction of the MnDNR.

Commonly associated agricultural vegetation of Southern Minnesota includes corn, soybean, alfalfa, and winter wheat. Typical prairie vegetation of Southern Minnesota includes big bluestem, little bluestem, indiangrass, sideoats grama, june-grass, and sun sedge.

According to the MnDNR's NHIS, no federal- or State-listed threatened or endangered species are known to occur within the Lakefield Junction Substation area. In addition, no State-listed species of concern are known to occur within the Lakefield Junction Substation study area. Within three miles of the Lakefield Junction Substation, NHIS data include sightings of one State-listed endangered species- Henslow's sparrow (*Ammodramus henslowii*), one State-listed threatened species, trumpeter swan (*Cygnus buccinator*), and two State-listed species of concern, common gallinule (*Gallinula galeata*) and upland sandpiper (*Bartramia longicauda*). According to USFWS, one federally listed threatened species, prairie bush-clover (*Lespedeza leptostachya*), may potentially occur within Jackson County, however, it has not been noted in the area of the Lakefield Junction Substation.

The Lakefield Junction Substation is approximately 1.5 miles west of the Toe WMA, an area containing a complex of wetlands and upland areas where upland sandpiper have been recorded. Boot Lake WPA) and the Windom Wetland Management District are located approximately 2.5 miles east of the substation. Both are federal, protected land set aside as part of a migration corridor for waterfowl. The Boot Lake Archaeological site is located at the northeast corner of the WPA, approximately 2.9 miles from the Lakefield Junction Substation.

Based on USFWS NWI maps, no wetlands occur in the Lakefield Substation area. Within three miles of the Lakefield Junction Substation, there are two types of wetlands; palustrine emergent ("PEM") and palustrine unconsolidated bottom ("PUB" or "pond"). The "Palustrine System" includes all nontidal wetlands dominated by trees, shrubs, and emergents (herbaceous plants). The "Riverine System" includes all wetlands and deepwater habitats contained within a channel, except for wetlands dominated by trees, shrubs, persistent emergents, emergent moss, or lichens, and habitat with water containing ocean-derived salts in excess of 0.5 percent (Cowardin et al, 1979).

Although generally a rural agricultural area, the Lakefield Junction Substation lies on the western edge of a commercial wind farm. It is bounded by 820th Street to the north, 460th Avenue to the east, 810th Street to the south, and 480th Street to the east. All of these county roads, primarily gravel surface around the substation, contain numerous rural residences, farmsteads, and agriculture-related facilities such as barns, shops, and grain bins. Interstate 90 runs from east to west approximately 2 miles south of the Lakefield Junction Substation, and the municipality of Lakefield, Minnesota (population 1,700) is located about 1 mile northwest of the substation (US Census Bureau 2010). Numerous existing transmission lines connect with the Lakefield Substation, including 345 kV, 161 kV and 69 kV lines. These include the existing 161 kV Fox Lake to Lakefield Junction line under consideration for double circuiting with the proposed new 345 kV line.

9.3 HUNTLEY SUBSTATION

The proposed Huntley Substation is located in Faribault County, Section 14 of Verona Township. This area is situated within the Western Corn Belt Plains ecoregion of Minnesota as defined by the USGS. This ecoregion is typically flat with gently rolling topography, with an average elevation of 1,500 feet above sea level, and averages 24 to 36 inches of precipitation annually. Agricultural land accounts for the vast majority of this ecoregion, with typical crops including corn, soybeans, wheat, and alfalfa. The USGS NLCD lists two land cover types (Developed, Medium Intensity and Cultivated Crops) for the proposed Huntley Substation area. The site of the proposed Huntley Substation is currently a cropfield. An existing 161 kV transmission line extends along the east side of the substation site, un-maintained portions of 160th Street bound the south side of the substation and a dirt and sand operation is located to the east which would be unaffected by the Project. The terrain slopes away from the site to the west and north, with riparian woodland and the Blue Earth River located to the west, crop land and Blue Earth River floodplain occur to the north.

The proposed Huntley Substation study area is dominated by Shorewood and Minnetonka soil units. These soils units are typically considered to be a silty clay loam, are typically used for agricultural purposes, are moderately well drained to poorly drained, and are considered prime farmland according to the NRCS.

The proposed Huntley Substation study area lies within the Minnesota River Basin watershed. The nearest perennial waterways are the Blue Earth River and South Creek, approximately 0.2 mile southeast and 0.5 mile south respectively, of the proposed Huntley Substation study area. Both the Blue Earth River and South Creek are listed under the Public Waters Inventory Program.

Commonly associated agricultural vegetation of Southern Minnesota includes corn, soybean, alfalfa, and winter wheat. Typical prairie vegetation of Southern Minnesota includes big bluestem, little bluestem, indiangrass, sideoats grama, prairie june-grass, and sun sedge.

According to the MnDNR's NHIS, no federal- or State-listed threatened or endangered species are known to occur within the proposed Huntley Substation study area. In addition, no State-listed species of concern are known to occur within the proposed Huntley Substation study area. Within three miles of the proposed Huntley Substation, NHIS lists two State- listed threatened species are known to occur- round pigtoe (*Pleurobema sintoxia*) and mucket (*Actinonaias ligamentina*) mussels; and three State- listed mussel species of concern- fluted-shell (*Lasmigona costata*), creek heelsplitter (*Lasmigona compressa*), and black sandshell (*Ligumia recta*). Two other State- listed species of special concern found within three miles of the proposed substation are the bald eagle (*Haliaeetus leucocephalus*), and the small white lady's slipper (*Cypripedium candidum*). No federally protected species are noted as potentially occurring in Faribault County according to USFWS.

Based on USFWS NWI maps, no wetlands occur in the proposed Huntley Substation study area. Within two miles of the proposed Huntley Substation there are five types of wetlands- PEM, PUB, PFO, palustrine shrub/scrub ("PSS"), and riverine. Most of these wetlands are associated with the streams and rivers in the adjacent areas. The Prescott WPA is located approximately 2.5 miles east of the proposed Huntley Substation. This WPA is a federally owned area of diverse wetland habitat associated with the Blue Earth River.

Center Creek Archaeological District is located approximately one mile northwest of the proposed Huntley Substation. Forty one archaeological sites occur within three miles of the proposed substation. These sites are associated with the archaeological district, as well as the Blue Earth River floodplain. The closest of these sites is approximately 500 feet away from the proposed substation boundaries, and it is the only cultural site within 1,000 feet of the proposed Huntley Substation site.

The location of the proposed Huntley Substation is near the meandering Blue Earth River and associated floodplain, an area more inaccessible than others in the region due to few roads and limited bridges over the river. U.S. Highway 169 is the closest large transportation corridor to the proposed Huntley Substation. It runs north to south approximately one mile east of the proposed substation, on the eastern side of the Blue Earth River. Most of the lands in the vicinity of the substation are farmed with wooded riparian areas adjacent to the river and creek. Only three residences and a hunting cabin occur within 0.5 mile of the substation location, with two of the residences located on the opposite side of the Blue Earth River. The municipality of Winnebago is located approximately three miles north of the proposed Huntley Substation, and has a population of around 1,500 people (US Census Bureau 2010).

9.4 IOWA BORDER CROSSING

The proposed 345 kV transmission line crossing at the Minnesota border is located in Faribault County, Section 36 of Pilot Grove Township, approximately three miles west of Elmore. This area is situated within the Western Corn Belt

Plains ecoregion of Minnesota as defined by the USGS. This ecoregion is typically flat with gently rolling topography, with an average elevation of 1,500 feet above sea level, and averages 24 to 36 inches of precipitation annually. Agricultural land accounts for the vast majority of this ecoregion, with typical crops including corn, soybeans, wheat, and alfalfa. The USGS NLCD lists 11 land cover types (Open Water, Developed Open Space, Developed Low Intensity, Developed Medium Intensity, Developed High Intensity, Deciduous Forest, Grassland/Herbaceous, Pasture/Hay, Cultivated Crops, Woody Wetlands, and Emergent Herbaceous Wetlands) in Minnesota within three miles of the proposed 345/161 kV transmission line three mile study area at the Minnesota border. Cultivated Crops comprise the majority of the study area, approximately 86 percent.

The three-mile Minnesota study area for the Minnesota border crossing of the proposed 345 kV transmission line is dominated by Caniesteo-Glencoe and Clarion-Swanlake soil units. These soils units are typically considered to be loams, are typically used for agricultural purposes, are well drained to poorly drained, and are considered prime farmland according to the NRCS.

The Minnesota crossing area lies within the Minnesota River Basin watershed. The nearest perennial waterway is the West Branch of the Blue Earth River, which is approximately 0.2 mile north of where the proposed line crosses the Minnesota border. In addition, the Middle Branch of the Blue Earth River and an unnamed perennial drainage ditch occur approximately two miles east and west, respectively, of where the proposed line crosses the Minnesota border. All three of these perennial waterways are listed under the Public Waters Inventory Program.

Commonly associated agricultural vegetation of Southern Minnesota includes corn, soybean, alfalfa, and winter wheat. Typical prairie vegetation of Southern Minnesota includes big bluestem, little bluestem, indiangrass, sideoats grama, prairie june-grass, and sun sedge.

According to the MnDNR's NHIS, no federal- or State-listed threatened or endangered species are known to occur within three miles of the proposed 345 kV transmission line at the Minnesota border. No federally protected species are noted as potentially occurring in Faribault County according to USFWS. Based on USFWS NWI maps, there are five types of wetlands- PEM, PUB, PFO, PSS, and lake within three miles of the proposed 345 kV transmission line at the Minnesota border. Most of these wetlands are associated with the streams and rivers in the adjacent areas. Aside from the three listed perennial waterways, no other waterways or wetlands are listed under the Public Waters Inventory Program.

One Minnesota County Biological Survey ("MCBS") site of moderate biodiversity significance and two Reinvest in Minnesota ("RIM") conservation easement areas occur within three miles of the proposed 345 kV transmission line at the Minnesota border.

9.5 MITIGATION MEASURES

The Project must mitigate the environmental impacts it may have on several types of formally managed and regulated lands, including municipal and county parks and trails, trust lands, State trails, trout streams and other public waters, federal easement lands, forest lands, WMAs, WPAs, state parks, National Wildlife Refuges ("NWRs") and SNAs. These lands are typically used for recreational purposes, habitat management and conservation. To mitigate impacts, these areas will be avoided where practicable. No SNAs or NWRs have been identified in the Project Study Area.

The Project would affect agricultural lands, which is the dominant land use in the majority of the Project Study Area shown in **Figure 24**. Much of the agricultural land is designated as "prime farmland," which is an indicator of land that is most desirable for agricultural production. Federal regulations define prime farmland as "land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber and oilseed crops and is available for these uses." 7 C.F.R. § 657.5(a)(1). Prime farmland is important because the land itself contains the necessary features for successful agriculture production.

The primary method used to minimize impacts to agricultural land is to locate transmission lines along road rights-of-way, section lines or fence lines. In addition, impacts can be minimized by using the single pole structure, proposed by ITC Midwest, as opposed to the H-frame, two pole structure.

New transmission facilities would also have aesthetic impacts. The visual character and setting of the majority of the affected areas are largely level agricultural fields broken up by field tree lines, roads and large water features (i.e., wetlands, lakes and rivers). There are also large blocks of forested areas and river valleys interspersed throughout the areas. Transmission lines will be seen from a variety of potential viewpoints within the proposed areas, including private residences, highways, county and township roads and recreation areas. Structures, conductors, insulators, aeronautical safety markings, avian diverters, vegetation clearing and access roads may create visual effects. Potential mitigation measures include:

- Locating facilities in relationship to landforms so they will screen transmission line features;
- Locating rights-of-way and structures with input from landowners or land management agencies;
- Using care in routing, structure design and pole placement to preserve the natural landscape;
- Implementing restoration measures that reflect the existing vegetation as much as possible without impacting the safe and reliable operation of the lines; and
- Where possible, proposing river crossings near existing transmission lines, highways or other infrastructure.

The Project may potentially impact state threatened, endangered, or of concern flora or fauna species and cultural resources. ITC Midwest anticipates that impacts to these resources can generally be avoided through the routing process. In limited instances, where impacts cannot be avoided, impacts can be mitigated by pole placement and special construction measures. ITC Midwest will also comply with the various state and federal endangered species laws where necessary.

Human settlement, such as homesteads, wind farms, highway expansions and new subdivisions also need to be considered. Minimizing impacts to homes is an important factor in determining routes. During the routing process, coordination with multiple state agencies, municipalities and counties will identify potential changes in human settlement. Mitigation methods include routing lines such that planned road expansions can be accommodated and locating substations away from known future subdivision sites. ITC Midwest does not anticipate that any homes or businesses will be displaced by the Project.

Archeological site (e.g., artifact scatters and earthworks) are located in the Project Area. In some cases, surveys of potential sites will be conducted during the permitting process. These surveys will focus on areas of high potential for archeological sites or where required by the permitting process underway at the time. Normally, archeological sites are only evaluated for significance if there is potential for direct physical effects and impacts are generally addressed through avoidance.

The Project Area also contains historic architectural resources. Some of the sites are listed or considered eligible for listing in the NRHP, while other sites have yet to be evaluated. Indirect effects (e.g., visual, noise) to the properties can be avoided by proper routing of the transmission lines. If impacts to any recorded site within the Project Area cannot be avoided, that recorded site will require formal significance evaluation to determine if it meets the eligibility requirements of the NRHP. If found significant, mitigation strategies will be undertaken to reduce impacts. This could include identifying the site in detail prior to construction, limiting construction access and activities as much as possible and having an archeologist present during construction to monitor work and to gather any artifacts found. If properties are listed on the NRHP, or if they are considered eligible for listing, they may be afforded protection under federal and state regulations. ITC Midwest will work with the appropriate state, federal and tribal agencies during the routing process to avoid known areas as much as possible.

No active aggregate mining operations have been identified along the two routes proposed in the Route Permit Application. No impacts are expected and therefore no mitigation measures have been described.

9.6 OTHER PERMITS AND APPROVALS

In addition to a Minnesota Certificate of Need and Route Permit, ITC Midwest will be required to obtain a number of other permits or approvals from local, State and federal agencies prior to constructing the facilities in Minnesota and Iowa. A list of permits and other approvals that may be required for the Project is presented in **Table 16**. All required permits will be obtained prior to construction.

Table 16. List of Potential Permits and Approvals

Permit	Jurisdiction
Federal Requirements	
Clean Water Act Section 404 Permit (Local/State/Federal Application for Water/Wetland Projects)	USACE
Rivers and Harbors Act Section 10 Permit	USACE

Permit	Jurisdiction
Part 7460 review	FAA
Special Use Permit	USFWS
Incidental Take Permit	USFWS
Eagle Non-Purposeful Take Permit	USFWS
Spill Prevention, Control and Countermeasure ("SPCC") Plan	MPCA/EPA
Minnesota State Approvals	
License to Cross Public Waters or State Lands Public Water Works Permit	MnDNR
General Permit No. 1997-0005; Temporary Water Appropriations	MnDNR
Endangered Species Statutes – Permits and Coordination	MnDNR
Utility Permit on Trunk Highway Right-of-Way (Long Form No. 2525)	MnDOT
Driveway Access	MnDOT
Oversize/overweight permits	MnDOT
NPDES Permit	MPCA
Clean Water Act, Section 401 Permit	MPCA
Agriculture Mitigation Plan	MDA
Minnesota Local Approvals	
Local/State/Federal Application for Water/Wetland Projects (under WCA)	County, Township, City, BWSR
Work within the Right-of-Way permits	County, Township, City
Lands Permits	County, Township, City
Overwidth/Overweight Loads Permits	County, Township, City
Road Crossing Permits	County, Township, City
Driveway/Access Permits	County, Township, City
Coordination meetings	Soil and Water Conversation Districts
Iowa State Approvals	
Electric Transmission Franchise	Iowa Utilities Board
NPDES Permit	Iowa DNR
Clean Water Act, Section 401 Permit	Iowa DNR
Flood Plain Development Permit	Iowa DNR
Joint 404 Application Form – Wetlands	Iowa DNR
Work within the Right-of-Way Permit	Iowa DOT
Utility Accommodation Permit	Iowa DOT
Railroad Permit	Iowa Utilities Board

Permit	Jurisdiction
Iowa Local Approvals	
Building Permits/Zoning Compliance Permits	County, City
Overwidth/Overweight Loads Permits	County, City
Utility Accommodation Permits	County, City
Entrance Permits	County, City
Local Floodplain Requirements	County, City
Other Approvals	
Approval to cross lands with conservation easements	Various, depending on program, including USDA, NRCS, and local implementing governmental entities

5071246

COMPLETENESS CHECKLIST

Authority	Required Information	Location in Application
Minn. R. 7829.2500, Subp. 2	Brief summary of filing on separate page sufficient to apprise potentially interested parties of its nature and general content	Front pocket of Certificate of Need Application Binder
Minn. R. 7849.0200, Subp. 2	Title Page and Table of Contents	Front of Certificate of Need Application and pages i-x
Minn. R. 7849.0200, Subp. 4	Cover Letter	Front pocket of Certificate of Need Application Binder
Minn. R. 7849.0240	Need Summary and Additional Considerations	
Subp. 1	Summary of the major factors that justify the need for the proposed facility	Sections 1.4, 4.0
Subp. 2	Relationship of the proposed facility to the following socioeconomic considerations:	
A.	Socially beneficial uses of the output of the facility	Sections 4.2, 5.2.6, 5.2.7, 5.2.8, 5.2.9, 5.2.10, 5.3
B.	Promotional activities that may have given rise to the demand for the facility	Data exemption granted by MPUC; see Appendix C-2, Department Comments at section C.1
	MPUC approved providing no alternative data for Minn. R. 7849.0240, Subp. 2(B)	
C.	Effects of the facility in inducing future development	Sections 4.2.4, 4.2.5
Minn. R. 7849.0260	Proposed LHVTL and Alternatives	
A.	A description of the type and general location of the proposed line, including:	
(1)	Design voltage	Sections 2.3.1, 2.3.2

COMPLETENESS CHECKLIST

Authority	Required Information	Location in Application
(2)	Number, sizes and types of conductors	Sections 2.3.1, 2.3.2
(3)	Expected losses under projected maximum loading and under projected average loading in the length of the line and at terminals or substations	Data exemption granted by MPUC; see Appendix C-2, Department Comments at section C.4
	MPUC approved the following alternative data for Minn. R. 7849.0260 A(3): Expected system losses under maximum and average loading with the addition of the Project	Section 5.2.10; Appendix J, Section 7
(4)	Approximate length of the proposed line	Sections 1.3, 2.1
(5)	Approximate locations of DC terminals or AC substations on a map	Figures 1 and 2
(6)	List of likely affected counties	Section 1.2
B.	Discussion of the available alternatives including:	
(1)	New generation	Section 6.1
(2)	Upgrading existing transmission lines	Section 6.2.1; Appendix J, Sections 3, 4, 7, 8
(3)	Transmission lines with different voltages or conductor arrays	Section 6.2.2; Appendix J, Section 2.2.2
(4)	Transmission lines with different terminals or substations	Sections 5.0, 6.2.3; Appendix J, Section 2.2.2; Appendix K at 23-25
(5)	Double circuiting of existing transmission lines	Section 6.2.4; Appendix J, Section 9

COMPLETENESS CHECKLIST

Authority	Required Information	Location in Application
(6)	If facility for DC (AC) transmission, an AC (DC) transmission line	Section 6.2.5
(7)	If proposed facility is for overhead (underground) transmission, an underground (overhead) transmission line	Section 6.2.6
(8)	Any reasonable combination of alternatives (1) – (7)	Section 6.2; Appendix J, Section 4
C.	For the facility and for each alternative in B, a discussion of:	
(1)	Total cost in current dollars	Section 2.5; Appendix J, Section 8
(2)	Service life	Section 7.6
(3)	Estimated average annual availability	Section 7.6
(4)	Estimated annual O&M costs in current dollars	Section 7.6
(5)	Estimate of its effect on rates system wide and in Minnesota	Data exemption granted by MPUC; See Appendix C-2, Department Comments at section C.3
	MPUC approved the following alternative data for Minn. R. 7849.0260 C(5): MISO MVP cost allocation calculations showing costs that will be allocated to Minnesota utilities for Project 3, and ITC Midwest's estimated revenue requirement for the Project	Section 2.6; Appendix E
(6)	Efficiency	Data Exemption granted by MPUC; see Appendix C-2, Department Comments at section C.4

COMPLETENESS CHECKLIST

Authority	Required Information	Location in Application
	MPUC approved the following alternative data for Minn. R. 7849.0260 C(6): Expected system losses under maximum and average loading with the addition of the Project	Section 5.2.10; Appendix J, Section 7
(7)	Major assumptions made in subitems (1) – (6)	Sections 2.5, 2.6; 7.6; Appendix E; Appendix J, Sections 7, 8
D.	A map (of appropriate scale) showing the applicant's system or load center to be served by the proposed LHVTL; and	Data exemption granted by MPUC; see Appendix C-2, Department Comments at section C.2.[1]
	MPUC approved the following alternative data for Minn. R. 7849.0260 D: a map showing ITC Midwest's network of transmission lines in Minnesota and Iowa.	Figure 8
E.	Such other information about the proposed facility and each alternative as may be relevant to determination of need.	Sections 4.0, 5.0, 6.0
Minn. R. 7849.0270	Peak demand and annual consumption forecasts, methodology; data bases, assumptions/special information; and coordination with other systems	Data exemption granted by MPUC; see Appendix C-2, Department Comments at section C.5
Minn. R. 7849.0280 B-G and I	System Capacity data	Data exemption granted by MPUC; see Appendix C-2, Department Comments at section C.6

[1] The Department's Comments recommending the MPUC grant this data exemption request mistakenly refer to Minn. R. 7849.0250 (D) rather than to Minn. R. 7849.0260(D).

COMPLETENESS CHECKLIST

Authority	Required Information	Location in Application
	MPUC approved the following alternative data for Minn. R. 7849.0270, and 7849.0280 B-G and I:	
	• Evaluation of the Fox Lake-Rutland-Winnebago 161 kV constraint, including information about how it is one of the most binding constraints on ITC Midwest's system, how it has contributed to wind energy curtailment, and how it contributes to the Minnesota Narrow Constrained Area ("NCA");	Sections 4.3, 4.4
	• Analysis of how the Project will relieve the Fox Lake-Rutland-Winnebago 161 kV constraint, and how this will relieve the Minnesota NCA;	Sections 5.1, 5.2.6, 5.2.7, 5.2.9; Appendix J, Sections 4.2, 4.3, 4.4; Appendix K at 23-25
	• Analysis of how the Project will enable deliveries of existing wind energy, and support development of additional generation, including wind;	Sections 5.2.6, 5.2.9; Appendix J,Section 4
	• Discussion of the existing Lakefield and Trimont special protection schemes ("SPSs") and how the Project will eliminate the necessity for the Lakefield and Trimont SPSs;	Section 5.2.8; Appendix J, Section 5
	• Historical and forecasted load data for the Project area and a discussion of how limited load exacerbates congestion;	Appendix J, Section 6 and appendix 51

COMPLETENESS CHECKLIST

Authority	Required Information	Location in Application
	• Analysis of need for additional transmission capacity to serve future wind projects based on status of Buffalo Ridge as premier wind resources, including discussion of MISO queue information regarding the demand for interconnection and transmission capacity in the Project area, RPS requirements in Minnesota, and other MISO states and MISO wind zones assumed in MVP studies;	Section 4.2, Appendix J, Section 1
	• Discussion of MISO energy markets and the effect of congestion on wholesale prices;	Sections 3.5.1, 4.1, 5.3; Appendix M
	• Information on recent curtailment and electrical system constraint hours in the Project area; and	Sections 4.3, 5.3
	• Discussion of the impact of existing constraints on further wind energy development in southwestern Minnesota and how the Project will increase the amount of wind generation outlet capability in the region	Sections 4.2, 5.2.6, 5.2.9: Appendix J, Sections 4.1, 4.2, 4.4, 5
Minn. R. 7849.0280	System Capacity	
A.	Power planning programs	Section 2.2
H.	Graph of monthly adjusted net demand and capability with difference between capability and maintenance outages plotted	Section 2.2
Minn. R. 7849.0290	Conservation Programs	Data exemption granted by MPUC; see Appendix C-2, Department Comments at section C.7
	MPUC approved providing no alternative data for Minn. R. 7849.0290	

COMPLETENESS CHECKLIST

Authority	Required Information	Location in Application
Minn. R. 7849.0300	Consequence of Delay Using Three Demand Scenarios	Data exemption granted by MPUC; see Appendix C-2, Department Comments at section C.8
	MPUC approved the following alternative data for Minn. R. 7849.0300: Discussion of potential impacts of delay on generational support/RPS mandates, delivery congestion, and regional system reliability	Sections 4.0, 5.0, 6.3; Appendix J, Section 6
Minn. R. 7849.0310	Required Environmental Information	
Minn. R. 7849.0330	Transmission Facilities- data for each alternative requiring LHVTL construction, including:	
A.	For overhead transmission lines	
(1)	Schematics showing dimensions of support structures	Appendix D
(2)	Discussion of electric fields	Sections 8.6, 8.7
(3)	Discussion of ozone and nitrogen oxide emissions	Section 8.2
(4)	Discussion of radio and television interference	Section 8.4
(5)	Discussion of audible noise	Section 8.3
B.	For underground transmission facilities:	
(1)	Types and dimensions of cable systems	Section 6.2.6
(2)	Types and qualities of cable system materials	Section 6.2.6
(3)	Heat released in kW per foot of cable	Section 6.2.6

COMPLETENESS CHECKLIST

Authority	Required Information	Location in Application
C.	Estimated right-of-way required for the facility	Sections 1.3, 2.3.1, 2.3.2
D.	Description of construction practices	Sections 7.2, 7.3, 7.4, 9.5
E.	Description of O&M practices	Section 7.6
F.	Estimated workforce required for construction and O&M	Section 7.5
G.	Description of region between endpoints in likely area for routes emphasizing a three mile radius of endpoints including:	
(1)	Hydrological features	Sections 9.1.6, 9.2, 9.3, 9.4
(2)	Vegetation and wildlife	Sections 9.1.7, 9.1.8, 9.2, 9.3, 9.4
(3)	Physiographic regions	Sections 9.1.2, 9.2, 9.3, 9.4
(4)	Land use types	Sections 9.1.3, 9.1.4, 9.1.5, 9.2, 9.3, 9.4
Minn. R. 7849.0340	No-Facility Alternative- for each of three levels of demand	Data exemption granted by MPUC; see Appendix C-2, Department Comments at section C.10
	MPUC approved providing the following alternative data for Minn. R. 7849.0340: Discussion of potential impacts of no-facility alternative on generational support/RPS mandates, delivery congestion, and regional system reliability	Sections 4, 5, 6.3; Appendix J, Section 6.

Additional Statutory Factors to be Considered for Certificate of Need for Large Energy Facility

Authority	Required Information	Location
Minn. Stat. § 216B.243, subd. 3(9)	Whether the proposed project enhances regional reliability to the extent these factors improve the robustness of the transmission system in Minnesota or lowers the cost of electricity for Minnesotans.	Sections 5.2, 5.3; Appendix J, Sections 3, 4, 5, 7; Appendix M, Executive Summary, Tables 1-3
Minn. Stat. §§ 216B.2422, subd. 4, and 216B.243, subd. 3a	Whether the applicant of a proposed project transmitting nonrenewable energy has demonstrated that the project is less expensive than one transmitting renewable energy or is otherwise in the public interest.	ITC Midwest's project is being proposed to transmit renewable energy- see Sections 4.2 , 5.2; Appendix J, Section 4
Minn. Stat. §§ 216B.1612, subd. 5(c) and 216B.243, subd. 3(10) (compliance with §§ 216B.1691 and 216B.2425, subd. 7)	Whether the applicant is in compliance with Minnesota's renewable energy objectives, including purchasing energy from C-BED projects, and has identified the necessary transmission facilities to support those objectives.	ITC Midwest does not provide electric service at retail, so the C-BED statutory requirement does not apply- see Section 2. ITC Midwest's project is being proposed to enable Minnesota utilities to meet their renewable energy objectives- see Sections 4.2, 5.2; Appendix J, Section 4
Minn. Stat. § 216B.2426	Whether the applicant has considered the opportunities for installation of distributed generation.	Section 6.1
Minn. Stat. § 216H.03, subd. 3(2)	Whether the proposed project will import power from a new large energy facility outside the state that would contribute to statewide power sector carbon dioxide emissions.	Section 5.2.10; Appendix J, Section 7.2
Minn. Stat. § 216B.243, subd. 3(12)	Whether an applicant proposing a nonrenewable energy generating plant has assessed the risk of environmental costs and regulation over the expected useful life of the plant.	ITC Midwest's proposal is a transmission project, not a generation project, so this statutory requirement does not apply.
Minn. Stat. § 216B.1694, subd. (2)(5)	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 5+-year purchased power agreement.	ITC Midwest's proposal is a transmission project, not a generation project or PPA, so this statutory requirement does not apply.

BEFORE THE MINNESOTA PUBLIC UTILITIES COMMISSION

Beverly Jones Heydinger	Chair
David C. Boyd	Commissioner
J. Dennis O'Brien	Commissioner
Phyllis A. Reha	Commissioner
Betsy Wergin	Commissioner

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

ISSUE DATE: December 31, 2012

DOCKET NO. ET-6675/CN-12-1053

ORDER APPROVING NOTICE PLAN AND GRANTING VARIANCES

PROCEDURAL HISTORY

On September 28, 2012, ITC Midwest (ITCM or the Applicant) filed a notice plan petition for its Minnesota-Iowa 345 kV transmission project in Jackson, Martin, and Faribault counties.

On October 18, 2012, the Minnesota Department of Commerce, Division of Energy Resources (the Department), filed comments recommending that the Commission approve the Applicant's notice plan with certain modifications, and grant a variance to two rule requirements: 1) the rule requiring that the notice plan be implemented within 30 days of Commission approval; and 2) the rule requiring a person filing a certificate of need application to publish a newspaper notice upon filing a certificate of need application.

On November 7, 2012, ITCM filed reply comments.

On December 6, 2012, the Commission met to consider the matter.[1]

FINDINGS AND CONCLUSIONS

I. Proposed Project

The applicant has proposed to construct approximately 75 miles of new 345 kV transmission line from the existing Lakefield Junction substation in Jackson County east to a new substation (the Huntley substation) to be constructed in Faribault County, and south to the Minnesota/Iowa border near Elmore. The proposed project also includes changing the termination point of four 161 kV transmission lines from the existing Winnebago substation to the new proposed Huntley substation.

[1] On December 20, 2012, the Commission met to clarify its December 6, 2012 decision.

II. Proposed Notice Plan

The Department reviewed the Applicants' notice plan under Minn. Rules, part 7829.2550, subp. 3, which requires an applicant to file a proposed notice plan designed to notify all persons reasonably likely to be affected by the proposed line. The rule requires such plans to include direct mail notice to landowners, tribal governments, local governments and other governmental entities, as well as to all mailing addresses within the area reasonably likely to be affected by the line; the rule also requires newspaper notice to members of the public in areas reasonably likely to be affected by the proposed line. The notice must contain information regarding the project, including a map of the proposed line and other existing facilities, as well as a statement that the line cannot be constructed unless the Commission certifies that it is needed.

In its evaluation of the proposed notice plan, the Department determined that the Applicant had identified those reasonably likely to be affected by the project and that the proposal for notification to landowners, residents, and tribal and local governments is reasonable and should be approved.[2] In its evaluation of the notice content, the Department also recommended certain changes to the notice, including: 1) the addition of a statement that the Department will prepare an environmental report for the certificate of need proceeding and include notice in a statewide newspaper; 2) inclusion of the Iowa Utilities Board in the list of government entities to be noticed; 3) minor changes to the notice language; and 4) and an expanded notice corridor. With those changes, the Department concluded that the notice contains the information required under the rule.

In its reply comments, the Applicant largely agreed with the Department’s proposed changes, but added certain other proposed modifications: 1) the Applicant proposed language regarding the preparation of an environmental report; and 2) the Applicant agreed to publish notice of the proposed project in the Star Tribune, but also proposed certain changes to the original newspaper notice.

Having considered the Applicant’s proposed notice plan, the Commission concurs with the Department that the plan meets the requirements contained in Minn. Rules, part 7829.2550, with the modifications recommended by the Department as well as one additional change. The Commission finds that certain information is missing from the revised newspaper notice submitted by the Applicant in its reply comments, and will direct Applicant to use the original notice (Attachment G to its petition) for the newspaper publication with the text changes suggested by the Department.[3]

---

[2] No tribal governments were identified within the proposed notice area.

[3] The Commission also corrects a minor typographical error found in ITCM’s proposed recommendations in its reply comments, attachments B and C, page 2, third paragraph, and Attachment G, page 1, last paragraph as set forth below:

> EFP may elect to combine these two documents and issue one document ~~and~~ an EIS, which satisfies the environmental review requirements for the Certificate of Need and Route Permit proceedings.

Accordingly, the Commission approves the following modifications to the notice plan:

- An expanded notice area as identified in Attachment 1 of ITCM's reply comments;
- Revision of the notice language for the mailed and newspaper notices (Attachments B, C, G) as provided by the Department in its initial comments;
- Use of the original notice (Attachment G) for newspaper publication with the text changes suggested by the Department;
- Publication of the project notice to include a state-wide newspaper;
- Inclusion of the Iowa Utilities Board to the list of government entities to be noticed; and
- Revision of the notice language with regard to the preparation of an environmental report for the mailed and newspaper notices (Attachments B, C, G) as provided by the ITCM in its reply comments.

III. Rule Variances

The Applicant requested that the Commission grant variances to Minn. Rules, part 7829.2550, subps. 5 and 6. Subpart 5 requires an applicant to publish a newspaper notice upon filing a certificate of need application. ITCM is asking that the Commission waive this provision in the Rules.

Subpart 6 requires the applicant to implement the proposed notice plan within 30 days of approval by the Commission. The Applicant has instead requested to implement the notice plan no more than 60 days and no less than two weeks prior to the filing of the certificate of need application to allow the notice to more closely coincide with the certificate of need filing.

Applicant asserts that should the Commission grant a variance to the rules, the two newspaper notices for the notice plan and the certificate of need application could be combined. ITCM states that it would publish newspaper notice of the notice plan and the certificate of need application in newspapers of local and regional circulation up to 60 days before and no less than two weeks prior to the filing of the certificate of need application.

A. Legal Standard for Varying Rules

Under Minn. Rules, part 7829.3200, the Commission is authorized to vary any of its rules upon making the following findings:

1) enforcement of the rule would impose an excessive burden upon the applicant or others affected by the rule;

2) granting the variance would not adversely affect the public interest; and

3) granting the variance would not conflict with standards imposed by law.

The Department supported varying the rules, stating: that enforcement of the rules would burden all parties involved by separating the provision of notice from the start of the proceeding; that enforcement of the rules would not adversely affect the public interest and would better tie the implementation of notice to the beginning of the certificate of need proceeding; and that the Department is not aware that the variances requested would conflict with standards imposed by law.

The Commission concurs with the parties and will vary the requirement of Minn. Rules, part 7829.2550, subp. 5 that an applicant publish a separate newspaper notice upon the filing of a certificate of need application, instead authorizing the newspaper notices for the notice plan and certificate of need to be combined. The Commission will also vary the 30-day time line of Minn. Rules, part 7829.2550, subp. 6. In granting these variances, the Commission makes the following findings:

1) Enforcing the rules would impose an excessive burden upon the public and upon parties to the proceeding by separating the delivery of the notice from the start of the certificate of need proceeding;

2) Granting the variances would not adversely affect the public interest and would in fact serve the public interest since implementation of the notice would more closely coincide with the beginning of the certificate of need process; and

3) Varying the 30-day time line would not conflict with any other standards imposed by law.

ORDER

1. The Commission approves the proposed notice plan as modified by the Department in its comments and with the typographical correction referenced in footnote 3 in this Order.

2. The Commission grants a variance to Minn. Rules, part 7829.2550, subp. 5, that requires an applicant to publish a newspaper notice upon filing a certificate of need application.

3. The Commission grants a variance to Minn. Rules, part 7829.2550, subp. 6 on the timing of the implementation of the notice plan.

4. This Order shall become effective immediately.

BY ORDER OF THE COMMISSION

Burl W. Haar
Executive Secretary

This document can be made available in alternative formats (i.e., large print or audio) by calling 651.296.0406 (voice). Persons with hearing or speech disabilities may call us through Minnesota Relay at 1.800.627.3529 or by dialing 711.

CERTIFICATE OF SERVICE

I, Margie DeLaHunt, hereby certify that I have this day, served a true and correct copy of the following document to all persons at the addresses indicated below or on the attached list by electronic filing, electronic mail, courier, interoffice mail or by depositing the same enveloped with postage paid in the United States mail at St. Paul, Minnesota.

Minnesota Public Utilities Commission
ORDER APPROVING NOTICE PLAN AND GRANTING VARIANCES

Docket Number **ET-6675/CN-12-1053**
Dated this **31st** day of **December, 2012**

/s/ Margie DeLaHunt

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Lisa	Agrimonti	lagrimonti@briggs.com	Briggs And Morgan, P.A.	2200 IDS Center80 South 8th Street Minneapolis, MN 55402	Electronic Service	No	OFF_SL_12-1053_CN-12-1053
Julia	Anderson	Julia.Anderson@ag.state.mn.us	Office of the Attorney General-DOC	1800 BRM Tower 445 Minnesota St St. Paul, MN 551012134	Electronic Service	Yes	OFF_SL_12-1053_CN-12-1053
Peter	Bellig	N/A		207 Cedar Cliff Rd Redwood Falls, MN 56283	Paper Service	No	OFF_SL_12-1053_CN-12-1053
Michelle F.	Bissonnette		HDR Engineering, Inc.	Golden Hills Office Center 701 Xenia Avenue South, Suite 600 Minneapolis, MN 55416	Paper Service	No	OFF_SL_12-1053_CN-12-1053
Derek	Brandt	N/A	Hartford Group Inc.	PMB 506 7455 France Ave S Edina, MN 55435-4702	Paper Service	No	OFF_SL_12-1053_CN-12-1053
Joe	Butner	N/A	The StressCrete Group	14503 Wallick Rd Atchison, MN 66002	Paper Service	No	OFF_SL_12-1053_CN-12-1053
Matthew S.	Carstens	N/A	ITC Holdings Corp.	123 5th Street SE Cedar Rapids, IA 52401	Paper Service	No	OFF_SL_12-1053_CN-12-1053
George	Crocker	gwillc@nawo.org	North American Water Office	PO Box 174 Lake Elmo, MN 55042	Paper Service	No	OFF_SL_12-1053_CN-12-1053
Wanda	Davies	wdavies@windpower.com	Gamesa Energy USA, Great Plains Region	3001 Broadway St. NE, Suite 695 Minneapolis, MN 55413	Paper Service	No	OFF_SL_12-1053_CN-12-1053
Hadley	Davis	N/A	Sierra Club	85 Second St San Franccisco, MN 94105	Paper Service	No	OFF_SL_12-1053_CN-12-1053

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Thomas	Davis			1161 50th Avenue Sherburn, MI 56171	Paper Service	No	OFF_SL_12-1053_CN-12-1053
Michael	Dolan	mjdolan@dolan-mn.com		6117 Scotia Drive Edina, MN 55439	Paper Service	No	OFF_SL_12-1053_CN-12-1053
Randall	Doneen	randall.doneen@dnr.state.mn.us	Department of Natural Resources	500 Lafayette Road St. Paul, MN 55155	Electronic Service	No	OFF_SL_12-1053_CN-12-1053
Jeremy	Duehr	jduehr@pirnie.com	Malcolm Pirnie, Inc.	924 Vista Ridge Lane Shakopee, Minnesota 55379	Paper Service	No	OFF_SL_12-1053_CN-12-1053
Cal	Dufault	Cal.Dufault@nrgenergy.com	NRG Energy	14893 Wilds Pkwy NW Prior Lake, MN 55372	Paper Service	No	OFF_SL_12-1053_CN-12-1053
Ledy	Dunkle	N/A	Aldridge Electric	844 E Rockland Rd Libertyville, IL 60498-3358	Paper Service	No	OFF_SL_12-1053_CN-12-1053
Patrick	Edwards	N/A		10006 305th St W Northfield, MN 55057	Paper Service	No	OFF_SL_12-1053_CN-12-1053
Kristen	Eide Tollefson	ket@wro-ns.net	R-CURE	P O Box 129 Frontenac, MN 55026	Paper Service	No	OFF_SL_12-1053_CN-12-1053
Paul	Entinger	N/A		13821 300th St New Prague, MN 56071	Paper Service	No	OFF_SL_12-1053_CN-12-1053
Sharon	Ferguson	sharon.ferguson@state.mn.us	Department of Commerce	85 7th Place E Ste 500 Saint Paul, MN 551012198	Electronic Service	No	OFF_SL_12-1053_CN-12-1053

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Huck	Finn	huck.finn@apigroupinc.us	API Construction Company	1100 Old Hwy 8 NW St. Paul, MN 55113	Paper Service	No	OFF_SL_12-1053_CN-12-1053
Dale	Fredrickson			12406 347th Street Lindstrom, MN 55045	Paper Service	No	OFF_SL_12-1053_CN-12-1053
Travis	Germundson	travis.germundson@state.mn.us		520 Lafayette Rd Saint Paul, MN 55155	Electronic Service	No	OFF_SL_12-1053_CN-12-1053
Curt, Mary Pat	Gohmann	N/A		35123 County Road 2 St Joseph, MN 56374	Paper Service	No	OFF_SL_12-1053_CN-12-1053
David	Grover	dgrover@itctransco.com	ITC Midwest	444 Cedar St Ste 1020 Saint Paul, MN 55101-2129	Paper Service	No	OFF_SL_12-1053_CN-12-1053
Floyd	Guajardo	N/A	PennWell Corporation	1455 West Loop S Ste 400 Houston, TX 77027-9501	Paper Service	No	OFF_SL_12-1053_CN-12-1053
Burl W.	Haar	burl.haar@state.mn.us	Public Utilities Commission	Suite 350 121 7th Place East St. Paul, MN 551012147	Electronic Service	Yes	OFF_SL_12-1053_CN-12-1053
Heidi	Hahn	N/A		4778 Chester Ave Webster, MN 55088	Paper Service	No	OFF_SL_12-1053_CN-12-1053
Eric	Hansen	N/A	Pinnacle Engineering Inc.	11541 95th Ave N Maple Grove, MN 55369	Paper Service	No	OFF_SL_12-1053_CN-12-1053
Linda	Hanson	elcskh5@yahoo.com	W.O.L.F., Inc.	W1806 Wilson Road Hawkins, WI 54530	Paper Service	No	OFF_SL_12-1053_CN-12-1053

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Randy, Rose	Haseleu	N/A		420 Hoyt Ave S Springfield, MN 56087	Paper Service	No	OFF_SL_12-1053_CN-12-1053
Vickie	Hessenius	N/A	CERTs	69144 270th St Dexter, MN 55926	Paper Service	No	OFF_SL_12-1053_CN-12-1053
Jason	Hoskins	N/A	Ulteig Engineers	c/o Jason Hoskins 4285 Lexington Ave N Saint Paul, MN 55126	Paper Service	No	OFF_SL_12-1053_CN-12-1053
Rick	Howden	N/A	Congressman Tim Walz	227 E Main St Ste 220 Mankato, MN 56001	Paper Service	No	OFF_SL_12-1053_CN-12-1053
Karen	Kromar	karen.kromar@state.mn.us	MN Pollution Control Agency	520 Lafayette Rd Saint Paul, MN 55155	Electronic Service	No	OFF_SL_12-1053_CN-12-1053
John	Lindell	agorud.ecf@ag.state.mn.us	Office of the Attorney General-RUD	1400 BRM Tower 445 Minnesota St St. Paul, MN 551012130	Electronic Service	Yes	OFF_SL_12-1053_CN-12-1053
Kim	Lindquist	kim.lindquist@ci.rosemount.mn.us		2875 145th St W Rosemount, MN 55068	Electronic Service	No	OFF_SL_12-1053_CN-12-1053
Brian	Mitchell	N/A	Corval Group	1633 Eustis St Saint Paul, MN 55108	Paper Service	No	OFF_SL_12-1053_CN-12-1053
Steven	Mittelstaedt	N/A		32097 Sandborn Dr Montgomery, MN 56069	Paper Service	No	OFF_SL_12-1053_CN-12-1053
Elling	Olson	N/A	M A Mortenson Co	700 Meadow Ln N Minneapolis, MN 55422	Paper Service	No	OFF_SL_12-1053_CN-12-1053

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Michael	Pangborn	N/A	NextEra Energy Resources	14000 Sundial Ct Eden Prairie, MN 55346	Paper Service	No	OFF_SL_12-1053_CN-12-1053
Bonnie	Patrick	N/A		30875 Minnesota Ave Lindstrom, MN 55065	Paper Service	No	OFF_SL_12-1053_CN-12-1053
Bob	Patton	bob.patton@state.mn.us	MN Department of Agriculture	625 Robert St N Saint Paul, MN 55155-2538	Electronic Service	No	OFF_SL_12-1053_CN-12-1053
Angela	Piner	angela.piner@hdrinc.com	HDR, Inc.	Suite 600 701 Xenia Avenue South Suite 600 Minneapolis, MN 55416	Paper Service	No	OFF_SL_12-1053_CN-12-1053
Jay	Porter	jporter@GREnergy.com	Great River Energy	12300 Elm Creek Blvd Maple Grove, MN 55369	Paper Service	No	OFF_SL_12-1053_CN-12-1053
David	Richardson	N/A	AMEC	800 Marquette Ave Ste 1200 Midwest Plaza Bldg Minneapolis, MN 55420-2876	Paper Service	No	OFF_SL_12-1053_CN-12-1053
Christian	Rieck	N/A		2819 167th LN NW Andover, MN 55304	Paper Service	No	OFF_SL_12-1053_CN-12-1053
Stoei	Rivesllp	N/A		33 S 6th St Ste 4200 Minneapolis, MN 55402	Paper Service	No	OFF_SL_12-1053_CN-12-1053
Jennie	Ross	jennie.ross@state.mn.us		395 John Ireland Blvd MS 620 Saint Paul, MN 55155	Electronic Service	No	OFF_SL_12-1053_CN-12-1053

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Tod	Sherman	tod.sherman@dot.state.mn.us	Mn/DOT Metro District	Waters Edge 1500 West County Road B2 Roseville, MN 55113	Electronic Service	No	OFF_SL_12-1053_CN-12-1053
Glen	Skarbakka	glen.skarbakka@iberdrolaREN.com	Iberdrola Renewables	701 Fourth Avenue South, Suite 1010 Minneapolis, MN 55415	Paper Service	No	OFF_SL_12-1053_CN-12-1053
Dana	Slad	N/A	Avant Energy Services	200 S 6th St Ste 300 Minneapolis, MN 55402	Paper Service	No	OFF_SL_12-1053_CN-12-1053
Adam	Sokolski	adam.sokolski@iberdrolaren.com	Iberdrola Renewables	701 fourth Avenue South Suite 1010 Minneapolis, MN 55415	Electronic Service	No	OFF_SL_12-1053_CN-12-1053
Tony	Sullins	N/A	U.S. Fish and Wildlife Service	Twin Cities Ecological Services Field Office 4101 American Blvd. E. Bloomington, MN 55425	Paper Service	No	OFF_SL_12-1053_CN-12-1053
Eric	Swanson	eswanson@winthrop.com	Winthrop Weinstine	225 S 6th St Ste 3500 Capella Tower Minneapolis, MN 554024629	Electronic Service	No	OFF_SL_12-1053_CN-12-1053
Steven	Swenson	N/A	Pipestone Publishing	115 2nd St NE Pipestone, MN 56164	Paper Service	No	OFF_SL_12-1053_CN-12-1053
SaGonna	Thompson	Regulatory.Records@xcelenergy.com	Xcel Energy	414 Nicollet Mall FL 7 Minneapolis, MN 554011993	Electronic Service	No	OFF_SL_12-1053_CN-12-1053
Emily	Ulmer	N/A	Sierra Club	85 2nd St FL 2 San Francisco, CA 94105	Paper Service	No	OFF_SL_12-1053_CN-12-1053

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Jeff	Vetsch	N/A	CERTs	112 Norwood St New London, MN 56273	Paper Service	No	OFF_SL_12-1053_CN-12-1053
James	Voller	N/A		33038 102nd Ave St Joseph, MN 56374	Paper Service	No	OFF_SL_12-1053_CN-12-1053
Guy	Wolf		Board Member of Clean Wisconsin	N3421 Mohawk Valley Road Stoddard, WI 54658	Paper Service	No	OFF_SL_12-1053_CN-12-1053

BRIGGS
BRIGGS AND MORGAN

2200 IDS Center
80 South 8th Street
Minneapolis MN 55402-2157
tel 612.977.8400
fax 612.977.8650

February 20, 2013

Lisa M. Agrimonti
(612) 977-8656
lagrimonti@briggs.com

ELECTRONIC FILING

Dr. Burl W. Haar
Executive Secretary
Minnesota Public Utilities Commission
350 Metro Square Building
121 Seventh Place East
St. Paul, MN 55101

Re: ***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***
MPUC Docket No. ET6675/CN-12-1053

Dear Dr. Haar:

Enclosed for electronic filing is ITC Midwest LLC's Notice Plan Compliance Filing in the above referenced docket. The filing demonstrates ITC Midwest has fulfilled all of the notice elements under the Notice Plan as required by the Minnesota Public Utilities Commission's Order Approving Notice Plan and Granting Variances dated December 31, 2012.

Please call me with any questions.

Sincerely,

/s/ Lisa M. Agrimonti

Lisa M. Agrimonti

LMA/ts
Enclosures
cc: Service List

Briggs and Morgan, Professional Association
Minneapolis | St. Paul | www.briggs.com
Member - Lex Mundi, a Global Association of Independent Law Firms

STATE OF MINNESOTA
BEFORE THE
MINNESOTA PUBLIC UTILITIES COMMISSION

Beverly Jones Heydinger	Chair
David C. Boyd	Commissioner
J. Dennis O'Brien	Commissioner
Phyllis Reha	Commissioner
Betsy Wergin	Commissioner

IN THE MATTER OF THE APPLICATION OF ITC MIDWEST LLC FOR A CERTIFICATE OF NEED FOR THE MINNESOTA-IOWA 345 KV TRANSMISSION PROJECT IN JACKSON, MARTIN, AND FARIBAULT COUNTIES, MINNESOTA

MPUC Docket No. E6675/CN-12-1053

NOTICE PLAN COMPLIANCE FILING

I. INTRODUCTION

ITC Midwest LLC, a Michigan limited liability company ("ITC Midwest"), submits this Notice Plan compliance filing to the Minnesota Public Utilities Commission ("Commission") pursuant to Minnesota Rules 7829.2500 and 7829.2550. This filing confirms that all required notices have been given in advance of submitting a Certificate of Need application for the Minnesota portion of ITC Midwest's Minnesota – Iowa 345 kV Transmission Project in Jackson, Martin, and Faribault counties.

II. NOTICE PLAN IMPLEMENTATION

A. Direct Mail Notice to Landowners and Mailing Addresses

Minnesota Rules 7829.2550, Subpart 3(A), requires an applicant for a Certificate of Need to provide direct mail notice to all landowners likely to be affected by the proposed transmission lines. Minnesota Rule 7829.2550, Subpart 3(B), requires an applicant for a Certificate of Need to provide direct mail notice to all mailing addresses in the area that are likely to be affected by the proposed transmission lines. On January 22, 2013, ITC Midwest sent direct mail notice to landowners and mailing addresses within the Notice Area approved by the Commission in its December 31, 2013 Order Approving the Notice Plan and

Granting Variances ("Notice Plan Order"). Landowners and residents were provided notice materials included in this filing as **Attachment A.** The list of notified landowners and residents along with the affidavit of mailing is included in this filing as **Part 1 of Attachment B**.

B. Direct Mail Notice to Local Governments

Minnesota Rule 7829.2550, Subpart 3(C), requires applicants to provide direct mail notice to governments of towns, cities, home rule charter cities, and counties whose jurisdictions are reasonably likely to be affected by the proposed transmission lines. On January 22, 2013, ITC Midwest sent direct mail notice to local governmental officials and lead administrative personnel. A copy of the notice materials sent to those individuals is included in this filing as **Attachment C**. On January 22, 2013, ITC Midwest also sent this notice to State Senators and Representatives whose districts are within the Notice Area. The materials mailed to landowners and residents at **Attachment A** was sent to federal, State, and local government agencies and offices as identified in the approved Notice Plan. The list of notified local government elected officials and State Senators and Representatives is included in this filing along with the affidavit of mailing as **Part 2 of Attachment B**. Recipients of the notice materials at federal, State, and local government agencies and offices is included in this filing, along with the affidavit of mailing, as **Part 1 of Attachment B**.

C. Newspaper Notice

Minnesota Rule 7829.2550, Subpart 3(D), requires applicants to publish notice in newspapers in the areas that may be affected by the transmission lines. Between January 21 and 24, 2013, newspaper advertisements announcing the project were run in local and statewide papers. The Commission waived Minnesota Rule 7829.2500, subp. 5 as part of its Notice Plan Order and the notices published in January 2013 satisfy the requirements under that rule. An affidavit of publication, including a list of newspapers and dates of publication, and a copy of each publication's tear sheet are included in this filing as **Attachment D**.

D. Notice Timing

Minnesota Rule 7829.2550, Subpart 6, requires the applicant to implement the Notice Plan within 30 days of its approval by the Commission. The Commission granted a variance to this rule to modify the Notice Plan implementation requirement to allow notice to more closely coincide with the Certificate of Need filing. The Commission directed the notices identified in this filing to occur no more than 60 days and no less than two weeks prior to the filing of the Certificate of Need application.

III. CONCLUSION

ITC Midwest respectfully submits this compliance filing demonstrating compliance with the Commission's Notice Plan Order. All notice elements of the Notice Plan have been completed as required.

Dated: February 20, 2013

Respectfully submitted,

BRIGGS AND MORGAN, P.A.

By: *__/s/ Lisa Agrimonti_________*

Lisa Agrimonti (#272474)
Kodi Jean Church (#391056)
2200 IDS Center
80 South Eighth Street
Minneapolis, MN 55402
(612) 977-8400

Attorneys for ITC Midwest LLC,
a Michigan limited liability company

5282944v1

Attachment A

ITC Midwest LLC • 444 Cedar Street, Suite 1020 • St. Paul, MN 55101

January 22, 2013

RE: Notice of Certificate of Need Application for the Minnesota-Iowa 345 KV Transmission Project in Jackson, Martin, and Faribault counties, Minnesota MPUC Docket No.: ET6675/CN-12-1053

Dear Stakeholder:

ITC Midwest LLC, a Michigan limited liability company ("ITCM"), is proposing to construct a 345 kV transmission line from its Lakefield Junction Substation in Jackson County, east through Martin County to the newly-proposed Huntley Substation in Faribault County, before turning south to the Iowa border (the "Project"). In Iowa, the transmission line will continue south to a new Ledyard Substation, near the City of Ledyard, Iowa, and then on to a substation near the City of Burt in Kossuth County, Iowa. ITCM will seek approval to construct the Minnesota portion of the Project from the Minnesota Public Utilities Commission ("Commission"). This letter is intended to provide you with notification of certain Project details and also to provide you with information on how you can participate in the Minnesota regulatory process.

The Project includes expanding the Lakefield Substation, a new Huntley Substation and several miles of reconfigured 161 kV transmission line near the Huntley Substation. The reconfigurations are necessary to relocate all 161 kV transmission substation facilities to the Huntley Substation from the existing Winnebago Substation which will be decommissioned. The Minnesota portion of the Project will be approximately 75 miles long. The area under consideration for the location of the Project is depicted in **Attachment A**. The Iowa portion of the Project will be permitted by the Iowa Utilities Board.

This notice is being provided to those who fall within one or more of the categories listed below as they relate to the area ("Notice Area") shown on Attachment A:

- Landowners with property within the Notice Area;
- Residents within the Notice Area;
- Local units of government in and around the Notice Area;
- Local and State elected officials; or
- State and local government agencies and offices.

Regulatory Process Overview

For the Project, the Commission must determine whether the Project is needed (Certificate of Need) and where the Project should be located (Route Permit). Before the Project can be constructed, the Commission must first certify that the Project is needed.

The certification of the Project is governed by Minnesota law, including Minnesota Statutes Section 216B.243, and Minnesota Rules Chapters 7829 and 7849, specifically Rules 7849.0010 to 7849.0400 and 7849.1000 to 7849.2100. In the Certificate of Need proceeding, the Commission will analyze whether ITCM has proposed the most appropriate size, type, and timing for the Project. The Certificate of Need application, once submitted, can be obtained by visiting the Commission's website at www.puc.state.mn.us in Docket No. ET6675/CN-12-1053.

In addition to certifying the Project, the Commission must also grant a Route Permit for the Project. The routing of the Minnesota portion of the Project is governed by Minnesota law, including Minnesota Statutes Chapter 216E and Minnesota Rules Chapter 7850. Information on the Route Permit application, once filed, can be obtained by visiting the Commission's website in Docket No. ET6675/TL-12-1337.

Minnesota Department of Commerce Energy Facility Permitting staff ("EFP") is responsible for conducting environmental review of the Project. EFP will prepare an environmental report for the Certificate of Need proceeding. EFP will prepare an environmental impact statement ("EIS") for the Route Permit proceeding. EFP may elect to combine these two documents and issue one document, an EIS, which satisfies the environmental review requirements for the Certificate of Need and Route Permit proceedings.

ITCM will be submitting an application for a Route Permit with at least two routes and will identify the route which ITCM prefers. Other routes can be proposed during the EIS scoping process to be completed by EFP. As part of its analysis, EFP will evaluate the routes proposed by ITCM in its Route Permit application and any other routes proposed during the scoping process that will aid in the Commission's decision on the Route Permit application. The Commission may determine that a route submitted by ITCM, or a route proposed during the scoping process, or some combination of such routes is the most appropriate route for the Project. Selection of a final route by the Commission will be based on evaluation of the routes, guided by the Factors identified in Minnesota Statutes Section 216E.03, Minnesota Rule 7850.4100, and stakeholder input received during the regulatory process.

For the 345 kV transmission line portions of the Project, ITCM anticipates that it will obtain a 200-foot wide permanent right-of-way. For the 161 kV transmission line portions of the Project, ITCM anticipates that it will obtain a 150-foot wide permanent right-of-way. Before beginning construction, ITCM will acquire property rights for the right-of-way, typically through an easement that will be negotiated with the landowner for each parcel.

The proposed structures for the Project are primarily single pole, weathering or galvanized steel structures. Where the 345 kV transmission line can be co-located with existing 161 kV transmission lines, double-circuit structures will be used. For the 161 kV transmission line portions of the Project, single pole single circuit and double circuit poles will be used to accommodate construction. Structures are proposed to be placed using spans of approximately 600 to 1,100 feet, with an average span of approximately 900 feet. Additionally, specialty structures, other than the single pole structures discussed above, may be used through areas of environmental sensitivity or where construction conditions require their use.

Need for the Project

The Project is needed to enhance regional reliability, increase transmission capacity to support additional generation, including generation to meet renewable energy standards throughout the region, and to reduce congestion which will enable more efficient delivery of energy.

The proposed facilities in Minnesota and Iowa were studied and approved in December 2011 as part of the Midwest Independent Transmission System Operator ("MISO") Multi-Value Projects ("MVP") portfolio in the 2011 MISO Transmission Expansion Plan.

The MVP projects were developed based on a broad assessment of benefits to strengthen and enhance reliability across the integrated transmission system on which all regional electric load and exports rely including:

- Substantial reductions in regional congestion costs;
- Reductions in transmission losses, effecting significant, broadly-shared cost savings; and
- Reductions in the region's installed capacity requirement, thus measurably reducing capacity costs throughout the region.

The Project is a portion of what is identified as Project 3 in the MVP portfolio. The Iowa portions of Project 3 are subject to review and approval by the Iowa Utilities Board.

Biennial Transmission Planning

Minnesota statutes include a requirement that each electric transmission owning utility in the state file a biennial transmission planning report with the Commission in the fall of odd years. These reports provide an excellent source of background information on the transmission planning process used by utilities in Minnesota. The 2011 Biennial Transmission Planning Report is available at: www.minnelectrans.com.

Project Notifications

To subscribe to the Project Certificate of Need docket and receive email notifications when information is filed that is related to the Certificate of Need for the Project, please visit www.puc.state.mn.us, click on the "Subscribe to a Docket" button, enter your email address and select "Docket Number" from the Type of Subscription dropdown box, then select "12" from the first Docket Number dropdown box and enter "1053" in the second box before clicking on the "Add to List" button. You must then click the "Save" button at the bottom of the page to confirm your subscription to the Project Docket. These same steps can be followed to subscribe to the Project Route Permit docket (ET6675/TL-12-1337).

Please visit www.itctransco.com/minnesota-iowa-project for more information on the Project. If you have questions about the process, you may contact the Minnesota regulatory staff listed below:

Minnesota Public Utilities Commission	Minnesota Department of Commerce
Scott Ek	Ray Kirsch, State Permit Manager
121 7th Place East, Suite 350	85 7th Place East, Suite 500
St. Paul, Minnesota 55101	St. Paul, Minnesota 55101
651.201.2255	651.296.7588
800.657.3782	800.657.3794
scott.ek@state.mn.us	raymond.kirsch@state.mn.us
www.puc.state.mn.us	

If you would **like to have your name added to the Project Route Permit mailing list** (MPUC Docket ET6675/TL-12-1337), you may register by visiting the Department of Commerce webpage at mn.gov/commerce/energyfacilities/, clicking on the "Transmission Lines" tab, selecting "Minnesota-Iowa 345 kV Transmission Project" from the listed projects, and then clicking the links next to the "Mailing List" heading. Alternately, you may contact Department of Commerce staff at the address above. Please be aware that the Route Permit mailing list may not be available for online registration until the Route Permit application is submitted.

A separate service list is maintained for the Certificate of Need proceeding. To be **placed on the Project Certificate of Need mailing list** (MPUC Docket ET6675/CN-12-1053), mail, fax, or email Robin Benson at Minnesota Public Utilities Commission, 121 7th Place E., Suite 350, St. Paul, MN 55101-2147, Fax: 651-297-7073 or robin.benson@state.mn.us.

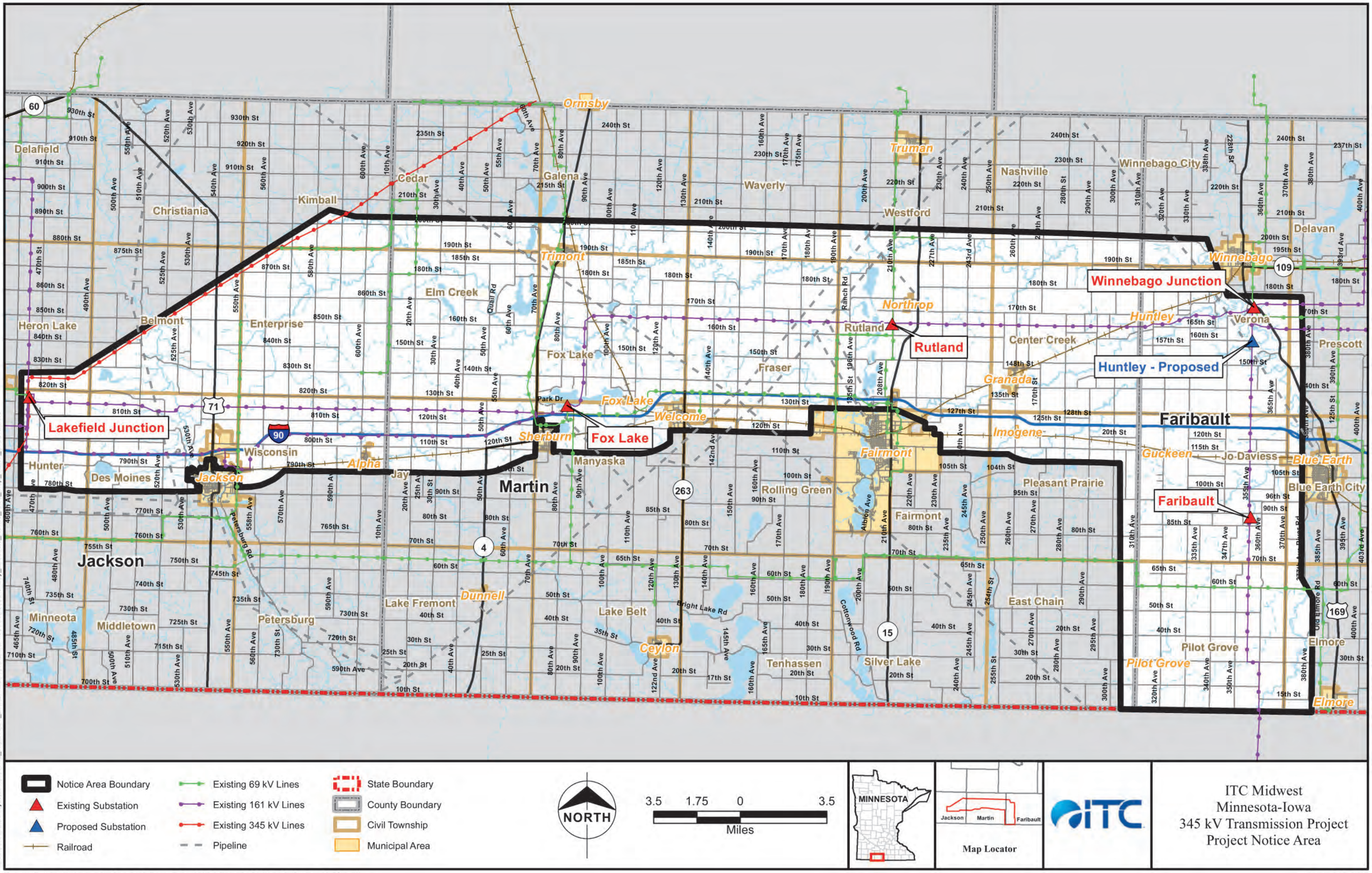
The ITCM contact for questions about this Project is:

David B. Grover
Manager, Regulatory Strategy
ITC Midwest LLC
444 Cedar Street, Suite 1020
St. Paul, MN 55101
877-482-4829
minniowa@itctransco.com

Sincerely,

David B. Grover

David B. Grover
Manager, Regulatory Strategy



ITC Midwest
Minnesota-Iowa
345 kV Transmission Project
Project Notice Area

Source: National Hydrography Dataset; Minnesota Geo GIS; Minnesota DOT; ITC; Burns & McDonnell.

January 03, 2013

\\ESPSRV\Data\Projects\ITC\66742_HUNTLEY_LAKEFIELD\GIS\DataFiles\ArcDocs\Huntley_Lakefield_Notice_Area_Map_11x17_010313.mxd

Attachment B

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

AFFIDAVIT OF MAILING
MPUC Docket No. ET6675/CN-12-1053

Jennifer Jacobson being first duly sworn, deposes and states that on the 22nd of January 2013, the following were mailed by United States Postal Service, postage prepaid thereon, to the individuals identified on the attached list:

Notice of Certificate of Need Application for the Minnesota-Iowa 345 kV Transmission Project in Jackson, Martin, and Faribault counties, Minnesota.

Jennifer Jacobson

Subscribed and sworn to before me

this 11th day of February 2013.

Lora L Jencks
Notary Public

LORA L JENCKS
Notarial Seal - Iowa
Commission # 168107
My Commission Expires 1/31/14

5238288v1

List of Attachment A Recipients:

- Landowners
- Residents
- Federal, State, and Local Agencies

Michele Stindtman	SWCD Program Administrator		415 S Grove St Ste 8	Blue Earth MN 56013-2600
Deanna Pomije	District Conservationist	411 S Grove St, Suite 1	PO Box 185	Blue Earth MN 56013-0185
Jason & Laura Larsen			9370 345th Ave	Blue Earth MN 56013-5723
Marjorie Poppe			1001 S Grove St	Blue Earth MN 56013-5834
Apolinar & Melinda Sifuentes			1006 E 4th St	Blue Earth MN 56013-2710
Helen M Smith Trust			1011 E 4th St	Blue Earth MN 56013-2711
Charles & Karen Fairchild			1014 E 3rd St	Blue Earth MN 56013-2730
Dale G Goerndt			1019 305th Ave	Blue Earth MN 56013-3084
Douglas G & Susan L Garlick			1020 S Ramsey St	Blue Earth MN 56013-2222
Koestler Irrevocable Trust, Douglas Garlick Trustee			1020 S Ramsey St	Blue Earth MN 56013-2222
Maxine Lawrence			1025 Highland Dr	Blue Earth MN 56013-1501
Merrill K Smith Jr			104 Smith Dr	Blue Earth MN 56013-1645
Darren L & Kimberly K Hagedorn			1073 305th Ave	Blue Earth MN 56013-3084
Michael P & Amy P Ankeny			1081 Highland Dr	Blue Earth MN 56013-1501
Roger H & Sandra S Grandgenett			10811 365th Ave	Blue Earth MN 56013-5313
Cleighton R Johnson Life Estate et al.			10820 435th Ave	Blue Earth MN 56013-7603
Lawrence Farm Inc			1120 Highland Dr	Blue Earth MN 56013-1500
Lawrence Land LLC			1120 Highland Dr	Blue Earth MN 56013-1500
Ingrid Elise Pechumer			11305 323rd Ave	Blue Earth MN 56013-5228
Marsha A. Kadlecik			11312 322nd Ave	Blue Earth MN 56013-5211
Thomas E. & Margaret Hanson			11328 322nd Ave	Blue Earth MN 56013-5211
Rory Hardt			11336 321st Ave	Blue Earth MN 56013-5213
Lillian L Hartwick			11351 377th Ave	Blue Earth MN 56013-5434
Terrence R Jenson			114 W 2nd St	Blue Earth MN 56013-1201
Robert T Murphy Life Est et al.			11404 330th Ave	Blue Earth MN 56013-5218
Fern Anderson Trust			115 E 10th St	Blue Earth MN 56013-2101
Julie Irene Willmert			115 Oak Knoll Ct	Blue Earth MN 56013-1668
Terry Stensland			11545 320th Ave	Blue Earth MN 56013-5201
Regina Jean Eischen			11547 321st Ave	Blue Earth MN 56013-5207
Cecil & Cheryl Kiethahn			11547 322nd Ave	Blue Earth MN 56013-5206
Joann M & Howard W Lange			11643 River Ridge Rd	Blue Earth MN 56013-3004
Eldon M & Jean L Beenken			118 E 9th St	Blue Earth MN 56013-2012
Thomas J & Rebecca P Plocker			118 S Holland St	Blue Earth MN 56013-1329
Donald & Colleen True			11890 390th Ave	Blue Earth MN 56013-1705
John A & Candace L Arends			11990 380th Ave	Blue Earth MN 56013-5402
Wayne D & Donna Lawrence			120 Bartel Dr	Blue Earth MN 56013-1421
Minn-Iowa Christian Broadcasting Foundation Inc		12089 380th Ave	PO Box 72	Blue Earth MN 56013-0072
Mary Ayleen Carr			1223 Highland Dr	Blue Earth MN 56013-1504
Paul T Carr c/o Tom Carr			1223 Highland Dr	Blue Earth MN 56013-1504
B E Industrial Service Co c/o Robert L Hammond			123 W 7th St	Blue Earth MN 56013-1309
Blue Earth Valley Comm Inc			123 W 7th St	Blue Earth MN 56013-1309
Comtech Resources Inc			123 W 7th St	Blue Earth MN 56013-1309
Rural Communications Holding Corporation			123 W 7th St	Blue Earth MN 56013-1309
Larry O & Susan R Cassens			12370 330th Ave	Blue Earth MN 56013-5222
David G Anderson et al.			124 E 13th St E	Blue Earth MN 56013-2176
George & Jean Murphy			12523 370th Ave	Blue Earth MN 56013-5301
Curt & Cindy H Sorgenfrie			12565 330th Ave	Blue Earth MN 56013-5200
Patrick A & Angela J Murphy			12620 345th Ave	Blue Earth MN 56013-5302
Raymond H & Carmel T Murphy			12675 380th Ave	Blue Earth MN 56013-5410
Robert & Carol Moore			12675 380th Ave	Blue Earth MN 56013-5410
Cody A Feder et al. & Wayne & Lynda I Feder			12871 380th Ave	Blue Earth MN 56013-5409
Kevin L Krieger & Margaret Sonnek Krieger			12875 370th Ave	Blue Earth MN 56013-5300
Denise Traetow & C Gronwald			1304 S Galbraith St	Blue Earth MN 56013-1628

Tafco	1304 W 1st St	Blue Earth MN 56013-1170
Douglas & Susan Krinke	1307 S Galbraith St	Blue Earth MN 56013-1664
James V & Thelma D Smith	13123 365th Ave	Blue Earth MN 56013-4905
David E & Kathryn A Frank	1324 S Ramsey St	Blue Earth MN 56013-2211
Raymond M & Patricia K Bell	1334 S Ramsey St	Blue Earth MN 56013-2211
Timothy P, Nancy & Marjie L Peterson	13485 345th Ave	Blue Earth MN 56013-4910
Jason E & Carla S Lawrence	13547 365th Ave	Blue Earth MN 56013-4904
David C & Florence Peterson	13665 US Highway 169	Blue Earth MN 56013-5012
Kevin J & Molly Henningsen	13880 US Highway 169	Blue Earth MN 56013-5011
Kathleen Ann Maloney	13915 US Highway 169	Blue Earth MN 56013-5009
Neal & Brenda Mensing	14136 365th Ave	Blue Earth MN 56013-4903
Custom Built Pneumatics Inc	1420 Industrial Dr	Blue Earth MN 56013-1145
Henry C, Violet & Kent Mensing	14635 US Highway 169	Blue Earth MN 56013-5007
Ellen Sanders & Leroy Sanders Trust B	14875 US Highway 169	Blue Earth MN 56013-5006
Norman R & Lillian Kohlmeyer	15320 US Highway 169	Blue Earth MN 56013-4900
Richard J, Michael & Shannon Dickman	15455 US Highway 169	Blue Earth MN 56013-4901
Express Diagnostics Int'l	PO Box 310	Blue Earth MN 56013-0310
Kerry Group	1640 W 1st St	Blue Earth MN 56013-1176
Feder Prairie Seed Co LLC	1740 Industrial Dr	Blue Earth MN 56013-1187
Derald L Loge	208 Tanglewood Ln	Blue Earth MN 56013-1652
Frances E Fenske	208 W 6th St	Blue Earth MN 56013-1304
Anthony Zierke & Bradley Zierke & Tracy Zierke	227 N Main St # 3	Blue Earth MN 56013-1939
Harry Childs Trust , Sue Hauskins Trustee	227 N Nicollet St	Blue Earth MN 56013-1246
Bradley K & Deborah L Zierke	28 Linden Ln	Blue Earth MN 56013-3001
Bonnie Larsen	2808 40th St	Blue Earth MN 56013-3013
Terry L & Sonja M Peterson	2927 50th St	Blue Earth MN 56013-3018
Dale R & Troy L Jensen	2967 50th St	Blue Earth MN 56013-3018
Ann Jensen	2970 40th St	Blue Earth MN 56013-3010
Russell Jensen	2970 40th St	Blue Earth MN 56013-3010
Steven Wannarka	2973 95th St	Blue Earth MN 56013-3086
George Howell	3001 40th St	Blue Earth MN 56013-3009
Derick Benz	302 Oak Knoll Ct	Blue Earth MN 56013-1641
Loren & Kathleen Benz	302 Oak Knoll Ct	Blue Earth MN 56013-1641
Orletha B Stewart Life Est et al. c/o Kathy Benz	302 Oak Knoll Ct	Blue Earth MN 56013-1641
Louis M Maday	3033 115th St	Blue Earth MN 56013-3089
Marvis Maday	3033 115th St	Blue Earth MN 56013-3089
Dale & Troy Jensen	3036 40th St	Blue Earth MN 56013-3009
Eugene E Hacklander Fam Trust & Florence Hacklander	304 S Moore St	Blue Earth MN 56013-2050
Walter K Krosch & Charlotte Ann Matti	3049 95th St	Blue Earth MN 56013-3026
James J Welchlin	3077 95th St	Blue Earth MN 56013-3026
Byron K & Sandra A Steuer	3088 60th St	Blue Earth MN 56013-3019
Victoria Zabel	309 N Nicollet St	Blue Earth MN 56013-1253
Jason S Olson & Robyn Lynn Beach-Olson	310 E 2nd St	Blue Earth MN 56013-1906
Roscoe & Shirley Hannaman	31029 95th St	Blue Earth MN 56013-5612
James E & Marjorie A Meyer	311 N Moore St	Blue Earth MN 56013-1948
Keith & Lori Zoeller	31176 50th St	Blue Earth MN 56013-6005
Amos D & Amanda L Bahr	31205 110th St	Blue Earth MN 56013-5216
Ted I & Maureen A Mittelstadt	31208 95th St	Blue Earth MN 56013-5611
Patrick J, Holly & Elizabeth L Moore	31270 80th St	Blue Earth MN 56013-5609
Daniel D & Taylor M Weerts	31453 85th St	Blue Earth MN 56013-5610
Marjorie H Schock	315 E 3rd St	Blue Earth MN 56013-1913

Richard S & Debra K Murphy	315 E 8th St	Blue Earth MN 56013-2032
James D & Carla M Wagner	31683 95th St	Blue Earth MN 56013-5601
Edward C & Sharon K Hannaman	31749 105th St	Blue Earth MN 56013-5214
Donald Hannaman Life Estate et al.	31759 105th St	Blue Earth MN 56013-5214
Greg Grotte	31775 65th St	Blue Earth MN 56013-6002
Keith & Lori Barton	31847 40th St	Blue Earth MN 56013-6020
Kevin Emery, et al.	320 N Sailor St	Blue Earth MN 56013-2726
Donamae D Blom Life Estate et al.	32091 65th St	Blue Earth MN 56013-6000
Milden R & Loretta Schock	32156 65th St	Blue Earth MN 56013-6001
Milden & Marlene Arndt	32210 115th St	Blue Earth MN 56013-5202
Alvin M & Evelyn H Jacobson Irrevocable Trust	32329 85th St	Blue Earth MN 56013-5619
Donald J & Tamera A Asmus	32396 40th St	Blue Earth MN 56013-6014
Kevin Zabel & Sarah Jaskulke	32469 95th St	Blue Earth MN 56013-5600
Timothy Spencer	32577 109th St	Blue Earth MN 56013-5230
Mary Ann Ziegler	32609 109th St # 104	Blue Earth MN 56013-5227
Michael & Joann Jacobson	32632 85th St	Blue Earth MN 56013-5621
Elizabeth M. Mahlstedt	32655 109th St	Blue Earth MN 56013-5227
John H & Debra A Oothoudt	32734 130th St	Blue Earth MN 56013-4802
Ryan M & Angela M Ohara	32761 70th St	Blue Earth MN 56013-5613
Marc & Jane Bell	33058 70th St	Blue Earth MN 56013-5614
Scott & Julie Smith Revoc Trust & James L Smith	33080 50th St	Blue Earth MN 56013-6012
Duane D & Vivian More Life Estate et al.	331 Tanglewood Ln	Blue Earth MN 56013-1655
Paul R & Karla Carr	33312 50th St	Blue Earth MN 56013-6011
Andrew L Pierce	33315 50th St	Blue Earth MN 56013-6011
David H & Barbara J Warner	33473 105th St	Blue Earth MN 56013-5225
Meldon & Sherry Elmore	33613 130th St	Blue Earth MN 56013-4800
Wesley D Saunders	33699 120th St	Blue Earth MN 56013-5224
Dale Saunders Life Estate et al.	33709 120th St	Blue Earth MN 56013-5223
Mary Rosenau Life Estate & Gail Thieman	33737 70th St	Blue Earth MN 56013-5615
Brady Goerndt	33858 85th St	Blue Earth MN 56013-5617
Brian Wenthold	33999 105th St	Blue Earth MN 56013-5226
David J Maday	34287 70th St	Blue Earth MN 56013-5706
Marlin Elmore	34463 130th St	Blue Earth MN 56013-4911
Leo Olson	34553 130th St	Blue Earth MN 56013-4909
M & L Olson Dairy Inc	34553 130th St	Blue Earth MN 56013-4909
Merle A & Beverly L Olson	34553 130th St	Blue Earth MN 56013-4909
Dean R & Susan K Jahnke	34747 115th St	Blue Earth MN 56013-5305
Danny A & Kristin C Thompson	34751 60th St	Blue Earth MN 56013-6112
James & Carolyn Kennedy	34904 90th St	Blue Earth MN 56013-5722
Dean & Marilyn M Moller	34915 100th St	Blue Earth MN 56013-5316
Duane & Patricia A Murphy	34930 115th St	Blue Earth MN 56013-5306
Douglas A & Rebecca S Nagel	34972 130th St	Blue Earth MN 56013-4908
Jean A Hougen	35162 100th St	Blue Earth MN 56013-5317
Bradley & Louisa Krosch	35188 115th St	Blue Earth MN 56013-5307
Joshua G & Melissa M Bruellman	35322 130th St	Blue Earth MN 56013-4907
Aaron & Jenna Johnson	35417 90th St	Blue Earth MN 56013-5721
Rahn D & Michele Greimann	35418 90th St	Blue Earth MN 56013-5721
Terry D & Jody L Johnson	35439 100th St	Blue Earth MN 56013-5318
Gregory K & Kimberly Mastin	35498 85th St	Blue Earth MN 56013-5711
Mark & Darlene Cervantes	35612 115th St	Blue Earth MN 56013-5308
Tracy J Gustafson	35618 100th St	Blue Earth MN 56013-5319
Eldon L & Reta M Steele	35675 96th St	Blue Earth MN 56013-5718
Curtis W & Bette L Lamaack	35780 110th St	Blue Earth MN 56013-5309
Douglas & Kelly Sloneker	35798 85th St	Blue Earth MN 56013-5712
Alberta L Greimann	35838 90th St	Blue Earth MN 56013-5715
Chad S & Angela L Lawrence	35852 70th St	Blue Earth MN 56013-5705

Neil & Mary Jane Taylor		36073 110th St	Blue Earth MN 56013-5310
Kim G & Tammy J Meyers		36131 110th St	Blue Earth MN 56013-5311
Kyle J Evenson		36172 130th St	Blue Earth MN 56013-4906
Bruce Stensland		36178 90th St	Blue Earth MN 56013-5714
Bruce W & Cindy K Lyon		36197 96th St	Blue Earth MN 56013-5717
Neil A & Justine L Hougen		36267 100th St	Blue Earth MN 56013-5320
Paul A & Jackie J Willner		36463 120th St	Blue Earth MN 56013-5210
Roger W & Cleo Jean Quaday Life Estate et al.		36552 70th St	Blue Earth MN 56013-5704
Dennis P Warner & Mary J Dickman Warner		36595 130th St	Blue Earth MN 56013-4902
Edward & Kathleen Pfaffinger Life Estate et al.		37133 120th St	Blue Earth MN 56013-5412
Irene C Meyers Life Est et al.		37189 105th St	Blue Earth MN 56013-5431
Roland A & Irene C Meyers		37189 105th St	Blue Earth MN 56013-5431
Zierke Real Estate LLC		37334 130th St	Blue Earth MN 56013-5015
Daniel Pfaffinger		37339 130th St	Blue Earth MN 56013-5015
Perry G & Peggy Olson		37441 115th St	Blue Earth MN 56013-5413
E Jane Olson		37475 115th St	Blue Earth MN 56013-5413
Rolin Ray & Roberta Ann Sinn		37524 110th St	Blue Earth MN 56013-5418
John H & Mona L Eustice		37593 130th St	Blue Earth MN 56013-5014
Dorothy L Ristau Life Est et al.		37620 80th St	Blue Earth MN 56013-5825
Benjamin J & Ashley Ruby		37743 115th St	Blue Earth MN 56013-5414
Marlon J & Fern M Teigland		3781 330th Ave	Blue Earth MN 56013-6400
Ruth L Driscoll Life Estate et al.		39276 110th St	Blue Earth MN 56013-5419
Roger D & Ladonna M Dutton		40996 110th St	Blue Earth MN 56013-5502
Herbert G Schwen Family Trust, Dale Stallkamp et al. Trustees		411 S Grove St Ste 4	Blue Earth MN 56013-2643
Faribault County	415 North Main	PO Box 130	Blue Earth MN 56013-0130
Henry C & Marilyn A Bollum Joint Trust Agreement		415 S Grove St Ste 2	Blue Earth MN 56013-2600
Douglas & Denise Gjerde & David & Diane Tvedten		41552 60th St	Blue Earth MN 56013-2803
Elda Tvedten c/o Dave Tvedten		41552 60th St	Blue Earth MN 56013-2803
Carol Eberline		41915 140th St	Blue Earth MN 56013-5110
Marian Bell		420 N Sailor St	Blue Earth MN 56013-2728
Douglas & Tina Nimz		42333 93rd St	Blue Earth MN 56013-5904
Ernest & Gladys Frette Life Estate et al.		425 E 17th St Apt 109	Blue Earth MN 56013-2243
Helen I Johnston Life Estate et al.		425 E 17th St Apt 201	Blue Earth MN 56013-2244
Donna B Bauman Life Estate et al.		425 E 17th St Apt 203	Blue Earth MN 56013-2244
Orville H Olson Life Estate et al.		425 E 17th St Apt 206	Blue Earth MN 56013-2244
H Vincent Krinke Life Estate et al.		425 E 17th St Apt 209	Blue Earth MN 56013-2244
David Berndt		425 W 7th St	Blue Earth MN 56013-1314
Hinrichsen Family Trust c/o Bradley L Hinrichsen Trustee		43097 100th St	Blue Earth MN 56013-7617
Brian Jesse Smith & Jennifer Marie Smith		4310 320th Ave	Blue Earth MN 56013-6018
Larry Fenske		43265 50th St	Blue Earth MN 56013-8005
James M Shumski		4448 310th Ave	Blue Earth MN 56013-6006
Conrad & Lorie Zoeller		445 310th Ave	Blue Earth MN 56013-3008
Carroll L & Diane Niss		4816 320th Ave	Blue Earth MN 56013-6015
Robert L & Karrie A Riegel		483 310th Ave	Blue Earth MN 56013-3008
Milton R & Donna J Steele Life Estate et al.		4940 360th Ave	Blue Earth MN 56013-6106
James D & Diane Meyer		504 Teems Dr	Blue Earth MN 56013-2203
Elaine E Hoppe		505 E 17th St Apt 106	Blue Earth MN 56013-5526
Robert E Tvedten		5134 340th Ave	Blue Earth MN 56013-6010
Onnen & Ann M Cassens Living Trust		516 Teems Dr	Blue Earth MN 56013-2203

David R & Denise L Schavey		5221 330th Ave	Blue Earth MN 56013-6016
David E Hacklander		5231 360th Ave	Blue Earth MN 56013-6105
Russell D & Lois I Hornke		5417 350th Ave	Blue Earth MN 56013-6110
Scott A & Kathryn Lyon		5498 360th Ave	Blue Earth MN 56013-6104
John D & Mary Jo Kuhn		5533 340th Ave	Blue Earth MN 56013-6009
Julie Thedens		568 290th Ave	Blue Earth MN 56013-3021
Betty J Johnston Life Estate et al.		5942 320th Ave	Blue Earth MN 56013-6004
Allen J & Joanne Sukalski		5966 385th Ave	Blue Earth MN 56013-6208
Joan Lesch et al		614 S Moore St	Blue Earth MN 56013-2159
Harlan E & Susan M Schavey		6164 360th Ave	Blue Earth MN 56013-6103
Raymond Hornke		6315 350th Ave	Blue Earth MN 56013-6101
Gilbert W & Ramona G Ehrich		6471 377th Ave	Blue Earth MN 56013-6210
Todd M Evans		6522 330th Ave	Blue Earth MN 56013-6017
James, Allen, Scott & Ilene Sukalski		6644 385th Ave	Blue Earth MN 56013-6201
David & Paula Rosenau		7151 347th Ave	Blue Earth MN 56013-5708
Robert Jared Worner		720 NW 3rd St	Blue Earth MN 56013-1186
Teresa Oelke et al.		723 310th Ave	Blue Earth MN 56013-3024
Kirk Nichols et al. & Wanda Nichols Life Estate et al. c/o Linda Hersc		725 S Moore St	Blue Earth MN 56013-2133
Donald H & Vernette Bell		7252 320th Ave	Blue Earth MN 56013-5607
Kenneth O & Catherine Haase		7301 377th Ave	Blue Earth MN 56013-5824
Steven R Ripley		7353 415th Ave	Blue Earth MN 56013-5923
Homer & Evelyne M Bell		7687 320th Ave	Blue Earth MN 56013-5606
John C & A Rosella Plocker Life Estate et al.		7711 370th Ave	Blue Earth MN 56013-5703
John W & Bonita Moore Rev Trusts		785 310th Ave	Blue Earth MN 56013-3024
Vernon S & Velma B Burt		7880 335th Ave	Blue Earth MN 56013-5618
Howard W & Mae Jean Zierke		817 S Galbraith St	Blue Earth MN 56013-2121
John J & Jody L Hansen		817 W 1st St	Blue Earth MN 56013-1108
Clinton L & Susan Benz		8183 347th Ave	Blue Earth MN 56013-5710
David A & Sara J Redepenning		8191 360th Ave	Blue Earth MN 56013-5713
Garry L & Ellen J Sunken		8202 395th Ave	Blue Earth MN 56013-5817
Wanda R Helland Revoc Trust		834 S Main St	Blue Earth MN 56013-2180
Roger & Gloria J Moore		837 310th Ave	Blue Earth MN 56013-3025
Nancy M Warner		8400 395th Ave	Blue Earth MN 56013-5818
Anna Mae Erichsrud		8410 370th Ave	Blue Earth MN 56013-5702
Daniel R Moore		845 310th Ave	Blue Earth MN 56013-3025
Scott & Anna Haase		8574 377th Ave	Blue Earth MN 56013-5828
Winnebago Mfg. Co.	870 Welk Dr	PO Box 442	Blue Earth MN 56013-0442
David J & Kathryn A Anderson		8740 385th Ave	Blue Earth MN 56013-5836
William V Eckles Revoc Trust		8786 377th Ave	Blue Earth MN 56013-5829
Travis Preuss & Lynn Preuss & James R Anderson		8794 377th Ave	Blue Earth MN 56013-5829
Jeffrey R & Diane Bell		8817 330th Ave	Blue Earth MN 56013-5622
Nancy Smith		8896 377th Ave	Blue Earth MN 56013-5837
David A & Tamara J Boie		116 Oak Knoll Ct	Blue Earth MN 56013-1638
Sherri L Dejong		904 W 14th St	Blue Earth MN 56013-2257
Carole Zierke Life Estate et al.		921 Upper Valley Dr	Blue Earth MN 56013-1708
Alexandria M Sucher		9218 320th Ave	Blue Earth MN 56013-5603
William S Olson & Dwight J Olson		923 Upper Valley Dr	Blue Earth MN 56013-1708
William D & Jan M Farnham		9374 382nd Ave	Blue Earth MN 56013-5806
Ronald & Julie Loge		9383 370th Ave	Blue Earth MN 56013-5700
Amy K & Andrew J Lorenzen		9407 355th Ave	Blue Earth MN 56013-5719
Donald W & Dorothy M Stensland		9427 330th Ave	Blue Earth MN 56013-5623
Marie Brodie For Life et al.		PO Box 127	Blue Earth MN 56013-0127
Forfeited Property - State Of Minnesota		PO Box 130	Blue Earth MN 56013-0130
Mary Jo Tungland		PO Box 134	Blue Earth MN 56013-0134
United Builders Of Be Inc		PO Box 157	Blue Earth MN 56013-0157

Lon V & Anita Hyland 2004 Trust, Loren Hyland Trustee	PO Box 171	Blue Earth MN 56013-0171
Marvin Albert Manske	PO Box 190	Blue Earth MN 56013-0190
Michael Mensing	PO Box 202	Blue Earth MN 56013-0202
Mike Mensing	PO Box 202	Blue Earth MN 56013-0202
Kevin M & Vicki L Grant	PO Box 245	Blue Earth MN 56013-0245
August A Williams	PO Box 250	Blue Earth MN 56013-0250
Clarence More c/o Michael Jakobe	PO Box 277	Blue Earth MN 56013-0277
Michael H Jakobe Revoc Trust	PO Box 277	Blue Earth MN 56013-0277
David C Pirsig	PO Box 283	Blue Earth MN 56013-0283
BPR Investments LLC c/o Paul K Johnson	PO Box 310	Blue Earth MN 56013-0310
Ankeny & Sons, Tafco Equipment Co	PO Box 339	Blue Earth MN 56013-0339
City of Blue Earth	PO Box 38	Blue Earth MN 56013-0038
John T Wagner	PO Box 414	Blue Earth MN 56013-0414
Wagner Brothers	PO Box 414	Blue Earth MN 56013-0414
PPM Enterprises LLC c/o Daryle D Pomranke	PO Box 442	Blue Earth MN 56013-0442
Steven & Gennie Gesche	PO Box 453	Blue Earth MN 56013-0453
Charles E Oliver c/o Mike Enger	PO Box 53	Blue Earth MN 56013-0053
Riverside Town & Country Club	PO Box 68	Blue Earth MN 56013-0068
Mitchell J Murphy & Diane L Murphy	33136 115th St	Blue Earth MN 56013-5219
Benjamin Edward Henke	33343 115th St	Blue Earth MN 56013-5229
Iglesia Del Calvario c/o Antonia Martinez	32147 116th St	Blue Earth MN 56013-5204
Current Resident	1091 300th Ave	Blue Earth MN 56013-3087
Current Resident	1116 305th Ave	Blue Earth MN 56013-3090
Current Resident	11275 377th Ave	Blue Earth MN 56013-5433
Current Resident	11300 322nd Ave	Blue Earth MN 56013-5211
Current Resident	11306 323rd Ave	Blue Earth MN 56013-5228
Current Resident	11323 321st Ave	Blue Earth MN 56013-5213
Current Resident	11396 322nd Ave	Blue Earth MN 56013-5211
Current Resident	11417 322nd Ave	Blue Earth MN 56013-5209
Current Resident	11534 320th Ave	Blue Earth MN 56013-5201
Current Resident	11580 River Ridge Rd	Blue Earth MN 56013-3006
Current Resident	11628 River Ridge Rd	Blue Earth MN 56013-3004
Current Resident	11711 River Ridge Rd	Blue Earth MN 56013-3005
Current Resident	12402 330th Ave	Blue Earth MN 56013-5221
Current Resident	12525 345th Ave	Blue Earth MN 56013-5303
Current Resident	13527 US Highway 169	Blue Earth MN 56013-5024
Current Resident	13835 US Highway 169	Blue Earth MN 56013-5011
Current Resident	14209 US Highway 169	Blue Earth MN 56013-5008
Current Resident	14975 US Highway 169	Blue Earth MN 56013-5005
Current Resident	31159 110th St	Blue Earth MN 56013-5215
Current Resident	31754 95th St	Blue Earth MN 56013-5602
Current Resident	31920 65th St	Blue Earth MN 56013-6003
Current Resident	32042 65th St	Blue Earth MN 56013-6000
Current Resident	32226 115th St	Blue Earth MN 56013-5202
Current Resident	32612 116th St	Blue Earth MN 56013-5203
Current Resident	32692 110th St	Blue Earth MN 56013-5208
Current Resident	33136 115th St	Blue Earth MN 56013-5219
Current Resident	33254 40th St	Blue Earth MN 56013-6013
Current Resident	33343 115th St	Blue Earth MN 56013-5229
Current Resident	33547 110th St	Blue Earth MN 56013-5217
Current Resident	33557 110th St	Blue Earth MN 56013-5217
Current Resident	34009 105th St	Blue Earth MN 56013-5314
Current Resident	34278 60th St	Blue Earth MN 56013-6111
Current Resident	34305 100th St	Blue Earth MN 56013-5315
Current Resident	34354 90th St	Blue Earth MN 56013-5724
Current Resident	34359 90th St	Blue Earth MN 56013-5724

Current Resident			34782 70th St	Blue Earth MN 56013-5707
Current Resident			35174 50th St	Blue Earth MN 56013-6108
Current Resident			35254 60th St	Blue Earth MN 56013-6102
Current Resident			35500 90th St	Blue Earth MN 56013-5720
Current Resident			36099 110th St	Blue Earth MN 56013-5310
Current Resident			36357 110th St	Blue Earth MN 56013-5312
Current Resident			36623 115th St	Blue Earth MN 56013-5435
Current Resident			37000 110th St	Blue Earth MN 56013-5436
Current Resident			37041 96th St	Blue Earth MN 56013-5833
Current Resident			37502 105th St	Blue Earth MN 56013-5432
Current Resident			37594 130th St	Blue Earth MN 56013-5014
Current Resident			37799 115th St	Blue Earth MN 56013-5414
Current Resident			37926 60th St	Blue Earth MN 56013-6209
Current Resident			4884 360th Ave	Blue Earth MN 56013-6107
Current Resident			5598 310th Ave	Blue Earth MN 56013-6007
Current Resident			6266 340th Ave	Blue Earth MN 56013-6008
Current Resident			6604 350th Ave	Blue Earth MN 56013-6100
Current Resident			7085 320th Ave	Blue Earth MN 56013-5608
Current Resident			7930 320th Ave	Blue Earth MN 56013-5605
Current Resident			7945 347th Ave	Blue Earth MN 56013-5709
Current Resident			8164 377th Ave	Blue Earth MN 56013-5826
Current Resident			8186 377th Ave	Blue Earth MN 56013-5826
Current Resident			8762 377th Ave	Blue Earth MN 56013-5829
Current Resident			9139 355th Ave	Blue Earth MN 56013-5726
Current Resident			9370 345th Ave	Blue Earth MN 56013-5723
Current Resident			700 Commerce Dr	Blue Earth MN 56013-1160
Current Resident			641 Commerce Dr	Blue Earth MN 56013-1157
Current Resident			904 W 1st St	Blue Earth MN 56013-1162
Current Resident			824 W 1st St	Blue Earth MN 56013-1107
Current Resident			825 W 1st St	Blue Earth MN 56013-1108
Current Resident			521 N Grant St	Blue Earth MN 56013-1119
Current Resident			520 N Grant St	Blue Earth MN 56013-1153
Ronald H Lawrence			1025 Highland Dr	Blue Earth MN 56013-1501
Mary J. Stuart			11396 322nd Ave	Blue Earth MN 56013-5211
Claudine M. Meckes			119 E 3rd St	Blue Earth MN 56013-1909
Pilot Grove Cemetery Assoc c/o Reta Steele			35675 96th St	Blue Earth MN 56013-5718
Robert M & Mary J Greeley			35785 90th St	Blue Earth MN 56013-5716
Scott & Susan Erichsrud			37041 96th St	Blue Earth MN 56013-5833
Wood Lake Co Park c/o Blue Earth Parks & Rec			PO Box 38	Blue Earth MN 56013-0038
Vernette L Bell Fam Shre Trust c/o Donald Bell			7252 320th Ave	Blue Earth MN 56013-5607
Kathy Smith	SWCD District Manager		923 N State St Ste 110	Fairmont MN 56031-3899
Reginald Liddell	District Conservationist	Natural Resources Conservation Service	923 N State St Ste 170	Fairmont MN 56031-3866
Craig Diegnau			10 Forgotten Lake Rd	Fairmont MN 56031-5007
City of Fairmont		100 Downtown Plz	PO Box 751	Fairmont MN 56031-0751
Donald & Marie Jose et al.			1001 Pheasant Ave	Fairmont MN 56031-4526
Evelyn & Paul Betts			101 Albion Ave	Fairmont MN 56031-2101
Evelyn M Wohlers (LE) et al.			101 Albion Ave	Fairmont MN 56031-2101
Partricia J Steuber Irrev Trust			101 Albion Ave	Fairmont MN 56031-2101
Pearl M Bahr Irrev Trust			101 Albion Ave	Fairmont MN 56031-2101
Ruth A Draut Rev Trust			101 Albion Ave	Fairmont MN 56031-2101
Verlyn Steuber Irrev Trust			101 Albion Ave	Fairmont MN 56031-2101
Erwin P Thiel Jr			101 W Innes St	Fairmont MN 56031-1479
Phyllis Neuenschwander			1015 S Prairie Ave	Fairmont MN 56031-3035
Dennis M Weir			1017 N Hampton St	Fairmont MN 56031-3714
Dennis L & Beth V Prust			102 Park St	Fairmont MN 56031-1478
Warren Angus			1030 N Main St	Fairmont MN 56031-1641
Bruce R & Ann Gemmill			1030 Shoreacres Dr	Fairmont MN 56031-2230

Zoey's Acres Inc		1032 Lake Ave	Fairmont MN 56031-1937
Edward C & Nancy D Ritter Trusts		1039 Shoreacres Dr	Fairmont MN 56031-2231
Patrick R Beemer		104 Parkwood Pl	Fairmont MN 56031-3419
Dulas Family Trust Agreement		1040 S State St	Fairmont MN 56031-4448
Keith L & Lori L Schwieger		1041 180th Ave	Fairmont MN 56031-1367
Richard W & Alicia Barke		105 Cedar Bluff Dr	Fairmont MN 56031-1739
Ralph H & Joanne E Becker Irrev Trusts		105 Delu St	Fairmont MN 56031-3310
Anthony & Veronica Holland		105 N Judson St	Fairmont MN 56031-1472
Grace C Hodgman		105 Lake Ave	Fairmont MN 56031-1812
Grace Hodgman Estate et al.	105 Lake Ave	PO Box 848	Fairmont MN 56031-0848
Murphy Lake Properties LLC		106 Cambridge St	Fairmont MN 56031-2935
Myla M Roskop		106 Freund St	Fairmont MN 56031-1483
James E & Carol J Dick		107 Cedar Bluff Dr	Fairmont MN 56031-1739
St James Evang Luth Church		108 S James St	Fairmont MN 56031-1468
St James Lutheran Society c/o St James Lutheran Church		108 S James St	Fairmont MN 56031-1468
William A & Diann K Diekman		108 W Margaret St	Fairmont MN 56031-1511
Jacob S Stith		109 N James St	Fairmont MN 56031-1467
Rhonda Nowak		109 Sisseton Dr	Fairmont MN 56031-2142
Thomas D & Dawn M Zimmer		110 N James St	Fairmont MN 56031-1467
Michael & Rita Frette		1107 N Main St	Fairmont MN 56031-1644
Thomas J Rosen Rev Trust et al.		1120 Lake Ave	Fairmont MN 56031-1939
David J & Debra K Kroon		1128 N North Ave	Fairmont MN 56031-1651
Corrie Lee Martinson		113 N Judson St	Fairmont MN 56031-1472
Peter Kirkpatrick		114 W 2nd St	Fairmont MN 56031-1718
Elsie M Krueger		114 W 2nd St	Fairmont MN 56031-1718
Marsha Rae Levasseur		114 W 2nd St	Fairmont MN 56031-1718
Shelly Kirkpatrick & K Williams		114 W 2nd St	Fairmont MN 56031-1718
Eisenmenger Dodge Inc		114 Woodland Ave	Fairmont MN 56031-2147
Robert L Niss Family Trust c/o Bernice & Carroll Niss Trustees		1149 Chestnut St	Fairmont MN 56031-4402
Bernice L Niss Life Est et al.		1149 Chestnut St	Fairmont MN 56031-4402
William R & Patricia K Cowing		115 Eltinge Pl	Fairmont MN 56031-3407
Russell A & Eva L Sonnabend		115 Freund St	Fairmont MN 56031-1483
Laurie & Ellen Neubauer Loring		116 Webster St	Fairmont MN 56031-2803
Thomas L & Karen M Horkey		118 Circle Dr	Fairmont MN 56031-2124
Christopher R Hillmer		119 S Judson St	Fairmont MN 56031-1473
John A & Sharon E Betts		12 N Joy Ln	Fairmont MN 56031-3300
Martin Co Hwy Dept		1200 Marcus St	Fairmont MN 56031-3746
Kayton & Rabe LLP	1205 Bixby Rd	PO Box 150	Fairmont MN 56031-0150
Corey Freitag		1217 Webster St	Fairmont MN 56031-4267
Martin Co Cons Club Inc		1234 S State St	Fairmont MN 56031-4417
Gary E & Anne N Reutzel		1252 230th Ave	Fairmont MN 56031-4643
Donald & Judith Moritz & N Fairbairn		1256 230th Ave	Fairmont MN 56031-4643
Travis & Angela(Becker) Deboer		1258 250th Ave	Fairmont MN 56031-4636
Roy H Baumhoefner		1260 S State St	Fairmont MN 56031-4417
Center Creek Pork Inc		1275 Highway 15 S	Fairmont MN 56031-4461
West Ridge Pork		1275 Highway 15 S	Fairmont MN 56031-4461
Camalot Breeders LLP		1275 Highway 15 S	Fairmont MN 56031-4461
Kent D & Lynn Unke		130 Lake Park Pl	Fairmont MN 56031-2138
James D & Amy L Wintheiser		1303 220th Ave	Fairmont MN 56031-1393
Connie M & Betty L Lewis		1303 Tilden St	Fairmont MN 56031-4208
Dallas A Dorr Trust		1310 Adams Ave	Fairmont MN 56031-4480
Gerald E & June E Anders		1310 Adams Ave	Fairmont MN 56031-4480
H Dewey & Sharon L Valentine		1310 Adams Ave	Fairmont MN 56031-4480
Robert J & La Vonne F Barke		1310 Adams Ave	Fairmont MN 56031-4480
Roger L & Darlene A Isenberg		1310 Adams Ave	Fairmont MN 56031-4480
David E Johnson		1312 S State St	Fairmont MN 56031-4462
Koch Conservation Trust		1313 Holland St	Fairmont MN 56031-1563

Ethan E & Mary Ann Koch	1313 Holland St	Fairmont MN 56031-1563
Odegaard Investments, LLC	1317 N Elm St	Fairmont MN 56031-2618
William Chaffee	1320 Holland St	Fairmont MN 56031-1562
Arlene Newman	1326 Holland St	Fairmont MN 56031-1562
Robert Dwayne True	1329 N Elm St	Fairmont MN 56031-2618
Eugene & Pendergast	1330 230th Ave	Fairmont MN 56031-4646
FTF Partnership c/o Daniel Garry	134 Homewood Dr	Fairmont MN 56031-2127
Garry Elevators Inc	134 Homewood Dr	Fairmont MN 56031-2127
David S & Greta R Olson	1344 220th Ave	Fairmont MN 56031-1393
Nathan S Nordstrom	1344 Oak Beach Dr	Fairmont MN 56031-3105
Grace Clemmensen	1346 Holland St	Fairmont MN 56031-1562
Charles D & Steven A Niehaus	1350 Oak Beach Dr	Fairmont MN 56031-3105
Matthew & Jennifer Streit	1358 190th Ave	Fairmont MN 56031-1328
Steven P & Vicky L Streit	1377 196th Ave	Fairmont MN 56031-1379
Dick & Diane Gerhardt	1385 W Lair Rd	Fairmont MN 56031-2320
Alice A, Rosemary, Karen & Jerome Sandt	1392 175th Ave	Fairmont MN 56031-1324
Susan Stusse	1392 175th Ave	Fairmont MN 56031-1324
Royal D & Bonnie Redenius	1398 105th St	Fairmont MN 56031-1463
Holly J Kotewa	1401 208th Ave	Fairmont MN 56031-1397
Billeye A Rabbe	1402 208th Ave	Fairmont MN 56031-1397
Bruce A Hamsmith	1407 230th Ave	Fairmont MN 56031-4600
Dale & Debra J Moeller	1409 175th Ave	Fairmont MN 56031-1323
William R Nielsen	1410 190th Ave	Fairmont MN 56031-1327
Bryan & Linda Gregor	1416 175th Ave	Fairmont MN 56031-1323
Robert L & Peggy L Jones	1419 220th Ave	Fairmont MN 56031-1392
Delmer & Karen Whitaker	1420 State Highway 15	Fairmont MN 56031-1391
Guy Beemer	1424 196th Ave	Fairmont MN 56031-1382
Joanne & Brian Hansen	1425 Ida St	Fairmont MN 56031-1566
Michael & David Stefanski et al.	1428 N Prairie Ave	Fairmont MN 56031-2524
Allan K & Patricia A Voigt	1429 196th Ave	Fairmont MN 56031-1382
Eunice Voigt (LE)	1429 196th Ave	Fairmont MN 56031-1382
Glenn & Susan Moeller	1432 190th Ave	Fairmont MN 56031-1327
Kevin E & Sherri L Roforth	1433 208th Ave	Fairmont MN 56031-1397
Hugh G & Jocelyn M Fraser	1434 230th Ave	Fairmont MN 56031-4600
Kenneth & Joyce Kabe	1444 196th Ave	Fairmont MN 56031-1382
Michael & Linda Egeness	1446 Timber Ln	Fairmont MN 56031-1400
R Polzin	1446 Timber Ln	Fairmont MN 56031-1400
Steven & Nancy Willers	1447 196th Ave	Fairmont MN 56031-1382
Robert & Shirley Polzin	1448 Timber Ln	Fairmont MN 56031-1400
Gloria Scott	145 Homewood Dr	Fairmont MN 56031-2163
Gregory S Spotswood	1451 175th Ave	Fairmont MN 56031-1323
Darold & Elisa Kotewa	1471 220th Ave	Fairmont MN 56031-1392
Myron Moeller	1474 175th Ave	Fairmont MN 56031-1323
Dale & Roxane Wedel	1477 208th Ave	Fairmont MN 56031-1397
Jeanette Wedel Irrev Trust	1477 208th Ave	Fairmont MN 56031-1397
Rutland Township	1477 208th Ave	Fairmont MN 56031-1397
Eileen Mary Grefe	1487 190th Ave	Fairmont MN 56031-1327
Jacob J & Jessica J Korte	1496 190th Ave	Fairmont MN 56031-1327
Daniel R & Pamela K Coquyt	1496 220th Ave	Fairmont MN 56031-1392
Dana A & Sandra L Kuhlers	1496 230th Ave	Fairmont MN 56031-4600
Kenneth & Anita Tumbleson	1518 Blue Jay Blvd	Fairmont MN 56031-4584
Bradley L Musser	1519 196th Ave	Fairmont MN 56031-1301
Brian L & Linda K Sauck	1520 230th Ave	Fairmont MN 56031-4602
Lois I Peterson (LE) et al.	1520 Cardinal Ct	Fairmont MN 56031-4548
Mark A & Shelly M Moeller	1527 230th Ave	Fairmont MN 56031-4602
Marlys Prafke Freeman (LE) et al.	1531 Southgate Dr	Fairmont MN 56031-4579
James T & R L Droegemueller	1534 196th Ave	Fairmont MN 56031-1301
Steven H Oskerson	1537 170th Ave	Fairmont MN 56031-1313
Melvin M & Carol A Schultze	1561 Meadowlark Ln	Fairmont MN 56031-4587

Ardis L Droegemueller	1562 196th Ave	Fairmont MN 56031-1301
Troy M & Amber S Droegemueller	1566 196th Ave	Fairmont MN 56031-1301
Michelle K Dressen	1570 175th Ave	Fairmont MN 56031-1312
Daniel Wedel	1571 196th Ave	Fairmont MN 56031-1301
Dana Moeller	1572 170th Ave	Fairmont MN 56031-1313
Cleo & Lorraine Moeller	1574 170th Ave	Fairmont MN 56031-1313
Justin Preuss	1578 170th St	Fairmont MN 56031-1304
Kevin Behrens	1587 160th St	Fairmont MN 56031-1316
Dallyn P Kotewa	1589 220th Ave	Fairmont MN 56031-4648
Arlen R & Sharon K Moeller	1591 230th Ave	Fairmont MN 56031-4602
Michael & Heidi Steuber	1592 190th Ave	Fairmont MN 56031-1453
Marlan C Anders (LE) et al.	1594 210th Ave	Fairmont MN 56031-1388
Ryan Scott & Karla Jayne Lunn	16 N Joy Ln	Fairmont MN 56031-3300
Alice V Clancy et al. %Lea Bishop	1600 Patriot Dr	Fairmont MN 56031-1738
Harland R & D E Johnson	1602 N Park	Fairmont MN 56031-2522
Arlo W. Gustafson	1606 N North Ave	Fairmont MN 56031-1553
Laurence & Mary Lau	1608 190th Ave	Fairmont MN 56031-1455
Douglas K & Michelle E Larson	1609 Charlotte Oak Dr	Fairmont MN 56031-1387
Michael & Lois M Swanson	1613 Cadillac Ave	Fairmont MN 56031-3124
James & Rachel Spencer	1614 150th St	Fairmont MN 56031-1319
Bradley D & Debbie S Wallace	1615 Charlotte Oak Dr	Fairmont MN 56031-1387
Thomas L & Joan Andersen et al.	1615 S Prairie Ave	Fairmont MN 56031-3156
Brandon Steuber	1616 175th Ave	Fairmont MN 56031-1311
Ronald D & Karen D Unke	1619 Charlotte Oak Dr	Fairmont MN 56031-1387
Dale H & Jacy L Kosbab	1623 Charlotte Oak Dr	Fairmont MN 56031-1387
D Schwieger & D Smith Co Trustees	1629 190th Ave	Fairmont MN 56031-1455
Marcella Theobald Revoc Trust	1631 Blue Jay Blvd	Fairmont MN 56031-4589
Paul Theobald Revoc Trust	1631 Blue Jay Blvd	Fairmont MN 56031-4589
Daniel C & Terri L Peterson	1631 Charlotte Oak Dr	Fairmont MN 56031-1387
Sandra Sorgenfrie Revoc Trust	1635 Blue Jay Blvd	Fairmont MN 56031-4589
John R Garbers Trust	1637 230th Ave	Fairmont MN 56031-4603
Clifford Lehman	1642 196th Ave	Fairmont MN 56031-1326
Eugene & Betty Lehman	1642 196th Ave	Fairmont MN 56031-1326
Donald A & Kay M Kuhl	1643 170th Ave	Fairmont MN 56031-1314
Gary & Linda Nielsen	1645 State Highway 15	Fairmont MN 56031-1378
Elloy Hinz	1647 170th St	Fairmont MN 56031-1305
Dennis L & Jeanne L Thate	1652 190th Ave	Fairmont MN 56031-1455
Christopher & Krista Thompson	1652 196th Ave	Fairmont MN 56031-1326
Harvey & Susan Moeller	1658 160th St	Fairmont MN 56031-1315
Chad & Rebecca L Moeller et al.	1659 160th St	Fairmont MN 56031-1315
Hall Lake Cabins & Rentals LLC	1661 Patriot Dr	Fairmont MN 56031-1738
Marvin & Lola Talledge	1662 150th St	Fairmont MN 56031-1319
Sylvan H Senne et al.	1662 150th St	Fairmont MN 56031-1319
David & Katherine Moeller	1662 180th St	Fairmont MN 56031-1459
Todd Steuber	1663 190th Ave	Fairmont MN 56031-1455
Chad E Hybbert	1665 140th St	Fairmont MN 56031-1318
Tucker J Betts	1665 150th St	Fairmont MN 56031-1319
Roger & Brenda Kotewa Trusts	1673 230th Ave	Fairmont MN 56031-4603
Arlo L & V M Lueth Irrev Trust	1675 210th Ave	Fairmont MN 56031-1383
Four M Farms Inc	1675 210th Ave	Fairmont MN 56031-1383
Roland L & Ruth E Milow	1678 170th St	Fairmont MN 56031-1305
Wayne J & Laura J Wille	1686 210th Ave	Fairmont MN 56031-1383
Leaann W Mcdonald	1688 196th Ave	Fairmont MN 56031-1326
Duane & Myrna Behrens et al.	1692 160th Ave	Fairmont MN 56031-1306
Pork Behrens Farms Inc	1692 160th Ave	Fairmont MN 56031-1306
Roger E Peterson	1700 S Prairie Ave	Fairmont MN 56031-3148
Harland L & Phyllis Wedel	1704 120th St	Fairmont MN 56031-1331
Roger & Joyce Moeller	1719 150th St	Fairmont MN 56031-1321
Joshua Jay & Elisa Marie Meyer	1725 196th Ave	Fairmont MN 56031-1341
Derek Gene Schwieger	1732 180th St	Fairmont MN 56031-1458

Joel H & Dawn R Meyer	1732 196th Ave	Fairmont MN 56031-1341
Darren & Michelle Schwieger	1735 175th Ave	Fairmont MN 56031-1310
Lonny & Jeanne Schwieger	1735 175th Ave	Fairmont MN 56031-1310
Neal Becker et al.	1738 State Highway 15	Fairmont MN 56031-1377
David J & Sandra G Bulfer	1739 120th St	Fairmont MN 56031-1331
Rodney Robert Tow	1748 120th St	Fairmont MN 56031-1331
Clarence Wehner	1748 190th Ave	Fairmont MN 56031-1456
Susan E Stusse	1751 130th St	Fairmont MN 56031-1330
Joann & J Burgeson Hodgman	1754 120th St	Fairmont MN 56031-1331
Dean A Schwieger	1759 170th St	Fairmont MN 56031-1307
Wade D & Lauri J Brandt	1772 170th St	Fairmont MN 56031-1307
L Louis & Diane Olson	1781 90th St	Fairmont MN 56031-5064
Duane R & Bridgit J Tenney	1782 130th St	Fairmont MN 56031-1330
Gene W Wright Irrev Trust	1786 180th St	Fairmont MN 56031-1458
Justin Bulfer	1788 120th St	Fairmont MN 56031-1331
Douglas M & Lorna L Bicknase	1791 160th Ave	Fairmont MN 56031-1303
Clifford C & Leona M Lehman	1793 190th Ave	Fairmont MN 56031-1456
Timothy P Langer	1799 130th St	Fairmont MN 56031-1330
Fernando H Lima	1806 150th St	Fairmont MN 56031-1322
Warren Brodt Testamentary Trust	1807 140th St	Fairmont MN 56031-1325
Elaine Schwieger (LE)	1811 180th St	Fairmont MN 56031-1457
Lonny & Jeanne Schwieger	1811 180th St	Fairmont MN 56031-1457
Kurt R & Patricia E Steuber	1814 170th St	Fairmont MN 56031-1308
Patricia E & Douglas C Padgett	1822 140th St	Fairmont MN 56031-1325
Rollo & G Kosbab Trusts	1824 210th Ave	Fairmont MN 56031-1370
Douglas J & Bethany Faber	1827 100th St	Fairmont MN 56031-8700
Gerald F & Mary G Nutt	1831 160th St	Fairmont MN 56031-1452
Steven P & Lynn Harris	1844 130th St	Fairmont MN 56031-1329
Kenneth & Mary Kotewa	1844 180th St	Fairmont MN 56031-1457
Timothy C & Lynn M Davis	1845 State Highway 15	Fairmont MN 56031-1373
Eldean Maschoff	1846 190th Ave	Fairmont MN 56031-1585
Ole & Katie L Rodning	1853 130th St	Fairmont MN 56031-1329
Daniel R & Mary B Freeman	1867 State Highway 15	Fairmont MN 56031-1373
Clifford E & Lynette A Jessen	1876 180th St	Fairmont MN 56031-1457
Steven R & Janine A Draper	1883 140th St	Fairmont MN 56031-1325
Bank Midwest	1920 Center Creek Dr	Fairmont MN 56031-3426
Franchise Realty Interstate	1920 Knollwood Dr	Fairmont MN 56031-2304
McDonald's Corporation	1920 Knollwood Dr	Fairmont MN 56031-2304
Lering LLC	1933 Albion Ave	Fairmont MN 56031-3204
Martin County Conservation Club	1940 S Prairie Ave	Fairmont MN 56031-3157
Center Creek Holdings LLC	1950 Center Creek Dr	Fairmont MN 56031-3428
Jeff S Silker	1960 160th St	Fairmont MN 56031-1320
Bart Saxton	1982 175th St	Fairmont MN 56031-1358
Jacklyn Lee Beemer	1988 135th St	Fairmont MN 56031-1349
Richard L & Eunice J Barke	1996 160th St	Fairmont MN 56031-1320
Richard W & Alicia A Barke	1998 160th St	Fairmont MN 56031-1320
Javen D & Anne M Holm	2 N Joy Ln	Fairmont MN 56031-3300
Maynard & Margaret M Bettin	2006 Albion Ave	Fairmont MN 56031-3205
Four Fifths LLC	2007 Knollwood Dr	Fairmont MN 56031-2307
Martin County	201 Lake Ave	Fairmont MN 56031-1845
Barbara Jean Clark	2011 Albion Ave	Fairmont MN 56031-3206
Charles A & J A Dobson	2018 150th St	Fairmont MN 56031-1398
Patricia (Lane) Blaufuss	202 N Judson St	Fairmont MN 56031-1470
Gregory A & Jody K Mitchell	2020 Knollwood Dr	Fairmont MN 56031-2306
Tim Steuber Pork Inc	2028 175th St	Fairmont MN 56031-1365
James Tow	2036 150th St	Fairmont MN 56031-1398
John Clymer	204 N Judson St	Fairmont MN 56031-1470
A L & C E Ward Inc	204 Lake Ave	Fairmont MN 56031-1846
Fred C & Bruce A Krahmer	204 Lake Ave	Fairmont MN 56031-1846
Juanita E Schmeeckle Trust	204 Lake Ave	Fairmont MN 56031-1846

Tenhassen Farms Inc	204 Lake Ave	Fairmont MN 56031-1846
Krahmer Inc	204 Lake Ave Ste 201	Fairmont MN 56031-1846
Bean Town Developments LLC	204 Lake Ave Ste 201	Fairmont MN 56031-1846
Silver Lake Farms Inc et al.	204 Lake Ave Ste 201	Fairmont MN 56031-1846
Lonny & Lynn K Becker	2041 170th St	Fairmont MN 56031-1381
Highland Oaks Inc	2042 170th St	Fairmont MN 56031-1381
Kurt & Gedee Unke	2042 170th St	Fairmont MN 56031-1381
Dennis S & Darla J Larson	205 N James St	Fairmont MN 56031-1469
John E & Nelda J Zimmer	2050 Knollwood Dr	Fairmont MN 56031-2301
Earl Dean & Julie Ann Ricard	206 N James St	Fairmont MN 56031-1469
Scott B & Caroline Unke	2065 Knollwood Dr	Fairmont MN 56031-2307
Douglas L & Michelle L Moeller	2070 135th St	Fairmont MN 56031-1396
Moeller Investments LLC	2070 135th St	Fairmont MN 56031-1396
Margaret Tonne (LE) et al.	208 W Christina St	Fairmont MN 56031-1503
Joseph & Linda Pygman	2085 70th St	Fairmont MN 56031-5082
Teresa A Newville	209 N James St	Fairmont MN 56031-1469
Dennis R & Jodie Schrader	209 N Judson St	Fairmont MN 56031-1470
Joseph L & Gina L Swenson	209 Park St	Fairmont MN 56031-1493
Larry D & L Behrens	209 Winnebago Ave	Fairmont MN 56031-2637
John T Pfaffinger & Georgiann M Pfaffinger	210 Cottonwood Rd	Fairmont MN 56031-5076
Van C Johnson	210 N James St	Fairmont MN 56031-1469
Randy K & Carmen J Deling	2103 150th St	Fairmont MN 56031-1389
L B Family Farm LLLP	2104 175th St	Fairmont MN 56031-1376
L B Pork Inc	2104 175th St	Fairmont MN 56031-1376
Larry L & Linda L Becker	2104 175th St	Fairmont MN 56031-1376
Lonny A & Lynn J Becker	2108 175th St	Fairmont MN 56031-1376
Paul Thomas Kosbab	2111 175th St	Fairmont MN 56031-1376
Steven R & V F Michalke	2114 135th St	Fairmont MN 56031-1395
Lori A & Danny D Krome	2116 150th St	Fairmont MN 56031-1389
Mark & Marjorie Knutson	212 S Judson St	Fairmont MN 56031-1494
Mary Jo Neusch	2134 80th St	Fairmont MN 56031-4613
Timothy W Maschoff	214 N James St	Fairmont MN 56031-1469
Craig V & Evangeline M Fowler	2144 190th St	Fairmont MN 56031-1372
Terry L Senne	215 E 4th St	Fairmont MN 56031-2834
Harold & Joan & Duane Peymann	2150 135th St	Fairmont MN 56031-1395
Duane Dafoe	2162 190th St	Fairmont MN 56031-1372
Marvin D & Agnes E Kosbab	2166 150th St	Fairmont MN 56031-1491
John P & Susan E Toothaker	2167 190th St	Fairmont MN 56031-1372
Edward & L Kotewa Irrev Trusts	2170 135th St	Fairmont MN 56031-1395
John K & B J Goodrich	2184 160th St	Fairmont MN 56031-1386
Gregory J Sokoloski	219 S James St	Fairmont MN 56031-1481
Daniel L Vandever	2192 175th St	Fairmont MN 56031-1376
Steven D & Janice M Frick	22 Silver Lake Dr	Fairmont MN 56031-5081
Doug & June Nelson	220 E 8th St	Fairmont MN 56031-2705
Ervin J & G Barchenger	2205 Albion Ave	Fairmont MN 56031-3210
Julane L Hansen et al.	2206 135th St	Fairmont MN 56031-1394
Steven R & Lori J Pomerenke	2206 80th St	Fairmont MN 56031-4629
John B & Susan J Lund	221 Krahmer Dr	Fairmont MN 56031-3408
Daniel F & Anna Harris	2210 N North Ave	Fairmont MN 56031-1535
Brett Tietema	2213 Albion Ave	Fairmont MN 56031-3256
Marlin J & Janice S Johnson	2213 N North Ave	Fairmont MN 56031-1536
Brent J & Karen A Moeller	2214 170th St	Fairmont MN 56031-1489
Bradley Paul Gerhardt et al.	2214 Stade Ln	Fairmont MN 56031-3230
Goldie N Lohse Rev Trust	2226 Albion Ave	Fairmont MN 56031-3209
Kyle Steuber	223 S James St	Fairmont MN 56031-1481
Rollo & Suzanne K Barnes	223 Woodland Ave	Fairmont MN 56031-2151
Keith Gieseke	2230 150th St	Fairmont MN 56031-4625
Merle H & Marion A Gieseke	2230 150th St	Fairmont MN 56031-4625
Elmer A Hartmann Irrev Trust	2230 180th St	Fairmont MN 56031-1375

Bertha G Anderson	224 E 2nd St	Fairmont MN 56031-2813
Marie E Glawe	2244 160th St	Fairmont MN 56031-4604
Garry Lee Rosen	225 W Margaret St	Fairmont MN 56031-1514
Donald A Vonbank	225 S Prairie Ave	Fairmont MN 56031-2852
Benjamin Stabner	2288 125th St	Fairmont MN 56031-4650
Kenneth C Ringeisen	2300 N North Ave	Fairmont MN 56031-1537
Carl & Cheryl Beckendorf	2301 Memorial Park Dr	Fairmont MN 56031-1410
Fairview Memorial Park	2301 Memorial Park Dr	Fairmont MN 56031-1410
Randy J Kroon	2306 135th St	Fairmont MN 56031-4647
Michael M Bettin	2307 N State St	Fairmont MN 56031-3643
David R Bramstedt	2309 N North Ave	Fairmont MN 56031-1538
John & Nancy Reischl	2311 N North Ave	Fairmont MN 56031-1538
Wilbert & L Becker Irrev Trust	232 S Dewey St S	Fairmont MN 56031-4048
Anita L Hartman (LE) et al.	232 S Dewey St	Fairmont MN 56031-4048
Marie Riegel (LE) et al.	234 W 10th St	Fairmont MN 56031-1612
Lowell & Cynthia Spee (LE) et al.	2342 115th St	Fairmont MN 56031-4642
Jeremy D Bellecourt	2351 127th St	Fairmont MN 56031-4645
Lee J & Janice Freeman	2373 150th St	Fairmont MN 56031-4601
Kenneth & Kristina Mcdonald	2390 150th St	Fairmont MN 56031-4601
Duane M Stusse	2409 127th St	Fairmont MN 56031-4644
Alyn Angus Trust	2414 115th St	Fairmont MN 56031-4638
Angus Acres LLLP	2414 115th St	Fairmont MN 56031-4638
Thomas & L Coderre Rev Living Trust	2431 Stella St	Fairmont MN 56031-3318
Lucile J Tow	2484 Albion Ave	Fairmont MN 56031-3301
Thoms & Jean Mayday Rev Trusts	2502 50th St	Fairmont MN 56031-5020
Jason R Harris	2512 Albion Ave	Fairmont MN 56031-3304
Leon V & Judy A Schaffer	2527 Stella St	Fairmont MN 56031-3320
East Chain LP Gas	2537 50th St	Fairmont MN 56031-5020
Grace D & Gary W Haeckel	2540 Stella St	Fairmont MN 56031-3319
Kevin E & Victoria M Thate	2544 115th St	Fairmont MN 56031-4635
Tory Jon Gustafson	2554 115th St	Fairmont MN 56031-4635
Oliver Garlick	2557 104th St	Fairmont MN 56031-4634
Michael G & Nadine Gatewood	2612 N North Ave	Fairmont MN 56031-1543
Donald R Snyder	262 Krahmer Dr	Fairmont MN 56031-3413
Luverna Hartmann	2679 Albion Ave	Fairmont MN 56031-3325
Wilbert Hartmann	2679 Albion Ave	Fairmont MN 56031-3325
Michael & Nancy Droegemueller	2712 Albion Ave	Fairmont MN 56031-3501
Jerry Mapson	900 Hengen St Apt 201	Fairmont MN 56031-2048
Dennis & S M Neuenschwander	2810 N North Ave	Fairmont MN 56031-1547
Garry L Neuenschwander et al.	2810 N North Ave	Fairmont MN 56031-1547
Hilbert Brandt	2811 Roland Ave	Fairmont MN 56031-3528
Margaret & Alfred Schmidt (LE)	2811 Roland Ave	Fairmont MN 56031-3528
Ruth D M Philipp Revocable Trust Agreement	2811 Roland Ave Apt 222	Fairmont MN 56031-3535
Dorothy M Bolte & Jerry Bolte	2811 Roland Ave Apt 223	Fairmont MN 56031-3535
Shirley & Kenneth A Johnson	301 Lake Aires Rd	Fairmont MN 56031-2413
Joanne Conn	302 E 9th St	Fairmont MN 56031-2710
Harold S & Leone Vandermoon	307 S Judson St	Fairmont MN 56031-1474
Bryan Barchenger	308 S Judson St	Fairmont MN 56031-1474
Jr Investments c/o Randy Kabe	308 W Anna St	Fairmont MN 56031-1559
Jamee L Hinrichsen	310 S Judson St	Fairmont MN 56031-1474
Beverly M Fretty Revoc Trust c/o Jake Fretty	310 Krahmer Dr	Fairmont MN 56031-3414
James R Tietje	311 S James St	Fairmont MN 56031-1466
Mark W & Rita M Sagehorn	313 S James St	Fairmont MN 56031-1466
Kevin Zimmer	315 245th Ave	Fairmont MN 56031-5005
Bruce A & Lori J Barchenger	315 S James St	Fairmont MN 56031-1466
Kevin D & Debra R Kelly	319 E 2nd St	Fairmont MN 56031-2859
Fretty Family Properties LLC	320 N State St	Fairmont MN 56031-4063
Jacob Fretty Jr Revoc Trust	320 N State St	Fairmont MN 56031-4063

Krueger Realty Inc	323 E Blue Earth Ave	Fairmont MN 56031-2860
Kenneth R Krueger	323 E Blue Earth Ave	Fairmont MN 56031-2860
Joyce E Vaughn	327 Lake Park Blvd	Fairmont MN 56031-2166
Leonora Chadderdon	35 Downtown Plz	Fairmont MN 56031-1702
Marvin Madsen	354 E Amber Lake Dr	Fairmont MN 56031-3403
Jeffery J Timmerman	3704 Cedar Creek Ct	Fairmont MN 56031-2429
Thomas J Gibbons (LE) et al.	3710 W Amber Lake Dr	Fairmont MN 56031-2401
Mae Verine Gibbons	3710 W Amber Lake Dr	Fairmont MN 56031-2401
Curtis Mayo	1518 Blue Jay Blvd	Fairmont MN 56031-4584
Robert & Janet Cone	389 Lake Aires Rd	Fairmont MN 56031-2413
Paul W & Kimberly K Greischar	4 S Joy Ln	Fairmont MN 56031-3327
Delmar D Jr & Phyllis J Ellis	4 N Joy Ln	Fairmont MN 56031-3300
Jeffrey Ziemer	400 Geraldine St	Fairmont MN 56031-2034
James M & Fern A Dietz	401 S Bridgeman St	Fairmont MN 56031-1476
Eugene R & Mary E Zellmer	401 Kings Rd	Fairmont MN 56031-2117
Mark & Vicki E Bulfer	403 S Bridgeman St	Fairmont MN 56031-1476
Linda Wannarka	404 S Bridgeman St	Fairmont MN 56031-1476
Paul Tomlinson	407 S James St	Fairmont MN 56031-1465
Paul R & Cindi Lou Tomlinson	407 S James St	Fairmont MN 56031-1465
Gerald & Joy & J Meyer Meyer	408 S Prairie Ave	Fairmont MN 56031-4160
Jgg Holdings LLC	410 Downtown Plz	Fairmont MN 56031-1714
Darryl & Heidi L W Sanden	411 S James St	Fairmont MN 56031-1465
Dennis A Smith et al.	415 W 3rd St	Fairmont MN 56031-1844
Troy & Teresa Tonneson	416 S Judson St	Fairmont MN 56031-1475
Gerald D & Darin M Moore et al.	417 Kings Rd	Fairmont MN 56031-2117
John W & Jane M Thate	418 W Margaret St	Fairmont MN 56031-1517
Kenneth C Jr & W M Crissinger	421 S Bridgeman St	Fairmont MN 56031-1476
Roger A & Joyce A Anderson	422 N Grant St	Fairmont MN 56031-3825
Arlynn & Karen Lueth	455 W Amber Lake Dr	Fairmont MN 56031-2404
Sammie K Moeller TT	455 Ward St	Fairmont MN 56031-4368
Jonathan Kotewa	474 Lake Park Blvd	Fairmont MN 56031-2174
Robert J Siems Sr Invmts LLP	48 Cottage St	Fairmont MN 56031-2407
Louise E Carter	502 S Hampton St	Fairmont MN 56031-4101
Terry P & Anita M Duffey	505 Lucia Ave	Fairmont MN 56031-1572
Jerald L & D M Mosloski	508 Winnebago Ave	Fairmont MN 56031-3605
David E & Susan Kuhl	511 S Fairlakes Ave	Fairmont MN 56031-2008
Brian E Stene	515 N Grant St	Fairmont MN 56031-3828
William Cieslinski	517 Independence Dr	Fairmont MN 56031-2217
Marguerite L Burmeister	518 Webster St	Fairmont MN 56031-4144
Kelly Trust Stokes	519 E 2nd St	Fairmont MN 56031-3903
David C & Karen M Garrison	520 Southwind Dr	Fairmont MN 56031-3152
John J & Wendy Janke	521 E Blue Earth Ave	Fairmont MN 56031-3933
Kathryn Hawkins	526 Kings Rd	Fairmont MN 56031-2130
Elnora Anderson (LE) et al.	53 Downtown Plz	Fairmont MN 56031-1731
Richard Traetow	531 Southwind Dr	Fairmont MN 56031-3149
RB Fretty Properties LLC	534 W Interlaken Rd	Fairmont MN 56031-2409
Bonnie R Truesdell et al.	567 W Interlaken Rd	Fairmont MN 56031-2410
Kenneth Bents	580 Southwind Dr	Fairmont MN 56031-3152
D Charles & Jennifer M Persson	600 W Interlaken Rd	Fairmont MN 56031-2411
Bruce N & Evelyn E Helvig	601 Shoreacres Dr	Fairmont MN 56031-2244
Lorena & Harriet Danielson	601 Shoreacres Dr	Fairmont MN 56031-2244
Richard & Gloria Hein Liv Trust	601 Shoreacres Dr	Fairmont MN 56031-2244
Robert Seidel Trust	601 Shoreacres Dr	Fairmont MN 56031-2244
Viona R (Winch) Sokoloski	606 E Blue Earth Ave	Fairmont MN 56031-3934
Bruce & Donna Krahmer	606 W Interlaken Rd	Fairmont MN 56031-2411
Lyla M Brockmann	610 Summit Dr	Fairmont MN 56031-2247
Marlin L & Irene C Mcnea	610 Summit Dr	Fairmont MN 56031-2247
Olorraine Becker (LE) et al.	610 Summit Dr	Fairmont MN 56031-2247
Betty E Hiller (LE) et al.	620 Summit Dr	Fairmont MN 56031-2200
Elmer & Agnes Carter Irrev Trust	620 Summit Dr	Fairmont MN 56031-2200

Francis R & Mabel Motl (LE) et al.	620 Summit Dr	Fairmont MN 56031-2200
James P Scholl	620 Summit Dr	Fairmont MN 56031-2200
James P Scholl	620 Summit Dr	Fairmont MN 56031-2200
Ruth D Voelker (LE) et al.	620 Summit Dr	Fairmont MN 56031-2200
Robert D & Y M McMurtry Trust	620 Summit Dr Apt 103	Fairmont MN 56031-2248
Vernon & Lorraine Vogt Irrev Trusts	620 Summit Dr Apt 211	Fairmont MN 56031-2249
Johnathan Taplin	624 Heritage Ct	Fairmont MN 56031-2214
David M & Marcia L Hanson	624 Willow St	Fairmont MN 56031-4128
Douglas & Charles Abel	625 W Interlaken Rd	Fairmont MN 56031-2426
David C & Lois A Johnson Rev Trusts	627 Shoreacres Dr	Fairmont MN 56031-2223
James R Cone	640 W Interlaken Rd	Fairmont MN 56031-2411
Harry A Petrowiak Living Trust	693 Shoreacres Dr	Fairmont MN 56031-2223
Margaret Petrowiak Trust	693 Shoreacres Dr	Fairmont MN 56031-2223
William H Petrowiak et al.	693 Shoreacres Dr	Fairmont MN 56031-2223
School District #2752	714 Victoria St Ste 10	Fairmont MN 56031-4300
Edward L & Mary Kay Redenius	746 W Lair Rd	Fairmont MN 56031-1740
Jon M Balcom	774 250th Ave	Fairmont MN 56031-2014
Mark C & Rita R Craven	781 Shoreacres Dr	Fairmont MN 56031-2225
Chad Striemer	783 Pierce Lake Rd	Fairmont MN 56031-1353
Brian & Yonna Ruschy	8 N Joy Ln	Fairmont MN 56031-3300
Dustyn D & Leah M Hartung	8 Miedtke Ln	Fairmont MN 56031-4667
Kevin & Nora Kahler	8 Miedtke Ln	Fairmont MN 56031-4667
Joyce A Henriksen	802 Day St	Fairmont MN 56031-4326
John D & Constance L Anthony	809 Hengen St	Fairmont MN 56031-2126
John M & Charlotte K Malo	814 S Prairie Ave	Fairmont MN 56031-3020
Michael W Lutz & David A Lutz	815 S Hampton St	Fairmont MN 56031-4308
Mid America Distributing LLC	815 Will Nett Pl	Fairmont MN 56031-1661
Mn Motor Bus Inc	820 Winnebago Ave	Fairmont MN 56031-3645
Zion Lutheran Society	824 245th Ave	Fairmont MN 56031-4610
Robert, William D & Mary K Truesdell	829 190th Ave	Fairmont MN 56031-5073
Janette C Loe et al.	840 Redwood Dr	Fairmont MN 56031-3024
Brian & Renee Poppe	845 245th Ave	Fairmont MN 56031-4610
Lucille E Gorgen	850 Goldfinch St	Fairmont MN 56031-3042
Marjorie M Mapson (LE) et al.	850 Goldfinch St	Fairmont MN 56031-3042
Lynn & Devorah Schwieger Irrev Trust	850 Goldfinch St Apt 300	Fairmont MN 56031-3045
Reanard A & L Moen Living Trust	850 Goldfinch St Apt 304	Fairmont MN 56031-3045
Junice Hamre Life Est et al.	850 Goldfinch St Apt 513	Fairmont MN 56031-3045
Landmark Management Co of Mart	900 N North Ave	Fairmont MN 56031-1624
Marie Riegel LLP	900 N North Ave	Fairmont MN 56031-1624
Steven S Poetter	900 N North Ave	Fairmont MN 56031-1624
Bartlett J & Helen Eriksen	901 S Hampton St	Fairmont MN 56031-4310
Evangelical Church	901 Woodland Ave	Fairmont MN 56031-2012
Fairmont Foods of MN Inc	905 E 4th St	Fairmont MN 56031-4014
Steve & Jody Lyle	908 Home St	Fairmont MN 56031-4433
John E & Diane R Evans	910 Willow St	Fairmont MN 56031-4133
Curtis & Jeanette Howard	914 School St	Fairmont MN 56031-4348
Ajax Best Inc	919 Shoreacres Dr	Fairmont MN 56031-2229
James R & Jim Tow	919 Shoreacres Dr	Fairmont MN 56031-2229
Richard & Betty Wiederhoeft	919 Summit Dr	Fairmont MN 56031-2236
Dorothy M & Lyle E Saxton	921 School St	Fairmont MN 56031-4349
Mary Mach Cross (LE) et al.	921 Victoria St	Fairmont MN 56031-4355
Robert Huemoeller	923 Summit Dr	Fairmont MN 56031-2236
Lynn M & Lyn M Johnson	924 Hengen St	Fairmont MN 56031-2045
Richard C Buckmeier	925 Victoria St	Fairmont MN 56031-4355
Steven L & Barbara L Kuehl	948 Budd St	Fairmont MN 56031-4320
Donald M & Evelyn D Strauser	957 Liberty Ln	Fairmont MN 56031-2240
Beatrice L Hanson	976 S Orient St	Fairmont MN 56031-4371
April Tordsen	986 220th Ave	Fairmont MN 56031-4621
Douglas & Dawn Willner	PO Box 147	Fairmont MN 56031-0147

Fairmont Glass & Sign Prod	PO Box 152	Fairmont MN 56031-0152
Willard Carlson	PO Box 318	Fairmont MN 56031-0318
Chris L Nasby	PO Box 48	Fairmont MN 56031-0048
Schumann Realty Inc	PO Box 6	Fairmont MN 56031-0006
Randy & Brenda Fretty	PO Box 645	Fairmont MN 56031-0645
Rail Yard Bar & Grill LLC	PO Box 658	Fairmont MN 56031-0658
Lawrence P Mcguire	PO Box 825	Fairmont MN 56031-0825
Fairmont Growth Oppty Co	PO Box 826	Fairmont MN 56031-0826
Mitchell R & Lisa K Lueth	PO Box 941	Fairmont MN 56031-0941
Current Resident	100 Hampton Dr	Fairmont MN 56031-3958
Current Resident	1005 N Bixby Rd	Fairmont MN 56031-1416
Current Resident	1025 N Bixby Rd	Fairmont MN 56031-1416
Current Resident	106 Park St	Fairmont MN 56031-1478
Current Resident	1125 N Bixby Rd	Fairmont MN 56031-1418
Current Resident	1138 240th Ave	Fairmont MN 56031-4639
Current Resident	1140 Torgerson Dr	Fairmont MN 56031-3655
Current Resident	1150 Torgerson Dr	Fairmont MN 56031-3655
Current Resident	116 Harris Rd	Fairmont MN 56031-1500
Current Resident	12 N Joy Ln	Fairmont MN 56031-3300
Current Resident	1200 Goemann Rd	Fairmont MN 56031-4659
Current Resident	1200 Torgerson Dr	Fairmont MN 56031-3600
Current Resident	122 Harris Rd	Fairmont MN 56031-1500
Current Resident	1250 Goemann Rd	Fairmont MN 56031-4659
Current Resident	1319 190th Ave	Fairmont MN 56031-1328
Current Resident	1357 190th Ave	Fairmont MN 56031-1328
Current Resident	1434 230th Ave	Fairmont MN 56031-4600
Current Resident	1448 State Highway 15	Fairmont MN 56031-1391
Current Resident	1457 230th Ave	Fairmont MN 56031-4600
Current Resident	1535 210th Ave	Fairmont MN 56031-1388
Current Resident	1569 190th Ave	Fairmont MN 56031-1453
Current Resident	1601 N Bixby Rd	Fairmont MN 56031-1428
Current Resident	1605 N Bixby Rd	Fairmont MN 56031-1428
Current Resident	1608 230th Ave	Fairmont MN 56031-4603
Current Resident	1611 150th St	Fairmont MN 56031-1319
Current Resident	1613 175th Ave	Fairmont MN 56031-1311
Current Resident	1623 170th St	Fairmont MN 56031-1305
Current Resident	1628 170th St	Fairmont MN 56031-1305
Current Resident	1633 210th Ave	Fairmont MN 56031-1383
Current Resident	1663 180th St	Fairmont MN 56031-1459
Current Resident	1671 160th Ave	Fairmont MN 56031-1306
Current Resident	1688 210th Ave	Fairmont MN 56031-1383
Current Resident	1726 170th St	Fairmont MN 56031-1307
Current Resident	1734 130th St	Fairmont MN 56031-1330
Current Resident	1769 160th Ave	Fairmont MN 56031-1303
Current Resident	1782 175th Ave	Fairmont MN 56031-1310
Current Resident	1793 210th Ave	Fairmont MN 56031-1369
Current Resident	1809 180th St	Fairmont MN 56031-1457
Current Resident	1829 150th St	Fairmont MN 56031-1322
Current Resident	1833 210th Ave	Fairmont MN 56031-1370
Current Resident	1845 State Highway 15	Fairmont MN 56031-1373
Current Resident	1846 150th St	Fairmont MN 56031-1322
Current Resident	1888 140th St	Fairmont MN 56031-1325
Current Resident	1901 N State St	Fairmont MN 56031-3628
Current Resident	1903 N State St	Fairmont MN 56031-3628
Current Resident	1905 Memorial Park Dr	Fairmont MN 56031-1402
Current Resident	2000 N State St	Fairmont MN 56031-3629
Current Resident	2064 170th St	Fairmont MN 56031-1381
Current Resident	2117 150th St	Fairmont MN 56031-1389
Current Resident	2197 N State St	Fairmont MN 56031-3632
Current Resident	2200 N State St	Fairmont MN 56031-3633

Current Resident		2209 N North Ave	Fairmont MN 56031-1536
Current Resident		2213 N North Ave	Fairmont MN 56031-1536
Current Resident		2217 N State St	Fairmont MN 56031-3634
Current Resident		2225 N State St	Fairmont MN 56031-3634
Current Resident		2231 150th St	Fairmont MN 56031-4625
Current Resident		2237 N State St	Fairmont MN 56031-3634
Current Resident		2307 N State St	Fairmont MN 56031-3643
Current Resident		2317 N North Ave	Fairmont MN 56031-1538
Current Resident		2484 115th St	Fairmont MN 56031-4638
Current Resident		2614 N North Ave	Fairmont MN 56031-1543
Current Resident		4 N Joy Ln	Fairmont MN 56031-3300
Current Resident		820 E 10th St	Fairmont MN 56031-3723
Roland, Ronald & Shirley A Unke		101 Albion Ave Apt 201	Fairmont MN 56031-2101
Judith Balcom (LE) et al.		1029 Lake Ave # 2	Fairmont MN 56031-1965
Randy E & Connie L Miller		1905 Memorial Park Dr	Fairmont MN 56031-1402
Brad Twait		214 S Bridgeman St	Fairmont MN 56031-1480
Daniel J. Kevin T. Meyer		551 Burton Ln	Fairmont MN 56031-4266
Steven W & Linda R Pierce		104 SW 1st St	Granada MN 56039-3171
Dona Fae Decker (LE) et al.		104 W Creamery St	Granada MN 56039-3162
James & Rosemary Cegelske		1045 270th Ave	Granada MN 56039-3161
Mary Jane Balcom		1052 260th Ave	Granada MN 56039-3110
Becky Sharp		106 E Creamery St	Granada MN 56039-2700
Robert E & Debra Tonne	109 Harmony E	PO Box 133	Granada MN 56039-0133
Campe Family Trust B		1103 260th Ave	Granada MN 56039-3108
Gene L Larsen & Jacki Larsen	112 1st St SW	PO Box 183	Granada MN 56039-0183
Lisa M Strauser		113 SW 1st St	Granada MN 56039-3171
Thomas A Sullivan (LE) et al.		1137 290th Ave	Granada MN 56039-3075
Kent N & Bev H Dahl		115 W Hill St	Granada MN 56039-4021
Joseph J & Marjorie Svoboda		115 SW 1st St	Granada MN 56039-3171
Warren & Barbara Landin		116 W Hill St	Granada MN 56039-4021
Matthew J & Betsy L Mortenson		116 W Harmony St	Granada MN 56039-4018
Clint A Drayfahl		117 E Meagher St	Granada MN 56039-4004
Donald L & D Park Jorgenson	117 SW 1st St	PO Box 94	Granada MN 56039-0094
Kory T & Shari L Hines		1170 260th Ave	Granada MN 56039-3108
Janice M Jensen		1172 260th Ave	Granada MN 56039-3108
Mark Allen Shumski		1191 270th Ave	Granada MN 56039-3081
Bruce Baxter		209 SW 1st St	Granada MN 56039-4024
Russell L Mileham		1204 Peach St	Granada MN 56039-3105
Milda M Artner (LE) et al.		1206 Cherry St	Granada MN 56039-3106
Joshua P Thate		1207 260th Ave	Granada MN 56039-3101
Calvin & Jody Saxton		1207 290th Ave	Granada MN 56039-3072
Darryl E Peterson		1210 Peach St	Granada MN 56039-3105
Ronald W & Pamela Casey		1212 260th Ave	Granada MN 56039-3101
Mark & Patricia D Crissinger		1218 260th Ave	Granada MN 56039-3158
Dennis Phillips		1218 270th Ave	Granada MN 56039-3082
Flying Goose Campground LLC		1224 260th Ave	Granada MN 56039-3158
Gary E & Linda Hanson		1224 260th Ave	Granada MN 56039-3158
Chad Hannaman		12240 310th Ave	Granada MN 56039-3169
Glenndon R & Debra K McConnell		1227 280th Ave	Granada MN 56039-3057
Michael & Gail M Warriner		1298 245th Ave	Granada MN 56039-3005
Ann M Gronewald et al.		1318 290th Ave	Granada MN 56039-3071
Jean Drexler		1329 State Highway 262	Granada MN 56039-3103
Benjamin L Austin		1332 250th Ave	Granada MN 56039-3001
Donald & D Grondwald Trusts		1337 290th Ave	Granada MN 56039-3071
Lucille E Gorgen		1337 290th Ave	Granada MN 56039-3071
Clifford E & J. Eisenbarger		1359 280th Ave	Granada MN 56039-3093
Donald L & Jeffrey L Hall		1383 290th Ave	Granada MN 56039-3071
Randall C Schmidt		1397 State Highway 262	Granada MN 56039-3103
Arvid E & Sheryl K Colby		1398 240th Ave	Granada MN 56039-3024
Benjamin J & Sara L Kolbe		1417 293rd Ave	Granada MN 56039-3068

Ross Gronewald		1426 280th Ave	Granada MN 56039-3092
Chad & Torre Eckmann		1451 310th Ave	Granada MN 56039-3066
Bryan & Kimberly & Bruce Brockmann		1456 270th Ave	Granada MN 56039-3058
Terrance J Hopp		1471 280th Ave	Granada MN 56039-3092
Glen Arthur Becker		1477 255th Ave	Granada MN 56039-3073
Jeffrey L & Jill R Mathiason		1483 255th Ave	Granada MN 56039-3073
Peter & Cindy L M Milne		1497 265th Ave	Granada MN 56039-3056
Leo D Helland		15038 310th Ave	Granada MN 56039-3168
Melva Lou Tonne		1507 260th Ave	Granada MN 56039-3083
Rodney & Connie Hinz		1530 265th Ave	Granada MN 56039-3055
Thomas L & Maria L Hinz		1532 265th Ave	Granada MN 56039-3055
David & Elizabeth Shimon		1558 255th Ave	Granada MN 56039-3039
Maurice B & Joann Theobald		1563 265th Ave	Granada MN 56039-3055
Susan E & Jerald A Grefe		1568 280th Ave	Granada MN 56039-3090
Ryan Voyles		1577 280th Ave	Granada MN 56039-3090
Arlen R & Sharon K Moeller		1593 240th Ave	Granada MN 56039-3041
Berdean A, Janice & A Moeller Moeller		1593 240th Ave	Granada MN 56039-3041
Duwayne C & Lesia J Jaskulke		1604 255th Ave	Granada MN 56039-3038
Kenneth D & Rhonda R Petrowiak		1619 260th Ave	Granada MN 56039-3084
Jasen & Christy Selbrade et al.		1634 240th Ave	Granada MN 56039-3042
F Rose & Dwayne H Mortenson		16456 316th Ave	Granada MN 56039-8706
Rose F Mortenson		16456 316th Ave	Granada MN 56039-8706
Scott & Lupe Y Stromberg		1665 288th Ave	Granada MN 56039-3088
Michael Oltman		1665 298th Ave	Granada MN 56039-3007
Joyce E Anderson (Wetzler)		16788 315th Ave	Granada MN 56039-3178
Curtis G Chaffee		1689 280th Ave	Granada MN 56039-3086
Marcella K Chaffee et al.		1689 280th Ave	Granada MN 56039-3086
William A Rohlik		16905 315th Ave	Granada MN 56039-8703
Arlyn W & Marthe A Becker		1710 230th Ave	Granada MN 56039-3033
Daniel A & Tammy L Becker		1725 240th Ave	Granada MN 56039-3043
Gene A & Candy K Becker		1737 240th Ave	Granada MN 56039-3043
Randall S & Linda L Larson		1742 270th Ave	Granada MN 56039-3050
Mark G & Jamie C (LE)mon		1767 240th Ave	Granada MN 56039-3043
Daryl D & Sonia Hoewisch		1776 240th Ave	Granada MN 56039-3043
Darwin G & R R Peterson		1793 260th Ave	Granada MN 56039-3047
Todd C & Betsy A Steuber		1812 270th Ave	Granada MN 56039-3014
Darwin A & Saundra R Roberts		1838 260th Ave	Granada MN 56039-3046
Nathan & Amy Anders		1868 240th Ave	Granada MN 56039-3026
Michael R & Joanna Salic et al.		1868 270th Ave	Granada MN 56039-3014
Lawrence E & Arlene Warriner		1873 230th Ave	Granada MN 56039-3030
Bradley A Becker		1889 240th Ave	Granada MN 56039-3026
Craig D & Marilyn Carrigan		1893 230th Ave	Granada MN 56039-3030
Matt, Paul L & Cynthia K Wolter		1911 270th Ave	Granada MN 56039-3017
Wolter Brothers		1911 270th Ave	Granada MN 56039-3017
Robert Lewis		1934 260th Ave	Granada MN 56039-3023
Connie & Kent Lewis		1959 260th Ave	Granada MN 56039-3023
Charles Post		205 SW 1st St	Granada MN 56039-4024
Roger C Buckmeier	205 Main St N	PO Box 172	Granada MN 56039-0172
Darren J & Tevi J Maday	207 NW 1st St	PO Box 204	Granada MN 56039-0204
Holly K Niss		208 NW 1st St	Granada MN 56039-4009
Roland E & Brenda Duncan		214 NW 1st St	Granada MN 56039-4009
Krista K Lyons	215 1st St NW	PO Box 13	Granada MN 56039-0013
Jesse Lang		215 NW 1st St	Granada MN 56039-4009
Marcella K Chaffee		325 S Main St	Granada MN 56039-9605
Donna R Franzen		217 SW 1st St	Granada MN 56039-4024
Paul E & Jessie M Sanders		217 E Creamery St	Granada MN 56039-2701
John Wayne Taplin		217 E Meagher St	Granada MN 56039-9604
Larry W & Debra A Stensland		217 W Meagher St	Granada MN 56039-3164

Calvary Baptist Church		218 E Creamery St	Granada MN 56039-2701
Chelsie E Lager		220 N Main St	Granada MN 56039-4007
James & Lynne Duben		221 SW 1st St	Granada MN 56039-4024
Clayton R Mitchell		221 N Main St	Granada MN 56039-4007
Lisa M Balcom		221 W Harmony St	Granada MN 56039-4019
Scott Sundberg		224 S Main St	Granada MN 56039-4015
Kevin L & Linda Goraczkowski		224 SW 1st St	Granada MN 56039-4024
Keith E & Mary J Hartmann		2269 180th St	Granada MN 56039-3031
Dean A Becker		2276 170th St	Granada MN 56039-3035
Veryl L & C A Champine		2285 190th St	Granada MN 56039-3029
Aaron J Hartmann		2286 180th St	Granada MN 56039-3031
Linda G & William Layman		229 N Main St	Granada MN 56039-4027
Gary M & Sandra K Luhmann		2338 180th St	Granada MN 56039-3032
Eldren E & Darla Colby		2399 135th St	Granada MN 56039-3015
Jeffrey L & Jaclyn V Hall		2411 170th St	Granada MN 56039-3036
William N & Debra K Fritz		2426 170th St	Granada MN 56039-3036
Larry A & Beverly J Graplar		2426 180th St	Granada MN 56039-3044
Royce Abel		2451 160th St	Granada MN 56039-3040
James & Sheri Miedtke		2454 150th St	Granada MN 56039-3059
Michael J & Becky S Tonne		2464 140th St	Granada MN 56039-3027
David Oltman		2473 140th St	Granada MN 56039-3027
Brent & Carol Tonne		2473 150th St	Granada MN 56039-3059
Margaret Tonne (LE) et al.		2473 150th St	Granada MN 56039-3059
Ricki A Benson		2484 132nd St	Granada MN 56039-3003
Darwin E Kotewa		2484 170th St	Granada MN 56039-3036
Lavonne M Kotewa Irrev Trust		2484 170th St	Granada MN 56039-3036
Larry L & Ardis Osborn		2485 180th St	Granada MN 56039-3044
Eric E Colby		2495 190th St	Granada MN 56039-3025
Willard Abel		2498 150th St	Granada MN 56039-3059
Matthew J & Debra A Wolter		2505 170th St	Granada MN 56039-3037
Marc & Katie Hanson		2506 170th St	Granada MN 56039-3037
Sheila K Artner		2507 Spring St	Granada MN 56039-3104
Jamison Wessels		2509 Railroad St	Granada MN 56039-3107
Michael J & Judith M Post		2524 140th St	Granada MN 56039-3048
Jordan & Jennifer Luhmann		2529 200th St	Granada MN 56039-3021
Philip R & M K Askevold		2531 135th St	Granada MN 56039-3097
Randy Poulson		2531 200th St	Granada MN 56039-3021
Hiram Ricard		2542 190th St	Granada MN 56039-3022
Roxanna L Brummond		2542 190th St	Granada MN 56039-3022
Blake Lewis		2559 190th St	Granada MN 56039-3022
Robert A & Anna Belle Smith		2584 50th St	Granada MN 56039-3125
Michael J & D H Sparks	2626 140th St	PO Box 18	Granada MN 56039-0018
Donald & Janell Palmer		2632 110th St	Granada MN 56039-3109
Neil & Crystal Hanson		2638 115th St	Granada MN 56039-3170
Louis J & Amy M Maday et al.		2644 110th St	Granada MN 56039-3109
Maday Farms Inc		2644 110th St	Granada MN 56039-3109
Michael N & J K Bleess		2646 115th St	Granada MN 56039-3170
Roger D & D D Schwab		2652 200th St	Granada MN 56039-3019
Alice Barnes		2655 95th St	Granada MN 56039-3156
Donald G & Richard L Barnes		2655 95th St	Granada MN 56039-3156
Doris Barnes		2655 95th St	Granada MN 56039-3156
John C Carson		2661 200th St	Granada MN 56039-3019
Ronald & Jo Ann Niss		2669 140th St	Granada MN 56039-3060
Myron Mathiason		2687 140th St	Granada MN 56039-3060
Charles E Koestler		2703 115th St	Granada MN 56039-3078
Elsie V Sager		2703 115th St	Granada MN 56039-3078
Arlen R Larson Residual Trust		2721 180th St	Granada MN 56039-3013
Sandra Larson		2721 180th St	Granada MN 56039-3013
Cory M & Nichole M Lewis		2724 200th St	Granada MN 56039-3018
Leslie Lewis		2739 115th St	Granada MN 56039-3078

Theodore F & L M Fisher		2747 110th St	Granada MN 56039-3080
Brad B & Julie A Wells		2752 115th St	Granada MN 56039-3078
Kent A & Sarah E Larson		2753 180th St	Granada MN 56039-3013
Florence N Mckay		2776 190th St	Granada MN 56039-3016
Loren D & Shirley R Mapson		2778 180th St	Granada MN 56039-3013
Martha Sturm		2778 180th St	Granada MN 56039-3013
Harold R & Sandra L Cooper		2791 115th St	Granada MN 56039-3078
Ronald & Marian Bahr		2820 170th St	Granada MN 56039-3087
Joy Lou & Jodieth Seeger et al.		2823 180th St	Granada MN 56039-3012
Larry & Allison Cowing		2823 180th St	Granada MN 56039-3012
C Kent Kislingbury		2838 60th St	Granada MN 56039-3144
Kevin & Mary Hugoson		2838 60th St	Granada MN 56039-3144
Eugene & Kim M Shoemaker		2849 150th St	Granada MN 56039-3091
Duane Schock & E Holland (LE) et al.		2851 163rd St	Granada MN 56039-3089
Warren A Carlson Res Trust et al.		2856 70th St	Granada MN 56039-3146
Maurice & V Kellander Trusts		2857 70th St	Granada MN 56039-3146
Steven R Shumski		2858 128th St	Granada MN 56039-3061
Richard K Findley		2858 145th St	Granada MN 56039-3094
Greg & Lori Schock		2861 163rd St	Granada MN 56039-3089
Kathleen M Mathiason		2863 170th St	Granada MN 56039-3087
Michael G & Susan M Findley		2897 180th St	Granada MN 56039-3012
Gary L & Sherri J Ettesvold		2898 145th St	Granada MN 56039-3094
Kenneth R Findley Trust		2923 180th St	Granada MN 56039-3010
Center Creek Public Cemetery c/o Patricia Messer		2943 170th St	Granada MN 56039-3096
Center Creek Township		2943 170th St	Granada MN 56039-3096
Ralph E & P A Messer et al.		2943 170th St	Granada MN 56039-3096
E-W Trust		2967 140th St	Granada MN 56039-3069
Nicholas J Richison		2968 170th St	Granada MN 56039-3096
John, Robert & Melissa Garry		2992 120th St	Granada MN 56039-3070
Alan N & Stephannie K Langager		2992 160th St	Granada MN 56039-3006
Monica Mcdonald		3006 147th St	Granada MN 56039-3067
Gary S & Pamela Rae True		301 W Creamery St	Granada MN 56039-9609
Dwaine L & Evelyn J Peterson		3013 160th St	Granada MN 56039-3004
Jeremiah J & Alycia M Johnson		3018 160th St	Granada MN 56039-3004
Kenneth K Baker		3027 160th St	Granada MN 56039-3004
Catherine K Maya		304 S Main St	Granada MN 56039-9605
Roger L Hall		3046 147th St	Granada MN 56039-3067
Jason L & Melissa Engel		305 W Hill St	Granada MN 56039-4022
Matthew R & Angela J Brown		305 E Meagher St	Granada MN 56039-9780
Robert & Kathleen Leet		305 S Main St	Granada MN 56039-9605
Kevin W Hanning	305 Sparks Dr	PO Box 125	Granada MN 56039-0125
James M Oltman Revoc Trust		3052 120th St	Granada MN 56039-3074
Karen M & James Oltman		3052 120th St	Granada MN 56039-3074
Ryan A & Cornelia M Hagedorn		3054 130th St	Granada MN 56039-3063
Dean R & Wendy Howard		3062 160th St	Granada MN 56039-3004
Kelly Mcdermott et al.		3067 180th St	Granada MN 56039-3009
Matthew J & Jennifer Schuster		307 Reynolds St	Granada MN 56039-4011
Jeffrey C & Merry L Lewis		3085 120th St	Granada MN 56039-3074
Mark R & Sandra M Johnson		31032 165th St	Granada MN 56039-8716
Kevin H & Michelle K Stennes		31124 180th St	Granada MN 56039-8713
Ronald Svoboda		312 W Creamery St	Granada MN 56039-9609
Richard & Kendra Armon & Tyler Weringa		31223 170th St	Granada MN 56039-8701
Carl A & Lola M Petersen		31224 170th St	Granada MN 56039-8701
Luverna Kopischke		31258 170th St	Granada MN 56039-8701
Virginia D Nicholson		31283 170th St	Granada MN 56039-8701
Nancy A Owen		313 E Meagher St	Granada MN 56039-9780
Michael L & Amy S Sheplee		31365 170th St	Granada MN 56039-8720

Todd C Miles		316 E Creamery St	Granada MN 56039-2702
Delores Mae Schmicking		316 S Main St	Granada MN 56039-9605
Arthur A. Loeschen Life Estate		31600 169th St	Granada MN 56039-8705
Douglas R & Robin Scheff		317 E Meagher St	Granada MN 56039-9780
Everett & Lela Hanning	317 S Main	PO Box 156	Granada MN 56039-0156
Nancy Farnham		319 N Main St	Granada MN 56039-4008
Craig T & Liza Jo Woitas		31950 170th St	Granada MN 56039-8707
Jerome H & Sharon K Voyles	321 Reynolds	PO Box 178	Granada MN 56039-0178
Jean M Mosloski		325 W 2nd St	Granada MN 56039-3099
Patrice Emich		326 NW 1st St	Granada MN 56039-4010
Kermit E & Arlene L Shoemaker		326 S Main St	Granada MN 56039-9605
Thomas Hammer	329 S Main St	PO Box 303	Granada MN 56039-0303
Traci L Schultz		330 W 2nd St	Granada MN 56039-3099
Ricky Dean Carlson		331 SW 1st St	Granada MN 56039-3163
Glen H & G B Voyles		334 S Main St	Granada MN 56039-9605
Norman J & Bev A Christian		337 S Main St	Granada MN 56039-9605
Shane W & Michelle L Larsen		399 255th Ave	Granada MN 56039-3129
Wayne J Kotewa		406 Reynolds St	Granada MN 56039-4012
Melvin V Shumski		409 E Meagher St	Granada MN 56039-9796
Melvin V Shumski c/o Gary Shumski		409 E Meagher St	Granada MN 56039-9796
Gary L Shumski		409 E Meagher St	Granada MN 56039-9796
Michael A & Linda J Grotte		415 Reynolds St	Granada MN 56039-4012
Dean L Denton		418 Reynolds St	Granada MN 56039-4012
Benjamin J & Brenda L Stevens		421 Sparks Dr	Granada MN 56039-8714
Jennifer M James		422 Reynolds St	Granada MN 56039-4012
Dewane K & Jean M Mortensen		426 Sparks Dr	Granada MN 56039-8714
James Mathiason		429 Sparks Dr	Granada MN 56039-8714
David C & Linda M Henry		433 Sparks Dr	Granada MN 56039-8714
Michael L & Jennifer M Preston		434 Sparks Dr	Granada MN 56039-8714
Arlyn K Jensen Rev Living Trust		435 255th Ave	Granada MN 56039-3127
Robert & Ann Schultz		441 Sparks Dr	Granada MN 56039-8714
W Merle Wood et al.		441 Sparks Dr	Granada MN 56039-8714
Kenny L & Mary Jo Felion		449 Sparks Dr	Granada MN 56039-8714
Jason & Debra C Goodin		501 S Main St	Granada MN 56039-9611
Daniel L & Sheila J Denton		503 E Meagher St	Granada MN 56039-9798
Valerie Johnson		509 E Meagher St	Granada MN 56039-9798
Mark A Munsterman		513 W Creamery St	Granada MN 56039-9681
Steven & Evelyn Tonneson		614 N Main St	Granada MN 56039-4026
Kenneth Kabage		701 S Main St	Granada MN 56039-3157
Donald C & Cynthia Neuenfeldt		714 W Creamery St	Granada MN 56039-3098
Jessica & Michael Salic Jr		801 S Main St	Granada MN 56039-3160
Richard L & J M Maday et al.		921 290th Ave	Granada MN 56039-3150
Dewane & Jean Mortensen		PO Box 1	Granada MN 56039-0001
Charles Schultz		PO Box 102	Granada MN 56039-0102
Carol K Barrett & Tracy Risk		PO Box 103	Granada MN 56039-0103
Allen R Wolf		PO Box 111	Granada MN 56039-0111
Chris & Linda Hanning		PO Box 115	Granada MN 56039-0115
Frances V Mortensen (LE) et al.		PO Box 118	Granada MN 56039-0118
Linda J Rotunda		PO Box 12	Granada MN 56039-0012
Kevin L & Jodi L Schleininger		PO Box 123	Granada MN 56039-0123
City of Granada		PO Box 126	Granada MN 56039-0126
Darryl R & Coleen D Schock		PO Box 14	Granada MN 56039-0014
Robert S & May E Schock		PO Box 14	Granada MN 56039-0014
Leroy Ferguson		PO Box 142	Granada MN 56039-0142
Dale J & Linda M Strauser		PO Box 143	Granada MN 56039-0143
Vern D & Kathleen Rowan		PO Box 155	Granada MN 56039-0155
Darryl & Mary Fowler		PO Box 158	Granada MN 56039-0158
George H II & Debra K Pierce		PO Box 162	Granada MN 56039-0162
Marylin R Lindgren		PO Box 163	Granada MN 56039-0163
Kevin D & Delphine K Lane		PO Box 164	Granada MN 56039-0164

School District # 2536	PO Box 17	Granada MN 56039-0017
Joseph D & Susanne Hennager	PO Box 176	Granada MN 56039-0176
Sharon Voyles	PO Box 178	Granada MN 56039-0178
Darlene Sparks	PO Box 18	Granada MN 56039-0018
Dale L & Diana J Christenson	PO Box 187	Granada MN 56039-0187
Gary R Peterson	PO Box 194	Granada MN 56039-0194
Geneva A Wood	PO Box 21	Granada MN 56039-0021
Loren Jablinske	PO Box 23	Granada MN 56039-0023
Darliss J Green	PO Box 24	Granada MN 56039-0024
Gregory Talledge	PO Box 301	Granada MN 56039-0301
Rodney L Berhow et al.	PO Box 302	Granada MN 56039-0302
Bruce & Margaret Hiatt	PO Box 312	Granada MN 56039-0312
Steven T Schwager	PO Box 32	Granada MN 56039-0032
Theodore A Fisher	PO Box 33	Granada MN 56039-0033
Chester M & Lucille C Short	PO Box 42	Granada MN 56039-0042
Richard & Margaret Nelson	PO Box 44	Granada MN 56039-0044
Arlie Farnham (LE)	PO Box 52	Granada MN 56039-0052
Roland E & Brenda K Duncan	PO Box 53	Granada MN 56039-0053
Eugene G & Janet C Voyles	PO Box 72	Granada MN 56039-0072
Hector Lounge Inc	PO Box 81	Granada MN 56039-0081
Current Resident	101 E Meagher St	Granada MN 56039-4004
Current Resident	102 S Main St	Granada MN 56039-4014
Current Resident	104 SW 1st St	Granada MN 56039-3171
Current Resident	104 W Creamery St	Granada MN 56039-3162
Current Resident	105 E Creamery St	Granada MN 56039-2700
Current Resident	105 S Main St	Granada MN 56039-4014
Current Resident	105 W Meagher St	Granada MN 56039-3173
Current Resident	108 E Creamery St	Granada MN 56039-2700
Current Resident	108 S Main St	Granada MN 56039-4014
Current Resident	109 S Main St	Granada MN 56039-4014
Current Resident	109 E Meagher St	Granada MN 56039-4004
Current Resident	1122 290th Ave	Granada MN 56039-3075
Current Resident	113 E Meagher St	Granada MN 56039-4004
Current Resident	115 W Anderson St	Granada MN 56039-4000
Current Resident	115 W Becker St	Granada MN 56039-4001
Current Resident	116 W Harmony St	Granada MN 56039-4018
Current Resident	1162 290th Ave	Granada MN 56039-3075
Current Resident	1169 260th Ave	Granada MN 56039-3108
Current Resident	117 E Creamery St	Granada MN 56039-2700
Current Resident	1196 290th Ave	Granada MN 56039-3075
Current Resident	1203 260th Ave	Granada MN 56039-3101
Current Resident	1206 Peach St	Granada MN 56039-3105
Current Resident	1207 Peach St	Granada MN 56039-3105
Current Resident	1208 Peach St	Granada MN 56039-3105
Current Resident	125 S Main St	Granada MN 56039-4014
Current Resident	126 S Main St	Granada MN 56039-4014
Current Resident	1286 250th Ave	Granada MN 56039-3002
Current Resident	1324 State Highway 262	Granada MN 56039-3103
Current Resident	1359 300th Ave	Granada MN 56039-3064
Current Resident	1415 240th Ave	Granada MN 56039-3054
Current Resident	1482 265th Ave	Granada MN 56039-3056
Current Resident	1484 270th Ave	Granada MN 56039-3058
Current Resident	1489 310th Ave	Granada MN 56039-3066
Current Resident	1494 293rd Ave	Granada MN 56039-3068
Current Resident	1513 293rd Ave	Granada MN 56039-3095
Current Resident	1529 265th Ave	Granada MN 56039-3055
Current Resident	1608 265th Ave	Granada MN 56039-3052
Current Resident	1675 260th Ave	Granada MN 56039-3084
Current Resident	16808 315th Ave	Granada MN 56039-3174
Current Resident	1745 270th Ave	Granada MN 56039-3050

Current Resident	1770 230th Ave	Granada MN 56039-3033
Current Resident	1781 300th Ave	Granada MN 56039-3008
Current Resident	1833 260th Ave	Granada MN 56039-3046
Current Resident	1863 260th Ave	Granada MN 56039-3046
Current Resident	201 E Creamery St	Granada MN 56039-2701
Current Resident	201 S Main St	Granada MN 56039-4015
Current Resident	201 Mary St	Granada MN 56039-4005
Current Resident	201 W Meagher St	Granada MN 56039-3164
Current Resident	202 S Main St	Granada MN 56039-4015
Current Resident	205 S Main St	Granada MN 56039-4015
Current Resident	207 E Creamery St	Granada MN 56039-2701
Current Resident	208 N Main St	Granada MN 56039-4007
Current Resident	209 SW 1st St	Granada MN 56039-4024
Current Resident	209 N Main St	Granada MN 56039-4007
Current Resident	209 S Main St	Granada MN 56039-4015
Current Resident	212 SW 1st St	Granada MN 56039-4024
Current Resident	213 W Hill St	Granada MN 56039-3159
Current Resident	214 NW 1st St	Granada MN 56039-4009
Current Resident	215 E Creamery St	Granada MN 56039-2701
Current Resident	216 SW 1st St	Granada MN 56039-4024
Current Resident	217 N Main St	Granada MN 56039-4007
Current Resident	217 S Main St	Granada MN 56039-4015
Current Resident	220 N Main St	Granada MN 56039-4007
Current Resident	221 W Harmony St	Granada MN 56039-4019
Current Resident	221 W Hill St	Granada MN 56039-3159
Current Resident	221 N Main St	Granada MN 56039-4007
Current Resident	221 S Main St	Granada MN 56039-4015
Current Resident	222 NW 1st St	Granada MN 56039-4009
Current Resident	224 SW 1st St	Granada MN 56039-4024
Current Resident	224 S Main St	Granada MN 56039-4015
Current Resident	225 W Hill St	Granada MN 56039-3159
Current Resident	225 S Main St	Granada MN 56039-4015
Current Resident	227 NW 1st St	Granada MN 56039-4009
Current Resident	229 SW 1st St	Granada MN 56039-4024
Current Resident	2328 190th St	Granada MN 56039-3028
Current Resident	2426 140th St	Granada MN 56039-3027
Current Resident	2496 190th St	Granada MN 56039-3025
Current Resident	2522 200th St	Granada MN 56039-3021
Current Resident	2528 135th St	Granada MN 56039-3097
Current Resident	2632 180th St	Granada MN 56039-3049
Current Resident	2634 180th St	Granada MN 56039-3049
Current Resident	2648 115th St	Granada MN 56039-3170
Current Resident	2669 148th St	Granada MN 56039-4023
Current Resident	2685 115th St	Granada MN 56039-3170
Current Resident	2692 180th St	Granada MN 56039-3049
Current Resident	2693 170th St	Granada MN 56039-3051
Current Resident	2724 160th St	Granada MN 56039-3053
Current Resident	2776 170th St	Granada MN 56039-3085
Current Resident	2821 180th St	Granada MN 56039-3012
Current Resident	2825 115th St	Granada MN 56039-3077
Current Resident	2858 115th St	Granada MN 56039-3077
Current Resident	2858 150th St	Granada MN 56039-3091
Current Resident	2937 140th St	Granada MN 56039-3069
Current Resident	2941 160th St	Granada MN 56039-3006
Current Resident	2953 130th St	Granada MN 56039-3062
Current Resident	2978 130th St	Granada MN 56039-3062
Current Resident	2989 120th St	Granada MN 56039-3070
Current Resident	2993 160th St	Granada MN 56039-3006
Current Resident	2995 170th St	Granada MN 56039-3096
Current Resident	301 W Creamery St	Granada MN 56039-9609

Current Resident	302 W 2nd St	Granada MN 56039-3099
Current Resident	302 N Main St	Granada MN 56039-4008
Current Resident	3026 170th St	Granada MN 56039-8715
Current Resident	303 SW 1st St	Granada MN 56039-3163
Current Resident	303 W Harmony St	Granada MN 56039-4020
Current Resident	303 N Main St	Granada MN 56039-4008
Current Resident	3047 140th St	Granada MN 56039-3065
Current Resident	305 S Main St	Granada MN 56039-9605
Current Resident	3068 180th St	Granada MN 56039-3009
Current Resident	307 N Main St	Granada MN 56039-4008
Current Resident	3071 170th St	Granada MN 56039-8715
Current Resident	309 S Main St	Granada MN 56039-9605
Current Resident	311 SW 1st St	Granada MN 56039-3163
Current Resident	31176 170th St	Granada MN 56039-8717
Current Resident	312 W Creamery St	Granada MN 56039-9609
Current Resident	312 S Main St	Granada MN 56039-9605
Current Resident	313 E Meagher St	Granada MN 56039-9780
Current Resident	314 W 2nd St	Granada MN 56039-3099
Current Resident	315 SW 1st St	Granada MN 56039-3163
Current Resident	315 N Main St	Granada MN 56039-4008
Current Resident	31590 170th St	Granada MN 56039-8708
Current Resident	316 SW 1st St	Granada MN 56039-3163
Current Resident	316 S Main St	Granada MN 56039-9605
Current Resident	31638 170th St	Granada MN 56039-8709
Current Resident	31657 170th St	Granada MN 56039-8709
Current Resident	318 NW 1st St	Granada MN 56039-4010
Current Resident	322 W 2nd St	Granada MN 56039-3099
Current Resident	322 N Main St	Granada MN 56039-4008
Current Resident	323 N Main St	Granada MN 56039-4008
Current Resident	325 W 2nd St	Granada MN 56039-3099
Current Resident	325 S Main St	Granada MN 56039-9605
Current Resident	326 W 2nd St	Granada MN 56039-3099
Current Resident	332 SW 1st St	Granada MN 56039-3163
Current Resident	333 S Main St	Granada MN 56039-9605
Current Resident	405 Sparks Dr	Granada MN 56039-8714
Current Resident	413 Sparks Dr	Granada MN 56039-8714
Current Resident	414 Reynolds St	Granada MN 56039-4012
Current Resident	501 S Main St	Granada MN 56039-9611
Current Resident	509 E Meagher St	Granada MN 56039-9798
Current Resident	513 W Creamery St	Granada MN 56039-9681
Current Resident	603 E Meagher St	Granada MN 56039-8700
Tracy M & Larae L Risk	113 W Meagher St	Granada MN 56039-3173
Craig & Chad Diegnau	16820 316th Ave	Granada MN 56039-8718
Charles F & Theresa Lund	314 E Meagher St	Granada MN 56039-9780
Christine P. Batker	31535 169th St	Granada MN 56039-8704
Delmar W. & Lenora L. Burgess	31564 169th St	Granada MN 56039-8704
Frank & Roxanne L Mennenga	31301 170th St	Granada MN 56039-8720
Current Resident	513 Reynolds St	Granada MN 56039-4028
Craig M & Lora S Johnston	12681 320th Ave	Winnebago MN 56098-5205
Marie Grimmelman & Elmer Zielske	13676 320th Ave	Winnebago MN 56098-4850
Frederick J Wolff	14059 330th Ave	Winnebago MN 56098-4835
Darwin L & Suzanne C Olson	14483 320th Ave	Winnebago MN 56098-4865
Charlotte Olson Life Estate & Darwin L Olson	14493 320th Ave	Winnebago MN 56098-4865
Rodney N Olson	14649 330th Ave	Winnebago MN 56098-4830
Herman R Ochsendorf Jr	148 1st Ave SW	Winnebago MN 56098-2010
Richard Dimatteo	15 6th St NW	Winnebago MN 56098-1048
Leroy R Jenkins	15078 315th Ave	Winnebago MN 56098-4870
Robert E Sr, Floyd E & Theresa J Kesselring	15375 315th Ave	Winnebago MN 56098-4870

Anthony & Leta Alleven		15567 330th Ave	Winnebago MN 56098-4815
Keith & Ronda Cooper		15941 345th Ave	Winnebago MN 56098-4950
Stephen L Stix		16098 Highway 169	Winnebago MN 56098-4535
Kathleen Wiederholt Life Est et al. & Leona M Martin		16206 315th Ave	Winnebago MN 56098-4420
Patrick J & Debra A Hassing		16211 Highway 169	Winnebago MN 56098-4535
Douglas G & Raeleen C Hill		16292 345th Ave	Winnebago MN 56098-4540
Duane & Margie L Liebl		16331 Highway 169	Winnebago MN 56098-4535
Donald H Cole Testmntry Trust & Nancy L Cole Revoc Trust		16422 390th Ave	Winnebago MN 56098-4630
Delores I Cyphers		16639 Highway 169	Winnebago MN 56098-4530
Jane Simon		16745 Highway 169	Winnebago MN 56098-4530
Samuel E & Nina Patten		16868 340th Ave	Winnebago MN 56098-4545
Mark A Adams & Eva M Adams		16875 Highway 169	Winnebago MN 56098-4530
James L & Carol A Hill		17001 345th Ave	Winnebago MN 56098-4555
David D & Norma J Cartwright		17101 340th Ave	Winnebago MN 56098-4585
Joseph J Cartwright & David D Cartwright		17220 Highway 169	Winnebago MN 56098-4510
James P Ricard Sr & Carol Ann Ricard		17536 337th Ave	Winnebago MN 56098-4465
Rodney A Simser		17825 345th Ave	Winnebago MN 56098-2139
Kim M & Carol Garletz		17920 345th Ave	Winnebago MN 56098-2140
Marion Muir		17990 Highway 169	Winnebago MN 56098-4505
Marvin J & Judy K Yeager		18106 337th Ave	Winnebago MN 56098-4460
Rose Hill Cemetery Association c/o William Reineking		18145 Highway 169	Winnebago MN 56098-4501
William G & Diana Reineking		18145 Highway 169	Winnebago MN 56098-4501
James & Carol Teubner		1815 290th Ave	Winnebago MN 56098-2131
Scott J & Ethel M Robertson		18195 340th Ave	Winnebago MN 56098-4575
Ronald J Teigland Life Estate et al. & Janet Ellis		18367 315th Ave	Winnebago MN 56098-4495
Mary Engelby Revocable Trust		18402 360th Ave	Winnebago MN 56098-4565
Bonnie L Poole		18438 340th Ave	Winnebago MN 56098-4575
Retha & Dean Rasmussen		18439 375th Ave	Winnebago MN 56098-4605
Darwin D & Carol A Riewe		18501 315th Ave	Winnebago MN 56098-4404
Ernst D & Pamela S Fuhrman		18524 330th Ave	Winnebago MN 56098-4470
James W Reynolds		1879 300th Ave	Winnebago MN 56098-2130
Larry W & Kathryn L Becker		18799 330th Ave	Winnebago MN 56098-4403
Lois E Gronseth		1886 290th Ave	Winnebago MN 56098-2131
Mark A & Darcie L Christensen		18899 315th Ave	Winnebago MN 56098-4402
Chad Johnson & Jennie Johnson		1893 290th Ave	Winnebago MN 56098-2131
Kimberly K Stickfort		19054 330th Ave	Winnebago MN 56098-4010
Ruth A & James B Morris		1915 310th Ave	Winnebago MN 56098-2127
Richard Lobb		1995 290th Ave	Winnebago MN 56098-2105
David L & Cindy Jo Lein		20 N Shore Dr	Winnebago MN 56098-3345
Marjorie A Hill		2083 290th Ave	Winnebago MN 56098-2115
Michael & Connie Richison		2113 300th Ave	Winnebago MN 56098-2113
Diane, Kathryn & Kenneth Ritter		2185 300th Ave	Winnebago MN 56098-2113
Douglas L & Elizabeth Johanson	22775 228th St	PO Box 66	Winnebago MN 56098-0066
Eleanor B Stewart		232 1st St NW Apt 1	Winnebago MN 56098-1079
David A & Mary E Lewis		23365 228th St	Winnebago MN 56098-2903
Butler Farms Inc c/o Michael Butler		2357 310th Ave	Winnebago MN 56098-2126
Michael & Debra Butler		2357 310th Ave	Winnebago MN 56098-2126
Beverly M Alfson Life Estate et al.		25 2nd St SW	Winnebago MN 56098-2041
Amy Jo Porter		2792 200th St	Winnebago MN 56098-2107
Joan Adams		2822 200th St	Winnebago MN 56098-2106
Richard Earl Adams		2827 200th St	Winnebago MN 56098-2106
James L Johnson		2834 200th St	Winnebago MN 56098-2106
Sheldon C & Ingrid E Warmka		2918 200th St	Winnebago MN 56098-2116
Kelly & Mona Hyland		2969 200th St	Winnebago MN 56098-2116

Matthew A Johnson	2978 200th St	Winnebago MN 56098-2116
Andrey P Hartman	3003 240th St	Winnebago MN 56098-2125
Mary Ann Toland	3015 210th St	Winnebago MN 56098-2114
Newton P Toland	3015 210th St	Winnebago MN 56098-2114
Robert W & Madge E Toland	3032 200th St	Winnebago MN 56098-2117
Michael Doolittle et al.	3056 200th St	Winnebago MN 56098-2117
Grabouski Enterprises	3059 200th St	Winnebago MN 56098-2117
Harold H & Beverly J Grabouski	3059 200th St	Winnebago MN 56098-2117
Gary I & Pamela J Hill	3079 190th St	Winnebago MN 56098-2128
Charles Larson et al.	31 1st St SW	Winnebago MN 56098-2020
Bruce & Sheila K Helland	31394 130th St	Winnebago MN 56098-5215
Nick Melinsky	31423 140th St	Winnebago MN 56098-4855
Harold A & Janet M Grabouski	31487 200th St	Winnebago MN 56098-4001
Jackson Road Pork c/o Harold Grabouski	31487 200th St	Winnebago MN 56098-4001
Ronald & Linda Blair	31631 130th St	Winnebago MN 56098-5210
Steven H & Ranae L Schutt	31655 190th St	Winnebago MN 56098-4485
Duane & Jeanette Wolff	31686 140th St	Winnebago MN 56098-4860
Robert D Weerts	318 2nd Ave SW	Winnebago MN 56098-1103
Scott & Renee Scheid	31981 180th St	Winnebago MN 56098-4445
Ruth M Hartman	32211 157th St	Winnebago MN 56098-4810
Donald E Sonnicksen	323 Main St N	Winnebago MN 56098-1065
Kim M Garletz	324 Cleveland Ave W	Winnebago MN 56098-1025
Jason R & Stephenie A Rose	32422 210th St	Winnebago MN 56098-4040
John Howard & Dave Oothoudt et al.	32440 130th St	Winnebago MN 56098-5200
Arlene M Winch	32493 200th St	Winnebago MN 56098-4020
C R Winch Trust c/o Arlene Winch	32493 200th St	Winnebago MN 56098-4020
Deborah J Smith	32726 240th St	Winnebago MN 56098-2850
Duane D & Mary H Larson	32899 180th St	Winnebago MN 56098-4450
Christopher M Cyphers & Patricia L Wreath	32917 190th St	Winnebago MN 56098-4475
Carol Y Kvittem & Duane Kvittem	33168 175th St	Winnebago MN 56098-4415
Dwight & Lori Olson	33207 150th St	Winnebago MN 56098-4825
Thomas H & Judy A Golly Trusts	33229 215th St	Winnebago MN 56098-4030
Ward K Johnson c/o Thomas Golly	33229 215th St	Winnebago MN 56098-4030
Juanita L Cegelske et al.	333 2nd Ave SW	Winnebago MN 56098-3001
Tara L Kalash	33300 180th St	Winnebago MN 56098-4455
Robert D & Shirley A Haight Life Estate et al.	33353 200th St	Winnebago MN 56098-4005
Stacey & Ben Johnson	33371 140th St	Winnebago MN 56098-4801
David E & Loretta Rynearson	33411 180th St	Winnebago MN 56098-4455
Danny A & Jaclyn A Rynearson	33497 175th St	Winnebago MN 56098-4415
Ronald D & Sandra C Tolzmann	33536 200th St	Winnebago MN 56098-4000
Jared & Jennifer Ihle	33597 200th St	Winnebago MN 56098-4000
Shirley Leagjeld	33951 160th St	Winnebago MN 56098-4800
Donald W & Julie A Hoffman	33998 160th St	Winnebago MN 56098-4800
Andrew C & Bertha K Rock	33999 150th St	Winnebago MN 56098-4802
River Side Park Cemetery c/o Jerry Poole	34 3rd Ave SW	Winnebago MN 56098-2170
Sherry Simon	34144 220th St	Winnebago MN 56098-4145
Carlyle W & Mary Jean Perry	34410 180th St	Winnebago MN 56098-4590
Gary & Julie L Owen	34444 180th St	Winnebago MN 56098-4590
Aaron Tolzmann	34502 180th St	Winnebago MN 56098-4595
Mark S & Christine A Rockers	34909 183rd St	Winnebago MN 56098-4511
Jerome Roiger	34946 183rd St	Winnebago MN 56098-4511
Todd R & Mindy L Golly	34976 183rd St	Winnebago MN 56098-4511
Maxine Durkee Revoc Trust & Maurice Durkee Disclaim Trust	35276 150th St	Winnebago MN 56098-4920
Garry W & Carol A Tipler	35395 170th St	Winnebago MN 56098-4525
Gregory & Annette Jenkins	35481 170th St	Winnebago MN 56098-4525

Ryan Borris		35593 150th St	Winnebago MN 56098-4915
Morris D & Barbara J Hanson		35611 140th St	Winnebago MN 56098-4925
Morris R & Margie M Hanson Life Estate et al.		35611 140th St	Winnebago MN 56098-4925
Harvey & Leola Hagedorn		35624 140th St	Winnebago MN 56098-4925
Kurt D & Sherry M Abel		35703 156th St	Winnebago MN 56098-4910
Joseph W & Pamela A Robb		35713 156th St	Winnebago MN 56098-4910
Gregory L Young		35719 150th St	Winnebago MN 56098-4915
George N & Irene K Bassett		35882 150th St	Winnebago MN 56098-4915
Douglas & Annjanette Jenkins		36757 195th St	Winnebago MN 56098-4100
Makayla M Jenkins		36757 195th St	Winnebago MN 56098-4100
Barry & Joy Marsh et al.		36813 170th St	Winnebago MN 56098-4515
John A Gray		37280 160th St	Winnebago MN 56098-5000
Chris M & Michelle R Klinkner		37312 180th St	Winnebago MN 56098-4610
Collette J Meidinger & Gerald J Meidinger		37584 180th St	Winnebago MN 56098-4615
Ted A Nagel		37790 180th St	Winnebago MN 56098-4615
T & D Farms LLC		39290 200th St	Winnebago MN 56098-4210
Tom Loveall		39290 200th St	Winnebago MN 56098-4210
Scott & Dawn Hatfield		417 1st Ave NW	Winnebago MN 56098-1021
Kirk Nichols et al. & Wanda Nichols Life Est et al.	434 1st St SW	PO Box 594	Winnebago MN 56098-0594
Sherman L & Marilyn A Olson		442 1st Ave SW	Winnebago MN 56098-2013
Oakland Cemetery Association		463 2nd Ave SW	Winnebago MN 56098-2036
Lori Ann Foster & Scott Foster	519 2nd Ave SW	PO Box 352	Winnebago MN 56098-0352
Andrew & Christina Dahl	535 2nd Ave SW	PO Box 383	Winnebago MN 56098-0383
Gary Pawlitschek		601 6th Ave SW	Winnebago MN 56098-1008
Ronald F. Sr & Collen Bressler		605 1st Ave NW	Winnebago MN 56098-1040
Ronald F & Colleen Bressler	605 1st Ave NW	PO Box 533	Winnebago MN 56098-0533
Robert & Yvonne Hanks Life Estate et al.		724 1st Ave NW	Winnebago MN 56098-1042
Arnold L & Carolyn M Lewis Life Estate et al.		733 5th St SW	Winnebago MN 56098-1007
Richard L & Mary Jo Anderson		750 Cleveland Ave W	Winnebago MN 56098-1003
Mary Jo Anderson		750 Cleveland Ave W	Winnebago MN 56098-1003
John F Butler Trust & Leonora M Butler		812 1st Ave NW	Winnebago MN 56098-1043
Brady G Murry & Victoria L Brooks		828 1st Ave NW	Winnebago MN 56098-1043
Verona Union Cemetery c/o Winnebago Museum		PO Box 218	Winnebago MN 56098-0218
West Verona Cemetery Assn c/o Winnebago Museum		PO Box 218	Winnebago MN 56098-0218
Alejandro Vargas		PO Box 233	Winnebago MN 56098-0233
Christopher R Kaduce & Kimberly A Kaduce		PO Box 252	Winnebago MN 56098-0252
City of Winnebago		PO Box 35	Winnebago MN 56098-0035
Andrew J Dahl		PO Box 383	Winnebago MN 56098-0383
Roger W & Millicent L Hanson		PO Box 425	Winnebago MN 56098-0425
Richard K Kortuem		PO Box 433	Winnebago MN 56098-0433
F Roger Iliff		PO Box 482	Winnebago MN 56098-0482
Gregory M Zierke		PO Box 486	Winnebago MN 56098-0486
Rosemary Keller		PO Box 546	Winnebago MN 56098-0546
Lyndon L & Lana M Krause		PO Box 572	Winnebago MN 56098-0572
Timothy W & Judi A Hynes		PO Box 688	Winnebago MN 56098-0688
Brian Jacobson		PO Box 704	Winnebago MN 56098-0704
Richard J & Maryjean Miller		32444 180th St	Winnebago MN 56098-4440
Current Resident		12740 320th Ave	Winnebago MN 56098-5205
Current Resident		13452 330th Ave	Winnebago MN 56098-4845
Current Resident		13860 330th Ave	Winnebago MN 56098-4803
Current Resident		14206 345th Ave	Winnebago MN 56098-4935

Current Resident		14770 345th Ave	Winnebago MN 56098-4940
Current Resident		14775 345th Ave	Winnebago MN 56098-4940
Current Resident		15000 330th Ave	Winnebago MN 56098-4820
Current Resident		15033 330th Ave	Winnebago MN 56098-4820
Current Resident		15385 315th Ave	Winnebago MN 56098-4870
Current Resident		15955 Highway 169	Winnebago MN 56098-4900
Current Resident		16272 315th Ave	Winnebago MN 56098-4420
Current Resident		16653 330th Ave	Winnebago MN 56098-2138
Current Resident		16895 340th Ave	Winnebago MN 56098-4545
Current Resident		17011 345th Ave	Winnebago MN 56098-4555
Current Resident		17514 340th Ave	Winnebago MN 56098-4580
Current Resident		17603 325th Ave	Winnebago MN 56098-4435
Current Resident		17831 340th Ave	Winnebago MN 56098-4580
Current Resident		18155 Highway 169	Winnebago MN 56098-4501
Current Resident		18412 360th Ave	Winnebago MN 56098-4565
Current Resident		1849 300th Ave	Winnebago MN 56098-2130
Current Resident		18592 330th Ave	Winnebago MN 56098-4470
Current Resident		20348 330th Ave	Winnebago MN 56098-4025
Current Resident		20925 320th Ave	Winnebago MN 56098-4050
Current Resident		2856 200th St	Winnebago MN 56098-2106
Current Resident		3029 200th St	Winnebago MN 56098-2117
Current Resident		31187 200th St	Winnebago MN 56098-4015
Current Resident		31287 190th St	Winnebago MN 56098-4490
Current Resident		31295 157th St	Winnebago MN 56098-4875
Current Resident		31675 190th St	Winnebago MN 56098-4485
Current Resident		32070 165th St	Winnebago MN 56098-4410
Current Resident		32233 180th St	Winnebago MN 56098-4440
Current Resident		32291 210th St	Winnebago MN 56098-4040
Current Resident		32444 180th St	Winnebago MN 56098-4440
Current Resident		32483 200th St	Winnebago MN 56098-4020
Current Resident		32496 170th St	Winnebago MN 56098-4425
Current Resident		32597 173rd St	Winnebago MN 56098-4430
Current Resident		33040 165th St	Winnebago MN 56098-4400
Current Resident		33195 200th St	Winnebago MN 56098-4005
Current Resident		33205 200th St	Winnebago MN 56098-4005
Current Resident		33458 200th St	Winnebago MN 56098-4005
Current Resident		33825 165th St	Winnebago MN 56098-4405
Current Resident		33993 200th St	Winnebago MN 56098-4000
Current Resident		34001 150th St	Winnebago MN 56098-4945
Current Resident		34320 180th St	Winnebago MN 56098-4590
Current Resident		35395 170th St	Winnebago MN 56098-4525
Current Resident		35695 170th St	Winnebago MN 56098-4520
Current Resident		35951 170th St	Winnebago MN 56098-4520
Current Resident		35999 156th St	Winnebago MN 56098-4910
Current Resident		822 1st Ave NW	Winnebago MN 56098-1043
Current Resident		802 1st Ave NW	Winnebago MN 56098-1043
Current Resident		803 1st Ave NW	Winnebago MN 56098-1044
Alvin Seetin Fam Share Trust c/o Nina Patten		16868 340th Ave	Winnebago MN 56098-4545
Charlotte Olson Life Estate & Marcia L Horn		14493 320th Ave	Winnebago MN 56098-4865
Joshua D Howe		233 2nd St NW	Winnebago MN 56098-2039
Douglas & Mary Springer		31187 200th St	Winnebago MN 56098-4015
Larry W & Nancy E Jenkins & Mitchell D & Laurie J Jenkins		36756 Highway 109	Winnebago MN 56098-4570
Tammy Lynne Eicholz c/o Tammy L Doppenberg	115 N Palmer St	PO Box 84	Alpha MN 56111-0084
Justin L & Staci R Warmka		1158 10th Ave	Alpha MN 56111-1106
Gary Armbrust		118 120th St	Alpha MN 56111-1105
Brent A Bruse		122 110th St	Alpha MN 56111-1107

Larry & Carole Harries		133 180th St	Alpha MN 56111-1101
Souay Singvongsa		135 Knox St N	Alpha MN 56111-4008
Michael R Herman c/o Cheryl Battagliotti		1357 10th Ave	Alpha MN 56111-3213
Elmer & Sonya Welch	140 Paddock Ave E	PO Box 66	Alpha MN 56111-0066
Brian W Westfall et al		140 Railroad Ave W	Alpha MN 56111-4030
Beulah D Erickson Trust et al.		144 130th St	Alpha MN 56111-1103
John B & Dawn Weseman		145 110th St	Alpha MN 56111-1107
Paul & Jane Weseman et al.		145 110th St	Alpha MN 56111-1107
Janette E Vacek		1535 10th Ave	Alpha MN 56111-3231
Laverne Kusler		159 110th St	Alpha MN 56111-1107
Kenneth G & Myrnna J Peters		164 110th St	Alpha MN 56111-1107
William Thomas Swan II c/o Rachel V Truong		205 Beach St N	Alpha MN 56111-4018
Rosalio Valle Fonseca c/o Martha De Fonseca Padilla		215 Main St S	Alpha MN 56111-4004
Meridee Heinrichs c/o Meridee Kauffman		215 Palmer St N	Alpha MN 56111-4022
Jake Lee Jones		220 Palmer St N	Alpha MN 56111-4022
John Ingebrigtson c/o Kelly & Tracy Mitchell		225 Knox St N	Alpha MN 56111-4011
Robert F & Mary Ann Hassing	320 N Main	PO Box 1	Alpha MN 56111-0001
Travis & Dacia Broesdner		325 Palmer St N	Alpha MN 56111-4020
Ryan Busch		350 Palmer St N	Alpha MN 56111-4020
Susan Clymer Rev Liv Trust		58178 800th St	Alpha MN 56111-3069
Joseph P & Shannon L Carr		58289 800th St	Alpha MN 56111-3068
William E & Karen Grunst		58358 890th St	Alpha MN 56111-3204
Elizabeth Waters et al c/o Rodney Vonohlen		58558 800th St	Alpha MN 56111-3070
Rodney & Sylvia Vonohlen		58558 800th St	Alpha MN 56111-3070
Gregory & Amy Hartzler		58563 830th St	Alpha MN 56111-3202
Neal R & Julie A Vonohlen		58681 890th St	Alpha MN 56111-3203
Ronald E & Darla G Harries Rev Trust		58773 870th St	Alpha MN 56111-3253
John E & Barbara Eckert Living Trust		58814 830th St	Alpha MN 56111-3201
Michael J & Kimberly R Devries		58948 790th St	Alpha MN 56111-3011
Matthew D & Gretchen Benda		58958 850th St	Alpha MN 56111-3005
Lucille Denney c/o Lucille Meyer		59072 800th St	Alpha MN 56111-3071
Arthur Jr & Sharon Benda c/o Donald And Dorothy Benda		59093 850th St	Alpha MN 56111-3227
Steven Tusa et al		59117 760th St	Alpha MN 56111-3023
Bradley W & Margaret Freking		59185 790th St	Alpha MN 56111-3009
Carol Franks		59192 790th St	Alpha MN 56111-3009
Jeremey L Smid		59196 810th St	Alpha MN 56111-3215
David Ringkob		59341 860th St	Alpha MN 56111-3225
Dean & Elaine Schentzel Living Trust		59438 810th St	Alpha MN 56111-3214
Lowell L Gorden		59627 830th St	Alpha MN 56111-3218
Ronald, Sara, Margaret, & Richard Fransen		59706 800th St	Alpha MN 56111-3074
Loren Schoewe et al		59720 890th St	Alpha MN 56111-3247
Bernard Lutterman		59927 800th St	Alpha MN 56111-3072
Mark A, Harlene N & Kerri L Rose		60123 850th St	Alpha MN 56111-3232
David C & Debra G Schley		60499 820th St	Alpha MN 56111-3210
Kevin Schentzel		60690 800th St	Alpha MN 56111-3206
Kirsten F Marx		60732 820th St	Alpha MN 56111-3211
Patrick B & Ann M Comer		60745 850th St	Alpha MN 56111-3233
Kevin L Kruse		60818 820th St	Alpha MN 56111-3212
Bernice Christophel		60827 870th St	Alpha MN 56111-3238
Cory D & Gail A Faitz		60896 870th St	Alpha MN 56111-3238
Nick Sampson		60906 790th St	Alpha MN 56111-3006

Earl Tusa et al	75329 600th Ave	Alpha MN 56111-3028
Donald & Carol Zebedee	76577 580th Ave	Alpha MN 56111-3063
Donald Zebedee & Sons Inc	76577 580th Ave	Alpha MN 56111-3063
Dennis, Anita, & Ronald Whisney	77301 600th Ave	Alpha MN 56111-3018
George D & D Jean Benda	78348 580th Ave	Alpha MN 56111-3067
Joseph & Cynthia Keck	80672 600th Ave	Alpha MN 56111-3208
Mychal D & Juliann R Schwanz	82048 590th Ave	Alpha MN 56111-3217
Jerrod Simmons	83070 600th Ave	Alpha MN 56111-3230
Tracy L Dorschner	84821 590th Ave	Alpha MN 56111-3224
Max A & Cindy L Simmons	84947 600th Ave	Alpha MN 56111-3228
Gary & Lori Beseke	85700 600th Ave	Alpha MN 56111-3235
Jerry, Lorelie, & Ingrid Ploehn	85703 600th Ave	Alpha MN 56111-3235
Lorelie Ploehn	85703 600th Ave	Alpha MN 56111-3235
Daniel Schulz	86362 600th Ave	Alpha MN 56111-3237
Irma Grunst	87201 590th Ave	Alpha MN 56111-3244
Eugene Stene	87225 600th Ave	Alpha MN 56111-3240
Cole D & Laura B Rossow	87498 590th Ave	Alpha MN 56111-3246
Harold Bettin	87715 600th Ave	Alpha MN 56111-3242
Joey D Buller	88266 600th Ave	Alpha MN 56111-3249
Nicholas & Ellen Vonohlen	88790 600th Ave	Alpha MN 56111-3251
Immanuel Lutheran Church	88945 600th Ave	Alpha MN 56111-3252
Trinity Lutheran Church	88945 600th Ave	Alpha MN 56111-3252
Tommy A Nelson Jr	PO Box 102	Alpha MN 56111-0102
Chadd L Preuss	PO Box 103	Alpha MN 56111-0103
Roy & Alice Scheff	PO Box 104	Alpha MN 56111-0104
Neil Kuchenbecker	PO Box 121	Alpha MN 56111-0121
John Lanz	PO Box 123	Alpha MN 56111-0123
James R & Harriet Clark	PO Box 124	Alpha MN 56111-0124
Tracy L Endreson & Tanya M Plumhoff	PO Box 131	Alpha MN 56111-0131
Linda S York	PO Box 133	Alpha MN 56111-0133
Ronald & Joyce Halverson	PO Box 14	Alpha MN 56111-0014
John Ingebrigtson	PO Box 142	Alpha MN 56111-0142
Leslie F Nichol	PO Box 142	Alpha MN 56111-0142
Mary Hecht	PO Box 144	Alpha MN 56111-0144
Cory Weets	PO Box 16	Alpha MN 56111-0016
Hazel Marie Plumhoff	PO Box 21	Alpha MN 56111-0021
Teresa Sathe Trust et al c/o Verlon Jones	PO Box 31	Alpha MN 56111-0031
Vron A Jones Trust c/o Verlon A Jones	PO Box 31	Alpha MN 56111-0031
Cindy Saddoris	PO Box 34	Alpha MN 56111-0034
Tamera York	PO Box 35	Alpha MN 56111-0035
Donald R & Viola J Swanson	PO Box 36	Alpha MN 56111-0036
Craig Nafziger	PO Box 37	Alpha MN 56111-0037
Eugene & Theresa Swanson	PO Box 41	Alpha MN 56111-0041
Marixa K & Dina M Gregory	PO Box 45	Alpha MN 56111-0045
Tina Marie Grunst	PO Box 5	Alpha MN 56111-0005
Gaylord & Pamela Kemp	PO Box 53	Alpha MN 56111-0053
Kenneth & Jeannie Gettler	PO Box 57	Alpha MN 56111-0057
Anna Ambrose	PO Box 6	Alpha MN 56111-0006
Wayne & Connie Herrman	PO Box 63	Alpha MN 56111-0063
Jerry C Gregory	PO Box 65	Alpha MN 56111-0065
Kenneth W & Eloise Peterson	PO Box 74	Alpha MN 56111-0074
Rick W & Dona I Weets	PO Box 75	Alpha MN 56111-0075
Keith M Siepker	PO Box 76	Alpha MN 56111-0076
David L & Sandra E Weets	PO Box 77	Alpha MN 56111-0077
Alpha Farm & Merch State Bank	PO Box 8	Alpha MN 56111-0008
Harlow & Helen S Meium c/o Paul Meium	PO Box 8	Alpha MN 56111-0008

Timothy & Lois Cain	PO Box 82	Alpha MN 56111-0082
Doyle Becker	PO Box 83	Alpha MN 56111-0083
William & Marilyn Winter	PO Box 85	Alpha MN 56111-0085
Todd & Angela Hamlett	PO Box 86	Alpha MN 56111-0086
Alpha MN Confraternity Of The Traditional Latin Mass	PO Box 87	Alpha MN 56111-0087
Jerome F Verdick	PO Box 87	Alpha MN 56111-0087
Daryl Becker	PO Box 93	Alpha MN 56111-0093
Steven & Marilyn Plumhoff	PO Box 95	Alpha MN 56111-0095
City of Alpha	PO Box 97	Alpha MN 56111-0097
Current Resident	100 Knox St S	Alpha MN 56111-4007
Current Resident	105 Main St N	Alpha MN 56111-4003
Current Resident	105 Main St S	Alpha MN 56111-4002
Current Resident	110 Franklin Ave W	Alpha MN 56111-4009
Current Resident	110 Knox St S	Alpha MN 56111-4007
Current Resident	115 Knox St N	Alpha MN 56111-4008
Current Resident	115 Main St N	Alpha MN 56111-4003
Current Resident	115 Paddock Ave E	Alpha MN 56111-4025
Current Resident	115 Palmer St N	Alpha MN 56111-4021
Current Resident	120 Keisel Ave W	Alpha MN 56111-4028
Current Resident	120 Knox St S	Alpha MN 56111-4007
Current Resident	120 Main St N	Alpha MN 56111-4003
Current Resident	125 Knox St N	Alpha MN 56111-4008
Current Resident	125 Main St N	Alpha MN 56111-4003
Current Resident	125 Palmer St N	Alpha MN 56111-4021
Current Resident	1253 20th Ave	Alpha MN 56111-1104
Current Resident	130 Knox St S	Alpha MN 56111-4007
Current Resident	130 Paddock Ave E	Alpha MN 56111-4025
Current Resident	130 Palmer St S	Alpha MN 56111-4019
Current Resident	133 130th St	Alpha MN 56111-1103
Current Resident	135 Palmer St S	Alpha MN 56111-4019
Current Resident	135 White Ave W	Alpha MN 56111-4017
Current Resident	140 Franklin Ave E	Alpha MN 56111-4033
Current Resident	140 Knox St N	Alpha MN 56111-4008
Current Resident	140 Main St N	Alpha MN 56111-4003
Current Resident	140 White Ave E	Alpha MN 56111-4015
Current Resident	140 White Ave W	Alpha MN 56111-4017
Current Resident	147 110th St	Alpha MN 56111-1107
Current Resident	1474 10th Ave	Alpha MN 56111-1102
Current Resident	150 Main St N	Alpha MN 56111-4003
Current Resident	205 Knox St N	Alpha MN 56111-4011
Current Resident	205 Main St S	Alpha MN 56111-4004
Current Resident	207 110th St	Alpha MN 56111-1108
Current Resident	210 Franklin Ave W	Alpha MN 56111-4023
Current Resident	210 Main St N	Alpha MN 56111-4001
Current Resident	210 Paddock Ave E	Alpha MN 56111-4032
Current Resident	215 Knox St N	Alpha MN 56111-4011
Current Resident	220 Franklin Ave W	Alpha MN 56111-4023
Current Resident	220 Knox St N	Alpha MN 56111-4011
Current Resident	220 Main St S	Alpha MN 56111-4004
Current Resident	225 Main St S	Alpha MN 56111-4004
Current Resident	225 Palmer St N	Alpha MN 56111-4022
Current Resident	230 Knox St S	Alpha MN 56111-4006
Current Resident	235 Paddock Ave W	Alpha MN 56111-4027
Current Resident	235 White Ave E	Alpha MN 56111-4014
Current Resident	235 White Ave W	Alpha MN 56111-4016
Current Resident	235 Williamson Ave W	Alpha MN 56111-4031
Current Resident	240 Railroad Ave E	Alpha MN 56111-4029
Current Resident	310 Palmer St N	Alpha MN 56111-4020
Current Resident	315 Knox St N	Alpha MN 56111-4010

Current Resident	320 Palmer St N	Alpha MN 56111-4020
Current Resident	330 Main St N	Alpha MN 56111-4000
Current Resident	330 Palmer St N	Alpha MN 56111-4020
Current Resident	335 Palmer St N	Alpha MN 56111-4020
Current Resident	340 Palmer St N	Alpha MN 56111-4020
Current Resident	380 Palmer St N	Alpha MN 56111-4020
Current Resident	59097 800th St	Alpha MN 56111-3071
Current Resident	59166 850th St	Alpha MN 56111-3226
Current Resident	59222 830th St	Alpha MN 56111-3219
Current Resident	59874 800th St	Alpha MN 56111-3073
Current Resident	60292 800th St	Alpha MN 56111-3207
Current Resident	60592 880th St	Alpha MN 56111-3243
Current Resident	60636 790th St	Alpha MN 56111-3007
Current Resident	60837 870th St	Alpha MN 56111-3238
Current Resident	81553 590th Ave	Alpha MN 56111-3216
Current Resident	83481 600th Ave	Alpha MN 56111-3254
Current Resident	83615 590th Ave	Alpha MN 56111-3220
Current Resident	83828 590th Ave	Alpha MN 56111-3221
Current Resident	84304 600th Ave	Alpha MN 56111-3229
Current Resident	84461 590th Ave	Alpha MN 56111-3223
Current Resident	85063 600th Ave	Alpha MN 56111-3234
Current Resident	86058 600th Ave	Alpha MN 56111-3236
Current Resident	87576 600th Ave	Alpha MN 56111-3241
Current Resident	88391 600th Ave	Alpha MN 56111-3250
Current Resident	89194 590th Ave	Alpha MN 56111-3205
Sombat Phosy	110 Palmer St S	Alpha MN 56111-4019
Kyle David Schley	133 130th St	Alpha MN 56111-1103
Gregory L & Amy L Hartzler	58563 830th St	Alpha MN 56111-3202
Laverne H & Lois M Swanson Rev Trust	1002 Homedale Dr	Jackson MN 56143-1737
Martin A Chergosky	101 Gillie Dr	Jackson MN 56143-1114
Roger C & Pamela K Ringkob	1012 Springfield Pkwy	Jackson MN 56143-1063
Irene Callender et al	1019 Homedale Dr	Jackson MN 56143-1738
Lois Hartjen Lee	1023 Homedale Dr	Jackson MN 56143-1738
Ronald F Greenside et al c/o Delores K Dopp	107 Lee Ave	Jackson MN 56143-1251
State Of Minnesota	108 County Road 51	Jackson MN 56143-3365
Mark & Barbara Raboin	1114 Sherman St	Jackson MN 56143-1266
Evonne Sirovy et al	113 Center St	Jackson MN 56143-1172
Carl, Mary, & Lillian Larson et al	114 Bryon Rd	Jackson MN 56143-1080
Jackson Co Tourism Inc	115 Barnel Rd	Jackson MN 56143-3368
Tony Dvorak	115 Hilltop Ave	Jackson MN 56143-1305
Henrichs Family Trust	116 State St Apt 104	Jackson MN 56143-1150
Troy A & Laura L Schneekloth	118 Circle Dr	Jackson MN 56143-1012
Sharon Cordes	123 2nd Ave	Jackson MN 56143-1806
Casey J Steffensen	123 S Highway	Jackson MN 56143-1827
Laurence A Vacek et al	125 S Highway Apt 202	Jackson MN 56143-1822
David P Pribyl et al	126 Northridge Dr	Jackson MN 56143-1701
Walter Svoboda Rev Liv Trust	127 1st Ave	Jackson MN 56143-1805
Margaret Drahota	1305 South St	Jackson MN 56143-1323
Kenneth & Dorothy Schultz Irrev Trusts	131 3rd Ave	Jackson MN 56143-1807
Arnold Ellsworth Benson Lvg Ts	1320 Springfield Pkwy	Jackson MN 56143-1069
David A Lusk	1326 Springfield Pkwy	Jackson MN 56143-1069
Brandon L Bonnicksen	136 Thomas Hill Rd	Jackson MN 56143-1812
Jean Pike	1362 Springfield Pkwy	Jackson MN 56143-1069
Francis & Therese Hlavka	138 Industrial Park	Jackson MN 56143-9439
Joseph P Carr	139 Industrial Park	Jackson MN 56143-9589
Helen M Peterson	140 1st Ave	Jackson MN 56143-1801
Ronald Sinn	149 3rd Ave	Jackson MN 56143-1807

Leo & Terrijo Hacker		150 Jackson St	Jackson MN 56143-1119
Larry A Ringkob Trust B et al c/o Karen K Ringkob		1500 Sayles Dr	Jackson MN 56143-1002
Alice E Olson		1508 North Hwy Apt 312	Jackson MN 56143-1083
Roy H Stipek Irrevoc Trst et al c/o Iris Stipek		1508 North Hwy Apt 317	Jackson MN 56143-1083
Roy H & Iris M Stipek Irrevovable Trust		1508 North Hwy Apt 218	Jackson MN 56143-1082
Vernelda E Hartzler		152 2nd Ave	Jackson MN 56143-1802
William & Diane Kruppiak		1541 Grant St	Jackson MN 56143-1279
BCJB Enterprises LLC		1548 Grant St	Jackson MN 56143-1278
Donna Holtz (LE) et al.		1628 Sayles Dr	Jackson MN 56143-1191
Virgil & Donna L Holtz		1628 Sayles Dr	Jackson MN 56143-1191
New Fashion Pork LLP		164 Industrial Park	Jackson MN 56143-9588
Freking Family Farms Inc	164 Industrial Pkwy	PO Box 244	Jackson MN 56143-0244
Dorothy A Benson	165 Circle Dr	PO Box 14	Jackson MN 56143-0014
Philip Handevidt		166 Industrial Park	Jackson MN 56143-9588
Bhavesh & Hina Amin		2007 Highway 71 N	Jackson MN 56143-1096
Mary Ann Werner Revocable Trst		2012 Wedgewood Ln	Jackson MN 56143-1739
Ronald Werner Tst Trust Mary Ann Werner Trustee		2012 Wedgewood Ln	Jackson MN 56143-1739
Agco Corporation		202 Industrial Park	Jackson MN 56143-9448
Harold A & Frances M Skow		202 S Highway	Jackson MN 56143-1800
Minn West LLC c/o Gita B Patel		2025 Highway 71 N	Jackson MN 56143-1096
Francis & Melinda Christianson		2035 Highway 71 N	Jackson MN 56143-1096
Mary S Muir		225 Westridge Dr	Jackson MN 56143-1729
Mary Margaret Tweedt		314 1st St Apt 203	Jackson MN 56143-1699
Spring Creek Holding Company		235 County Road 51	Jackson MN 56143-3367
Gerald D & Karen F Benjamin		235 State St	Jackson MN 56143-1164
Ordell G & Arlyss A Skogen		238 Moore St	Jackson MN 56143-1158
Nina M Walterman		239 Moore St	Jackson MN 56143-1101
Carol Neal et al		316 Park St	Jackson MN 56143-1420
Robert B & Juanita Wachal		400 Park St	Jackson MN 56143-1422
Bess B Oltmans Trust		401 Park St	Jackson MN 56143-1421
John W Oltmans Trust B c/o Bess Oltmans		401 Park St	Jackson MN 56143-1421
Lynn Flatgard		401 Park St	Jackson MN 56143-1421
Oltmans Family Limited Prtshp		401 Park St	Jackson MN 56143-1421
Jackson County		405 4th St	Jackson MN 56143-1588
LHS Investors Group LLP		410 Springfield Pkwy	Jackson MN 56143-1006
Justin Ambrose		47306 780th St	Jackson MN 56143-3708
DTJJ Farms		48 River St	Jackson MN 56143-3369
Jeffrey K Johnson		48 River St	Jackson MN 56143-3369
Kevin L Roslansky		48496 780th St	Jackson MN 56143-3691
Donald & Elaine Dvorak		48596 780th St	Jackson MN 56143-3692
Robert J & Dorothy Svoboda		48917 780th St	Jackson MN 56143-3693
David & Sandra Svoboda		49164 735th St	Jackson MN 56143-3741
William F & Jeri Sirovy		49378 790th St	Jackson MN 56143-3803
David J & Laurinda Pytleski		49434 790th St	Jackson MN 56143-3687
C & M Svoboda Farms Inc c/o Charles & Marjorie Svoboda		49504 755th St	Jackson MN 56143-3733
Eric & Kathleen Overaas		49800 790th St	Jackson MN 56143-3686
Wayne W Gordon		49803 790th St	Jackson MN 56143-3686
Theresa Rose Macek Trust		50002 790th St	Jackson MN 56143-3683
Frances E Paulson		50224 830th St	Jackson MN 56143-3645
Alice Baloun & Bessie Drahota		50348 780th St	Jackson MN 56143-3775
Alice Rasmussen c/o Leroy Sydness		50597 840th St	Jackson MN 56143-3641
Kari Lynn Anderson c/o Leroy Sydness		50597 840th St	Jackson MN 56143-3641
Rebecca A Liebl c/o Leroy Sydness		50597 840th St	Jackson MN 56143-3641

Thomas A & Catherine Holthe	50601 865th St	Jackson MN 56143-3166
Leonard A Pribyl Trust	50704 810th St	Jackson MN 56143-3789
Mark Carl Goede	50708 800th St	Jackson MN 56143-3601
Glen D & Lana D Grabill	50781 790th St	Jackson MN 56143-3682
Donald & Dianne Palmer	50916 820th St	Jackson MN 56143-3607
Julia B Kilen Trust c/o Ervin & P C Kilen	51044 850th St	Jackson MN 56143-3639
Rodney & Terrie Hlavac	51064 820th St	Jackson MN 56143-3651
Donald E & Marilyn Dahlin Trust	51353 850th St	Jackson MN 56143-3638
Wayne & Janet Fischer	515 6th St	Jackson MN 56143-1511
Jeffrey & Esther Oldenburg	51512 820th St	Jackson MN 56143-3652
Douglas C & Lynette M Lusk	51624 810th St	Jackson MN 56143-3656
Timothy Lusk	51624 810th St	Jackson MN 56143-3656
Jay Place	51636 800th St	Jackson MN 56143-3602
John O & Diane Lilleberg	51685 830th St	Jackson MN 56143-3634
Judith Cihak Trust	51825 790th St	Jackson MN 56143-3678
Darin & Peggy Vagle	52007 850th St	Jackson MN 56143-3123
Mark & Robin L Medill	52086 790th St	Jackson MN 56143-3675
Mark & Kay Steffen	52136 790th St	Jackson MN 56143-3676
Evangeline Tusa Larsen Liv Tst c/o Evangeline Larsen	52258 790th St	Jackson MN 56143-3677
Virgil & Sylvia Storm	52380 780th St	Jackson MN 56143-3778
Paul & Clarice Nasby	52388 790th St	Jackson MN 56143-3673
Hansen & Johnson Farms LLC	52434 870th St	Jackson MN 56143-3088
Nathan & Lori Jacobsen	52530 790th St	Jackson MN 56143-3792
Clarence & Helen Lentz c/o Lois Hansen	52574 715th St	Jackson MN 56143-3324
Philip A & Holly J Nasby	52602 790th St	Jackson MN 56143-3674
Tillman Family Ltd Partnership	52615 Blackbridge Rd	Jackson MN 56143-4006
Gregory W Ahrens	52760 790th St	Jackson MN 56143-3672
Michael B & Lori I Schmit	52858 790th St	Jackson MN 56143-3740
Lonnie Anderson c/o Hope Cornelius	52870 850th St	Jackson MN 56143-3631
Michael & Peggy Garber	52940 Blackbridge Rd	Jackson MN 56143-4005
Betty Ann Kocak Rev Liv Trust	52962 790th St	Jackson MN 56143-3671
Galen P Mccarthy	52968 790th St	Jackson MN 56143-3671
Wayne P & Tricia J Christopher	53005 830th St	Jackson MN 56143-3626
Libra Family Revoc Liv Trust Richard & Emily Libra Trustees	53092 790th St	Jackson MN 56143-3670
Paul & Karen Zoch	53093 802nd St	Jackson MN 56143-3611
Michael J & Teresa Boyer	53169 850th St	Jackson MN 56143-3165
James, Matthew, Daniel, & Mary Grantz	53267 813th St	Jackson MN 56143-3615
Eugene & Alice Michelson	53282 813th St	Jackson MN 56143-3615
I J Sether Lmtd Ptrshp	53310 880th St	Jackson MN 56143-3093
Dennis G & Michelle Bratrud	53631 830th St	Jackson MN 56143-3169
Allan L Bratrud	53746 830th St	Jackson MN 56143-3008
Paul A & Pamela Heser	53872 860th St	Jackson MN 56143-3117
Jerry E & Nichole P Zich	54036 840th St	Jackson MN 56143-3145
Mark A Walter	54285 830th St	Jackson MN 56143-3161
Bradley R & Holly J Nestegard	54340 860th St	Jackson MN 56143-3134
Timothy Keller	54364 810th St	Jackson MN 56143-3000
Vernon & Wilma Vachuska	54468 840th St	Jackson MN 56143-3144
Andrew P, Rosalie, & John V Peterson	54611 860th St	Jackson MN 56143-3133
Verland D & Rosella M Mix	54668 830th St	Jackson MN 56143-3160
Adrian T & Donamae Skrove	54693 880th St	Jackson MN 56143-3115
David A & Ruth Hansen	54784 850th St	Jackson MN 56143-3135
Wade Wenzel	55128 820th St	Jackson MN 56143-3143
Frank & Cheryl Dvorak	55311 840th St	Jackson MN 56143-3139

Violet Censky et al c/o Charles Censky	55318 790th St	Jackson MN 56143-3043
Russell N & Joann M Winther	55346 790th St	Jackson MN 56143-3043
Tanner Thompson	55612 880th St	Jackson MN 56143-3114
Steven M & Sharon M Glidden	55635 880th St	Jackson MN 56143-3114
Steven C Bents	55804 790th St	Jackson MN 56143-3041
Everett Ascheman	56142 780th St	Jackson MN 56143-3208
Kenneth L & Donna M Fransen	56296 800th St	Jackson MN 56143-3004
Stanley & Bonnie Shearer	56483 810th St	Jackson MN 56143-3061
Jason S Vacek	56506 830th St	Jackson MN 56143-3125
Myrtle C Shearer Trust	56544 810th St	Jackson MN 56143-3060
William C & Judith Ascheman	56590 780th St	Jackson MN 56143-3210
Marvin E Thompson et al	56861 850th St	Jackson MN 56143-3119
Hesebeck Family Farms LLLP c/o Roger A Hesebeck	57049 850th St	Jackson MN 56143-3086
Roger Hesebeck Rev Trust Hesebeck Family Trust	57049 850th St	Jackson MN 56143-3086
Merle Johnson et al	57084 890th St	Jackson MN 56143-3098
Wisconsin Township Dawn Ascheman,Clerk	57088 780th St	Jackson MN 56143-3211
Richard & Eva Fransen	57276 800th St	Jackson MN 56143-3003
Charles R & Frances M Shearer	57288 810th St	Jackson MN 56143-3059
Shearer Irrev Family Trust c/o Charles & Frances Shearer	57288 810th St	Jackson MN 56143-3059
Merville W & Lavonne Steen Trust	57295 830th St	Jackson MN 56143-3066
Curtis Handevidt	57448 790th St	Jackson MN 56143-3040
Gene & Marcia Geesman	57610 810th St	Jackson MN 56143-3058
Enterprise Township Jed Hesebeck, Clerk	57726 850th St	Jackson MN 56143-3085
Jed A & Tracy A Hesebeck	57726 850th St	Jackson MN 56143-3085
Warren & Kathleen Wachal	57798 830th St	Jackson MN 56143-3064
Adam J Weets	58074 810th St	Jackson MN 56143-3057
Chad R & Amanda L Benda	58174 810th St	Jackson MN 56143-3056
Kent & Debra Ringkob	58218 830th St	Jackson MN 56143-3063
Donald & Dorothy Benda	58512 860th St	Jackson MN 56143-3087
Audrey J Teigen	603 5th St	Jackson MN 56143-1503
Robert & Carol Neal	609 N Sverdrup Ave	Jackson MN 56143-1434
East Belmont Cemetery Assn c/o Richard Siem	701 N Sverdrup Ave	Jackson MN 56143-1436
Larry C & Barbara K Hansen	70241 476th Ave	Jackson MN 56143-8515
Norma E Monson et al	715 Butler Ave	Jackson MN 56143-1203
Mary K Iversen	715 Logan Ave	Jackson MN 56143-1417
Joseph Pribyl	716 White St	Jackson MN 56143-1469
Steven I Johnson	71866 US Highway 71	Jackson MN 56143-3312
Thomas & Annette Zebedee	72430 Petersburg Rd	Jackson MN 56143-3235
Dewey Hendricks et al	72626 US Highway 71	Jackson MN 56143-3344
Lyle H & Mildred Fisher	73079 US Highway 71	Jackson MN 56143-3345
Dary & Leila Hendricks	73847 550th Ave	Jackson MN 56143-3302
American Fabrication LLC c/o Jack Erickson	75196 Petersburg Rd	Jackson MN 56143-3274
Timothy & Denise Micklos et al	75307 US Highway 71	Jackson MN 56143-3293
Ronald & Lisa Schafer Living Trust	75557 480th Ave	Jackson MN 56143-3717
Ronald G & Nancy K Jensen	75877 Petersburg Rd	Jackson MN 56143-3277
Steven & Debra Benes	76193 570th Ave	Jackson MN 56143-3214
David A & Diane Wells	77219 550th Ave	Jackson MN 56143-3202
Robert G & Ethel J Drahota	78199 500th Ave	Jackson MN 56143-3684
Donald Williams & Kenneth Bond	78709 490th Ave	Jackson MN 56143-3689
Colin Sirovy	78828 Lamphere Dr	Jackson MN 56143-5100
Terry A & Shelly M Hotzler	78863 Lamphere Dr	Jackson MN 56143-5100
Kurtis E Walton	78948 Riverside Dr	Jackson MN 56143-3791

Guy T Vacura	79165 Blackbridge Rd	Jackson MN 56143-4001
Wayne & Linda Torgerson	79334 Highway 71 N	Jackson MN 56143-3609
Kent D Libra	79345 510th Ave	Jackson MN 56143-3681
Last Deck Inc	79434 550th Ave	Jackson MN 56143-3168
Leland & Marjorie Erickson	79655 Blackbridge Rd	Jackson MN 56143-4003
Dallas A & Janice C Hansen	79802 560th Ave	Jackson MN 56143-3045
Harry W Miller	79819 Blackbridge Rd	Jackson MN 56143-4004
Ronald E & Mary L Mulder	79865 532nd Ave	Jackson MN 56143-3610
Jerome & Lola Gruhlke	79888 520th Ave	Jackson MN 56143-3660
Rodney & Dawn Duncan	79896 570th Ave	Jackson MN 56143-3022
Julius C Jr & Patricia A Cole	79961 560th Ave	Jackson MN 56143-3044
Jackson City	80 W Ashley St	Jackson MN 56143-1669
Lu Ann Ritter Owen	801 Hills Ave	Jackson MN 56143-1013
Bryon & Paul Neal	80252 550th Ave	Jackson MN 56143-3055
Russell J & Merva D Fransen c/o Bryon Neal	80252 550th Ave	Jackson MN 56143-3055
Jason D Garms	80289 532nd Ave	Jackson MN 56143-3612
Harlo & Mavis Handevidt	804 White St	Jackson MN 56143-1471
Dale & Molly Sauder	80463 532nd Ave	Jackson MN 56143-3613
C & S Fransen Farms Inc	80507 550th Ave	Jackson MN 56143-3054
Craig, Kathleen, & Steven Fransen	80507 550th Ave	Jackson MN 56143-3054
Elizabeth Vacura	80591 510th Ave	Jackson MN 56143-3604
Timothy L & Debra L Lee	80697 532nd Ave	Jackson MN 56143-3614
Guy & Carolyn Geesman	80707 560th Ave	Jackson MN 56143-3050
Ryan H & Betty H Hargan	80711 US Highway 71	Jackson MN 56143-3009
Jeremy M & Kassandra L Ambrose	80802 560th Ave	Jackson MN 56143-3049
Douglas & Shirley Hartzler	80806 580th Ave	Jackson MN 56143-3074
Matthew J Nesseth	80851 510th Ave	Jackson MN 56143-3605
Gary L & Susan M Lusk	80859 520th Ave	Jackson MN 56143-3657
Knute & Kaye Meneely	80920 US Highway 71	Jackson MN 56143-3608
Lori A Udermann	810 Brown St	Jackson MN 56143-1010
Tillman & Clarine Michelson	811 Brown St	Jackson MN 56143-1009
Steven J Lusk	81240 520th Ave	Jackson MN 56143-3655
Jeremy Michelson	81490 535th Ave	Jackson MN 56143-3616
Jerome Hepp	81512 560th Ave	Jackson MN 56143-3048
Abraham J Lusk	81807 520th Ave	Jackson MN 56143-3654
Timothy & Dawn Peterson	81832 570th Ave	Jackson MN 56143-3025
Steven D & Janice M Fransen	81909 550th Ave	Jackson MN 56143-3053
Wenzel Family Rev Liv Trust c/o Joseph & Ila Wenzel	81936 550th Ave	Jackson MN 56143-3053
Mark A Whisney	82013 525th Ave	Jackson MN 56143-3621
Edward Zich c/o Shirley Smith Ling	821 Brown St	Jackson MN 56143-1009
Curtis & Barbara Egeland	82217 525th Ave	Jackson MN 56143-3622
John & Sheri Lilleberg	82244 510th Ave	Jackson MN 56143-3649
Larry & Janice Griffin	82353 550th Ave	Jackson MN 56143-3159
Charles M & Margie A Lusk	824 Frost Ave	Jackson MN 56143-1053
Steven H & Angie Rogotzke	82476 535th Ave	Jackson MN 56143-3619
Paul M Jones Jr	82511 525th Ave	Jackson MN 56143-3623
Cheryl Gielau et al	82549 US Highway 71	Jackson MN 56143-3021
Lowell Christopher et al	82549 US Highway 71	Jackson MN 56143-3021
Jay A Hall	82645 580th Ave	Jackson MN 56143-3072
Philip B Paulson	82687 510th Ave	Jackson MN 56143-3648
Frances E Paulson c/o Philip B Paulson	82687 510th Ave	Jackson MN 56143-3648
Joshua Lee & Ami Jo Swanson	82880 580th Ave	Jackson MN 56143-3071
Arnold & Jane Henning	829 Frost Ave	Jackson MN 56143-1052
John & Gladys Mellum	82916 510th Ave	Jackson MN 56143-3647
Scott R Allen & Judith Smith	83138 525th Ave	Jackson MN 56143-3781
Larry & Wayne Christopher	83237 US Highway 71	Jackson MN 56143-3020
Paul H & Ferne Jones Trust	83272 560th Ave	Jackson MN 56143-3150

Dean H Lemickson	83327 510th Ave	Jackson MN 56143-3636
Mark Rossow	83343 500th Ave	Jackson MN 56143-3644
Joe J Whisney	83431 560th Ave	Jackson MN 56143-3149
Lilly L & Joseph J Whisney	83431 560th Ave	Jackson MN 56143-3149
Daniel J Grantz	83507 US Highway 71	Jackson MN 56143-3019
Kevin & Deborah Christopher	83537 570th Ave	Jackson MN 56143-3034
Chanhsamone Inthavixay	83602 550th Ave	Jackson MN 56143-3156
Paul W & Tara M Hansen	83626 530th Ave	Jackson MN 56143-3627
Alan M & Cynthia C Erickson Living Trust	83714 525th Ave	Jackson MN 56143-3739
Belmont Union Cemetary Assoc c/o Alan Erickson	83714 525th Ave	Jackson MN 56143-3739
Brent T & Melissa Christopher	83938 560th Ave	Jackson MN 56143-3148
Cliff & Sheila Weinzetl	83998 510th Ave	Jackson MN 56143-3637
Kendall & Leona Koppen	83998 530th Ave	Jackson MN 56143-3629
Mark E Olson	84003 525th Ave	Jackson MN 56143-3633
Roger D & Kay Johnson	84085 530th Ave	Jackson MN 56143-3628
Kimary A Lewis	84185 525th Ave	Jackson MN 56143-3632
Daniel & Karen Strom	84409 510th Ave	Jackson MN 56143-3640
Trenton L Kolander	84419 560th Ave	Jackson MN 56143-3147
Wayne A & Veryl J Saathoff Rev Trust	84421 550th Ave	Jackson MN 56143-3155
Justin J & Sara Dvorak	113 Avenue A	Jackson MN 56143-1438
James J Hall Rev Trust	84509 525th Ave	Jackson MN 56143-3736
Nancy Jensen	84732 580th Ave	Jackson MN 56143-3068
Leslie W Johnson	84754 US Highway 71	Jackson MN 56143-3017
Paul D Vachuska	84917 US Highway 71	Jackson MN 56143-3016
Gary & Bonnie Natterstad	85139 520th Ave	Jackson MN 56143-3132
Jonathan V & Kristin Peterson	85140 550th Ave	Jackson MN 56143-3154
Richard C Benda	85162 580th Ave	Jackson MN 56143-3076
Lennie & Janet Varilek	85208 570th Ave	Jackson MN 56143-3033
Dennis D & Susan R Fields	85267 520th Ave	Jackson MN 56143-3131
Eliot & Frances M Ellefson	85534 530th Ave	Jackson MN 56143-3039
Ronald Greenside	85544 580th Ave	Jackson MN 56143-3077
Harry Censky	85703 580th Ave	Jackson MN 56143-3078
Lowell & Lynn Flatgard	85914 530th Ave	Jackson MN 56143-3038
Douglas H Paulson	86083 520th Ave	Jackson MN 56143-3105
Johnson Farms	86481 550th Ave	Jackson MN 56143-3152
Kent M & Diane J Johnson Trust	86213 550th Ave	Jackson MN 56143-3153
Steven P & Jodi L Johnson	86368 US Highway 71	Jackson MN 56143-3015
Scott W & Christina R Johnson	86481 550th Ave	Jackson MN 56143-3152
Brad & Ann Henning	86689 580th Ave	Jackson MN 56143-3080
Michael D & Darnell Johnson	86845 US Highway 71	Jackson MN 56143-3014
Dennis & Karla Schulz	87309 580th Ave	Jackson MN 56143-3081
Sigurd J Jr & Verjean T Skrove	87744 550th Ave	Jackson MN 56143-3127
Grace L Hansen	87761 520th Ave	Jackson MN 56143-3101
Bryce & Laura Vancura	87844 560th Ave	Jackson MN 56143-3128
Violet Censky et al c/o Paula Censky	88184 570th Ave	Jackson MN 56143-3029
Kenneth M Censky Estate c/o Paula Censky	88184 570th Ave	Jackson MN 56143-3029
Sheldon & Janell Johnson et al	88335 580th Ave	Jackson MN 56143-3082
Bradley M Anderson	89187 580th Ave	Jackson MN 56143-3084
Curtis O & Myra Paulson	89671 570th Ave	Jackson MN 56143-3027
Gladys Ratzlaff	900 Hills Ave	Jackson MN 56143-1078
Lowell & Loy Ann Nasby	911 Grant St	Jackson MN 56143-1411
James & Joann Gumto	913 Westbriar Rd	Jackson MN 56143-1335
Leland & Evelyn Fransen	916 Hills Ave	Jackson MN 56143-1078
Thomas & Bradley Fransen c/o Leland Fransen	916 Hills Ave	Jackson MN 56143-1078

Marjorie & Erica Tobola	916 Springfield Pkwy	Jackson MN 56143-1055
Dwain P & Judith A Goede	923 Sherman St	Jackson MN 56143-1458
Gerald N Thom	PO Box 135	Jackson MN 56143-0135
Marilyn Matejka	PO Box 143	Jackson MN 56143-0143
BWT Holdings LLLP c/o Bradley W Freking	PO Box 165	Jackson MN 56143-0165
Jackson Co Fair Board	PO Box 175	Jackson MN 56143-0175
Jackson Economic Develop Corp	PO Box 183	Jackson MN 56143-0183
FCA Co-op	PO Box 228	Jackson MN 56143-0228
George D & D Jean Benda	PO Box 244	Jackson MN 56143-0244
Jay D Moore	PO Box 244	Jackson MN 56143-0244
New Fashion Pork LLP	PO Box 244	Jackson MN 56143-0244
Robert L & Julie A Vos c/o New Fashion Pork	PO Box 244	Jackson MN 56143-0244
William J & Katja D Stephan	PO Box 244	Jackson MN 56143-0244
Jerald & Karen Vacura	PO Box 26	Jackson MN 56143-0026
Rentschlers Truck/Auto Plaza c/o Dan Schultz	PO Box 271	Jackson MN 56143-0271
Kemna-ASA Holdings LLC	PO Box 28	Jackson MN 56143-0028
Clair O Gilmore Trust	PO Box 45	Jackson MN 56143-0045
Vet's Oil Co	PO Box 45	Jackson MN 56143-0045
Vets Oil Co	PO Box 45	Jackson MN 56143-0045
Kaat Development LLC	PO Box 47	Jackson MN 56143-0047
Shane N & Amery S Phillips	PO Box 51	Jackson MN 56143-0051
Steve J & Melonie S Wilfahrt	PO Box 61	Jackson MN 56143-0061
Federated Rural Electric Assn	PO Box 69	Jackson MN 56143-0069
Current Resident	111 Torgerson Ln	Jackson MN 56143-4000
Current Resident	149 County Road 34 E	Jackson MN 56143-3164
Current Resident	154 County Road 34 W	Jackson MN 56143-3372
Current Resident	172 Industrial Park	Jackson MN 56143-9588
Current Resident	177 Industrial Park	Jackson MN 56143-9589
Current Resident	182 Industrial Park	Jackson MN 56143-9440
Current Resident	2000 Highway 71 N	Jackson MN 56143-1088
Current Resident	2015 Highway 71 N	Jackson MN 56143-1096
Current Resident	47748 780th St	Jackson MN 56143-3707
Current Resident	50170 840th St	Jackson MN 56143-3642
Current Resident	50783 830th St	Jackson MN 56143-3646
Current Resident	51139 820th St	Jackson MN 56143-3650
Current Resident	51163 790th St	Jackson MN 56143-3680
Current Resident	51182 780th St	Jackson MN 56143-3777
Current Resident	51339 830th St	Jackson MN 56143-3635
Current Resident	51345 830th St	Jackson MN 56143-3635
Current Resident	51420 790th St	Jackson MN 56143-3679
Current Resident	52233 790th St	Jackson MN 56143-3677
Current Resident	52548 830th St	Jackson MN 56143-3625
Current Resident	52654 860th St	Jackson MN 56143-3118
Current Resident	53050 802nd St	Jackson MN 56143-3611
Current Resident	54040 810th St	Jackson MN 56143-3001
Current Resident	54498 800th St	Jackson MN 56143-3005
Current Resident	55120 840th St	Jackson MN 56143-3140
Current Resident	55273 860th St	Jackson MN 56143-3138
Current Resident	55412 830th St	Jackson MN 56143-3141
Current Resident	55534 870th St	Jackson MN 56143-3137
Current Resident	55742 810th St	Jackson MN 56143-3062
Current Resident	56156 870th St	Jackson MN 56143-3112
Current Resident	56335 850th St	Jackson MN 56143-3120
Current Resident	57303 830th St	Jackson MN 56143-3065
Current Resident	58112 870th St	Jackson MN 56143-3090
Current Resident	58251 870th St	Jackson MN 56143-3091
Current Resident	78597 500th Ave	Jackson MN 56143-3685

Current Resident		78665 490th Ave	Jackson MN 56143-3797
Current Resident		78828 490th Ave	Jackson MN 56143-3688
Current Resident		79110 Riverside Dr	Jackson MN 56143-3780
Current Resident		79230 Blackbridge Rd	Jackson MN 56143-4002
Current Resident		79312 560th Ave	Jackson MN 56143-3047
Current Resident		79563 570th Ave	Jackson MN 56143-3023
Current Resident		79602 550th Ave	Jackson MN 56143-3036
Current Resident		79743 560th Ave	Jackson MN 56143-3046
Current Resident		79793 520th Ave	Jackson MN 56143-3659
Current Resident		79898 520th Ave	Jackson MN 56143-3660
Current Resident		79960 550th Ave	Jackson MN 56143-3035
Current Resident		80331 580th Ave	Jackson MN 56143-3075
Current Resident		80431 560th Ave	Jackson MN 56143-3052
Current Resident		80600 560th Ave	Jackson MN 56143-3051
Current Resident		81613 535th Ave	Jackson MN 56143-3790
Current Resident		81753 580th Ave	Jackson MN 56143-3073
Current Resident		82738 550th Ave	Jackson MN 56143-3158
Current Resident		82810 560th Ave	Jackson MN 56143-3151
Current Resident		83507 550th Ave	Jackson MN 56143-3157
Current Resident		83634 US Highway 71	Jackson MN 56143-3018
Current Resident		83749 580th Ave	Jackson MN 56143-3070
Current Resident		85836 560th Ave	Jackson MN 56143-3146
Current Resident		86627 570th Ave	Jackson MN 56143-3030
Current Resident		88178 560th Ave	Jackson MN 56143-3099
Current Resident		88724 580th Ave	Jackson MN 56143-3083
Vernon Beseke Test Fam Trust c/o Joyce Beseke		1130 Springfield Pkwy	Jackson MN 56143-1065
Roger Hesebeck Rev Trust		57049 850th St	Jackson MN 56143-3086
James M Jasper		616 1/2 2nd St	Jackson MN 56143-1691
Julie C Brunner		10 E Park Dr	Sherburn MN 56171-1177
James Kampert		10 North Shore Dr N	Sherburn MN 56171-1167
Douglas D & Susan L Dunker		10 North Shore Dr S	Sherburn MN 56171-1168
Clarence W & Diane E Maday		10 S Fox Lake Dr E	Sherburn MN 56171-1174
Ronald L & M K Johnson (LE) et al.		1002 90th Ave	Sherburn MN 56171-1196
Duane G & Joyce E Bond		101 Swanson Dr	Sherburn MN 56171-1093
Jamie & Deborah Williamson		102 Ringer Dr	Sherburn MN 56171-1130
Lottie B Harris Revoc Trust & Harris Family Rev Living Trust		102 Swanson Dr	Sherburn MN 56171-1093
Beverly A Schafer Irrev Family Trust		1025 30th Ave	Sherburn MN 56171-1216
Gordon L Preuss		1029 40th Ave	Sherburn MN 56171-1214
Andrew J Theobald		1030 40th Ave	Sherburn MN 56171-1214
Douglas L & S L Eisenmenger		1034 120th St	Sherburn MN 56171-1172
Benedict J & Elfriede S Cuba		104 Swanson Dr	Sherburn MN 56171-1093
Melvin & Marvin W Garbers		105 N Lake St	Sherburn MN 56171-1046
David & Louise Janssen		105 Swanson Dr	Sherburn MN 56171-1093
Jeffrey Allen Mayo		1055 30th Ave	Sherburn MN 56171-1216
Dustin & Jenna Faber		107 Swanson Dr	Sherburn MN 56171-1259
Jerry J Rathman		1071 State Highway 4	Sherburn MN 56171-1244
Robert Cook		1077 120th St	Sherburn MN 56171-1172
Helen Lee Murphy Revoc Trust et al.	108 Swanson Dr	PO Box 614	Sherburn MN 56171-0614
Dennis R Crissinger		1084 60th Ave	Sherburn MN 56171-1242
Trudy Merrifield		110 Cargill St	Sherburn MN 56171-9671
Gerry A Wedner		1103 70th Ave	Sherburn MN 56171-1253
Richard W & Judith A Zehms		112 Cargill St	Sherburn MN 56171-9671
Michael T & Stephanie Updike		1143 50th Ave	Sherburn MN 56171-1240
Johnnie Jay Simmons		1161 30th Ave	Sherburn MN 56171-1228
Thomas M & Anita L Davis		1161 50th Ave	Sherburn MN 56171-1114
Eldon L & Joan L Madison		1167 70th Ave	Sherburn MN 56171-1111
Brady, Denise & Mark Gaalswyk		12 Lake Shore Dr	Sherburn MN 56171-1183
Wm L & Jan M Bremer		12 North Shore Dr S	Sherburn MN 56171-1168

Jon A & Jennifer Saxen	12 S Fox Lake Dr W	Sherburn MN 56171-1249
SDH Irrevocable Trust	12 S Fox Lake Dr W	Sherburn MN 56171-1249
Jacob P Shoen	1205 50th Ave	Sherburn MN 56171-1243
Thomas E & Penny Claussen	1236 30th Ave	Sherburn MN 56171-1229
Keith A & Patrice M Frick	125 160th St	Sherburn MN 56171-1125
Patrick J & Karen A McConnell	1255 76th Ave	Sherburn MN 56171-1178
Brian M & Lee Ann Steen	1265 76th Ave	Sherburn MN 56171-1178
Daryl & Deanna Anderson	1267 76th Ave	Sherburn MN 56171-1178
Dale V & Lee Ann Erickson	1271 76th Ave	Sherburn MN 56171-1178
David L & Jean Lundquist	1280 Miller Rd	Sherburn MN 56171-1173
Karen Hieb	1281 Miller Rd	Sherburn MN 56171-1173
Nathan L & Mary J Whitehead	1321 State Highway 4	Sherburn MN 56171-1169
Paul D & Elaine Ficken	1323 90th Ave	Sherburn MN 56171-1236
Duane L & Amber L Engebretson	1324 90th Ave	Sherburn MN 56171-1236
Arden J Hanson	1326 90th Ave	Sherburn MN 56171-1236
Bradley K & Barbara A Skerik	1333 40th Ave	Sherburn MN 56171-1116
Donald Becker Farms Inc	1336 30th Ave	Sherburn MN 56171-1118
Tylan Remmers	1349 85th Ave	Sherburn MN 56171-1147
Peggy Holtz	1389 40th Ave	Sherburn MN 56171-1116
Jerrad C Juhl	14 E Park Dr	Sherburn MN 56171-1177
Eric M & Stacy S Schettler	14 North Shore Dr S	Sherburn MN 56171-1168
Martin Juhl	14 E Park Dr	Sherburn MN 56171-1177
Randy & A A Sippel (LE) et al.	14 S Fox Lake Dr E	Sherburn MN 56171-1174
Jonathan W & L K Schafer	14 Schafer Shore Dr	Sherburn MN 56171-4000
Schafer Shores LLC	14 Schafer Shore Dr	Sherburn MN 56171-4000
Jerome M & Gail E Finke	1419 30th Ave	Sherburn MN 56171-1120
Dennis A Peterson	1436 20th Ave	Sherburn MN 56171-1123
Robert K & Janice Nelson	1446 State Highway 4	Sherburn MN 56171-1166
Jay & Marilyn Oltmans Liv Trust	1452 20th Ave	Sherburn MN 56171-1123
James M & Monica Chukuske	1454 40th Ave	Sherburn MN 56171-1139
Wm C & Sue Ellen Koons	1473 State Highway 4	Sherburn MN 56171-1166
Edward H Lee Jr	148 140th St	Sherburn MN 56171-1122
Elm Creek Township	148 140th St	Sherburn MN 56171-1122
Fox Lake Golf Club Inc	15 E Park Dr	Sherburn MN 56171-1177
Warren D Olson	15 Schafer Shore Dr	Sherburn MN 56171-4000
Warren D & Michelle F M Olson	15 Schafer Shore Dr	Sherburn MN 56171-4000
Matthew T & Jill N Peterson	1526 50th Ave	Sherburn MN 56171-1142
Earl O & Charlotte A Cordes	1529 30th Ave	Sherburn MN 56171-1136
Ervin H Cordes Sr et al.	1529 30th Ave	Sherburn MN 56171-1136
Loren A Matejka	1531 State Highway 4	Sherburn MN 56171-1165
Roger & Rita Matejka	1531 State Highway 4	Sherburn MN 56171-1165
William D Snyder	1535 90th Ave	Sherburn MN 56171-1245
Paul E & Rita A Matejka	1552 80th Ave	Sherburn MN 56171-1151
Zane Anderson	1553 30th Ave	Sherburn MN 56171-1136
Robert W & Elizabeth A Arnold	1556 90th Ave	Sherburn MN 56171-1245
Timothy L & Barbara J Jordi	1573 20th Ave	Sherburn MN 56171-1124
Adeline Simmons	16 E Park Dr	Sherburn MN 56171-1177
Adeline M Simmons et al	16 E Park Dr	Sherburn MN 56171-1177
Joseph L & Suzanne D Biehn	16 Lake Shore Dr	Sherburn MN 56171-1183
Vivian Bontjes	16 North Shore Dr N	Sherburn MN 56171-1167
Steve & Beverly Thom Trusts	16 W Park Dr	Sherburn MN 56171-1176
Garry M Roeker	16 S Fox Lake Dr E	Sherburn MN 56171-1174
Scott & Mary Brolsma	16 W 2nd St	Sherburn MN 56171-1007
Steven & Cheryl Thom	16 W Park Dr	Sherburn MN 56171-1176
John L & Faye L Hogan	1612 30th Ave	Sherburn MN 56171-1133
Clifford & Marla Anderson	1668 90th Ave	Sherburn MN 56171-1154
Gerald & Joanne Tumbleson	1705 40th Ave	Sherburn MN 56171-1131
Ronald E & Vicki L Gerhardt	1727 70th Ave	Sherburn MN 56171-1158
Carol Suter	1732 20th Ave	Sherburn MN 56171-1126
Gail Suter	1732 20th Ave	Sherburn MN 56171-1126

Dale W & Mary A Ebeling		1732 40th Ave	Sherburn MN 56171-1131
Douglas L & Anne Sheppard		1741 20th Ave	Sherburn MN 56171-1126
Paul J & Joan K Peterson		1758 20th Ave	Sherburn MN 56171-1126
Douglas & Kristine Fuller		1759 70th Ave	Sherburn MN 56171-1158
Donald Jr, David, & Daniel Faber et al.		1775 Quail Rd	Sherburn MN 56171-1162
Faber Brothers Farms		1775 Quail Rd	Sherburn MN 56171-1162
Marlo F & Joan C Schultz		18 W Park Dr	Sherburn MN 56171-1176
Constance E Jensen		18 S Fox Lake Dr E	Sherburn MN 56171-1174
Robert L Carlson et al.		1801 60th Ave	Sherburn MN 56171-1161
Trenton L Bonser		1823 70th Ave	Sherburn MN 56171-1159
Travis L & Tracy A Winter		19 North Shore Dr N	Sherburn MN 56171-1167
Michael & Joann Ambrose		2 North Shore Dr N	Sherburn MN 56171-1167
Jerome & Sandra Honnette		2 North Shore Dr S	Sherburn MN 56171-1168
David & Judy Traetow		2 S Fox Lake Dr W	Sherburn MN 56171-1249
Rodney G & Tami J Kittleson		205 E 2nd St	Sherburn MN 56171-1274
Robert J Truesdell	208 N Manyaska	PO Box 366	Sherburn MN 56171-0366
Dorothy L Behne Rev Trust Agrmnt		210 S Manyaska St	Sherburn MN 56171-9645
Michael T & Linda K Schwager		22 North Shore Dr N	Sherburn MN 56171-1167
Daniel & Tracey Schley		252 110th St	Sherburn MN 56171-1217
Andrew P & Kathleen Nolte		259 140th St	Sherburn MN 56171-1121
Gordon & Patricia Becker		286 160th St	Sherburn MN 56171-1134
Margaret E Loveng		290 160th St	Sherburn MN 56171-1134
Dale & Debra Harbitz		292 130th St	Sherburn MN 56171-1117
Wesley D & Candi C Schafer		3 Schafer Shore Dr	Sherburn MN 56171-4000
Brodie Cook		301 S Prairie St Lot 8	Sherburn MN 56171-9697
Oscar & Joan Rosen Irrev Trust		303 N Manyaska St	Sherburn MN 56171-1066
Rj & L LLP		305 S Osborne St	Sherburn MN 56171-1074
David B & Marian M Brodersen		312 110th St	Sherburn MN 56171-1227
John L & Emily J Menssen		315 140th St	Sherburn MN 56171-1119
Cory J & Cara L Sinn		323 180th St	Sherburn MN 56171-1127
Walnut Pork Inc		323 180th St	Sherburn MN 56171-1127
Cheryl Lynn Schumann	328 Fox Lake Ave	PO Box 292	Sherburn MN 56171-0292
Thomas W & Cheryl A Miller		332 N Lake St	Sherburn MN 56171-1048
Arla & John Ringeisen (LE) et al.		335 Fox Lake Ave	Sherburn MN 56171-9650
Roger & Michelle Ahrens		338 150th St	Sherburn MN 56171-1137
Donald F & J L Hoffmeister		340 Fox Lake Ave	Sherburn MN 56171-9604
Ryan R Sinn		341 160th St	Sherburn MN 56171-1132
Jade & Tristy Rossow		343 150th St	Sherburn MN 56171-1137
Daniel J Helvig		36 W Park Dr	Sherburn MN 56171-1176
Charles Kuntz		368 120th St	Sherburn MN 56171-1278
Lavern L & Mary L Ebel		39 W Park Dr	Sherburn MN 56171-1176
Laverne L Ebel		39 W Park Dr	Sherburn MN 56171-1176
Curtis & Janice Mayo		395 110th St	Sherburn MN 56171-1227
Kieth Worthley		395 110th St	Sherburn MN 56171-1227
Timothy J & Lizabeth A Stahl		4 Lake Shore Dr	Sherburn MN 56171-1183
Troy & Jadee Menke		4 E Park Dr	Sherburn MN 56171-1177
Frank J & Therese H Hlavka		4 S Fox Lake Dr E	Sherburn MN 56171-1174
Floyd V & Mary Olson		4 S Fox Lake Dr W	Sherburn MN 56171-1249
Genevieve Theobald	401 N Osborne	PO Box 608	Sherburn MN 56171-0608
Jared L & Michele R Anderson		402 W 1st St	Sherburn MN 56171-1006
Mark & Linda Sandberg		406 160th St	Sherburn MN 56171-1128
Harold & Myrtle Qualley		410 Fox Lake Ave	Sherburn MN 56171-9610
Arnold & Dorothy Dunker		410 Fox Lake Ave Apt 10	Sherburn MN 56171-9610
Matilda Matejka		410 Fox Lake Ave	Sherburn MN 56171-9610
Russell E & Vivian M Erickson		410 Fox Lake Ave	Sherburn MN 56171-9610
Ross Bettin		411 N Prairie St	Sherburn MN 56171-9689
Wayne D & J E Breneman		42 W Park Dr	Sherburn MN 56171-1176
Jason Ahrens		425 120th St	Sherburn MN 56171-1230
Cindy E & Lyle Page		432 140th St	Sherburn MN 56171-1140

Trent W & Melissa M Tumbleson		435 170th St	Sherburn MN 56171-1129
Timothy & Dayle Schafer Rev Trust		442 130th St	Sherburn MN 56171-1235
Keith & Gwendoly Sickler		451 150th St	Sherburn MN 56171-1138
Kent D & Jolynn K Janssen		457 160th St	Sherburn MN 56171-1128
Tommy A Nelson		472 110th St	Sherburn MN 56171-1257
Wanda M Nordhausen		472 130th St	Sherburn MN 56171-1235
Jay Township		474 100th St	Sherburn MN 56171-1234
John & Dianne Theobald		474 100th St	Sherburn MN 56171-1234
Edgar T Savidge		50 W Park Dr	Sherburn MN 56171-1176
Gary D & Vicki Nelsen		501 Fairmont Ave	Sherburn MN 56171-1032
Donald E & D J Winter		410 Fox Lake Ave Apt 212	Sherburn MN 56171-9607
Joshua Eisenmenger		511 140th St	Sherburn MN 56171-1143
David Crissinger		525 110th St	Sherburn MN 56171-1247
Donald Faber Jr		535 165th St	Sherburn MN 56171-1163
Michael D Erickson		537 130th St	Sherburn MN 56171-1115
Thomas & Roberta Alsworth		552 120th St	Sherburn MN 56171-1113
Duane L & Diane Faber Rev Trust		552 140th St	Sherburn MN 56171-1143
Stanley H & Sandra L Nelson		561 130th St	Sherburn MN 56171-1115
Lance Waldee		562 120th St	Sherburn MN 56171-1113
Beverley Jean Neppl		565 140th St	Sherburn MN 56171-1143
Victoria L Ogren		567 90th St	Sherburn MN 56171-1212
Jerome & Sandra Honnette		2 North Shore Dr S	Sherburn MN 56171-1168
Gerald & Loan-Anh Lorenz Irrev		571 165th St	Sherburn MN 56171-1163
Charles Saathoff		588 140th St	Sherburn MN 56171-1143
Mark A & Glynis M Stoffel		6 S Fox Lake Dr E	Sherburn MN 56171-1174
Ignatious & Betty Maday (LE) et al.		6 S Fox Lake Dr W	Sherburn MN 56171-1249
Mark & Shirleen Zehms		603 119th St	Sherburn MN 56171-1112
William & Doris Zehms et al.	607 100th St	PO Box 844	Sherburn MN 56171-0844
Wayne T & Della Lutterman		617 130th St	Sherburn MN 56171-1170
Robert H & Nancy L Smith		619 160th St	Sherburn MN 56171-1164
Philip H & Julie Schafer		648 110th St	Sherburn MN 56171-1232
Joan Pearson		650 130th St	Sherburn MN 56171-1170
Crissinger Corporation		663 110th St	Sherburn MN 56171-1232
Kenneth L Crissinger		663 110th St	Sherburn MN 56171-1232
Catherina Olson		664 160th St	Sherburn MN 56171-1164
Robert R & H Gaalswyk Olson		664 160th St	Sherburn MN 56171-1164
Norman L & Lavonne Kittleson		668 140th St	Sherburn MN 56171-1144
Mark F & Sheryl L Updike		688 State Highway 4	Sherburn MN 56171-1256
Ralph & David Crissinger		732 E Temperance Rd	Sherburn MN 56171-1179
Lange Sons Inc		752 140th St	Sherburn MN 56171-1145
Mary Jane Lange Trust		752 140th St	Sherburn MN 56171-1145
Albine Nawrocki Test Trust et al.		755 110th St	Sherburn MN 56171-1180
Raymond J Theobald		758 E Temperance Rd	Sherburn MN 56171-1179
Gary & Mary Jo P Manzey		773 90th St	Sherburn MN 56171-1190
Thomas E & Roberta R White		774 170th St	Sherburn MN 56171-1157
David & Andrea Sitzmann		8 Lake Shore Dr	Sherburn MN 56171-1183
Kenneth W & Mavis A Morris		8 North Shore Dr N	Sherburn MN 56171-1167
Duane K Crawley		8 North Shore Dr S	Sherburn MN 56171-1168
Timothy J Meger		8 S Fox Lake Dr W	Sherburn MN 56171-1249
Dennis G & Lona L Larson		815 120th St	Sherburn MN 56171-1171
Robert M & Patricia Posivio		826 140th St	Sherburn MN 56171-1146
Randall Nelson		836 80th Ave	Sherburn MN 56171-1209
James M Ebeling		854 160th St	Sherburn MN 56171-1153
Shirley L Kittleson		865 70th St	Sherburn MN 56171-1206
Carl H & Linda L Munson		873 20th Ave	Sherburn MN 56171-1219
Stacey A Sharp		877 170th St	Sherburn MN 56171-1156
Douglas E & Patricia Winter		882 90th Ave	Sherburn MN 56171-1194
Allen D Kahler		883 70th Ave	Sherburn MN 56171-1203
Kevin Kahler et al.		883 70th Ave	Sherburn MN 56171-1203
Robert E & Norma Brolsma		886 120th St	Sherburn MN 56171-1171

Brian T Coulter	898 125th St	Sherburn MN 56171-1175
Roger M & Angela M Schlenk	907 170th St	Sherburn MN 56171-1155
Benjamin Truesdell	919 85th St	Sherburn MN 56171-1192
Randy M & Nancy L Paris	953 30th Ave	Sherburn MN 56171-1226
Mary A Schweiss Living Trust	958 70th Ave	Sherburn MN 56171-1202
Oliver Truesdell	962 70th St	Sherburn MN 56171-1189
Vern & Mary Swanson	966 110th St	Sherburn MN 56171-1182
John E & Linda Tirevold	PO Box 195	Sherburn MN 56171-0195
Fox Lake Conservation League	PO Box 212	Sherburn MN 56171-0212
Thomas A Finke	PO Box 245	Sherburn MN 56171-0245
Daniel A & Julie K Grill	PO Box 246	Sherburn MN 56171-0246
James P Richards	PO Box 351	Sherburn MN 56171-0351
Raymond L & Mary E Mulso Trust	PO Box 356	Sherburn MN 56171-0356
Kerri J & Jon A Walters Hopkins	PO Box 369	Sherburn MN 56171-0369
Donald L Dorschner	PO Box 383	Sherburn MN 56171-0383
Assembly of God	PO Box 400	Sherburn MN 56171-0400
Walter E Waldron	PO Box 429	Sherburn MN 56171-0429
James F & Donna M Mulso	PO Box 452	Sherburn MN 56171-0452
Sheek Inc	PO Box 455	Sherburn MN 56171-0455
Curtis Olson (LE) et al.	PO Box 488	Sherburn MN 56171-0488
Douglas & Virginia Ringnell	PO Box 577	Sherburn MN 56171-0577
Kevin & Patricia Kelly	PO Box 605	Sherburn MN 56171-0605
City of Sherburn	PO Box 667	Sherburn MN 56171-0667
Sherburn Sewage Disposal	PO Box 667	Sherburn MN 56171-0667
Leroy D & Karen K Landin	PO Box 692	Sherburn MN 56171-0692
Fox Lake Park Association	PO Box 723	Sherburn MN 56171-0723
Ryan A & Michele Baker	PO Box 723	Sherburn MN 56171-0723
Harvey & Audrey A Amborn	PO Box 883	Sherburn MN 56171-0883
Current Resident	1 E Temperance Rd	Sherburn MN 56171-1094
Current Resident	10 E Park Dr	Sherburn MN 56171-1177
Current Resident	103 Swanson Dr	Sherburn MN 56171-1093
Current Resident	1183 70th Ave	Sherburn MN 56171-1111
Current Resident	12 S Fox Lake Dr W	Sherburn MN 56171-1249
Current Resident	1322 90th Ave	Sherburn MN 56171-1236
Current Resident	14 S Fox Lake Dr E	Sherburn MN 56171-1174
Current Resident	1458 50th Ave	Sherburn MN 56171-1141
Current Resident	1473 State Highway 4	Sherburn MN 56171-1166
Current Resident	1519 20th Ave	Sherburn MN 56171-1124
Current Resident	1541 80th Ave	Sherburn MN 56171-1151
Current Resident	16 E Park Dr	Sherburn MN 56171-1177
Current Resident	16 S Fox Lake Dr E	Sherburn MN 56171-1174
Current Resident	1624 80th Ave	Sherburn MN 56171-1152
Current Resident	18 S Fox Lake Dr E	Sherburn MN 56171-1174
Current Resident	2 S Fox Lake Dr E	Sherburn MN 56171-1174
Current Resident	20 W Park Dr	Sherburn MN 56171-1176
Current Resident	22 W Park Dr	Sherburn MN 56171-1176
Current Resident	24 E Park Dr	Sherburn MN 56171-1177
Current Resident	28 W Park Dr	Sherburn MN 56171-1176
Current Resident	3 Schafer Shore Dr	Sherburn MN 56171-4000
Current Resident	310 County Road 13	Sherburn MN 56171-1184
Current Resident	32 W Park Dr	Sherburn MN 56171-1176
Current Resident	328 100th St	Sherburn MN 56171-1215
Current Resident	34 W Park Dr	Sherburn MN 56171-1176
Current Resident	36 W Park Dr	Sherburn MN 56171-1176
Current Resident	374 150th St	Sherburn MN 56171-1137
Current Resident	38 W Park Dr	Sherburn MN 56171-1176
Current Resident	39 W Park Dr	Sherburn MN 56171-1176
Current Resident	4 S Fox Lake Dr E	Sherburn MN 56171-1174
Current Resident	4 S Fox Lake Dr W	Sherburn MN 56171-1249
Current Resident	42 W Park Dr	Sherburn MN 56171-1176

Current Resident		44 W Park Dr	Sherburn MN 56171-1176
Current Resident		449 110th St	Sherburn MN 56171-1257
Current Resident		449 130th St	Sherburn MN 56171-1235
Current Resident		494 140th St	Sherburn MN 56171-1140
Current Resident		50 W Park Dr	Sherburn MN 56171-1176
Current Resident		518 140th St	Sherburn MN 56171-1143
Current Resident		532 165th St	Sherburn MN 56171-1163
Current Resident		588 165th St	Sherburn MN 56171-1163
Current Resident		592 120th St	Sherburn MN 56171-1113
Current Resident		6 S Fox Lake Dr E	Sherburn MN 56171-1174
Current Resident		600 State Highway 4	Sherburn MN 56171-1256
Current Resident		635 180th St	Sherburn MN 56171-1160
Current Resident		648 160th St	Sherburn MN 56171-1164
Current Resident		737 160th St	Sherburn MN 56171-1268
Current Resident		8 S Fox Lake Dr E	Sherburn MN 56171-1174
Current Resident		802 125th St	Sherburn MN 56171-1175
Current Resident		853 170th St	Sherburn MN 56171-1156
Eric A & Molly A Hanson		1052 State Highway 4	Sherburn MN 56171-1244
Kim R & Melinda S Sassman		32 W Park Dr	Sherburn MN 56171-1176
Eugene & Carolyn Nordstrom		10 3rd Ave NE	Trimont MN 56176-1313
Kenneth V Cutler		1012 200th St	Trimont MN 56176-1227
Jeffrey J & Chelsey M Armbrust		1014 185th St	Trimont MN 56176-1241
Robert E Johnson		1082 200th St	Trimont MN 56176-1227
Thomas & Melinda Eckmann		11 2nd Ave SE	Trimont MN 56176-4048
Lester Lorenz (LE) et al.		11 Chestnut St E	Trimont MN 56176-9678
Judith R Carlson		110 3rd Ave SE	Trimont MN 56176-9731
Bruce E & J M S Russenberger	110 Beech St	PO Box 355	Trimont MN 56176-0355
Keith A Meyer	110 Birch St W	PO Box 15	Trimont MN 56176-0015
Brian L & Katherine Carlson	110 Chestnut St E	PO Box 4	Trimont MN 56176-0004
Amy Bloomquist		110 Main St E	Trimont MN 56176-9788
Carol Quade		111 2nd Ave SW	Trimont MN 56176-4025
Timothy & Christine Wohlford		111 2nd Ave SW	Trimont MN 56176-4025
Floyd R & Emily A Lee		111 Beech St E	Trimont MN 56176-9704
Yvonne Flohrs	111 E Ash St	PO Box 246	Trimont MN 56176-0246
Clifford H & Debra S Armbrust		1115 185th St	Trimont MN 56176-1224
Joan M Ellis		1118 200th St	Trimont MN 56176-1228
Joshua J Paulson		120 Ash St E	Trimont MN 56176-4022
David B & Carol J Jones	120 Birch St	PO Box 377	Trimont MN 56176-0377
Roger W & Joanne Thayer		120 Chestnut St E	Trimont MN 56176-9719
Greg Miller		120 Birch St W	Trimont MN 56176-9724
Shannon Schwager		121 Birch St W	Trimont MN 56176-9724
James & Steven Schulte		121 Chestnut St E	Trimont MN 56176-9719
Lois V Schulte		121 Chestnut St E	Trimont MN 56176-9719
David K & K L Olson		121 Main St W	Trimont MN 56176-9600
Bradley & Rochelle Krusemark		1225 200th St	Trimont MN 56176-1230
Bradley K Williams		1249 210th St	Trimont MN 56176-1248
Dwight L & Mary L Adamson		128 200th St	Trimont MN 56176-1268
Jeremy D Glidden		130 Beech St W	Trimont MN 56176-4027
Jacob Hansen		130 Birch St W	Trimont MN 56176-9724
Nadine M & Roger L Quade		130 Main St E	Trimont MN 56176-9788
Edwin J Jr & Mary Ann Potter		1306 200th St	Trimont MN 56176-1231
Larry E Flohrs		131 Apple St W	Trimont MN 56176-4001
Joyce M Knudson	131 Beech St E	PO Box 257	Trimont MN 56176-0257
Marvis J Holtz (LE) et al.		131 Birch St W	Trimont MN 56176-9792
Mike R Gonzalez		131 Birch St W Apt 11	Trimont MN 56176-9792
Douglas & Katherine Bergemann		1355 190th St	Trimont MN 56176-1234
Kim A & Laura A Flohrs		1365 230th St	Trimont MN 56176-1243
Steven H Sheppard		1384 200th St	Trimont MN 56176-1231
Vyonne M Adams		140 Ash St E	Trimont MN 56176-4022
Linh D & Nickole J Bowie		140 Ash St W	Trimont MN 56176-9726

Michael J Libra		140 Beech St E	Trimont MN 56176-9704
James S Nelsen	141 Apple St W	PO Box 116	Trimont MN 56176-0116
Donald W & Debbra A Vagle		141 Ash St W	Trimont MN 56176-9726
Cory, Layne & Stacy Ebeling		145 210th St	Trimont MN 56176-1269
Dennis Harder		147 200th St	Trimont MN 56176-1268
Bernard J & Diane E Semanko		150 Beech St W	Trimont MN 56176-4027
Billie L Anderson		150 Chestnut St E	Trimont MN 56176-9719
Mike J & Paulsen		151 Apple St E	Trimont MN 56176-4026
E R & Richard Erickson (LE) et al.	151 Beech St E	PO Box 45	Trimont MN 56176-0045
Leland G Carlson		151 Chestnut St E	Trimont MN 56176-9719
Laura Swanson	160 Ash St E	PO Box 303	Trimont MN 56176-0303
Allene R Anderson		160 Ash St W	Trimont MN 56176-9726
Brian D Olson		161 Ash St W	Trimont MN 56176-9726
Tyler Morris		1756 100th Ave	Trimont MN 56176-1222
Wayne & Wanda Bloomquist et al.		1789 100th Ave	Trimont MN 56176-1222
Brian S Holtz		1797 80th Ave	Trimont MN 56176-1218
Mavis I Rohman		180 3rd Ave NE	Trimont MN 56176-9706
Darrel D & Carolyn M Ficken		181 1st Ave NE	Trimont MN 56176-9700
Eldon W & Nilagene Olson		181 2nd Ave NW	Trimont MN 56176-9729
Charles R & Joyce B Potts	181 2nd Ave SE	PO Box 371	Trimont MN 56176-0371
Curtis E & Sarah E Gwin		181 4th Ave NE	Trimont MN 56176-9795
Billi Jo Meade		181 5th Ave SE	Trimont MN 56176-9798
Randall C & Alice D Martin		1823 100th Ave	Trimont MN 56176-1223
Mark, Jerry, Paul & Jon Gaalswyk		1846 90th Ave	Trimont MN 56176-1220
Dean C & Cynthia K Sinn		1857 40th Ave	Trimont MN 56176-1249
Don G & Niphaphon Bramstedt		188 200th St	Trimont MN 56176-1268
Diann Bloomquist		1888 90th Ave	Trimont MN 56176-1220
Michael & Tena M Schultz		1897 110th Ave	Trimont MN 56176-1225
Randall & Kathy Taylor	191 Cherry St	PO Box 46	Trimont MN 56176-0046
Lowell & Helen Fisher		1917 130th Ave	Trimont MN 56176-1233
Curtis & Darlis Hoppe		1917 20th Ave	Trimont MN 56176-1266
Robert B & Mildred A Gemmill		1939 110th Ave	Trimont MN 56176-1226
Benjamin & Jeffrey Scholl		1943 40th Ave	Trimont MN 56176-1274
Duane & Wendi Russenberger		1944 90th Ave	Trimont MN 56176-1262
Donald A Holtz		1960 60th Ave	Trimont MN 56176-1285
Charles C & Eliz Bloomquist		1963 110th Ave	Trimont MN 56176-1226
Cindy R Olson Verschelde		1972 40th Ave	Trimont MN 56176-1274
Julee J & Jonathan S Scarfpin		1982 50th Ave	Trimont MN 56176-1279
Ross Cutler		1982 90th Ave	Trimont MN 56176-1262
Kenneth & Kathryn Bergemann		1984 130th Ave	Trimont MN 56176-1233
Wayne E & Lila Cutler		1986 90th Ave	Trimont MN 56176-1262
James & Cindy Mock	1994 70th Ave	PO Box 262	Trimont MN 56176-0262
Leroy S & Sharon K Jones Revocable Trust		2 Cedar Dr	Trimont MN 56176-1283
Brian Kascht		2 Cedar Pl	Trimont MN 56176-1282
Linnea M Carlson (LE) et al.		20 3rd Ave SE	Trimont MN 56176-9710
Gerald & Alice A Gray	20 Ash St W	PO Box 213	Trimont MN 56176-0213
Lois E Nelson et al.		20 Birch St W	Trimont MN 56176-9723
Luella M Karstens	20 Main St W	PO Box 124	Trimont MN 56176-0124
Troy Olson		2020 90th Ave	Trimont MN 56176-1260
Dean & Lenore Handevidt		2052 State Highway 4	Trimont MN 56176-1311
Dennis & Roxanne Sjogren		2053 50th Ave	Trimont MN 56176-1277
Cory Olson		2061 20th Ave	Trimont MN 56176-1270
Gary & Betty Anderson		2069 State Highway 4	Trimont MN 56176-1311
Ardis Hayek		2072 110th Ave	Trimont MN 56176-1251
Dennis D & Susan L Krueger		2072 110th Ave	Trimont MN 56176-1251
Donald & Rhonda Rudolph		2075 140th Ave	Trimont MN 56176-1236
Kent V Flohrs		2075 60th Ave	Trimont MN 56176-1286
Benjamin Scholl		2083 40th Ave	Trimont MN 56176-1292
Philip L Bettin		2088 90th Ave	Trimont MN 56176-1260

Jeffrey Scholl		2095 30th Ave	Trimont MN 56176-1272
Alan Bosworth		21 Apple St E	Trimont MN 56176-4016
Todd & Melissa Wade	21 Main St E	PO Box 65	Trimont MN 56176-0065
Melvia G Nelsen	210 3rd St E	PO Box 105	Trimont MN 56176-0105
Eldred L & Carol Brandt Rev Trust		210 4th Ave SE	Trimont MN 56176-9796
Jack & Jamie L Bednarek		210 Beech St E	Trimont MN 56176-9705
Viola A Bernhardt		211 2nd Ave SW	Trimont MN 56176-9794
Chris & Shaunna Durand		211 Apple St W	Trimont MN 56176-9718
Kenneth West	211 Ash St W	PO Box 203	Trimont MN 56176-0203
Georgie Ray Ellis		211 Birch St W	Trimont MN 56176-9725
Mark & Kristina & Bocock		211 Birch St E	Trimont MN 56176-9663
Charles H Ogren		211 Main St E	Trimont MN 56176-9674
Duane Kubly		220 Ash St W	Trimont MN 56176-9727
Gerald & Shirley Russenberger		220 Beech St E	Trimont MN 56176-9705
Layne E & Darnel M Ebeling		220 Birch St E	Trimont MN 56176-9663
Farmers State Bank of Trimont		220 Main St W	Trimont MN 56176-4021
Darwin R Anthony & L W Peterson	220 Main St W	PO Box 388	Trimont MN 56176-0388
David H & Laura L Holtz		221 Ash St W	Trimont MN 56176-9727
Joel K Sinn		221 Birch St E	Trimont MN 56176-9663
Harold A Anderson		221 Birch St W	Trimont MN 56176-9725
Jon E Rabbe		2247 90th Ave	Trimont MN 56176-1258
Kermit & Robin Carlson et al.		2256 70th Ave	Trimont MN 56176-1207
Glenda Bloomquist		230 Apple St E	Trimont MN 56176-9799
Randall L Jacobson		230 Birch St E	Trimont MN 56176-9663
Bruce & Heather Borntrager		230 Birch St W	Trimont MN 56176-9725
Lois & Tanya A Schmidtke		230 Chestnut St E	Trimont MN 56176-9720
Ronald E Helmich		231 Apple St E	Trimont MN 56176-9799
Brittany Vanzandt		231 Apple St W	Trimont MN 56176-9718
Jeffrey J & Beverly Jo Behr	240 Apple St	PO Box 122	Trimont MN 56176-0122
Robert J & Betty J Connors		240 Beech St E	Trimont MN 56176-9705
Bryan St John		240 Birch St E	Trimont MN 56176-9663
Judith E Nielson		240 Birch St W	Trimont MN 56176-9725
Edwin Grue Jr & Joan M Grue		241 Birch St W	Trimont MN 56176-9725
Jerome A & M K Glidden	250 Apple St	PO Box 373	Trimont MN 56176-0373
Neil & Jackie Royer	250 Birch St W	PO Box 1	Trimont MN 56176-0001
Monica J & Nicholas P Pavich		250 Chestnut St E	Trimont MN 56176-9720
Keith A Ebeling		251 200th St	Trimont MN 56176-1267
Joanne M Olson et al.		251 Birch St W	Trimont MN 56176-9725
Lori Stade		251 Chestnut St E	Trimont MN 56176-9720
Bonnilou E Ekstadt Rev Trust		251 Main St E	Trimont MN 56176-9674
Joe B & Laura Sue Lawrence		260 1st Ave SE	Trimont MN 56176-9721
Jeremie Orcutt		260 Apple St E	Trimont MN 56176-9799
Alan J & Theresa A Peterson		260 Apple St W	Trimont MN 56176-9718
Wallace & Dawn Sjogren		260 Ash St E	Trimont MN 56176-4007
Jon S & Donna Holtz		261 Ash St W	Trimont MN 56176-9727
Peggy Rankin		262 2nd Ave NE	Trimont MN 56176-9714
Darwin A & Peggy Ann Rankin		262 2nd Ave NE	Trimont MN 56176-9714
Borntrager Auto Body & Towing	270 Main St W	PO Box 404	Trimont MN 56176-0404
Scott & Bruce Borntrager	270 Main St W	PO Box 404	Trimont MN 56176-0404
William W & Cynthia K Cagle		280 1st Ave SE	Trimont MN 56176-9721
Thomas J & Kimberly J Sampson		280 2nd Ave SE	Trimont MN 56176-1315
Natalie Knickrehm		280 4th Ave SE	Trimont MN 56176-9796
Richard & Elizabeth Viesselman	280 5th Ave SE	PO Box 333	Trimont MN 56176-0333
Timothy W & Dianne Pearson	30 Beech St E	PO Box 307	Trimont MN 56176-0307
Marsha Lawrence		30 Birch St E	Trimont MN 56176-9722
Mark Nathan Larson	30 Main St E	PO Box 106	Trimont MN 56176-0106
Chad R McMurtry	30 W Main St	PO Box 194	Trimont MN 56176-0194
James M & Rhea M Hecker		300 Chestnut St E	Trimont MN 56176-9791
Leland M & Marilyn W Pierson	31 Birch St E	PO Box 341	Trimont MN 56176-0341
Jerald B Shade		31 Main St E	Trimont MN 56176-9601

Ronald & Ardys Manzey		310 1st Ave NE	Trimont MN 56176-9671
Lloyd F & Lois A Hartke	310 2nd Ave SE	PO Box 284	Trimont MN 56176-0284
Bradford & Melissa Flohrs		310 Main St E	Trimont MN 56176-9709
Steven Stade	311 Apple St	PO Box 13	Trimont MN 56176-0013
Dennis Lee Smidt		311 Chestnut St E	Trimont MN 56176-9791
Jimmy & Sharon Lorenz	311 Chestnut St E	PO Box 295	Trimont MN 56176-0295
Douglas L & Bruce R Anderson		318 220th St	Trimont MN 56176-1294
John & Dianne M Ebeling et al		321 Beech St E	Trimont MN 56176-9661
Craig J & Cassandra E Weaver		321 Birch St E	Trimont MN 56176-9715
Lorraine Rohman (LE) et al.		330 Apple St E	Trimont MN 56176-9707
Tyler & Erika Ask		330 Chestnut St E	Trimont MN 56176-9791
Dana L & Anthony J Timm		331 Chestnut St E	Trimont MN 56176-9791
Ken & Deb Rohman		331 Main St E	Trimont MN 56176-9709
Morgan J Moeller		341 Main St E	Trimont MN 56176-9709
Kevin Joe Nelson		350 Ash St E	Trimont MN 56176-9711
Michael D & Marian Goldencrown et al.		350 Chestnut St E	Trimont MN 56176-9791
Lori L Finke	350 Highway 4 S	PO Box 323	Trimont MN 56176-0323
Eric M Ellanson		351 Ash St E	Trimont MN 56176-9711
Krista Peterson		351 Chestnut St E	Trimont MN 56176-9791
Gerald A & Karen Morris		372 185th St	Trimont MN 56176-1256
Pontow Family Living Trust		390 Chestnut St E	Trimont MN 56176-9791
Randy G & Renee J Grupe		4 Cedar Dr	Trimont MN 56176-1283
James, Glenda & Dean Sinn		4 Cedar Pl	Trimont MN 56176-1282
Pine Ridge Prairie LLC		4 Cedar Pl	Trimont MN 56176-1282
Thomas S & Ruth G Hage		40 5th Ave SE	Trimont MN 56176-9797
Susan Mary Hilgendorf	40 Ash St E	PO Box 267	Trimont MN 56176-0267
Paul & Lorraine Harter		40 Ash St W	Trimont MN 56176-9730
Janice E Storbeck Revoc Trust		40 Birch St E	Trimont MN 56176-9722
Robert K & Julie Vanzandt		40 Main St E	Trimont MN 56176-9601
Kevin & Ann Hilgendorf	40 Main St W	PO Box 26	Trimont MN 56176-0026
Dan Mattsen		41 5th Ave NE	Trimont MN 56176-1317
Stephen Salzman	41 Ash St E	PO Box 63	Trimont MN 56176-0063
Kelly J Sandmeyer		41 Ash St W	Trimont MN 56176-9730
Dennis Stromberg		410 Ash St E	Trimont MN 56176-9786
Erma Pygman		411 Ash St E	Trimont MN 56176-9786
Joseph & Linda Pygman		411 Ash St E	Trimont MN 56176-9786
Moore Automation Inc	411 Main St E	PO Box G	Trimont MN 56176-0319
Elaine R Johnson et al.	411 Main St W	PO Box 288	Trimont MN 56176-0288
Wayne & Doris Huber		420 Ash St E	Trimont MN 56176-9786
Thomas Gott		430 Birch St E	Trimont MN 56176-9716
Robert & Karla Bloomgren		430 Chestnut St E	Trimont MN 56176-9665
Katrina M Heier		431 Apple St W	Trimont MN 56176-4015
Keith D & Norma J Gates		431 Ash St E	Trimont MN 56176-9786
Darrell J & Katherine R Fuller		431 Chestnut St E	Trimont MN 56176-9665
Jeffrey D & Bethany A Sinn		434 185th St	Trimont MN 56176-1239
United Agtech Inc	435 Main St E	PO Box 331	Trimont MN 56176-0331
Douglas L Holtz	440 Apple St W	PO Box 95	Trimont MN 56176-0095
Chad L Winchester		440 Ash St E	Trimont MN 56176-9786
Patricia C Holtz		440 Birch St E	Trimont MN 56176-9716
Daniel T & Julie D Krumwiede		441 Ash St E	Trimont MN 56176-9786
Thomas Pygman et al.		450 Birch St E	Trimont MN 56176-9716
Gary L & Debra Jellema		450 Chestnut St E	Trimont MN 56176-9665
Shane M & Lisa Fett		451 Chestnut St E	Trimont MN 56176-9665
Robert R & Marlene M Anderson	461 200th St	PO Box 247	Trimont MN 56176-0247
Elaine E Anderson		463 200th St	Trimont MN 56176-1276
Ronald R Sparks et al.		467 185th St	Trimont MN 56176-1239
Trace & Stephanie Tumbleson		467 185th St	Trimont MN 56176-1239
Marion Burkhardt	50 Ash St W	PO Box 182	Trimont MN 56176-0182
Brian & Tina Krumwiede	50 Beech St W	PO Box 195	Trimont MN 56176-0195

Harley O & Alysia M Bolstad		50 Birch St W	Trimont MN 56176-9723
Sara B Leiding		51 Ash St W	Trimont MN 56176-9730
Nada Oanes		51 Birch St W	Trimont MN 56176-9723
Dennis Berkness		510 Ash St E	Trimont MN 56176-9713
Karen M Koeder		530 Ash St E	Trimont MN 56176-9713
Kevin L & Ocie E Nelson		531 Ash St E	Trimont MN 56176-9713
Rachelle Lubben		531 Main St W	Trimont MN 56176-9677
David A & Rachelle Lubben		531 Main St W	Trimont MN 56176-9677
Barry K & Allison I Schmidt		534 200th St	Trimont MN 56176-1278
Fred A Stabenow (LE) et al.	540 Ash St E	PO Box 5	Trimont MN 56176-0005
James & Shirley Guetzkow		540 Birch St E	Trimont MN 56176-9717
Theodore & Constance Richter		549 185th St	Trimont MN 56176-1201
Steven I & Debra A Olson		551 Main St W	Trimont MN 56176-9677
Mark A & Laura Gowen		565 200th St	Trimont MN 56176-1278
Tracy & Beth Melson		568 220th St	Trimont MN 56176-1308
D H & N F Faber Living Trusts		592 185th St	Trimont MN 56176-1201
Roland W & Donna S Hansen		6 Cedar Dr	Trimont MN 56176-1283
Loren Matejka		6 Cedar Pl	Trimont MN 56176-1282
Stephany J Feely		60 Ash St E	Trimont MN 56176-4010
Shane Schofield		60 Birch St E	Trimont MN 56176-9722
James S & Amy E Lien		60 Main St E	Trimont MN 56176-9601
Chad & Mayda Helmstetter	60 Main St W	PO Box 94	Trimont MN 56176-0094
Floyd M Olson (LE)	61 2nd Ave NW	PO Box 74	Trimont MN 56176-0074
John & Joyce Rabbe	61 Broadway S	PO Box 261	Trimont MN 56176-0261
Troy Melson		632 220th St	Trimont MN 56176-1309
John J & Kelli J Forstrom		640 190th St	Trimont MN 56176-1281
Ronald & Merlin Garlisch		656 230th St	Trimont MN 56176-1208
Rodney R & Suzanne J Erickson		659 200th St	Trimont MN 56176-1284
Lester Forstrom		665 190th St	Trimont MN 56176-1281
David & Gail Honnette		668 200th St	Trimont MN 56176-1284
Paul Honnette (LE) et al.		668 200th St	Trimont MN 56176-1284
John A & B Y Borntrager		670 190th St	Trimont MN 56176-1281
Rabbe Farms LLP	691 E Main	PO Box B	Trimont MN 56176-0260
Jonas & Eva Gossen et al.	70 Ash St W	PO Box 158	Trimont MN 56176-0158
Ione Laase (LE) et al.		70 Beech St W	Trimont MN 56176-4014
Marlene K Krumwiede		70 Apple St W	Trimont MN 56176-4003
Arlene M Janzen		701 Main St W	Trimont MN 56176-9611
Trelin & Kristie Swenson		707 215th St	Trimont MN 56176-1205
Joel K & Myrna J Rahm	71 4th Ave NW	PO Box 243	Trimont MN 56176-0243
Mark L Berkness		71 Ash St W	Trimont MN 56176-9730
Derek R Palmquist		71 Birch St E	Trimont MN 56176-9722
Richard L Pope Family Trust	751 Main St W	PO Box 364	Trimont MN 56176-0364
Birdella M Allen	768 180th St	PO Box 126	Trimont MN 56176-0126
Grant C & Kelly Carlson		80 3rd Ave SE	Trimont MN 56176-9710
Allen L Sandmeyer	80 4th Ave NE	PO Box 54	Trimont MN 56176-0054
T R & L J Kramer Trusts		81 2nd Ave SE	Trimont MN 56176-4048
Kevin Fett		81 Broadway St N	Trimont MN 56176-9701
Tiffany Jandl & M Brannum		813 220th St	Trimont MN 56176-1211
Charles F & Sandra J Dressen	851 Main St W	PO Box 369	Trimont MN 56176-0369
Darvin Bishop		859 200th St	Trimont MN 56176-1261
Kay Marie Cutler (LE) et al.		944 190th St	Trimont MN 56176-1264
Nick & Courtney Cutler		944 190th St	Trimont MN 56176-1264
Joel S & Kirsten C Rabbe		951 Main St W	Trimont MN 56176-4039
Kevin & Sheila Moore		966 200th St	Trimont MN 56176-1263
Kristine Elizabeth Scheff		PO Box 103	Trimont MN 56176-0103
Sonja Haugen		PO Box 25	Trimont MN 56176-0025
Leonard Whitfield		PO Box 112	Trimont MN 56176-0112
Rodger & Jill Taylor		PO Box 131	Trimont MN 56176-0131
Trimont Area Conservation Club		PO Box 131	Trimont MN 56176-0131
Scott L & Tammy A Borntrager		PO Box 132	Trimont MN 56176-0132

Barry R & M A Carlson		PO Box 133	Trimont MN 56176-0133
Douglas Blue		PO Box 143	Trimont MN 56176-0143
Rebecca Schmidtke		PO Box 145	Trimont MN 56176-0145
Ronald V & Mary L Shade		PO Box 161	Trimont MN 56176-0161
Russell F & F Delaney		PO Box 164	Trimont MN 56176-0164
Ronald L & Susan M Reicherts		PO Box 171	Trimont MN 56176-0171
David H & Kathleen Weiss		PO Box 174	Trimont MN 56176-0174
Allan R & Gladys S Johnson		PO Box 175	Trimont MN 56176-0175
Brian Krumwiede		PO Box 195	Trimont MN 56176-0195
Trimont Methodist Church		PO Box 202	Trimont MN 56176-0202
Kathleen A Senne et al. c/o Jerry Gray		PO Box 213	Trimont MN 56176-0213
Troy D Schmidtke		PO Box 215	Trimont MN 56176-0215
Rodney L & Jane E Anderson		PO Box 225	Trimont MN 56176-0225
Michael K Ebeling		PO Box 226	Trimont MN 56176-0226
Ronald & Nancy Erickson		PO Box 227	Trimont MN 56176-0227
Brian E & Julie Suter		PO Box 232	Trimont MN 56176-0232
Kevin W & Audrey J Diekmann		PO Box 234	Trimont MN 56176-0234
Sterling E & Dianne Adamson		PO Box 236	Trimont MN 56176-0236
Dustin P Weiss		PO Box 24	Trimont MN 56176-0024
Jerry N Gaalswyk		PO Box 242	Trimont MN 56176-0242
Curtis Umbreit		PO Box 246	Trimont MN 56176-0246
Umbreits Locker		PO Box 246	Trimont MN 56176-0246
Betty A (Umbreit) Rosenbrook		PO Box 248	Trimont MN 56176-0248
Lloyd & Elaine Olson		PO Box 250	Trimont MN 56176-0250
Scott A Fisher		PO Box 251	Trimont MN 56176-0251
Nathan & Allison Vrieze		PO Box 253	Trimont MN 56176-0253
Bryant & Pamela Eggert		PO Box 255	Trimont MN 56176-0255
Joyce L Rabbe		PO Box 261	Trimont MN 56176-0261
Jerry N & Paul H Gaalswyk		PO Box 265	Trimont MN 56176-0265
Evan Miss Covenant Church		PO Box 273	Trimont MN 56176-0273
Rudolph & Ruth Schoewe		PO Box 275	Trimont MN 56176-0275
Rudolph G & Ruth F Schoewe		PO Box 275	Trimont MN 56176-0275
Don K Franz		PO Box 282	Trimont MN 56176-0282
Loren A & Dawn C Matejka		PO Box 285	Trimont MN 56176-0285
Daryl & Lois M Schultz		PO Box 301	Trimont MN 56176-0301
Carol & R A Goodeman Anderson		PO Box 304	Trimont MN 56176-0304
Dennis & Kristin Clifford		PO Box 306	Trimont MN 56176-0306
Murle W & E L Fuller (LE) et al.		PO Box 308	Trimont MN 56176-0308
Barbara J Wrightson		PO Box 31	Trimont MN 56176-0031
Lucinda J Olson		PO Box 314	Trimont MN 56176-0314
Trinity Lutheran Church		PO Box 321	Trimont MN 56176-0321
Leland B Hansen	131 Birch St E	PO Box 325	Trimont MN 56176-0325
Triumph State Bank		PO Box 329	Trimont MN 56176-0329
Kelsey Borntrager		PO Box 33	Trimont MN 56176-0033
Jon E, Joel S & Kirsten C Rabbe		PO Box 330	Trimont MN 56176-0330
Marianne Holtz Trust		PO Box 334	Trimont MN 56176-0334
Patricia A Geerdes		PO Box 34	Trimont MN 56176-0034
Fred J & Doreen Rabbe		PO Box 344	Trimont MN 56176-0344
Kevin & Lauree J Kuehl		PO Box 351	Trimont MN 56176-0351
John R & Nikki J Indergaard		PO Box 356	Trimont MN 56176-0356
Karen Steinberg		PO Box 36	Trimont MN 56176-0036
Frederick E Weir		PO Box 365	Trimont MN 56176-0365
Gerald & Ardella J Mcgee		PO Box 374	Trimont MN 56176-0374
Kathryn Peterson or B Anthony		PO Box 388	Trimont MN 56176-0388
Leslie W, Darwin R & Beverly J Anthony		PO Box 388	Trimont MN 56176-0388
Henry, Rachel & Deanne E Gaalswyk		PO Box 403	Trimont MN 56176-0403
Paul , Mark & Jerry Gaalswyk		PO Box 403	Trimont MN 56176-0403

City of Trimont	PO Box 405	Trimont MN 56176-0405
Randy D & Darla Beatty Scheff	PO Box 43	Trimont MN 56176-0043
Douglas W & Mary E Huber	PO Box 52	Trimont MN 56176-0052
Rodney N & Diane E Persson	PO Box 57	Trimont MN 56176-0057
Lyle & Darlene Slaughter	PO Box 7	Trimont MN 56176-0007
Oliver & Michael Sandmeyer	PO Box 72	Trimont MN 56176-0072
Jeremy Reese	PO Box 76	Trimont MN 56176-0076
Lange Family Revocable Trust	PO Box 82	Trimont MN 56176-0082
Kenneth Olson	PO Box 84	Trimont MN 56176-0084
Karen A Dorschner	PO Box 92	Trimont MN 56176-0092
Wayne A & Arladyne E Stanton	PO Box 93	Trimont MN 56176-0093
Harlin H Holtz	PO Box 95	Trimont MN 56176-0095
First Evang Lutheran Church	PO Box F	Trimont MN 56176-0300
Nuway Cooperative	PO Box Q	Trimont MN 56176-0370
Current Resident	10 Ash St E	Trimont MN 56176-4010
Current Resident	10 Beech St W	Trimont MN 56176-4014
Current Resident	10 Cedar Dr	Trimont MN 56176-1283
Current Resident	10 Main St W	Trimont MN 56176-4004
Current Resident	1079 200th St	Trimont MN 56176-1227
Current Resident	11 Chestnut St W	Trimont MN 56176-4034
Current Resident	11 Main St E	Trimont MN 56176-9601
Current Resident	110 5th Ave NE	Trimont MN 56176-4030
Current Resident	110 Ash St E	Trimont MN 56176-4022
Current Resident	110 Birch St E	Trimont MN 56176-9662
Current Resident	111 1st Ave SW	Trimont MN 56176-4023
Current Resident	111 Apple St E	Trimont MN 56176-4026
Current Resident	111 Apple St W	Trimont MN 56176-4001
Current Resident	111 Ash St E	Trimont MN 56176-4022
Current Resident	111 Birch St W	Trimont MN 56176-9724
Current Resident	111 Chestnut St W	Trimont MN 56176-4011
Current Resident	120 Chestnut St E	Trimont MN 56176-9719
Current Resident	121 Main St E	Trimont MN 56176-9790
Current Resident	1234 200th St	Trimont MN 56176-1230
Current Resident	1261 210th St	Trimont MN 56176-1248
Current Resident	130 Beech St E	Trimont MN 56176-9704
Current Resident	130 Birch St E	Trimont MN 56176-9662
Current Resident	131 Ash St W	Trimont MN 56176-9726
Current Resident	131 Birch St E	Trimont MN 56176-9662
Current Resident	141 Main St W	Trimont MN 56176-9600
Current Resident	150 Main St W	Trimont MN 56176-9600
Current Resident	151 5th Ave NW	Trimont MN 56176-4047
Current Resident	151 Apple St W	Trimont MN 56176-4001
Current Resident	151 Chestnut St W	Trimont MN 56176-4011
Current Resident	170 Main St W	Trimont MN 56176-9600
Current Resident	171 200th St	Trimont MN 56176-1268
Current Resident	171 7th Ave SE	Trimont MN 56176-4050
Current Resident	1765 90th Ave	Trimont MN 56176-1219
Current Resident	180 4th Ave NE	Trimont MN 56176-9795
Current Resident	181 2nd Ave NE	Trimont MN 56176-9793
Current Resident	181 3rd Ave SE	Trimont MN 56176-9731
Current Resident	181 Broadway St S	Trimont MN 56176-4031
Current Resident	1843 90th Ave	Trimont MN 56176-1220
Current Resident	1864 110th Ave	Trimont MN 56176-1225
Current Resident	1890 60th Ave	Trimont MN 56176-1280
Current Resident	190 Main St W	Trimont MN 56176-9600
Current Resident	1925 70th Ave	Trimont MN 56176-1214
Current Resident	1948 State Highway 4	Trimont MN 56176-1215
Current Resident	1951 State Highway 4	Trimont MN 56176-1215
Current Resident	1957 120th Ave	Trimont MN 56176-1229
Current Resident	1968 140th Ave	Trimont MN 56176-1235

Current Resident	20 3rd Ave SE	Trimont MN 56176-9710
Current Resident	20 Ash St E	Trimont MN 56176-4010
Current Resident	20 Birch St E	Trimont MN 56176-9722
Current Resident	2005 State Highway 4	Trimont MN 56176-1311
Current Resident	2031 130th Ave	Trimont MN 56176-1232
Current Resident	2088 80th Ave	Trimont MN 56176-1213
Current Resident	21 Birch St W	Trimont MN 56176-9723
Current Resident	210 3rd Ave SE	Trimont MN 56176-4017
Current Resident	210 Ash St E	Trimont MN 56176-4007
Current Resident	210 Birch St E	Trimont MN 56176-9663
Current Resident	210 Main St W	Trimont MN 56176-4021
Current Resident	211 1st Ave NE	Trimont MN 56176-9603
Current Resident	211 1st Ave SE	Trimont MN 56176-9721
Current Resident	211 2nd Ave SW	Trimont MN 56176-9794
Current Resident	211 Beech St E	Trimont MN 56176-9705
Current Resident	211 Birch St E	Trimont MN 56176-9663
Current Resident	2142 60th Ave	Trimont MN 56176-1287
Current Resident	220 Apple St E	Trimont MN 56176-9799
Current Resident	221 Beech St E	Trimont MN 56176-9705
Current Resident	230 Beech St E	Trimont MN 56176-9705
Current Resident	231 Ash St W	Trimont MN 56176-9727
Current Resident	231 Beech St E	Trimont MN 56176-9705
Current Resident	231 Birch St W	Trimont MN 56176-9725
Current Resident	231 Chestnut St E	Trimont MN 56176-9720
Current Resident	231 Main St E	Trimont MN 56176-9674
Current Resident	240 Apple St W	Trimont MN 56176-9718
Current Resident	240 Ash St E	Trimont MN 56176-4007
Current Resident	241 Ash St W	Trimont MN 56176-9727
Current Resident	241 Beech St E	Trimont MN 56176-9705
Current Resident	241 Main St W	Trimont MN 56176-4021
Current Resident	251 Apple St W	Trimont MN 56176-9718
Current Resident	251 Ash St W	Trimont MN 56176-9727
Current Resident	251 Main St E	Trimont MN 56176-9674
Current Resident	256 190th St	Trimont MN 56176-1265
Current Resident	260 2nd Ave NE	Trimont MN 56176-9714
Current Resident	261 Birch St W	Trimont MN 56176-9725
Current Resident	270 Ash St W	Trimont MN 56176-9727
Current Resident	271 Ash St W	Trimont MN 56176-9727
Current Resident	292 190th St	Trimont MN 56176-1265
Current Resident	294 Main St W	Trimont MN 56176-4021
Current Resident	30 Apple St E	Trimont MN 56176-4016
Current Resident	30 Beech St W	Trimont MN 56176-4014
Current Resident	30 Birch St W	Trimont MN 56176-9723
Current Resident	303 Broadway St S	Trimont MN 56176-9732
Current Resident	31 Apple St W	Trimont MN 56176-4003
Current Resident	31 Ash St W	Trimont MN 56176-9730
Current Resident	31 Birch St W	Trimont MN 56176-9723
Current Resident	31 Main St W	Trimont MN 56176-4004
Current Resident	310 Apple St E	Trimont MN 56176-9707
Current Resident	311 Beech St E	Trimont MN 56176-9661
Current Resident	311 Birch St E	Trimont MN 56176-9715
Current Resident	320 Ash St E	Trimont MN 56176-9711
Current Resident	321 Apple St E	Trimont MN 56176-9707
Current Resident	330 Ash St E	Trimont MN 56176-9711
Current Resident	330 Birch St E	Trimont MN 56176-9715
Current Resident	331 Apple St E	Trimont MN 56176-9707
Current Resident	331 Chestnut St E	Trimont MN 56176-9791
Current Resident	340 Apple St E	Trimont MN 56176-9707
Current Resident	340 Main St W	Trimont MN 56176-4033
Current Resident	350 Birch St E	Trimont MN 56176-9715

Current Resident	351 Birch St E	Trimont MN 56176-9715
Current Resident	358 200th St	Trimont MN 56176-1273
Current Resident	375 200th St	Trimont MN 56176-1273
Current Resident	40 Apple St E	Trimont MN 56176-4016
Current Resident	41 2nd Ave NW	Trimont MN 56176-4012
Current Resident	41 Apple St W	Trimont MN 56176-4003
Current Resident	41 Beech St E	Trimont MN 56176-9703
Current Resident	41 Birch St E	Trimont MN 56176-9722
Current Resident	41 Birch St W	Trimont MN 56176-9723
Current Resident	41 Main St E	Trimont MN 56176-9601
Current Resident	411 Apple St E	Trimont MN 56176-9614
Current Resident	422 200th St	Trimont MN 56176-1276
Current Resident	422 Main St E	Trimont MN 56176-4019
Current Resident	429 Main St E	Trimont MN 56176-4019
Current Resident	431 Birch St E	Trimont MN 56176-9716
Current Resident	431 Main St E	Trimont MN 56176-4019
Current Resident	451 Birch St E	Trimont MN 56176-9716
Current Resident	460 Ash St E	Trimont MN 56176-9786
Current Resident	460 Birch St E	Trimont MN 56176-9716
Current Resident	460 Chestnut St E	Trimont MN 56176-9665
Current Resident	461 Ash St E	Trimont MN 56176-9786
Current Resident	50 Apple St W	Trimont MN 56176-4003
Current Resident	50 Ash St E	Trimont MN 56176-4010
Current Resident	50 Beech St E	Trimont MN 56176-9703
Current Resident	50 Birch St E	Trimont MN 56176-9722
Current Resident	500 Chestnut St E	Trimont MN 56176-4046
Current Resident	51 Apple St W	Trimont MN 56176-4003
Current Resident	51 Ash St E	Trimont MN 56176-4010
Current Resident	51 Beech St E	Trimont MN 56176-9703
Current Resident	51 Birch St E	Trimont MN 56176-9722
Current Resident	511 2nd Ave SW	Trimont MN 56176-4032
Current Resident	511 Ash St E	Trimont MN 56176-9713
Current Resident	511 Main St W	Trimont MN 56176-9677
Current Resident	521 Ash St E	Trimont MN 56176-9713
Current Resident	531 Ash St E	Trimont MN 56176-9713
Current Resident	531 Main St W	Trimont MN 56176-9677
Current Resident	542 Main St E	Trimont MN 56176-4008
Current Resident	550 Ash St E	Trimont MN 56176-9713
Current Resident	560 Ash St E	Trimont MN 56176-9713
Current Resident	560 Birch St E	Trimont MN 56176-9717
Current Resident	60 Apple St W	Trimont MN 56176-4003
Current Resident	60 Beech St E	Trimont MN 56176-9703
Current Resident	60 Chestnut St E	Trimont MN 56176-9664
Current Resident	60 Main St E	Trimont MN 56176-9601
Current Resident	61 1st Ave NW	Trimont MN 56176-9728
Current Resident	61 Apple St E	Trimont MN 56176-4016
Current Resident	61 Apple St W	Trimont MN 56176-4003
Current Resident	61 Beech St E	Trimont MN 56176-9703
Current Resident	61 Birch St E	Trimont MN 56176-9722
Current Resident	640 190th St	Trimont MN 56176-1281
Current Resident	691 Main St E	Trimont MN 56176-4049
Current Resident	70 Apple St W	Trimont MN 56176-4003
Current Resident	70 Ash St E	Trimont MN 56176-4010
Current Resident	70 Main St E	Trimont MN 56176-9601
Current Resident	71 2nd Ave SE	Trimont MN 56176-4048
Current Resident	71 Apple St W	Trimont MN 56176-4003
Current Resident	71 Ash St E	Trimont MN 56176-4010
Current Resident	741 190th St	Trimont MN 56176-1275
Current Resident	751 Main St W	Trimont MN 56176-9611
Current Resident	77 Beech St W	Trimont MN 56176-4014

Current Resident		80 3rd Ave NW	Trimont MN 56176-4020
Current Resident		80 Broadway St N	Trimont MN 56176-9701
Current Resident		80 Broadway St S	Trimont MN 56176-4013
Current Resident		81 1st Ave NW	Trimont MN 56176-9728
Current Resident		81 2nd Ave NW	Trimont MN 56176-1316
Current Resident		81 4th Ave NE	Trimont MN 56176-9708
Current Resident		81 Apple St W	Trimont MN 56176-9733
Current Resident		883 190th St	Trimont MN 56176-1202
Current Resident		885 190th St	Trimont MN 56176-1202
Current Resident		90 Beech St W	Trimont MN 56176-4014
Current Resident		964 190th St	Trimont MN 56176-1264
Current Resident		967 190th St	Trimont MN 56176-1264
Lloyd O & Dianne Olson (LE) et al.		2005 State Highway 4	Trimont MN 56176-1311
Tina Jentz (LE) et al.		30 Beech St W	Trimont MN 56176-4014
Duane A Meade		441 Apple St W	Trimont MN 56176-4015
Leslie W Peterson		511 Main St W	Trimont MN 56176-9677
Dawn M & Robert E Flohre		10 Main St	Welcome MN 56181-1335
Tammy L Nowak Trust		10 Shafter St	Welcome MN 56181-1317
Rodney & Susan Nelson		1003 Martin Rd	Welcome MN 56181-1366
Neal A & Alma Barber		1005 Martin Rd	Welcome MN 56181-1366
Steven D & Eileen Morrow		1007 110th Ave	Welcome MN 56181-1359
Nichole K Nelsen		101 Kruse St	Welcome MN 56181-3300
Louis A & Delores M Weyer		101 Quarterline St	Welcome MN 56181-9636
Harold I & Joan B Nowak		1013 Martin Rd	Welcome MN 56181-1366
Allan & Gloria Lindell		1015 Martin Rd	Welcome MN 56181-1366
Harlan C & Joan M Thilges		1017 Martin Rd	Welcome MN 56181-1366
Timothy & Lori Kain Landkamer	102 3rd St	PO Box 117	Welcome MN 56181-0117
Andrew W & Jennifer M Borg		102 Campbell St	Welcome MN 56181-5020
Easy Automation Inc		102 Mill St	Welcome MN 56181-5045
Dewaine L Gilbertson		102 Van Amber St W	Welcome MN 56181-4700
Jean Burkhardt		1021 Martin Rd	Welcome MN 56181-1366
Larry J & Marsha L Schultz		1025 Martin Rd	Welcome MN 56181-1366
Wm G & Carol A Lafavor		103 Harrison St	Welcome MN 56181-5036
Paul R & Judith A Klenke	103 N Dugan St	PO Box 363	Welcome MN 56181-0363
Gary & Janet Miller		1031 Martin Rd	Welcome MN 56181-1366
Duane & Kari Anderson		1037 Martin Rd	Welcome MN 56181-1366
Dean & Kathy Weiss	104 Dugan St	PO Box 315	Welcome MN 56181-0315
Nicholas Thiesse		104 Guide St N	Welcome MN 56181-9709
Gayle L Askeland	104 Harrison St	PO Box 87	Welcome MN 56181-0087
Steven R & Jennifer L Ellis		104 Kruse St	Welcome MN 56181-5012
Benjamin L & Kelly M Wolter		104 Montgomery St	Welcome MN 56181-5033
Randy Stade		105 Kruse St	Welcome MN 56181-5012
George A & G F Hendricks	105 Montgomery St	PO Box 377	Welcome MN 56181-0377
Leroy W & Kathleen D Hodges		1051 Martin Rd	Welcome MN 56181-1366
Paul G & Marlene K Stueven		1055 Martin Rd	Welcome MN 56181-1366
Steven D Hendricks		1057 110th Ave	Welcome MN 56181-1359
Chad R & Amanda L Kosbab		1059 Martin Rd	Welcome MN 56181-1366
Lois E & Christopher S Nelson	106 Harrison St	PO Box 14	Welcome MN 56181-0014
Kirk & Rebecca S Yahnke		1061 Martin Rd	Welcome MN 56181-1366
John Shell	107 Harrison St	PO Box 293	Welcome MN 56181-0293
Marian M Westphal		107 Quarterline St	Welcome MN 56181-9636
Travis & Teri Petersen		108 Montgomery St	Welcome MN 56181-5033
Joseph P & Sandra K Newville		109 Harrison St	Welcome MN 56181-5036
Dale A & Laura Anderson		11 Circle Dr W	Welcome MN 56181-9782
John Mark Guerdet		11 Main St	Welcome MN 56181-1335
Nolan J & Angela Posivio		11 Shafter St	Welcome MN 56181-1317
Gregory & Jennifer Moore	110 Campbell	PO Box 64	Welcome MN 56181-0064
Thomas A Mcdonald		110 Hulseman St	Welcome MN 56181-5014
Welcome State Bank	111 Guide St N	PO Box 238	Welcome MN 56181-0238
Dennis & L J Schwichtenberg		1117 120th St	Welcome MN 56181-1362

Roger J & Joan L Lohse		112 Campbell St	Welcome MN 56181-5020
Evelyn Koons	112 E 3rd	PO Box 84	Welcome MN 56181-0084
Grady D Schwichtenberg		1128 120th St	Welcome MN 56181-1362
Mary M Williams	114 Second St	PO Box 34	Welcome MN 56181-0034
Loren & Marlene Kuehl		1161 170th St	Welcome MN 56181-1381
Richard A & Amy Louise Koons		1172 125th St	Welcome MN 56181-1397
Ronald Goodemann		1172 125th St	Welcome MN 56181-1397
Glenda Lynn Clifford		1177 125th St	Welcome MN 56181-1397
Esther M Bicknase		118 Weaver St	Welcome MN 56181-9646
Charles R & Dawn R Abel		1189 125th St	Welcome MN 56181-1397
Charles L & Barbara L Poppe		1202 State Highway 263	Welcome MN 56181-1334
David A & Laurie A Jensen		1212 83rd St	Welcome MN 56181-1352
Douglas L & Michele L Storbeck		1236 130th St	Welcome MN 56181-1401
Jerald L & Joann S Hagen		1237 120th St	Welcome MN 56181-1363
Scott & Flora Thiesse		1261 120th St	Welcome MN 56181-1363
Aldo I & Karen Senne		1271 150th St	Welcome MN 56181-1313
Neil J & Carol B Erickson		1275 Maple Rd	Welcome MN 56181-1311
Brad L & Jennifer J Hughes		13 Circle Dr W	Welcome MN 56181-9782
Lorenz W & M J Brockman		1303 110th Ave	Welcome MN 56181-1376
Wayne W & Mildred G Joyce		1304 130th Ave	Welcome MN 56181-1315
Darin & Wendy Brockman		1313 110th Ave	Welcome MN 56181-1376
Gerald & Marlene Moeller		1323 160th Ave	Welcome MN 56181-1322
John W Schaefer		1328 130th St	Welcome MN 56181-1318
Myron G Latzke Rev Trust et al.		1344 105th St	Welcome MN 56181-1343
Kenneth Petzel		1348 180th St	Welcome MN 56181-1308
Arvin & Scott Rosenberg		1351 130th St	Welcome MN 56181-1318
M F Hartjen Res Trust		1372 110th Ave	Welcome MN 56181-1376
M J Hartjen Res Trust		1372 110th Ave	Welcome MN 56181-1376
Helen Hartjen		1374 110th Ave	Welcome MN 56181-1376
Robert Moffitt & Lonnie Tic		1374 110th Ave	Welcome MN 56181-1376
Gary L & Lorena Zeitz		1377 120th Ave	Welcome MN 56181-1378
Melva C L Ziemer		1378 120th St	Welcome MN 56181-1333
Wesley D & Margaret Anderson		1382 180th St	Welcome MN 56181-1308
Richad D & Jolene Kruse Trusts		1383 130th St	Welcome MN 56181-1318
Daniel J Nowak		1412 100th Ave	Welcome MN 56181-1367
Timothy J & Debra K Meyer		1414 130th Ave	Welcome MN 56181-1314
Howard D & Eileen M Abel TT		1419 150th Ave	Welcome MN 56181-1392
Duane Daleske et al.		1425 110th Ave	Welcome MN 56181-1375
Wayne R & Cheryl A Wolle		1437 120th St	Welcome MN 56181-1331
Douglas C & Karen R Mclellan		1442 130th St	Welcome MN 56181-1319
Lynn B Jagodzinske		1444 160th St	Welcome MN 56181-1305
Scott A & Amy M Morrow		1453 130th St	Welcome MN 56181-1319
Cory W & Carisa M Andersen		1454 120th Ave	Welcome MN 56181-1379
Corner K Ranch LLC		1454 150th St	Welcome MN 56181-1391
Daryl G & Carol J Bartz		1454 150th St	Welcome MN 56181-1391
Gary W & Connie Peymann		1454 150th St	Welcome MN 56181-1391
Lilly Creek Farms Inc		1454 150th St	Welcome MN 56181-1391
Playa Del Farma LLC		1454 150th St	Welcome MN 56181-1391
Burdean & Dorothy Hartwig		1463 150th Ave	Welcome MN 56181-1392
Ruth Davis		1472 150th Ave	Welcome MN 56181-1392
Micky & Kimberly Garbers		1475 140th Ave	Welcome MN 56181-1303
Fraser Township Hall		1486 130th St	Welcome MN 56181-1319
John T & Rita R Garbers		1486 130th St	Welcome MN 56181-1319
Loren Schultz		1492 100th Ave	Welcome MN 56181-1367
Roland & Mary Ann Philipp		1493 100th Ave	Welcome MN 56181-1367
Donald H & Mary M Garbers		15 Circle Dr W	Welcome MN 56181-9782
Dav Jago LLC		1506 120th Ave	Welcome MN 56181-1380
Kat Jago LLC		1506 120th Ave	Welcome MN 56181-1380
Maynard L & Mary Jagodzinske		1506 120th Ave	Welcome MN 56181-1380
Sar Jago LLC		1506 120th Ave	Welcome MN 56181-1380

N H & Trust B Patsche et al.		1514 150th St	Welcome MN 56181-1390
Darrell A & Brenda L Ziegler		1517 120th Ave	Welcome MN 56181-1380
Beverly J Krahmer		1524 140th St	Welcome MN 56181-1300
Christopher & J Eiden Kellam		1526 120th Ave	Welcome MN 56181-1380
Barry W Maday		1526 170th St	Welcome MN 56181-1387
Paul Thomas Hein		1528 130th St	Welcome MN 56181-1320
Brent Thiesse		1535 130th St	Welcome MN 56181-1320
Ronald H Rosenberg		1547 150th St	Welcome MN 56181-1390
Bruce & Deborah A Whitehead		1550 110th Ave	Welcome MN 56181-1372
Gregory L Wohlhuter		1551 130th Ave	Welcome MN 56181-1312
Roxann M & Dennis R Hample		1551 130th Ave	Welcome MN 56181-1312
David Lynn & Dawn M Hartung		1565 140th Ave	Welcome MN 56181-1304
Larry & Deb Philipp		1566 120th Ave	Welcome MN 56181-1380
Clarence A Andersen Irrev Trust		1570 100th Ave	Welcome MN 56181-1368
Velma M Andersen Irrev Trust		1570 100th Ave	Welcome MN 56181-1368
Kathleen K Larson		1573 130th St	Welcome MN 56181-1320
Dale A, Linda K & Kevin L Shaw		1576 130th Ave	Welcome MN 56181-1312
Doug & Lin Hilgendorf Rev Trusts		1579 120th Ave	Welcome MN 56181-1380
Fox Lake Township		1579 120th Ave	Welcome MN 56181-1380
Ross & Carol Hilgendorf		1583 120th Ave	Welcome MN 56181-1380
Charles & Wanda Patsche		1583 150th Ave	Welcome MN 56181-1389
CW Pork Inc et al.		1583 150th Ave	Welcome MN 56181-1389
Ronald & Lana Morris		1591 100th Ave	Welcome MN 56181-1368
Marilyn L Posivio		16 Shafter St	Welcome MN 56181-1317
Gregory L & Jillayne E Denton		1618 130th Ave	Welcome MN 56181-1310
Jay A & Sarah Striemer		1621 140th Ave	Welcome MN 56181-1306
Roscoe & Augusta Stusse		1628 120th St	Welcome MN 56181-1325
Theodore H & Gary L Stusse		1628 120th St	Welcome MN 56181-1325
Jeffrey & Heather Moeller		1632 150th Ave	Welcome MN 56181-1388
John V & Joann L Hilgendorf		1635 130th Ave	Welcome MN 56181-1310
Larry & Sheri Potts		1643 100th Ave	Welcome MN 56181-1369
Tod Williamson		1665 100th Ave	Welcome MN 56181-1369
Tod M & Twyla D Williamson		1667 100th Ave	Welcome MN 56181-1369
Matthew & Angel Moeller		1668 130th St	Welcome MN 56181-1323
Janeen Bachenberg		1669 120th St	Welcome MN 56181-1325
Lois Handevidt (LE) et al.		1670 130th Ave	Welcome MN 56181-1310
Lester H & Elaine M Lenz		1672 120th St	Welcome MN 56181-1325
Keith & Kevin Darmer		1678 140th Ave	Welcome MN 56181-1306
Harley & J R Rosenberg		168 Dewey St	Welcome MN 56181-1330
David E Meschke		1684 130th St	Welcome MN 56181-1323
Jonathan Meschke		1686 130th St	Welcome MN 56181-1323
David M & Heidi J Bicknase		1691 150th Ave	Welcome MN 56181-1388
Tamara L Fritz		17 Circle Dr W	Welcome MN 56181-9782
Ronald C & Gloria K Martin		1707 150th Ave	Welcome MN 56181-1386
Kevin L & Lynette J Shaw		1713 140th Ave	Welcome MN 56181-1307
Kevin L & Kristy Prafke		1718 130th Ave	Welcome MN 56181-1309
Douglas D & S A Ziemer		1771 140th Ave	Welcome MN 56181-1307
Rodney & Ann Marie Fiala		1799 150th Ave	Welcome MN 56181-1386
Don S & Nancy A Nordstrom		1809 115th Ave	Welcome MN 56181-1382
Jordan R Garbers & K Fedder		19 Circle Dr W	Welcome MN 56181-9782
Travis & Tara Schuett		20 Circle Dr W	Welcome MN 56181-9783
Randy K & Irene M Quiring		201 Dugan St S	Welcome MN 56181-9605
Eugene H Storbeck et al.	201 Harrison	PO Box 386	Welcome MN 56181-0386
Joel Rae Seibring		201 Kelser St S	Welcome MN 56181-9790
Richard Ring		201 Kruse St	Welcome MN 56181-5011
Gregory D Geerdes		201 Quarterline St	Welcome MN 56181-9637
Gary L Warriner		201 Van Amber St W	Welcome MN 56181-9702
Eugene W Scheff		202 Guide St N	Welcome MN 56181-9743
Robert E Mattin		202 Harrison St	Welcome MN 56181-5037
Doug & June Nelson et al.		202 Kruse St	Welcome MN 56181-5011

Michael A & Jami J Thompson		202 Kruse St	Welcome MN 56181-5011
Nicholas & Stephanie Hillmer		202 Van Amber St W	Welcome MN 56181-9703
Randall Hjelmtveit		202 Weaver St	Welcome MN 56181-9606
Tyler J Bovy		203 Dugan St S	Welcome MN 56181-9605
Clarence L & Julie Schulz		203 Kelser St	Welcome MN 56181-5041
Judith Ann Cook		203 Montgomery St # 334	Welcome MN 56181-5035
Jay M & Beth L Mulso		203 Van Amber St W	Welcome MN 56181-9700
Scot Scheff		203 Weaver St	Welcome MN 56181-9606
James & M Wohlhuter (LE) et al.		204 Harrison St	Welcome MN 56181-5037
David L Peterson	204 Hulseman	PO Box 421	Welcome MN 56181-0421
Matt Bau		204 Kruse St	Welcome MN 56181-5011
Jennifer Williams		204 Montgomery St	Welcome MN 56181-5035
Steven R & Rebecca R Olsen		204 Van Amber St W	Welcome MN 56181-9703
Gary Koenecke		205 Dugan St N	Welcome MN 56181-5026
Paul A Jagodzinske		205 Kruse St	Welcome MN 56181-5011
Mark J & S L Bicknase Jewison		205 Dugan St S	Welcome MN 56181-9605
David M Hanson		205 Sewell St S	Welcome MN 56181-9635
Dawnita Jo Jagodzinske		205 Van Amber St W	Welcome MN 56181-9700
Richard Rasmussen		206 Dugan St S	Welcome MN 56181-9604
Jeffrey & Dawn Schultz		206 Kelser St	Welcome MN 56181-5041
Dale & Angela Henning		206 Van Amber St W	Welcome MN 56181-9703
Todd A & Rhonda L Oechsle		207 Dugan St N	Welcome MN 56181-5026
Violet R Hansen		207 Van Amber St W	Welcome MN 56181-9700
Scott & Amy Morrow		208 Cleveland St E	Welcome MN 56181-9794
Geneva Nelle Evans et al.		208 Dugan St S	Welcome MN 56181-9604
William E & Nanette M Badger		208 Guide St N	Welcome MN 56181-9743
Todd R & Rita M Williams		208 Van Amber St W	Welcome MN 56181-9703
Craig & Lori Groshens		209 Dugan St S	Welcome MN 56181-9605
Quinton A Pytleski		209 Kelser St	Welcome MN 56181-5041
Kim Behrends	209 Montgomery St	PO Box 122	Welcome MN 56181-0122
Dwaine & Shirley A Kurseth		21 Circle Dr W	Welcome MN 56181-9782
Michael A Lee		210 Campbell St	Welcome MN 56181-5018
Carol J & Donald W Shoberg		210 Cleveland St E	Welcome MN 56181-9794
Larry Puhrman	210 Dugan St	PO Box 252	Welcome MN 56181-0252
Roger J & Julie A Morris		210 Van Amber St W	Welcome MN 56181-9703
Stacie Lynn Jorgenson Anderson		211 Dugan St S	Welcome MN 56181-9605
Marland J & Phyllis J Arndt	211 Kelser St	PO Box 405	Welcome MN 56181-0405
SST Daisy Corporation		211 Dugan St S	Welcome MN 56181-9605
Curtis & Marion Mattsen et al.		211 Sewell St S	Welcome MN 56181-9635
Lynn M Bamgbose		211 Van Amber St W	Welcome MN 56181-9780
Harold B Borchardt et al.		212 Dugan St S	Welcome MN 56181-9604
Alvin W & Mary A Schultze		213 Cleveland St E	Welcome MN 56181-1396
Larry L & Carol J Jurs	213 Kelser St	PO Box 296	Welcome MN 56181-0296
St Pauls United Church		214 Dugan St N	Welcome MN 56181-5026
Margaret S Mcdonald		215 Dugan St S	Welcome MN 56181-9605
Francis W Smith		216 Kelser St	Welcome MN 56181-5041
Betty Lou Krueger		217 Dugan St S	Welcome MN 56181-9605
James & Diane Korte		218 Cleveland St E	Welcome MN 56181-9794
Edwin A & Marlene K Abel		219 Dugan St S	Welcome MN 56181-9605
Mary Ann Debus	22 Circle Dr	PO Box 355	Welcome MN 56181-0355
Elenora M Bong (LE) et al.		22 Main St	Welcome MN 56181-1335
Don D & M J Schlager		3 Circle Dr W	Welcome MN 56181-9782
Harold R & Emma L King		301 Bidwell St	Welcome MN 56181-1399
Delano A & Elaine Bergemann		301 Kruse St	Welcome MN 56181-5013
Kristine Redenius		302 Bidwell St	Welcome MN 56181-1399
Gary L & S K Scheff	302 Cleveland St	PO Box 273	Welcome MN 56181-0273
Lynn R Peterson & Troy J Stade		303 Hulseman St	Welcome MN 56181-5017
Sarah J Barker (LE) et al.	303 Montgomery	PO Box 121	Welcome MN 56181-0121
Dwain & Barbara Hartwig		303 Dugan St S	Welcome MN 56181-9611
Lewis W & Mavis Meyer (LE) et al.	PO Box 681	303 Weaver St	Welcome MN 56181-9644

Jeremy Wink	304 Hulseman	PO Box 138	Welcome MN 56181-0138
Ronald L & Jean E Schock		304 Weaver St	Welcome MN 56181-9644
Kevin L Sr Urban		305 Bidwell St	Welcome MN 56181-1399
Marion H & Hildegard S Bunge	305 Campbell	PO Box 35	Welcome MN 56181-0035
Sharon Chavez		305 Hulseman St	Welcome MN 56181-5017
Olin G & Linda E Bakke		305 Weaver St	Welcome MN 56181-9644
Faith Sokoloski		306 Campbell St	Welcome MN 56181-5019
Kevin S & Jody L Hemann		306 Dugan St N	Welcome MN 56181-5025
William Rosa		306 Kruse St	Welcome MN 56181-5013
Michael A Kleinschmidt		307 Kruse St	Welcome MN 56181-5013
Lori J (Meyer) Stibbe	307 N Dugan St	PO Box 393	Welcome MN 56181-0393
Peggy S Crimmins		307 Weaver St	Welcome MN 56181-9644
Craig & Carol Senne		308 3rd St	Welcome MN 56181-5006
School District #2448		308 4th St	Welcome MN 56181-5047
John T & Denyse R Borchardt		308 Dugan St S	Welcome MN 56181-9601
Craig D & Patti J Leschefske		308 Guide St S	Welcome MN 56181-9602
Wanda Shaikoski		308 Montgomery St	Welcome MN 56181-5034
Dallas S & Tami J Rasmussen		309 Hulseman St	Welcome MN 56181-5017
Gary L Franks		309 Kruse St	Welcome MN 56181-5013
Rodney D & Teresa M Ehlert		310 3rd St	Welcome MN 56181-5006
Scott A & Mary K Cole		310 Dugan St N	Welcome MN 56181-5025
Kenneth Wolford et al.	311 Campbell	PO Box 74	Welcome MN 56181-0074
Michael L Mcdonald		311 Dugan St N	Welcome MN 56181-5025
Jeri L Johnson		311 Montgomery St	Welcome MN 56181-5034
Bennie L & Alice V Blom TTs		316 Guide St S	Welcome MN 56181-9602
Kari L Wedel		318 Guide St S	Welcome MN 56181-9602
Steven & Penny Wright Weber		32 Dewey St	Welcome MN 56181-1365
Amy Schwager		PO Box 253	Welcome MN 56181-0253
Derry Dettmer		PO Box 272	Welcome MN 56181-0272
Larry D & Kathryn E Behrens		4 Circle Dr W	Welcome MN 56181-9783
Harlan & Sena Berkness		4 Schley St	Welcome MN 56181-1326
Vladimir Aksenov		404 2nd St	Welcome MN 56181-5032
Eugene L & Jan S Leach		406 4th St	Welcome MN 56181-5008
Keith G Strausser	407 1st St	PO Box 322	Welcome MN 56181-0322
Aaron E & Jessica L Hoffman		407 3rd St	Welcome MN 56181-5001
Dustin William Olson		407 Dugan St N	Welcome MN 56181-5024
Shirley Juhl		408 1st St	Welcome MN 56181-5039
Richard E & Tammy Hand		408 Weaver St	Welcome MN 56181-9642
Lee A & Mary A Thompson		409 Guide St N	Welcome MN 56181-9784
Mary Gunnary		409 Harrison St	Welcome MN 56181-9745
Heath T Munich		409 Mill St	Welcome MN 56181-5010
Joshua Robert Ruby		410 Mill St	Welcome MN 56181-5010
Clair E Klug		410 Weaver St	Welcome MN 56181-9642
John B Frerichs		411 Guide St N	Welcome MN 56181-9784
John W Rochefort		411 Mill St	Welcome MN 56181-5010
Ronnie R & Marilyn Montgomery		411 Weaver St	Welcome MN 56181-9643
Ralph L Stanton		412 Bidwell St	Welcome MN 56181-1400
Robert & C A Swanson (LE) et al.		412 Weaver St	Welcome MN 56181-9642
Matt & Dana Becker		413 Harrison St	Welcome MN 56181-9745
Brenda Lee Lemier		413 Mill St	Welcome MN 56181-5010
Nathan & Katy Winter Hanson		416 Weaver St	Welcome MN 56181-9642
Randy S & Lisa A Koenecke		418 Mill St	Welcome MN 56181-5010
Eugene & Elizabeth Ann Olson		420 5th St	Welcome MN 56181-1394
Christopher & Laura Borchardt		425 5th St	Welcome MN 56181-1394
Crystal Lynn Lemier-Cooper		428 Mill St	Welcome MN 56181-5010
Richard J & Linda L Kling		43 Dewey St	Welcome MN 56181-1365
Brandon Carl Nordstrom		1809 115th Ave	Welcome MN 56181-1382
Arven E & Almeda K Holland		5 Circle Dr W	Welcome MN 56181-9782
Joyce E Jones		5 Dewey St	Welcome MN 56181-1365
Robert F & Jannelle Spear		5 Dewey St	Welcome MN 56181-1365

Philip L Burgess		501 Homewood Dr N	Welcome MN 56181-9607
Teresa Lynn Schott		501 Dugan St N	Welcome MN 56181-9746
Albert & Cora Olson		502 Guide St N	Welcome MN 56181-9787
Douglas & Tami Gerhardt		502 Homewood Dr N	Welcome MN 56181-9793
Ronda Quinn		503 1st St	Welcome MN 56181-5044
John A & Rosalie R Newville		503 Guide St N	Welcome MN 56181-9781
Kimberly L Holm		504 Homewood Dr N	Welcome MN 56181-9793
Max H Amis		505 Dugan St N	Welcome MN 56181-9746
Matthew T & Nancy K Prunty		505 Guide St N	Welcome MN 56181-9781
Curtis W & Peggy L Godden	505 Homewood Dr	PO Box 151	Welcome MN 56181-0151
Keith & Jolene Kruse Moeller		506 1st St	Welcome MN 56181-5044
Vernon A & Janice M Olson TT		506 Dugan St N	Welcome MN 56181-9789
Robert E & Lynda H Stauter		506 Harrison St	Welcome MN 56181-9788
David E & Alicia A Debusca		506 Homewood Dr N	Welcome MN 56181-9793
Jean M Trust Beckendorf	506 W 2nd St	PO Box 104	Welcome MN 56181-0104
Colleen M Bunge		1551 130th Ave	Welcome MN 56181-1312
Thomas Schweiss		507 Weaver St	Welcome MN 56181-9647
Donald M & Bev J Meyer		508 5th St	Welcome MN 56181-1395
Gary W & Kathryn Barke		509 Guide St N	Welcome MN 56181-9781
Larry & Gayle Schuett		509 Homewood Dr N	Welcome MN 56181-9607
Jesse J & Kelsey M Murphy		509 Dugan St N	Welcome MN 56181-9746
Aaron Lee Fullerton	510 5th St	PO Box 291	Welcome MN 56181-0291
Anthony J & S K Hed		510 Dugan St N	Welcome MN 56181-9789
Adam C Poppe		510 Homewood Dr N	Welcome MN 56181-9793
Richard F & Mildred Garbers		510 Hopp St	Welcome MN 56181-4001
Dale Norman Schley et al.		511 Guide St N	Welcome MN 56181-9781
Norman & Norma J Schley et al.		511 Guide St N	Welcome MN 56181-9781
Douglas M & Natalie A Cepress		512 5th St	Welcome MN 56181-1395
Eliza Lewis		512 4th St	Welcome MN 56181-5007
Amanda Mae Burmeister		513 Dugan St N	Welcome MN 56181-9746
Larry Schweiss		514 Dugan St N	Welcome MN 56181-9789
Wesley G & C J Strausser		514 Hopp St	Welcome MN 56181-4001
Keith E & Sandra L Winter		515 Bidwell St	Welcome MN 56181-1402
Stuart T & Lori J Smart		515 Dugan St N	Welcome MN 56181-9746
Brian & Joanna Sandberg		516 5th St	Welcome MN 56181-1395
John S & Julie A Speckman		516 Dugan St N	Welcome MN 56181-9789
Stephen C Nelsen	518 4th St	PO Box 126	Welcome MN 56181-0126
Victor A & D L Abelson		518 Hopp St	Welcome MN 56181-4001
Alvin F & Alma M Thompson Trust		56 Main St	Welcome MN 56181-1335
Deeanna M Bakken		58 Dewey St	Welcome MN 56181-1365
Wayne & Mildred Joyce		601 Guide St N	Welcome MN 56181-9641
Bruce Lee & Kathryn C Johnson		602 Hopp St	Welcome MN 56181-4000
David A & Connie K Cook		603 1st St W	Welcome MN 56181-9779
Ken S & Tabitha Odegaard		604 1st St W	Welcome MN 56181-9708
Keith L & Carol J Thiesse		607 1st St W	Welcome MN 56181-9779
Debra & David W Hansen		608 3rd St	Welcome MN 56181-5000
Ralph E Busse		608 Hopp St	Welcome MN 56181-4000
Marsha H Rettig		610 2nd St	Welcome MN 56181-5031
Lance E & Jean A Vath		62 Dewey St	Welcome MN 56181-1365
Roger & Gretchen A Hoppe		7 Circle Dr W	Welcome MN 56181-9782
Gavin E Flohre		7 Main St	Welcome MN 56181-1335
John E & Stacie M Shaw		804 1st St W	Welcome MN 56181-1403
Darin L Cook		805 2nd St W	Welcome MN 56181-9798
Jason L & Leann R Mix		806 2nd St W	Welcome MN 56181-9798
John R & Mary A Larson		808 2nd St W	Welcome MN 56181-9798
Charles R & P A Schultz		9 Circle Dr W	Welcome MN 56181-9782
Robert L Droegemueller		904 1st St W	Welcome MN 56181-9608
Jeffrey J Kampert		911 1st St W	Welcome MN 56181-9704
Mildred C Miller TT of Rev Trust		919 State Highway 263	Welcome MN 56181-1345
Manyaska Township		944 110th Ave	Welcome MN 56181-1358

Christina I Rosenberg	952 State Highway 263	Welcome MN 56181-1345
Jeff Miller	995 120th Ave	Welcome MN 56181-1340
Ronald & Beverly Trebesch	PO Box 106	Welcome MN 56181-0106
Patrick L & Gayle L Feely	PO Box 113	Welcome MN 56181-0113
Eugene P & E G Mcdonald	PO Box 114	Welcome MN 56181-0114
David W Hansen	PO Box 127	Welcome MN 56181-0127
Mike & Jami Thompson	PO Box 13	Welcome MN 56181-0013
Andy L Larsen	PO Box 144	Welcome MN 56181-0144
Eric Anderson	PO Box 153	Welcome MN 56181-0153
Steve Feely	PO Box 16	Welcome MN 56181-0016
Delano Bergemann	PO Box 164	Welcome MN 56181-0164
Calvin & Barbara Hemingway	PO Box 171	Welcome MN 56181-0171
Chad & Amy L Feely Harder	PO Box 172	Welcome MN 56181-0172
Ardella Wohlhuter	PO Box 175	Welcome MN 56181-0175
Ronald L & Diane M Runkle	PO Box 176	Welcome MN 56181-0176
Teresa M Ehlert	PO Box 187	Welcome MN 56181-0187
Trinity Lutheran Church	PO Box 205	Welcome MN 56181-0205
William Petersen	PO Box 207	Welcome MN 56181-0207
Ronald D & S F Nelson (LE) et al.	PO Box 212	Welcome MN 56181-0212
Rebecca J Blanchard	PO Box 214	Welcome MN 56181-0214
Delight E Shell	PO Box 22	Welcome MN 56181-0022
Harold & Susan Borchardt	PO Box 227	Welcome MN 56181-0227
Julia L Borchardt	PO Box 227	Welcome MN 56181-0227
James P & Carol Chukuske	PO Box 233	Welcome MN 56181-0233
Ruthe M & Robert J Young	PO Box 244	Welcome MN 56181-0244
Eugene & Jan Leach	PO Box 251	Welcome MN 56181-0251
Michael L & Paula A Finke	PO Box 254	Welcome MN 56181-0254
James & Shirley Christian (LE)	PO Box 257	Welcome MN 56181-0257
Donald D & Janet Saxen	PO Box 261	Welcome MN 56181-0261
Kimberly A Dirks	PO Box 263	Welcome MN 56181-0263
John Wesley Mcdonald	PO Box 281	Welcome MN 56181-0281
Kathie G Gronnel	PO Box 281	Welcome MN 56181-0281
Nicole R Johnson	PO Box 284	Welcome MN 56181-0284
Larry L & Jane L Fullerton	PO Box 291	Welcome MN 56181-0291
Gloria A Sandberg et al.	PO Box 294	Welcome MN 56181-0294
Roger D & Linda K Schultz	PO Box 298	Welcome MN 56181-0298
Robert L Schultze	PO Box 301	Welcome MN 56181-0301
Russell J & Bj Plumhoff (LE) et al.	PO Box 302	Welcome MN 56181-0302
Garett & Pamela Jagodzinske	PO Box 303	Welcome MN 56181-0303
Theresa Marie Schneider	PO Box 304	Welcome MN 56181-0304
Weiss Milling	PO Box 315	Welcome MN 56181-0315
Robert P Dau	PO Box 324	Welcome MN 56181-0324
Dennis M Skelly	PO Box 327	Welcome MN 56181-0327
Dale B & Shirley J Keck	PO Box 33	Welcome MN 56181-0033
Howard L Humburg & L E Carter	PO Box 343	Welcome MN 56181-0343
Duane L & Lisa A Rosburg	PO Box 356	Welcome MN 56181-0356
Joann L Wohlhuter	PO Box 375	Welcome MN 56181-0375
George A & G F Hendricks (LE)	PO Box 377	Welcome MN 56181-0377
Harold & Starr L Spiegeler	PO Box 381	Welcome MN 56181-0381
Danny K & Tammy L Williams	PO Box 383	Welcome MN 56181-0383
James D & Julie A Hill	PO Box 384	Welcome MN 56181-0384
Douglas M & S K Kyte	PO Box 417	Welcome MN 56181-0417
Justin B & Carey L Borchardt	PO Box 434	Welcome MN 56181-0434
Welcome Tv Sales & Service	PO Box 435	Welcome MN 56181-0435
Chad M Rademaker	PO Box 52	Welcome MN 56181-0052
Gary J & Marsha Williams	PO Box 61	Welcome MN 56181-0061
Terry L Lutz	PO Box 66	Welcome MN 56181-0066
Velma E & Sonya Price Sandberg	PO Box 7	Welcome MN 56181-0007
City of Welcome	PO Box 72	Welcome MN 56181-0072

Welcome Cemetery Assn c/o Max Lungley	PO Box 72	Welcome MN 56181-0072
Welcome Economic Dev Authority	PO Box 72	Welcome MN 56181-0072
Current Resident	1001 Martin Rd	Welcome MN 56181-1366
Current Resident	1003 Martin Rd	Welcome MN 56181-1366
Current Resident	1005 Martin Rd	Welcome MN 56181-1366
Current Resident	1007 Martin Rd	Welcome MN 56181-1366
Current Resident	1007 Martin Rd	Welcome MN 56181-1366
Current Resident	101 Dugan St N	Welcome MN 56181-5028
Current Resident	101 Hulseman St	Welcome MN 56181-5014
Current Resident	1013 Martin Rd	Welcome MN 56181-1366
Current Resident	102 Dugan St S	Welcome MN 56181-9600
Current Resident	103 Montgomery St	Welcome MN 56181-5033
Current Resident	104 Dugan St N	Welcome MN 56181-5028
Current Resident	104 Dugan St S	Welcome MN 56181-9600
Current Resident	1050 150th St	Welcome MN 56181-1374
Current Resident	1053 Martin Rd	Welcome MN 56181-1366
Current Resident	106 Hulseman St	Welcome MN 56181-5014
Current Resident	106 Montgomery St	Welcome MN 56181-5033
Current Resident	1066 150th St	Welcome MN 56181-1374
Current Resident	107 Hulseman St	Welcome MN 56181-5014
Current Resident	108 Dugan St N	Welcome MN 56181-5028
Current Resident	109 Campbell St	Welcome MN 56181-5020
Current Resident	109 Dugan St N	Welcome MN 56181-5028
Current Resident	109 Kruse St	Welcome MN 56181-5012
Current Resident	109 Montgomery St	Welcome MN 56181-5033
Current Resident	110 3rd St	Welcome MN 56181-5004
Current Resident	110 Dugan St N	Welcome MN 56181-5028
Current Resident	112 E 3rd St	Welcome MN 56181-5002
Current Resident	112 Dugan St N	Welcome MN 56181-5028
Current Resident	1121 110th Ave	Welcome MN 56181-1360
Current Resident	1126 150th St	Welcome MN 56181-1373
Current Resident	113 2nd St	Welcome MN 56181-5030
Current Resident	113 Dugan St N	Welcome MN 56181-9707
Current Resident	113 Guide St N	Welcome MN 56181-9785
Current Resident	113 Montgomery St	Welcome MN 56181-5033
Current Resident	114 2nd St	Welcome MN 56181-5030
Current Resident	116 Dugan St N	Welcome MN 56181-5043
Current Resident	1170 130th St	Welcome MN 56181-1377
Current Resident	118 Dugan St N	Welcome MN 56181-5043
Current Resident	1184 State Highway 263	Welcome MN 56181-1337
Current Resident	1192 120th St	Welcome MN 56181-1362
Current Resident	12 Main St	Welcome MN 56181-1335
Current Resident	120 Dugan St N	Welcome MN 56181-5022
Current Resident	1202 State Highway 263	Welcome MN 56181-1334
Current Resident	1233 120th St	Welcome MN 56181-1363
Current Resident	1253 170th Ave	Welcome MN 56181-1324
Current Resident	1358 140th Ave	Welcome MN 56181-1302
Current Resident	1372 150th Ave	Welcome MN 56181-1301
Current Resident	1376 120th Ave	Welcome MN 56181-1378
Current Resident	1412 180th St	Welcome MN 56181-1398
Current Resident	1414 120th St	Welcome MN 56181-1331
Current Resident	1416 120th Ave	Welcome MN 56181-1379
Current Resident	1426 140th Ave	Welcome MN 56181-1303
Current Resident	1458 120th St	Welcome MN 56181-1331
Current Resident	1472 140th Ave	Welcome MN 56181-1303
Current Resident	1476 130th Ave	Welcome MN 56181-1314
Current Resident	148 Dewey St	Welcome MN 56181-1330
Current Resident	1495 120th Ave	Welcome MN 56181-1379
Current Resident	1501 120th St	Welcome MN 56181-1327

Current Resident	152 Dewey St	Welcome MN 56181-1330
Current Resident	1522 130th Ave	Welcome MN 56181-1312
Current Resident	154 Dewey St	Welcome MN 56181-1330
Current Resident	1583 120th St	Welcome MN 56181-1327
Current Resident	1648 110th Ave	Welcome MN 56181-1371
Current Resident	1668 150th Ave	Welcome MN 56181-1388
Current Resident	1672 130th Ave	Welcome MN 56181-1310
Current Resident	1727 120th Ave	Welcome MN 56181-1393
Current Resident	1751 150th Ave	Welcome MN 56181-1386
Current Resident	18 Main St	Welcome MN 56181-1335
Current Resident	1802 150th Ave	Welcome MN 56181-1385
Current Resident	1836 115th Ave	Welcome MN 56181-1382
Current Resident	19 Circle Dr W	Welcome MN 56181-9782
Current Resident	20 Lake St	Welcome MN 56181-1364
Current Resident	201 Campbell St	Welcome MN 56181-5021
Current Resident	201 Dugan St S	Welcome MN 56181-9605
Current Resident	201 Kelser St	Welcome MN 56181-5041
Current Resident	202 Dugan St N	Welcome MN 56181-5026
Current Resident	202 Dugan St S	Welcome MN 56181-9604
Current Resident	202 Kruse St	Welcome MN 56181-5011
Current Resident	202 Sewell St S	Welcome MN 56181-9634
Current Resident	202 Van Amber St W	Welcome MN 56181-9703
Current Resident	202 2nd St	Welcome MN 56181-5046
Current Resident	203 Kelser St	Welcome MN 56181-5041
Current Resident	204 3rd St	Welcome MN 56181-5003
Current Resident	204 Dugan St S	Welcome MN 56181-9604
Current Resident	204 2nd St	Welcome MN 56181-5046
Current Resident	205 Dugan St S	Welcome MN 56181-9605
Current Resident	205 Montgomery St	Welcome MN 56181-5035
Current Resident	205 Van Amber St W	Welcome MN 56181-9700
Current Resident	205 Weaver St	Welcome MN 56181-9606
Current Resident	206 Campbell St	Welcome MN 56181-5018
Current Resident	206 Dugan St S	Welcome MN 56181-9604
Current Resident	206 Kruse St	Welcome MN 56181-5011
Current Resident	206 Sewell St S	Welcome MN 56181-9634
Current Resident	207 Dugan St S	Welcome MN 56181-9605
Current Resident	208 Guide St N	Welcome MN 56181-9743
Current Resident	208 Montgomery St	Welcome MN 56181-5035
Current Resident	209 Campbell St	Welcome MN 56181-5018
Current Resident	210 Kruse St	Welcome MN 56181-5011
Current Resident	210 Van Amber St W	Welcome MN 56181-9703
Current Resident	211 Dugan St N	Welcome MN 56181-5026
Current Resident	211 Hulseman St	Welcome MN 56181-5015
Current Resident	213 Dugan St S	Welcome MN 56181-9605
Current Resident	214 Kelser St	Welcome MN 56181-5041
Current Resident	215 Cleveland St E	Welcome MN 56181-1396
Current Resident	215 Kelser St	Welcome MN 56181-5041
Current Resident	216 Dugan St S	Welcome MN 56181-9604
Current Resident	217 Cleveland St E	Welcome MN 56181-1396
Current Resident	217 Dugan St S	Welcome MN 56181-9605
Current Resident	217 Kelser St	Welcome MN 56181-5041
Current Resident	218 Dugan St S	Welcome MN 56181-9604
Current Resident	27 Main St	Welcome MN 56181-1335
Current Resident	29 Main St	Welcome MN 56181-1335
Current Resident	301 Dugan St N	Welcome MN 56181-5025
Current Resident	302 Campbell St	Welcome MN 56181-5019
Current Resident	302 Dugan St S	Welcome MN 56181-9609
Current Resident	302 Guide St N	Welcome MN 56181-9786
Current Resident	303 Campbell St	Welcome MN 56181-5019
Current Resident	303 Dugan St N	Welcome MN 56181-5025

Current Resident	303 Dugan St S	Welcome MN 56181-9611
Current Resident	303 Hulseman St	Welcome MN 56181-5017
Current Resident	303 Weaver St	Welcome MN 56181-9644
Current Resident	305 Bidwell St	Welcome MN 56181-1399
Current Resident	305 Kruse St	Welcome MN 56181-5013
Current Resident	305 Montgomery St	Welcome MN 56181-5034
Current Resident	306 Harrison St	Welcome MN 56181-5038
Current Resident	306 Hulseman St	Welcome MN 56181-5017
Current Resident	307 Dugan St N	Welcome MN 56181-5025
Current Resident	307 Hulseman St	Welcome MN 56181-5017
Current Resident	307 Montgomery St	Welcome MN 56181-5034
Current Resident	309 Campbell St	Welcome MN 56181-5019
Current Resident	309 Weaver St	Welcome MN 56181-9644
Current Resident	310 Campbell St	Welcome MN 56181-5019
Current Resident	311 Dugan St N	Welcome MN 56181-5025
Current Resident	314 Guide St S	Welcome MN 56181-9602
Current Resident	401 Weaver St	Welcome MN 56181-9643
Current Resident	402 W 4th St	Welcome MN 56181-5009
Current Resident	402 Guide St N	Welcome MN 56181-9705
Current Resident	403 Dugan St N	Welcome MN 56181-5024
Current Resident	403 Mill St	Welcome MN 56181-5010
Current Resident	405 Mill St	Welcome MN 56181-5010
Current Resident	405 Weaver St	Welcome MN 56181-9643
Current Resident	406 Weaver St	Welcome MN 56181-9642
Current Resident	407 4th St	Welcome MN 56181-5008
Current Resident	407 Dugan St N	Welcome MN 56181-5024
Current Resident	407 Mill St	Welcome MN 56181-5010
Current Resident	408 2nd St	Welcome MN 56181-5032
Current Resident	408 Weaver St	Welcome MN 56181-9642
Current Resident	409 Harrison St	Welcome MN 56181-9745
Current Resident	410 4th St	Welcome MN 56181-5008
Current Resident	413 Guide St N	Welcome MN 56181-9784
Current Resident	413 Weaver St	Welcome MN 56181-9643
Current Resident	414 Mill St	Welcome MN 56181-5010
Current Resident	416 Weaver St	Welcome MN 56181-9642
Current Resident	417 Guide St N	Welcome MN 56181-9784
Current Resident	417 Mill St	Welcome MN 56181-5010
Current Resident	418 Weaver St	Welcome MN 56181-9642
Current Resident	420 Mill St	Welcome MN 56181-5010
Current Resident	501 Dugan St N	Welcome MN 56181-9746
Current Resident	502 2nd St	Welcome MN 56181-5029
Current Resident	503 2nd St	Welcome MN 56181-5029
Current Resident	503 Harrison St	Welcome MN 56181-9745
Current Resident	505 Guide St N	Welcome MN 56181-9781
Current Resident	506 Dugan St N	Welcome MN 56181-9789
Current Resident	507 1st St	Welcome MN 56181-5044
Current Resident	508 W 3rd St	Welcome MN 56181-5005
Current Resident	508 Dugan St N	Welcome MN 56181-9638
Current Resident	509 Dugan St N	Welcome MN 56181-9746
Current Resident	511 5th St	Welcome MN 56181-1395
Current Resident	512 4th St	Welcome MN 56181-5007
Current Resident	513 Dugan St N	Welcome MN 56181-9746
Current Resident	514 4th St	Welcome MN 56181-5007
Current Resident	515 Harrison St	Welcome MN 56181-9745
Current Resident	516 4th St	Welcome MN 56181-5007
Current Resident	516 Dugan St N	Welcome MN 56181-9789
Current Resident	516 Harrison St	Welcome MN 56181-9788
Current Resident	601 Guide St N	Welcome MN 56181-9641
Current Resident	605 Guide St N	Welcome MN 56181-9641
Current Resident	609 3rd St	Welcome MN 56181-5000

Current Resident			8 Dewey St	Welcome MN 56181-1365
Current Resident			8 Main St	Welcome MN 56181-1335
Current Resident			804 2nd St W	Welcome MN 56181-9798
Current Resident			809 2nd St W	Welcome MN 56181-9798
Current Resident			9 Main St	Welcome MN 56181-1335
Current Resident			907 1st St W	Welcome MN 56181-9704
Current Resident			915 1st St W	Welcome MN 56181-9704
Current Resident			PO Box 226	Welcome MN 56181-0226
Ronald G & Cynthia A Runge			1372 150th Ave	Welcome MN 56181-1301
American Legion			112 Dugan St N	Welcome MN 56181-5028
Steven H Blair			202 Kelser St	Welcome MN 56181-5041
Otto C Pfaffinger Family Trust & Vivian Pfaffinger			100 Dublin Rd Apt 3326	Mankato MN 56001-8777
John E Berg			101 Topaz Ct	Mankato MN 56001-6214
David L & Marilyn Mathiason			105 Celestine Cir	Mankato MN 56001-5575
Carol A Hanson (LE)			113 Caron Dr	Mankato MN 56001-1723
Lynnette Leduc & Gail Kahler			130 Copper Mountain Dr	Mankato MN 56001-8934
Dewayne R & Noreen R Hannaman Life Estate et al.			132 E Welcome Ave	Mankato MN 56001-4932
Darrell L & Virginia Eastvold			132 Falcon Dr	Mankato MN 56001-5798
Trimont Housing Investors LLC			201 N Broad St N	Mankato MN 56001-3585
Welcome Housing Investors LLC			201 N Broad St N	Mankato MN 56001-3585
Andrew M Anderson et al.			213 Bittersweet Ln	Mankato MN 56001-3108
Minn Dept Of Transportation			2151 Bassett Dr	Mankato MN 56001-6888
Harvey A & Virginia J Hanel			21579 535th Ave	Mankato MN 56001-5915
Westman Acquisition LLC			2200 4th Ave	Mankato MN 56001-2815
Craig & Deborah Sinning			222 Terrace Vw W	Mankato MN 56001-8624
Jacob H & Linda L Nawrocki			224 Parkway Pl	Mankato MN 56001-5905
Jackson Feed LLC		PO Box 308	416 Mathews St	Mankato MN 56001-1849
Mark Wolner			55010 Sunrise Ln	Mankato MN 56001-5936
Gerald L Sonnek			58214 240th St	Mankato MN 56001-5592
Donald Goldencrown			70 Mary Oaks Ln	Mankato MN 56001-8729
Richard King			301 S 5th St Apt 107	Mankato MN 56001-7501
Nicole Griensewic	Region 9 Executive Director	10 Civic Center Plaza Suite 3	PO Box 3367	Mankato MN 56002-3367
Steven Dahle (LE) et al.			PO Box 328	Mankato MN 56002-0328
Robert Scott SEigfreid			1587 Sharon Dr	North Mankato MN 56003-2821
Richard Olson			1627 James Dr	North Mankato MN 56003-1932
Southcentral MN Multi-Co Hra			360 Pierce Ave	North Mankato MN 56003-2207
Gene & Mary Ellen Neal			408 Pierce Ave	North Mankato MN 56003-2126
Ronald Schmidt et al.			424 W Wheeler Ave	North Mankato MN 56003-3736
Paula & William G Thiede			58307 Birch Bluff Dr	North Mankato MN 56003-4128
Jessica Erin Frette			601 Lyndale St	North Mankato MN 56003-3746
Leona Krupp Life Est et al. c/o Janae Clausen			26013 810th Ave	Albert Lea MN 56007-7556
Karen M Gray			416 Ridge Rd	Albert Lea MN 56007-1484
Grace L Johnson Irrev Trust			228 Holway St	Alden MN 56009-1021
William L & Dorothy A Burk			2903 250th St	Amboy MN 56010-2801
Duncan P Diel Liv Trust et al.			50857 111th St	Amboy MN 56010-4403
William T Pfeffer			55174 121st St	Amboy MN 56010-5051
C H Perry c/o William T Pfeffer			55174 121st St	Amboy MN 56010-5051
Diversified Agricultural Inc			PO Box 279	Amboy MN 56010-0279
Diversified Agriculture Inc			PO Box 279	Amboy MN 56010-0279
The Nashville Township LLP, Bressler LLP			PO Box 279	Amboy MN 56010-0279
Sharon K Phillips			PO Box 5	Amboy MN 56010-0005
Bruce E Anderson			50156 110th St	Bricelyn MN 56014-2192
Charles H Nilson Life Estate et al.			206 E 1st St	Delavan MN 56023-9625
Darryl Patton			305 Thomas Dr	Eagle Lake MN 56024-9684
Yvonne Cory			14338 470th Ave	Easton MN 56025-7504

Albert J & Margaret Robbins Life Estate et al.		22487 460th Ave	Easton MN 56025-6801
Doris Klein Life Estate et al.		107 S West St	Elmore MN 56027-3339
Michael E Krosch		111 N Mill St	Elmore MN 56027-3333
Carroll L Viland		1184 310th Ave	Elmore MN 56027-3390
Elton & Sharon R Rhoda		122 N Stockman St	Elmore MN 56027-1003
F A Rodriguez Revoc Trust & Blanche E Rodriguez Rev Trust	126 N Stockman St	PO Box 217	Elmore MN 56027-0217
James Laue		1623 340th St	Elmore MN 56027-3409
Lucas B Huber		1898 380th Ave	Elmore MN 56027-1010
Merwin E Thompson Farms Inc		190 280th Ave	Elmore MN 56027-3505
Roger C & Donna L Thompson		190 280th Ave	Elmore MN 56027-3505
Arnold D & Marcia E Swanson		2172 360th Ave	Elmore MN 56027-3350
Lori Sailor		2270 330th Ave	Elmore MN 56027-3404
Harry & Myron E Childs c/o Denise L Wolf Trustee		2301 370th Ave	Elmore MN 56027-2043
Robert A & Denise L Wolf		2301 370th Ave	Elmore MN 56027-2043
Kenneth & Gail Naumann & Kevin & Cynthia Naumann		2356 US Highway 169	Elmore MN 56027-1015
John G & Rita C Volz		2474 370th Ave	Elmore MN 56027-2044
Douglas & Marcia Milbrandt		2786 380th Ave	Elmore MN 56027-1011
Irvin C Milbrandt Trust & Douglas L Milbrandt		2786 380th Ave	Elmore MN 56027-1011
Milbrandt Bros Inc		2786 380th Ave	Elmore MN 56027-1011
Tony Thompson		2858 20th St	Elmore MN 56027-3506
Alan W Johnson		2858 30th St	Elmore MN 56027-3503
Dean & Joanne Larsen		2943 319th Ave	Elmore MN 56027-3510
Deborah Adella Moore		2962 360th Ave	Elmore MN 56027-3352
Gary A & Terri L Johnson	304 S East St	PO Box 87	Elmore MN 56027-0087
Joe Gonzales Jr		307 W Harrison St	Elmore MN 56027-3307
John F Garner & Inge L Garner		31860 30th St	Elmore MN 56027-3382
Jose Luis Ibanez		32405 30th St	Elmore MN 56027-3377
Roger T & Candis L Carr		3263 340th Ave	Elmore MN 56027-3371
Taylor D & Emily M Smith		32772 30th St	Elmore MN 56027-3374
Joseph James Sanders & Jill R Sanders		33159 30th St	Elmore MN 56027-3373
Todd & Michele Stewart		3327 360th Ave	Elmore MN 56027-3357
Derrick M Dahl		33827 20th St	Elmore MN 56027-3407
Mark T & Ronda Dahl		34033 30th St	Elmore MN 56027-3367
Thomas E & Stella J Dahl Revocable Trusts		34185 30th St	Elmore MN 56027-3365
Wayne O & Joyce Risk		34416 30th St	Elmore MN 56027-3362
Darrel & Beverly J Nave		34899 30th St	Elmore MN 56027-3361
Douglas D & Karen M Nave		34899 30th St	Elmore MN 56027-3361
John C & Marilyn M Stewart		35361 30th St	Elmore MN 56027-3359
Todd J & Michele Stewart c/o John C Stewart		35361 30th St	Elmore MN 56027-3359
Bradley K Zierke		3648 370th Ave	Elmore MN 56027-2046
Ruth Ann Kuchenbecker Scholtz & Franz Jacobus Scholtz		36615 30th St	Elmore MN 56027-2041
Ricky H & Jan M Barnick		36621 60th St	Elmore MN 56027-2057
Terry & Laurie Jagerson		37168 30th St	Elmore MN 56027-2038
Preston D Krinke		37421 30th St	Elmore MN 56027-2037
Wayne D & Tamy J Tvedten		37550 40th St	Elmore MN 56027-2115
Elnora M Ziegler Revocable Trust		37599 15th St	Elmore MN 56027-3343
Anthony & Tracy Zierke		37600 40th St	Elmore MN 56027-2070
Dobson School House Cemetery Ass'n (Richardson Cemetery) c/o George Hu		37631 30th St	Elmore MN 56027-2035
George Jr & Mary Huber		37631 30th St	Elmore MN 56027-2035

Pat G Traxler & Shirley J Olson		37890 40th St	Elmore MN 56027-2114
William T & Suzanne R Carr		3828 340th Ave	Elmore MN 56027-3368
Dessie Jean & Jose Luis Ibanez		383 310th Ave	Elmore MN 56027-3500
Michael A & Heidi L Schiltz		38414 40th St	Elmore MN 56027-2089
Mary S & Gerhard H Kuchenbecker		39315 17th St	Elmore MN 56027-1008
Elmore Cemetery Association (Riverview Cemetery) c/o Beverly Krosch		40037 30th St	Elmore MN 56027-3040
Stanley & Patricia Mccormick		4060 370th Ave	Elmore MN 56027-2048
Rocky W & Brenda A Huber		4125 380th Ave	Elmore MN 56027-2069
Virginia Ristau et al.		42804 30th St	Elmore MN 56027-2006
Jennifer Krosch-Pierce & Dan Pierce		4434 380th Ave	Elmore MN 56027-2066
Kelly R Drake & Frank J Drake		4516 380th Ave	Elmore MN 56027-2064
Duane & Marlys Darnell		4625 385th Ave	Elmore MN 56027-2061
Frederick & Leona Krupp		4630 370th Ave	Elmore MN 56027-2050
Marlin F Krupp		4630 370th Ave	Elmore MN 56027-2050
Sherwood F & Lucinda Krosch		4675 385th Ave	Elmore MN 56027-2061
Ronny D Klein		514 W Rasmussen St	Elmore MN 56027-3340
Frank J Drake		5335 385th Ave	Elmore MN 56027-2059
David D Rochefort & Nicolette H Holmgren		6463 370th Ave	Elmore MN 56027-2055
Morgan Family Partnership		PO Box 107	Elmore MN 56027-0107
Marvin E & Myrna L Krosch Life Estate & Melissa Garry		PO Box 241	Elmore MN 56027-0241
Joseph J Sanders		PO Box 34	Elmore MN 56027-0034
Joseph James Sanders Jr		PO Box 34	Elmore MN 56027-0034
James Volz		PO Box 35	Elmore MN 56027-0035
Roxann R & Donald C Hughes		PO Box 464	Elmore MN 56027-0464
City of Elmore		PO Box 56	Elmore MN 56027-0056
Norman Kolve		PO Box 86	Elmore MN 56027-0086
Current Resident		1692 380th Ave	Elmore MN 56027-1009
Current Resident		1778 310th Ave	Elmore MN 56027-3388
Current Resident		2289 320th Ave	Elmore MN 56027-3401
Current Resident		2455 330th Ave	Elmore MN 56027-3403
Current Resident		2837 380th Ave	Elmore MN 56027-1012
Current Resident		2943 319th Ave	Elmore MN 56027-3510
Current Resident		2954 319th Ave	Elmore MN 56027-3510
Current Resident		2969 319th Ave	Elmore MN 56027-3510
Current Resident		3019 30th St	Elmore MN 56027-3501
Current Resident		31742 20th St	Elmore MN 56027-3398
Current Resident		31752 20th St	Elmore MN 56027-3398
Current Resident		31916 30th St	Elmore MN 56027-3380
Current Resident		3240 310th Ave	Elmore MN 56027-3384
Current Resident		3451 380th Ave	Elmore MN 56027-2113
Current Resident		34899 30th St	Elmore MN 56027-3361
Current Resident		36000 15th St	Elmore MN 56027-3348
Current Resident		3691 360th Ave	Elmore MN 56027-3355
Current Resident		37457 15th St	Elmore MN 56027-3345
Current Resident		4637 380th Ave	Elmore MN 56027-2063
Current Resident		5151 370th Ave	Elmore MN 56027-2053
Current Resident		5345 385th Ave	Elmore MN 56027-2059
Michael T Tesch		211 E North St	Elmore MN 56027-1007
Brian D Naumann		2777 420th Ave	Elmore MN 56027-2015
Bruce & Constance Peterson		5931 490th Ave	Frost MN 56033-6337
Charles R & Joann Anderson		PO Box 612	Frost MN 56033-0612
Diane F (Thompson) Hoverson		74632 140th St	Glenville MN 56036-4594
Justin Shanks		PO Box 224	Hollandale MN 56045-0224
Joseph M & Patti L Strukel	16833 315th Ave	PO Box 97	Huntley MN 56047-0097
Center Creek Gun Club Inc	17100 330th Ave	PO Box 6	Huntley MN 56047-0006
Samuel E. & Nina I. Patten	31510 170th St	PO Box 65	Huntley MN 56047-0065

Tracy D. & Kathleen J. Johnson		31513 169th St	PO Box 71	Huntley MN 56047-0071
Eugene & Helen Nelson, Trustees		31546 169th St	PO Box 27	Huntley MN 56047-0027
Brendon R. & Nancy Bablock		31693 170th	PO Box 26	Huntley MN 56047-0026
Gary T & Carol F Sands			PO Box 12	Huntley MN 56047-0012
Jr Investment			PO Box 21	Huntley MN 56047-0021
Larry Ray Menssen & Cynthia Jane Menssen			PO Box 23	Huntley MN 56047-0023
Clara C Robertson Trust			PO Box 25	Huntley MN 56047-0025
David J Robertson Irrev Trust			PO Box 25	Huntley MN 56047-0025
Eugene & Helen M Nelson			PO Box 27	Huntley MN 56047-0027
James H Mair Rev Trust			PO Box 32	Huntley MN 56047-0032
Richard L. & Darlene P. Mair			PO Box 32	Huntley MN 56047-0032
Dennis L . & Mary P. Bpoviak			PO Box 36	Huntley MN 56047-0036
Austin L & Hannah R Bressler			PO Box 44	Huntley MN 56047-0044
Steven D Theobald & Cody J Theobald			PO Box 5	Huntley MN 56047-0005
Donald & Patricia Hillquist			PO Box 62	Huntley MN 56047-0062
Gordon E Richison			PO Box 63	Huntley MN 56047-0063
Community Club, Nina Patten (Township Clerk)			PO Box 65	Huntley MN 56047-0065
Patten Roofing Of Iowa Inc c/o Samuel Patten			PO Box 65	Huntley MN 56047-0065
Community Covenant Church Of Huntley			PO Box 68	Huntley MN 56047-0068
Diann & Donald SElvig			PO Box 85	Huntley MN 56047-0085
Chad & Melissa Diegnau			PO Box 86	Huntley MN 56047-0086
Charles C Diegnau Irrev Trust c/o Chad Diegnau			PO Box 86	Huntley MN 56047-0086
Barbara Ann Kelly			PO Box 15	Huntley MN 56047-0015
William H Lindgren			PO Box 15	Huntley MN 56047-0015
Huntley Well Corporation			PO Box 32	Huntley MN 56047-0032
Eric L. Martin			PO Box 10	Huntley MN 56047-0010
James Johnston & Wayne Davis			101 W Main St	Kasota MN 56050-2068
James W Johnstone			221 S Rice St	Kasota MN 56050-2041
L & M Rentals LLC c/o Larry Mages			57815 330th St	Lafayette MN 56054-3005
Chad Hollerich & Nicole Braunshausen			204 Maga Ct	Lake Crystal MN 56055-4582
Sheryl & Timothy Vanrooyen			49819 185th St	Lake Crystal MN 56055-4436
Sheri Anderson		103 Broadway S	PO Box 82	La Salle MN 56056-0082
Dennis Lusk			372 N Waterville Ave	Le Center MN 56057-1426
Joseph W Archer & L M Bruender			302 S Elmwood Ave	Le Sueur MN 56058-2181
Kristine L Bowder Revoc Trust			33096 Sand Prairie Rd	Le Sueur MN 56058-3420
Duane L & Patricia K Dick			303 Center Ave S	Madelia MN 56062-1547
Schaefer Family Farm LLC c/o Gerald Schaefer			62693 Shorewood Ln	Madison Lake MN 56063-4408
Tim, Lisa & Lee Manthei			14610 586th Ave	Mapleton MN 56065-5691
Choice Connection LLP			15503 State Highway 22	Mapleton MN 56065-9417
Ellen Sanders & Violet Manthei			60397 132nd St	Mapleton MN 56065-2273
Virginia Huber Life Estate et al.			61305 124th St	Mapleton MN 56065-2216
Vista Farms			PO Box 26	Mapleton MN 56065-0026
Larrell & Jodi Dejong			25501 Willow Ln	New Prague MN 56071-8890
Esther S Craig (LE) et al.			999 Columbus Ave N	New Prague MN 56071-2092
Palmer M & Susan A Welcome			PO Box 22	New Prague MN 56071-0022
Bob Hobart	MnDNR/Division of Lands and Minerals		261 Highway 15 S	New Ulm MN 56073-8915
Kevin Mixon	MnDNR/Division of Lands and Minerals		261 Highway 15 S	New Ulm MN 56073-8915
David J Clancy			1221 N Payne St	New Ulm MN 56073-1430
Roberta A Hintz et al.			1604 S Payne St	New Ulm MN 56073-3733
MJS Inc		104 So Judson	PO Box 33	Northrop MN 56075-0033

Montana Thiesse	110 N Judson	PO Box 3	Northrop MN 56075-0003
Lawrence H & L M Hartmann Trust	111 James St S	PO Box 24	Northrop MN 56075-0024
Thomas W & Avis L Wakey	409 Bridgeman S	PO Box 29	Northrop MN 56075-0029
Larry E Baarts	Judson S	PO Box 85	Northrop MN 56075-0085
Jason & Jackie Schuder		PO Box 101	Northrop MN 56075-0101
Carol A Swanson		PO Box 102	Northrop MN 56075-0102
Roger J & Sharon Kusick		PO Box 105	Northrop MN 56075-0105
Kathleen A Tietema		PO Box 114	Northrop MN 56075-0114
Joshua Schmit		PO Box 13	Northrop MN 56075-0013
Arvid & Marlaine Binde		PO Box 14	Northrop MN 56075-0014
David W Wohlers		PO Box 16	Northrop MN 56075-0016
James K & Cheryl Becker		PO Box 17	Northrop MN 56075-0017
Michael Dean Edinger		PO Box 19	Northrop MN 56075-0019
Dale & Lois Lenz		PO Box 2	Northrop MN 56075-0002
W A Kakeldey		PO Box 2	Northrop MN 56075-0002
Nannette L Darnell		PO Box 205	Northrop MN 56075-0205
Ronald E & Paulette Y Lehr		PO Box 206	Northrop MN 56075-0206
Raymond Hilman		PO Box 22	Northrop MN 56075-0022
Robert A & Joan E Schmidtgal		PO Box 227	Northrop MN 56075-0227
Martin Luther High School Assn		PO Box 228	Northrop MN 56075-0228
Kenneth E & J A Petersen		PO Box 235	Northrop MN 56075-0235
Richard A & Pamela K Weber		PO Box 26	Northrop MN 56075-0026
Albert B & Darlene Cordt		PO Box 27	Northrop MN 56075-0027
Kolton S Thiesse		PO Box 3	Northrop MN 56075-0003
Douglas Willner		PO Box 310	Northrop MN 56075-0310
Northrop American Legion		PO Box 32	Northrop MN 56075-0032
Keith B & Elaine L Anderson		PO Box 34	Northrop MN 56075-0034
Paul A Wels		PO Box 37	Northrop MN 56075-0037
Robert C & P L Kosbab		PO Box 38	Northrop MN 56075-0038
Bart J & Sandra M Johnson		PO Box 4	Northrop MN 56075-0004
Gregory M & Debra D Rabbe		PO Box 40	Northrop MN 56075-0040
Vinton A & Lila M Koeritz		PO Box 43	Northrop MN 56075-0043
Bryan Simmering		PO Box 45	Northrop MN 56075-0045
Kenneth L & Barbara Schultze		PO Box 46	Northrop MN 56075-0046
David & Heather Wiederhoeft		PO Box 47	Northrop MN 56075-0047
James & Tara Bohlsen		PO Box 49	Northrop MN 56075-0049
Carole J Lohmann		PO Box 5	Northrop MN 56075-0005
Warren D Schultze		PO Box 53	Northrop MN 56075-0053
City of Northrop		PO Box 55	Northrop MN 56075-0055
Myron P & D I Quade		PO Box 56	Northrop MN 56075-0056
Rusty T & Deborah M Burnham		PO Box 60	Northrop MN 56075-0060
Donald W Wilkins		PO Box 62	Northrop MN 56075-0062
James E & Janet Smith		PO Box 7	Northrop MN 56075-0007
Alvin M Hartmann		PO Box 8	Northrop MN 56075-0008
Norman & Esther Ahrens		PO Box 83	Northrop MN 56075-0083
Thomas A & Heidi S Koeritz		PO Box 84	Northrop MN 56075-0084
Baarts Family Trust		PO Box 85	Northrop MN 56075-0085
Larry E & Bonnie Baarts		PO Box 85	Northrop MN 56075-0085
Jeremy Lynn Kluver		PO Box 9	Northrop MN 56075-0009
David & Lorae Radunz		PO Box 91	Northrop MN 56075-0091
Michael I & Tracy J Schultz		PO Box 94	Northrop MN 56075-0094
Marlin & Ione Nave		PO Box 95	Northrop MN 56075-0095
Mark R Frahm et al.	521 Hiawatha Dr	PO Box 98	Saint Clair MN 56080-0098
Renee A Mathiason		PO Box 17	Saint Clair MN 56080-0017
L D & G H Johnson Rev Trusts		1101 2nd St S	Saint James MN 56081-1836
Gerald W Anderson Revoc Trust		111 Sunset Dr	Saint James MN 56081-1303
Betty Carlson		203 4th Ave N	Saint James MN 56081-1274
Lynn C & Mary Overson		32600 730th Ave	Saint James MN 56081-5535
Victor Jagodzinske		32913 730th Ave	Saint James MN 56081-5567
Janet Froslan		37387 745th Ave	Saint James MN 56081-5617

Overson Lumber Co		500 Armstrong Blvd N	Saint James MN 56081-1648
Orval & Joyce Larson		521 4th St N	Saint James MN 56081-1150
Roxanne Scholl		70331 410th St	Saint James MN 56081-4533
South Central Elec Assn		PO Box 150	Saint James MN 56081-0150
Dennis J Paschke		326 Locust St	Saint Peter MN 56082-1461
Nicholas W Fritz		PO Box 194	Saint Peter MN 56082-0194
Christensen Family Farms Inc	23971 County Rd 10	PO Box 3000	Sleepy Eye MN 56085-0003
DWN LLP		32074 240th St	Sleepy Eye MN 56085-4661
David J & Sharon Carr		535 3rd Ave NW	Sleepy Eye MN 56085-1009
Terry L & Cynthia L Boesch		10497 481st Ave	Truman MN 56088-2164
St Paul Lutheran Church		110 E 4th St N	Truman MN 56088-1132
Guy Rudolph		1467 200th St	Truman MN 56088-2068
Daniel Helvig		1480 200th St	Truman MN 56088-2068
Jonathan B & Karen J Helvig		1480 200th St	Truman MN 56088-2068
Mark Charles & Julie R Ufer		1543 210th St	Truman MN 56088-2065
Matthew & Carly Owens		1609 210th St	Truman MN 56088-2050
Timothy J & Julie A Geistfeld		1609 250th St	Truman MN 56088-2140
Ronald E & Bonnie Jean Rahm		1634 190th St	Truman MN 56088-2073
Charles E Johnson		1657 220th St	Truman MN 56088-2047
Larry & Adonica Siegler		1663 190th St	Truman MN 56088-2073
Leonard E & M L Johnson		1684 190th St	Truman MN 56088-2073
Rosemary Kay Sandt		1686 200th St	Truman MN 56088-2062
Bruce R & Tami F Whitman		1766 190th St	Truman MN 56088-2074
Kevin D & Kathleen A Bartz		1773 200th St	Truman MN 56088-2061
Steven E Griese		1801 190th St	Truman MN 56088-2075
Gregory & Cynthia E Graif		1840 230th St	Truman MN 56088-2044
Scott Peterson		1849 200th St	Truman MN 56088-2060
Craig & Debra Asmus		1858 160th Ave	Truman MN 56088-2072
Brian & Laurie Burmeister et al.		1859 150th Ave	Truman MN 56088-2070
Jason Bulfer		1866 160th Ave	Truman MN 56088-2072
Randy Scott Wilking		1869 210th St	Truman MN 56088-2054
Grant Pomerenke		1877 175th Ave	Truman MN 56088-2107
Steven P & Elizabeth Zehnder		1883 200th St	Truman MN 56088-2060
Duane J & Nancy A Letcher		1888 190th St	Truman MN 56088-2075
Walter A & Jean M Godfredsen		1889 Ranch Rd	Truman MN 56088-2161
Wayne & Marlene Burmeister		1892 150th Ave	Truman MN 56088-2070
Linda K Anderson		1894 State Highway 15	Truman MN 56088-2104
Lucinda Anderson		1894 State Highway 15	Truman MN 56088-2104
Travis D & Jeanine M Fowler		1904 210th Ave	Truman MN 56088-2078
Tony L & Virginia D Brummond		1913 210th St	Truman MN 56088-2058
Merle Burmeister Rev Liv Trust		1931 160th Ave	Truman MN 56088-2063
German Evang Society c/o Robert Traetow		1943 150th Ave	Truman MN 56088-2069
Robert Traetow		1943 150th Ave	Truman MN 56088-2069
Gregory & Adele Kaufman		1943 210th St	Truman MN 56088-2058
Gregory A & Kim M Wills		1944 243rd Ave	Truman MN 56088-2084
Eugene & Barbara Gates		1948 227th Ave	Truman MN 56088-2081
Larry H & Annette L Bremer		1948 State Highway 15	Truman MN 56088-2080
Keith & Karen Worthley & K Andrews		1951 227th Ave	Truman MN 56088-2081
Michael P & Theresa Ricard		1957 243rd Ave	Truman MN 56088-2084
Clayton Wendt Trustee		1962 150th Ave	Truman MN 56088-2069
Albert & Muriel Armbrust		1971 160th Ave	Truman MN 56088-2063
Ronald & Kay Sandersfeld Trust		1972 190th Ave	Truman MN 56088-2059
Curtis R Sager		1972 210th Ave	Truman MN 56088-2078
Dereck E Bartz		1987 Ranch Rd	Truman MN 56088-2076
Steven Zwiefel		2005 210th St	Truman MN 56088-2038
Dudley D & Donna Leonard		201 S 6th Ave E	Truman MN 56088-1307
Jack Armbrust & Marlys & Randy Fischer		2019 200th St	Truman MN 56088-2036

Arnold L & J R Rosenberg		2024 150th Ave	Truman MN 56088-2067
Bridget & Charles Rosch		2025 200th Ave	Truman MN 56088-2037
Douglas E Quinn		2044 230th Ave	Truman MN 56088-2030
Clayton Mitchell		2045 230th Ave	Truman MN 56088-2030
Willis P & Eulalie A Grunig		2048 210th Ave	Truman MN 56088-2035
Howard L Anderson		2048 240th Ave	Truman MN 56088-2085
Willis P & Eulalie A Grunig et al.		2050 210th Ave	Truman MN 56088-2035
Tyler & Jessica Sauck		2052 190th St	Truman MN 56088-2077
Church of Christ of Horic		2054 190th St	Truman MN 56088-2077
Jonathon R & Jean Gerdes Bentz		2054 200th St	Truman MN 56088-2036
Alan Wille		2059 160th Ave	Truman MN 56088-2064
Daniel M & Leah L Owens		2064 160th Ave	Truman MN 56088-2064
Melvin C Evans		2065 180th Ave	Truman MN 56088-2053
David W & Trudy S Bates		2066 250th Ave	Truman MN 56088-2087
Louise M Bates Irrev Trust		2066 250th Ave	Truman MN 56088-2087
Michael D Bates		2066 250th Ave	Truman MN 56088-2087
George H Fowler Irrevoc Trust c/o Ron Fowler		2067 190th St	Truman MN 56088-2077
Ronald D & Dora Fowler		2067 190th St	Truman MN 56088-2077
Mary C Fowler		2068 190th St	Truman MN 56088-2077
Brian J & Louise Ostlie		2071 200th Ave	Truman MN 56088-2037
Terry John Theobald		2073 230th Ave	Truman MN 56088-2030
Wayne H Larsen		2079 250th Ave	Truman MN 56088-2087
Kirk & Kay Vogt		2084 State Highway 15	Truman MN 56088-2031
Vogts Hog Finishing LLC		2084 State Highway 15	Truman MN 56088-2031
Terry & Betty Grunig	2092 210th Ave	PO Box 113	Truman MN 56088-0113
Elliot R & Connie J Belgard	213 N 3rd Ave E	PO Box 144	Truman MN 56088-0144
Ronald & Marcia Clay		2134 270th Ave	Truman MN 56088-2092
Violet P Hansen		214 W 5th St N	Truman MN 56088-1013
Michael L & Kathleen Lundgren		2141 200th St	Truman MN 56088-2079
Daniel P & Diane K Southwick		2148 200th St	Truman MN 56088-2079
Matthew R & Jaime L Fretty		2161 200th St	Truman MN 56088-2079
Kenneth J & Barbara Detloff		2182 200th St	Truman MN 56088-2079
Clarice A Kleinschrodt		221 N 1st Ave W Apt 3	Truman MN 56088-1019
L & Mark Smith & R Sagehorn		221 S 7th Ave E	Truman MN 56088-1304
Gary Roloff et al.		222 N 1st Ave E	Truman MN 56088-1119
Ray A & Vicki L Davison		2258 260th Ave	Truman MN 56088-2095
Steven & Vanessa Graham		2267 175th Ave	Truman MN 56088-2046
Robert Lee & Faith Ann Sitzman		2275 260th Ave	Truman MN 56088-2095
Leroy G & Susan M Risk		2313 210th St	Truman MN 56088-2029
Watonwan Farm Service Co	233 W Ciro St	PO Box 68	Truman MN 56088-0068
Mark S & Sandra Grefe		2340 200th St	Truman MN 56088-2082
Pamela A Spencer		2376 200th St	Truman MN 56088-2082
Michael J & Penny J Stolz		2383 200th St	Truman MN 56088-2082
Mark Hansen		2386 210th Ave	Truman MN 56088-3100
Ask Farm, LLC		2404 State Highway 15	Truman MN 56088-2151
Flohrs Farm LLC		2404 State Highway 15	Truman MN 56088-2151
Jacob M & Vanessa L Bettin		2406 200th St	Truman MN 56088-2083
Russell & Linda Osmundsen		2409 280th Ave	Truman MN 56088-2128
Rahm Farms Inc		2411 140th Ave	Truman MN 56088-2147
Jeffrey Hoppe		2431 175th Ave	Truman MN 56088-2117
James R Hansen		2437 210th St	Truman MN 56088-2086
Garth A Carlson		2442 240th St	Truman MN 56088-2131
Albert T & Drusilla Egeness		2467 200th St	Truman MN 56088-2083
Lois I Peterson (LE) et al.		2486 200th St	Truman MN 56088-2083
Mark, Kay, Brian, & Linda Sauck		2486 200th St	Truman MN 56088-2083
E & M Sauck Irrev Family Trust		2488 200th St	Truman MN 56088-2083
Thomas R Tomlinson		2528 220th St	Truman MN 56088-2096
Ernest E Jr & Virginia Salic		2613 210th St	Truman MN 56088-2090
Norma Grefe		2340 200th St	Truman MN 56088-2082

Sylvia Balk		405 N 3rd Ave E	PO Box 262	Truman MN 56088-0262
Duane & Rose Mary Kasten Trusts			418 W 2nd St S	Truman MN 56088-1224
Edward Sanders III et al.			43675 850th Ave	Truman MN 56088-4462
Sanders Farms			43675 850th Ave	Truman MN 56088-4462
Amy Lang			505 E 1st St S	Truman MN 56088-1314
Flowrein Cramer & Evelyn Bower			505 W Ciro St	Truman MN 56088-1208
Scott O & Monica J Stith			521 W Ciro St	Truman MN 56088-1208
Grace C Ekstrom			PO Box 122	Truman MN 56088-0122
Mark A Wolf			PO Box 264	Truman MN 56088-0264
Troy D & Teresa M Tonneson			PO Box 368	Truman MN 56088-0368
Morgan R & J F Tennyson			PO Box 370	Truman MN 56088-0370
Current Resident			1709 200th St	Truman MN 56088-2061
Current Resident			1720 190th St	Truman MN 56088-2074
Current Resident			1750 200th St	Truman MN 56088-2061
Current Resident			1958 State Highway 15	Truman MN 56088-2080
Current Resident			1998 190th Ave	Truman MN 56088-2059
Current Resident			2012 200th Ave	Truman MN 56088-2037
Current Resident			2016 190th St	Truman MN 56088-2077
Current Resident			2028 State Highway 15	Truman MN 56088-2031
Current Resident			2055 270th Ave	Truman MN 56088-2091
Current Resident			2056 170th Ave	Truman MN 56088-2051
Dennis Howell			13136 494th Ave	Vernon Center MN 56090-2019
Kent & Cherrie Langford			PO Box 302	Vernon Center MN 56090-0302
Eric D & Leah M Worke			14823 367th Ave	Waseca MN 56093-4662
Cynthia Lemickson Kolander			43140 130th St	Waseca MN 56093-1400
Dennis C & Elaine M Sellner			441 1st St NW	Wells MN 56097-1007
Michael D & Diane A Morgan			551 2nd Ave NW	Wells MN 56097-9581
Lance L & Cori B Slater			560 W Franklin St	Wells MN 56097-1162
Barbara Ziegler			888 4th Ave SW	Wells MN 56097-1408
J & M Properties of Wells LLC			PO Box 184	Wells MN 56097-0184
Tom Kresko	MnDNR/Ecological and Water Resources		175 County Road 26	Windom MN 56101-1868
Rob Baden	MnDNR/Assistant Area Wildlife Manager		175 County Road 26	Windom MN 56101-1868
Todd Luke	District Manager		49663 County Road 17	Windom MN 56101-3026
Cecilio & Yulma Pesina			1408 5th Ave	Windom MN 56101-1470
State Of MN Dot			180 County Road 26	Windom MN 56101-1868
Sylvan & Beverly Peterson			260 N Shore Dr	Windom MN 56101-3600
Harlan C Olson & Eileen M Olson Co-Trustees			350 6th Ave S Apt 105	Windom MN 56101-1864
Belmont Evangelical Luth Churc c/o Judy Nelson			48602 870th St	Windom MN 56101-4102
Dennis Rosin			52086 920th St	Windom MN 56101-4044
Merva Fransen et al c/o Judy Kielty			615 5th St	Windom MN 56101-1817
Conrad & Joan A Heggeseth			655 Verona Ave	Windom MN 56101-1623
John & Patricia Salzwedel			733 18th St	Windom MN 56101-1103
Daniel Jones			875 20th St	Windom MN 56101-1132
Tait A Jensen			89982 540th Ave	Windom MN 56101-4033
Alexandra Boardman			PO Box 128	Windom MN 56101-0128
Chambers Family Farms LLC c/o Fairland Management			PO Box 128	Windom MN 56101-0128
George R Bodley Trust Rochelle H Uchibori Trust			PO Box 128	Windom MN 56101-0128
Honeywood Farm Inc			PO Box 128	Windom MN 56101-0128
John A Boardman et al.			PO Box 128	Windom MN 56101-0128
Nasby Family Farms LLP			PO Box 128	Windom MN 56101-0128
Peter W Boardman Rev Trust et al.			PO Box 128	Windom MN 56101-0128
Brent G & Jennifer J Quiring			PO Box 366	Windom MN 56101-0366
Lonnie Roloff et al.			409 W 3rd St	Adrian MN 56110-1223
Thomas & Joann Plumhoff		202 Clark N	PO Box 34	Ceylon MN 56121-0034

Dennis & Linda Hoppe			410 W Oak St	Ceylon MN 56121-4053
Six Sons Properties LLC			8 W Clear Lake Dr	Ceylon MN 56121-4069
Wayne Hansen et al.			PO Box 16	Ceylon MN 56121-0016
Gregory Bents			PO Box 238	Ceylon MN 56121-0238
Joann Plumhoff			PO Box 34	Ceylon MN 56121-0034
Daniel E Kennedy			PO Box 74	Ceylon MN 56121-0074
Steven M Zens et al			18 N Forman Rd	Currie MN 56123-1077
Lowell Schultz			130 N Lindberg Ave	Dunnell MN 56127-4007
George W & V Sickler (LE) et al.			228 50th Ave	Dunnell MN 56127-1102
Cynthia M Anderson et al.			268 50th Ave	Dunnell MN 56127-1102
Alan A & Juanita E Ask			319 60th St	Dunnell MN 56127-1122
Inga L Macatiag et al c/o Heidi Scott			437 40th Ave	Dunnell MN 56127-1140
Nancy K Roehler			686 State Highway 4	Dunnell MN 56127-1142
Myrna M Anderson			726 20th Ave	Dunnell MN 56127-1130
Darrell & Anita Ogren			PO Box 162	Dunnell MN 56127-0162
Chad Hybbert			PO Box 234	Dunnell MN 56127-0234
Jerald Ebeling			354 60th Ave	Dunnell MN 56127-1212
Jan Voit	Heron Lake Watershed District Administrator	PO Box 345	1008 3rd Ave	Heron Lake MN 56137-4009
Edward Svoboda Trust c/o Barbara Svoboda			39328 440th St	Heron Lake MN 56137-2005
Tiffany & Daniel E Cross			24173 484th Ave	Jasper MN 56144-1054
Robert L & Laurie Baumann			PO Box 202	Jeffers MN 56145-0202
Brian Nyborg	SWCD District Manager		603 S Highway 86	Lakefield MN 56150-3295
Ray Hendrickson	District Conservationist	Natural Resources Conservation Service	603 S Highway 86	Lakefield MN 56150-3295
Marilyn J Bauer Trust			1004 Milwaukee St	Lakefield MN 56150-9427
Larye Wachal et al			107 W 4th Ave	Lakefield MN 56150-9368
Ervin & Dorothy Ihrke		205 Funk Ave	PO Box 58	Lakefield MN 56150-0058
Lloyd & Christine E Steffen			207 Snure St	Lakefield MN 56150-9475
Betty Rossow Trust c/o Marjorie L Olmen			308 Main St	Lakefield MN 56150-1200
C J Schumann Trust c/o Anna Marie Schumann			309 Oconnor St	Lakefield MN 56150-9442
Kirk & Darla Rossow et al			40191 Okabena Rd	Lakefield MN 56150-3422
Yvonne Hodnefield			406 Snure St	Lakefield MN 56150-9464
Paul D & Cynthia D Cihak			407 Milwaukee St	Lakefield MN 56150-9450
John H Nauerth Iii			42549 800th St	Lakefield MN 56150-3171
Shirley Thooft			44093 870th St	Lakefield MN 56150-3107
Brian & Amy Majerus			46101 740th St	Lakefield MN 56150-3293
Debra & Gary Bailey			46371 820th St	Lakefield MN 56150-3006
Orval Bailey Family Trust c/o Gary Bailey			46371 820th St	Lakefield MN 56150-3006
Fred & Arlyce Henning			46385 810th St	Lakefield MN 56150-3018
Phillip & Lori Kruger			46400 820th St	Lakefield MN 56150-3005
Lee John Garms			46536 780th St	Lakefield MN 56150-3278
Michael & Mary Ann Hasara			46638 810th St	Lakefield MN 56150-3017
Chris Bauer			46885 820th St	Lakefield MN 56150-3008
Doyle Svoboda			46954 820th St	Lakefield MN 56150-3007
Stephen & Twilla J Van Hal			47059 800th St	Lakefield MN 56150-3025
Milford & Janice Gentz			47114 830th St	Lakefield MN 56150-3048
David R Bauer			47196 820th St	Lakefield MN 56150-3010
Richard & Mabel Weets			47213 800th St	Lakefield MN 56150-3026
Irvin& Pearl Swanson Trust			47313 840th St	Lakefield MN 56150-3062
Richard G Jandera			47477 790th St	Lakefield MN 56150-3035
Byron & Keri Buresch et al			47607 820th St	Lakefield MN 56150-3011
Roger C & Darlene E Wedeking Living Trust			47628 810th St	Lakefield MN 56150-3016
Larry G Miller			47640 830th St	Lakefield MN 56150-3049
Steven D & Patricia Voss			47702 820th St	Lakefield MN 56150-3012
Dennis R Salzwedel			47838 830th St	Lakefield MN 56150-3050

Donald & Bonnie Vrchota	48154 790th St	Lakefield MN 56150-3033
Kenneth Pohlman	48294 830th St	Lakefield MN 56150-3051
Jay Reipke	48350 800th St	Lakefield MN 56150-3029
Wayne & Delores Kolander	48425 810th St	Lakefield MN 56150-3159
Alvin W Schultze	49246 795th St	Lakefield MN 56150-3032
Nicole Johnson & Steven Tidyman	49376 795th St	Lakefield MN 56150-3298
Mayme Jenness	49494 795th St	Lakefield MN 56150-3031
Donald Hendrickson	49575 820th St	Lakefield MN 56150-3046
Donald & Judith Hodnefield	508 Summer Ln	Lakefield MN 56150-9474
Ann Gladys Schultz	606 Ludwig Dr	Lakefield MN 56150-3339
Douglas G & Jolene Krumwiede	610 W 1st St	Lakefield MN 56150-9359
Leon & Violet Voss	705 Sioux Ave	Lakefield MN 56150-9443
Melvin & Geraldine Rademacher Trust	709 Walters St	Lakefield MN 56150-1271
Timothy & Wendalyn Tungland	72721 Kahuna Dr	Lakefield MN 56150-3344
Vancura Investments Lp	75589 460th Ave	Lakefield MN 56150-3273
Benji P Zishka	77365 380th Ave	Lakefield MN 56150-3442
Terry L Post	77534 440th Ave	Lakefield MN 56150-3206
Marilyn A Jandera-Larson	78625 480th Ave	Lakefield MN 56150-3153
William & Terri Jandera	78632 480th Ave	Lakefield MN 56150-3153
James E & Marlys A Swanson	79190 460th Ave	Lakefield MN 56150-3281
Douglas W Lesch	79455 480th Ave	Lakefield MN 56150-3034
Jenny Brooks	79519 470th Ave	Lakefield MN 56150-3024
Arthur & Millicent Swanson	80184 460th Ave	Lakefield MN 56150-3021
Corey & Danyelle Swanson	80190 460th Ave	Lakefield MN 56150-3021
Peter & Sherri Hodnefield Rev Trust	80434 480th Ave	Lakefield MN 56150-3014
Michael R Ehlers	80444 500th Ave	Lakefield MN 56150-3039
Relind Trust Virginia Schenck,Trustee	80628 500th Ave	Lakefield MN 56150-3038
Barry & Pamela Nosbusch	80685 490th Ave	Lakefield MN 56150-3040
Gene & Leslie Oeltjenbruns	80719 480th Ave	Lakefield MN 56150-3015
Michael A & Susan Buresch	81288 480th Ave	Lakefield MN 56150-3013
Milton & Dorothy Fricke Trust	81410 460th Ave	Lakefield MN 56150-3019
Robert J & Diann Ambrose Living Trust	81467 490th Ave	Lakefield MN 56150-3042
Kayle L & Jamie N Koep	81675 420th Ave	Lakefield MN 56150-3174
Daron J & Jody E Buresch	81713 490th Ave	Lakefield MN 56150-3043
Jay & Roslyn Schumann	81762 490th Ave	Lakefield MN 56150-3043
Jon & Amy Timko	82641 490th Ave	Lakefield MN 56150-3047
Joyce Bretzman Trust	84195 490th Ave	Lakefield MN 56150-3056
Keith & Pauline Buresch	85234 State Highway 86	Lakefield MN 56150-3137
Deloris A Strom	85661 500th Ave	Lakefield MN 56150-3090
Martha & Meil Jr Buresch	901 Reid St	Lakefield MN 56150-1263
Dwaine & Gertrude Hodnefield	912 Douglas St	Lakefield MN 56150-1184
Elaine E Pohlman	914 Walters St	Lakefield MN 56150-1229
Michael D & Randy D Hendrickson	PO Box 1011	Lakefield MN 56150-1011
Steven & Deborah Fricke	PO Box 105	Lakefield MN 56150-0105
Stanley & Joanne Sievert	PO Box 369	Lakefield MN 56150-0369
Wade & Debra Salzwedel	PO Box 603	Lakefield MN 56150-0603
Bonnie B Fricke	PO Box 625	Lakefield MN 56150-0625
Bonnie Gyberg	PO Box 663	Lakefield MN 56150-0663
Scott & Bradley Sievert	PO Box 855	Lakefield MN 56150-0855
Current Resident	46434 790th St	Lakefield MN 56150-3282
Current Resident	47337 820th St	Lakefield MN 56150-3009
Current Resident	47396 790th St	Lakefield MN 56150-3036
Current Resident	48239 800th St	Lakefield MN 56150-3028
Current Resident	49919 800th St	Lakefield MN 56150-3037
Current Resident	79732 460th Ave	Lakefield MN 56150-3022
Current Resident	81552 460th Ave	Lakefield MN 56150-3004
Gene R Oeltjenbruns	80719 480th Ave	Lakefield MN 56150-3015

Duane Pick			PO Box 104	Lismore MN 56155-0104
John & Amy Sue Regier			34406 590th Ave	Mountain Lake MN 56159-2098
Albert G & Loretta G Hertle			745 Basinger Memorial Dr	Mountain Lake MN 56159-1312
Eugene A Peterson			89755 580th Ave	Mountain Lake MN 56159-3000
Richard & Kathleen Peterson			89874 590th Ave	Mountain Lake MN 56159-3012
Bruce Swanson			90412 580th Ave	Mountain Lake MN 56159-3003
Lorin Epp Trust Agreement			PO Box 579	Mountain Lake MN 56159-0579
Rebecca Epp Trust Lorin Epp Trustee			PO Box 579	Mountain Lake MN 56159-0579
Luke E & Celeste K Olson			113 230th St	Odin MN 56160-1204
Steven J Swanson			60660 920th St	Odin MN 56160-3006
Randall S Olson et al.			1189 230th St	Ormsby MN 56162-1215
John M Wassman			71339 430th St	Ormsby MN 56162-4103
Patricia Munson et al.			904 90th Ave	Ormsby MN 56162-4003
Urban M Neisen			PO Box 518	Ormsby MN 56162-0518
Joel S & Jon E Rabbe			PO Box 548	Ormsby MN 56162-0548
Norman Pohlman c/o Vicki Place			36572 740th St	Round Lake MN 56167-2157
Blm Jackson LLP c/o Bradley & Linda Mohns			70426 320th Ave	Round Lake MN 56167-2182
Jay Trustry	Southwest Region Executive Director		2401 Broadway Ave Ste 1	Slayton MN 56172-1168
Roelsy Gonzalez			1117 Humiston Ave	Worthington MN 56187-1729
Shane & Jason Rohman		3 Ledgewood Ln	PO Box 10	Canton CT 06019-0010
Frontier Communications of MN			3 High Ridge Park	Stamford CT 06905-1337
Valerie A Vogt			19 Bunning Dr	Voorhees NJ 08043-4158
Donald & Grace Adamson			97 Northridge Dr	Buffalo NY 14224-4408
Robert B Mccoun			245 Cutleaf Cir	Harleysville PA 19438-2444
Pioneer Hi-Bred Intl Inc			PO Box 1039	Wilmington DE 19899-1039
Richard R Palmer			4747 Upton St NW	Washington DC 20016-2369
G W Palmer			4747 Upton St NW	Washington DC 20016-2369
Neal W & Denise R Zierke			2603 Youngs Dr	Haymarket VA 20169-1646
Stanley C Dalton Res Trust			10301 Grosvenor Pl	Rockville MD 20852-4685
Harries Family Trust et al c/o Rick Harries			5608 Meridian Hill Pl	Burke VA 22015-2196
Shelly Brunk			214 Keswick Cir	Dayton VA 22821-9202
The Langerman Decedent's Trust c/o Kathryn J Langerman			1575 John Knox Dr Apt C104	Colfax NC 27235-9665
Margery Duffey			423 Cedar Berry Ln # 203	Chapel Hill NC 27517-7209
Denise Scholl			8005 N Bridgewater Ct	Raleigh NC 27615-3508
Milton R & Edna M Bezdicek Tst			380 Winding Way Dr	Franklin NC 28734-7795
Wells Fargo Bank Attn: Foreclosure Dept			3476 Stateview Blvd	Fort Mill SC 29715-7203
Melody G & Thomas G Heil			1167 Wagner Ave	Fort Mill SC 29715-7840
RV Holdings One, LLC			1112 Price Ave	Columbia SC 29201-1860
Jose L & Ileana Diaz			248 Tymberbrook Dr	Lyman SC 29365-9222
Lynn R Shearer			4757 Old Acworth Dallas Rd	Acworth GA 30101-9521
Kristina Nadneau (Carter)			436 Holderness St SW	Atlanta GA 30310-1758
Laura A Hillman & Pauline A Crise			300 Woodhaven Dr Apt 35	Hilton Head SC 29928-7511
Laura A & P A Crise Hillman			300 Woodhaven Dr	Hilton Head SC 29928-7511
Sheri A Hartung Larue			6838 SW 117th St	Ocala FL 34476-3618
Janet Zimmerman Family Trust %Lynn M Zimmerman			292 Raintree Dr	Altoona FL 32702-9605
Thomas J Carpenter			16132 4th St E	Redington Beach FL 33708-1614
James R Kurtock & Rita R Kurtock Trust			6372 Palma Del Mar Blvd S	St Petersburg FL 33715-2705
Harold W & Bonnie B Yonker Trust			1610 Reynolds Rd Lot 52	Lakeland FL 33801-6959
Ruth L Eder Trust, Kathryn E Abbott Trustee			8923 Dartmoor Way	Fort Myers FL 33908-5613
Richard A Lunn			645 103rd Ave N	Naples FL 34108-3220
Lawrence M Magdovitz,Trustee		222 Issaquena	PO Box 997	Clarksdale MS 38614-0997

Carol Nolting		29 Josh Jct	Iuka MS 38852-6020
Delbert Farnham		1873 Preston St	Radcliff KY 40160-9107
Eugenia Mae Strohm		315 Buck Creek Blvd	Indianapolis IN 46227-2013
Neal J & Roberta Murphy Trust		2425 Dickinson Rd	Chesterton IN 46304-9657
Larry & Joan Murphy		2425 Dickinson Rd	Chesterton IN 46304-9657
Elaine Murphy Hunkins		2425 Dickinson Rd	Chesterton IN 46304-9657
Daniel H Stoltzfus		2423 College Ave	Goshen IN 46528-5009
ITC Midwest LLC		27175 Energy Way	Novi MI 48377-3639
Jerome & Ruth Devine		15196 Murray Woods Ct	Byron MI 48418-9053
USF Holland Inc		750 E 40th St	Holland MI 49423-5342
Mary M & Emmett J Stevermer		2607 Tyler Ave	Ames IA 50010-4445
Bruce Hinds		5115 Clemens Blvd	Ames IA 50014-6934
Casey's Retail Company	One Convenience Blvd	PO Box 3001	Ankeny IA 50021-8045
Eugene & Sandra K Gronseth		1304 Moingona Rd	Boone IA 50036-7172
E E & R L Gronseth Living Trust		1304 Moingona Rd	Boone IA 50036-7172
Lucille Nelson Life Estate et al.		PO Box 500	Nevada IA 50201-0500
Arlo & Marjorie Erickson Revocable Trust et al.		PO Box 500	Nevada IA 50201-0500
Robert & Ilene Leen		714 S 3rd Ave W	Newton IA 50208-3639
Janice E Frey		8989 Old Orchard Dr	Norwalk IA 50211-1865
Lawrence A Bergemann		5205 Perry Pt	Panora IA 50216-8612
Bergemann Corporation		5205 Perry Pt	Panora IA 50216-8612
A & E Leasing LLC		6400 Westown Pkwy	West Des Moines IA 50266-7709
Wells Fargo Financial Inc		800 Walnut St	Des Moines IA 50309-3605
Southern MN Construction		PO Box 3365	Des Moines IA 50316-0365
	Iowa Utilities Board	1375 E Court Ave Rm 69	Des Moines IA 50319-9020
Donald O Evans		9600 Tanglewood Dr	Urbandale IA 50322-1366
Ruby E Vanderiet		15161 Beechwood Ave	Clive IA 50325-4530
Wells Fargo Financial MN Inc		One Home Campus Mac#X2301-03R # X2301-03	Des Moines
Robert C & Delores L Williams		1620 E Linden St	Algona IA 50511-2035
Marilyn K Frideres Irrev Trust		502 N Minnesota St	Algona IA 50511-1566
James P & Patricia A Elbert		1421 E State St	Algona IA 50511-3048
Paul J Weber		112 N Western Hills Dr	Algona IA 50511-5005
Betty J Kunkel		1307 W Valley View Dr	Algona IA 50511-7267
Molly & Tom Elliott		PO Box 161	Armstrong IA 50514-0161
Jesse Leroy Prochniak		1770 570th Ave	Armstrong IA 50514-7503
Delmer Hardecopf		106 500th St	Armstrong IA 50514-7042
Shirley Hellman	111 N Walnut	PO Box 143	Bancroft IA 50517-0143
Joan Peymann		PO Box 288	Bancroft IA 50517-0288
Bradley A Eichenberger		PO Box 142	Bancroft IA 50517-0142
Stateline Coop & Watonwan Farm		PO Box 67	Burt IA 50522-0067
Carol Konradi		1515 520th Ave	Dolliver IA 50531-7562
Hawkeye Three LLP		PO Box 96	Emmetsburg IA 50536-0096
Donald C Nauss		94 Lake Shore Dr	Emmetsburg IA 50536-1424
Thomas L Arne		2137 Oak Ridge Rd	Goldfield IA 50542-7569
JF Trust		PO Box 85	Ledyard IA 50556-0085
Esther Haahr Revocable Trust c/o Curtis Haahr		2211 550th Ave	Ringsted IA 50578-7521
Bruce K Milbrandt		804 Emerald Dr	Storm Lake IA 50588-2720
Mark Erickson		1001 Emerald Dr	Storm Lake IA 50588-2724
Teri Laidig		3909 70th Ave	Swea City IA 50590-8590
Dorothy Zielske	601 Park Ave W	PO Box 102	Swea City IA 50590-0102
Ardell & James L Blekfeld		108 7th St S	Swea City IA 50590-1034
David A & Mary Ellen Malo		2307 Highland Dr	Webster City IA 50595-3031
Cropmate Company		PO Box 10	Wall Lake IA 51466-0010
Scott A. & Jennifer L. Poole		514 Lake Dr	Ottumwa IA 52501-3730
Ronald & Judy Delong		48335 30th Ave	Buffalo Center IA 50424-7583
Bonita L Naumann		4808 200th Ave	Buffalo Center IA 50424-3013
Dan & Hohni Weringa		2308 480th St	Buffalo Center IA 50424-7046
David W Ley		4107 185th Ave	Lakota IA 50451-7017

Robert A & Lorraine B Stewart		203 5th St	Lakota IA 50451-7121
Sara L & Matthew D Ertman		2085 510th St	Northwood IA 50459-8617
Jeffrey L Creger		301 1st Ave N	Northwood IA 50459-1420
Silk Road Family Ltd Prtnrshp		PO Box 335	Osage IA 50461-0335
Hauge Family Lp c/o Allen D Hauge		1233 Maple St	Osage IA 50461-1829
Jana S & Curtis Wm Frank		710 South St	Plymouth IA 50464-5054
Mary Marlene Winter		PO Box 234	Rake IA 50465-0234
Lawrence V & Dorothy Johanson		PO Box 67	Thompson IA 50478-0067
Jessica Marie Bloomquist		PO Box 102	Titonka IA 50480-0102
Jacqueline Mcmahon & Monica Haag		1122 Meadow Ln	Waterloo IA 50701-4710
Etta J Petersen & G K Schroedel		PO Box 85	Waukon IA 52172-0085
John Jordahl & Shirley Coombes		8 Cascade Ter	Burlington IA 52601-6516
Ronald Abel		4563 Amber Ct	Bettendorf IA 52722-2193
George Lane Buck		1810 Sussex Ct	Bettendorf IA 52722-3156
Wisconsin Town Lot Company c/o Borgelt, Powell, et al.		735 N Water St Fl 15	Milwaukee WI 53202-4106
C V Boultinghouse		2825 Cozy Acres Rd	Mount Pleasant WI 53406-4909
Donald Lusk		7127 North Shore Dr	Belleville WI 53508-9775
Nuvex Ingredients Inc c/o Kerry Inc		3330 Millington Rd	Beloit WI 53511-9542
Alliant Interstate Power Co		4902 N Biltmore Ln Ste 1000	Madison WI 53718-2148
Gjevre Revocable Trust c/o Philip W & Jane L Gvervre		1828 Marys Dr	Stevens Point WI 54481-7016
Minnesota Energy Resources Cor	700 Adams St N	PO Box 19001	Green Bay WI 54307-9001
Fairmont Development Group LLC		3027 Autumn Leaves Cir	Green Bay WI 54313-9326
Burdean & Dawn M Senne		254 85th Ave	Clayton WI 54004-3322
John R Vieths		PO Box 25	Hager City WI 54014-0025
Holt Enterprises LLP c/o Dave Holt		PO Box 223	Hudson WI 54016-0223
David A Holt et al		1103 Crest View Dr	Hudson WI 54016-9484
Linda K Jerlow		239 125th Ave	Hudson WI 54016-6703
Craig Froke		N8461 1251st St	River Falls WI 54022-4731
Hubert & Anna Neumann		119 Union St	River Falls WI 54022-1550
Jackie Grefe		730 E Wilson Ave	Arcadia WI 54612-1605
Mary J Pirsig Life Estate et al.		1126 Main St Apt 20	Onalaska WI 54650-2773
Nial E Bessinger Life Est et al.		S3502B Asbury Rd	Viroqua WI 54665-8199
Jamarka Martin LLC		N4320 494th St	Menomonie WI 54751-7422
Max A & Mary E Gustafson		13718 340th St	Center City MN 55012-9652
William A Wood Estate Trust		2505 Woodhurst Dr	Faribault MN 55021-9278
Roy B & A E Gronseth (LE) et al.		857 8th St SW	Faribault MN 55021-5902
Ronnie L Gronseth Living Trust		857 8th St SW	Faribault MN 55021-5902
Jones Family Partnership LLP		3033 Circle Bluff Trl	Faribault MN 55021-7274
Bernard Murphy Farms LP		6670 212th St W	Farmington MN 55024-9555
David & Karen L Finnegan		212 Elm St	Farmington MN 55024-1018
David J Finnegan		25251 Chippendale Ave W	Farmington MN 55024-9321
Jeffrey M & Sharon L Johnston		17607 Foxboro Ct	Farmington MN 55024-8507
Jonathan A & Shelly R Hallberg		19858 Evensong Ave	Farmington MN 55024-8686
Terry Lynn Caflisch		7768 200th St N	Forest Lake MN 55025-9724
Myron L Anderson Revoc Trust c/o John L Anderson		1526 Stonegate Rd	Hastings MN 55033-8593
John L & Carol J Anderson		1526 Stonegate Rd	Hastings MN 55033-8593
Larry C & Kathleen U Johnson		45747 Chalet Valley Ln	Hinckley MN 55037-7402
Scott D & Kristi L Larowe		2260 277th Ave NE	Isanti MN 55040-5210
Elizabeth & Mark Mcafee		9834 166th St W	Lakeville MN 55044-4623
Troy Johnson		17708 Kingsbury Cir	Lakeville MN 55044-5219
Stuart Sybesma		30855 Minnesota Ave	Lindstrom MN 55045-9103
Skluzacek Wadsten Farms LLP		601 Railway St SW	Lonsdale MN 55046-9559
G & J Skluzacek Farms		601 Railway St SW	Lonsdale MN 55046-9559
Steve Looft		PO Box 154	Marine St Crx MN 55047-0154
Gary & Amy Larson		PO Box 42	Morristown MN 55052-0042
Rosemary Dahl Revocable Trust c/o Rosemary Dahl et al.		888 Cannon Valley Dr Apt 212	Northfield MN 55057-3378

Rita A Matejka et al c/o Joyce Hartle			1125 Ridge Rd	Owatonna MN 55060-1921
Lance H Holter			1071 Lincoln Ave	Owatonna MN 55060-4027
Morrill W King c/o Arden Sheplee			2533 Eagle Ridge Dr Unit 112	Red Wing MN 55066-6045
Arden W & Frances Sheplee			2533 Eagle Ridge Dr	Red Wing MN 55066-7458
Henry(Jr)& Audrey J Wertheimer			PO Box 179	South Saint Paul MN 55075-0179
Darrel D Hacklander Life Est et al. c/o Lee Hacklander			5838 Blackshire Path	Inver Grove Heights MN 55076-1607
John Jeffries			3250 105th St E	Inver Grove Heights MN 55077-5350
Gilmore Vonohlen et al			7312 Argenta Trl	Inver Grove Heights MN 55077-2604
Maryanne R Swanson			6897 Inverness Trl	Inver Grove Heights MN 55077-1704
Mark E O'sell			13827 40th St N	Stillwater MN 55082-1208
	US Army Corps of Engineers	Attn: St Paul District Regulatory Branch	180 5th St E Ste 700	Saint Paul MN 55101-1600
Don Baloun	State Conservationist	United States Department Of Agriculture	375 Jackson St Ste 600	Saint Paul MN 55101-1851
Barbara Mitchell	Deputy State Historic Preservation Officer	State Historic Preservation Office	345 Kellogg Blvd W	Saint Paul MN 55102-1903
James N Wolf et al.			404 Mississippi River Blvd N	Saint Paul MN 55104-4920
Debra Teuchert & Steve Peterson			1813 Lincoln Ave	Saint Paul MN 55105-1954
Sara K Zimmerman			1393 Keston St	Saint Paul MN 55108-1644
Mary Lynn Worwa			4053 Birch Knoll Dr	White Bear Lake MN 55110-4568
United States Of America c/o U S Fish & Wildlife Service			1 Federal Dr	Fort Snelling MN 55111-4080
Mary Jo Zimmerman Trust			1648 Lake View Ct	Arden Hills MN 55112-2800
Kenneth S & Marie E Bezdicek			3356 Lake Johanna Blvd	Arden Hills MN 55112-7942
Donna Lee Barnett			1480 Applewood Ct W Unit 315	Roseville MN 55113-6289
William Hinton			8288 105th St N	Mahtomedi MN 55115-1304
Mary Mead			1830 Moccasin Ave	Saint Paul MN 55115-1408
Dorothy S Oltman			550 Hyde Ave N	Saint Paul MN 55115-2261
Thad A Tumbleson			260 Dahlia St	Mahtomedi MN 55115-2046
Waldon J & E A Baranuk			54 Manitoba Ave	Saint Paul MN 55117-5409
Norma J Cashill			1760 Trail Rd	Mendota Heights MN 55118-3730
Larry E & Michele Cain			455 Burlington Rd	Saint Paul MN 55119-5313
E Edward Lockner et al			1000 Marnie St S	Saint Paul MN 55119-5934
Lockner Family Partnership			1000 Marnie St S	Saint Paul MN 55119-5934
Patrick H & Bonnie M King			1842 Hyacinth Ave E	Saint Paul MN 55119-4547
Rosalie Ann Soronen			1563 Sherwood Ct	Eagan MN 55122-2745
Lars A Hallberg			1408 Rebecca Ln	Eagan MN 55122-2780
Dorothy M Scheuring Trust			1660 Riverton Pt	Eagan MN 55122-3138
Andrew & Amanda Lancette			1231 Carlson Lake Ln	Saint Paul MN 55123-1714
Grand Agra LLP			3613 Woodland Trl	Eagan MN 55123-2400
Douglas Donald Hoppe & Sandra Leann Hoppe			4755 Dodd Rd	Eagan MN 55123-2112
Shelly L Brekke			14852 Lower Endicott Way	Apple Valley MN 55124-6338
Clara C Wells Trust et al. c/o Carna Sinkula			104 Strese Ln	Apple Valley MN 55124-9334
Tamara R & Michael J Hoffman			13822 Grothe Cir	Apple Valley MN 55124-7615
Blossom M Spencer Irrev Trust			8729 Highwood Way	Apple Valley MN 55124-9455
James B Spencer			8729 Highwood Way	Apple Valley MN 55124-9455
K & S Malecha Investments			8448 133rd Street Ct	Apple Valley MN 55124-9503
J Robert Wardin			1 Eagle Ridge Rd	North Oaks MN 55127-6409
Tobola Farms			12 Raven Rd	Saint Paul MN 55127-2017
John Jacobson c/o Brett Peterson			10805 Sailor Way	Woodbury MN 55129-5297
Wayne E & Saundra J Johnston Joint Living Trust			648 Lake View Dr	Woodbury MN 55129-9283
State of MN			520 Layfayette Rd Suite	Saint Paul MN 55146-0001
State Of Minnesota - DNR - Division of Land & Minerals			500 Lafayette Rd N	Saint Paul MN 55155-4002
State of MN			500 Lafayette Rd N # 45	Saint Paul MN 55155-4002
State Of Minnesota - DNR - Bureau of Real Estate Mgmt			500 Lafayette Rd N # 30	Saint Paul MN 55155-4002
Bob Patton	MN Department of Agriculture		625 Robert St N	Saint Paul MN 55155-2538

State of MN			310 Centennial Bldg	Saint Paul MN 55155-0001
MN DNR Div Of Lands & Minerals			500 Lafayette Rd N	Saint Paul MN 55155-4045
Linda Bruemmer	Environmental Health Division	PO Box 64975	625 Robert St N	Saint Paul MN 55155-2538
Stacy Kotch	Utility Transmission Route Coordinator	395 John Ireland Blvd	Mn Department Of Transportation	Saint Paul MN 55155-0001
Karen Kromar	MN Pollution Control Agency		520 Lafayette Rd N	Saint Paul MN 55155-4102
Jamie Schrenzel	MnDNR/Ecological and Water Resources		500 Lafayette Rd N	Saint Paul MN 55155-4002
CHS Inc			PO Box 64796 Stop 110	Saint Paul MN 55164-0796
Maruice & Shirley Iliff et al.			2400 Washington Ave	Cloquet MN 55720-2844
Darwin Berhow			27975 E Bass Lake Rd	Grand Rapids MN 55744-4775
Joan L Roessler & G C Hemiller			2808 Meyers Point Rd	Grand Rapids MN 55744-4701
Kay Benck et al.			18382 Farm To Market Rd	Sturgeon Lake MN 55783-3361
Orville D & Carrol Sanderson Trust			211 2nd St NW Ofc Ofc	Rochester MN 55901-2897
Craig Lamphere et al			2100 Valkyrie Dr NW Apt 211	Rochester MN 55901-2454
Southern MN Municipal Power			500 1st Ave SW	Rochester MN 55902-3303
Alice M Olson/Trust et al			21 1st St SW	Rochester MN 55902-3124
Marilyn F Deling			3254 Echo Ln SW	Rochester MN 55902-2875
Ysbrand Vanderwerf & Eric Vanderwerf: US Bank, Attn: Jim Myhra			PO Box 4661	Rochester MN 55903-4661
Burnham Family Lmt Partnership c/o Steve Gleason Us Bank			PO Box 4661	Rochester MN 55903-4661
Henry & Viola Aberson Rev Trusts			1314 80th St SE	Rochester MN 55904-8434
Leona Mackie Martin			905 14th St NE	Rochester MN 55906-7050
Susan L Kramer			2684 Colleen St NE	Rochester MN 55906-8331
Burnell R & Folkert			2684 Colleen St NE	Rochester MN 55906-8331
Debra Winchester (LE) et al.			1604 11th Ave NE	Rochester MN 55906-4214
Wayne A Diekrager			1002 19th St NE	Rochester MN 55906-4249
Nicholas F Salic et al.			606 8th Ave SE	Austin MN 55912-3837
Hormel Foods Corporation			1 Hormel Pl	Austin MN 55912-3673
Denniece K Trimble et al.			606 8th Ave SE	Austin MN 55912-3837
Foxcoop LLC			65572 200th Ave	Dodge Center MN 55927-7727
Gregory E Cooper et al.			PO Box 452	Dodge Center MN 55927-0452
Richard Untiedt			73764 170th Ave	Hayfield MN 55940-8537
Kathleen Knoll			1004 3rd Pl NW	Kasson MN 55944-1495
Donald L & Audrey Snydar			1401 Terry Dr	Saint Charles MN 55972-1664
Marlo Maschoff			211 7th Ave SW	Stewartville MN 55976-1127
Manco of Fairmont Inc			211 7th Ave SW	Stewartville MN 55976-1127
Arthur E & Bonnie J Miller			67863 County Road 76	Wabasha MN 55981-7568
Nevin Radke			400 5th St	West Concord MN 55985-8806
Signe Cone			43359 Twin Bluffs Dr	Winona MN 55987-5987
Tyler D Panka			259 E Sanborn St	Winona MN 55987-3845
Robert Gorden			1613 Gilmore Valley Rd	Winona MN 55987-7609
Richard F Blahnik			1617 Circle Dr	Winona MN 55987-4806
Vivian Henry			10601 30th St NW	Annandale MN 55302-3208
Marlo D & Marlene J Baldwin			13907 McGinty Rd E	Minnetonka MN 55305-3654
Robert G Ovrebo		22799 Highland Ln	PO Box 840	Arlington MN 55307-0840
Debra L Cichanski & D Campbell			14187 63rd Ave N	Maple Grove MN 55311-4230
Double E Acres Farm LLP			7257 Terraceview Ln N	Osseo MN 55311-2146
Neil P & Lisa G Quade			1506 Pulaski Rd	Buffalo MN 55313-2456
Vincent E Schwieger			5037 Oxbow Pl	Champlin MN 55316-3566
Randal L & Deann M Phillips			319 Sunset Dr W	Champlin MN 55316-1337
Kenneth H & Barbara E Johnson			8655 Tellers Rd	Chaska MN 55318-9312
Esther O'sell			787 Ashley Dr	Chaska MN 55318-1542
Michael C & Paula Alexander			1475 Neal Ave	Delano MN 55328-9029
August & Kathleen Nordhausen			8415 Oakwood Ave NE	Elk River MN 55330-6846
Susan D Peterson			5342 Barrington Way	Excelsior MN 55331-7038
Linda Ann Kiecker			PO Box 147	Fairfax MN 55332-0147
Ronald A Winch			1003 1st St SE	Fairfax MN 55332-9794

Troy A Utz		PO Box 642	Gaylord MN 55334-0642
Helen Van Brunt Revoc Trust		556 Karmil Pl	Gaylord MN 55334-2256
Wakefield Pork Inc		410 Main Ave E	Gaylord MN 55334-9620
Larry Anderson		1321 20th St E	Glencoe MN 55336-1443
Tammy Stuart		3405 Barbara Ln	Burnsville MN 55337-1803
Drive Buy Inc		PO Box 936	Burnsville MN 55337-0936
Steven D Alme & M Jeanne Berns		1315 W 140th St	Burnsville MN 55337-4415
Helen J Vanderploeg		316 Eagle Ridge Cir	Burnsville MN 55337-3510
Karl A & Ramona K Holtz		5418 Williston Rd	Minnetonka MN 55345-4737
Carl H & Janet Weyer		8660 Red Oak Dr	Eden Prairie MN 55347-2323
Karen Hranicka et al.		1320 Prairie View Dr SW	Hutchinson MN 55350-6765
James C & Sharon L Rook		945 E 215th St	Jordan MN 55352-9357
Michael D & Christina Schafer		2631 Deerhill Rd	Long Lake MN 55356-9536
Outstate MN Properties LLC		6244 78th Ln	Loretto MN 55357-8727
Jacquetta H (Risk) Mann		5455 Bryant St	Maple Plain MN 55359-9627
Christine E & Martin Johnson		1582 Bluebird Ln	Mound MN 55364-1110
Kathyrn L Hanna		1816 Commerce Blvd	Mound MN 55364-1127
Fred C & Leona Dahl		PO Box 442	Mound MN 55364-0442
L-Land LLP c/o Leonard Lano		PO Box 278	Nya MN 55368-0278
Merle E. & Edith C. Brown Life Estate c/o Timothy Brown		8474 Underwood Ln N	Maple Grove MN 55369-5002
Ronald F & Margaret L Svehla		11374 65th Pl N	Maple Grove MN 55369-6162
Kenneth & Diane Ziemann		2770 Cougar Path NW	Prior Lake MN 55372-3262
Joanna S Bryant & James Lien		15240 Dakota Trl E	Prior Lake MN 55372-1862
Susan M Fordahl		22736 132nd Ave N	Rogers MN 55374-8713
Raymond Zierke Life Est et al. c/o Debra Nicholson		8850 Hillview Dr	St Bonifacius MN 55375-1195
Patricia L Teskey		9422 Maggie Ln	Savage MN 55378-3167
Vernon A & Marian E San		705 128th St W	Shakopee MN 55379-9269
Norcor Properties Inc		12466 Marystown Rd	Shakopee MN 55379-9239
Dianne E Smith & Linda J Muesing		1778 Green Crest Dr	Victoria MN 55386-9401
Mary Kaye Springer		1776 Steiger Lake Ln Apt	Victoria MN 55386-7702
Richard Charles Krueger et al.		672 Harmony Cir	Wayzata MN 55391-1106
Julie Alsworth		PO Box 389	Wayzata MN 55391-0389
Nortech Systems Incorporated		1120 Wayzata Blvd E	Wayzata MN 55391-1984
Ronald A & Scott A Goodemann		22722 583rd Ave	Winthrop MN 55396-2278
DM & E Railroad		120 S 6th St	Minneapolis MN 55402-1803
Paul E Mittelstadt		28 Greenway Gables	Minneapolis MN 55403-2145
Jackson Investments Inc		133 E 26th St	Minneapolis MN 55404-4351
Spray Tech Inc		133 E 26th St	Minneapolis MN 55404-4351
Thomas D Unruh		133 E 26th St	Minneapolis MN 55404-4351
Shane & Jason Rohman		3620 Colfax Ave S	Minneapolis MN 55409-1022
Jennifer E Dick et al		3735 Glenhurst Ave	Minneapolis MN 55416-4913
Johnston Bros LLP c/o Steven Johnston		3401 Saint Louis Ave	Minneapolis MN 55416-4396
Paul & Jolana Bernhardt		3607 Van Buren St NE	Minneapolis MN 55418-1215
Ziegler Jackson LLC		901 W 94th St	Minneapolis MN 55420-4236
Kay Hay et al		1525 Pierce Ter NE	Minneapolis MN 55421-1870
Erica Tobola		7339 Garfield Ave	Richfield MN 55423-3047
Virginia Wenzel Spartz		4603 Bruce Ave	Edina MN 55424-1124
Gerald Kelsey Smith et al.		4801 W 44th St	Edina MN 55424-1006
Thomas E Dougherty Rev Trust		PO Box 24247	Minneapolis MN 55424-0247
DFP Limited Partnership		PO Box 24247	Edina MN 55424-0247
Dorothy A Dougherty Rev Trust		PO Box 24247	Edina MN 55424-0247
Tony Sullins	Twin Cities Ecological Services Field Office	4101 American Blvd E	Bloomington MN 55425-1665
Nancy E Willette		8200 W 33rd St Apt 114	Minneapolis MN 55426-3886
Patricia D Schafer		7221 Unity Ave N	Brooklyn Center MN 55429-1277
Juley Clark		5947 Central Ave NE	Minneapolis MN 55432-5709
Eileen E & Larry V Fringer		1102 97th Ln NE	Blaine MN 55434-3556

William F Rieckhoff Rev Trust & James W Rieckhoff		7212 Monardo Ln	Edina MN 55435-4010
U S Fish & Wildlife Service		5600 American Blvd W Ste 990	Minneapolis MN 55437-1458
Convenience Merchandising LLC		6401 W 106th St W	Bloomington MN 55438-2648
Kent Rodriguez		7020 Lanham Ln	Edina MN 55439-1817
Trust Agreement Lawrence Wolff c/o Lawrence F & Elizabeth Wolff		6221 Creek Valley Rd	Edina MN 55439-1116
Mary F Burnham		6004 Shane Dr	Edina MN 55439-1758
Cargill Inc		PO Box 5626	Minneapolis MN 55440-5626
Marian J Zejdlik Trust		4055 Goldenrod Ln N	Plymouth MN 55441-1324
Charlotte J Miller		5340 Yorktown Ln N	Plymouth MN 55442-1938
David Jensen		1224 Banfill Cir N	Brooklyn Park MN 55444-1302
Paul R Chaussee et al		1916 75th Ave N	Brooklyn Park MN 55444-2418
Elsie M Krueger Trustee		55 Holly Ln N	Plymouth MN 55447-3585
Richard C Krueger Fam Irrevoc Trust		55 Holly Ln N	Plymouth MN 55447-3585
Richard Charles Krueger		55 Holly Ln N	Plymouth MN 55447-3585
Priscilla L Lien Rev Trust		15620 17th Pl N	Minneapolis MN 55447-6440
Boss Enterprises LLC		8970 W 35W Service Dr NE	Minneapolis MN 55449-4847
Minnegasco Inc		PO Box 59038	Minneapolis MN 55459-0038
Greischar & Torgerson Ptnship		PO Box 1020	Willmar MN 56201-1020
Holiday Inn of Fairmont		PO Box 1020	Willmar MN 56201-1020
Perkins Restaurant		PO Box 1020	Willmar MN 56201-1020
Frances L & Thomas A Meium		603 26th Ave SW	Willmar MN 56201-5155
Thrifty Franklin Budget		PO Box 1020	Willmar MN 56201-1020
Greischar & Torgerson III LLC		103 15th Ave NW	Willmar MN 56201-2194
Sadd Family Trust		1121 Carolina Ave	Willmar MN 56201-3061
Fort Randall Cable Systems Inc		1700 Technology Dr NE Ste	Willmar MN 56201-2284
Patricia L Fath		19650 Highway 71 S	Blomkest MN 56216-9625
Cynthia Huse Revoc Trust		503 9th Ave	Madison MN 56256-1134
Pantera LLC		811 Westmar Cir	Marshall MN 56258-2133
Gordon Teig		606 N High St	Marshall MN 56258-1158
Gary A & Helen R Quist		108 W James Ave	Marshall MN 56258-1639
David A Dauk		5126 County Road 40 NE	New London MN 56273-9515
Hawtons Hilltop Farm LLP		36657 280th St	Redwood Falls MN 56283-2704
James & Kay Ruter	326 5th St SE	PO Box 273	Renville MN 56284-0273
TLC Properties Inc		PO Box 865	Saint Cloud MN 56302-0865
Morris G & Gerda Freier		2617 15th St N	Saint Cloud MN 56303-1617
Judith R Roforth		306 E Lake Geneva Rd NE	Alexandria MN 56308-8906
Karl M Samp et al		10769 River Hills Cir	Brainerd MN 56401-5234
Raymond B Peterson Trust		14073 Norway Trl	Crosslake MN 56442-2514
Marlyn Hagedorn & Kandis Koppen		64197 County Highway 46	Eagle Bend MN 56446-1076
Joann Schaumburg Life Estate et al.		939 38th St NW	Hackensack MN 56452-2243
Jarrod M & Darcy Boldt		48831 133rd Ave	Hewitt MN 56453-2095
John B & Peggy Silker		10874 Crescent Dr	Nisswa MN 56468-2250
Ormal & Karen Steffen Leetal		26489 Inward Loop	Park Rapids MN 56470-5320
Laurel C Hodnefield Kremer		8813 Breezy Point Dr	Breezy Point MN 56472-3182
Rice Lake LLC		PO Box 373	Pine River MN 56474-0373
Ronald Lee Craven		PO Box 373	Pine River MN 56474-0373
Howard G Cordes Rev Trust		1511 Delton Ave NW	Bemidji MN 56601-2586
Kerry E Krenz		5290 Mission Rd NE	Bemidji MN 56601-8454
Mark Worshek		42875 390th St SE	Clearbrook MN 56634-4269
Wilfred & Marjorie Eckhardt Life Estate et al.		4856 State Highway 84 Unit 21	Longville MN 56655-3366
Rachel C Brophy et al		2604 S Newton St	Sioux City IA 51106-3411
Sabrina Weber		713 10th St	Sheldon IA 51201-2034
Joseph M Caven et al.		504 E 17th St	Spencer IA 51301-4622
Tyrell Family Ltd Ptrship		1090 375th Ave	Estherville IA 51334-7432
Charles & Lorri Weets		1024 340th Ave	Estherville IA 51334-7007
Cletus C & Jeanette E Ortmeier Liv Trust		1102 H Ave	Milford IA 51351-1362

John T & Jennifer J Heller	2285 195th Ave	Milford IA 51351-7149
Lyle Westergard	2272 240th Ave	Milford IA 51351-7126
Reginald Heinrichs & Lea Vermulm	PO Box 345	Okoboji IA 51355-0345
Lloyd C Kruse	3807 Lake Shore Dr	Okoboji IA 51355-2584
Gary A & Diana K Halder	1101 28th St	Spirit Lake IA 51360-1123
Vernon W, Dale, & Larry Wittler	2208 130th St	Spirit Lake IA 51360-7463
Richard & Darlene Hample	25631 105th St	Spirit Lake IA 51360-7086
Robert J & Jeanne L Karl	16879 256th Ave	Spirit Lake IA 51360-6863
G Wallis Reed Trust	PO Box 425	Spirit Lake IA 51360-0425
Douglas Carlson	2341 Quail Run Ave	Spirit Lake IA 51360-2039
Robert J & Jeanne L Karl	16879 256th Ave	Spirit Lake IA 51360-6863
Robert L & June Ann Stall	2408 25th St Lot 72	Spirit Lake IA 51360-7040
Dwane K Blachowske	400 E Redwood Blvd	Brandon SD 57005-2558
Sandra Carlson	501 S 8th Ave	Brandon SD 57005-1837
Debra Johnson	336 Eastern Ave	Brookings SD 57006-2726
Sandra J Crevier	48481 Sd Highway 13	Elkton SD 57026-7213
Everett E Tollakson Rev Trust	815 Maple St	Yankton SD 57078-3422
Diane Van Essen et al	803 Burgess Rd	Yankton SD 57078-4904
Santee Crossing Inc	PO Box 1503	Sioux Falls SD 57101-1503
Annette K Adams et al	4032 S Brady Ct	Sioux Falls SD 57103-7227
David E Peterson	3600 N 4th Ave Apt 307	Sioux Falls SD 57104-0793
Charlene Stebritz	512 S Western Ave	Sioux Falls SD 57104-3927
Janyce R Boettcher Rev Trust	2908 S Jefferson Ave	Sioux Falls SD 57105-4420
Rebecca L Branick	4712 S Sundance Cir	Sioux Falls SD 57105-6708
Robert & M Kuiken Trust	2517 S Mary Knoll Dr	Sioux Falls SD 57105-5050
Barbara M Messer	2904 W 33rd St Apt 328	Sioux Falls SD 57105-4273
P W Properties LLC	3800 W 53rd St	Sioux Falls SD 57106-4223
Jack & Joyce Rentschler	3408 S Gateway Blvd	Sioux Falls SD 57106-1556
Jackie's Farms LLC	2 W Penmarch Pl	Sioux Falls SD 57108-2967
Brenda Engen	2309 S Avondale Ave	Sioux Falls SD 57110-5611
Richard Steffen	PO Box 726	Watertown SD 57201-0726
Dennis R & Theresa A Larson	1003 N Commercial St	Clark SD 57225-1266
R & M Commercial Properties LLC	30965 US Highway 212	Gettysburg SD 57442-8709
Mindeer Inc	30965 US Highway 212	Gettysburg SD 57442-8709
Carolyn Helm	13893 Morgan Ct	Rapid City SD 57702-7344
Evelyn L Schock Life Est et al.	1117 Mountain Springs Ln	Rapid City SD 57702-0280
Wilmar A Grabow	PO Box 100	Hawley MN 56549-0100
Helen Mclaren c/o Wells Fargo Bank	PO Box 340	Moorhead MN 56561-0340
Thomas J Schwieger	650 3rd Ave SE	Perham MN 56573-1784
Granada Telephone Co	150 2nd St SW	Perham MN 56573-1461
Thomas K Schafer & P Hombledal	1219 Edgewood Dr	Thief River Falls MN 56701-3307
Gene Greimann	RR 1 Box 1140D	Hardin MT 59034-9716
Gladys Nelson (LE) et al.	2351 Solomon Ave	Billings MT 59102-2879
James Bloomer	4341 Pine Cove Rd	Billings MT 59106-1336
Leona M Kienitz	PO Box 461	Malta MT 59538-0461
Sylvia Lawrence	501 N 10th St	Hamilton MT 59840-2378
James A Prust & P J Peterson	1244 N Oak St	Palatine IL 60067-2724
Shirleen Ella Hardt et al.	7717 N Alpine Rd	Loves Park IL 61111-3106
Optimum Realty Corporation	242 N York St Ste 203	Elmhurst IL 60126-2747
Hoovel Properties c/o Margaret Hoovel	2809 Caldwell Ln	Geneva IL 60134-4484
Darlene P Bruce	1105 College Ave	Wheaton IL 60187-5778
The Keith A & M M Whittington	443 N 35th Rd	La Salle IL 61301-9643
Fredrick W & Norine M Belz	1425 Peoria St	Peru IL 61354-2211
John P Kurtock	2103 Hedgewood Dr	Bloomington IL 61704-2403
Virginia L West c/o Alan Schrock	307 W Washington St	Pontiac IL 61764-1745
Robert D & Keith West	307 W Washington St	Pontiac IL 61764-1745
Parks of Minnesota LLC	PO Box 10	Oakwood IL 61858-0010
M E Tumbleson	PO Box 710	Tolono IL 61880-0710
Theodore Ziemann Rev Trust	546 Autumn Oaks Dr	Ellisville MO 63021-5988

Harold A & Leota Karl		PO Box 790179	Saint Louis MO 63179-0179
Barbara A Blanchar		2640 Samuel Dr	O Fallon MO 63368-9604
N Central Public Service Co		1 Liberty Plz	Liberty MO 64068-2970
Everett Libra		605 E 29th Ave	North Kansas City MO 64116-2908
Frederick L Schuster Revoc Trust		PO Box 996	Saint Joseph MO 64502-0996
Olson Farming LLC		7 E Burnam Rd	Columbia MO 65203-3511
Anita Blanchar		7801 S Old Plank Rd	Columbia MO 65203-8960
Wayne Vanderwert et al		4902 Cochero Ct	Columbia MO 65203-9758
Paul & Doris Embretson Trust c/o Scott Embretson		2527 E Logan St	Republic MO 65738-2291
Ray E & Edite B Park		3165 N Maranatha Ln	Springfield MO 65803-3600
Richard Arlo Erickson Trust		PO Box 1008	Tonganoxie KS 66086-1008
Cameron & Teri Bell		18600 182nd St	Tonganoxie KS 66086-5147
U S West Communications Inc		PO Box 7909	Overland Park KS 66207-0909
Centurylink		PO Box 7909	Overland Park KS 66207-0909
Frances J Riegel Bagby		29951 S Adams Rd	Melvern KS 66510-9131
Darmer Resources LP		104 Huntington Cir	Pittsburg KS 66762-6864
Patrick Philip Fischer		1323 E 2nd St	Fremont NE 68025-5323
Northern Natural Gas Company		PO Box 3330	Omaha NE 68103-0330
Marietta Epler		721 N 87th St	Omaha NE 68114-2805
Betty Ruth Babcock Trust		PO Box 542016	Omaha NE 68154-8016
Kark Family Farms LLP		PO Box 542016	Omaha NE 68154-8016
C Ziemann Rev Liv Trust (LE) et al. c/o Farmers Natl Co Farm		11516 Nicholas St	Omaha NE 68154-4409
West Asset Management Inc c/o Dan Jensen		11808 Miracle Hills Dr	Omaha NE 68154-4403
E E Zemke Revocable Trust		PO Box 542016	Omaha NE 68154-8016
Northern Border Pipeline Co		13710 Fnb Pkwy Ste 300	Omaha NE 68154-5298
Union Pacific Railroad Co		1400 Douglas St Stop 1640	Omaha NE 68179-1001
Karen Baker et al.		2185 144th Dr	Raymond NE 68428-8208
Merlin R Kesselring Rev Trust		261 Sandcreek Rd	Crawford NE 69339-1920
Norcross S Tilney Farms LLP		2141 Highway 224 E	Tuckerman AR 72473-9105
Wal-Mart Stores Inc	Ms 0555	PO Box 8050	Bentonville AR 72712-8055
Geraldine L Henning		702 N Cumberland Ct	Russellville AR 72801-2505
Douglas F Bradley Trust c/o Douglas F Bradley		680 E Water Well Rd	Salina KS 67401-8990
Secretary of H U D		4400 Will Rogers Pkwy	Oklahoma City OK 73108-1837
Consolidated Ready Mix Inc		431 W 23rd St	Tulsa OK 74107-3005
Ross Mapson		28960 S 594 Ln	Grove OK 74344-7728
Federal Nat'l Mtg Assoc		14221 Dallas Pkwy Ste 1000	Dallas TX 75254-2946
Bank of America Attn: Vareo		2375 N Glenville Dr	Richardson TX 75082-4315
Helen Virgens	602 Temple Ave N	PO Box 529	Pineland TX 75968-0529
Harold Joseph Hill & Mary Lawrence Hill Liv Trust		2001 Elmhurst Dr	Arlington TX 76012-1727
Wells Fargo Bank N.A.		PO Box 13519	Arlington TX 76094-0519
John & Kathleen Garry		30 Pebble Hollow Ct	Spring TX 77381-4804
Jeanne E Frahm Trustee		604 E 13th St	Mission TX 78572-4228
Karen Steffen		404 Capricorn St	Mission TX 78572-6522
Valero Renewable Fuels Co LLC		PO Box 690110	San Antonio TX 78269-0110
Eric C Hansen & Kendall Ordarza		4703 Highland Ter	Austin TX 78731-5318
Wyatte & Leslie L Rayburn		214 County Road 500	Bayfield CO 81122-8721
Kathy & Harold Anderson		PO Box 75	Jaroso CO 81138-0075
Sylvia Aslakson & Karen Aslakson		12537 County Road 195A	Salida CO 81201-8537
Wendell L Schuler Trust et al.		201 Springs Dr	Louisville CO 80027-3201
Jay R & Carolyn Ufer		6469 Ashburn Ln	Highlands Ranch CO 80130-4179
Doyle & Patricia Vanderwert		15725 Carob Cir	Parker CO 80134-4404
Buffalo Lake Energy LLC c/o Biofuel Energy Corp		1600 Broadway Ste 2200	Denver CO 80202-4921
Kent Scholl Trust		2229 Bellaire St	Denver CO 80207-3723
Virginia Schafer		7005 E Girard Ave Apt A	Denver CO 80224-2967

Enid Behrens Trust		2971 W 119th Ave Unit 103	Westminster CO 80234-2492
Cropbuilders Inc, Attn: Crop Production Services		3005 Rocky Mountain Ave	Loveland CO 80538-9001
Royster-Clark Inc, Attn: Crop Production Services		3005 Rocky Mountain Ave	Loveland CO 80538-9001
Carl Sjogren et al		PO Box 665	Hereford AZ 85615-0665
Curtis J. Runia		PO Box 65512	Tucson AZ 85728-5512
Barbara L & Berry Amy Living Trust		7621 S 40th St	Phoenix AZ 85042-7338
Marjorie Ann Gangl		834 S Meridian Rd S	Apache Junction AZ 85120-8476
Gentry & Vicki Stanley		20125 E Avenida Del Valle	Queen Creek AZ 85142-6305
Roger & Lois Bultman		2535 W Naranja Ave	Mesa AZ 85202-7232
Robert E & Donna M Duffey (LE)		6107 E Akron St	Mesa AZ 85205-8905
Laurence D Shoemaker		7422 E Arbor Ave	Mesa AZ 85208-1218
Joan L Hartke		709 S 81st Pl	Mesa AZ 85208-4609
Douglas C & Pamela A Schroeder		1452 S Ellsworth Rd # 3645	Mesa AZ 85209-3700
Mark M & Charlotte M Teaser		777 W Chandler Blvd	Chandler AZ 85225-2506
Barry Barton		110 S 130th Pl	Chandler AZ 85225-5913
Mary L Lanford Trust		645 E Tremaine Ave	Gilbert AZ 85234-4602
Juel Teig Trust		7055 N Via De La Campana	Scottsdale AZ 85258-3903
Sandra J Smith		16540 E El Lago Blvd Unit 16	Fountain Hills AZ 85268-4730
Kathleen Cordt		1058 E Gail Dr	Gilbert AZ 85296-9704
Roger D & Luella M Nimz		15515 W Skyview Way	Surprise AZ 85374-4778
Monard R & Vada M Peterson Revocable Living Trust		14950 W Mountain View Blvd Apt 1108	Surprise AZ 85374-4703
Raul & Maria T Donacio	PO Box 605	7917 Craddock Ave	El Paso TX 79915-4812
Larry J & Penelope Mccormick		4301 Raymond Reed Blvd	Deming NM 88030-7109
Michael J. Clark Living Trust		PO Box 4241	Pahrump NV 89041-4241
Robert Morris		PO Box 92	Hooper UT 84315-0092
J-M Manufacturing Co Inc		5200 W Century Blvd Fl 10	Los Angeles CA 90045-5971
Anabel M Gott		13233 Beach St	Cerritos CA 90703-1329
Larry D & Barbara Kooiman		7803 Adoree St	Downey CA 90242-4101
Robert P & Sharon M Huber		2109 Van Karajan Dr	Rancho Palos Verdes CA 90275-1609
Ned Weyer Rodriguez		1590 Old House Rd	Pasadena CA 91107-1519
Misak & Bedros Tadevossian		6400 Laurel Canyon Blvd	N Hollywood CA 91606-1571
Charmaine K Liccardi et al c/o Carole Mcginnis		1323 Paseo Valle Vis	Covina CA 91724-3202
Doreen Roberts Revocable Trust		PO Box 826	Solana Beach CA 92075-0826
Robert W & Jeannine Shannon		82252 Vandenberg Dr	Indio CA 92201-7456
Timothy W Tompkins		56925 Yucca Trl	Yucca Valley CA 92284-7913
Catherin Jean Lynn Barzan Trust		11773 Ashland Way	Yucaipa CA 92399-3415
Cooan Family Living Trust		36665 Oak Meadows Pl	Murrieta CA 92562-4386
Naeve Family Trust et al c/o William D Naeve		26492 Palisades Dr	Capistrano Beach CA 92624-1703
Jaskulke Family Trust		28476 Pacheco	Mission Viejo CA 92692-1855
Joseph & Sherry Rikalo		1831 Deerfield Ct	Coalinga CA 93210-9229
Margaret Pastor Living Trust		1152 Via Doble	Concord CA 94521-4714
John W Anderson Trust c/o William J Anderson		515 Weldon Ave	Oakland CA 94610-1623
Big Blue Wind Land Holdings LLC		5 Palo Alto Sq Ste 700	Palo Alto CA 94306-2109
Walter C Hurst		PO Box 14534	Santa Rosa CA 95402-6534
Sandra M & Jeffrey A Baker		6800 Westmore Way	Carmichael CA 95608-1540
Mckisson Land LLC		100 Wild River Ln	Folsom CA 95630-2023
Sharon Koch		8226 Lake Forest Dr	Sacramento CA 95826-2958
De Ann M Campbell		1801 Z St	Heyburn ID 83336-7648
Elizabeth Rooney Fam Trust et al.		263 Mumby Rd	Nordland WA 98358-9643
Daniel Markeson		21220 Port Gamble Rd NE	Poulsbo WA 98370-8904
Katherine Ann Goeddel		2767 SW Rutland Ter	Portland OR 97205-5853
Elm Creek Wind II LLC c/o Contracts Administration		1125 NW Couch St Ste 7	Portland OR 97209-4142
Jean C Lane & Carol J Bucholz et al.		12705 SE River Rd Apt 414	Portland OR 97222-9799

Wendell & Verna Secrest		1600 Rhododendron Dr Spc 220	Florence OR 97439-7301
Clarence E Palmer Family Trust		3604 S Helena St	Spokane WA 99203-4054
Tumbleson Living Trust		18534 NE 20th Pl	Redmond WA 98052-6067
Linus & Sharon Tumbleson		18534 NE 20th Pl	Redmond WA 98052-6067
David & Ben Finden Irrev Trust c/o			
David P Finden Trustee		8137 29th Ave SW	Seattle WA 98126-3523
Tom H Hill Trust		5310 Potter Rd	Deming WA 98244-9221
Current Resident		11347 323rd Ave	Blue Earth MN 56013
Current Resident		14865 US Highway 169	Blue Earth MN 56013
Current Resident		2988 50th St	Blue Earth MN 56013
Current Resident		3049 60th St	Blue Earth MN 56013
Current Resident		32147 115th St	Blue Earth MN 56013
Current Resident		32159 115th St	Blue Earth MN 56013
Current Resident		32163 65th St	Blue Earth MN 56013
Current Resident		32604 116th St	Blue Earth MN 56013
Current Resident		32671 109th St	Blue Earth MN 56013
Current Resident		33698 120th St	Blue Earth MN 56013
Current Resident		5071 350th Ave	Blue Earth MN 56013
Current Resident		6491 377th Ave	Blue Earth MN 56013
County Line Nursery Inc		1015 310th Ave	Blue Earth MN 56013
Robert C. & Carolyn M. Wagner		31528 95th St	Blue Earth MN 56013
Current Resident		10766 322nd Ave	Blue Earth MN 56013
Current Resident		11390 337th Ave	Blue Earth MN 56013
Current Resident		13875 345th Ave	Blue Earth MN 56013
Current Resident		14540 365th Ave	Blue Earth MN 56013
Current Resident		3001 70th St	Blue Earth MN 56013
Current Resident		3027 50th St	Blue Earth MN 56013
Current Resident		31176 310th Ave	Blue Earth MN 56013
Current Resident		32041 115th St	Blue Earth MN 56013
Current Resident		32093 115th St	Blue Earth MN 56013
Current Resident		3872 310th Ave	Blue Earth MN 56013
Current Resident		539 310th Ave	Blue Earth MN 56013
Current Resident		571 310th Ave	Blue Earth MN 56013
Current Resident		8261 320th Ave	Blue Earth MN 56013
Current Resident		982 305th Ave	Blue Earth MN 56013
Current Resident		1800 Industrial Dr	Blue Earth MN 56013
Current Resident		268 300th Ave	Elmore MN 56027
Current Resident		3073 30th St	Elmore MN 56027
Current Resident		31691 10th St	Elmore MN 56027
Current Resident		341 310th Ave	Elmore MN 56027
Current Resident		3008 10th St	Elmore MN 56027
Current Resident		3043 20th St	Elmore MN 56027
Current Resident		32795 10th St	Elmore MN 56027
Current Resident		34291 10th St	Elmore MN 56027
Current Resident		3683 350th Ave	Elmore MN 56027
Lisa K Iverson		105 N James St	Fairmont MN 56031
Jill M Jensen		106 N Judson St	Fairmont MN 56031
Sandra J Cooley		110 Freund St	Fairmont MN 56031
Thomas L Andersen		1516 S Prairie Ave	Fairmont MN 56031
Robert M & Gina M Borchardt	1832 130th St	PO Box 149	Fairmont MN 56031
Randy D Garrison		202 N James St	Fairmont MN 56031
Neal & Susanne Senne		210 Park St	Fairmont MN 56031
Wilbert & Luverna V Hartmann		2579 Albion Ave	Fairmont MN 56031
Karen J & Senne		3703 Cedar Creek Ct	Fairmont MN 56031
Mary Lynn Bales		405 S Bridgeman St	Fairmont MN 56031
Current Resident		1001 N Bixby Rd	Fairmont MN 56031
Current Resident		102 Freund St	Fairmont MN 56031
Current Resident		1115 N Bixby Rd	Fairmont MN 56031
Current Resident		1121 N Bixby Rd	Fairmont MN 56031
Current Resident		114 Harris Rd	Fairmont MN 56031

Current Resident	1142 Torgerson Dr	Fairmont MN 56031
Current Resident	1201 Torgerson Dr	Fairmont MN 56031
Current Resident	1220 Goemann Rd	Fairmont MN 56031
Current Resident	1251 Goemann Rd	Fairmont MN 56031
Current Resident	1271 Goemann Rd	Fairmont MN 56031
Current Resident	1291 Goemann Rd	Fairmont MN 56031
Current Resident	1301 190th Ave	Fairmont MN 56031
Current Resident	1331 190th Ave	Fairmont MN 56031
Current Resident	1431 196th Ave	Fairmont MN 56031
Current Resident	1487 140th St	Fairmont MN 56031
Current Resident	1548 160th Ave	Fairmont MN 56031
Current Resident	1563 230th Ave	Fairmont MN 56031
Current Resident	1577 210th Ave	Fairmont MN 56031
Current Resident	1591 N Bixby Rd	Fairmont MN 56031
Current Resident	1657 210th Ave	Fairmont MN 56031
Current Resident	1660 210th Ave	Fairmont MN 56031
Current Resident	1715 190th Ave	Fairmont MN 56031
Current Resident	1742 180th St	Fairmont MN 56031
Current Resident	1746 State Highway 15	Fairmont MN 56031
Current Resident	1782 150th St	Fairmont MN 56031
Current Resident	1800 N State St	Fairmont MN 56031
Current Resident	1847 190th Ave	Fairmont MN 56031
Current Resident	1857 160th Ave	Fairmont MN 56031
Current Resident	1888 150th St	Fairmont MN 56031
Current Resident	1905 190th Ave	Fairmont MN 56031
Current Resident	1936 160th St	Fairmont MN 56031
Current Resident	1953 N State St	Fairmont MN 56031
Current Resident	1968 30th St	Fairmont MN 56031
Current Resident	1978 175th St	Fairmont MN 56031
Current Resident	1981 243rd Ave	Fairmont MN 56031
Current Resident	2001 N State St	Fairmont MN 56031
Current Resident	2013 208th Ave	Fairmont MN 56031
Current Resident	2024 135th St	Fairmont MN 56031
Current Resident	2076 175th St	Fairmont MN 56031
Current Resident	2090 135th St	Fairmont MN 56031
Current Resident	2091 135th St	Fairmont MN 56031
Current Resident	2148 160th St	Fairmont MN 56031
Current Resident	2219 N State St	Fairmont MN 56031
Current Resident	2221 N State St	Fairmont MN 56031
Current Resident	2235 N State St	Fairmont MN 56031
Current Resident	2287 125th St	Fairmont MN 56031
Current Resident	2301 N State St	Fairmont MN 56031
Current Resident	2343 150th St	Fairmont MN 56031
Current Resident	2375 127th St	Fairmont MN 56031
Current Resident	2575 115th St	Fairmont MN 56031
Current Resident	1200 Armstrong Dr	Fairmont MN 56031
Current Resident	1200 Gemini Dr	Fairmont MN 56031
Current Resident	1240 Gemini Dr	Fairmont MN 56031
Current Resident	1241-1245 Gemini Dr	Fairmont MN 56031
Current Resident	1255 Gemini Dr	Fairmont MN 56031
Current Resident	1258 170th Ave	Fairmont MN 56031
Current Resident	1533 120th St	Fairmont MN 56031
Current Resident	1600 Incinerator Rd	Fairmont MN 56031
Current Resident	1601 Incinerator Rd	Fairmont MN 56031
Current Resident	1691 Winnebago Ave	Fairmont MN 56031
Current Resident	1800 Memorial Park Dr	Fairmont MN 56031
Current Resident	1835 Ranch Rd	Fairmont MN 56031
Current Resident	1903 Lowenberg Dr	Fairmont MN 56031
Current Resident	2100 125th St	Fairmont MN 56031
Current Resident	2201 Winnebago Ave	Fairmont MN 56031

Current Resident	2250 Railroad Ln	Fairmont MN 56031
Current Resident	2320 128th St	Fairmont MN 56031
Current Resident	2404 128th St	Fairmont MN 56031
Current Resident	2465 170th St	Fairmont MN 56031
Eldon P & Barbara A Hatfield	311 S 1st St	Granada MN 56039
Adam Steuer	313 Reynolds St	Granada MN 56039
Lori S Pohlman	325 SW 1st St	Granada MN 56039
Lonnie Gilbert Moe	500 E Meagher St	Granada MN 56039
Current Resident	101 S Main St	Granada MN 56039
Current Resident	111 S Main St	Granada MN 56039
Current Resident	114 S Main St	Granada MN 56039
Current Resident	118 S Main St	Granada MN 56039
Current Resident	120 E Harmony St	Granada MN 56039
Current Resident	120 S Main St	Granada MN 56039
Current Resident	121 S Main St	Granada MN 56039
Current Resident	1212 Peach St	Granada MN 56039
Current Resident	1224 250th Ave	Granada MN 56039
Current Resident	1504 265th Ave	Granada MN 56039
Current Resident	1538 280th Ave	Granada MN 56039
Current Resident	1548 293rd Ave	Granada MN 56039
Current Resident	1564 293rd Ave	Granada MN 56039
Current Resident	1662 260th Ave	Granada MN 56039
Current Resident	1733 260th Ave	Granada MN 56039
Current Resident	1748 290th Ave	Granada MN 56039
Current Resident	203 N Main St	Granada MN 56039
Current Resident	208 S Main St	Granada MN 56039
Current Resident	212 S Main St	Granada MN 56039
Current Resident	213 SW 1st St	Granada MN 56039
Current Resident	215 W Creamery St	Granada MN 56039
Current Resident	220 S Main St	Granada MN 56039
Current Resident	230 NW 1st St	Granada MN 56039
Current Resident	2376 180th St	Granada MN 56039
Current Resident	2424 180th St	Granada MN 56039
Current Resident	2475 140th St	Granada MN 56039
Current Resident	2529 180th St	Granada MN 56039
Current Resident	2551 190th St	Granada MN 56039
Current Resident	2564 190th St	Granada MN 56039
Current Resident	2582 190th St	Granada MN 56039
Current Resident	2611 200th St	Granada MN 56039
Current Resident	2668 140th St	Granada MN 56039
Current Resident	2692 140th St	Granada MN 56039
Current Resident	2741 170th St	Granada MN 56039
Current Resident	2774 115th St	Granada MN 56039
Current Resident	2782 180th St	Granada MN 56039
Current Resident	2795 200th St	Granada MN 56039
Current Resident	2837 128th St	Granada MN 56039
Current Resident	2892 128th St	Granada MN 56039
Current Resident	2934 170th St	Granada MN 56039
Current Resident	2935 170th St	Granada MN 56039
Current Resident	301 W 2nd St	Granada MN 56039
Current Resident	3023 170th St	Granada MN 56039
Current Resident	3024 170th St	Granada MN 56039
Current Resident	304 S 1st St	Granada MN 56039
Current Resident	3046 180th St	Granada MN 56039
Current Resident	3058 160th St	Granada MN 56039
Current Resident	3076 170th St	Granada MN 56039
Current Resident	3081 160th St	Granada MN 56039
Current Resident	309 E Meagher St	Granada MN 56039
Current Resident	31032 160th St	Granada MN 56039
Current Resident	312 S 1st St	Granada MN 56039

Current Resident		320 S Main St	Granada MN 56039
Current Resident		321 W 2nd St	Granada MN 56039
Current Resident		323 SW 1st St	Granada MN 56039
Current Resident		324 SW 1st St	Granada MN 56039
Current Resident		335 SW 1st St	Granada MN 56039
Current Resident		336 SW 1st St	Granada MN 56039
Current Resident		339 SW 1st St	Granada MN 56039
Current Resident		414 S Main St	Granada MN 56039
Current Resident		607 E Meagher St	Granada MN 56039
Charles H. & Ruthie A. Schulenburg		31601 169th St	Granada MN 56039
Hannah R. Bressler		31620 169th St	Granada MN 56039
Farmers St BK of Huntley		31668 170th St	Granada MN 56039
Diana Robertson Life Estate		31685 170th St	Granada MN 56039
Current Resident		1302 245th Ave	Granada MN 56039
Current Resident		1371 310th Ave	Granada MN 56039
Current Resident		1569 310th Ave	Granada MN 56039
Current Resident		180th St	Granada MN 56039
Current Resident		1838 280th Ave	Granada MN 56039
Current Resident		1892 280th Ave	Granada MN 56039
Current Resident		2722 140th St	Granada MN 56039
Current Resident		2764 125th St	Granada MN 56039
Current Resident		2768 150th St	Granada MN 56039
Current Resident		2837 140th St	Granada MN 56039
Current Resident		2962 147th St	Granada MN 56039
Current Resident		2965 147th St	Granada MN 56039
Current Resident		3015 80th St	Granada MN 56039
Current Resident		3034 70th St	Granada MN 56039
Current Resident		314 Main St E	Granada MN 56039
Current Resident		31734 169th St	Granada MN 56039
Current Resident		3542 190th St	Granada MN 56039
Donald E. & Florence Wishman	31572 170th St	PO Box 95	Huntley MN 56047
Alternative Logistics Services		PO Box 95	Huntley MN 56047
Current Resident		16978 315th Ave	Huntley MN 56047
Current Resident		16789 315th Ave	Huntley MN 56047
Current Resident		16968 315th Ave	Huntley MN 56047
Current Resident		17106 315th Ave	Huntley MN 56047
Current Resident		31157 170th St	Huntley MN 56047
Current Resident		31169 170th St	Huntley MN 56047
Current Resident		31301 170th St	Huntley MN 56047
Current Resident		31323 170th St	Huntley MN 56047
Current Resident		31514 170th St	Huntley MN 56047
Current Resident		31523 170th St	Huntley MN 56047
Current Resident		31551 169th St	Huntley MN 56047
Current Resident		31559 170th St	Huntley MN 56047
Current Resident		31571 169th St	Huntley MN 56047
Current Resident		31571 170th St	Huntley MN 56047
Current Resident		31582 169th St	Huntley MN 56047
Current Resident		31612 170th St	Huntley MN 56047
Current Resident		31626 170th St	Huntley MN 56047
Current Resident		31636 169th St	Huntley MN 56047
Current Resident		31673 170th St	Huntley MN 56047
Current Resident		31710 170th St	Huntley MN 56047
Current Resident		31711 170th St	Huntley MN 56047
Current Resident		32860 170th St	Huntley MN 56047
Current Resident		101 James St N	Northrop MN 56075
Current Resident		101 Judson St N	Northrop MN 56075
Current Resident		102 Bridgeman St N	Northrop MN 56075
Current Resident		102 James St N	Northrop MN 56075
Current Resident		102 Judson St N	Northrop MN 56075
Current Resident		103 County Rd #38	Northrop MN 56075

Current Resident	103 Von Holst St	Northrop MN 56075
Current Resident	104 Bridgeman St N	Northrop MN 56075
Current Resident	104 Innes St	Northrop MN 56075
Current Resident	104 Von Holst St	Northrop MN 56075
Current Resident	106 Innes St	Northrop MN 56075
Current Resident	106 James St N	Northrop MN 56075
Current Resident	106 Judson St N	Northrop MN 56075
Current Resident	107 James St S	Northrop MN 56075
Current Resident	107 Von Holst St	Northrop MN 56075
Current Resident	108 James St	Northrop MN 56075
Current Resident	108 N Judson	Northrop MN 56075
Current Resident	108 Von Holst St	Northrop MN 56075
Current Resident	109 Bridgeman St	Northrop MN 56075
Current Resident	109 Judson St N	Northrop MN 56075
Current Resident	110 James St N	Northrop MN 56075
Current Resident	110 Judson St N	Northrop MN 56075
Current Resident	110 Town Rd	Northrop MN 56075
Current Resident	111 175th St	Northrop MN 56075
Current Resident	111 Harper St	Northrop MN 56075
Current Resident	111 Judson St S	Northrop MN 56075
Current Resident	111 Von Holst St	Northrop MN 56075
Current Resident	112 Bridgeman St S	Northrop MN 56075
Current Resident	112 Judson St S	Northrop MN 56075
Current Resident	112 Von Holst St	Northrop MN 56075
Current Resident	113 James St N	Northrop MN 56075
Current Resident	113 Von Holst St	Northrop MN 56075
Current Resident	114 Bridgeman St S	Northrop MN 56075
Current Resident	114 Judson St N	Northrop MN 56075
Current Resident	115 Bridgeman St	Northrop MN 56075
Current Resident	115 Judson St S	Northrop MN 56075
Current Resident	116 Judson St S	Northrop MN 56075
Current Resident	118 Judson St N	Northrop MN 56075
Current Resident	119 James St S	Northrop MN 56075
Current Resident	120 Judson St S	Northrop MN 56075
Current Resident	201 Bridgeman St	Northrop MN 56075
Current Resident	201 Judson St N	Northrop MN 56075
Current Resident	202 Bridgeman St	Northrop MN 56075
Current Resident	202 James St N	Northrop MN 56075
Current Resident	203 Bridgeman St	Northrop MN 56075
Current Resident	203 James St N	Northrop MN 56075
Current Resident	203 James St S	Northrop MN 56075
Current Resident	203 Judson St S	Northrop MN 56075
Current Resident	203 Von Holst St	Northrop MN 56075
Current Resident	204 Judson St	Northrop MN 56075
Current Resident	204 Judson St S	Northrop MN 56075
Current Resident	205 Judson St N	Northrop MN 56075
Current Resident	206 James St N	Northrop MN 56075
Current Resident	206 Von Holst St	Northrop MN 56075
Current Resident	207 James St S	Northrop MN 56075
Current Resident	207 Judson St S	Northrop MN 56075
Current Resident	208 Bridgeman St S	Northrop MN 56075
Current Resident	208 Judson St N	Northrop MN 56075
Current Resident	208 Judson St S	Northrop MN 56075
Current Resident	209 Innes St	Northrop MN 56075
Current Resident	210 James St N	Northrop MN 56075
Current Resident	210 Town Rd	Northrop MN 56075
Current Resident	210 Von Holst St	Northrop MN 56075
Current Resident	211 James St S	Northrop MN 56075
Current Resident	211 Judson St S	Northrop MN 56075
Current Resident	212 Bridgeman St S	Northrop MN 56075

Current Resident	212 Judson St N	Northrop MN 56075
Current Resident	213 Bridgeman St	Northrop MN 56075
Current Resident	213 James St N	Northrop MN 56075
Current Resident	215 Bridgeman St	Northrop MN 56075
Current Resident	215 James St N	Northrop MN 56075
Current Resident	215 James St S	Northrop MN 56075
Current Resident	215 Judson St S	Northrop MN 56075
Current Resident	216 Judson St N	Northrop MN 56075
Current Resident	216 Judson St S	Northrop MN 56075
Current Resident	217 Bridgeman St	Northrop MN 56075
Current Resident	219 Bridgeman St	Northrop MN 56075
Current Resident	301 Bridgeman St	Northrop MN 56075
Current Resident	303 Judson St S	Northrop MN 56075
Current Resident	304 Judson St S	Northrop MN 56075
Current Resident	305 Bridgeman St	Northrop MN 56075
Current Resident	307 Judson St S	Northrop MN 56075
Current Resident	310 Judson St S	Northrop MN 56075
Current Resident	311 Judson St	Northrop MN 56075
Current Resident	313 James St S	Northrop MN 56075
Current Resident	314 Judson St S	Northrop MN 56075
Current Resident	315 James St S	Northrop MN 56075
Current Resident	315 Judson St S	Northrop MN 56075
Current Resident	316 Judson St S	Northrop MN 56075
Current Resident	319 James St S	Northrop MN 56075
Current Resident	320 Judson St S	Northrop MN 56075
Current Resident	397 Bridgeman St	Northrop MN 56075
Current Resident	County Rd 38	Northrop MN 56075
Mark G & James R Hansen	2386 210th St	Truman MN 56088
George A Peppard	488 N 4th Ave E	Truman MN 56088
Current Resident	1513 190th St	Truman MN 56088
Current Resident	1879 190th St	Truman MN 56088
Current Resident	1891 150th Ave	Truman MN 56088
Current Resident	1932 210th Ave	Truman MN 56088
Current Resident	1939 190th Ave	Truman MN 56088
Current Resident	1948 190th Ave	Truman MN 56088
Current Resident	2022 190th St	Truman MN 56088
Current Resident	2049 150th Ave	Truman MN 56088
Current Resident	2091 210th Ave	Truman MN 56088
Current Resident	2135 190th Ave	Truman MN 56088
Current Resident	2266 200th Ave	Truman MN 56088
Current Resident	1418 190th St	Truman MN 56088
Current Resident	1639 180th St	Truman MN 56088
Current Resident	1938 180th Ave	Truman MN 56088
Current Resident	2050 140th Ave	Truman MN 56088
Current Resident	15512 Highway 169	Winnebago MN 56098
Current Resident	18185 340th Ave	Winnebago MN 56098
Current Resident	1914 300th Ave	Winnebago MN 56098
Current Resident	2061 290th Ave	Winnebago MN 56098
Current Resident	2933 200th St	Winnebago MN 56098
Current Resident	2967 210th St	Winnebago MN 56098
Current Resident	31082 140th St	Winnebago MN 56098
Current Resident	34956 183rd St	Winnebago MN 56098
Current Resident	35276 160th St	Winnebago MN 56098
Current Resident	36249 156th St	Winnebago MN 56098
Current Resident	37594 180th St	Winnebago MN 56098
Current Resident	13124 345th Ave	Winnebago MN 56098
Current Resident	17057 325th Ave	Winnebago MN 56098
Current Resident	17706 175th St	Winnebago MN 56098
Current Resident	18511 340th Ave	Winnebago MN 56098
Current Resident	2857 210th St	Winnebago MN 56098

Current Resident	2906 180th St	Winnebago MN 56098
Current Resident	35551 160th St	Winnebago MN 56098
Current Resident	36511 180th St	Winnebago MN 56098
Current Resident	1055 Highland Dr	Winnebago MN 56098
Current Resident	1097 Highland Dr	Winnebago MN 56098
Current Resident	1126 Highland Dr	Winnebago MN 56098
Current Resident	1127 Highland Dr	Winnebago MN 56098
Current Resident	1130 Highland Dr	Winnebago MN 56098
Current Resident	1201 Highland Dr	Winnebago MN 56098
Current Resident	1218 Highland Dr	Winnebago MN 56098
Current Resident	1219 Highland Dr	Winnebago MN 56098
Current Resident	1224 Highland Dr	Winnebago MN 56098
Current Resident	1227 Highland Dr	Winnebago MN 56098
Current Resident	1231 Highland Dr	Winnebago MN 56098
Current Resident	37501 96th St	Winnebago MN 56098
Curtis E & Kristen K Endreson	315 Palmer St N	Alpha MN 56111
Current Resident	110 Main St S	Alpha MN 56111
Current Resident	120 Main St S	Alpha MN 56111
Current Resident	130 Knox St N	Alpha MN 56111
Current Resident	141 Paddock Ave E	Alpha MN 56111
Current Resident	1579 10th Ave	Alpha MN 56111
Current Resident	210 Knox St S	Alpha MN 56111
Current Resident	210 Palmer St N	Alpha MN 56111
Current Resident	240 White Ave E	Alpha MN 56111
Current Resident	340 Main St N	Alpha MN 56111
Current Resident	360 Palmer St N	Alpha MN 56111
Current Resident	1 Weets Ln	Alpha MN 56111
Current Resident	1119 120th St	Alpha MN 56111
Current Resident	1184 110th St	Alpha MN 56111
Current Resident	130 Main	Alpha MN 56111
Current Resident	310 Main	Alpha MN 56111
Current Resident	59495 820th St	Alpha MN 56111
Current Resident	59520 850th St	Alpha MN 56111
Current Resident	60150 830th St	Alpha MN 56111
Current Resident	60715 860th St	Alpha MN 56111
Current Resident	79821 590th Ave	Alpha MN 56111
Current Resident	803 120th St	Alpha MN 56111
Current Resident	86176 580th Ave	Alpha MN 56111
Current Resident	88500 590th Ave	Alpha MN 56111
Scott & Mary Beckel	52043 790th St	Jackson MN 56143
Douglas R Bratrud	53702 830th St	Jackson MN 56143
Brady L Jass B & H Mfg Inc	54389 800th St	Jackson MN 56143
Kenneth Lentz et al	71026 530th Ave	Jackson MN 56143
Current Resident	187 Industrial Park	Jackson MN 56143
Current Resident	49435 790th St	Jackson MN 56143
Current Resident	50203 840th St	Jackson MN 56143
Current Resident	52050 790th St	Jackson MN 56143
Current Resident	52072 805th St	Jackson MN 56143
Current Resident	55691 790th St	Jackson MN 56143
Current Resident	56118 820th St	Jackson MN 56143
Current Resident	56202 850th St	Jackson MN 56143
Current Resident	56862 880th St	Jackson MN 56143
Current Resident	78854 Lamphere Dr	Jackson MN 56143
Current Resident	79439 550th Ave	Jackson MN 56143
Current Resident	79857 532nd Ave	Jackson MN 56143
Current Resident	80572 510th Ave	Jackson MN 56143
Current Resident	80621 532nd Ave	Jackson MN 56143
Current Resident	80709 US Highway 71	Jackson MN 56143
Current Resident	80813 570th Ave	Jackson MN 56143
Current Resident	83971 510th Ave	Jackson MN 56143

Current Resident	85633 570th Ave	Jackson MN 56143
Current Resident	86177 580th Ave	Jackson MN 56143
Current Resident	87740 550th Ave	Jackson MN 56143
Current Resident	110 Belmont Ln	Jackson MN 56143
Current Resident	119 Torgeson Ln	Jackson MN 56143
Current Resident	120 Torgeson Ln	Jackson MN 56143
Current Resident	130 Torgeson Ln	Jackson MN 56143
Current Resident	140 Torgeson Ln	Jackson MN 56143
Current Resident	160 Torgeson Ln	Jackson MN 56143
Current Resident	201 Industrial Pwky	Jackson MN 56143
Current Resident	203 Industrial Pwky	Jackson MN 56143
Current Resident	217 Fort Belmont Trail	Jackson MN 56143
Current Resident	49161 790th St	Jackson MN 56143
Current Resident	49573 810th St	Jackson MN 56143
Current Resident	49671 830th St	Jackson MN 56143
Current Resident	49901 820th St	Jackson MN 56143
Current Resident	51547 860th St	Jackson MN 56143
Current Resident	51968 820th St	Jackson MN 56143
Current Resident	52456 790th St	Jackson MN 56143
Current Resident	53007 820th St	Jackson MN 56143
Current Resident	54496 870th St	Jackson MN 56143
Current Resident	55135 789th St	Jackson MN 56143
Current Resident	57135 870th St	Jackson MN 56143
Current Resident	60572 810th St	Jackson MN 56143
Current Resident	78790 Lamphere Drive	Jackson MN 56143
Current Resident	78902 Lamphere Drive	Jackson MN 56143
Current Resident	79250 520th Ave	Jackson MN 56143
Current Resident	79263 550th Ave	Jackson MN 56143
Current Resident	79742 532nd Ave	Jackson MN 56143
Current Resident	81720 US Hwy 71	Jackson MN 56143
Current Resident	81728/81614 535th Ave	Jackson MN 56143
Current Resident	83126 530th Ave	Jackson MN 56143
Current Resident	83695 560th Ave	Jackson MN 56143
Current Resident	84033 510th Ave	Jackson MN 56143
Current Resident	84143 580th Ave	Jackson MN 56143
Current Resident	84722 525th Ave	Jackson MN 56143
Current Resident	84980 550th Ave	Jackson MN 56143
Current Resident	85535 US Hwy 71	Jackson MN 56143
Current Resident	86194 550th Ave	Jackson MN 56143
Current Resident	86317 600th Ave	Jackson MN 56143
Current Resident	86814 550th Ave	Jackson MN 56143
Current Resident	87343 550th Ave	Jackson MN 56143
Current Resident	50216 820th St	Lakefield MN 56150
Current Resident	80757 490th Ave	Lakefield MN 56150
Current Resident	47821 800th St	Lakefield MN 56150
Current Resident	78356 460th Ave	Lakefield MN 56150
Current Resident	82738 480th Ave	Lakefield MN 56150
Current Resident	89568 590th Ave	Mountain Lake MN 56159
Jonathan F & Amy L Fitzgerald	1151 70th Ave	Sherburn MN 56171
Harold H & Janice Handevidt	401 Fox Lake Ave	Sherburn MN 56171
Gary & Ann Jacobsen	596 E 5th St	Sherburn MN 56171
Current Resident	1 Kirby Dr	Sherburn MN 56171
Current Resident	10 W Park Dr	Sherburn MN 56171
Current Resident	1001 40th Ave	Sherburn MN 56171
Current Resident	1035 120th St	Sherburn MN 56171
Current Resident	1056 30th Ave	Sherburn MN 56171
Current Resident	1133 70th Ave	Sherburn MN 56171
Current Resident	1155 70th Ave	Sherburn MN 56171
Current Resident	12 North Shore Dr N	Sherburn MN 56171
Current Resident	12 W Park Dr	Sherburn MN 56171

Current Resident	1257 State Highway 4	Sherburn MN 56171
Current Resident	1328 90th Ave	Sherburn MN 56171
Current Resident	14 North Shore Dr N	Sherburn MN 56171
Current Resident	14 W Park Dr	Sherburn MN 56171
Current Resident	1468 90th Ave	Sherburn MN 56171
Current Resident	1520 State Highway 4	Sherburn MN 56171
Current Resident	1532 20th Ave	Sherburn MN 56171
Current Resident	1565 80th Ave	Sherburn MN 56171
Current Resident	1618 90th Ave	Sherburn MN 56171
Current Resident	164 160th St	Sherburn MN 56171
Current Resident	1701 70th Ave	Sherburn MN 56171
Current Resident	1716 Quail Rd	Sherburn MN 56171
Current Resident	1735 40th Ave	Sherburn MN 56171
Current Resident	179 140th St	Sherburn MN 56171
Current Resident	18 North Shore Dr N	Sherburn MN 56171
Current Resident	2 E Park Dr	Sherburn MN 56171
Current Resident	20 North Shore Dr N	Sherburn MN 56171
Current Resident	22 E Park Dr	Sherburn MN 56171
Current Resident	233 160th St	Sherburn MN 56171
Current Resident	24 North Shore Dr N	Sherburn MN 56171
Current Resident	248 110th St	Sherburn MN 56171
Current Resident	26 North Shore Dr N	Sherburn MN 56171
Current Resident	28 North Shore Dr N	Sherburn MN 56171
Current Resident	288 170th St	Sherburn MN 56171
Current Resident	3 Kirby Dr	Sherburn MN 56171
Current Resident	301 160th St	Sherburn MN 56171
Current Resident	368 110th St	Sherburn MN 56171
Current Resident	4 North Shore Dr N	Sherburn MN 56171
Current Resident	4 North Shore Dr S	Sherburn MN 56171
Current Resident	400 State Highway 4	Sherburn MN 56171
Current Resident	406 120th St	Sherburn MN 56171
Current Resident	442 110th St	Sherburn MN 56171
Current Resident	491 150th St	Sherburn MN 56171
Current Resident	528 130th St	Sherburn MN 56171
Current Resident	6 North Shore Dr N	Sherburn MN 56171
Current Resident	6 North Shore Dr S	Sherburn MN 56171
Current Resident	6 E Park Dr	Sherburn MN 56171
Current Resident	6 W Park Dr	Sherburn MN 56171
Current Resident	689 State Highway 4	Sherburn MN 56171
Current Resident	690 State Highway 4	Sherburn MN 56171
Current Resident	692 State Highway 4	Sherburn MN 56171
Current Resident	699 160th St	Sherburn MN 56171
Current Resident	716 130th St	Sherburn MN 56171
Current Resident	727 140th St	Sherburn MN 56171
Current Resident	788 140th St	Sherburn MN 56171
Current Resident	8 E Park Dr	Sherburn MN 56171
Current Resident	8 W Park Dr	Sherburn MN 56171
Current Resident	801 140th St	Sherburn MN 56171
Current Resident	834 110th St	Sherburn MN 56171
Current Resident	836 150th St	Sherburn MN 56171
Current Resident	844 170th St	Sherburn MN 56171
Current Resident	868 120th St	Sherburn MN 56171
Current Resident	897 140th St	Sherburn MN 56171
Current Resident	11 Harris Ln	Sherburn MN 56171
Current Resident	1275 85th Ave	Sherburn MN 56171
Current Resident	15 Harris Ln	Sherburn MN 56171
Current Resident	1557 40th Ave	Sherburn MN 56171
Current Resident	1637 50th Ave	Sherburn MN 56171
Current Resident	1649 70th Ave	Sherburn MN 56171
Current Resident	1655 40th Ave	Sherburn MN 56171

Current Resident	1681 20th Ave	Sherburn MN 56171
Current Resident	1785 50th Ave	Sherburn MN 56171
Current Resident	19 Harris Ln	Sherburn MN 56171
Current Resident	21 Harris Ln	Sherburn MN 56171
Current Resident	22 Harris Ln	Sherburn MN 56171
Current Resident	23 Harris Ln	Sherburn MN 56171
Current Resident	242 100th St	Sherburn MN 56171
Current Resident	25 Harris Ln	Sherburn MN 56171
Current Resident	26 Harris Ln	Sherburn MN 56171
Current Resident	27 Harris Ln	Sherburn MN 56171
Current Resident	28 Harris Ln	Sherburn MN 56171
Current Resident	29 Harris Ln	Sherburn MN 56171
Current Resident	3 Harris Ln	Sherburn MN 56171
Current Resident	30 Harris Ln	Sherburn MN 56171
Current Resident	31 Harris Ln	Sherburn MN 56171
Current Resident	5 Harris Ln	Sherburn MN 56171
Current Resident	573 State Hwy 4	Sherburn MN 56171
Current Resident	7 Harris Ln	Sherburn MN 56171
Current Resident	786 120th St	Sherburn MN 56171
Current Resident	900 125th St	Sherburn MN 56171
Randy J & Diane E Wink	1070 200th St	Trimont MN 56176
Pleasure Nelson-Heupel	131 Chestnut St W	Trimont MN 56176
Troy R & Karina L Palmquist	140 Birch St E	Trimont MN 56176
Heather Morris	140 Birch St W	Trimont MN 56176
Swedish Mission Church	1973 50th Ave	Trimont MN 56176
William A & Marion Julin	531 Birch St E	Trimont MN 56176
Swedish Lutheran Cemetery	554 185th St	Trimont MN 56176
John J Jurries	60 2nd Ave NW	Trimont MN 56176
Christopher R &Danielle E Fett	740 190th St	Trimont MN 56176
Current Resident	10 2nd Ave W	Trimont MN 56176
Current Resident	10 Broadway St S	Trimont MN 56176
Current Resident	11 Apple St W	Trimont MN 56176
Current Resident	111 6th Ave SE	Trimont MN 56176
Current Resident	111 Birch St E	Trimont MN 56176
Current Resident	120 Main St W	Trimont MN 56176
Current Resident	140 Main St E	Trimont MN 56176
Current Resident	180 1st Ave NE	Trimont MN 56176
Current Resident	180 5th Ave SE	Trimont MN 56176
Current Resident	1805 130th Ave	Trimont MN 56176
Current Resident	1813 80th Ave	Trimont MN 56176
Current Resident	1814 80th Ave	Trimont MN 56176
Current Resident	1816 130th Ave	Trimont MN 56176
Current Resident	1870 80th Ave	Trimont MN 56176
Current Resident	1907 50th Ave	Trimont MN 56176
Current Resident	1934 40th Ave	Trimont MN 56176
Current Resident	1987 130th Ave	Trimont MN 56176
Current Resident	20 Apple St E	Trimont MN 56176
Current Resident	200 5th Ave SE	Trimont MN 56176
Current Resident	211 Main St W	Trimont MN 56176
Current Resident	221 Main St W	Trimont MN 56176
Current Resident	240 Ash St W	Trimont MN 56176
Current Resident	250 Main St W	Trimont MN 56176
Current Resident	251 7th Ave SE	Trimont MN 56176
Current Resident	251 Apple St E	Trimont MN 56176
Current Resident	251 Main St W	Trimont MN 56176
Current Resident	261 Main St W	Trimont MN 56176
Current Resident	271 Main St W	Trimont MN 56176
Current Resident	280 Main St W	Trimont MN 56176
Current Resident	291 Main St W	Trimont MN 56176
Current Resident	292 Main St W	Trimont MN 56176

Current Resident	30 Ash St W	Trimont MN 56176
Current Resident	31 4th Ave NE	Trimont MN 56176
Current Resident	332 185th St	Trimont MN 56176
Current Resident	340 Main St E	Trimont MN 56176
Current Resident	341 Apple St E	Trimont MN 56176
Current Resident	341 Ash St E	Trimont MN 56176
Current Resident	350 Main St E	Trimont MN 56176
Current Resident	351 Main St E	Trimont MN 56176
Current Resident	360 Main St E	Trimont MN 56176
Current Resident	361 Apple St E	Trimont MN 56176
Current Resident	361 Main St E	Trimont MN 56176
Current Resident	400 Apple St E	Trimont MN 56176
Current Resident	400 Main St E	Trimont MN 56176
Current Resident	400 Main St W	Trimont MN 56176
Current Resident	41 Main St W	Trimont MN 56176
Current Resident	411 Apple St W	Trimont MN 56176
Current Resident	411 Birch St E	Trimont MN 56176
Current Resident	419 Main St E	Trimont MN 56176
Current Resident	421 Main St E	Trimont MN 56176
Current Resident	440 Main St E	Trimont MN 56176
Current Resident	441 Main St W	Trimont MN 56176
Current Resident	442 Main St E	Trimont MN 56176
Current Resident	450 Apple St W	Trimont MN 56176
Current Resident	451 Apple St E	Trimont MN 56176
Current Resident	451 Apple St W	Trimont MN 56176
Current Resident	461 Main St E	Trimont MN 56176
Current Resident	464 Main St E	Trimont MN 56176
Current Resident	471 Main St E	Trimont MN 56176
Current Resident	472 200th St	Trimont MN 56176
Current Resident	494 185th St	Trimont MN 56176
Current Resident	511 Main St E	Trimont MN 56176
Current Resident	518 Main St E	Trimont MN 56176
Current Resident	520 Birch St E	Trimont MN 56176
Current Resident	520 Main St E	Trimont MN 56176
Current Resident	522 Main St E	Trimont MN 56176
Current Resident	540 Main St E	Trimont MN 56176
Current Resident	541 Birch St E	Trimont MN 56176
Current Resident	541 Main St E	Trimont MN 56176
Current Resident	546 Main St E	Trimont MN 56176
Current Resident	551 Birch St E	Trimont MN 56176
Current Resident	561 Main St E	Trimont MN 56176
Current Resident	61 Ash St W	Trimont MN 56176
Current Resident	61 Chestnut St E	Trimont MN 56176
Current Resident	61 Main St W	Trimont MN 56176
Current Resident	691 215th St	Trimont MN 56176
Current Resident	81 Broadway St S	Trimont MN 56176
Current Resident	858 190th St	Trimont MN 56176
Current Resident	1657 80th Ave	Trimont MN 56176
Current Resident	1678 70th Ave	Trimont MN 56176
Current Resident	1730 70th Ave	Trimont MN 56176
Current Resident	1731 50th Ave	Trimont MN 56176
Current Resident	1752 150th Ave	Trimont MN 56176
Current Resident	1758 70th Ave	Trimont MN 56176
Current Resident	1780 70th Ave	Trimont MN 56176
Current Resident	1860 70th Ave	Trimont MN 56176
Current Resident	1952 10th Ave	Trimont MN 56176
Current Resident	250 Beech St W	Trimont MN 56176
Current Resident	260 S 7th Ave E	Trimont MN 56176
Current Resident	300 7th Ave NE	Trimont MN 56176
Current Resident	31 N 6th Ave E	Trimont MN 56176

Current Resident	327 210th St	Trimont MN 56176
Current Resident	41 N 6th Ave E	Trimont MN 56176
Current Resident	411 2nd Ave SW	Trimont MN 56176
Current Resident	420 State Hwy 4 S	Trimont MN 56176
Current Resident	440 State Hwy 4 S	Trimont MN 56176
Current Resident	458 190th St	Trimont MN 56176
Current Resident	460 State Hwy 4 S	Trimont MN 56176
Current Resident	490 State Hwy 4 S	Trimont MN 56176
Current Resident	495 State Hwy 4 S	Trimont MN 56176
Current Resident	51 N 6th Ave E	Trimont MN 56176
Current Resident	510 Apple St E	Trimont MN 56176
Current Resident	541 210th St	Trimont MN 56176
Current Resident	550 State Hwy 4 S	Trimont MN 56176
Current Resident	557 190th St	Trimont MN 56176
Current Resident	949 180th St	Trimont MN 56176
Randy & Amy Patnode	205 Kelser St	Welcome MN 56181
Lois E Nelson	218 Kelser St S	Welcome MN 56181
Jannelle Spear	27 Schley St	Welcome MN 56181
Eric L Anderson	406 1st St	Welcome MN 56181
Matthew & Dana Becker	501 Harrison St	Welcome MN 56181
Valerie Omvig & Curtis Godden	502 1st St	Welcome MN 56181
Terry Heavirland Sr (LE) et al.	504 1st St	Welcome MN 56181
Lori McNealy	608 2nd St	Welcome MN 56181
Current Resident	10 Dewey St	Welcome MN 56181
Current Resident	1011 Martin Rd	Welcome MN 56181
Current Resident	1019 Martin Rd	Welcome MN 56181
Current Resident	102 Guide St N	Welcome MN 56181
Current Resident	1023 Martin Rd	Welcome MN 56181
Current Resident	105 Dugan St N	Welcome MN 56181
Current Resident	1054 170th St	Welcome MN 56181
Current Resident	107 Dugan St N	Welcome MN 56181
Current Resident	108 Kruse St	Welcome MN 56181
Current Resident	1098 170th St	Welcome MN 56181
Current Resident	11 Schley St	Welcome MN 56181
Current Resident	112 2nd St	Welcome MN 56181
Current Resident	1163 125th St	Welcome MN 56181
Current Resident	1182 State Highway 263	Welcome MN 56181
Current Resident	12 Dewey St	Welcome MN 56181
Current Resident	121 Dugan St N	Welcome MN 56181
Current Resident	1252 150th Ave	Welcome MN 56181
Current Resident	1275 120th St	Welcome MN 56181
Current Resident	1288 State Highway 263	Welcome MN 56181
Current Resident	14 Dewey St	Welcome MN 56181
Current Resident	1409 130th St	Welcome MN 56181
Current Resident	1487 110th Ave	Welcome MN 56181
Current Resident	150 Dewey St	Welcome MN 56181
Current Resident	150 Guide St S	Welcome MN 56181
Current Resident	156 Dewey St	Welcome MN 56181
Current Resident	1574 140th St	Welcome MN 56181
Current Resident	158 Dewey St	Welcome MN 56181
Current Resident	1597 140th Ave	Welcome MN 56181
Current Resident	1599 130th St	Welcome MN 56181
Current Resident	160 Dewey St	Welcome MN 56181
Current Resident	162 Dewey St	Welcome MN 56181
Current Resident	166 Dewey St	Welcome MN 56181
Current Resident	170 Dewey St	Welcome MN 56181
Current Resident	172 Dewey St	Welcome MN 56181
Current Resident	1737 115th Ave	Welcome MN 56181
Current Resident	1749 130th Ave	Welcome MN 56181
Current Resident	1751 115th Ave	Welcome MN 56181

Current Resident	180 Guide St S	Welcome MN 56181
Current Resident	1871 130th Ave	Welcome MN 56181
Current Resident	2 Circle Dr W	Welcome MN 56181
Current Resident	20 Dewey St	Welcome MN 56181
Current Resident	201 Guide St S	Welcome MN 56181
Current Resident	204 Campbell St	Welcome MN 56181
Current Resident	206 Hulseman St	Welcome MN 56181
Current Resident	207 Harrison St	Welcome MN 56181
Current Resident	210 Guide St N	Welcome MN 56181
Current Resident	212 Kelser St	Welcome MN 56181
Current Resident	214 Dugan St S	Welcome MN 56181
Current Resident	25 Dewey St	Welcome MN 56181
Current Resident	30 Dewey St	Welcome MN 56181
Current Resident	301 Campbell St	Welcome MN 56181
Current Resident	305 Dugan St S	Welcome MN 56181
Current Resident	319 Dugan St S	Welcome MN 56181
Current Resident	403 Harrison St	Welcome MN 56181
Current Resident	403 Weaver St	Welcome MN 56181
Current Resident	406 Mill St	Welcome MN 56181
Current Resident	408 Mill St	Welcome MN 56181
Current Resident	42 Main St	Welcome MN 56181
Current Resident	424 Mill St	Welcome MN 56181
Current Resident	45 Main St	Welcome MN 56181
Current Resident	500 Dugan St N	Welcome MN 56181
Current Resident	504 Dugan St N	Welcome MN 56181
Current Resident	505 1st St	Welcome MN 56181
Current Resident	51 Main St	Welcome MN 56181
Current Resident	511 Dugan St N	Welcome MN 56181
Current Resident	6 Dewey St	Welcome MN 56181
Current Resident	7 Dewey St	Welcome MN 56181
Roy G & Neva D Rosenberg et al.	204 E 1st St	Welcome MN 56181
Current Resident	1275 Martin Rd	Welcome MN 56181
Current Resident	1290 140th Ave	Welcome MN 56181
Current Resident	1296 140th Ave	Welcome MN 56181
Current Resident	132 Dewey St	Welcome MN 56181
Current Resident	134 Dewey St	Welcome MN 56181
Current Resident	1356 170th St	Welcome MN 56181
Current Resident	136 Dewey St	Welcome MN 56181
Current Resident	138 Dewey St	Welcome MN 56181
Current Resident	140 Dewey St	Welcome MN 56181
Current Resident	142 Dewey St	Welcome MN 56181
Current Resident	146 Dewey St	Welcome MN 56181
Current Resident	304 1st St W	Welcome MN 56181
Current Resident	305 2nd St	Welcome MN 56181
Current Resident	704 1st St	Welcome MN 56181
Carolyn A & Darrel D Berkland et al.	211 Hwy 15	Fenton IA 50539
Morris E & Sandra L Holm	160 Ash Ave W	Swea City IA 50590
Shirley Beck Trust	PO Box 435	Mediapolis IA 52637
Michael L & Kandee K Ennis	26072 Marina Rd	Veneta OR 97487

Mark Westby et al.	34 Rawlings Ave	Rchmnd Hll On L4S1B	CANADA
Daniel H Schafer	93 Moo 5, Tambon Ving Y Amphur Muang	Lamphun	Thailand
Mark Westby et al.	34 Rawlings Ave	Richmond Hill	CANADA
Daniel H Schafer	93 Moo 5, Tambon Ving Y Amphur Muang	Lamphun 51000	THAILAND

List of Attachment C Recipients

- Local Government Unit Lead Administrator
- Local Government Unit Elected Officials
- State Senators and Representatives with Districts in Notice Area

Bill. Weber		100 Rev. Dr. Martin Luther King Jr. Blvd, Room 125	State Office Building	Saint Paul MN 55155-1206
Julie Ann Rosen		75 Rev. Dr. Martin Luther King Jr. Blvd, Room 317	Capitol	Saint Paul MN 55155-1606
Bob Gunther		100 Rev. Dr. Martin Luther King Jr. Blvd, Room 591	State Office Building	Saint Paul MN 55155-1206
Rodney Hamilton		100 Rev. Dr. Martin Luther King Jr. Blvd, Room 559	State Office Building	Saint Paul MN 55155-1206
Amy Klobuchar			416 6th St SE	Minneapolis MN 55414-1622
Tim Walz			227 E Main St Ste 220	Mankato MN 56001-3573
John Ritter			31914 250th St	Amboy MN 56010-2805
Denise Pfaffinger	Blue Earth City Township Clerk		PO Box 224	Blue Earth MN 56013-0224
David Schaefer			42628 105th St	Blue Earth MN 56013-5511
Edie Smith			9599 415th Ave	Blue Earth MN 56013-5906
Richard Smith			9599 415th Ave	Blue Earth MN 56013-5906
Tim Blagg			41909 93rd St	Blue Earth MN 56013-5905
Todd Thedens			568 290th Ave	Blue Earth MN 56013-3021
Byron Steuer			3088 60th St	Blue Earth MN 56013-3019
Robert Stomberg			368 295th Ave	Blue Earth MN 56013-3011
Duane Ehrich	Elmore Township Clerk		40566 60th St	Blue Earth MN 56013-2801
Justine Hougen	Jo Daviess Township Clerk		36267 100th St	Blue Earth MN 56013-5320
Greg Mastin			35498 85th St	Blue Earth MN 56013-5711
Brian Wenthold			33999 105th St	Blue Earth MN 56013-5226
Mitch Murphy			33136 115th St	Blue Earth MN 56013-5219
Mike Jacobson			32632 85th St	Blue Earth MN 56013-5621
Ray Hornke			6315 350th Ave	Blue Earth MN 56013-6101
Scott Smith			33080 50th St	Blue Earth MN 56013-6012
James Welchlin			3077 95th St	Blue Earth MN 56013-3026
Brian Millmann			13882 390th Ave	Blue Earth MN 56013-5001
Bill Eckhardt			40598 150th St	Blue Earth MN 56013-5100
Neal Mensing			14136 365th Ave	Blue Earth MN 56013-4903
Kathy Bailey	Blue Earth City Administrator	125 West 6th Street	PO Box 38	Blue Earth MN 56013-0038
Rob Hammond		125 West 6th Street	PO Box 38	Blue Earth MN 56013-0038
Glenn Gaylord		125 West 6th Street	PO Box 38	Blue Earth MN 56013-0038
John Gartzke		125 West 6th Street	PO Box 38	Blue Earth MN 56013-0038
Allen Aukes		125 West 6th Street	PO Box 38	Blue Earth MN 56013-0038
John Huisman		125 West 6th Street	PO Box 38	Blue Earth MN 56013-0038
Richard Scholtes		125 West 6th Street	PO Box 38	Blue Earth MN 56013-0038
Russ Erichsrud		125 West 6th Street	PO Box 38	Blue Earth MN 56013-0038
John Thompson	Faribault County Coordinator		415 N Main St	Blue Earth MN 56013-5528
John Roper		415 North Main Street	PO Box 130	Blue Earth MN 56013-0130
Greg Young		415 North Main Street	PO Box 130	Blue Earth MN 56013-0130
Bill Groskreutz, Jr.		415 North Main Street	PO Box 130	Blue Earth MN 56013-0130
Tom Loveall		415 North Main Street	PO Box 130	Blue Earth MN 56013-0130
Tom Warmka		415 North Main Street	PO Box 130	Blue Earth MN 56013-0130
Jan Rauenhorst	Prescott Township Clerk/Treasurer		16233 405th Ave	Delavan MN 56023-4706
Joe Anderson			39251 180th St	Delavan MN 56023-4601
Alan Johnson			2858 30th St	Elmore MN 56027-3503
George Huber Jr.			37631 30th St	Elmore MN 56027-2035
Sherwood Krosch			4675 385th Ave	Elmore MN 56027-2061
Randy Peter			3677 400th Ave	Elmore MN 56027-2079
Brian Naumann			2777 420th Ave	Elmore MN 56027-2015
Ronda Dahl	Pilot Grove Township Clerk		34033 30th St	Elmore MN 56027-3367
Dean Larsen			2943 319th Ave	Elmore MN 56027-3510
Bill Carr			3828 340th Ave	Elmore MN 56027-3368
Dianne Nowak	Elmore City Clerk/Treasurer	PO Box 56	202 S Highway 169	Elmore MN 56027-4300
Keven Sullivan		PO Box 56	202 S Highway 169	Elmore MN 56027-4300
Edrys (Eddy) Viland		PO Box 56	202 S Highway 169	Elmore MN 56027-4300
Pat Coupanger		PO Box 56	202 S Highway 169	Elmore MN 56027-4300

Marlys Jagerson		PO Box 56	202 S Highway 169	Elmore MN 56027-4300
Lorman Jahnke		PO Box 56	202 S Highway 169	Elmore MN 56027-4300
Dan Whitman	East Chain Township Clerk		2521 50th St	Fairmont MN 56031-5020
Heather Trembley	Fairmont Township Clerk		834 225th Ave	Fairmont MN 56031-4631
Michael Gerken			2178 70th St	Fairmont MN 56031-5088
Jason Steuber			772 225th Ave	Fairmont MN 56031-4630
Robert Lintelman			2121 90th St	Fairmont MN 56031-4618
Larry Maday			2287 105th St	Fairmont MN 56031-4622
Myron Moeller			1474 175th Ave	Fairmont MN 56031-1323
Gregory Murphy	Pleasant Prairie Township Clerk		882 250th Ave	Fairmont MN 56031-4607
Dan Bebernes	Rolling Green Township Clerk		1544 90th St	Fairmont MN 56031-1360
Brian Wannarka			1832 110th St	Fairmont MN 56031-1371
Todd Rosenberg			968 160th Ave	Fairmont MN 56031-1333
Daniel Rosenberg			1077 170th Ave	Fairmont MN 56031-1332
David Butler			1739 120th St	Fairmont MN 56031-1331
Roxane Wedel	Rutland Township Clerk		1477 208th Ave	Fairmont MN 56031-1397
Billeye Rabbe			1402 208th Ave	Fairmont MN 56031-1397
Roxane Wedel			1477 208th Ave	Fairmont MN 56031-1397
Mike Humpal	Fairmont City Administrator		100 Downtown Plz	Fairmont MN 56031-1709
Randy Quiring			100 Downtown Plz	Fairmont MN 56031-1709
Andrew Lucas			100 Downtown Plz	Fairmont MN 56031-1709
Wes Clerc			100 Downtown Plz	Fairmont MN 56031-1709
Harlan Gorath			100 Downtown Plz	Fairmont MN 56031-1709
Joe Kallemeyn			100 Downtown Plz	Fairmont MN 56031-1709
Darin Rahm			100 Downtown Plz	Fairmont MN 56031-1709
Scott Higgins	Martin County Coordinator		201 Lake Ave Ste 104	Fairmont MN 56031-1845
Steve Pierce			220 S Prairie Ave	Fairmont MN 56031-2851
Steve Donnelly			840 Albion Ave	Fairmont MN 56031-3001
Dan Schmidtke			1598 70th St	Fairmont MN 56031-1352
Patricia Messer	Center Creek Township Clerk		2943 170th St	Granada MN 56039-3096
Alan Langager			2992 160th St	Granada MN 56039-3006
Lucille Findley			2923 180th St	Granada MN 56039-3010
Randy Schmidt			1397 State Highway 262	Granada MN 56039-3103
Greg Schock			2861 163rd St	Granada MN 56039-3089
Robert Garry			2992 120th St	Granada MN 56039-3070
Terry Murphy			2929 95th St	Granada MN 56039-3151
Eric Colby			2495 190th St	Granada MN 56039-3025
Darlene Sparks	Granada City Clerk/Trasurer		PO Box 126	Granada MN 56039-0126
Darliss Green			PO Box 126	Granada MN 56039-0126
Gregory Talledge			PO Box 126	Granada MN 56039-0126
Melissa Engel			PO Box 126	Granada MN 56039-0126
DeWayne Mortensen			PO Box 126	Granada MN 56039-0126
Dale Strauser			PO Box 126	Granada MN 56039-0126
Charles Haugen			851 270th Ave	Granada MN 56039-3154
Willard Abel			2498 150th St	Granada MN 56039-3059
Nina Patten	Verona Township Clerk		PO Box 37	Huntley MN 56047-0037
Don Selvig			PO Box 85	Huntley MN 56047-0085
Warren Schultze	Northrop City Clerk/Treasurer		PO Box 55	Northrop MN 56075-0055
Tom Wakey			PO Box 55	Northrop MN 56075-0055
Larry Baarts			PO Box 55	Northrop MN 56075-0055
Rick Weber			PO Box 55	Northrop MN 56075-0055
Tom Koeritz			PO Box 55	Northrop MN 56075-0055
Roger Kusick			PO Box 55	Northrop MN 56075-0055
Al Franken			208 S Minnesota Ave Ste 6	Saint Peter MN 56082-2546
Lee Petersen	Nashville Township Clerk		2652 230th St	Truman MN 56088-2123

H C (Skip) Henton		2744 230th St	Truman MN 56088-2125
Karen Helvig	Waverly Township Clerk	1480 200th St	Truman MN 56088-2068
Alan Wille		2059 160th Ave	Truman MN 56088-2064
Denise Wille		2438 160th Ave	Truman MN 56088-2141
Steve Graham		2267 175th Ave	Truman MN 56088-2046
Jeff Lueth		2258 150th Ave	Truman MN 56088-2145
Wayne Maloney	Westford Township Clerk	2282 230th St	Truman MN 56088-2102
Lawrence Salic		2162 230th Ave	Truman MN 56088-2028
Tony Weihe		2044 230th St	Truman MN 56088-2022
Greg Kaufman		1943 210th St	Truman MN 56088-2058
Kieth Worthley		1951 227th Ave	Truman MN 56088-2081
Monte Rohman	Truman City Clerk/Treasurer	PO Box 398	Truman MN 56088-0398
Lynn Brownlee		PO Box 398	Truman MN 56088-0398
Richard Becker		PO Box 398	Truman MN 56088-0398
Jake Ebert		PO Box 398	Truman MN 56088-0398
Kathy Hendricksen		PO Box 398	Truman MN 56088-0398
Paul Leimer		PO Box 398	Truman MN 56088-0398
Elliott Belgard		213 N 3rd Ave E	Truman MN 56088-1112
Duane Meyer		2993 230th St	Winnebago MN 56098-2133
Joan Adams		2822 200th St	Winnebago MN 56098-2106
Mike Salic		2219 290th Ave	Winnebago MN 56098-2110
Darwin Olson		14483 320th Ave	Winnebago MN 56098-4865
Douglas Hill		16292 345th Ave	Winnebago MN 56098-4540
Deb Claeys	Winnebago Township Clerk	PO Box 131	Winnebago MN 56098-0131
Ken Hartman		32571 230th St	Winnebago MN 56098-2820
Thomas Golly		33229 215th St	Winnebago MN 56098-4030
Donna Brown		33249 230th St	Winnebago MN 56098-2815
Austin Bleess	Winnebago City Manager	140 Main St S	Winnebago MN 56098-2100
Randy Nowak		140 Main St S	Winnebago MN 56098-2100
Rick Johnson		140 Main St S	Winnebago MN 56098-2100
Chris Ziegler		140 Main St S	Winnebago MN 56098-2100
Scott Robertson		140 Main St S	Winnebago MN 56098-2100
Stacy Huntington-Scofield		140 Main St S	Winnebago MN 56098-2100
Michael Christophel		60837 870th St	Alpha MN 56111-3238
Art Benda, Jr.		59093 850th St	Alpha MN 56111-3227
Gary Beseke		85700 600th Ave	Alpha MN 56111-3235
Dave Ringkob		59341 860th St	Alpha MN 56111-3225
Loren Schoewe		59720 890th St	Alpha MN 56111-3247
Joe Buller		88266 600th Ave	Alpha MN 56111-3249
Dean Schentzel		59438 810th St	Alpha MN 56111-3214
Linda York	Alpha City Clerk/Treasurer	PO Box 97	Alpha MN 56111-0097
Tim Cain		PO Box 97	Alpha MN 56111-0097
Daryl Becker		PO Box 97	Alpha MN 56111-0097
Krystal Preuss		PO Box 97	Alpha MN 56111-0097
David Doppenberg		PO Box 97	Alpha MN 56111-0097
Elmer Welch		PO Box 97	Alpha MN 56111-0097
Alan Erickson	Belmont Township Clerk	83714 525th Ave	Jackson MN 56143-3739
Lowell Flatgard		85914 530th Ave	Jackson MN 56143-3038
Marilyn Dahlin		51353 850th St	Jackson MN 56143-3638
John Lilleberg		51685 830th St	Jackson MN 56143-3634
Mark Eggimann	Des Moines Township Clerk	76349 530th Ave	Jackson MN 56143-3355
Ron Bezdicek		77427 500th Ave	Jackson MN 56143-3772
David Storm		77919 500th Ave	Jackson MN 56143-3774
Mark Goede		50708 800th St	Jackson MN 56143-3601
Leland Kanuch		51516 770th St	Jackson MN 56143-3769

Jed Hesebeck	Enterprise Township Clerk		57726 850th St	Jackson MN 56143-3085
Richard Klima			47249 780th St	Jackson MN 56143-3709
Dawn Ascheman	Wisconsin Township Clerk		57088 780th St	Jackson MN 56143-3211
Neal Perkins			55605 780th St	Jackson MN 56143-3204
Everett Ascheman			56142 780th St	Jackson MN 56143-3208
Matt Benson			79563 570th Ave	Jackson MN 56143-3023
Steve Walker	Jackson City Clerk		80 W Ashley St	Jackson MN 56143-1669
Wayne Walters			80 W Ashley St	Jackson MN 56143-1669
Fred Bern			80 W Ashley St	Jackson MN 56143-1669
Gary Willink			80 W Ashley St	Jackson MN 56143-1669
Ken Temple			80 W Ashley St	Jackson MN 56143-1669
Donald Shoenrock			80 W Ashley St	Jackson MN 56143-1669
Dennis Hunwardsen			80 W Ashley St	Jackson MN 56143-1669
Chris Vee			80 W Ashley St	Jackson MN 56143-1669
Janice Fransen	Jackson County Coordinator	Jackson County Courthouse	405 4th St	Jackson MN 56143-1588
William Tusa		Jackson County Courthouse	405 4th St	Jackson MN 56143-1588
Kim Hummel		Jackson County Courthouse	405 4th St	Jackson MN 56143-1588
Rosemary Schultz		Jackson County Courthouse	405 4th St	Jackson MN 56143-1588
Roger Ringkob		Jackson County Courthouse	405 4th St	Jackson MN 56143-1588
David Henkels		Jackson County Courthouse	405 4th St	Jackson MN 56143-1588
James Thoreson			85281 500th Ave	Lakefield MN 56150-3089
Theodore Bretzman			46360 840th St	Lakefield MN 56150-3070
Geraldine Pohlman			87509 420th Ave	Lakefield MN 56150-3124
Norman Stender			47427 860th St	Lakefield MN 56150-3099
Douglas Hansen			46404 850th St	Lakefield MN 56150-3074
Rosemary Swanson	Hunter Township Clerk		45633 780th St	Lakefield MN 56150-3222
Karin Rubis			79357 460th Ave	Lakefield MN 56150-3280
Steve VanHal			47059 800th St	Lakefield MN 56150-3025
Art Swanson			80184 460th Ave	Lakefield MN 56150-3021
Kelly Rasche	Lakefield City Clerk		PO Box 900	Lakefield MN 56150-0900
Darrell Nissen			PO Box 900	Lakefield MN 56150-0900
Darrel Hage			PO Box 900	Lakefield MN 56150-0900
Andrea Monson			PO Box 900	Lakefield MN 56150-0900
Kim Rients			PO Box 900	Lakefield MN 56150-0900
Bruce Bakalyar			PO Box 900	Lakefield MN 56150-0900
Angela Rossow	Heron Lake Township Clerk		83941 State Highway 86	Lakefield MN 56150-3141
Kathleen Peterson	Kimball Township Clerk		89874 590th Ave	Mountain Lake MN 56159-3012
Lowell Porath			57070 910th St	Mountain Lake MN 56159-3020
Richard Peterson			89874 590th Ave	Mountain Lake MN 56159-3012
Steven Syverson	Cedar Township Clerk		435 240th St	Odin MN 56160-1208
Gary Wilson			134 240th St	Odin MN 56160-1203
Anna Beth Faber			1207 250th St	Ormsby MN 56162-1211
Edward Lee	Elm Creek Township Clerk		148 140th St	Sherburn MN 56171-1122
Keith Sickler			451 150th St	Sherburn MN 56171-1138
Earl Cordes			1529 30th Ave	Sherburn MN 56171-1136
Dianne Theobald	Jay Township Clerk		474 100th St	Sherburn MN 56171-1234
Steve Roben			962 40th Ave	Sherburn MN 56171-1238
Irene Schlaphoff			993 State Highway 4	Sherburn MN 56171-1223
Philip Schafer			648 110th St	Sherburn MN 56171-1232
David Crissinger			525 110th St	Sherburn MN 56171-1247
Edgar Savidge			50 W Park Dr	Sherburn MN 56171-1176
Pat Bedford			821 100th St	Sherburn MN 56171-1185
Mark Stoffel			6 S Fox Lake Dr E	Sherburn MN 56171-1174
Jamie Letzring	Sherburn City Administrator		PO Box 667	Sherburn MN 56171-0667
Robert Roesler			PO Box 667	Sherburn MN 56171-0667

Carroll Behne		PO Box 667	Sherburn MN 56171-0667
Jeff Ross		PO Box 667	Sherburn MN 56171-0667
Brad Ringnell		PO Box 667	Sherburn MN 56171-0667
Kurt Olson		PO Box 667	Sherburn MN 56171-0667
Nathan Whitehead		1321 State Highway 4	Sherburn MN 56171-1169
Elaine Anderson		463 200th St	Trimont MN 56176-1276
Rodney Erickson		659 200th St	Trimont MN 56176-1284
Donald Faber		592 185th St	Trimont MN 56176-1201
Debra Rabbe	Galena Township Clerk	2247 90th Ave	Trimont MN 56176-1258
Kermit Carlson		2256 70th Ave	Trimont MN 56176-1207
Terry Heavirland		1068 210th St	Trimont MN 56176-1252
Phillip Bettin		2088 90th Ave	Trimont MN 56176-1260
Melissa Flohrs	Trimont City Clerk/Treasurer	PO Box 405	Trimont MN 56176-0405
Thomas Eckmann		PO Box 405	Trimont MN 56176-0405
Mark Larson		PO Box 405	Trimont MN 56176-0405
Thomas Hage		PO Box 405	Trimont MN 56176-0405
Ron Reicherts		PO Box 405	Trimont MN 56176-0405
Karen Koeder		PO Box 405	Trimont MN 56176-0405
Jack Potter		1306 200th St	Trimont MN 56176-1231
Dennis Carlson		449 230th St	Trimont MN 56176-1304
Doug Hilgendorf	Fox Lake Township Clerk	1579 120th Ave	Welcome MN 56181-1380
Bruce Whitehead		1550 110th Ave	Welcome MN 56181-1372
Lin Hilgendorf		1579 120th Ave	Welcome MN 56181-1380
Donald Nordstrom		1809 115th Ave	Welcome MN 56181-1382
Roland Phillipp		1493 100th Ave	Welcome MN 56181-1367
Rita Garbers	Fraser Township Clerk	1486 130th St	Welcome MN 56181-1319
John Garbers		1486 130th St	Welcome MN 56181-1319
Wanda Patsche		1583 150th Ave	Welcome MN 56181-1389
Wes Anderson		1382 180th St	Welcome MN 56181-1308
Becky Weig	Manyaska Township Clerk	1172 105th St	Welcome MN 56181-1339
Richard Koons		1172 125th St	Welcome MN 56181-1397
Deb Hansen	Welcome City Clerk/Treasurer	PO Box 72	Welcome MN 56181-0072
H. Bocky Borchardt		PO Box 72	Welcome MN 56181-0072
Todd Williams		PO Box 72	Welcome MN 56181-0072
Kim Holm		PO Box 72	Welcome MN 56181-0072
John Larson		PO Box 72	Welcome MN 56181-0072
Scot Scheff		PO Box 72	Welcome MN 56181-0072

Attachment C

ITC **ITC Midwest LLC** • 444 Cedar Street, Suite 1020 • St. Paul, MN 55101

January 22, 2013

RE: Notice of Certificate of Need Application for the Minnesota-Iowa 345 KV Transmission Project in Jackson, Martin, and Faribault Counties, Minnesota MPUC Docket No.: ET6675/CN-12-1053

Dear Local Government Representative or Elected Official:

ITC Midwest LLC, a Michigan limited liability company ("ITCM"), is proposing to construct a 345 kV transmission line from its Lakefield Junction Substation in Jackson County, east through Martin County to the newly-proposed Huntley Substation in Faribault County, before turning south to the Iowa border (the "Project"). In Iowa, the transmission line will continue south to a new Ledyard Substation, near the City of Ledyard, Iowa, and then on to a substation near the City of Burt in Kossuth County, Iowa. ITCM will seek approval to construct the Minnesota portion of the Project from the Minnesota Public Utilities Commission ("Commission"). This letter is intended to provide you with notification of certain Project details and also to provide you with information on how you can participate in the Minnesota regulatory process.

The Project includes expanding the Lakefield Substation, a new Huntley Substation and several miles of reconfigured 161 kV transmission line near the Huntley Substation. The reconfigurations are necessary to relocate all 161 kV transmission substation facilities to the Huntley Substation from the existing Winnebago Substation which will be decommissioned. The Minnesota portion of the Project will be approximately 75 miles long. The area under consideration for the location of the Project is depicted in **Attachment A**. The Iowa portion of the Project will be permitted by the Iowa Utilities Board.

This notice is being provided to those who fall within one or more of the categories listed below as they relate to the area ("Notice Area") shown on Attachment A:

- Landowners with property within the Notice Area;
- Residents within the Notice Area;
- Local units of government in and around the Notice Area;
- Local and State elected officials; or
- State and local government agencies and offices.

Because your constituents may have questions related to the Project, we wanted to inform you of our proposal and also how you and your constituents may get involved in the regulatory process for the Project.

Regulatory Process Overview

For the Project, the Commission must determine whether the Project is needed (Certificate of Need) and where the Project should be located (Route Permit). Before the Project can be constructed, the Commission must first certify that the Project is needed. The certification of the Project is governed by Minnesota law, including Minnesota Statutes Section 216B.243, and Minnesota Rules Chapters 7829 and 7849, specifically Rules 7849.0010 to 7849.0400 and 7849.1000 to 7849.2100. In the Certificate of Need proceeding, the Commission will analyze whether ITCM has proposed the most appropriate size, type, and timing for the Project. The Certificate of Need application, once submitted, can be obtained by visiting the Commission's website at www.puc.state.mn.us in Docket No. ET6675/CN-12-1053.

In addition to certifying the Project, the Commission must also grant a Route Permit for the Project. The routing of the Minnesota portion of the Project is governed by Minnesota law, including Minnesota Statutes Chapter 216E and Minnesota Rules Chapter 7850. Information on the Route Permit application, once filed, can be obtained by visiting the Commission's website in Docket No. ET6675/TL-12-1337.

Minnesota Department of Commerce Energy Facility Permitting staff ("EFP") is responsible for conducting environmental review of the Project. EFP will prepare an environmental report for the Certificate of Need proceeding. EFP will prepare an environmental impact statement ("EIS") for the Route Permit proceeding. EFP may elect to combine these two documents and issue one document, an EIS, which satisfies the environmental review requirements for the Certificate of Need and Route Permit proceedings.

ITCM will be submitting an application for a Route Permit with at least two routes and will identify the route which ITCM prefers. Other routes can be proposed during the EIS scoping process to be completed by EFP. As part of its analysis, EFP will evaluate the routes proposed by ITCM in its Route Permit application and any other routes proposed during the scoping process that will aid in the Commission's decision on the Route Permit application. The Commission may determine that a route submitted by ITCM, or a route proposed during the scoping process, or some combination of such routes is the most appropriate route for the Project. Selection of a final route by the Commission will be based on evaluation of the routes, guided by the Factors identified in Minnesota Statutes Section 216E.03, Minnesota Rule 7850.4100, and stakeholder input received during the regulatory process.

For the 345 kV transmission line portions of the Project, ITCM anticipates that it will obtain a 200-foot wide permanent right-of-way. For the 161 kV transmission line portions of the Project, ITCM anticipates that it will obtain a 150-foot wide permanent right-of-way. Before beginning construction, ITCM will acquire property rights for the right-of-way, typically through an easement that will be negotiated with the landowner for each parcel.

The proposed structures for the Project are primarily single pole, weathering or galvanized steel structures. Where the 345 kV transmission line can be co-located with existing 161 kV transmission lines, double-circuit structures will be used. For the 161 kV transmission line portions of the Project, single pole single circuit and double circuit poles will be used to accommodate construction. Structures are proposed to be placed using spans of approximately 600 to 1,100 feet, with an average span of approximately 900 feet. Additionally, specialty structures, other than the single pole structures discussed above, may be used through areas of environmental sensitivity or where construction conditions require their use.

Need for the Project

The Project is needed to enhance regional reliability, increase transmission capacity to support additional generation, including generation to meet renewable energy standards throughout the region, and to reduce congestion which will enable more efficient delivery of energy.

The proposed facilities in Minnesota and Iowa were studied and approved in December 2011 as part of the Midwest Independent Transmission System Operator ("MISO") Multi-Value Projects ("MVP") portfolio in the 2011 MISO Transmission Expansion Plan.

The MVP projects were developed based on a broad assessment of benefits to strengthen and enhance reliability across the integrated transmission system on which all regional electric load and exports rely including:

- Substantial reductions in regional congestion costs;
- Reductions in transmission losses, effecting significant, broadly-shared cost savings; and
- Reductions in the region's installed capacity requirement, thus measurably reducing capacity costs throughout the region.

The Project is a portion of what is identified as Project 3 in the MVP portfolio. The Iowa portions of Project 3 are subject to review and approval by the Iowa Utilities Board.

Biennial Transmission Planning

Minnesota statutes include a requirement that each electric transmission owning utility in the state file a biennial transmission planning report with the Commission in the fall of odd years. These reports provide an excellent source of background information on the transmission planning process used by utilities in Minnesota. The 2011 Biennial Transmission Planning Report is available at: www.minnelectrans.com.

Project Notifications

To subscribe to the Project Certificate of Need docket and receive email notifications when information is filed that is related to the Certificate of Need for the Project, please visit www.puc.state.mn.us, click on the "Subscribe to a Docket" button, enter your email address and select "Docket Number" from the Type of Subscription dropdown box, then select "12" from the first Docket Number dropdown box and enter "1053" in the second box before clicking on the "Add to List" button. You must then click the "Save" button at the bottom of the page to confirm your subscription to the Project Docket. These same steps can be followed to subscribe to the Project Route Permit docket (ET6675/TL-12-1337).

Please visit www.itctransco.com/minnesota-iowa-project for more information on the Project. If you have questions about the process, you may contact the Minnesota regulatory staff listed below:

Minnesota Public Utilities Commission	**Minnesota Department of Commerce**
Scott Ek	Ray Kirsch, State Permit Manager
121 7th Place East, Suite 350	85 7th Place East, Suite 500
St. Paul, Minnesota 55101	St. Paul, Minnesota 55101
651.201.2255	651.296.7588
800.657.3782	800.657.3794
scott.ek@state.mn.us	raymond.kirsch@state.mn.us
www.puc.state.mn.us	

If you would **like to have your name added to the Project Route Permit mailing list** (MPUC Docket ET6675/TL-12-1337), you may register by visiting the Department of Commerce webpage at mn.gov/commerce/energyfacilities/, clicking on the "Transmission Lines" tab, selecting "Minnesota-Iowa 345 kV Transmission Project" from the listed projects, and then clicking the links next to the "Mailing List" heading. Alternately, you may contact Department of Commerce staff at the address above. Please be aware that the Route Permit mailing list may not be available for online registration until the Route Permit application is submitted.

A separate service list is maintained for the Certificate of Need proceeding. To be **placed on the Project Certificate of Need mailing list** (MPUC Docket ET6675/CN-12-1053), mail, fax, or email Robin Benson at Minnesota Public Utilities Commission, 121 7th Place E., Suite 350, St. Paul, MN 55101-2147, Fax: 651-297-7073 or robin.benson@state.mn.us.

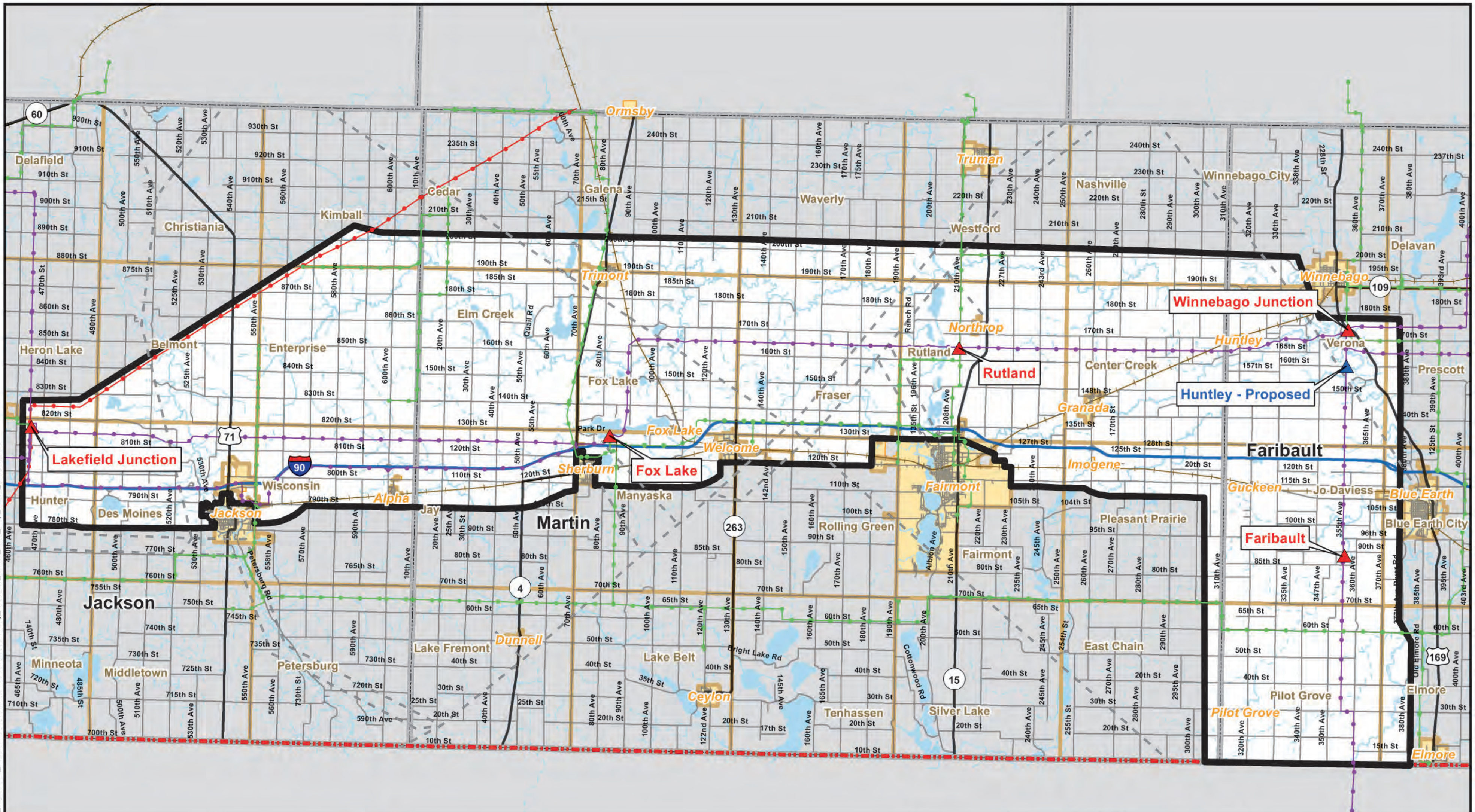
The ITCM contact for questions about this Project is:

David B. Grover
Manager, Regulatory Strategy
ITC Midwest LLC
444 Cedar Street, Suite 1020
St. Paul, MN 55101
877-482-4829
minniowa@itctransco.com

Sincerely,

David B. Grover

David B. Grover
Manager, Regulatory Strategy



- Notice Area Boundary
- Existing Substation
- Proposed Substation
- Railroad
- Existing 69 kV Lines
- Existing 161 kV Lines
- Existing 345 kV Lines
- Pipeline
- State Boundary
- County Boundary
- Civil Township
- Municipal Area

NORTH

3.5 1.75 0 3.5
Miles

MINNESOTA

Jackson Martin Faribault
Map Locator

ITC

ITC Midwest
Minnesota-Iowa
345 kV Transmission Project
Project Notice Area

Source: National Hydrography Dataset; Minnesota Geo GIS; Minnesota DOT; ITC; Burns & McDonnell.

January 03, 2013

\\ESPSRV\Data\Projects\ITC\66742_HUNTLEY_LAKEFIELD\GIS\DataFiles\ArcDocs\Huntley_Lakefield_Notice_Area_Map_11x17_010313.mxd

Attachment D

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

AFFIDAVIT OF PUBLICATION
MPUC Docket No. ET6675/CN-12-1053

Gregory D. Trees, being first duly sworn, deposes and states that the attached invoice and tear sheets are provided as proof of publication of the notice of ITC Midwest for its Minnesota-Iowa 345 kV Transmission Project in Jackson, Martin, and Faribault Counties in the following publications on the following dates:

Faribault County Register	January 21, 2013
Fairmont Daily Sentinel	January 24, 2013
Tri County News	January 23, 2013
Jackson County Pilot	January 24, 2013
Kiester Courier Sentinel	January 24, 2013
Lakefield Standard	January 24, 2013
Minneapolis Star Tribune	January 24, 2013
Minnesota Lake Tribune	January 24, 2013
Martin County Star	January 23, 2013
Truman Tribune	January 23, 2013
Wells Mirror	January 24, 2013
Worthington Daily Globe	January 24, 2013

By: [signature]
Gregory D. Trees, CFO

Subscribed and sworn to before me

this 18TH day of February 2013.

[signature: Lisa B Chase]
Notary Public

LISA B. CHASE
NOTARY PUBLIC - STATE OF KANSAS
My Appt. Exp. 04.14.15

5255739v2

AMERICAN NEWSPAPER REPRESENTATIVES, INC.
2075 W Big Beaver Rd, Ste 310, Troy, MI 48084
P. 248-643-7766 F. 248-643-0606
www.gotoanr.com

anr
Newspaper. Simplified.

BILL TO: Accounts Payable
Barkley
1740 Main
Kansas City, MO 64108

INVOICE DATE: 01/10/2013
INVOICE NO.: 27147
PAGE NO.: 1

Agency and Advertiser are held jointly and severally liable until payment is received in full.

ACCOUNT	DESCRIPTION	INVOICE TERMS
020100-ITC	ITC Holdings	DUE UPON RECIEPT

PREPAID

LINE	ORDER	AD DATE	INCHES	RATE	COLOR	GROSS AMT	NET AMT	CODE
NEWSPAPER NAME: FARIBAULT COUNTY REGISTER								
PUB NO.: 231081		**CITY/ST:** BLUE EARTH, MN						
001	13013010	01/21/2013	126.00	$11.56	$0.00	$1,457.15	$1,238.58	9
						$1,457.15	$1,238.58	
NEWSPAPER NAME: FAIRMONT DAILY SENTINEL								
PUB NO.: 232937		**CITY/ST:** FAIRMONT, MN						
002	13013010	01/24/2013	129.00	$9.59	$0.00	$1,236.88	$1,051.35	9
						$1,236.88	$1,051.35	
NEWSPAPER NAME: TRI COUNTY NEWS								
PUB NO.: 233835		**CITY/ST:** HERON LAKE, MN						
003	13013010	01/23/2013	172.00	$7.19	$0.00	$1,236.37	$1,050.91	9
						$1,236.37	$1,050.91	
NEWSPAPER NAME: JACKSON COUNTY PILOT								
PUB NO.: 234177		**CITY/ST:** JACKSON, MN						
004	13013010	01/24/2013	172.00	$10.95	$0.00	$1,883.90	$1,601.32	9
						$1,883.90	$1,601.32	
NEWSPAPER NAME: KIESTER COURIER SENTINEL								
PUB NO.: 234321		**CITY/ST:** KIESTER, MN						
005	13013010	01/24/2013	126.00	$6.54	$0.00	$824.19	$700.56	9
						$824.19	$700.56	
NEWSPAPER NAME: LAKEFIELD STANDARD								
PUB NO.: 234573		**CITY/ST:** LAKEFIELD, MN						
006	13013010	01/24/2013	172.00	$7.85	$0.00	$1,349.70	$1,147.24	9
						$1,349.70	$1,147.24	
NEWSPAPER NAME: MINNEAPOLIS STAR TRIBUNE								
PUB NO.: 235868		**CITY/ST:** MINNEAPOLIS, MN						
007	13013010	01/24/2013	126.00	$236.18	$0.00	$29,758.24	$25,294.50	9
						$29,758.24	$25,294.50	

Code	Description	Code	Description	Code	Description
1	Not Received	5	Agency Cancelled	9	Invoiced Without Tearsheets
2	Received/In Process	6	Ran Early	A	Not As Scheduled - Wrong Ad
3	Discrepant	7	Ran Late	C	ANR Correction
4	Did Not Run	8	Received Correct		

Agency Copy

AMERICAN NEWSPAPER REPRESENTATIVES, INC.
2075 W Big Beaver Rd, Ste 310, Troy, MI 48084
P. 248-643-7766 F. 248-643-0606
www.gotoanr.com

Newspaper. Simplified.

BILL TO: Accounts Payable
Barkley
1740 Main
Kansas City, MO 64108

INVOICE DATE: 01/10/2013
INVOICE NO.: 27147
PAGE NO.: 2

Agency and Advertiser are held jointly and severally liable until payment is received in full.

ACCOUNT	DESCRIPTION	INVOICE TERMS
020100-ITC	ITC Holdings	DUE UPON RECIEPT

LINE	ORDER	AD DATE	INCHES	RATE	COLOR	GROSS AMT	NET AMT	CODE
NEWSPAPER NAME: MINNESOTA LAKE TRIBUNE								
PUB NO.: 236157		**CITY/ST:** MINNESOTA LAKE, MN						
008	13013010	01/24/2013	65.00	$6.21	$0.00	$403.77	$343.20	9
						$403.77	$343.20	
NEWSPAPER NAME: MARTIN COUNTY STAR								
PUB NO.: 238123		**CITY/ST:** SHERBURN, MN						
009	13013010	01/23/2013	123.00	$5.88	$0.00	$723.54	$615.01	9
						$723.54	$615.01	
NEWSPAPER NAME: TRUMAN TRIBUNE								
PUB NO.: 239037		**CITY/ST:** TRUMAN, MN						
010	13013010	01/23/2013	129.00	$10.46	$0.00	$1,349.19	$1,146.81	9
						$1,349.19	$1,146.81	
NEWSPAPER NAME: WELLS MIRROR								
PUB NO.: 239541		**CITY/ST:** WELLS, MN						
011	13013010	01/24/2013	129.00	$3.79	$0.00	$488.68	$415.38	9
						$488.68	$415.38	
NEWSPAPER NAME: WORTHINGTON DAILY GLOBE								
PUB NO.: 239855		**CITY/ST:** WORTHINGTON, MN						
012	13013010	01/24/2013	189.00	$25.04	$0.00	$4,731.67	$4,021.92	9
						$4,731.67	$4,021.92	
					INVOICE TOTAL:	$45,443.28	$38,626.78	

PREPAID

Code	Description	Code	Description	Code	Description
1	Not Received	5	Agency Cancelled	9	Invoiced Without Tearsheets
2	Received/In Process	6	Ran Early	A	Not As Scheduled - Wrong Ad
3	Discrepant	7	Ran Late	C	ANR Correction
4	Did Not Run	8	Received Correct		

Agency Copy

Notice of Certificate of Need Application for the Minnesota-Iowa 345 KV Transmission Project in Jackson, Martin, and Faribault counties, Minnesota
MPUC Docket No.: ET6675/CN-12-1053

ITC Midwest LLC, a Michigan limited liability company ("ITCM"), is proposing to construct a 345 kV transmission line from its Lakefield Junction Substation in Jackson County, east through Martin County to the newly-proposed Huntley Substation in Faribault County, before turning south to the Iowa border (the "Project"). In Iowa, the transmission line will continue south to a new Ledyard Substation, near the City of Ledyard, Iowa, and then on to a substation near the City of Burt in Kossuth County, Iowa. ITCM will seek approval to construct the Minnesota portion of the Project from the Minnesota Public Utilities Commission ("Commission"). This letter is intended to provide you with notification of certain Project details and also to provide you with information on how you can participate in the Minnesota regulatory process.

The Project includes expanding the Lakefield Substation, a new Huntley Substation and several miles of reconfigured 161 kV transmission line near the Huntley Substation. The reconfigurations are necessary to relocate all 161 kV transmission substation facilities to the Huntley Substation from the existing Winnebago Substation which will be decommissioned. The Minnesota portion of the Project will be approximately 75 miles long. The area under consideration for the location of the Project is depicted on the map below. The Iowa portion of the Project will be permitted by the Iowa Utilities Board.

This notice is being provided to those who fall within one or more of the categories listed below as they relate to the area ("Notice Area") shown below:

- Landowners with property within the Notice Area;
- Residents within the Notice Area;
- Local units of government in and around the Notice Area;
- Local and State elected officials; or
- State and local government agencies and offices.

Regulatory Process Overview
For the Project, the Commission must determine whether the Project is needed (Certificate of Need) and where the Project should be located (Route Permit). Before the Project can be constructed, the Commission must first certify that the Project is needed. The certification of the Project is governed by Minnesota law, including Minnesota Statutes Section 216B.243, and Minnesota Rules Chapters 7829 and 7849, specifically Rules 7849.0010 to 7849.0400 and 7849.1000 to 7849.2100. In the Certificate of Need proceeding, the Commission will analyze whether ITCM has proposed the most appropriate size, type, and timing for the Project. The Certificate of Need application, once submitted, can be obtained by visiting the Commission's website at www.puc.state.mn.us in Docket No. ET6675/CN-12-1053.

In addition to certifying the Project, the Commission must also grant a Route Permit for the Project. The routing of the Minnesota portion of the Project is governed by Minnesota law, including Minnesota Statutes Chapter 216E and Minnesota Rules Chapter 7850. Information on the Route Permit application, once filed, can be obtained by visiting the Commission's website in Docket No. ET6675/TL-12-1337.

Minnesota Department of Commerce Energy Facility Permitting staff ("EFP") is responsible for conducting environmental review of the Project. EFP will prepare an environmental report for the Certificate of Need proceeding. EFP will prepare an environmental impact statement ("EIS") for the Route Permit proceeding. EFP may elect to combine these two documents and issue one document, an EIS, which satisfies the environmental review requirements for the Certificate of Need and Route Permit proceedings.

ITCM will be submitting an application for a Route Permit with at least two routes and will identify the route which ITCM prefers. Other routes can be proposed during the EIS scoping process to be completed by EFP. As part of its analysis, EFP will evaluate the routes proposed by ITCM in its Route Permit application and any other routes proposed during the scoping process that will aid in the Commission's decision on the Route Permit application. The Commission may determine that a route submitted by ITCM, or a route proposed during the scoping process, or some combination of such routes is the most appropriate route for the Project. Selection of a final route by the Commission will be based on evaluation of the routes, guided by the Factors identified in Minnesota Statutes Section 216E.03, Minnesota Rule 7850.4100, and stakeholder input received during the regulatory process.

For the 345 kV transmission line portions of the Project, ITCM anticipates that it will obtain a 200-foot wide permanent right-of-way. For the 161 kV transmission line portions of the Project, ITCM anticipates that it will obtain a 150-foot wide permanent right-of-way. Before beginning construction, ITCM will acquire property rights for the right-of-way, typically through an easement that will be negotiated with the landowner for each parcel.

The proposed structures for the Project are primarily single pole, weathering or galvanized steel structures. Where the 345 kV transmission line can be co-located with existing 161 kV transmission lines, double-circuit structures will be used. For the 161 kV transmission line portions of the Project, single pole single circuit and double circuit poles will be used to accommodate construction. Structures are proposed to be placed using spans of approximately 600 to 1,100 feet, with an average span of approximately 900 feet. Additionally, specialty structures, other than the single pole structures discussed above, may be used through areas of environmental sensitivity or where construction conditions require their use.

Need for the Project
The Project is needed to enhance regional reliability, increase transmission capacity to support additional generation, including generation to meet renewable energy standards throughout the region, and to reduce congestion which will enable more efficient delivery of energy.

The proposed facilities in Minnesota and Iowa were studied and approved in December 2011 as part of the Midwest Independent Transmission System Operator ("MISO") Multi-Value Projects ("MVP") portfolio in the 2011 MISO Transmission Expansion Plan.

The MVP projects were developed based on a broad assessment of benefits to strengthen and enhance reliability across the integrated transmission system on which all regional electric load and exports rely including:

- Substantial reductions in regional congestion costs;
- Reductions in transmission losses, effecting significant, broadly-shared cost savings; and
- Reductions in the region's installed capacity requirement, thus measurably reducing capacity costs throughout the region.

The Project is a portion of what is identified as Project 3 in the MVP portfolio. The Iowa portions of Project 3 are subject to review and approval by the Iowa Utilities Board.

Biennial Transmission Planning
Minnesota statutes include a requirement that each electric transmission owning utility in the state file a biennial transmission planning report with the Commission in the fall of odd years. These reports provide an excellent source of background information on the transmission planning process used by utilities in Minnesota. The 2011 Biennial Transmission Planning Report is available at: www.minnelectrans.com.

Project Notifications
To subscribe to the Project Certificate of Need docket and receive email notifications when information is filed that is related to the Certificate of Need for the Project, please visit www.puc.state.mn.us, click on the "Subscribe to a Docket" button, enter your email address and select "Docket Number" from the Type of Subscription dropdown box, then select "12" from the first Docket Number dropdown box and enter "1053" in the second box before clicking on the "Add to List" button. You must then click the "Save" button at the bottom of the page to confirm your subscription to the Project Docket. These same steps can be followed to subscribe to the Project Route Permit docket (ET6675/TL-12-1337).

Please visit http://www.itctransco.com/minnesota-iowa-project for more information on the Project. If you have questions about the process, you may contact the Minnesota regulatory staff listed below:

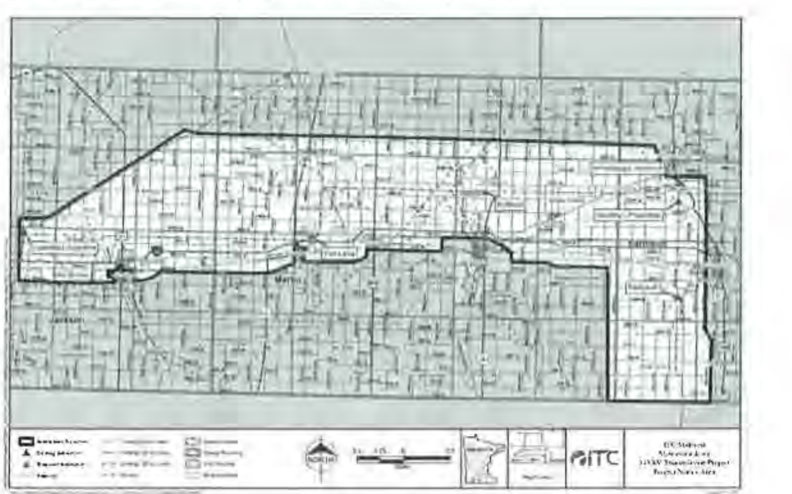
Minnesota Public Utilities Commission Scott Ek 121 7th Place East, Suite 350 St. Paul, Minnesota 55101 651.201.2255 800.657.3782 scott.ek@state.mn.us www.puc.state.mn.us	Minnesota Department of Commerce Ray Kirsch, State Permit Manager 85 7th Place East, Suite 500 St. Paul, Minnesota 55101 651.296.7588 800.657.3794 raymond.kirsch@state.mn.us

If you would like to have your name added to the Project Route Permit mailing list (MPUC Docket ET6675/TL-12-1337), you may register by visiting the Department of Commerce webpage at mn.gov/commerce/energyfacilities/, clicking on the "Transmission Lines" tab, selecting "Minnesota-Iowa 345 kV Transmission Project" from the listed projects, and then clicking the links next to the "Mailing List" heading. Alternately, you may contact Department of Commerce staff at the address above. Please be aware that the Route Permit mailing list may not be available for online registration until the Route Permit application is submitted.

A separate service list is maintained for the Certificate of Need proceeding. To be placed on the Project Certificate of Need mailing list (MPUC Docket ET6675/CN-12-1053), mail, fax, or email Robin Benson at Minnesota Public Utilities Commission, 121 7th Place E., Suite 350, St. Paul, MN 55101-2147, Fax: 651-297-7073 or robin.benson@state.mn.us.

The ITCM contact for questions about this Project is:

David B. Grover
Manager, Regulatory Strategy
ITC Midwest LLC
444 Cedar Street, Suite 1020
St. Paul, MN 55101
877-482-4829
minniowa@itctransco.com



Paid Advertisement

RECEIVED JAN 18 2013

Faribault County Register 1/21/13

231081

Notice of Certificate of Need Application for the Minnesota-Iowa 345 KV Transmission Project in Jackson, Martin, and Faribault counties, Minnesota
MPUC Docket No.: ET6675/CN-12-1053

ITC Midwest LLC, a Michigan limited liability company ("ITCM"), is proposing to construct a 345 kV transmission line from its Lakefield Junction Substation in Jackson County, east through Martin County to the newly-proposed Huntley Substation in Faribault County, before turning south to the Iowa border (the "Project"). In Iowa, the transmission line will continue south to a new Ledyard Substation, near the City of Ledyard, Iowa, and then on to a substation near the City of Burt in Kossuth County, Iowa. ITCM will seek approval to construct the Minnesota portion of the Project from the Minnesota Public Utilities Commission ("Commission"). This letter is intended to provide you with notification of certain Project details and also to provide you with information on how you can participate in the Minnesota regulatory process.

The Project includes expanding the Lakefield Substation, a new Huntley Substation and several miles of reconfigured 161 kV transmission line near the Huntley Substation. The reconfigurations are necessary to relocate all 161 kV transmission substation facilities to the Huntley Substation from the existing Winnebago Substation which will be decommissioned. The Minnesota portion of the Project will be approximately 75 miles long. The area under consideration for the location of the Project is depicted on the map below. The Iowa portion of the Project will be permitted by the Iowa Utilities Board.

This notice is being provided to those who fall within one or more of the categories listed below as they relate to the area ("Notice Area") shown below:

- Landowners with property within the Notice Area;
- Residents within the Notice Area;
- Local units of government in and around the Notice Area;
- Local and State elected officials; or
- State and local government agencies and offices.

Regulatory Process Overview

For the Project, the Commission must determine whether the Project is needed (Certificate of Need) and where the Project should be located (Route Permit). Before the Project can be constructed, the Commission must first certify that the Project is needed. The certification of the Project is governed by Minnesota law, including Minnesota Statutes Section 216B.243, and Minnesota Rules Chapters 7829 and 7849, specifically Rules 7849.0010 to 7849.0400 and 7849.1000 to 7849.2100. In the Certificate of Need proceeding, the Commission will analyze whether ITCM has proposed the most appropriate size, type, and timing for the Project. The Certificate of Need application, once submitted, can be obtained by visiting the Commission's website at www.puc.state.mn.us in Docket No. ET6675/CN-12-1053.

In addition to certifying the Project, the Commission must also grant a Route Permit for the Project. The routing of the Minnesota portion of the Project is governed by Minnesota law, including Minnesota Statutes Chapter 216E and Minnesota Rules Chapter 7850. Information on the Route Permit application, once filed, can be obtained by visiting the Commission's website in Docket No. ET6675/TL-12-1337.

Minnesota Department of Commerce Energy Facility Permitting staff ("EFP") is responsible for conducting environmental review of the Project. EFP will prepare an environmental report for the Certificate of Need proceeding. EFP will prepare an environmental impact statement ("EIS") for the Route Permit proceeding. EFP may elect to combine these two documents and issue one document, an EIS, which satisfies the environmental review requirements for the Certificate of Need and Route Permit proceedings.

ITCM will be submitting an application for a Route Permit with at least two routes and will identify the route which ITCM prefers. Other routes can be proposed during the EIS scoping process to be completed by EFP. As part of its analysis, EFP will evaluate the routes proposed by ITCM in its Route Permit application and any other routes proposed during the scoping process that will aid in the Commission's decision on the Route Permit application. The Commission may determine that a route submitted by ITCM, or a route proposed during the scoping process, or some combination of such routes is the most appropriate route for the Project. Selection of a final route by the Commission will be based on evaluation of the routes, guided by the Factors identified in Minnesota Statutes Section 216E.03, Minnesota Rule 7850.4100, and stakeholder input received during the regulatory process.

For the 345 kV transmission line portions of the Project, ITCM anticipates that it will obtain a 200-foot wide permanent right-of-way. For the 161 kV transmission line portions of the Project, ITCM anticipates that it will obtain a 150-foot wide permanent right-of-way. Before beginning construction, ITCM will acquire property rights for the right-of-way, typically through an easement that will be negotiated with the landowner for each parcel.

The proposed structures for the Project are primarily single pole, weathering or galvanized steel structures. Where the 345 kV transmission line can be co-located with existing 161 kV transmission lines, double-circuit structures will be used. For the 161 kV transmission line portions of the Project, single pole single circuit and double circuit poles will be used to accommodate construction. Structures are proposed to be placed using spans of approximately 600 to 1,100 feet, with an average span of approximately 900 feet. Additionally, specialty structures, other than the single pole structures discussed above, may be used through areas of environmental sensitivity or where construction conditions require their use.

Need for the Project

The Project is needed to enhance regional reliability, increase transmission capacity to support additional generation, including generation to meet renewable energy standards throughout the region, and to reduce congestion which will enable more efficient delivery of energy.

The proposed facilities in Minnesota and Iowa were studied and approved in December 2011 as part of the Midwest Independent Transmission System Operator ("MISO") Multi-Value Projects ("MVP") portfolio in the 2011 MISO Transmission Expansion Plan.

The MVP projects were developed based on a broad assessment of benefits to strengthen and enhance reliability across the integrated transmission system on which all regional electric load and exports rely including:

- Substantial reductions in regional congestion costs;
- Reductions in transmission losses, affecting significant, broadly-shared cost savings; and
- Reductions in the region's installed capacity requirement, thus measurably reducing capacity costs throughout the region.

The Project is a portion of what is identified as Project 3 in the MVP portfolio. The Iowa portions of Project 3 are subject to review and approval by the Iowa Utilities Board.

Biennial Transmission Planning

Minnesota statutes include a requirement that each electric transmission owning utility in the state file a biennial transmission planning report with the Commission in the fall of odd years. These reports provide an excellent source of background information on the transmission planning process used by utilities in Minnesota. The 2011 Biennial Transmission Planning Report is available at: www.minnelectrans.com.

Project Notifications

To subscribe to the Project Certificate of Need docket and receive email notifications when information is filed that is related to the Certificate of Need for the Project, please visit www.puc.state.mn.us, click on the "Subscribe to a Docket" button, enter your email address and select "Docket Number" from the Type of Subscription dropdown box, then select "12" from the first Docket Number dropdown box and enter "1053" in the second box before clicking on the "Add to List" button. You must then click the "Save" button at the bottom of the page to confirm your subscription to the Project Docket. These same steps can be followed to subscribe to the Project Route Permit docket (ET6675/TL-12-1337).

Please visit http://www.itctransco.com/minnesota-iowa-project for more information on the Project. If you have questions about the process, you may contact the Minnesota regulatory staff listed below:

Minnesota Public Utilities Commission Scott Ek 121 7th Place East, Suite 350 St. Paul, Minnesota 55101 651.201.2255 800.657.3782 scott.ek@state.mn.us www.puc.state.mn.us	Minnesota Department of Commerce Ray Kirsch, State Permit Manager 85 7th Place East, Suite 500 St. Paul, Minnesota 55101 651.296.7588 800.657.3794 raymond.kirsch@state.mn.us

If you would like to have your name added to the Project Route Permit mailing list (MPUC Docket ET6675/TL-12-1337), you may register by visiting the Department of Commerce webpage at mn.gov/commerce/energyfacilities/, clicking on the "Transmission Lines" tab, selecting "Minnesota-Iowa 345 kV Transmission Project" from the listed projects, and then clicking the links next to the "Mailing List" heading. Alternately, you may contact Department of Commerce staff at the address above. Please be aware that the Route Permit mailing list may not be available for online registration until the Route Permit application is submitted.

A separate service list is maintained for the Certificate of Need proceeding. To be placed on the Project Certificate of Need mailing list (MPUC Docket ET6675/CN-12-1053), mail, fax, or email Robin Benson at Minnesota Public Utilities Commission, 121 7th Place E., Suite 350, St. Paul, MN 55101-2147, Fax: 651-297-7073 or robin.benson@state.mn.us.

The ITCM contact for questions about this Project is:

David B. Grover
Manager, Regulatory Strategy
ITC Midwest LLC
444 Cedar Street, Suite 1020
St. Paul, MN 55101
877-482-4829
minniowa@itctransco.com

Paid Advertisement

RECEIVED JAN 24 2013

Fairmont Daily Sentinel 01/24/13

232937

Notice of Certificate of Need Application for the Minnesota-Iowa 345 KV Transmission Project in Jackson, Martin, and Faribault counties, Minnesota
MPUC Docket No.: ET6675/CN-12-1053

ITC Midwest LLC, a Michigan limited liability company ("ITCM"), is proposing to construct a 345 kV transmission line from its Lakefield Junction Substation in Jackson County, east through Martin County to the newly-proposed Huntley Substation in Faribault County, before turning south to the Iowa border (the "Project"). In Iowa, the transmission line will continue south to a new Ledyard Substation, near the City of Ledyard, Iowa, and then on to a substation near the City of Burt in Kossuth County, Iowa. ITCM will seek approval to construct the Minnesota portion of the Project from the Minnesota Public Utilities Commission ("Commission"). This letter is intended to provide you with notification of certain Project details and also to provide you with information on how you can participate in the Minnesota regulatory process.

The Project includes expanding the Lakefield Substation, a new Huntley Substation and several miles of reconfigured 161 kV transmission line near the Huntley Substation. The reconfigurations are necessary to relocate all 161 kV transmission substation facilities to the Huntley Substation from the existing Winnebago Substation which will be decommissioned. The Minnesota portion of the Project will be approximately 75 miles long. The area under consideration for the location of the Project is depicted on the map below. The Iowa portion of the Project will be permitted by the Iowa Utilities Board.

This notice is being provided to those who fall within one or more of the categories listed below as they relate to the area ("Notice Area") shown below:

- Landowners with property within the Notice Area;
- Residents within the Notice Area;
- Local units of government in and around the Notice Area;
- Local and State elected officials; or
- State and local government agencies and offices.

Regulatory Process Overview
For the Project, the Commission must determine whether the Project is needed (Certificate of Need) and where the Project should be located (Route Permit). Before the Project can be constructed, the Commission must first certify that the Project is needed. The certification of the Project is governed by Minnesota law, including Minnesota Statutes Section 216B.243, and Minnesota Rules Chapters 7829 and 7849, specifically Rules 7849.0010 to 7849.0400 and 7849.1000 to 7849.2100. In the Certificate of Need proceeding, the Commission will analyze whether ITCM has proposed the most appropriate size, type, and timing for the Project. The Certificate of Need application, once submitted, can be obtained by visiting the Commission's website at www.puc.state.mn.us in Docket No. ET6675/CN-12-1053.

In addition to certifying the Project, the Commission must also grant a Route Permit for the Project. The routing of the Minnesota portion of the Project is governed by Minnesota law, including Minnesota Statutes Chapter 216E and Minnesota Rules Chapter 7850. Information on the Route Permit application, once filed, can be obtained by visiting the Commission's website in Docket
No. ET6675/TL-12-1337.

Minnesota Department of Commerce Energy Facility Permitting staff ("EFP") is responsible for conducting environmental review of the Project. EFP will prepare an environmental report for the Certificate of Need proceeding. EFP will prepare an environmental impact statement ("EIS") for the Route Permit proceeding. EFP may elect to combine these two documents and issue one document, an EIS, which satisfies the environmental review requirements for the Certificate of Need and Route Permit proceedings.

ITCM will be submitting an application for a Route Permit with at least two routes and will identify the route which ITCM prefers. Other routes can be proposed during the EIS scoping process to be completed by EFP. As part of its analysis, EFP will evaluate the routes proposed by ITCM in its Route Permit application and any other routes proposed during the scoping process that will aid in the Commission's decision on the Route Permit application. The Commission may determine that a route submitted by ITCM, or a route proposed during the scoping process, or some combination of such routes is the most appropriate route for the Project. Selection of a final route by the Commission will be based on evaluation of the routes, guided by the Factors identified in Minnesota Statutes Section 216E.03, Minnesota Rule 7850.4100, and stakeholder input received during the regulatory process.

For the 345 kV transmission line portions of the Project, ITCM anticipates that it will obtain a 200-foot wide permanent right-of-way. For the 161 kV transmission line portions of the Project, ITCM anticipates that it will obtain a 150-foot wide permanent right-of-way. Before beginning construction, ITCM will acquire property rights for the right-of-way, typically through an easement that will be negotiated with the landowner for each parcel.

The proposed structures for the Project are primarily single pole, weathering or galvanized steel structures. Where the 345 kV transmission line can be co-located with existing 161 kV transmission lines, double-circuit structures will be used. For the 161 kV transmission line portions of the Project, single pole single circuit and double circuit poles will be used to accommodate construction. Structures are proposed to be placed using spans of approximately 600 to 1,100 feet, with an average span of approximately 900 feet. Additionally, specialty structures, other than the single pole structures discussed above, may be used through areas of environmental sensitivity or where construction conditions require their use.

Need for the Project
The Project is needed to enhance regional reliability, increase transmission capacity to support additional generation, including generation to meet renewable energy standards throughout the region, and to reduce congestion which will enable more efficient delivery of energy.

The proposed facilities in Minnesota and Iowa were studied and approved in December 2011 as part of the Midwest Independent Transmission System Operator ("MISO") Multi-Value Projects ("MVP") portfolio in the 2011 MISO Transmission Expansion Plan.

The MVP projects were developed based on a broad assessment of benefits to strengthen and enhance reliability across the integrated transmission system on which all regional electric load and exports rely including:

- Substantial reductions in regional congestion costs;
- Reductions in transmission losses, effecting significant, broadly-shared cost savings; and
- Reductions in the region's installed capacity requirement, thus measurably reducing capacity costs throughout the region.

The Project is a portion of what is identified as Project 3 in the MVP portfolio. The Iowa portions of Project 3 are subject to review and approval by the Iowa Utilities Board.

Biennial Transmission Planning
Minnesota statutes include a requirement that each electric transmission owning utility in the state file a biennial transmission planning report with the Commission in the fall of odd years. These reports provide an excellent source of background information on the transmission planning process used by utilities in Minnesota. The 2011 Biennial Transmission Planning Report is available at: www.minnelectrans.com.

Project Notifications
To subscribe to the Project Certificate of Need docket and receive email notifications when information is filed that is related to the Certificate of Need for the Project, please visit www.puc.state.mn.us, click on the "Subscribe to a Docket" button, enter your email address and select "Docket Number" from the Type of Subscription dropdown box, then select "12" from the first Docket Number dropdown box and enter "1053" in the second box before clicking on the "Add to List" button. You must then click the "Save" button at the bottom of the page to confirm your subscription to the Project Docket. These same steps can be followed to subscribe to the Project Route Permit docket (ET6675/TL-12-1337).

Please visit http://www.itctransco.com/minnesota-iowa-project for more information on the Project. If you have questions about the process, you may contact the Minnesota regulatory staff listed below:

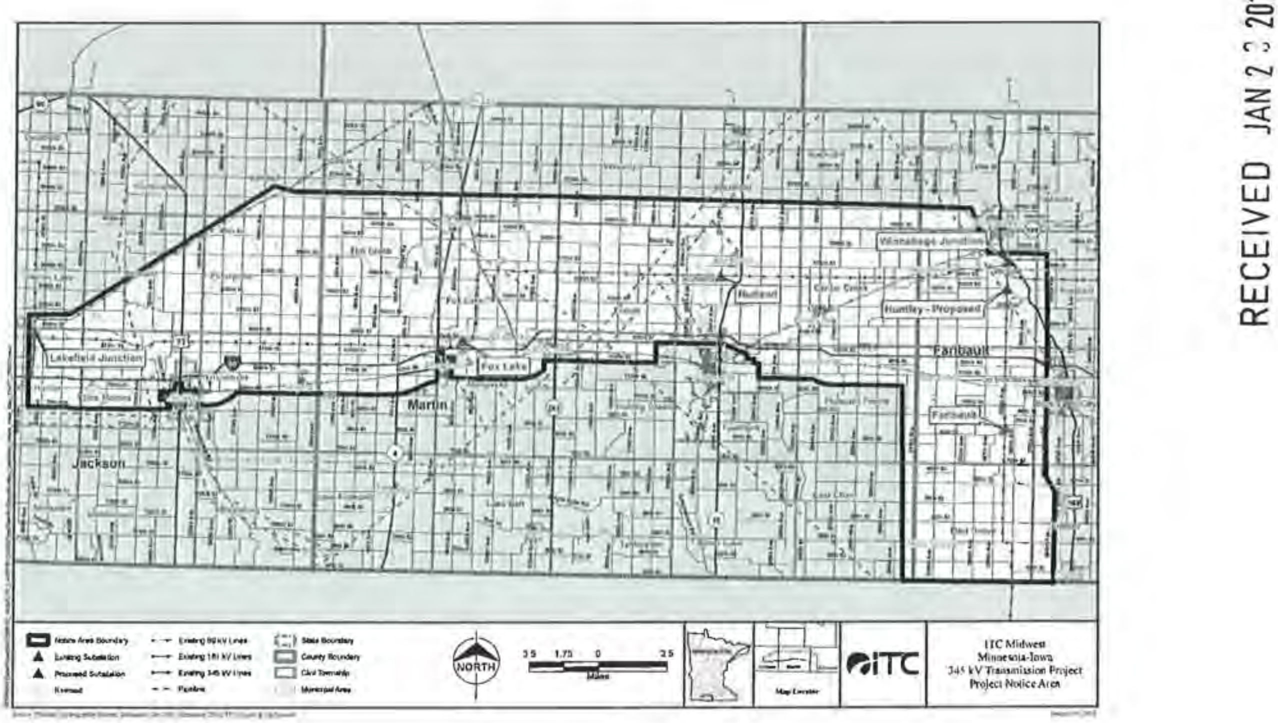
Minnesota Public Utilities Commission	Minnesota Department of Commerce
Scott Ek 121 7th Place East, Suite 350 St. Paul, Minnesota 55101 651.201.2255 800.657.3782 scott.ek@state.mn.us www.puc.state.mn.us	Ray Kirsch, State Permit Manager 85 7th Place East, Suite 500 St. Paul, Minnesota 55101 651.296.7588 800.657.3794 raymond.kirsch@state.mn.us

If you would like to have your name added to the Project Route Permit mailing list (MPUC Docket ET6675/TL-12-1337), you may register by visiting the Department of Commerce webpage at mn.gov/commerce/energyfacilities/, clicking on the "Transmission Lines" tab, selecting "Minnesota-Iowa 345 kV Transmission Project" from the listed projects, and then clicking the links next to the "Mailing List" heading. Alternately, you may contact Department of Commerce staff at the address above. Please be aware that the Route Permit mailing list may not be available for online registration until the Route Permit application is submitted.

A separate service list is maintained for the Certificate of Need proceeding. To be placed on the Project Certificate of Need mailing list (MPUC Docket ET6675/CN-12-1053), mail, fax, or email Robin Benson at Minnesota Public Utilities Commission, 121 7th Place E., Suite 350, St. Paul, MN 55101-2147, Fax: 651-297-7073 or robin.benson@state.mn.us.

The ITCM contact for questions about this Project is:

David B. Grover
Manager, Regulatory Strategy
ITC Midwest LLC
444 Cedar Street, Suite 1020
St. Paul, MN 55101
877-462-4829
minniowa@itctransco.com



Paid Advertisement

RECEIVED JAN 2 ? 2013

Tri County News 1/23/13 233835

Notice of Certificate of Need Application for the Minnesota-Iowa 345 KV Transmission Project in Jackson, Martin, and Faribault counties, Minnesota
MPUC Docket No.: ET6675/CN-12-1053

ITC Midwest LLC, a Michigan limited liability company ("ITCM"), is proposing to construct a 345 kV transmission line from its Lakefield Junction Substation in Jackson County, east through Martin County to the newly-proposed Huntley Substation in Faribault County, before turning south to the Iowa border (the "Project"). In Iowa, the transmission line will continue south to a new Ledyard Substation, near the City of Ledyard, Iowa, and then on to a substation near the City of Burt in Kossuth County, Iowa. ITCM will seek approval to construct the Minnesota portion of the Project from the Minnesota Public Utilities Commission ("Commission"). This letter is intended to provide you with notification of certain Project details and also to provide you with information on how you can participate in the Minnesota regulatory process.

The Project includes expanding the Lakefield Substation, a new Huntley Substation and several miles of reconfigured 161 kV transmission line near the Huntley Substation. The reconfigurations are necessary to relocate all 161 kV transmission substation facilities to the Huntley Substation from the existing Winnebago Substation which will be decommissioned. The Minnesota portion of the Project will be approximately 75 miles long. The area under consideration for the location of the Project is depicted on the map below. The Iowa portion of the Project will be permitted by the Iowa Utilities Board.

This notice is being provided to those who fall within one or more of the categories listed below as they relate to the area ("Notice Area") shown below:

- Landowners with property within the Notice Area;
- Residents within the Notice Area;
- Local units of government in and around the Notice Area;
- Local and State elected officials; or
- State and local government agencies and offices.

Regulatory Process Overview

For the Project, the Commission must determine whether the Project is needed (Certificate of Need) and where the Project should be located (Route Permit). Before the Project can be constructed, the Commission must first certify that the Project is needed. The certification of the Project is governed by Minnesota law, including Minnesota Statutes Section 216B.243, and Minnesota Rules Chapters 7829 and 7849, specifically Rules 7849.0010 to 7849.0400 and 7849.1000 to 7849.2100. In the Certificate of Need proceeding, the Commission will analyze whether ITCM has proposed the most appropriate size, type, and timing for the Project. The Certificate of Need application, once submitted, can be obtained by visiting the Commission's website at www.puc.state.mn.us in Docket No. ET6675/CN-12-1053.

In addition to certifying the Project, the Commission must also grant a Route Permit for the Project. The routing of the Minnesota portion of the Project is governed by Minnesota law, including Minnesota Statutes Chapter 216E and Minnesota Rules Chapter 7850. Information on the Route Permit application, once filed, can be obtained by visiting the Commission's website in Docket No. ET6675/TL-12-1337.

Minnesota Department of Commerce Energy Facility Permitting staff ("EFP") is responsible for conducting environmental review of the Project. EFP will prepare an environmental report for the Certificate of Need proceeding. EFP will prepare an environmental impact statement ("EIS") for the Route Permit proceeding. EFP may elect to combine these two documents and issue one document, an EIS, which satisfies the environmental review requirements for the Certificate of Need and Route Permit proceedings.

ITCM will be submitting an application for a Route Permit with at least two routes and will identify the route which ITCM prefers. Other routes can be proposed during the EIS scoping process to be completed by EFP. As part of its analysis, EFP will evaluate the routes proposed by ITCM in its Route Permit application and any other routes proposed during the scoping process that will aid in the Commission's decision on the Route Permit application. The Commission may determine that a route submitted by ITCM, or a route proposed during the scoping process, or some combination of such routes is the most appropriate route for the Project. Selection of a final route by the Commission will be based on evaluation of the routes, guided by the Factors identified in Minnesota Statutes Section 216E.03, Minnesota Rule 7850.4100, and stakeholder input received during the regulatory process.

For the 345 kV transmission line portions of the Project, ITCM anticipates that it will obtain a 200-foot wide permanent right-of-way. For the 161 kV transmission line portions of the Project, ITCM anticipates that it will obtain a 150-foot wide permanent right-of-way. Before beginning construction, ITCM will acquire property rights for the right-of-way, typically through an easement that will be negotiated with the landowner for each parcel.

The proposed structures for the Project are primarily single pole, weathering or galvanized steel structures. Where the 345 kV transmission line can be co-located with existing 161 kV transmission lines, double-circuit structures will be used. For the 161 kV transmission line portions of the Project, single pole single circuit and double circuit poles will be used to accommodate construction. Structures are proposed to be placed using spans of approximately 600 to 1,100 feet, with an average span of approximately 900 feet. Additionally, specialty structures, other than the single pole structures discussed above, may be used through areas of environmental sensitivity or where construction conditions require their use.

Need for the Project

The Project is needed to enhance regional reliability, increase transmission capacity to support additional generation, including generation to meet renewable energy standards throughout the region, and to reduce congestion which will enable more efficient delivery of energy.

The proposed facilities in Minnesota and Iowa were studied and approved in December 2011 as part of the Midwest Independent Transmission System Operator ("MISO") Multi-Value Projects ("MVP") portfolio in the 2011 MISO Transmission Expansion Plan.

The MVP projects were developed based on a broad assessment of benefits to strengthen and enhance reliability across the integrated transmission system on which all regional electric load and exports rely including:

- Substantial reductions in regional congestion costs;
- Reductions in transmission losses, effecting significant, broadly-shared cost savings; and
- Reductions in the region's installed capacity requirement, thus measurably reducing capacity costs throughout the region.

The Project is a portion of what is identified as Project 3 in the MVP portfolio. The Iowa portions of Project 3 are subject to review and approval by the Iowa Utilities Board.

Biennial Transmission Planning

Minnesota statutes include a requirement that each electric transmission owning utility in the state file a biennial transmission planning report with the Commission in the fall of odd years. These reports provide an excellent source of background information on the transmission planning process used by utilities in Minnesota. The 2011 Biennial Transmission Planning Report is available at: www.minnelectrans.com

Project Notifications

To subscribe to the Project Certificate of Need docket and receive email notifications when information is filed that is related to the Certificate of Need for the Project, please visit www.puc.state.mn.us, click on the "Subscribe to a Docket" button, enter your email address and select "Docket Number" from the Type of Subscription dropdown box, then select "12" from the first Docket Number dropdown box and enter "1053" in the second box before clicking on the "Add to List" button. You must then click the "Save" button at the bottom of the page to confirm your subscription to the Project Docket. These same steps can be followed to subscribe to the Project Route Permit docket (ET6675/TL-12-1337).

Please visit http://www.itctransco.com/minnesota-iowa-project for more information on the Project. If you have questions about the process, you may contact the Minnesota regulatory staff listed below:

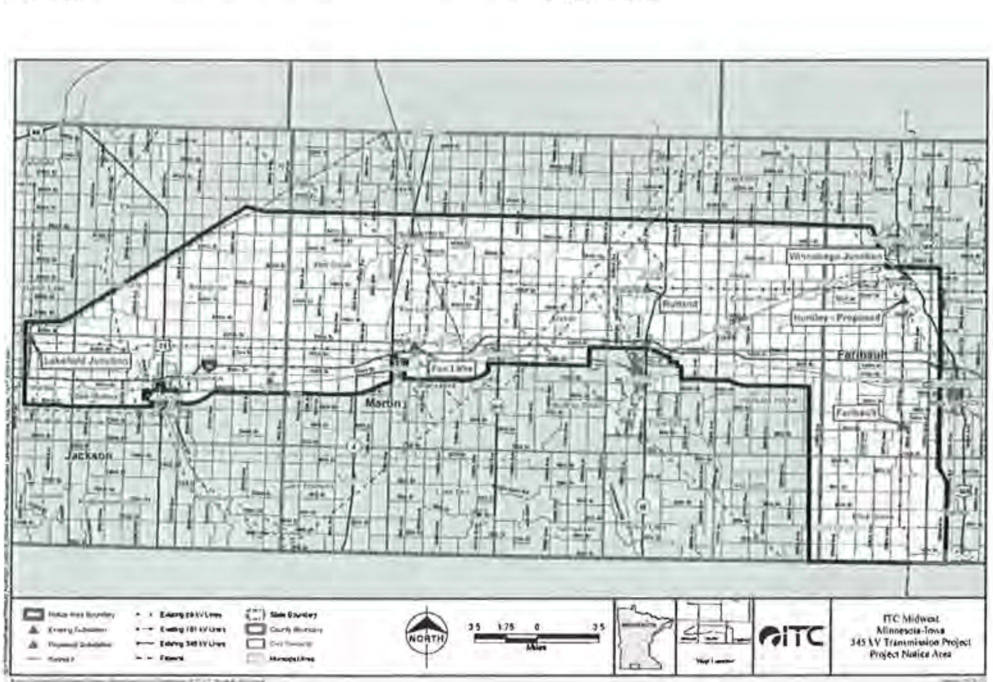
Minnesota Public Utilities Commission Scott Ek 121 7th Place East, Suite 350 St. Paul, Minnesota 55101 651.201.2255 800.657.3782 scott.ek@state.mn.us www.puc.state.mn.us	Minnesota Department of Commerce Ray Kirsch, State Permit Manager 85 7th Place East, Suite 500 St. Paul, Minnesota 55101 651.296.7588 800.657.3794 raymond.kirsch@state.mn.us

If you would like to have your name added to the Project Route Permit mailing list (MPUC Docket ET6675/TL-12-1337), you may register by visiting the Department of Commerce webpage at mn.gov/commerce/energyfacilities/, clicking on the "Transmission Lines" tab, selecting "Minnesota-Iowa 345 kV Transmission Project" from the listed projects, and then clicking the links next to the "Mailing List" heading. Alternately, you may contact Department of Commerce staff at the address above. Please be aware that the Route Permit mailing list may not be available for online registration until the Route Permit application is submitted.

A separate service list is maintained for the Certificate of Need proceeding. To be placed on the Project Certificate of Need mailing list (MPUC Docket ET6675/CN-12-1053), mail, fax, or email Robin Benson at Minnesota Public Utilities Commission, 121 7th Place E., Suite 350, St. Paul, MN 55101-2147, Fax: 651-297-7073 or robin.benson@state.mn.us.

The ITCM contact for questions about this Project is:

David B. Grover
Manager, Regulatory Strategy
ITC Midwest LLC
444 Cedar Street, Suite 1020
St. Paul, MN 55101
877-482-4829
minniowa@itctransco.com



RECEIVED JAN 24 2013

Jackson County Pilot 01/24/13

234177

Notice of Certificate of Need Application for the Minnesota-Iowa 345 KV Transmission Project in Jackson, Martin, and Faribault counties, Minnesota

MPUC Docket No.: ET6675/CN-12-1053

ITC Midwest LLC, a Michigan limited liability company ("ITCM"), is proposing to construct a 345 kV transmission line from its Lakefield Junction Substation in Jackson County, east through Martin County to the newly-proposed Huntley Substation in Faribault County, before turning south to the Iowa border (the "Project"). In Iowa, the transmission line will continue south to a new Ledyard Substation, near the City of Ledyard, Iowa, and then on to a substation near the City of Burt in Kossuth County, Iowa. ITCM will seek approval to construct the Minnesota portion of the Project from the Minnesota Public Utilities Commission ("Commission"). This letter is intended to provide you with notification of certain Project details and also to provide you with information on how you can participate in the Minnesota regulatory process.

The Project includes expanding the Lakefield Substation, a new Huntley Substation and several miles of reconfigured 161 kV transmission line near the Huntley Substation. The reconfigurations are necessary to relocate all 161 kV transmission substation facilities to the Huntley Substation from the existing Winnebago Substation which will be decommissioned. The Minnesota portion of the Project will be approximately 75 miles long. The area under consideration for the location of the Project is depicted on the map below. The Iowa portion of the Project will be permitted by the Iowa Utilities Board.

This notice is being provided to those who fall within one or more of the categories listed below as they relate to the area ("Notice Area") shown below:

- Landowners with property within the Notice Area;
- Residents within the Notice Area;
- Local units of government in and around the Notice Area;
- Local and State elected officials; or
- State and local government agencies and offices.

Regulatory Process Overview

For the Project, the Commission must determine whether the Project is needed (Certificate of Need) and where the Project should be located (Route Permit). Before the Project can be constructed, the Commission must first certify that the Project is needed. The certification of the Project is governed by Minnesota law, including Minnesota Statutes Section 216B.243, and Minnesota Rules Chapters 7829 and 7849, specifically Rules 7849.0010 to 7849.0400 and 7849.1000 to 7849.2100. In the Certificate of Need proceeding, the Commission will analyze whether ITCM has proposed the most appropriate size, type, and timing for the Project. The Certificate of Need application, once submitted, can be obtained by visiting the Commission's website at www.puc.state.mn.us in Docket No. ET6675/CN-12-1053.

In addition to certifying the Project, the Commission must also grant a Route Permit for the Project. The routing of the Minnesota portion of the Project is governed by Minnesota law, including Minnesota Statutes Chapter 216E and Minnesota Rules Chapter 7850. Information on the Route Permit application, once filed, can be obtained by visiting the Commission's website in Docket No. ET6675/TL-12-1337.

Minnesota Department of Commerce Energy Facility Permitting staff ("EFP") is responsible for conducting environmental review of the Project. EFP will prepare an environmental report for the Certificate of Need proceeding. EFP will prepare an environmental impact statement ("EIS") for the Route Permit proceeding. EFP may elect to combine these two documents and issue one document, an EIS, which satisfies the environmental review requirements for the Certificate of Need and Route Permit proceedings.

ITCM will be submitting an application for a Route Permit with at least two routes and will identify the route which ITCM prefers. Other routes can be proposed during the EIS scoping process to be completed by EFP. As part of its analysis, EFP will evaluate the routes proposed by ITCM in its Route Permit application and any other routes proposed during the scoping process that will aid in the Commission's decision on the Route Permit application. The Commission may determine that a route submitted by ITCM, or a route proposed during the scoping process, or some combination of such routes is the most appropriate route for the Project. Selection of a final route by the Commission will be based on evaluation of the routes, guided by the Factors identified in Minnesota Statutes Section 216E.03, Minnesota Rule 7850.4100, and stakeholder input received during the regulatory process.

For the 345 kV transmission line portions of the Project, ITCM anticipates that it will obtain a 200-foot wide permanent right-of-way. For the 161 kV transmission line portions of the Project, ITCM anticipates that it will obtain a 150-foot wide permanent right-of-way. Before beginning construction, ITCM will acquire property rights for the right-of-way, typically through an easement that will be negotiated with the landowner for each parcel.

The proposed structures for the Project are primarily single pole, weathering or galvanized steel structures. Where the 345 kV transmission line can be co-located with existing 161 kV transmission lines, double-circuit structures will be used. For the 161 kV transmission line portions of the Project, single pole single circuit and double circuit poles will be used to accommodate construction. Structures are proposed to be placed using spans of approximately 600 to 1,100 feet, with an average span of approximately 900 feet. Additionally, specialty structures, other than the single pole structures discussed above, may be used through areas of environmental sensitivity or where construction conditions require their use.

Need for the Project

The Project is needed to enhance regional reliability, increase transmission capacity to support additional generation, including generation to meet renewable energy standards throughout the region, and to reduce congestion which will enable more efficient delivery of energy.

The proposed facilities in Minnesota and Iowa were studied and approved in December 2011 as part of the Midwest Independent Transmission System Operator ("MISO") Multi-Value Projects ("MVP") portfolio in the 2011 MISO Transmission Expansion Plan.

The MVP projects were developed based on a broad assessment of benefits to strengthen and enhance reliability across the integrated transmission system on which all regional electric load and exports rely including:

- Substantial reductions in regional congestion costs;
- Reductions in transmission losses, effecting significant, broadly-shared cost savings; and
- Reductions in the region's installed capacity requirement, thus measurably reducing capacity costs throughout the region.

The Project is a portion of what is identified as Project 3 in the MVP portfolio. The Iowa portions of Project 3 are subject to review and approval by the Iowa Utilities Board.

Biennial Transmission Planning

Minnesota statutes include a requirement that each electric transmission owning utility in the state file a biennial transmission planning report with the Commission in the fall of odd years. These reports provide an excellent source of background information on the transmission planning process used by utilities in Minnesota. The 2011 Biennial Transmission Planning Report is available at: www.minnelectrans.com.

Project Notifications

To subscribe to the Project Certificate of Need docket and receive email notifications when information is filed that is related to the Certificate of Need for the Project, please visit www.puc.state.mn.us, click on the "Subscribe to a Docket" button, enter your email address and select "Docket Number" from the Type of Subscription dropdown box, then select "12" from the first Docket Number dropdown box and enter "1053" in the second box before clicking on the "Add to List" button. You must then click the "Save" button at the bottom of the page to confirm your subscription to the Project Docket. These same steps can be followed to subscribe to the Project Route Permit docket (ET6675/TL-12-1337).

Please visit http://www.itctransco.com/minnesota-iowa-project for more information on the Project. If you have questions about the process, you may contact the Minnesota regulatory staff listed below:

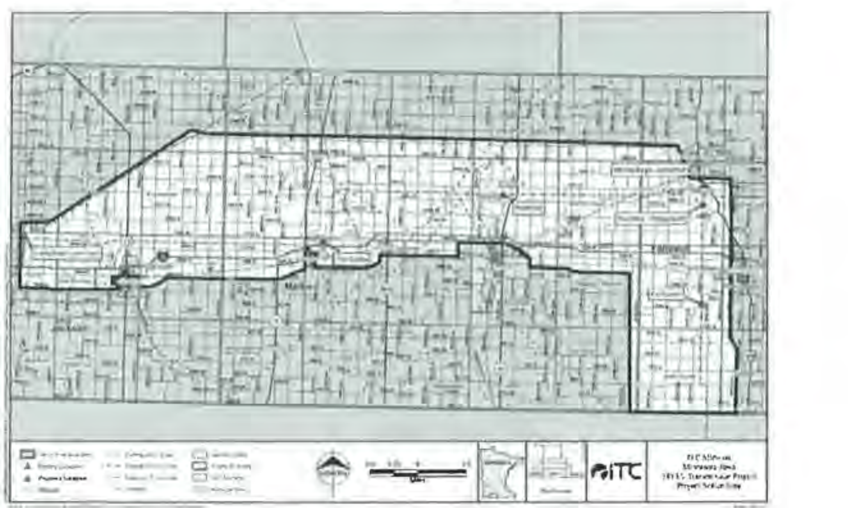
Minnesota Public Utilities Commission Scott Ek 121 7th Place East, Suite 350 St. Paul, Minnesota 55101 651.201.2255 800.657.3782 scott.ek@state.mn.us www.puc.state.mn.us	Minnesota Department of Commerce Ray Kirsch, State Permit Manager 85 7th Place East, Suite 500 St. Paul, Minnesota 55101 651.296.7588 800.657.3794 raymond.kirsch@state.mn.us

If you would like to have your name added to the Project Route Permit mailing list (MPUC Docket ET6675/TL-12-1337), you may register by visiting the Department of Commerce webpage at mn.gov/commerce/energyfacilities/, clicking on the "Transmission Lines" tab, selecting "Minnesota-Iowa 345 kV Transmission Project" from the listed projects, and then clicking the links next to the "Mailing List" heading. Alternately, you may contact Department of Commerce staff at the address above. Please be aware that the Route Permit mailing list may not be available for online registration until the Route Permit application is submitted.

A separate service list is maintained for the Certificate of Need proceeding. To be placed on the Project Certificate of Need mailing list (MPUC Docket ET6675/CN-12-1053), mail, fax, or email Robin Benson at Minnesota Public Utilities Commission, 121 7th Place E., Suite 350, St. Paul, MN 55101-2147, Fax: 651-297-7073 or robin.benson@state.mn.us.

The ITCM contact for questions about this Project is:

David B. Grover
Manager, Regulatory Strategy
ITC Midwest LLC
444 Cedar Street, Suite 1020
St. Paul, MN 55101
877-482-4829
minniowa@itctransco.com



Paid Advertisement

[illegible] Courier Sentinel 01/24/13

RECEIVED JAN 29 2013

234321

Notice of Certificate of Need Application for the Minnesota-Iowa 345 KV Transmission Project in Jackson, Martin, and Faribault counties, Minnesota
MPUC Docket No.: ET6675/CN-12-1053

ITC Midwest LLC, a Michigan limited liability company ("ITCM"), is proposing to construct a 345 kV transmission line from its Lakefield Junction Substation in Jackson County, east through Martin County to the newly-proposed Huntley Substation in Faribault County, before turning south to the Iowa border (the "Project"). In Iowa, the transmission line will continue south to a new Ledyard Substation, near the City of Ledyard, Iowa, and then on to a substation near the City of Burt in Kossuth County, Iowa. ITCM will seek approval to construct the Minnesota portion of the Project from the Minnesota Public Utilities Commission ("Commission"). This letter is intended to provide you with notification of certain Project details and also to provide you with information on how you can participate in the Minnesota regulatory process.

The Project includes expanding the Lakefield Substation, a new Huntley Substation and several miles of reconfigured 161 kV transmission line near the Huntley Substation. The reconfigurations are necessary to relocate all 161 kV transmission substation facilities to the Huntley Substation from the existing Winnebago Substation which will be decommissioned. The Minnesota portion of the Project will be approximately 75 miles long. The area under consideration for the location of the Project is depicted on the map below. The Iowa portion of the Project will be permitted by the Iowa Utilities Board.

This notice is being provided to those who fall within one or more of the categories listed below as they relate to the area ("Notice Area") shown below:

- Landowners with property within the Notice Area;
- Residents within the Notice Area;
- Local units of government in and around the Notice Area;
- Local and State elected officials; or
- State and local government agencies and offices.

Regulatory Process Overview

For the Project, the Commission must determine whether the Project is needed (Certificate of Need) and where the Project should be located (Route Permit). Before the Project can be constructed, the Commission must first certify that the Project is needed. The certification of the Project is governed by Minnesota law, including Minnesota Statutes Section 216B.243, and Minnesota Rules Chapters 7829 and 7849, specifically Rules 7849.0010 to 7849.0400 and 7849.1000 to 7849.2100. In the Certificate of Need proceeding, the Commission will analyze whether ITCM has proposed the most appropriate size, type, and timing for the Project. The Certificate of Need application, once submitted, can be obtained by visiting the Commission's website at
www.puc.state.mn.us in Docket No. ET6675/CN-12-1053.

In addition to certifying the Project, the Commission must also grant a Route Permit for the Project. The routing of the Minnesota portion of the Project is governed by Minnesota law, including Minnesota Statutes Chapter 216E and Minnesota Rules Chapter 7850. Information on the Route Permit application, once filed, can be obtained by visiting the Commission's website in Docket No. ET6675/TL-12-1337.

Minnesota Department of Commerce Energy Facility Permitting staff ("EFP") is responsible for conducting environmental review of the Project. EFP will prepare an environmental report for the Certificate of Need proceeding. EFP will prepare an environmental impact statement ("EIS") for the Route Permit proceeding. EFP may elect to combine these two documents and issue one document, an EIS, which satisfies the environmental review requirements for the Certificate of Need and Route Permit proceedings.

ITCM will be submitting an application for a Route Permit with at least two routes and will identify the route which ITCM prefers. Other routes can be proposed during the EIS scoping process to be completed by EFP. As part of its analysis, EFP will evaluate the routes proposed by ITCM in its Route Permit application and any other routes proposed during the scoping process that will aid in the Commission's decision on the Route Permit application. The Commission may determine that a route submitted by ITCM, or a route proposed during the scoping process, or some combination of such routes is the most appropriate route for the Project. Selection of a final route by the Commission will be based on evaluation of the routes, guided by the Factors identified in Minnesota Statutes Section 216E.03, Minnesota Rule 7850.4100, and stakeholder input received during the regulatory process.

For the 345 kV transmission line portions of the Project, ITCM anticipates that it will obtain a 200-foot wide permanent right-of-way. For the 161 kV transmission line portions of the Project, ITCM anticipates that it will obtain a 150-foot wide permanent right-of-way. Before beginning construction, ITCM will acquire property rights for the right-of-way, typically through an easement that will be negotiated with the landowner for each parcel.

The proposed structures for the Project are primarily single pole, weathering or galvanized steel structures. Where the 345 kV transmission line can be co-located with existing 161 kV transmission lines, double-circuit structures will be used. For the 161 kV transmission line portions of the Project, single pole single circuit and double circuit poles will be used to accommodate construction. Structures are proposed to be placed using spans of approximately 600 to 1,100 feet, with an average span of approximately 900 feet. Additionally, specialty structures, other than the single pole structures discussed above, may be used through areas of environmental sensitivity or where construction conditions require their use.

Need for the Project

The Project is needed to enhance regional reliability, increase transmission capacity to support additional generation, including generation to meet renewable energy standards throughout the region, and to reduce congestion which will enable more efficient delivery of energy.

The proposed facilities in Minnesota and Iowa were studied and approved in December 2011 as part of the Midwest Independent Transmission System Operator ("MISO") Multi-Value Projects ("MVP") portfolio in the 2011 MISO Transmission Expansion Plan.

The MVP projects were developed based on a broad assessment of benefits to strengthen and enhance reliability across the integrated transmission system on which all regional electric load and exports rely including:

- Substantial reductions in regional congestion costs;
- Reductions in transmission losses, effecting significant, broadly-shared cost savings; and
- Reductions in the region's installed capacity requirement, thus measurably reducing capacity costs throughout the region.

The Project is a portion of what is identified as Project 3 in the MVP portfolio. The Iowa portions of Project 3 are subject to review and approval by the Iowa Utilities Board.

Biennial Transmission Planning

Minnesota statutes include a requirement that each electric transmission owning utility in the state file a biennial transmission planning report with the Commission in the fall of odd years. These reports provide an excellent source of background information on the transmission planning process used by utilities in Minnesota. The 2011 Biennial Transmission Planning Report is
available at: www.minnelectrans.com.

Project Notifications

To subscribe to the Project Certificate of Need docket and receive email notifications when information is filed that is related to the Certificate of Need for the Project, please visit www.puc.state.mn.us, click on the "Subscribe to a Docket" button, enter your email address and select "Docket Number" from the Type of Subscription dropdown box, then select "12" from the first Docket Number dropdown box and enter "1053" in the second box before clicking on the "Add to List" button. You must then click the "Save" button at the bottom of the page to confirm your subscription to the Project Docket. Those same steps can be followed to subscribe to the Project Route Permit docket (ET6675/TL-12-1337).

Please visit http://www.itctransco.com/minnesota-iowa-project for more information on the Project. If you have questions about the process, you may contact the Minnesota regulatory staff listed below:

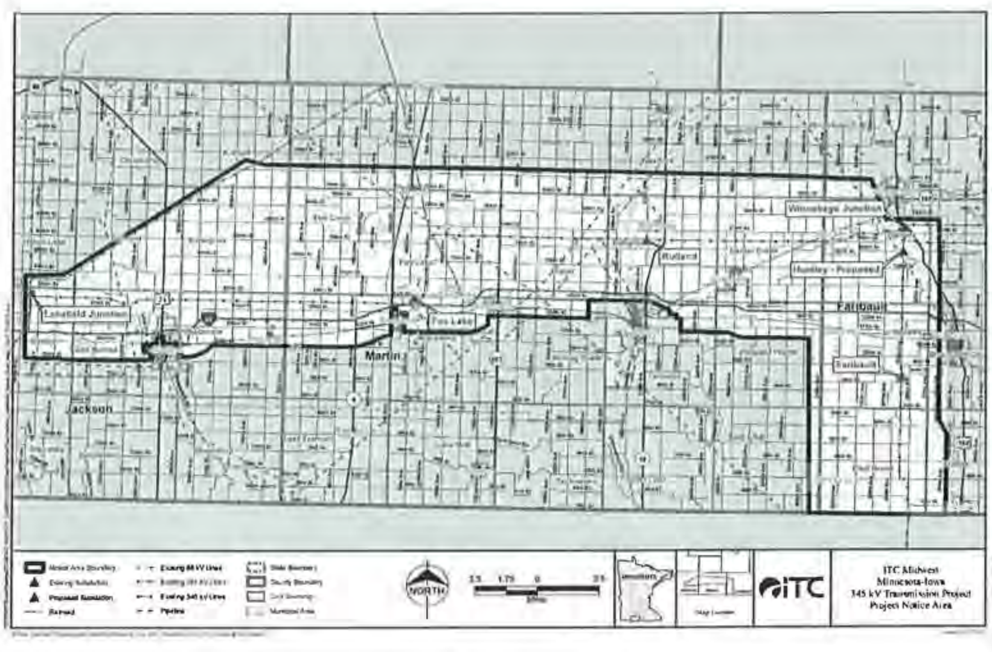
Minnesota Public Utilities Commission Scott Ek 121 7th Place East, Suite 350 St. Paul, Minnesota 55101 651.201.2255 800.657.3782 scott.ek@state.mn.us www.puc.state.mn.us	Minnesota Department of Commerce Ray Kirsch, State Permit Manager 85 7th Place East, Suite 500 St. Paul, Minnesota 55101 651.296.7588 800.657.3794 raymond.kirsch@state.mn.us

If you would like to have your name added to the Project Route Permit mailing list (MPUC Docket ET6675/TL-12-1337), you may register by visiting the Department of Commerce webpage at mn.gov/commerce/energyfacilities/, clicking on the "Transmission Lines" tab, selecting "Minnesota-Iowa 345 kV Transmission Project" from the listed projects, and then clicking the links next to the "Mailing List" heading. Alternately, you may contact Department of Commerce staff at the address above. Please be aware that the Route Permit mailing list may not be available for online registration until the Route Permit application is submitted.

A separate service list is maintained for the Certificate of Need proceeding. To be placed on the Project Certificate of Need mailing list (MPUC Docket ET6675/CN-12-1053), mail, fax, or email Robin Benson at Minnesota Public Utilities Commission, 121 7th Place E., Suite 350, St. Paul, MN 55101-2147, Fax: 651-297-7073 or robin.benson@state.mn.us.

The ITCM contact for questions about this Project is:

David B. Grover
Manager, Regulatory Strategy
ITC Midwest LLC
444 Cedar Street, Suite 1020
St. Paul, MN 55101
877-482-4829
minniowa@itctransco.com



Paid Advertisement

RECEIVED JAN 24 2013

Lakefield Standard

01/24/13

234573

PAID ADVERTISEMENT

Notice of Certificate of Need Application for the Minnesota-Iowa 345 KV Transmission Project in Jackson, Martin, and Faribault counties, Minnesota
MPUC Docket No.: ET6675/CN-12-1053

ITC Midwest LLC, a Michigan limited liability company ("ITCM"), is proposing to construct a 345 kV transmission line from its Lakefield Junction Substation in Jackson County, east through Martin County to the newly-proposed Huntley Substation in Faribault County, before turning south to the Iowa border (the "Project"). In Iowa, the transmission line will continue south to a new Ledyard Substation, near the City of Ledyard, Iowa, and then on to a substation near the City of Burt in Kossuth County, Iowa. ITCM will seek approval to construct the Minnesota portion of the Project from the Minnesota Public Utilities Commission ("Commission"). This letter is intended to provide you with notification of certain Project details and also to provide you with information on how you can participate in the Minnesota regulatory process.

The Project includes expanding the Lakefield Substation, a new Huntley Substation and several miles of reconfigured 161 kV transmission line near the Huntley Substation. The reconfigurations are necessary to relocate all 161 kV transmission substation facilities to the Huntley Substation from the existing Winnebago Substation which will be decommissioned. The Minnesota portion of the Project will be approximately 75 miles long. The area under consideration for the location of the Project is depicted on the map below. The Iowa portion of the Project will be permitted by the Iowa Utilities Board.

This notice is being provided to those who fall within one or more of the categories listed below as they relate to the area ("Notice Area") shown below:

- Landowners with property within the Notice Area;
- Residents within the Notice Area;
- Local units of government in and around the Notice Area;
- Local and State elected officials; or
- State and local government agencies and offices.

Regulatory Process Overview
For the Project, the Commission must determine whether the Project is needed (Certificate of Need) and where the Project should be located (Route Permit). Before the Project can be constructed, the Commission must first certify that the Project is needed. The certification of the Project is governed by Minnesota law, including Minnesota Statutes Section 216B.243, and Minnesota Rules Chapters 7829 and 7849, specifically Rules 7849.0010 to 7849.0400 and 7849.1000 to 7849.2100. In the Certificate of Need proceeding, the Commission will analyze whether ITCM has proposed the most appropriate size, type, and timing for the Project. The Certificate of Need application, once submitted, can be obtained by visiting the Commission's website at www.puc.state.mn.us in Docket No. ET6675/CN-12-1053.

In addition to certifying the Project, the Commission must also grant a Route Permit for the Project. The routing of the Minnesota portion of the Project is governed by Minnesota law, including Minnesota Statutes Chapter 216E and Minnesota Rules Chapter 7850. Information on the Route Permit application, once filed, can be obtained by visiting the Commission's website in Docket No. ET6675/TL-12-1337.

Minnesota Department of Commerce Energy Facility Permitting staff ("EFP") is responsible for conducting environmental review of the Project. EFP will prepare an environmental report for the Certificate of Need proceeding. EFP will prepare an environmental impact statement ("EIS") for the Route Permit proceeding. EFP may elect to combine these two documents and issue one document, an EIS, which satisfies the environmental review requirements for the Certificate of Need and Route Permit proceedings.

ITCM will be submitting an application for a Route Permit with at least two routes and will identify the route which ITCM prefers. Other routes can be proposed during the EIS scoping process to be completed by EFP. As part of its analysis, EFP will evaluate the routes proposed by ITCM in its Route Permit application and any other routes proposed during the scoping process that will aid in the Commission's decision on the Route Permit application. The Commission may determine that a route submitted by ITCM, or a route proposed during the scoping process, or some combination of such routes is the most appropriate route for the Project. Selection of a final route by the Commission will be based on evaluation of the routes, guided by the Factors identified in Minnesota Statutes Section 216E.03, Minnesota Rule 7850.4100, and stakeholder input received during the regulatory process.

For the 345 kV transmission line portions of the Project, ITCM anticipates that it will obtain a 200-foot wide permanent right-of-way. For the 161 kV transmission line portions of the Project, ITCM anticipates that it will obtain a 150-foot wide permanent right-of-way. Before beginning construction, ITCM will acquire property rights for the right-of-way, typically through an easement that will be negotiated with the landowner for each parcel.

The proposed structures for the Project are primarily single pole, weathering or galvanized steel structures. Where the 345 kV transmission line can be co-located with existing 161 kV transmission lines, double-circuit structures will be used. For the 161 kV transmission line portions of the Project, single pole single circuit and double circuit poles will be used to accommodate construction. Structures are proposed to be placed using spans of approximately 600 to 1,100 feet, with an average span of approximately 900 feet. Additionally, specialty structures, other than the single pole structures discussed above, may be used through areas of environmental sensitivity or where construction conditions require their use.

Need for the Project
The Project is needed to enhance regional reliability, increase transmission capacity to support additional generation, including generation to meet renewable energy standards throughout the region, and to reduce congestion which will enable more efficient delivery of energy.

The proposed facilities in Minnesota and Iowa were studied and approved in December 2011 as part of the Midwest Independent Transmission System Operator ("MISO") Multi-Value Projects ("MVP") portfolio in the 2011 MISO Transmission Expansion Plan.

The MVP projects were developed based on a broad assessment of benefits to strengthen and enhance reliability across the integrated transmission system on which all regional electric load and exports rely including:

- Substantial reductions in regional congestion costs;
- Reductions in transmission losses, effecting significant, broadly-shared cost savings; and
- Reductions in the region's installed capacity requirement, thus measurably reducing capacity costs throughout the region.

The Project is a portion of what is identified as Project 3 in the MVP portfolio. The Iowa portions of Project 3 are subject to review and approval by the Iowa Utilities Board.

Biennial Transmission Planning
Minnesota statutes include a requirement that each electric transmission owning utility in the state file a biennial transmission planning report with the Commission in the fall of odd years. These reports provide an excellent source of background information on the transmission planning process used by utilities in Minnesota. The 2011 Biennial Transmission Planning Report is available at: www.minnelectrans.com.

Project Notifications
To subscribe to the Project Certificate of Need docket and receive email notifications when information is filed that is related to the Certificate of Need for the Project, please visit www.puc.state.mn.us, click on the "Subscribe to a Docket" button, enter your email address and select "Docket Number" from the Type of Subscription dropdown box, then select "12" from the first Docket Number dropdown box and enter "1053" in the second box before clicking on the "Add to List" button. You must then click the "Save" button at the bottom of the page to confirm your subscription to the Project Docket. These same steps can be followed to subscribe to the Project Route Permit docket (ET6675/TL-12-1337).

Please visit http://www.itctransco.com/minnesota-iowa-project for more information on the Project. If you have questions about the process, you may contact the Minnesota regulatory staff listed below:

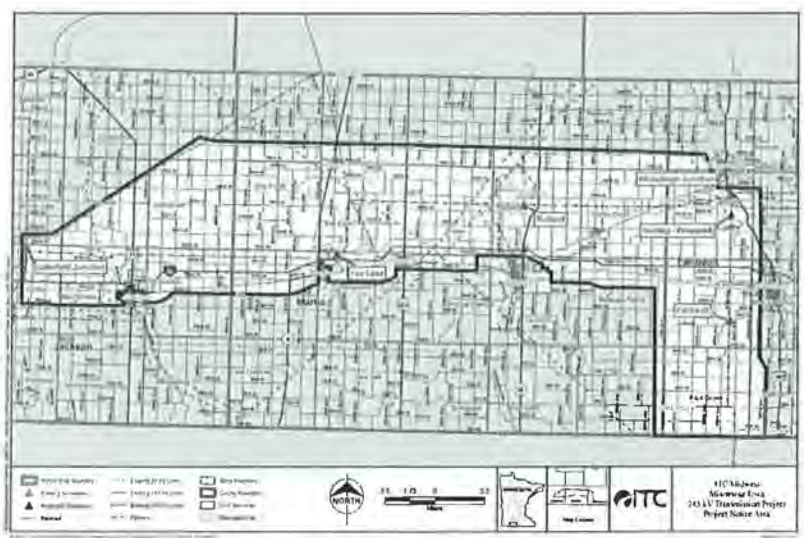
Minnesota Public Utilities Commission	Minnesota Department of Commerce
Scott Ek	Ray Kirsch, State Permit Manager
121 7th Place East, Suite 350	85 7th Place East, Suite 500
St. Paul, Minnesota 55101	St. Paul, Minnesota 55101
651.201.2255	651.296.7588
800.657.3782	800.657.3794
scott.ek@state.mn.us	raymond.kirsch@state.mn.us
www.puc.state.mn.us	

If you would like to have your name added to the Project Route Permit mailing list (MPUC Docket ET6675/TL-12-1337), you may register by visiting the Department of Commerce webpage at mn.gov/commerce/energyfacilities/, clicking on the "Transmission Lines" tab, selecting "Minnesota-Iowa 345 kV Transmission Project" from the listed projects, and then clicking the links next to the "Mailing List" heading. Alternately, you may contact Department of Commerce staff at the address above. Please be aware that the Route Permit mailing list may not be available for online registration until the Route Permit application is submitted.

A separate service list is maintained for the Certificate of Need proceeding. To be placed on the Project Certificate of Need mailing list (MPUC Docket ET6675/CN-12-1053), mail, fax, or email Robin Benson at Minnesota Public Utilities Commission, 121 7th Place E., Suite 350, St. Paul, MN 55101-2147, Fax: 651-297-7073 or robin.benson@state.mn.us.

The ITCM contact for questions about this Project is:

David B. Grover
Manager, Regulatory Strategy
ITC Midwest LLC
444 Cedar Street, Suite 1020
St. Paul, MN 55101
877-482-4829
mnnlowa@itctransco.com



RECEIVED FEB 01 2013

Minneapolis Star Tribune 1/24/13

235868

Notice of Certificate of Need Application for the Minnesota-Iowa 345 KV Transmission Project in Jackson, Martin, and Faribault counties, Minnesota
MPUC Docket No.: ET6675/CN-12-1053

ITC Midwest LLC, a Michigan limited liability company ("ITCM"), is proposing to construct a 345 kV transmission line from its Lakefield Junction Substation in Jackson County, east through Martin County to the newly-proposed Huntley Substation in Faribault County, before turning south to the Iowa border (the "Project"). In Iowa, the transmission line will continue south to a new Ledyard Substation, near the City of Ledyard, Iowa, and then on to a substation near the City of Burt in Kossuth County, Iowa. ITCM will seek approval to construct the Minnesota portion of the Project from the Minnesota Public Utilities Commission ("Commission"). This letter is intended to provide you with notification of certain Project details and also to provide you with information on how you can participate in the Minnesota regulatory process.

The Project includes expanding the Lakefield Substation, a new Huntley Substation and several miles of reconfigured 161 kV transmission line near the Huntley Substation. The reconfigurations are necessary to relocate all 161 kV transmission substation facilities to the Huntley Substation from the existing Winnebago Substation which will be decommissioned. The Minnesota portion of the Project will be approximately 75 miles long. The area under consideration for the location of the Project is depicted on the map below. The Iowa portion of the Project will be permitted by the Iowa Utilities Board.

This notice is being provided to those who fall within one or more of the categories listed below as they relate to the area ("Notice Area") shown below:

- Landowners with property within the Notice Area;
- Residents within the Notice Area;
- Local units of government in and around the Notice Area;
- Local and State elected officials; or
- State and local government agencies and offices.

Regulatory Process Overview

For the Project, the Commission must determine whether the Project is needed (Certificate of Need) and where the Project should be located (Route Permit). Before the Project can be constructed, the Commission must first certify that the Project is needed. The certification of the Project is governed by Minnesota law, including Minnesota Statutes Section 216B.243, and Minnesota Rules Chapters 7829 and 7849, specifically Rules 7849.0010 to 7849.0400 and 7849.1000 to 7849.2100. In the Certificate of Need proceeding, the Commission will analyze whether ITCM has proposed the most appropriate size, type, and timing for the Project. The Certificate of Need application, once submitted, can be obtained by visiting the Commission's website at www.puc.state.mn.us in Docket No. ET6675/CN-12-1053.

In addition to certifying the Project, the Commission must also grant a Route Permit for the Project. The routing of the Minnesota portion of the Project is governed by Minnesota law, including Minnesota Statutes Chapter 216E and Minnesota Rules Chapter 7850. Information on the Route Permit application, once filed, can be obtained by visiting the Commission's website in Docket No. ET6675/TL-12-1337.

Minnesota Department of Commerce Energy Facility Permitting staff ("EFP") is responsible for conducting environmental review of the Project. EFP will prepare an environmental report for the Certificate of Need proceeding. EFP will prepare an environmental impact statement ("EIS") for the Route Permit proceeding. EFP may elect to combine these two documents and issue one document, an EIS, which satisfies the environmental review requirements for the Certificate of Need and Route Permit proceedings.

ITCM will be submitting an application for a Route Permit with at least two routes and will identify the route which ITCM prefers. Other routes can be proposed during the EIS scoping process to be completed by EFP. As part of its analysis, EFP will evaluate the routes proposed by ITCM in its Route Permit application and any other routes proposed during the scoping process that will aid in the Commission's decision on the Route Permit application. The Commission may determine that a route submitted by ITCM, or a route proposed during the scoping process, or some combination of such routes is the most appropriate route for the Project. Selection of a final route by the Commission will be based on evaluation of the routes, guided by the Factors identified in Minnesota Statutes Section 216E.03, Minnesota Rule 7850.4100, and stakeholder input received during the regulatory process.

For the 345 kV transmission line portions of the Project, ITCM anticipates that it will obtain a 200-foot wide permanent right-of-way. For the 161 kV transmission line portions of the Project, ITCM anticipates that it will obtain a 150-foot wide permanent right-of-way. Before beginning construction, ITCM will acquire property rights for the right-of-way, typically through an easement that will be negotiated with the landowner for each parcel.

The proposed structures for the Project are primarily single pole, weathering or galvanized steel structures. Where the 345 kV transmission line can be co-located with existing 161 kV transmission lines, double-circuit structures will be used. For the 161 kV transmission line portions of the Project, single pole single circuit and double circuit poles will be used to accommodate construction. Structures are proposed to be placed using spans of approximately 600 to 1,100 feet, with an average span of approximately 900 feet. Additionally, specialty structures, other than the single pole structures discussed above, may be used through areas of environmental sensitivity or where construction conditions require their use.

Need for the Project

The Project is needed to enhance regional reliability, increase transmission capacity to support additional generation, including generation to meet renewable energy standards throughout the region, and to reduce congestion which will enable more efficient delivery of energy.

The proposed facilities in Minnesota and Iowa were studied and approved in December 2011 as part of the Midwest Independent Transmission System Operator ("MISO") Multi-Value Projects ("MVP") portfolio in the 2011 MISO Transmission Expansion Plan.

The MVP projects were developed based on a broad assessment of benefits to strengthen and enhance reliability across the integrated transmission system on which all regional electric load and exports rely including:

- Substantial reductions in regional congestion costs;
- Reductions in transmission losses, effecting significant, broadly-shared cost savings; and
- Reductions in the region's installed capacity requirement, thus measurably reducing capacity costs throughout the region.

The Project is a portion of what is identified as Project 3 in the MVP portfolio. The Iowa portions of Project 3 are subject to review and approval by the Iowa Utilities Board.

Biennial Transmission Planning

Minnesota statutes include a requirement that each electric transmission owning utility in the state file a biennial transmission planning report with the Commission in the fall of odd years. These reports provide an excellent source of background information on the transmission planning process used by utilities in Minnesota. The 2011 Biennial Transmission Planning Report is available at: www.minnelectrans.com.

Project Notifications

To subscribe to the Project Certificate of Need docket and receive email notifications when information is filed that is related to the Certificate of Need for the Project, please visit www.puc.state.mn.us, click on the "Subscribe to a Docket" button, enter your email address and select "Docket Number" from the Type of Subscription dropdown box, then select "12" from the first Docket Number dropdown box and enter "1053" in the second box before clicking on the "Add to List" button. You must then click the "Save" button at the bottom of the page to confirm your subscription to the Project Docket. These same steps can be followed to subscribe to the Project Route Permit docket (ET6675/TL-12-1337).

Please visit http://www.itctransco.com/minnesota-iowa-project for more information on the Project. If you have questions about the process, you may contact the Minnesota regulatory staff listed below:

Minnesota Public Utilities Commission Scott Ek 121 7th Place East, Suite 350 St. Paul, Minnesota 55101 651.201.2255 800.657.3782 scott.ek@state.mn.us www.puc.state.mn.us	Minnesota Department of Commerce Ray Kirsch, State Permit Manager 85 7th Place East, Suite 500 St. Paul, Minnesota 55101 651.296.7588 800.657.3794 raymond.kirsch@state.mn.us

If you would like to have your name added to the Project Route Permit mailing list (MPUC Docket ET6675/TL-12-1337), you may register by visiting the Department of Commerce webpage at mn.gov/commerce/energyfacilities/, clicking on the "Transmission Lines" tab, selecting "Minnesota-Iowa 345 kV Transmission Project" from the listed projects, and then clicking the links next to the "Mailing List" heading. Alternately, you may contact Department of Commerce staff at the address above. Please be aware that the Route Permit mailing list may not be available for online registration until the Route Permit application is submitted.

A separate service list is maintained for the Certificate of Need proceeding. To be placed on the Project Certificate of Need mailing list (MPUC Docket ET6675/CN-12-1053), mail, fax, or email Robin Benson at Minnesota Public Utilities Commission, 121 7th Place E., Suite 350, St. Paul, MN 55101-2147, Fax: 651-297-7073 or robin.benson@state.mn.us.

The ITCM contact for questions about this Project is:

David B. Grover
Manager, Regulatory Strategy
ITC Midwest LLC
444 Cedar Street, Suite 1020
St. Paul, MN 55101
877-482-4829
minniowa@itctransco.com

Paid Advertisement

RECEIVED JAN 23 2013

Minnesota Lake Tribune 1/24/13 236157

Notice of Certificate of Need Application for the Minnesota-Iowa 345 KV Transmission Project in Jackson, Martin, and Faribault counties, Minnesota
MPUC Docket No.: ET6675/CN-12-1053

ITC Midwest LLC, a Michigan limited liability company ("ITCM"), is proposing to construct a 345 kV transmission line from its Lakefield Junction Substation in Jackson County, east through Martin County to the newly-proposed Huntley Substation in Faribault County, before turning south to the Iowa border (the "Project"). In Iowa, the transmission line will continue south to a new Ledyard Substation, near the City of Ledyard, Iowa, and then on to a substation near the City of Burt in Kossuth County, Iowa. ITCM will seek approval to construct the Minnesota portion of the Project from the Minnesota Public Utilities Commission ("Commission"). This letter is intended to provide you with notification of certain Project details and also to provide you with information on how you can participate in the Minnesota regulatory process.

The Project includes expanding the Lakefield Substation, a new Huntley Substation and several miles of reconfigured 161 kV transmission line near the Huntley Substation. The reconfigurations are necessary to relocate all 161 kV transmission substation facilities to the Huntley Substation from the existing Winnebago Substation which will be decommissioned. The Minnesota portion of the Project will be approximately 75 miles long. The area under consideration for the location of the Project is depicted on the map below. The Iowa portion of the Project will be permitted by the Iowa Utilities Board.

This notice is being provided to those who fall within one or more of the categories listed below as they relate to the area ("Notice Area") shown below:

- Landowners with property within the Notice Area;
- Residents within the Notice Area;
- Local units of government in and around the Notice Area;
- Local and State elected officials; or
- State and local government agencies and offices.

Regulatory Process Overview
For the Project, the Commission must determine whether the Project is needed (Certificate of Need) and where the Project should be located (Route Permit). Before the Project can be constructed, the Commission must first certify that the Project is needed. The certification of the Project is governed by Minnesota law, including Minnesota Statutes Section 216B.243, and Minnesota Rules Chapters 7829 and 7849, specifically Rules 7849.0010 to 7849.0400 and 7849.1000 to 7849.2100. In the Certificate of Need proceeding, the Commission will analyze whether ITCM has proposed the most appropriate size, type, and timing for the Project. The Certificate of Need application, once submitted, can be obtained by visiting the Commission's website at www.puc.state.mn.us in Docket No. ET6675/CN-12-1053.

In addition to certifying the Project, the Commission must also grant a Route Permit for the Project. The routing of the Minnesota portion of the Project is governed by Minnesota law, including Minnesota Statutes Chapter 216E and Minnesota Rules Chapter 7850. Information on the Route Permit application, once filed, can be obtained by visiting the Commission's website in Docket No. ET6675/TL-12-1337.

Minnesota Department of Commerce Energy Facility Permitting staff ("EFP") is responsible for conducting environmental review of the Project. EFP will prepare an environmental report for the Certificate of Need proceeding. EFP will prepare an environmental impact statement ("EIS") for the Route Permit proceeding. EFP may elect to combine these two documents and issue one document, an EIS, which satisfies the environmental review requirements for the Certificate of Need and Route Permit proceedings.

ITCM will be submitting an application for a Route Permit with at least two routes and will identify the route which ITCM prefers. Other routes can be proposed during the EIS scoping process to be completed by EFP. As part of its analysis, EFP will evaluate the routes proposed by ITCM in its Route Permit application and any other routes proposed during the scoping process that will aid in the Commission's decision on the Route Permit application. The Commission may determine that a route submitted by ITCM, or a route proposed during the scoping process, or some combination of such routes is the most appropriate route for the Project. Selection of a final route by the Commission will be based on evaluation of the routes, guided by the Factors identified in Minnesota Statutes Section 216E.03, Minnesota Rule 7850.4100, and stakeholder input received during the regulatory process.

For the 345 kV transmission line portions of the Project, ITCM anticipates that it will obtain a 200-foot wide permanent right-of-way. For the 161 kV transmission line portions of the Project, ITCM anticipates that it will obtain a 150-foot wide permanent right-of-way. Before beginning construction, ITCM will acquire property rights for the right-of-way, typically through an easement that will be negotiated with the landowner for each parcel.

The proposed structures for the Project are primarily single pole, weathering or galvanized steel structures. Where the 345 kV transmission line can be co-located with existing 161 kV transmission lines, double-circuit structures will be used. For the 161 kV transmission line portions of the Project, single pole single circuit and double circuit poles will be used to accommodate construction. Structures are proposed to be placed using spans of approximately 600 to 1,100 feet, with an average span of approximately 900 feet. Additionally, specialty structures, other than the single pole structures discussed above, may be used through areas of environmental sensitivity or where construction conditions require their use.

Need for the Project
The Project is needed to enhance regional reliability, increase transmission capacity to support additional generation, including generation to meet renewable energy standards throughout the region, and to reduce congestion which will enable more efficient delivery of energy.

The proposed facilities in Minnesota and Iowa were studied and approved in December 2011 as part of the Midwest Independent Transmission System Operator ("MISO") Multi-Value Projects ("MVP") portfolio in the 2011 MISO Transmission Expansion Plan.

The MVP projects were developed based on a broad assessment of benefits to strengthen and enhance reliability across the integrated transmission system on which all regional electric load and exports rely including:

- Substantial reductions in regional congestion costs;
- Reductions in transmission losses, effecting significant, broadly-shared cost savings; and
- Reductions in the region's installed capacity requirement, thus measurably reducing capacity costs throughout the region.

The Project is a portion of what is identified as Project 3 in the MVP portfolio. The Iowa portions of Project 3 are subject to review and approval by the Iowa Utilities Board.

Biennial Transmission Planning
Minnesota statutes include a requirement that each electric transmission owning utility in the state file a biennial transmission planning report with the Commission in the fall of odd years. These reports provide an excellent source of background information on the transmission planning process used by utilities in Minnesota. The 2011 Biennial Transmission Planning Report is available at: www.minnelectrans.com.

Project Notifications
To subscribe to the Project Certificate of Need docket and receive email notifications when information is filed that is related to the Certificate of Need for the Project, please visit www.puc.state.mn.us, click on the "Subscribe to a Docket" button, enter your email address and select "Docket Number" from the Type of Subscription dropdown box, then select "12" from the first Docket Number dropdown box and enter "1053" in the second box before clicking on the "Add to List" button. You must then click the "Save" button at the bottom of the page to confirm your subscription to the Project Docket. These same steps can be followed to subscribe to the Project Route Permit docket (ET6675/TL-12-1337).

Please visit http://www.itctransco.com/minnesota-iowa-project for more information on the Project. If you have questions about the process, you may contact the Minnesota regulatory staff listed below:

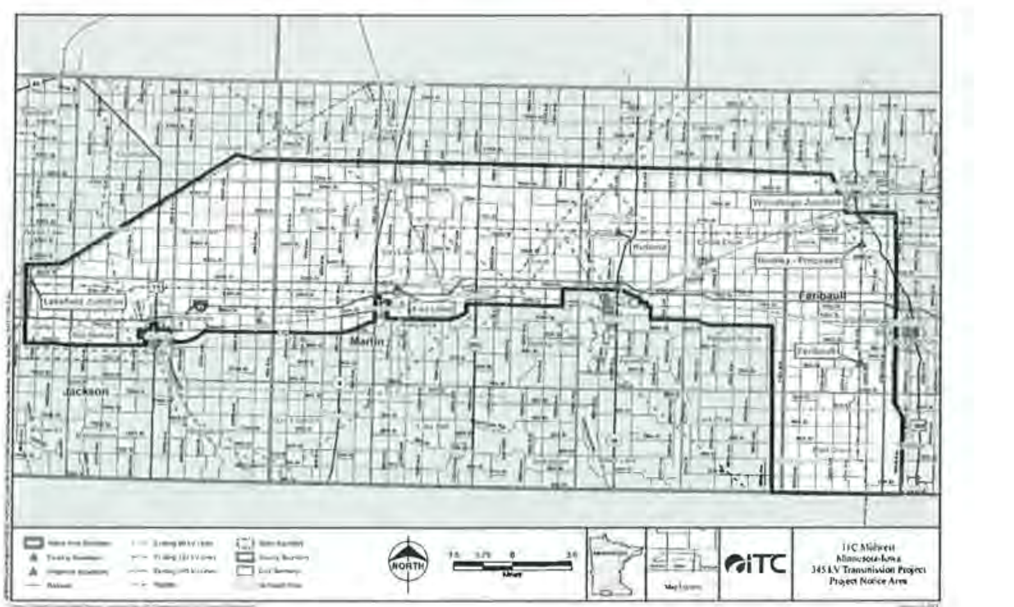
Minnesota Public Utilities Commission Scott Ek 121 7th Place East, Suite 350 St. Paul, Minnesota 55101 651.201.2255 800.657.3782 scott.ek@state.mn.us www.puc.state.mn.us	Minnesota Department of Commerce Ray Kirsch, State Permit Manager 85 7th Place East, Suite 500 St. Paul, Minnesota 55101 651.296.7588 800.657.3794 raymond.kirsch@state.mn.us

If you would like to have your name added to the Project Route Permit mailing list (MPUC Docket ET6675/TL-12-1337), you may register by visiting the Department of Commerce webpage at mn.gov/commerce/energyfacilities/, clicking on the "Transmission Lines" tab, selecting "Minnesota-Iowa 345 kV Transmission Project" from the listed projects, and then clicking the links next to the "Mailing List" heading. Alternately, you may contact Department of Commerce staff at the address above. Please be aware that the Route Permit mailing list may not be available for online registration until the Route Permit application is submitted.

A separate service list is maintained for the Certificate of Need proceeding. To be placed on the Project Certificate of Need mailing list (MPUC Docket ET6675/CN-12-1053), mail, fax, or email Robin Benson at Minnesota Public Utilities Commission, 121 7th Place E., Suite 350, St. Paul, MN 55101-2147, Fax: 651-297-7073 or robin.benson@state.mn.us.

The ITCM contact for questions about this Project is:

David B. Grover
Manager, Regulatory Strategy
ITC Midwest LLC
444 Cedar Street, Suite 1020
St. Paul, MN 55101
877-482-4829
minniowa@itctransco.com



Paid Advertisement

RECEIVED JAN 31 2013

Martin County Star 1/23/13

238123

Notice of Certificate of Need Application for the Minnesota-Iowa 345 KV Transmission Project in Jackson, Martin, and Faribault counties, Minnesota
MPUC Docket No.: ET6675/CN-12-1053

ITC Midwest LLC, a Michigan limited liability company ("ITCM"), is proposing to construct a 345 kV transmission line from its Lakefield Junction Substation in Jackson County, east through Martin County to the newly-proposed Huntley Substation in Faribault County, before turning south to the Iowa border (the "Project"). In Iowa, the transmission line will continue south to a new Ledyard Substation, near the City of Ledyard, Iowa, and then on to a substation near the City of Burt in Kossuth County, Iowa. ITCM will seek approval to construct the Minnesota portion of the Project from the Minnesota Public Utilities Commission ("Commission"). This letter is intended to provide you with notification of certain Project details and also to provide you with information on how you can participate in the Minnesota regulatory process.

The Project includes expanding the Lakefield Substation, a new Huntley Substation and several miles of reconfigured 161 kV transmission line near the Huntley Substation. The reconfigurations are necessary to relocate all 161 kV transmission substation facilities to the Huntley Substation from the existing Winnebago Substation which will be decommissioned. The Minnesota portion of the Project will be approximately 75 miles long. The area under consideration for the location of the Project is depicted on the map below. The Iowa portion of the Project will be permitted by the Iowa Utilities Board.

This notice is being provided to those who fall within one or more of the categories listed below as they relate to the area ("Notice Area") shown below:

- Landowners with property within the Notice Area;
- Residents within the Notice Area;
- Local units of government in and around the Notice Area;
- Local and State elected officials; or
- State and local government agencies and offices.

Regulatory Process Overview
For the Project, the Commission must determine whether the Project is needed (Certificate of Need) and where the Project should be located (Route Permit). Before the Project can be constructed, the Commission must first certify that the Project is needed. The certification of the Project is governed by Minnesota law, including Minnesota Statutes Section 216B.243, and Minnesota Rules Chapters 7829 and 7849, specifically Rules 7849.0010 to 7849.0400 and 7849.1000 to 7849.2100. In the Certificate of Need proceeding, the Commission will analyze whether ITCM has proposed the most appropriate size, type, and timing for the Project. The Certificate of Need application, once submitted, can be obtained by visiting the Commission's website at www.puc.state.mn.us in Docket No. ET6675/CN-12-1053.

In addition to certifying the Project, the Commission must also grant a Route Permit for the Project. The routing of the Minnesota portion of the Project is governed by Minnesota law, including Minnesota Statutes Chapter 216E and Minnesota Rules Chapter 7850. Information on the Route Permit application, once filed, can be obtained by visiting the Commission's website in Docket No. ET6675/TL-12-1337.

Minnesota Department of Commerce Energy Facility Permitting staff ("EFP") is responsible for conducting environmental review of the Project. EFP will prepare an environmental report for the Certificate of Need proceeding. EFP will prepare an environmental impact statement ("EIS") for the Route Permit proceeding. EFP may elect to combine these two documents and issue one document, an EIS, which satisfies the environmental review requirements for the Certificate of Need and Route Permit proceedings.

ITCM will be submitting an application for a Route Permit with at least two routes and will identify the route which ITCM prefers. Other routes can be proposed during the EIS scoping process to be completed by EFP. As part of its analysis, EFP will evaluate the routes proposed by ITCM in its Route Permit application and any other routes proposed during the scoping process that will aid in the Commission's decision on the Route Permit application. The Commission may determine that a route submitted by ITCM, or a route proposed during the scoping process, or some combination of such routes is the most appropriate route for the Project. Selection of a final route by the Commission will be based on evaluation of the routes, guided by the Factors identified in Minnesota Statutes Section 216E.03, Minnesota Rule 7850.4100, and stakeholder input received during the regulatory process.

For the 345 kV transmission line portions of the Project, ITCM anticipates that it will obtain a 200-foot wide permanent right-of-way. For the 161 kV transmission line portions of the Project, ITCM anticipates that it will obtain a 150-foot wide permanent right-of-way. Before beginning construction, ITCM will acquire property rights for the right-of-way, typically through an easement that will be negotiated with the landowner for each parcel.

The proposed structures for the Project are primarily single pole, weathering or galvanized steel structures. Where the 345 kV transmission line can be co-located with existing 161 kV transmission lines, double-circuit structures will be used. For the 161 kV transmission line portions of the Project, single pole single circuit and double circuit poles will be used to accommodate construction. Structures are proposed to be placed using spans of approximately 600 to 1,100 feet, with an average span of approximately 900 feet. Additionally, specialty structures, other than the single pole structures discussed above, may be used through areas of environmental sensitivity or where construction conditions require their use.

Need for the Project
The Project is needed to enhance regional reliability, increase transmission capacity to support additional generation, including generation to meet renewable energy standards throughout the region, and to reduce congestion which will enable more efficient delivery of energy.

The proposed facilities in Minnesota and Iowa were studied and approved in December 2011 as part of the Midwest Independent Transmission System Operator ("MISO") Multi-Value Projects ("MVP") portfolio in the 2011 MISO Transmission Expansion Plan.

The MVP projects were developed based on a broad assessment of benefits to strengthen and enhance reliability across the integrated transmission system on which all regional electric load and exports rely including:

- Substantial reductions in regional congestion costs;
- Reductions in transmission losses, effecting significant, broadly-shared cost savings; and
- Reductions in the region's installed capacity requirement, thus measurably reducing capacity costs throughout the region.

The Project is a portion of what is identified as Project 3 in the MVP portfolio. The Iowa portions of Project 3 are subject to review and approval by the Iowa Utilities Board.

Biennial Transmission Planning
Minnesota statutes include a requirement that each electric transmission owning utility in the state file a biennial transmission planning report with the Commission in the fall of odd years. These reports provide an excellent source of background information on the transmission planning process used by utilities in Minnesota. The 2011 Biennial Transmission Planning Report is available at: www.minnelectrans.com.

Project Notifications
To subscribe to the Project Certificate of Need docket and receive email notifications when information is filed that is related to the Certificate of Need for the Project, please visit www.puc.state.mn.us, click on the "Subscribe to a Docket" button, enter your email address and select "Docket Number" from the Type of Subscription dropdown box, then select "12" from the first Docket Number dropdown box and enter "1053" in the second box before clicking on the "Add to List" button. You must then click the "Save" button at the bottom of the page to confirm your subscription to the Project Docket. These same steps can be followed to subscribe to the Project Route Permit docket (ET6675/TL-12-1337).

Please visit http://www.itctransco.com/minnesota-iowa-project for more information on the Project. If you have questions about the process, you may contact the Minnesota regulatory staff listed below:

Minnesota Public Utilities Commission Scott Ek 121 7th Place East, Suite 350 St. Paul, Minnesota 55101 651.201.2255 800.657.3782 scott.ek@state.mn.us www.puc.state.mn.us	Minnesota Department of Commerce Ray Kirsch, State Permit Manager 85 7th Place East, Suite 500 St. Paul, Minnesota 55101 651.296.7588 800.657.3794 raymond.kirsch@state.mn.us

If you would like to have your name added to the Project Route Permit mailing list (MPUC Docket ET6675/TL-12-1337), you may register by visiting the Department of Commerce webpage at mn.gov/commerce/energyfacilities/, clicking on the "Transmission Lines" tab, selecting "Minnesota-Iowa 345 kV Transmission Project" from the listed projects, and then clicking the links next to the "Mailing List" heading. Alternately, you may contact Department of Commerce staff at the address above. Please be aware that the Route Permit mailing list may not be available for online registration until the Route Permit application is submitted.

A separate service list is maintained for the Certificate of Need proceeding. To be placed on the Project Certificate of Need mailing list (MPUC Docket ET6675/CN-12-1053), mail, fax, or email Robin Benson at Minnesota Public Utilities Commission, 121 7th Place E., Suite 350, St. Paul, MN 55101-2147, Fax: 651-297-7073 or robin.benson@state.mn.us.

The ITCM contact for questions about this Project is:

David B. Grover
Manager, Regulatory Strategy
ITC Midwest LLC
444 Cedar Street, Suite 1020
St. Paul, MN 55101
877-482-4829
minniowa@itctransco.com

RECEIVED JAN 28 2013

Truman Tribune 01/23/13 239037

NOTICE

Notice of Certificate of Need Application for the Minnesota-Iowa 345 KV Transmission Project in Jackson, Martin, and Faribault counties, Minnesota
MPUC Docket No.: ET6675/CN-12-1053

ITC Midwest LLC, a Michigan limited liability company ("ITCM"), is proposing to construct a 345 kV transmission line from its Lakefield Junction Substation in Jackson County, east through Martin County to the newly-proposed Huntley Substation in Faribault County, before turning south to the Iowa border (the "Project"). In Iowa, the transmission line will continue south to a new Ledyard Substation, near the City of Ledyard, Iowa, and then on to a substation near the City of Burt in Kossuth County, Iowa. ITCM will seek approval to construct the Minnesota portion of the Project from the Minnesota Public Utilities Commission ("Commission"). This letter is intended to provide you with notification of certain Project details and also to provide you with information on how you can participate in the Minnesota regulatory process.

The Project includes expanding the Lakefield Substation, a new Huntley Substation and several miles of reconfigured 161 kV transmission line near the Huntley Substation. The reconfigurations are necessary to relocate all 161 kV transmission substation facilities to the Huntley Substation from the existing Winnebago Substation which will be decommissioned. The Minnesota portion of the Project will be approximately 75 miles long. The area under consideration for the location of the Project is depicted on the map below. The Iowa portion of the Project will be permitted by the Iowa Utilities Board.

This notice is being provided to those who fall within one or more of the categories listed below as they relate to the area ("Notice Area") shown below:

- Landowners with property within the Notice Area;
- Residents within the Notice Area;
- Local units of government in and around the Notice Area;
- Local and State elected officials; or
- State and local government agencies and offices.

Regulatory Process Overview
For the Project, the Commission must determine whether the Project is needed (Certificate of Need) and where the Project should be located (Route Permit). Before the Project can be constructed, the Commission must first certify that the Project is needed. The certification of the Project is governed by Minnesota law, including Minnesota Statutes Section 216B.243, and Minnesota Rules Chapters 7829 and 7849, specifically Rules 7849.0010 to 7849.0400 and 7849.1000 to 7849.2100. In the Certificate of Need proceeding, the Commission will analyze whether ITCM has proposed the most appropriate size, type, and timing for the Project. The Certificate of Need application, once submitted, can be obtained by visiting the Commission's website at www.puc.state.mn.us in Docket No. ET6675/CN-12-1053.

In addition to certifying the Project, the Commission must also grant a Route Permit for the Project. The routing of the Minnesota portion of the Project is governed by Minnesota law, including Minnesota Statutes Chapter 216E and Minnesota Rules Chapter 7850. Information on the Route Permit application, once filed, can be obtained by visiting the Commission's website in Docket No. ET6675/TL-12-1337.

Minnesota Department of Commerce Energy Facility Permitting staff ("EFP") is responsible for conducting environmental review of the Project. EFP will prepare an environmental report for the Certificate of Need proceeding. EFP will prepare an environmental impact statement ("EIS") for the Route Permit proceeding. EFP may elect to combine these two documents and issue one document, an EIS, which satisfies the environmental review requirements for the Certificate of Need and Route Permit proceedings.

ITCM will be submitting an application for a Route Permit with at least two routes and will identify the route which ITCM prefers. Other routes can be proposed during the EIS scoping process to be completed by EFP. As part of its analysis, EFP will evaluate the routes proposed by ITCM in its Route Permit application and any other routes proposed during the scoping process that will aid in the Commission's decision on the Route Permit application. The Commission may determine that a route submitted by ITCM, or a route proposed during the scoping process, or some combination of such routes is the most appropriate route for the Project. Selection of a final route by the Commission will be based on evaluation of the routes, guided by the Factors identified in Minnesota Statutes Section 216E.03, Minnesota Rule 7850.4100, and stakeholder input received during the regulatory process.

For the 345 kV transmission line portions of the Project, ITCM anticipates that it will obtain a 200-foot wide permanent right-of-way. For the 161 kV transmission line portions of the Project, ITCM anticipates that it will obtain a 150-foot wide permanent right-of-way. Before beginning construction, ITCM will acquire property rights for the right-of-way, typically through an easement that will be negotiated with the landowner for each parcel.

The proposed structures for the Project are primarily single pole, weathering or galvanized steel structures. Where the 345 kV transmission line can be co-located with existing 161 kV transmission lines, double-circuit structures will be used. For the 161 kV transmission line portions of the Project, single pole single circuit and double circuit poles will be used to accommodate construction. Structures are proposed to be placed using spans of approximately 600 to 1,100 feet, with an average span of approximately 900 feet. Additionally, specialty structures, other than the single pole structures discussed above, may be used through areas of environmental sensitivity or where construction conditions require their use.

Need for the Project
The Project is needed to enhance regional reliability, increase transmission capacity to support additional generation, including generation to meet renewable energy standards throughout the region, and to reduce congestion which will enable more efficient delivery of energy.

The proposed facilities in Minnesota and Iowa were studied and approved in December 2011 as part of the Midwest Independent Transmission System Operator ("MISO") Multi-Value Projects ("MVP") portfolio in the 2011 MISO Transmission Expansion Plan.

The MVP projects were developed based on a broad assessment of benefits to strengthen and enhance reliability across the integrated transmission system on which all regional electric load and exports rely including:

- Substantial reductions in regional congestion costs;
- Reductions in transmission losses, effecting significant, broadly-shared cost savings; and
- Reductions in the region's installed capacity requirement, thus measurably reducing capacity costs throughout the region.

The Project is a portion of what is identified as Project 3 in the MVP portfolio. The Iowa portions of Project 3 are subject to review and approval by the Iowa Utilities Board.

Biennial Transmission Planning
Minnesota statutes include a requirement that each electric transmission owning utility in the state file a biennial transmission planning report with the Commission in the fall of odd years. These reports provide an excellent source of background information on the transmission planning process used by utilities in Minnesota. The 2011 Biennial Transmission Planning Report is available at: www.minnelectrans.com

Project Notifications
To subscribe to the Project Certificate of Need docket and receive email notifications when information is filed that is related to the Certificate of Need for the Project, please visit www.puc.state.mn.us, click on the "Subscribe to a Docket" button, enter your email address and select "Docket Number" from the Type of Subscription dropdown box, then select "12" from the first Docket Number dropdown box and enter "1053" in the second box before clicking on the "Add to List" button. You must then click the "Save" button at the bottom of the page to confirm your subscription to the Project Docket. These same steps can be followed to subscribe to the Project Route Permit docket (ET6675/TL-12-1337).

Please visit http://www.itctransco.com/minnesota-iowa-project for more information on the Project. If you have questions about the process, you may contact the Minnesota regulatory staff listed below.

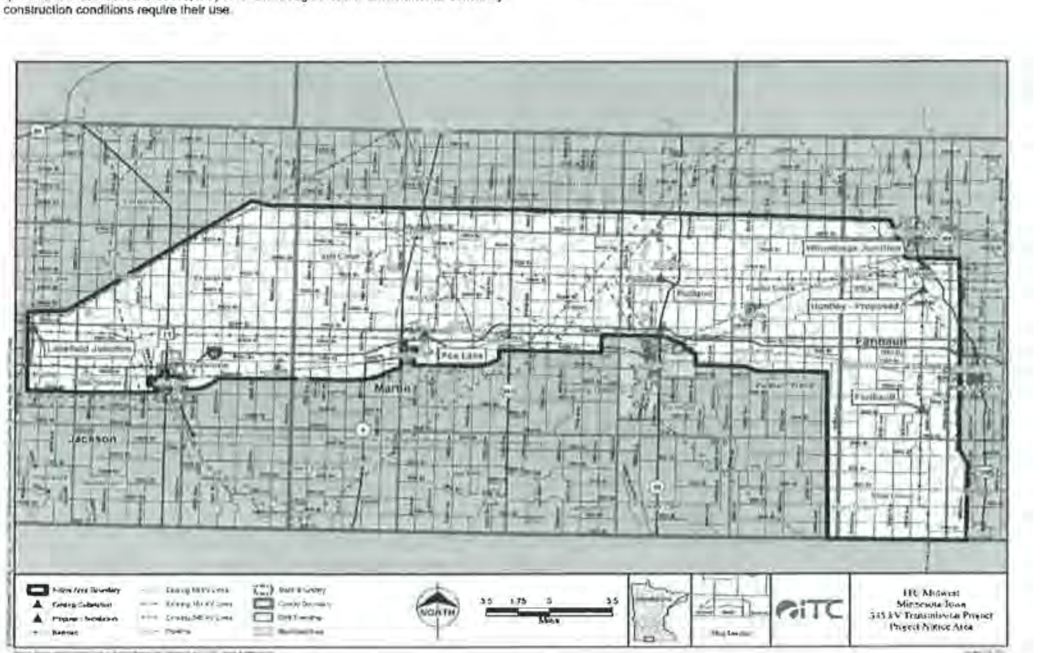
Minnesota Public Utilities Commission Scott Ek 121 7th Place East, Suite 350 St. Paul, Minnesota 55101 651.201.2255 800.657.3782 scott.ek@state.mn.us www.puc.state.mn.us	Minnesota Department of Commerce Ray Kirsch, State Permit Manager 85 7th Place East, Suite 500 St. Paul, Minnesota 55101 651.296.7588 800.657.3794 raymond.kirsch@state.mn.us

If you would like to have your name added to the Project Route Permit mailing list (MPUC Docket ET6675/TL-12-1337), you may register by visiting the Department of Commerce webpage at mn.gov/commerce/energyfacilities/, clicking on the "Transmission Lines" tab, selecting "Minnesota-Iowa 345 kV Transmission Project" from the listed projects, and then clicking the links next to the "Mailing List" heading. Alternately, you may contact Department of Commerce staff at the address above. Please be aware that the Route Permit mailing list may not be available for online registration until the Route Permit application is submitted.

A separate service list is maintained for the Certificate of Need proceeding. To be placed on the Project Certificate of Need mailing list (MPUC Docket ET6675/CN-12-1053), mail, fax, or email Robin Benson at Minnesota Public Utilities Commission, 121 7th Place E., Suite 350, St. Paul, MN 55101-2147, Fax: 651-297-7073 or robin.benson@state.mn.us.

The ITCM contact for questions about this Project is:

David B. Grover
Manager, Regulatory Strategy
ITC Midwest LLC
444 Cedar Street, Suite 1020
St. Paul, MN 55101
877-482-4829
minniowa@itctransco.com



RECEIVED JAN 28 2013

Wells Mirror 01/24/13 239541

LEGALS LEGALS LEGALS LEGALS LEGALS LEGALS LEGALS LEGALS LEGALS

Notice of Certificate of Need Application for the Minnesota-Iowa 345 KV Transmission Project in Jackson, Martin, and Faribault counties, Minnesota
MPUC Docket No.: ET6675/CN-12-1053

ITC Midwest LLC, a Michigan limited liability company ("ITCM"), is proposing to construct a 345 kV transmission line from its Lakefield Junction Substation in Jackson County, east through Martin County to the newly-proposed Huntley Substation in Faribault County, before turning south to the Iowa border (the "Project"). In Iowa, the transmission line will continue south to a new Ledyard Substation, near the City of Ledyard, Iowa, and then on to a substation near the City of Burt in Kossuth County, Iowa. ITCM will seek approval to construct the Minnesota portion of the Project from the Minnesota Public Utilities Commission ("Commission"). This letter is intended to provide you with notification of certain Project details and also to provide you with information on how you can participate in the Minnesota regulatory process.

The Project includes expanding the Lakefield Substation, a new Huntley Substation and several miles of reconfigured 161 kV transmission line near the Huntley Substation. The reconfigurations are necessary to relocate all 161 kV transmission substation facilities to the Huntley Substation from the existing Winnebago Substation which will be decommissioned. The Minnesota portion of the Project will be approximately 75 miles long. The area under consideration for the location of the Project is depicted on the map below. The Iowa portion of the Project will be permitted by the Iowa Utilities Board.

This notice is being provided to those who fall within one or more of the categories listed below as they relate to the area ("Notice Area") shown below:

- Landowners with property within the Notice Area;
- Residents within the Notice Area;
- Local units of government in and around the Notice Area;
- Local and State elected officials, or
- State and local government agencies and offices.

Regulatory Process Overview

For the Project, the Commission must determine whether the Project is needed (Certificate of Need) and where the Project should be located (Route Permit). Before the Project can be constructed, the Commission must first certify that the Project is needed. The certification of the Project is governed by Minnesota law, including Minnesota Statutes Section 216B.243, and Minnesota Rules Chapters 7829 and 7849, specifically Rules 7849.0010 to 7849.0400 and 7849.1000 to 7849.2100. In the Certificate of Need proceeding, the Commission will analyze whether ITCM has proposed the most appropriate size, type, and timing for the Project. The Certificate of Need application, once submitted, can be obtained by visiting the Commission's website at www.puc.state.mn.us in Docket No. ET6675/CN-12-1053.

In addition to certifying the Project, the Commission must also grant a Route Permit for the Project. The routing of the Minnesota portion of the Project is governed by Minnesota law, including Minnesota Statutes Chapter 216E and Minnesota Rules Chapter 7850. Information on the Route Permit application, once filed, can be obtained by visiting the Commission's website in Docket No. ET6675/TL-12-1337.

Minnesota Department of Commerce Energy Facility Permitting staff ("EFP") is responsible for conducting environmental review of the Project. EFP will prepare an environmental report for the Certificate of Need proceeding. EFP will prepare an environmental impact statement ("EIS") for the Route Permit proceeding. EFP may elect to combine these two documents and issue one document, an EIS, which satisfies the environmental review requirements for the Certificate of Need and Route Permit proceedings.

ITCM will be submitting an application for a Route Permit with at least two routes and will identify the route which ITCM prefers. Other routes can be proposed during the EIS scoping process to be completed by EFP. As part of its analysis, EFP will evaluate the routes proposed by ITCM in its Route Permit application and any other routes proposed during the scoping process that will aid in the Commission's decision on the Route Permit application. The Commission may determine that a route submitted by ITCM, or a route proposed during the scoping process, or some combination of such routes is the most appropriate route for the Project. Selection of a final route by the Commission will be based on evaluation of the routes, guided by the Factors identified in Minnesota Statutes Section 216E.03, Minnesota Rule 7850.4100, and stakeholder input received during the regulatory process.

For the 345 kV transmission line portions of the Project, ITCM anticipates that it will obtain a 200-foot wide permanent right-of-way. For the 161 kV transmission line portions of the Project, ITCM anticipates that it will obtain a 150-foot wide permanent right-of-way. Before beginning construction, ITCM will acquire property rights for the right-of-way, typically through an easement that will be negotiated with the landowner for each parcel.

The proposed structures for the Project are primarily single pole, weathering or galvanized steel structures. Where the 345 kV transmission line can be co-located with existing 161 kV transmission lines, double-circuit structures will be used. For the 161 kV transmission line portions of the Project, single pole single circuit and double circuit poles will be used to accommodate construction. Structures are proposed to be placed using spans of approximately 600 to 1,100 feet, with an average span of approximately 900 feet. Additionally, specialty structures, other than the single pole structures discussed above, may be used through areas of environmental sensitivity or where construction conditions require their use.

Need for the Project

The Project is needed to enhance regional reliability, increase transmission capacity to support additional generation, including generation to meet renewable energy standards throughout the region, and to reduce congestion which will enable more efficient delivery of energy.

The proposed facilities in Minnesota and Iowa were studied and approved in December 2011 as part of the Midwest Independent Transmission System Operator ("MISO") Multi-Value Projects ("MVP") portfolio in the 2011 MISO Transmission Expansion Plan.

The MVP projects were developed based on a broad assessment of benefits to strengthen and enhance reliability across the integrated transmission system on which all regional electric load and exports rely including:

- Substantial reductions in regional congestion costs;
- Reductions in transmission losses, effecting significant, broadly-shared cost savings, and
- Reductions in the region's installed capacity requirement, thus measurably reducing capacity costs throughout the region.

The Project is a portion of what is identified as Project 3 in the MVP portfolio. The Iowa portions of Project 3 are subject to review and approval by the Iowa Utilities Board.

Biennial Transmission Planning

Minnesota statutes include a requirement that each electric transmission owning utility in the state file a biennial transmission planning report with the Commission in the fall of odd years. These reports provide an excellent source of background information on the transmission planning process used by utilities in Minnesota. The 2011 Biennial Transmission Planning Report is available at: www.minnelectrans.com.

Project Notifications

To subscribe to the Project Certificate of Need docket and receive email notifications when information is filed that is related to the Certificate of Need for the Project, please visit www.puc.state.mn.us, click on the "Subscribe to a Docket" button, enter your email address and select "Docket Number" from the Type of Subscription dropdown box, then select "12" from the first Docket Number dropdown box and enter "1053" in the second box before clicking on the "Add to List" button. You must then click the "Save" button at the bottom of the page to confirm your subscription to the Project Docket. These same steps can be followed to subscribe to the Project Route Permit docket (ET6675/TL-12-1337).

Please visit http://www.itctransco.com/minnesota-iowa-project for more information on the Project. If you have questions about the process, you may contact the Minnesota regulatory staff listed below:

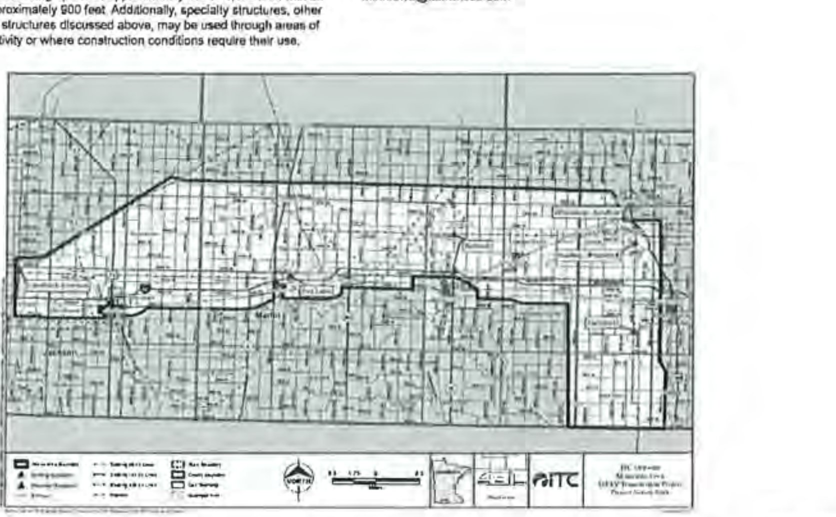
Minnesota Public Utilities Commission Scott Ek 121 7th Place East, Suite 350 St. Paul, Minnesota 55101 651.201.2255 800.657.3782 scott.ek@state.mn.us www.puc.state.mn.us	Minnesota Department of Commerce Ray Kirsch, State Permit Manager 85 7th Place East, Suite 500 St. Paul, Minnesota 55101 651.296.7588 800.657.3794 raymond.kirsch@state.mn.us

If you would like to have your name added to the Project Route Permit mailing list (MPUC Docket ET6675/TL-12-1337), you may register by visiting the Department of Commerce webpage at mn.gov/commerce/energyfacilities/, clicking on the "Transmission Lines" tab, selecting "Minnesota-Iowa 345 kV Transmission Project" from the listed projects, and then clicking the links next to the "Mailing List" heading. Alternately, you may contact Department of Commerce staff at the address above. Please be aware that the Route Permit mailing list may not be available for online registration until the Route Permit application is submitted.

A separate service list is maintained for the Certificate of Need proceeding. To be placed on the Project Certificate of Need mailing list (MPUC Docket ET6675/CN-12-1053), mail, fax, or email Robin Benson at Minnesota Public Utilities Commission, 121 7th Place E., Suite 350, St. Paul, MN 55101-2147, Fax: 651-297-7073 or robin.benson@state.mn.us

The ITCM contact for questions about this Project is:

David B. Grover
Manager, Regulatory Strategy
ITC Midwest LLC
444 Cedar Street, Suite 1020
St. Paul, MN 55101
877-482-4829
minniowa@itctransco.com



Paid Advertisement

(January 24, 2013)
#9577

RECEIVED JAN 2 4 2013

Worthington Daily Globe 1/24/13

239855

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

MPUC DOCKET NO. ET-6675/CN-12-1053

CERTIFICATE OF SERVICE

Jill N. Yeaman certifies that on the 20th day of February, 2013, she filed and served a true and correct copy of ITC Midwest LLC's **Notice Plan Compliance** via eDocket (www.edockets.state.mn.us). Said Document is also served via U.S. Mail or electronic service as designated on the attached Official Service List on file with the Minnesota Public Utilities Commission.

/s/ Jill N. Yeaman
Jill N. Yeaman

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Lisa	Agrimonti	lagrimonti@briggs.com	Briggs And Morgan, P.A.	2200 IDS Center80 South 8th Street Minneapolis, MN 55402	Electronic Service	No	OFF_SL_12-1053_CN-12-1053
Julia	Anderson	Julia.Anderson@ag.state.mn.us	Office of the Attorney General-DOC	1800 BRM Tower 445 Minnesota St St. Paul, MN 551012134	Electronic Service	Yes	OFF_SL_12-1053_CN-12-1053
Peter	Bellig	N/A		207 Cedar Cliff Rd Redwood Falls, MN 56283	Paper Service	No	OFF_SL_12-1053_CN-12-1053
Michelle F.	Bissonnette		HDR Engineering, Inc.	Golden Hills Office Center 701 Xenia Avenue South, Suite 600 Minneapolis, MN 55416	Paper Service	No	OFF_SL_12-1053_CN-12-1053
Joe	Butner	N/A	The StressCrete Group	14503 Wallick Rd Atchison, MN 66002	Paper Service	No	OFF_SL_12-1053_CN-12-1053
Matthew S.	Carstens	N/A	ITC Holdings Corp.	123 5th Street SE Cedar Rapids, IA 52401	Paper Service	No	OFF_SL_12-1053_CN-12-1053
George	Crocker	gwillc@nawo.org	North American Water Office	PO Box 174 Lake Elmo, MN 55042	Paper Service	No	OFF_SL_12-1053_CN-12-1053
Wanda	Davies	wdavies@windpower.com	Gamesa Energy USA, Great Plains Region	3001 Broadway St. NE, Suite 695 Minneapolis, MN 55413	Paper Service	No	OFF_SL_12-1053_CN-12-1053
Hadley	Davis	N/A	Sierra Club	85 Second St San Franccisco, MN 94105	Paper Service	No	OFF_SL_12-1053_CN-12-1053
Thomas	Davis			1161 50th Avenue Sherburn, MI 56171	Paper Service	No	OFF_SL_12-1053_CN-12-1053

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Michael	Dolan	mjdolan@dolan-mn.com		6117 Scotia Drive Edina, MN 55439	Paper Service	No	OFF_SL_12-1053_CN-12-1053
Jeremy	Duehr	jduehr@fredlaw.com	Fredrikson & Byron, P.A.	200 South Sixth Street Suite 4000 Minneapolis, Minnesota 55402-1125	Electronic Service	No	OFF_SL_12-1053_CN-12-1053
Cal	Dufault	Cal.Dufault@nrgenergy.com	NRG Energy	14893 Wilds Pkwy NW Prior Lake, MN 55372	Paper Service	No	OFF_SL_12-1053_CN-12-1053
Ledy	Dunkle	N/A	Aldridge Electric	844 E Rockland Rd Libertyville, IL 60498-3358	Paper Service	No	OFF_SL_12-1053_CN-12-1053
Patrick	Edwards	N/A		10006 305th St W Northfield, MN 55057	Paper Service	No	OFF_SL_12-1053_CN-12-1053
Jeff	Ehm	jehm@corvalgroup.com	Corval Group	1633 Eustis St Saint Paul, MN 55108	Electronic Service	No	OFF_SL_12-1053_CN-12-1053
Kristen	Eide Tollefson	ket@wro-ns.net	R-CURE	P O Box 129 Frontenac, MN 55026	Paper Service	No	OFF_SL_12-1053_CN-12-1053
Paul	Entinger	N/A		13821 300th St New Prague, MN 56071	Paper Service	No	OFF_SL_12-1053_CN-12-1053
Sharon	Ferguson	sharon.ferguson@state.mn.us	Department of Commerce	85 7th Place E Ste 500 Saint Paul, MN 551012198	Electronic Service	No	OFF_SL_12-1053_CN-12-1053
Dale	Fredrickson			12406 347th Street Lindstrom, MN 55045	Paper Service	No	OFF_SL_12-1053_CN-12-1053

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Travis	Germundson	travis.germundson@state.mn.us		Board of Water & Soil 520 Lafayette Rd Saint Paul, MN 55155	Electronic Service	No	OFF_SL_12-1053_CN-12-1053
David	Grover	dgrover@itctransco.com	ITC Midwest	444 Cedar St Ste 1020 Saint Paul, MN 55101-2129	Electronic Service	No	OFF_SL_12-1053_CN-12-1053
Burl W.	Haar	burl.haar@state.mn.us	Public Utilities Commission	Suite 350 121 7th Place East St. Paul, MN 551012147	Electronic Service	Yes	OFF_SL_12-1053_CN-12-1053
Heidi	Hahn	N/A		4778 Chester Ave Webster, MN 55088	Paper Service	No	OFF_SL_12-1053_CN-12-1053
Eric	Hansen	N/A	Pinnacle Engineering Inc.	11541 95th Ave N Maple Grove, MN 55369	Paper Service	No	OFF_SL_12-1053_CN-12-1053
Linda	Hanson	elcskh5@yahoo.com	W.O.L.F., Inc.	W1806 Wilson Road Hawkins, WI 54530	Paper Service	No	OFF_SL_12-1053_CN-12-1053
Randy, Rose	Haseleu	N/A		420 Hoyt Ave S Springfield, MN 56087	Paper Service	No	OFF_SL_12-1053_CN-12-1053
Vickie	Hessenius	N/A	CERTs	69144 270th St Dexter, MN 55926	Paper Service	No	OFF_SL_12-1053_CN-12-1053
Jason	Hoskins	N/A	Ulteig Engineers	c/o Jason Hoskins 4285 Lexington Ave N Saint Paul, MN 55126	Paper Service	No	OFF_SL_12-1053_CN-12-1053
Rick	Howden	N/A	Congressman Tim Walz	227 E Main St Ste 220 Mankato, MN 56001	Paper Service	No	OFF_SL_12-1053_CN-12-1053

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Mega	Hoye	megan.hoye@gmail.com		3124 West Calhoun Blvd. #405 Minneapolis, MN 55416	Paper Service	No	OFF_SL_12-1053_CN-12-1053
Karen	Kromar	karen.kromar@state.mn.us	MN Pollution Control Agency	520 Lafayette Rd Saint Paul, MN 55155	Electronic Service	No	OFF_SL_12-1053_CN-12-1053
John	Lindell	agorud.ecf@ag.state.mn.us	Office of the Attorney General-RUD	1400 BRM Tower 445 Minnesota St St. Paul, MN 551012130	Electronic Service	Yes	OFF_SL_12-1053_CN-12-1053
Kim	Lindquist	kim.lindquist@ci.rosemount.mn.us		2875 145th St W Rosemount, MN 55068	Electronic Service	No	OFF_SL_12-1053_CN-12-1053
Steven	Mittelstaedt	N/A		32097 Sandborn Dr Montgomery, MN 56069	Paper Service	No	OFF_SL_12-1053_CN-12-1053
Aaron	Moline	N/A	PennWell Corporation	1455 West Loop S Ste 400 Houston, TX 77027-9501	Paper Service	No	OFF_SL_12-1053_CN-12-1053
Robert K.	Nelson	six_bar_ranch@hotmail.com		1446 State Hwy 4 Sherburne, MN 56171	Paper Service	No	OFF_SL_12-1053_CN-12-1053
Elling	Olson	N/A	M A Mortenson Co	700 Meadow Ln N Minneapolis, MN 55422	Paper Service	No	OFF_SL_12-1053_CN-12-1053
Michael	Pangborn	N/A	NextEra Energy Resources	14000 Sundial Ct Eden Prairie, MN 55346	Paper Service	No	OFF_SL_12-1053_CN-12-1053
Bonnie	Patrick	N/A		30875 Minnesota Ave Lindstrom, MN 55065	Paper Service	No	OFF_SL_12-1053_CN-12-1053

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Bob	Patton	bob.patton@state.mn.us	MN Department of Agriculture	625 Robert St N Saint Paul, MN 55155-2538	Electronic Service	No	OFF_SL_12-1053_CN-12-1053
Angela	Piner	angela.piner@hdrinc.com	HDR, Inc.	Suite 600 701 Xenia Avenue South Suite 600 Minneapolis, MN 55416	Electronic Service	No	OFF_SL_12-1053_CN-12-1053
Jay	Porter	jporter@GREnergy.com	Great River Energy	12300 Elm Creek Blvd Maple Grove, MN 55369	Paper Service	No	OFF_SL_12-1053_CN-12-1053
David	Richardson	N/A	AMEC	800 Marquette Ave Ste 1200 Midwest Plaza Bldg Minneapolis, MN 55420-2876	Paper Service	No	OFF_SL_12-1053_CN-12-1053
Christian	Rieck	N/A		2819 167th LN NW Andover, MN 55304	Paper Service	No	OFF_SL_12-1053_CN-12-1053
Stoei	Rivesllp	N/A		33 S 6th St Ste 4200 Minneapolis, MN 55402	Paper Service	No	OFF_SL_12-1053_CN-12-1053
Jennie	Ross	jennie.ross@state.mn.us		395 John Ireland Blvd MS 620 Saint Paul, MN 55155	Electronic Service	No	OFF_SL_12-1053_CN-12-1053
Tod	Sherman	tod.sherman@dot.state.mn.us	Mn/DOT Metro District	Waters Edge 1500 West County Road B2 Roseville, MN 55113	Electronic Service	No	OFF_SL_12-1053_CN-12-1053
Dana	Slad	N/A	Avant Energy Services	200 S 6th St Ste 300 Minneapolis, MN 55402	Paper Service	No	OFF_SL_12-1053_CN-12-1053

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Adam	Sokolski	adam.sokolski@iberdrolaren.com	Iberdrola Renewables	701 fourth Avenue South Suite 1010 Minneapolis, MN 55415	Electronic Service	No	OFF_SL_12-1053_CN-12-1053
Erin	Stojan Ruccolo		Fresh Energy	408 Saint Peter St Ste 220 Saint Paul, MN 55102-1125	Paper Service	No	OFF_SL_12-1053_CN-12-1053
Tony	Sullins	N/A	U.S. Fish and Wildlife Service	Twin Cities Ecological Services Field Office 4101 American Blvd. E. Bloomington, MN 55425	Paper Service	No	OFF_SL_12-1053_CN-12-1053
Eric	Swanson	eswanson@winthrop.com	Winthrop Weinstine	225 S 6th St Ste 3500 Capella Tower Minneapolis, MN 554024629	Electronic Service	No	OFF_SL_12-1053_CN-12-1053
Steven	Swenson	N/A	Pipestone Publishing	115 2nd St NE PO Box 277 Pipestone, MN 56164	Paper Service	No	OFF_SL_12-1053_CN-12-1053
SaGonna	Thompson	Regulatory.Records@xcelenergy.com	Xcel Energy	414 Nicollet Mall FL 7 Minneapolis, MN 554011993	Electronic Service	No	OFF_SL_12-1053_CN-12-1053
Emily	Ulmer	N/A	Sierra Club	85 2nd St FL 2 San Francisco, CA 94105	Paper Service	No	OFF_SL_12-1053_CN-12-1053
Jeff	Vetsch	N/A	CERTs	112 Norwood St New London, MN 56273	Paper Service	No	OFF_SL_12-1053_CN-12-1053
James	Voller	N/A		33038 102nd Ave St Joseph, MN 56374	Paper Service	No	OFF_SL_12-1053_CN-12-1053
Guy	Wolf		Board Member of Clean Wisconsin	N3421 Mohawk Valley Road Stoddard, WI 54658	Paper Service	No	OFF_SL_12-1053_CN-12-1053

BRIGGS
BRIGGS AND MORGAN

2200 IDS Center
80 South 8th Street
Minneapolis MN 55402-21
tel 612.977.8400
fax 612.977.8650

December 4, 2012

Lisa M. Agrimonti
(612) 977-8656
lagrimonti@briggs.com

ELECTRONIC FILING

Dr. Burl W. Haar
Executive Secretary
Minnesota Public Utilities Commission
350 Metro Square Building
121 Seventh Place East
St. Paul, MN 55101

Re: 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
MPUC Docket No. ET6675/CN-12-1053

Dear Dr. Haar:

Enclosed for electronic filing is ITC Midwest LLC's Request for Exemptions from Certain Certificate of Need Application Content Requirements in the above-referenced matter. Also enclosed is the Certificate of Service.

Please call me with any questions.

Sincerely,

/s/ Lisa M. Agrimonti

Lisa M. Agrimonti

LMA/dba
Enclosures
cc: Service List

Briggs and Morgan, Professional Association
Minneapolis | St. Paul | www.briggs.com
Member - Lex Mundi, a Global Association of Independent Law Firms

STATE OF MINNESOTA
BEFORE THE
MINNESOTA PUBLIC UTILITIES COMMISSION

Beverly Jones Heydinger	Chair
David Boyd	Commissioner
J. Dennis O'Brien	Commissioner
Phyllis Reha	Commissioner
Betsy Wergin	Commissioner

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. ET6675/CN-12-1053

REQUEST FOR EXEMPTIONS FROM CERTAIN CERTIFICATE OF NEED APPLICATION CONTENT REQUIREMENTS

I. INTRODUCTION

ITC Midwest LLC ("ITCM" or "Company") respectfully submits this request for exemptions from certain content requirements for the Certificate of Need application pursuant to Minnesota Rule 7849.0200, Subpart 6. The Company intends to file a Certificate of Need application for the Minnesota-Iowa 345 kV Transmission Project ("Project") in early 2013. The Project includes a new 345 kV transmission line that connects the Lakefield Junction Substation in Jackson County, Minnesota to a new Huntley Substation in Faribault County, Minnesota, and then runs south into Iowa, connecting at the Ledyard Substation in Ledyard, Iowa, before heading south and west. A conceptual map showing the system configuration is attached as Attachment 1. [1]

The proposed facilities in Minnesota and Iowa are needed to relieve existing constraints on the transmission system in the Buffalo Ridge region, to provide outlet capability for existing and planned wind generation and to provide additional reliable capacity for future generation to interconnect to the system and deliver renewable energy. The proposed facilities were also studied and

[1] As shown in Exhibit A, certain Iowa portions of the Project will be constructed and owned by MidAmerican Energy Company.

designated as part of the Midwest Independent Transmission System Operator, Inc. ("MISO") Multi-Value Projects ("MVP") Portfolio. The Project is part of a MVP Portfolio of projects designed to reduce congestion on the grid, thereby enabling the delivery of more cost effective energy, and is needed to enhance regional reliability and support renewable portfolio standards ("RPS") in Minnesota and throughout the MISO footprint.

ITCM requests that the Minnesota Public Utilities Commission ("Commission") grant certain exemptions from the Certificate of Need application content requirements, as provided in Minnesota Rule 7849.0200, Subpart 6, primarily relating to power and energy forecasting. In most cases, alternative information will be submitted which will make the application more useful. ITCM believes that an application with information tailored to the specific circumstances of the Project would better serve the Commission and stakeholders in the review of this proposal.

II. BACKGROUND

ITCM is a transmission company that engages solely in the transmission of electric energy in interstate commerce. ITCM operates more than 6,800 circuit miles of transmission lines in Minnesota, Iowa, Illinois and Missouri, building and maintaining transmission infrastructure to enhance system integrity and reliability, reduce transmission constraints, and allow new generating resources to interconnect to the transmission grid. Since forming in 2007, ITCM has invested more than $980 million in the regional transmission system.

ITCM is a public utility under Section 203 of the Federal Power Act ("FPA"). As such, ITCM is subject to rate and other regulatory oversight by the Federal Energy Regulatory Commission ("FERC").

ITCM will be submitting applications for a Certificate of Need and a Route Permit to the Commission to construct the Minnesota portion of the Project. In Minnesota, ITCM proposes to construct approximately 75 miles of new 345 kV facilities that would run east from the Lakefield Junction Substation to a new Huntley Substation located by the existing Winnebago Substation, and then run south to cross the Iowa border, below Blue Earth, Minnesota. The four existing 161 kV lines that currently terminate at the Winnebago Substation would be relocated to terminate at the new Huntley Substation and the Winnebago Substation would be decommissioned.

After entering Iowa, the 345 kV line would continue south to connect to a new ITCM Ledyard Substation near Ledyard, Iowa, and further south to connect at MidAmerican Energy's new Kossuth County Substation near Burt, Iowa, and then onto substation facilities at or near MidAmerican Energy's existing Webster Substation near Fort Dodge, Iowa. The Iowa portion also includes a 345 kV connection between a new Kossuth County Substation near Burt, Iowa, and MidAmerican Energy's new O'Brien Substation to the west, near Sandborn, Iowa.

The Project will relieve a long-existing highly congested flowgate in southwestern Minnesota - the Fox Lake-Rutland 161 kV line - which is one of the most binding constraints on ITCM's entire system. The constraint limits ITCM's ability to transmit existing generation in the area, including wind generation. The Project will alleviate this constraint, providing the capacity necessary for existing and additional wind generation, particularly in the Buffalo Ridge Area, one of the region's premier wind resources.

The Minnesota and Iowa portions of the Project together are also identified as Project 3 in the MVP Portfolio of 17 projects included in the MISO Transmission Expansion Plan 2011 ("MTEP11"). As such, the Project is a high priority for enhancing the capacity and efficiency of the regional grid.

Following the approval of MISO's MVP Portfolio by the MISO Board of Directors on December 8, 2011, ITCM performed an analysis to determine the impacts of MVP Project 3 on the underlying transmission systems in Minnesota and Iowa. Part of that analysis was to determine what additional capacity MVP Project 3 could potentially create for existing and future generation facilities in the Buffalo Ridge Area and the impact this would have on the transmission grid.

The analysis included a Summer Peak case and a Summer Off-Peak case to identify the impact of MVP Project 3 on the transmission system throughout the year. The results of ITCM's analysis indicates that MVP Project 3 would provide approximately 1,000 megawatts of additional generation outlet during off-peak demand and approximately 2,500 megawatts of additional generation outlet during peak demand.

Some of the content requirements for a Certificate of Need are not germane to the circumstances that support constructing the Project. The Commission's rules for considering and granting Certificates of Need were designed decades ago, at a time when nearly all transmission improvements were driven by a growing demand for electricity within a specific utility's service area, and linked directly to the utility's generation to meet that demand. Consequently, the rules were drafted to require detailed information about the utility's system, including customer demand and generation resources, to demonstrate the need to add the proposed project to that system.

In contrast, ITCM's proposal is to create a 345 kV connection between southwestern Minnesota and northwestern Iowa to enhance the reliability and capacity of the regional grid, rather than the transmission network within a specific utility's service territory. In addition, since ITCM is a transmission-only utility, it does not own any generation resources or have any retail customers, making certain information requirements inapplicable to ITCM. As described in more detail below, the application will provide more useful information for the Commission and other stakeholders to assess the need for the Project if it is customized to the specific circumstances the Project is intended to address. Consequently, ITCM requests that the Commission grant certain exemptions as detailed below. Wherever practical, ITCM has suggested providing alternative, available information to assist the Commission in its decision-making process.

III. EXEMPTION REQUESTS

A. Legal Standard

Minnesota Rules, Chapter 7849 sets forth the requirements for Certificate of Need applications. The Commission has authority to grant exemptions from the requirements of Chapter 7849 in accordance with Rule 7849.0200, Subp. 6, which provides:

> Subp. 6 **Exemptions.** Before submitting an application, a person is exempted from any data requirement of this chapter if the person (1) requests an exemption from specified rules, in writing to the commission, and (2) shows that the data requirement is unnecessary to determine the need for the proposed facility or may be satisfied by submitting another document. A request for exemption must be filed at least 45 days before submitting an application. The commission shall respond in writing to a request for exemption within 30 days of receipt and include the reasons for the decision. The commission shall file a statement of exemptions granted and reasons for granting them before beginning the hearing.

The Commission may grant exemptions when the data requirements (1) are unnecessary to determine need in a specific case; or (2) can be satisfied by submitting documents other than those identified in the rules.

B. Exemption Requests

ITCM requests exemptions from parts of the following content requirements for Certificate of Need applications:

Table 1- Requested Data Exemptions

Minnesota Rule	Scope of Exemption Request
Rule 7849.0240, Subp. 2(B) and 7849.0120(A)(3)- Promotional Activities	Request full exemption.
Rule 7849.0260, Subp. (C)(5)- Effect of Project on Rates Systemwide	Request to submit alternative data in the form of MISO's MVP cost allocation calculation showing costs that will be allocated to Minnesota utilities for MVP Project 3, and ITCM's estimated revenue requirement for the Project.
Rule 7849.0260, Subps. (A)(3) and C(6)- Proposed High Voltage Transmission Facilities and Alternatives Application	Request to substitute data in the form of overall system losses instead of line losses.
Rule 7849.0260(D)- System Map	Request to submit alternative map of ITCM's transmission network in Minnesota and Iowa.
Rule 7849.0270- Forecasting (except Subpart 2(f)); Rule 7849.0120 A(1)- Criteria (forecasting) Rule 7849.0280 (B) through (G), and (I)- System Capacity	Request that ITCM be exempt from providing forecasting and capacity information for its system and provide substitute information. Proposed substitute information includes: • Evaluation of the Fox Lake-Rutland-Winnebago 161 kV constraint, including information about how it is one of the most binding constraints on ITCM's system, how it has contributed to wind energy curtailment, and how it contributes to

Minnesota Rule	Scope of Exemption Request
	the Minnesota Narrow Constrained Area (“NCA”); • Analysis of how the Project will relieve the Fox Lake-Rutland-Winnebago 161 kV constraint, and the relationship and impact of the Project on the Minnesota NCA; • Analysis of how the Project will enable deliveries of existing wind energy, and support development of additional generation, including wind; • Discussion of the existing Lakefield and Trimont special protection schemes (“SPSs”) and how the Project will eliminate the necessity for the Lakefield and Trimont SPSs; • Historical and forecasted load data for the Project area and a discussion of how limited load exacerbates congestion; • Average system weekday load factor data; • Analysis of need for additional transmission capacity to serve future wind projects based on status of Buffalo Ridge as premier wind resources, including discussion of MISO queue information regarding the demand for interconnection and transmission capacity in the Project area, RPS requirements in Minnesota, and other MISO states and MISO wind zones assumed in MVP studies; • Discussion of MISO energy markets and the effect of congestion on

Minnesota Rule	Scope of Exemption Request
	wholesale prices; • Information on recent curtailment and electrical system constraint hours in the Project area; and • Discussion of the impact of existing constraints on further wind energy development in southwestern Minnesota and how the Project will increase the amount of wind generation outlet capability in the region.
Rule 7849.0290- Conservation; Rule 7849.0120, Subp. A(2) Criteria (conservation programs)	Request full exemption.
Rule 7849.0300- Consequences of Delay	Request exemption from requirement to provide analysis using three demand scenarios. ITCM proposes to provide a discussion regarding potential impacts of Project delay on generational support/RPS mandates, delivery congestion, and regional system reliability.
Rule 7849.0330, Subp. (G)- Major Features Between Transmission Line Endpoints	Request exemption from requirement that environmental data for routes focus on area within three miles of the Project's endpoints. ITCM proposes providing environmental data within the notice corridor that focuses on areas within a half mile of the existing Lakefield and Winnebago Substations, the new Huntley Substation, and the point at which the Project crosses from Minnesota into Iowa.

Minnesota Rule	Scope of Exemption Request
Rule 7849.0340- Alternative of No Facility	Request exemption from requirement to provide no-facility alternative using three confidence levels. In addition, request exemption from requirements to provide information related to ITCM's generation assets. ITCM proposes providing data discussion regarding potential impacts of no facility alternative on generation support/RPS mandates, delivery congestion, and regional system reliability.

Each of these requests is discussed in more detail below. This request is being made at least 45 days before submitting the Project's application for a Certificate of Need, as required by Minnesota Rule 7849.0200, Subpart 6. ITCM anticipates filing its application for a Certificate of Need (and Route Permit) for the Project in first quarter 2013.

1. *Minnesota Rules 7849.0240, Subpart 2(B) and 7849.0120(A)(3)- Promotional Practices*

Minnesota Rule 7849.0240, Subpart 2(B) requires that a Certificate of Need application contain "an explanation of the relationship of the proposed facility to . . . promotional activities that may have given rise to the demand for the facility." Minnesota Rule 7849.0120(A)(3) contains similar requirements. Promotional practices include actions or activities that directly or indirectly give rise to the need for the facility, including advertising, billing practices, promotion of increased use of electricity, or other marketing activities.[2] ITCM does not directly serve end-users of electric service and has not engaged in promotional activities that could have given rise to the need for the proposed Project. The Commission has previously determined that an exemption from this requirement is appropriate for other entities that do not serve retail customers.[3]

---

[2] Minn. R. 7849.0010, subp. 24.

[3] *See, e.g.*, *In the Matter of the Application of Prairie Rose Wind, LLC for a Certificate of Need for up to 200 MW wind project in Rock and Pipestone Counties*, Docket No. IP6838/CN-10-80, ORDER APPROVING EXEMPTION PETITION, OES Cmts at 3 (May 14, 2010); *In the Matter of the Application of Pleasant Valley Wind, LLC for a Certificate of Need for the 299.5 MW Pleasant Valley Project in Dodge, Olmstead and Mower Counties*, Docket No. IP6828/CN-09-937, ORDER APPROVING EXEMPTION REQUESTS, OES Cmts at 2 (Oct. 8, 2009); *In the Matter of the Application of Goodhue Wind, LLC for a*

2. *Minnesota Rule 7849.0260(C)(5)- Effect of Project on Rates Systemwide*

Minnesota Rule 7849.0260(C)(5) requires an applicant to estimate its proposed project's "effect on rates systemwide and in Minnesota, assuming a test year beginning with the proposed in-service date." ITCM requests an exemption from this requirement because it is not a Minnesota public utility whose rates are regulated by the Commission. Rather, as a transmission-only utility, ITCM's rates are regulated by the FERC and the prices for providing transmission service are governed by the MISO tariff. This specific project is an MVP and, as such, its costs will be allocated across the MISO footprint to all load on the basis of MISO's MVP cost allocation process.[4] This same cost allocation methodology would apply regardless of project owner. Information regarding the expected Project cost, the MVP allocation methodology, and the share that will be allocated to Minnesota utilities' load would be more useful in evaluating the Project so ITCM proposes to provide this data as substitute information.

3. *Minnesota Rule 7849.0260 A(3) and C(6)- Losses*

Minnesota Rule 7849.0260 A(3) requires the applicant provide information regarding "the expected losses under projected maximum loading and under projected average loading in the length of the transmission line and at the terminals or substations." ITCM seeks an exemption from this requirement and C(6) which has similar language. Because electricity cannot be directed to "travel" from one point to another on a specific transmission line, energy losses occur throughout the network of lines that comprise the regional transmission system. As a result, losses are affected by the configuration of the system network, and calculations of losses associated with an individual transmission line are not meaningful.

ITCM proposes to provide loss information on a system basis and requests that the Commission accept this information in satisfaction of Rule 7849.0260, A(3) and C(6). As an alternative to individual line losses, the Commission has

---

Certificate of Need for a 78 MW Wind Project and Associated Facilities in Goodhue County, Docket No. IP6701/CN-09-1186, ORDER FINDING APPLICATION COMPLETE AND INITIATING INFORMAL REVIEW PROCESS at 2-3 (Dec. 30, 2009).

[4] *In re Midwest Independent Transmission System Operator , Inc.*, 133 FERC ¶ 61,221 (2010).

routinely accepted analyses of the system losses avoided due to the addition of a project to the system as a whole.[5]

4. *Minnesota Rule 7849.0260(D)- System Map*

Minnesota Rule 7849.0260(D) calls for a map showing the applicant's system or load center to be served by the proposed transmission lines. As a transmission company, ITCM does not directly serve load. ITCM proposes to submit a map showing ITCM's network of transmission lines in Minnesota and Iowa.

5. *Minnesota Rules 7849.0270 and 7849.0120 A(1)- Peak Demand and Annual Consumption Forecast*

Minnesota Rule 7849.0270 requires the applicant to provide "data concerning peak demand and annual electrical consumption within the applicant's service area and system." The subparts require the applicant to detail the forecast methodology employed, identify the databases used, and the assumptions made in preparing the forecasts, as well as present data by customer class categories and average system weekday load factor by month. This information is intended to be part of the Commission's need analysis in Rule 7849.0120 A(1).

These forecasting requirements would not provide the data most relevant to assessing the need for the Project. Even if the Project were needed to serve customer demand, a breakdown of this information by customer class would not inform the analysis. ITCM therefore requests an exemption from Rule 7849.0270 in its entirety, with the exception of Subpart 2(F) (average system weekday load

---

[5] *In the Matter of the Application of Northern States Power Company d/b/a Xcel Energy for a Certificate of Need for the Upgrade of the Southwest Twin Cities Bluff Creek – Westgate Area 69 kV Transmission Line To 115 kV Capacity*, Docket No. E002/CN-11-332, ORDER GRANTING APPLICANT'S EXEMPTION REQUEST, OES Cmts at 3 (Nov. 16, 2011) ("Twin Cities Bluff Creek–Westgate Exemption Order"); *In the Matter of the Application of Northern States Power Company d/b/a Xcel Energy and Great River Energy for a Certificate of Need for the Upgrade of the Southwest Twin Cities (SWTC) Chaska Area 69 kV Transmission Line to 115 kV Capacity*, Docket No. E002/CN-11-826, ORDER GRANTING APPLICANTS' EXEMPTION REQUEST, OES Cmts at 3 (Nov. 4, 2011) ("SWTC-Chaska Area Exemption Order"); *In the Matter of the Application of Great River Energy and Minnesota Power for a Certificate of Need for a 115 kV High Voltage Transmission Line in St. Louis and Carlton Counties*, Docket No. E-002/CN-10-973, ORDER APPROVING EXEMPTIONS AND PROPOSED PROVISION OF ALTERNATIVE DATA, OES Cmts at 3 (Nov. 2, 2010) ("St. Louis/Carlton Counties Exemption Order");

factors). Given the data's limited value, the Commission has granted such an exemption in other cases.[6]

ITCM proposes to provide alternative information on local constraint issues in southwestern Minnesota. Constraints on the electrical system, particularly the Fox Lake–Rutland–Winnebago 161 kV line, limits the amount of energy that can be delivered to customers. There are several consequences of these constraints. First, more and more wind generation is being curtailed over time, inhibiting existing clean, low-cost renewable energy from nearby end-user customers. Curtailment of existing wind resources also lowers expected tax revenues to local governments and decreased lease payments to area landowners. Second, curtailment stymies further development of Minnesota's best (low cost) wind resource by discouraging other developers from investing in this area. In the application, ITCM proposes to provide a full discussion of these issues, including ITCM's analysis of how the Minnesota portion of MVP Project No. 3 will affect the Fox Lake-Rutland-Winnebago 161 kV constraint.

ITCM will also provide historical and forecast demand in the Project area to explain how peak demand in the area is not anticipated to grow sufficiently to reduce the need for additional transmission to relieve the area's constraint.

Reliability information will also be provided. Specifically, ITCM will describe the existing Lakefield and Trimont SPSs that have had to be implemented to maintain the safe and reliable operation of the transmission system as additional generation has come on line. ITCM no longer deems these operational schemes to be acceptable solutions to system deficiencies, and the Project is expected to eliminate the need for these particular SPSs.

In addition, ITCM, proposes to provide substitute information describing the forecasting used in the course of evaluating the Project, specifically, data supporting the need for MVP Projects 3 and 4. This data includes MISO's analysis of the MVP Portfolio.

In developing the MVP Portfolio, MISO focused on a regional solution to support the existing renewable portfolio and energy standards adopted in 12 states

[6] Bemidji-Grand Rapids Exemption Order, OES Cmts at 5-6; 345 kV Projects Exemption Order at 11; *In the Matter of the Otter Tail Power Company Application for a Certificate of Need for a 115 kV Transmission Line Between Appleton and Canby Substations*, Docket No. E- 017/CN-06-677, ORDER GRANTING EXEMPTIONS AND APPROVING NOTICE PLAN AS MODIFIED at 3, 5 (Aug. 1, 2006) ("Appleton-Canby Exemption Order").

within the MISO footprint.[7] The final MVP Portfolio, consisting of 17 Projects, will enable delivery of 41 million MWh of renewable energy per year to meet renewable energy mandates and goals.[8] These transmission projects will enable the renewable energy mandates within the MISO footprint to be met at the lowest delivered wholesale cost.[9] This required the development of system alternatives that would allow delivery of renewable energy to large load centers from higher renewable availability areas and these areas are typically located further away from large load centers.[10] MVP Project Nos. 3 and 4 are two of the projects MISO designated as meeting these planning objectives.

In addition, Minnesota Rule 7849.0270, Subpart 2(E) calls for "the estimated annual revenue requirement per kilowatt hour for the system in current dollars" for each forecast year. This requirement appears to be intended for load serving public utilities and not transmission service providers like ITCM. ITCM proposes to instead provide information describing how costs will be allocated to Minnesota utilities for MVP Project 3 and ITCM's revenue requirement for the Project.

A list of all the alternative information ITCM proposes to provide under Minnesota Rule 7849.0270 is included in Table 1 in Section B above.

Finally, Minnesota Rule 7849.0270, Subpart 2(F) requires average system weekday load factors by month. ITCM is able to project average system weekday load factors by month and will provide these estimates.

6. *Minnesota Rule 7849.0280, (B) through (G) and (I)- System Capacity*

Minnesota Rule 7849.0280 requires the applicant to "describe the ability of its existing system to meet the demand for electrical energy forecast in response to Minn. R. part 7849.0270, and the extent to which the proposed facility will increase this capability." Only Parts A and H relate to transmission lines; the other parts relate to generation capacity. The Commission has granted requests

---

[7] *See* MTEP11 at 50 and Figure 4.1-6.
[8] MTEP11 at 42.
[9] MTEP11 at 44.
[10] MTEP11 at 44-45 and Figure 4.1-3.

for exemption from Rule 7849.0280(B) through (G) and (I) where need is based on the adequacy of transmission, not generation.[11]

7. *Minnesota Rules 7849.0290 and 7849.0120 A(2)- Conservation Programs*

Minnesota Rule 7849.0290 requires an applicant to describe its energy and conservation plans, including load management and the effect of conservation in reducing the applicant's need for new generation and transmission facilities. Minnesota Rule 7849.0120 A(2) requires the Commission to evaluate this information in determining need.

The Commission has previously determined that this rule is "designed to ensure that regulated utilities, providing essential services to captive customers, give conservation the same careful consideration they give to new generation in planning to meet the future needs of their service areas."[12] Given that ITCM is a transmission-only utility, however, it has no relationship with end-users that can affect their level of energy consumption and thus the requirements of Minnesota Rule part 7849.0290 are "onerous and essentially unhelpful" to the Commission's determination.[13] ITCM requests an exemption from this requirement in its entirety.

8. *Minnesota Rule 7849.0300- Consequences of Delay*

Minnesota Rule 7849.0300 asks for a discussion of the consequences of delay in developing the proposed project. As part of this requirement, the Rule requires an analysis of the consequences of delay relative to specific statistically based levels of demand. As with the demand and consumption information required under Minnesota Rule 7849.0270, this demand information is inapplicable to a transmission-only utility. ITCM proposes to provide substitute information in the form of a discussion of the impacts a delay of the Project would have on renewable generation support and satisfaction of RPS requirements, congestion relief, and general regional reliability.

---

[11] Twin Cities Bluff Creek-Westgate Exemption Order, OES Cmts at 4; SWTC-Chaska Area Exemption Order, OES Cmts at 4; Greater Rochester Area Exemption Order at 2, 3; Appleton-Canby Exemption Order at 3, 5.

[12] *In the Matter of the Application of Rapids Power LLC for a Certificate of Need for its Grand Rapids Cogeneration Project*, Docket No. IP-4/CN-01-1306, ORDER GRANTING EXEMPTIONS FROM FILING REQUIREMENTS at 6 (Oct. 9, 2001).

[13] *Id.* (waiving the requirements of Minnesota Rule 7849.0290 for a Certificate of Need application for a wholesale generation plant).

Requests for exemption from the requirements of Rules 7849.0300 in favor of providing information more relevant to the need for the project have been approved by the Commission in other recent Certificate of Need proceedings for transmission lines.[14]

9. *Minnesota Rule 7849.0330 (G) Major Features Between Transmission Line Endpoints*

Rule 7849.0330(G) requires an applicant to provide environmental information for a region encompassing the likely routes between endpoints, emphasizing the area within three miles of the endpoints. ITCM has identified a Notice Area for the Project's Certificate of Need and has identified routes within the Notice Area that will be presented in a Route Permit application submitted to the Commission in coordination with the Certificate of Need application. Given the development of the Project's proposed routes at this time, ITCM believes it would be appropriate to narrow the three-mile areas around the Project's endpoints in Minnesota to the half mile areas around: (i) the Lakefield Junction Substation where the Project begins; (ii) the existing Winnebago and proposed new Huntley substations; and (iii) the border point where the proposed routes cross from Minnesota into Iowa. The Commission granted a partial exemption consistent with this request for the Mud Lake – Wilson 115 kV Project.[15]

10. *Minnesota Rule 7849.0340- Three Levels of Demand for No-Facility Alternative Analysis*

Minnesota Rule 7849.0340(C) requires an analysis "of equipment and measures that may be used to reduce the environmental impact of the alternative of no facility." This discussion is an important element of a determination of the need for new transmission infrastructure. ITCM fully intends to discuss these issues, but asks the Commission to vary this rule in two ways.

First, the rule asks for a discussion of the alternative of "no facility" and requires that analysis to use the same three levels of demand required in Rule 7849.0300. Consistent with its request above for exemption from Rule 7849.0300, ITCM

---

[14] Twin Cities Bluff Creek-Westgate Exemption Order, OES Cmts at 4-5; SWTC-Chaska Area Exemption Order, OES Cmts at 5; Greater Rochester Area Exemption Order at 2-3; *In the Matter of the Application for Certificates of Need for Three 115 kV Transmission Lines in Southwestern Minnesota*, MPUC Docket No. E-002/CN-06-154, ORDER GRANTING EXEMPTIONS at 3-4, 7 (July 24, 2006) ("Southwestern Minnesota 115 kV Lines Exemption Order").

[15] Mud Lake Order at 5.

requests an exemption from the requirement to analyze three different demand levels for the no-facility alternatives.

Second, Minnesota Rule 7849.0340(A) requires an applicant to submit data on the impact of the "no facility" alternative on the applicant's existing and committed generation and transmission facilities. As detailed above, ITCM does not own generation and therefore this rule is not entirely applicable to ITCM.[16] ITCM proposes to provide substitute information in the form of a discussion of the impacts a delay of the Project would have on renewable generation support and the satisfaction of RPS requirements, congestion relief, and general regional reliability.

Similar requests for exemptions from the requirements of Minnesota Rule 7849.0340 have been approved by the Commission in other recent transmission line Certificate of Need dockets.[17]

IV. CONCLUSION

ITCM believes the Commission's Certificate of Need process would be best served by an application that presents information tailored to address the factors relevant to evaluating the need for its proposed 345 kV transmission line. Therefore, ITCM respectfully requests that the Commission grant its exemption requests.

---

[16] *See In the Matter of the Application of Calpine Corporation for a Certificate of Need for a Large Electric Generating Facility*, MPUC Docket No. IP-6345/CN-03-1884, ORDER GRANTING EXEMPTIONS FROM FILING REQUIREMENTS AND LIMITING SCOPE at 8 (Feb. 6, 2004) (granting request to provide alternative data on the impacts of delay because independent power producer did not have system facilities that could be impacted by delay as contemplated by Rule 7849.0340).

[17] Twin Cities Bluff Creek-Westgate Exemption Order, OES Cmts at 4-5; SWTC-Chaska Area Exemption Order, OES Cmts at 5; Greater Rochester Area Exemption Order at 2, 3; Southwestern Minnesota 115 kV Lines Exemption Order at 4, 7.

Dated: December 4, 2012

BRIGGS AND MORGAN, P.A.

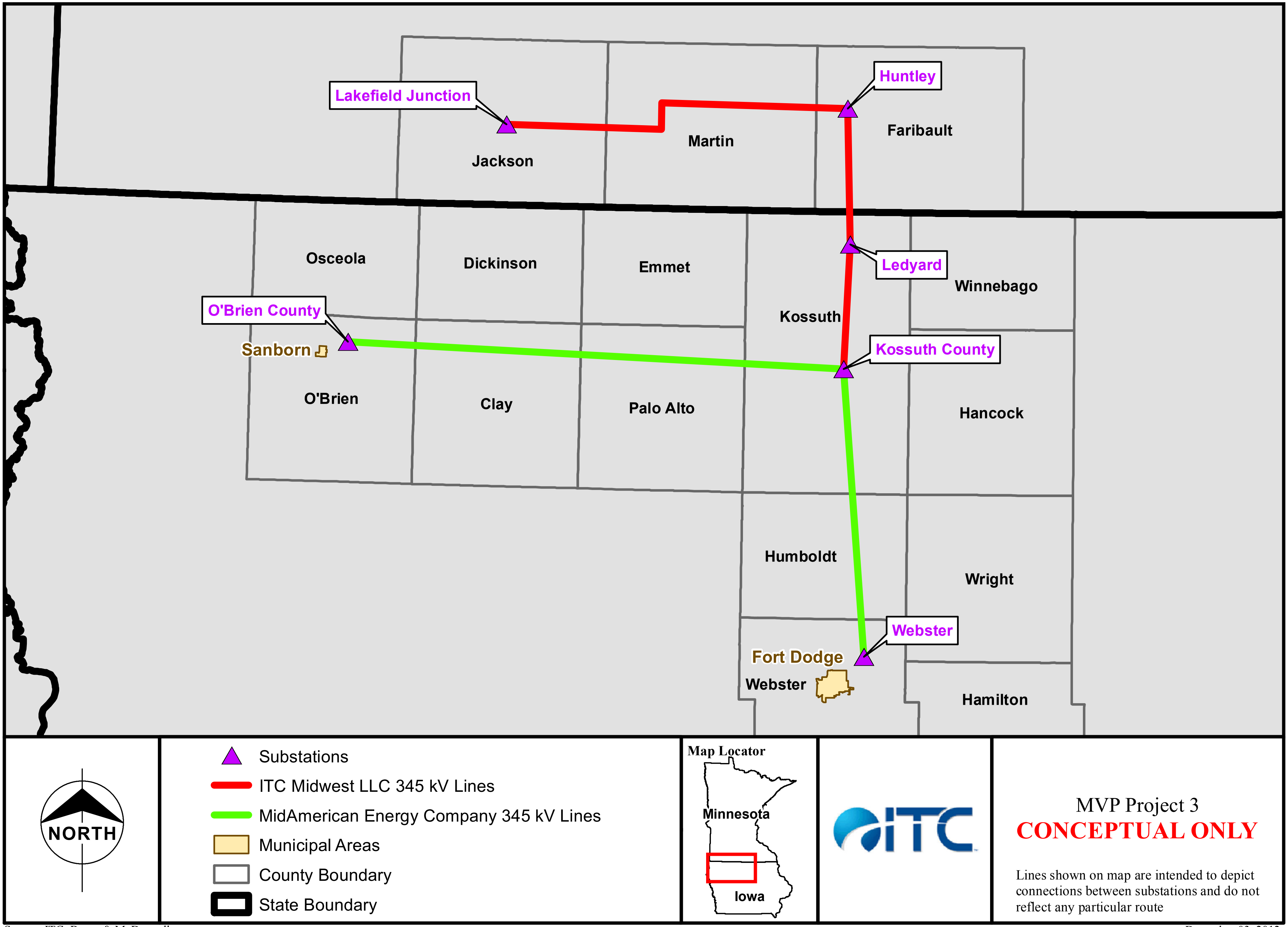
By: _/s/Lisa Agrimonti_
Lisa Agrimonti (#272474)
Kodi Jean Church (#391056)
2200 IDS Center
80 South Eighth Street
Minneapolis, MN 55402-2157
(612) 977-8400

FOR ITC MIDWEST LLC

4888863

ATTACHMENT 1 TO ITC MIDWEST LLC'S REQUEST FOR EXEMPTIONS

\\ESPSRV\Data\Projects\ITC\66742_HUNTLEY_LAKEFIELD\GIS\DataFiles\ArcDocs\Lakefield_Huntley_Iowa_Briggs_Map_120312.mxd



MVP Project 3

CONCEPTUAL ONLY

Lines shown on map are intended to depict connections between substations and do not reflect any particular route

Source: ITC; Burns & McDonnell.

December 03, 2012

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

MPUC Docket No. ET6675/CN-12-1053

CERTIFICATE OF SERVICE

Diane Bailey-Andersen certifies that on the 4th day of December 2012, she filed and served a true and correct copy of ITC Midwest LLC's **Request for Exemptions From Certain Certificate of Need Application Content Requirements** via eDocket (www.edockets.state.mn.us). Said Document(s) were also served via U.S. Mail as designated on the Official Service List on file with the Minnesota Public Utilities Commission.

/s/ Diane Bailey-Andersen
Diane Bailey-Andersen

Print Close

Service List Member Information

Electronic Service Member(s)

Last Name	First Name	Email	Company Name	Delivery Method	View Trade Secret
Agrimonti	Lisa	lagrimonti@briggs.com	Briggs And Morgan, P.A.	Electronic Service	No
Anderson	Julia	Julia.Anderson@ag.state.mn.us	Office of the Attorney General-DOC	Electronic Service	Yes
Ferguson	Sharon	sharon.ferguson@state.mn.us	Department of Commerce	Electronic Service	No
Haar	Burl W.	burl.haar@state.mn.us	Public Utilities Commission	Electronic Service	Yes
Lindell	John	agorud.ecf@ag.state.mn.us	Office of the Attorney General-RUD	Electronic Service	Yes
Lindquist	Kim	kim.lindquist@ci.rosemount.mn.us	N/A	Electronic Service	No
Sherman	Tod	tod.sherman@dot.state.mn.us	Mn/DOT Metro District	Electronic Service	No
Sokolski	Adam	adam.sokolski@iberdrolaren.com	Iberdrola Renewables	Electronic Service	No
Swanson	Eric	eswanson@winthrop.com	Winthrop Weinstine	Electronic Service	No
Thompson	SaGonna	Regulatory.Records@xcelenergy.com	Xcel Energy	Electronic Service	No

Paper Service Member(s)

Last Name	First Name	Company Name	Address	Delivery Method	View Trade Secret
Bellig	Peter	N/A	207 Cedar Cliff Rd, Redwood Falls, MN-56283	Paper Service	No
Bissonnette	Michelle F.	HDR Engineering, Inc.	Golden Hills Office Center, 701 Xenia Avenue South, Suite 600, Minneapolis, MN-55416	Paper Service	No
Brandt	Derek	Hartford Group Inc.	PMB 506, 7455 France Ave S, Edina, MN-55435-4702	Paper Service	No
Butner	Joe	The StressCrete Group	14503 Wallick Rd, Atchison, MN-66002	Paper Service	No
Carstens	Matthew S.	ITC Holdings Corp.	123 5th Street SE, Cedar Rapids, IA-52401	Paper Service	No
Crocker	George	North American Water Office	PO Box 174, Lake Elmo, MN-55042	Paper Service	No
Davies	Wanda	Gamesa Energy USA, Great Plains Region	3001 Broadway St. NE, Suite 695, Minneapolis, MN-55413	Paper Service	No
Davis	Thomas	N/A	1161 50th Avenue, Sherburn, MI-56171	Paper Service	No
Davis	Hadley	Sierra Club	85 Second St, San Franccisco, MN-94105	Paper Service	No
Dolan	Michael	N/A	6117 Scotia Drive, Edina, MN-55439	Paper Service	No
Duehr	Jeremy	Malcolm Pirnie, Inc.	924 Vista Ridge Lane, Shakopee, Minnesota-55379	Paper Service	No
Dufault	Cal	NRG Energy	14893 Wilds Pkwy NW, Prior Lake, MN-55372	Paper Service	No
Dunkle	Ledy	Aldridge Electric	844 E Rockland Rd, Libertyville, IL-60498-3358	Paper Service	No
Edwards	Patrick	N/A	10006 305th St W, Northfield, MN-55057	Paper Service	No
Eide Tollefson	Kristen	R-CURE	P O Box 129, Frontenac, MN-55026	Paper Service	No
Entinger	Paul	N/A	13821 300th St, New Prague, MN-56071	Paper Service	No
Finn	Huck	API Construction Company	1100 Old Hwy 8 NW, St. Paul, MN-55113	Paper Service	No
Fredrickson	Dale	N/A	12406 347th Street, Lindstrom, MN-55045	Paper Service	No
Frost	Jenny	Ulteig Engineers	c/o Jason Hoskins, 4285 Lexington Ave N, Saint Paul, MN-55126	Paper Service	No
Gohmann	Curt, Mary Pat	N/A	35123 County Road 2, St Joseph, MN-56374	Paper Service	No
Grover	David	ITC Midwest	444 Cedar St Ste 1020, Saint Paul, MN-55101-2129	Paper Service	No
Guajardo	Floyd	PennWell Corporation	1455 West Loop S Ste 400, Houston, TX-77027-9501	Paper Service	No
Hahn	Heidi	N/A	4778 Chester Ave, Webster, MN-55088	Paper Service	No
Hansen	Eric	Pinnacle Engineering Inc.	11541 95th Ave N, Maple Grove, MN-55369	Paper Service	No
Hanson	Linda	W.O.L.F., Inc.	W1806 Wilson Road, Hawkins, WI-54530	Paper Service	No
Haseleu	Randy, Rose	N/A	420 Hoyt Ave S, Springfield, MN-56087	Paper Service	No
Henry	Kris	N/A	28441 Garrett Ave, Northfield, MN-55057	Paper Service	No
Hessenius	Vickie	CERTs	69144 270th St, Dexter, MN-55926	Paper Service	No
Howden	Rick	Congressman Tim Walz	227 E Main St Ste 220, Mankato, MN-56001	Paper Service	No
Mitchell	Brian	Corval Group	1633 Eustis St, Saint Paul, MN-55108	Paper Service	No
Mittelstaedt	Steven	N/A	32097 Sandborn Dr, Montgomery, MN-56069	Paper Service	No
Olson	Elling	M A Mortenson Co	700 Meadow Ln N, Minneapolis, MN-55422	Paper Service	No
Pangborn	Michael	NextEra Energy Resources	14000 Sundial Ct, Eden Prairie, MN-55346	Paper Service	No
Patrick	Bonnie	N/A	30875 Minnesota Ave, Lindstrom, MN-55065	Paper Service	No
Piner	Angela	HDR, Inc.	Suite 600, 701 Xenia Avenue South Suite 600, Minneapolis, MN-55416	Paper Service	No
Porter	Jay	Great River Energy	12300 Elm Creek Blvd, Maple Grove, MN-55369	Paper Service	No
Richardson	David	AMEC	800 Marquette Ave Ste 1200, Midwest Plaza Bldg, Minneapolis, MN-55420-2876	Paper Service	No
Rieck	Christian	N/A	2819 167th LN NW, Andover, MN-55304	Paper Service	No

Riveslip	Stoei	N/A	33 S 6th St Ste 4200, Minneapolis, MN-55402	Paper Service	No
Skarbakka	Glen	Iberdrola Renewables	701 Fourth Avenue South, Suite 1010, Minneapolis, MN-55415	Paper Service	No
Slad	Dana	Avant Energy Services	200 S 6th St Ste 300, Minneapolis, MN-55402	Paper Service	No
Straub	Janet	N/A	PO Box 43, Le Sueur, MN-56058	Paper Service	No
Sullins	Tony	U.S. Fish and Wildlife Service	Twin Cities Ecological Services Field Office, 4101 American Blvd. E., Bloomington, MN-55425	Paper Service	No
Swenson	Steven	Pipestone Publishing	115 2nd St NE, Pipestone, MN-56164	Paper Service	No
Ulmer	Emily	Sierra Club	85 2nd St FL 2, San Francisco, CA-94105	Paper Service	No
Vetsch	Jeff	CERTs	112 Norwood St, New London, MN-56273	Paper Service	No
Voller	James	N/A	33038 102nd Ave, St Joseph, MN-56374	Paper Service	No
Wolf	Guy	Board Member of Clean Wisconsin	N3421 Mohawk Valley Road, Stoddard, WI-54658	Paper Service	No

Print Close

BEFORE THE MINNESOTA PUBLIC UTILITIES COMMISSION

Beverly Jones Heydinger	Chair
David Boyd	Commissioner
J. Dennis O'Brien	Commissioner
Phyllis Reha	Commissioner
Betsy Wergin	Commissioner

Lisa M. Agrimonti
Briggs and Morgan, P.A.
2200 IDS Center
80 South 8th Street
Minneapolis, MN 55402

SERVICE DATE: February 8, 2013

DOCKET NO. ET-6675/CN-12-1053

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

The above entitled matter has been considered by the Commission and the following disposition made:

The Commission grants ITC Midwest LLC's requested exemptions to:

- **Minnesota Rules 7849.0240, subp. 2(B);**
- **Minnesota Rules 7849.0250(D); and**
- **Minnesota Rules 7849.0290.**

The Commission grants ITC Midwest LLC's requested exemptions to the following rules with the provision of the proposed alternative data set forth in the Department's December 28, 2012 comments:

- **Minnesota Rules 7849.0260, subp. (C)(5);**
- **Minnesota Rules 7849.0260 A(3) and C(6);**
- **Minnesota Rules 7849.0270 (except subpart 2(F));**
- **Minnesota Rules 7849.0280, (B) through (G) and (I);**
- **Minnesota Rules 7849.0300; and**
- **Minnesota Rules 7849.0340.**

The Commission rejects ITC Midwest LLC's requested exemptions to:

- **Minnesota Rules 7849.0120 A(1);**
- **Minnesota Rules 7849.0120 A(2);**
- **Minnesota Rules 7849.0120 A(3); and**
- **Minnesota Rules 7849.0330 (G).**

The Commission agrees with and adopts the recommendations of the Department of Commerce, which are attached and hereby incorporated into the Order. This Order shall become effective immediately.

BY ORDER OF THE COMMISSION

Burl W. Haar
Executive Secretary

This document can be made available in alternative formats (i.e. large print or audio) by calling 651.296.0406 (voice). Persons with hearing or speech disabilities may call us through Minnesota Relay at 1.800.627.3529 or by dialing 711.

division of energy resources
Minnesota Department of Commerce

85 7th Place East, Suite 500, St. Paul, MN 55101-2198
main: 651.296.4026
tty: 651.296.2860
fax: 651.297.7891
www.energy.mn.gov

December 28, 2012

Burl W. Haar
Executive Secretary
Minnesota Public Utilities Commission
121 7th Place East, Suite 350
St. Paul, Minnesota 55101-2147

RE: **Request for Exemptions from Certain Certificate of Need Content Requirements**
Docket No. ET6675/CN-12-1053

Dear Dr. Haar:

Attached are the comments of the Minnesota Department of Commerce-Division of Energy Resources (Department) in the following matter:

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.

The petitioner is:

Lisa M. Agrimonti
Briggs and Morgan, P.A.
2200 IDS Center
80 South 8th Street
Minneapolis, Minnesota 55402

The Department recommends **approval as modified** and is available to answer any questions the Minnesota Public Utilities Commission may have.

Sincerely,

/s/ STEVE RAKOW
Rates Analyst

SR/ja
Attachment

BEFORE THE MINNESOTA PUBLIC UTILITIES COMMISSION

COMMENTS OF THE
MINNESOTA DEPARTMENT OF COMMERCE
DIVISION OF ENERGY RESOURCES

DOCKET NO. ET6675/CN-12-1053

I. BACKGROUND

On September 28, 2012 ITC Midwest LLC, a Michigan limited liability company (ITCM or the Applicant) filed ITCM's *Notice Plan Petition for the Application of ITC Midwest LLC Certificate of Need for the Minnesota-Iowa 345 kV Transmission Project in Jackson, Martin, and Faribault Counties, Minnesota* (Notice Petition). The Notice Petition provided ITCM's proposed notice plan for a 345 kV transmission line to be located in southwestern Minnesota (Project). The Project would consist of about 75 miles of new 345 kV facilities from the Lakefield Junction Substation running eastwards to a new Huntley Substation near Winnebago, Minnesota, then proceeding southwards to the Iowa border south of Blue Earth, Minnesota. Comments on the Notice Petition were filed on October 18, 2012 by the Minnesota Department of Commerce, Division of Energy Resources (Department). Reply comments were filed on November 7, 2012 by ITCM. The Minnesota Public Utilities Commission (Commission) heard this issue on December 6, 2012 and the Commission's written order is forthcoming.

On December 4, 2012 ITCM submitted 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* (Exemption Petition) in order to obtain exemption from certain data requirements of Minnesota Rules part 7849. On December 11, 2012 the Commission issued a notice stating that comments on the Exemption Petition are due December 28, 2012 and reply comments are due January 11, 2013. Below are the comments of the Department regarding the Exemption Petition.

II. DEPARTMENT ANALYSIS

A. BACKGROUND

The Applicant will propose to construct a 345 kV transmission line in southern Minnesota near the cities of Lakefield and Blue Earth, Minnesota. According to ITCM, the proposed Project would include the following elements:

- construct approximately 75 miles of new 345 kV transmission line from the Lakefield Junction Substation to a new Huntley Substation, located by the existing Winnebago Substation, and then crossing the Iowa border, south of Blue Earth, Minnesota;[1]

- relocate four existing 161 kV lines that currently terminate at the Winnebago Substation so that they terminate at the new Huntley Substation; and

- decommission the Winnebago Substation.

The proposed Project would qualify as large energy facility (LEF) under Minnesota Statutes §216B.2421, subd. 2 (3). Minnesota Statutes §216B.243, subd. 2 requires that LEFs obtain a Certificate of Need (CN). Minnesota Rules part 7849 includes the filing requirements for a CN for an electric transmission facility.

The Exemption Petition states that the proposed Project will:

- relieve a long-existing highly congested flowgate in southwestern Minnesota; and

- provide the capacity necessary for existing and additional wind generation, particularly in the Buffalo Ridge area.

Note that the proposed Project is part of "Project 3" of the 17 projects included in the Midwest Independent Transmission System Operator, Inc. (MISO) Multi-Value Projects (MVP) portfolio.

B. ITCM'S REQUEST

In the Exemption Petition, ITCM requested exemption from providing data relevant to the following portions of Minnesota Rules:

- 7849.0240, subp. 2(B) and 7849.0120(A)(3);
- 7849.0250(D);[2]

---

[1] After entering Iowa, the 345 kV line would continue south to connect to a new ITC Ledyard Substation near Ledyard, Iowa and then run further into Iowa.

- 7849.0260, subp. (C)(5);
- 7849.0260, subps. (A)(3) and C(6);
- 7849.0270 [except Subpart 2(f)] and 7849.0120 A(1);
- 7849.0280 (B) through (G), and (I);
- 7849.0290 and 7849.0120, subp. A(2);
- 7849.0300;
- 7849.0330, subp. (G); and
- 7849.0340.

Minnesota Rules 7849.0200, subp. 6 states:

> Before submitting an application, a person is exempted from any data requirement of this chapter if the person (1) requests an exemption from specified rules, in writing to the commission, and (2) shows that the data requirement is unnecessary to determine the need for the proposed facility or may be satisfied by submitting another document.

The Department examines each specific exemption request separately. The required criterion is whether ITCM has shown that "the data requirement is unnecessary to determine the need for the proposed facility or may be satisfied by submitting another document" as discussed above.

C. ANALYSIS OF EXEMPTION REQUESTS

1. Minnesota Rules 7849.0240, Subp. 2(B) and 7849.0120 A(3)

Minnesota Rules 7849.0240, subp. 2(B) requires an applicant to provide "promotional activities that may have given rise to the demand for the facility." ITCM states that the Applicant "does not directly serve end-users of electric service and has not engaged in promotional activities that could have given rise to the need for the proposed Project." As mentioned by ITCM, the Commission has granted other non-incumbent utilities a similar exemption in previous proceedings. Therefore, the Department recommends that the Commission grant the requested exemption to Minnesota Rules 7849.0240, subp. 2(B).

Minnesota Rules 7849.0120 A(3) is not a data requirement. Rather, it is a decision criterion. Minnesota Rules 7849.0200 states that ITCM can be "exempted from any data requirement." However, Minnesota Rules do not mention allowing exemptions from the decision criteria. Rather, Minnesota Rules 7849.0100 states that, "the criteria for assessment of need must be used by the Commission to determine the need for a proposed large energy facility …." Therefore, in

[2] Note that the Petition apparently has a typographical error referring to Minnesota Rules 7849.0260 (D).

making its determination, the Commission considers the relevance of the decision criterion. The Department recommends that the Commission reject the requested exemption to Minnesota Rules 7849.0120 A(3).

2. *Minnesota Rules 7849.0250(D)*

This rule requires the Applicant to provide a map showing the Applicant's system. As an independent transmission company, ITCM does not serve load directly. Therefore, ITCM proposed to provide a map showing ITCM's network of transmission lines in Minnesota and Iowa. The Department recommends that the Commission grant the requested exemption to Minnesota Rules 7849.0250(D) with the provision of the proposed alternative data.

3. *Minnesota Rules 7849.0260, Subp. (C)(5);*

Minnesota Rules 7849.0260, subp. (C)(5) requires an applicant to provide "for the proposed facility and for each of the alternatives…an estimate of its effect on rates systemwide and in Minnesota, assuming a test year beginning with the proposed in-service date." In lieu of the required data ITCM proposed to provide "information regarding the expected Project cost, the MVP allocation methodology, and the share that will be allocated to Minnesota utilities' load." The Department agrees with ITCM that data on the cost allocation method and the share estimated to be allocated to Minnesota load would be more relevant to this proceeding than the data required by rule. Therefore, the Department recommends that the Commission grant the requested exemption to Minnesota Rules 7849.0260, subp. (C)(5) with the provision of the proposed alternative data.

4. *Minnesota Rules 7849.0260, subp. A(3) and C(6)*

These rules require an applicant to provide estimated "losses under projected maximum loading and under projected average loading in the length of the transmission line and at the terminals or substations." Instead, ITCM proposes to supply system loss information in lieu of line-specific losses.

The Department agrees that line losses for the system are more relevant to the analysis in this proceeding than line losses for individual lines. The Department notes that, to make the proper decisions in a societal framework, it is necessary to know what happens to system losses when a line is added. To count only the losses on the line in question might lead to the selection of one alternative because it has lower losses on that line but has higher system line losses; therefore selection of such an alternative would force the system to produce more energy than some other alternative. Thus, the proposal to use data for the system as a whole in this proceeding is appropriate.

In summary, the Department recommends that the Commission grant ITCM's proposed exemption to Minnesota Rules 7849.0260 A(3) and C(6) with the provision of the proposed alternative data.

5. Minnesota Rules 7849.0270 and 7849.0120 A(1)

These rules require an applicant to provide information regarding its system peak demand, annual energy consumption, and load factors for the applicant's service area and system. The subparts of the rule also require the applicant to detail the forecast methodology, databases, and assumptions made in preparing the forecasts, as well as present data by customer class categories. According to ITCM, this exemption, with the exception of Subpart 2 (F), was requested because the forecasting requirements would not provide the data most relevant to assessing the need for the Project. According to ITCM, the Commission has granted similar exemption requests in the past.[3]

In lieu of the information required by Minnesota Rules 7849.0270, subpart 2(A-E) and subparts 3 through 6, ITCM proposed to provide data and information that includes:

- evaluation of the Fox Lake-Rutland-Winnebago 161 kV constraint, including information about how it is one of the most binding constraints on ITCM's system, how it has contributed to wind energy curtailment, and how it contributes to the Minnesota Narrow Constrained Area ("NCA");

- analysis of how the Project would relieve the Fox Lake-Rutland-Winnebago 161 kV constraint, and the relationship and impact of the Project on the Minnesota NCA;

- analysis of how the Project would enable deliveries of existing wind energy, and support development of additional generation, including wind;

- discussion of the existing Lakefield and Trimont special protection schemes ("SPSs") and how the Project would eliminate the necessity for the Lakefield and Trimont SPSs;

---

[3] *In the Matter of the Otter Tail Power Company Application for a Certificate of Need for a 115 kV Transmission Line Between Appleton and Canby Substations,* ORDER GRANTING EXEMPTIONS AND APPROVING NOTICE PLAN AS MODIFIED, Docket No. E-017/CN-06-677 (Aug 1, 2006); *In the Matter of the Application of Otter Tail Power Company, Minnesota Power, and Minnkota Power Cooperative, Inc. for a Certificate of Need for the 230kV Transmission Line from Bemidji to Grand Rapids, Minnesota,* Docket No. E017, E015, ET6/CN-07-1222 (Dec. 24, 2007); *In the Matter of the Application of Great River Energy, Northern States Power Company d/b/a Xcel Energy and Others for a Certificate of Need for the CapX 345kV Transmission Project* , ORDER DESIGNATING APPLICANTS' AND SETTING FILING REQUIREMENTS, Docket No. ET2, E002, et al./CN-06-1115 (June. 4, 2007).

- historical and forecasted load data for the Project area and a discussion of how limited load exacerbates congestion;
- average system weekday load factor data;
- analysis of need for additional transmission capacity to serve future wind projects based on status of Buffalo Ridge as a premier wind resource, including discussion of MISO queue information regarding the demand for interconnection and transmission capacity in the Project area, Renewable Portfolio Standards (RPS) requirements in Minnesota and other MISO states and MISO wind zones assumed in MVP studies;
- discussion of MISO energy markets and the effect of congestion on wholesale prices;
- information on recent curtailment and electrical system constraint hours in the Project area; and
- discussion of the impact of existing constraints on further wind energy development in southwestern Minnesota and how the Project would increase the amount of wind generation outlet capability in the region.

The Department notes that the data and information ITCM proposed to provide may be appropriate regarding assessing the need for the Project, and does not oppose its provision. However, regarding "historical and forecast demand in the Project area," the Department recommends that:

- ITCM, in its *Reply Comments*, identify and specify all of the company-owned and non-company-owned (distribution and transmission) substations in the Project area, that are relevant to ITCM's proposed Project;
- ITCM provide all of the relevant load data proposed above at the company-owned and non-company-owned detailed substation-specific level if they are relevant to ITCM's proposed Project; and
- in the proposed evaluations, analyses and discussions mentioned above, ITCM should also include detailed information and explanation of all of the effects of congestion, for example, on locational marginal pricing (LMP).

Therefore, the Department recommends that the Commission approve ITCM's proposed exemption to Minnesota Rules 7849.0270, with the exception of 7849.0270, Subpart 2 (F) and to allow ITCM to provide the proposed alternative data as modified above.

The Department notes that Minnesota Rules 7849.0120 A(1) is not a data requirement. Rather, it is a decision criterion. Minnesota Rules 7849.0200 states that ITCM can be "exempted from any data requirement." Again, the Minnesota Rules do not mention allowing exemptions from the decision criteria. Rather, Minnesota Rules 7849.0100 states that, "the criteria for assessment of need must be used by the Commission to determine the need for a proposed large energy facility…" Therefore, in making its determination, the Commission considers the relevant of the decision criterion. The Department recommends that the Commission reject the requested exemption to Minnesota Rules 7849.0120 A(1).

6. Minnesota Rules 7849.0280, (B) through (G) and (I)

This rule requires the applicant to provide information that describes the ability of its existing system to meet forecasted demand; in essence, load and capability (L&C) information. However, parts A and H do relate to transmission lines. Instead of L&C data, as discussed in the prior section, ITCM proposed to discuss the reliability concerns resulting from forecasted peak demand in the local area. The Department agrees with ITCM that the Company's proposed discussion, focusing on transmission adequacy in the local area, is more relevant than the required data, which focuses on generation adequacy. Therefore, the Department recommends that the Commission grant the exemption to Minnesota Rules 7849.0280, (B) through (G) and (I) with the provision of the proposed alternative data.

7. Minnesota Rules 7849.0290 and 7849.0120 A(2)

Minnesota Rules 7849.0290 requires the applicant to provide conservation program information and quantification of the impact of conservation programs on forecast data. ITCM cited prior Commission orders that state the rule is "designed to ensure that regulated utilities, providing essential services to captive customers, give conservation the same careful consideration they give to new generation in planning to meet the future needs of their service areas." However, ITCM has no relationship with end-users that can affect their level of energy consumption and thus ITCM has no data to address conservation related requirements. Therefore, the Department recommends that the Commission grant the exemption to Minnesota Rules 7849.0290.

However, as discussed above Minnesota Rules 7849.0120 A(2) is a decision criterion and not a data requirement. Exemption cannot be granted to decision criteria. Instead, the Commission considers the relevance of the criterion to its decision. Thus, the Department recommends that the Commission reject the requested exemption to Minnesota Rules 7849.0120 A(2).

8. Minnesota Rules 7849.0300

Minnesota Rules 7849.0300 requires detailed information regarding the consequences of delay on three specific statistically-based levels of demand and energy consumption. Instead, ITCM proposed to provide information on the consequences of delay in the context of the potential impacts of delay on the "renewable generation support and satisfaction of RPS requirements, congestion relief, and general regional reliability."

The Department agrees with ITCM that the Applicant's proposed data, focusing on the impact on the claimed need, provides more relevant information than the required data. Therefore, the Department recommends that the Commission grant the exemption to Minnesota Rules 7849.0300 with the provision of the proposed alternative data.

9. Minnesota Rule 7849.0330 (G)

Minnesota Rule 7849.0330 (G) requires environmental data regarding the region between the likely endpoints. The Rule states applicants must provide:

> a narrative description of the major features of the region between the endpoints of the transmission facility. The region shall encompass the likely area for routes between the endpoints. The description should emphasize the area within three miles of the endpoints. The following information shall be described where applicable:
>
> > (1) hydrologic features including lakes, rivers, streams, and wetlands;
> > (2) natural vegetation and associated wildlife;
> > (3) physiographic regions; and
> > (4) land-use types, including human settlement, recreation, agricultural production, forestry production, and mineral extraction.

ITCM requested that it be allowed to narrow the three-mile radius around the proposed Project's endpoints in Minnesota to a half mile – specifically, to narrow the radius around (i) the Lakefield Junction Substation, (ii) the existing Winnebago Substation, (iii) the proposed new Huntley Substation, and (iv) the border point where the proposed route crosses from Minnesota into Iowa. First, the Department does not dispute that ITCM's analysis may have proceeded to the point where a narrower discussion would be appropriate if ITCM were the only participant in the process. However, as a general rule the Department concludes that the CN process should study a broad region rather than a narrow region. This is because the degree to which ITCM's own analysis has progressed is not the only factor to consider. Other parties will participate in the CN and route permit processes. Transmission line routes and substation sites may be proposed and studied in detail during the route permit process that are outside of ITCM's narrower radius.

Second, the Commission order cited by ITCM as supporting a narrowed radius is not comparable to the proposed Project. ITCM cites the granting of a narrowed radius for the Mud Lake to Wilson 115 kV transmission line project – a 12-mile line between two existing substations. The proposed Project is approximately 75 miles in length with three proposed connection points (or endpoints) in Minnesota – the Lakefield Substation, the new Huntley Substation, and the border crossing into Iowa. Of these three points, one is fixed (existing) and two are unfixed. Thus, the proposed Project is dissimilar from the Mud Lake to Wilson project. The size of the proposed Project and the fact that two out of three connection points are not fixed argues that the radius of information around (i) the Lakefield Junction Substation, (ii) the existing Winnebago Substation, (iii) the proposed new Huntley Substation, and (iv) the border crossing not be narrowed. Therefore, the Department recommends that the Commission reject the proposed exemption to Minnesota Rule 7849.0330 (G).

10. Minnesota Rule 7849.0340

Minnesota Rules 7849.0340 requires a discussion of what the impact would be on existing generation and transmission facilities at three levels of demand specified in part 7849.0300 for the no build alternative. Instead of the required data, ITCM proposed to provide substitute information in the form of a discussion of the impacts a delay of the Project would have on the claimed needs of renewable generation support, satisfaction of renewable energy requirements, congestion relief, and general regional reliability. The Department agrees with ITCM that the proposed data is more relevant to the claimed need and more in line with the data available to ITCM than the required data. Therefore, the Department recommends that the Commission grant the exemption to Minnesota Rules 7849.0340 with the provision of the proposed alternative data.

III. DEPARTMENT RECOMMENDATION

The Department recommends that the Commission grant the requested exemption to:

- Minnesota Rules 7849.0240, subp. 2(B);
- Minnesota Rules 7849.0250(D); and
- Minnesota Rules 7849.0290.

The Department recommends that the Commission grant the following requested exemptions with the provision of the proposed alternative data:

- Minnesota Rules 7849.0260, subp. (C)(5);
- Minnesota Rules 7849.0260 A(3) and C(6);
- Minnesota Rules 7849.0270 (except subpart 2(F));
- Minnesota Rules 7849.0280, (B) through (G) and (I);

- Minnesota Rules 7849.0300; and
- Minnesota Rules 7849.0340.

The Department recommends that the Commission reject the requested exemption to:

- Minnesota Rules 7849.0120 A(1);
- Minnesota Rules 7849.0120 A(2);
- Minnesota Rules 7849.0120 A(3); and
- Minnesota Rules 7849.0330 (G).

/ja

CERTIFICATE OF SERVICE

I, Robin Benson, hereby certify that I have this day, served a true and correct copy of the following document to all persons at the addresses indicated below or on the attached list by electronic filing, electronic mail, courier, interoffice mail or by depositing the same enveloped with postage paid in the United States mail at St. Paul, Minnesota.

Minnesota Public Utilities Commission
ORDER

Docket Number: **ET-6675/CN-12-1053**

Dated this **8th** day of **February, 2013**

/s/ Robin Benson

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Lisa	Agrimonti	lagrimonti@briggs.com	Briggs And Morgan, P.A.	2200 IDS Center80 South 8th Street Minneapolis, MN 55402	Electronic Service	No	OFF_SL_12-1053_CN-12-1053
Julia	Anderson	Julia.Anderson@ag.state.mn.us	Office of the Attorney General-DOC	1800 BRM Tower 445 Minnesota St St. Paul, MN 551012134	Electronic Service	Yes	OFF_SL_12-1053_CN-12-1053
Peter	Bellig	N/A		207 Cedar Cliff Rd Redwood Falls, MN 56283	Paper Service	No	OFF_SL_12-1053_CN-12-1053
Michelle F.	Bissonnette		HDR Engineering, Inc.	Golden Hills Office Center 701 Xenia Avenue South, Suite 600 Minneapolis, MN 55416	Paper Service	No	OFF_SL_12-1053_CN-12-1053
Derek	Brandt	N/A	Hartford Group Inc.	PMB 506 7455 France Ave S Edina, MN 55435-4702	Paper Service	No	OFF_SL_12-1053_CN-12-1053
Joe	Butner	N/A	The StressCrete Group	14503 Wallick Rd Atchison, MN 66002	Paper Service	No	OFF_SL_12-1053_CN-12-1053
Matthew S.	Carstens	N/A	ITC Holdings Corp.	123 5th Street SE Cedar Rapids, IA 52401	Paper Service	No	OFF_SL_12-1053_CN-12-1053
George	Crocker	gwillc@nawo.org	North American Water Office	PO Box 174 Lake Elmo, MN 55042	Paper Service	No	OFF_SL_12-1053_CN-12-1053
Wanda	Davies	wdavies@windpower.com	Gamesa Energy USA, Great Plains Region	3001 Broadway St. NE, Suite 695 Minneapolis, MN 55413	Paper Service	No	OFF_SL_12-1053_CN-12-1053
Hadley	Davis	N/A	Sierra Club	85 Second St San Franccisco, MN 94105	Paper Service	No	OFF_SL_12-1053_CN-12-1053

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Thomas	Davis			1161 50th Avenue Sherburn, MI 56171	Paper Service	No	OFF_SL_12-1053_CN-12-1053
Michael	Dolan	mjdolan@dolan-mn.com		6117 Scotia Drive Edina, MN 55439	Paper Service	No	OFF_SL_12-1053_CN-12-1053
Jeremy	Duehr	jduehr@fredlaw.com	Fredrikson & Byron, P.A.	200 South Sixth Street Suite 4000 Minneapolis, Minnesota 55402-1125	Electronic Service	No	OFF_SL_12-1053_CN-12-1053
Cal	Dufault	Cal.Dufault@nrgenergy.com	NRG Energy	14893 Wilds Pkwy NW Prior Lake, MN 55372	Paper Service	No	OFF_SL_12-1053_CN-12-1053
Ledy	Dunkle	N/A	Aldridge Electric	844 E Rockland Rd Libertyville, IL 60498-3358	Paper Service	No	OFF_SL_12-1053_CN-12-1053
Patrick	Edwards	N/A		10006 305th St W Northfield, MN 55057	Paper Service	No	OFF_SL_12-1053_CN-12-1053
Jeff	Ehm	jehm@corvalgroup.com	Corval Group	1633 Eustis St Saint Paul, MN 55108	Electronic Service	No	OFF_SL_12-1053_CN-12-1053
Kristen	Eide Tollefson	ket@wro-ns.net	R-CURE	P O Box 129 Frontenac, MN 55026	Paper Service	No	OFF_SL_12-1053_CN-12-1053
Paul	Entinger	N/A		13821 300th St New Prague, MN 56071	Paper Service	No	OFF_SL_12-1053_CN-12-1053
Sharon	Ferguson	sharon.ferguson@state.mn.us	Department of Commerce	85 7th Place E Ste 500 Saint Paul, MN 551012198	Electronic Service	No	OFF_SL_12-1053_CN-12-1053

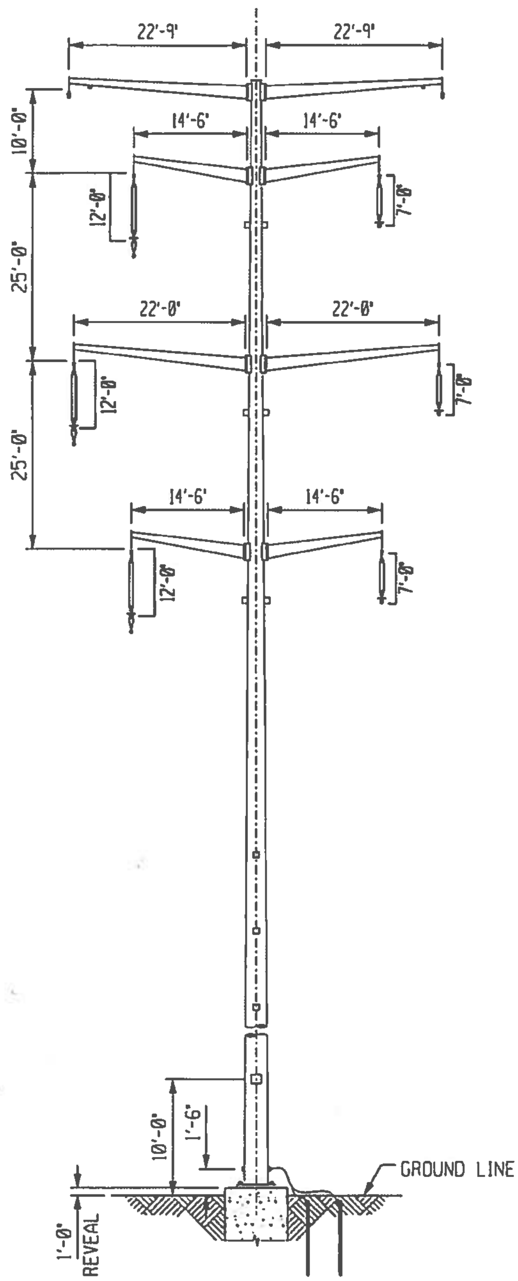
First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Dale	Fredrickson			12406 347th Street Lindstrom, MN 55045	Paper Service	No	OFF_SL_12-1053_CN-12-1053
Travis	Germundson	travis.germundson@state.mn.us		Board of Water & Soil 520 Lafayette Rd Saint Paul, MN 55155	Electronic Service	No	OFF_SL_12-1053_CN-12-1053
David	Grover	dgrover@itctransco.com	ITC Midwest	444 Cedar St Ste 1020 Saint Paul, MN 55101-2129	Electronic Service	No	OFF_SL_12-1053_CN-12-1053
Burl W.	Haar	burl.haar@state.mn.us	Public Utilities Commission	Suite 350 121 7th Place East St. Paul, MN 551012147	Electronic Service	Yes	OFF_SL_12-1053_CN-12-1053
Heidi	Hahn	N/A		4778 Chester Ave Webster, MN 55088	Paper Service	No	OFF_SL_12-1053_CN-12-1053
Eric	Hansen	N/A	Pinnacle Engineering Inc.	11541 95th Ave N Maple Grove, MN 55369	Paper Service	No	OFF_SL_12-1053_CN-12-1053
Linda	Hanson	elcskh5@yahoo.com	W.O.L.F., Inc.	W1806 Wilson Road Hawkins, WI 54530	Paper Service	No	OFF_SL_12-1053_CN-12-1053
Randy, Rose	Haseleu	N/A		420 Hoyt Ave S Springfield, MN 56087	Paper Service	No	OFF_SL_12-1053_CN-12-1053
Vickie	Hessenius	N/A	CERTs	69144 270th St Dexter, MN 55926	Paper Service	No	OFF_SL_12-1053_CN-12-1053
Jason	Hoskins	N/A	Ulteig Engineers	c/o Jason Hoskins 4285 Lexington Ave N Saint Paul, MN 55126	Paper Service	No	OFF_SL_12-1053_CN-12-1053

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Rick	Howden	N/A	Congressman Tim Walz	227 E Main St Ste 220 Mankato, MN 56001	Paper Service	No	OFF_SL_12-1053_CN-12-1053
Mega	Hoye	megan.hoye@gmail.com		3124 West Calhoun Blvd. #405 Minneapolis, MN 55416	Paper Service	No	OFF_SL_12-1053_CN-12-1053
Karen	Kromar	karen.kromar@state.mn.us	MN Pollution Control Agency	520 Lafayette Rd Saint Paul, MN 55155	Electronic Service	No	OFF_SL_12-1053_CN-12-1053
John	Lindell	agorud.ecf@ag.state.mn.us	Office of the Attorney General-RUD	1400 BRM Tower 445 Minnesota St St. Paul, MN 551012130	Electronic Service	Yes	OFF_SL_12-1053_CN-12-1053
Kim	Lindquist	kim.lindquist@ci.rosemount.mn.us		2875 145th St W Rosemount, MN 55068	Electronic Service	No	OFF_SL_12-1053_CN-12-1053
Steven	Mittelstaedt	N/A		32097 Sandborn Dr Montgomery, MN 56069	Paper Service	No	OFF_SL_12-1053_CN-12-1053
Aaron	Moline	N/A	PennWell Corporation	1455 West Loop S Ste 400 Houston, TX 77027-9501	Paper Service	No	OFF_SL_12-1053_CN-12-1053
Robert K.	Nelson	six_bar_ranch@hotmail.com		1446 State Hwy 4 Sherburne, MN 56171	Paper Service	No	OFF_SL_12-1053_CN-12-1053
Elling	Olson	N/A	M A Mortenson Co	700 Meadow Ln N Minneapolis, MN 55422	Paper Service	No	OFF_SL_12-1053_CN-12-1053
Michael	Pangborn	N/A	NextEra Energy Resources	14000 Sundial Ct Eden Prairie, MN 55346	Paper Service	No	OFF_SL_12-1053_CN-12-1053

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Bonnie	Patrick	N/A		30875 Minnesota Ave Lindstrom, MN 55065	Paper Service	No	OFF_SL_12-1053_CN-12-1053
Bob	Patton	bob.patton@state.mn.us	MN Department of Agriculture	625 Robert St N Saint Paul, MN 55155-2538	Electronic Service	No	OFF_SL_12-1053_CN-12-1053
Angela	Piner	angela.piner@hdrinc.com	HDR, Inc.	Suite 600 701 Xenia Avenue South Suite 600 Minneapolis, MN 55416	Electronic Service	No	OFF_SL_12-1053_CN-12-1053
Jay	Porter	jporter@GREnergy.com	Great River Energy	12300 Elm Creek Blvd Maple Grove, MN 55369	Paper Service	No	OFF_SL_12-1053_CN-12-1053
David	Richardson	N/A	AMEC	800 Marquette Ave Ste 1200 Midwest Plaza Bldg Minneapolis, MN 55420-2876	Paper Service	No	OFF_SL_12-1053_CN-12-1053
Christian	Rieck	N/A		2819 167th LN NW Andover, MN 55304	Paper Service	No	OFF_SL_12-1053_CN-12-1053
Stoei	Rivesllp	N/A		33 S 6th St Ste 4200 Minneapolis, MN 55402	Paper Service	No	OFF_SL_12-1053_CN-12-1053
Jennie	Ross	jennie.ross@state.mn.us		395 John Ireland Blvd MS 620 Saint Paul, MN 55155	Electronic Service	No	OFF_SL_12-1053_CN-12-1053
Tod	Sherman	tod.sherman@dot.state.mn.us	Mn/DOT Metro District	Waters Edge 1500 West County Road B2 Roseville, MN 55113	Electronic Service	No	OFF_SL_12-1053_CN-12-1053

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Dana	Slad	N/A	Avant Energy Services	200 S 6th St Ste 300 Minneapolis, MN 55402	Paper Service	No	OFF_SL_12-1053_CN-12-1053
Adam	Sokolski	adam.sokolski@iberdrolaren.com	Iberdrola Renewables	701 fourth Avenue South Suite 1010 Minneapolis, MN 55415	Electronic Service	No	OFF_SL_12-1053_CN-12-1053
Erin	Stojan Ruccolo		Fresh Energy	408 Saint Peter St Ste 220 Saint Paul, MN 55102-1125	Paper Service	No	OFF_SL_12-1053_CN-12-1053
Tony	Sullins	N/A	U.S. Fish and Wildlife Service	Twin Cities Ecological Services Field Office 4101 American Blvd. E. Bloomington, MN 55425	Paper Service	No	OFF_SL_12-1053_CN-12-1053
Eric	Swanson	eswanson@winthrop.com	Winthrop Weinstine	225 S 6th St Ste 3500 Capella Tower Minneapolis, MN 554024629	Electronic Service	No	OFF_SL_12-1053_CN-12-1053
Steven	Swenson	N/A	Pipestone Publishing	115 2nd St NE Pipestone, MN 56164	Paper Service	No	OFF_SL_12-1053_CN-12-1053
SaGonna	Thompson	Regulatory.Records@xcelenergy.com	Xcel Energy	414 Nicollet Mall FL 7 Minneapolis, MN 554011993	Electronic Service	No	OFF_SL_12-1053_CN-12-1053
Emily	Ulmer	N/A	Sierra Club	85 2nd St FL 2 San Francisco, CA 94105	Paper Service	No	OFF_SL_12-1053_CN-12-1053
Jeff	Vetsch	N/A	CERTs	112 Norwood St New London, MN 56273	Paper Service	No	OFF_SL_12-1053_CN-12-1053
James	Voller	N/A		33038 102nd Ave St Joseph, MN 56374	Paper Service	No	OFF_SL_12-1053_CN-12-1053

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Guy	Wolf		Board Member of Clean Wisconsin	N3421 Mohawk Valley Road Stoddard, WI 54658	Paper Service	No	OFF_SL_12-1053_CN-12-1053



ITC Midwest

NO.	DATE	REVISION	BY	CHK'D	APV'D
0					

MN-IA 345KV TRANSMISSION PROJECT

Typical 345kV-161kV Vertical Tangent

Structure Drawing

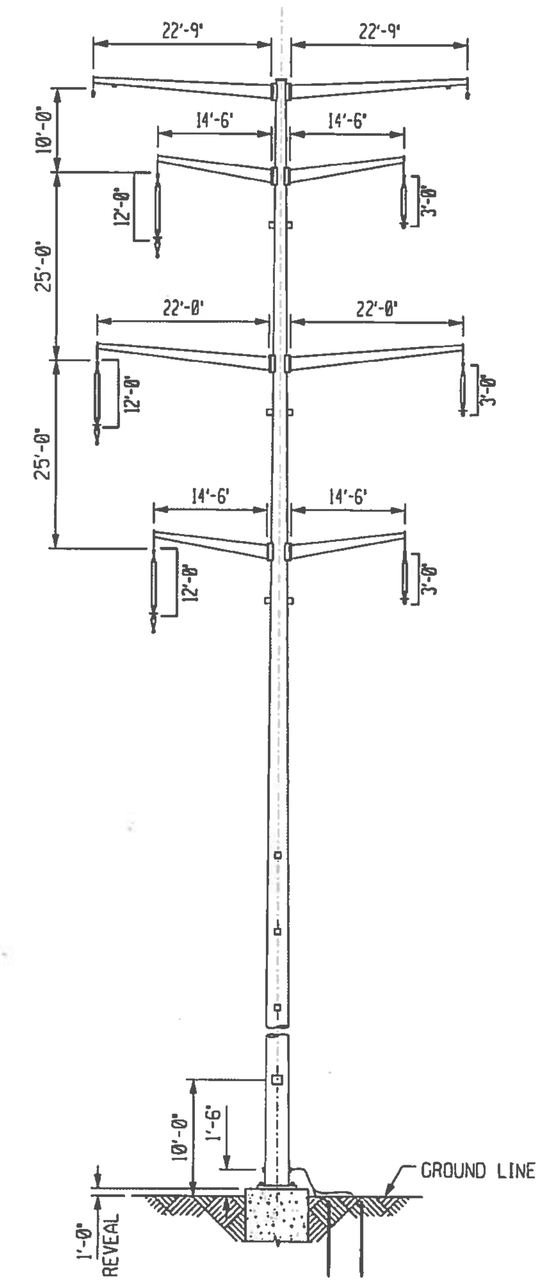
345kV-69kV CIRCUITS

Scale:

DWG. NO.

Plotted: $DATE$
File: $FILE$

TB.V8.01.01



CONFIDENTIAL
These documents are for the use of ITC Holdings Corp. ITC Holdings Corp. disclaims all warranties, both expressed and implied. Use by anyone other than ITC Holdings Corp. is at their own risk.

ITC Midwest

NO.	DATE	REVISION	BY	CHK'D	APV'D
0					

MN-IA 345KV TRANSMISSION PROJECT

Typical 345kV-161kV Vertical Tangent

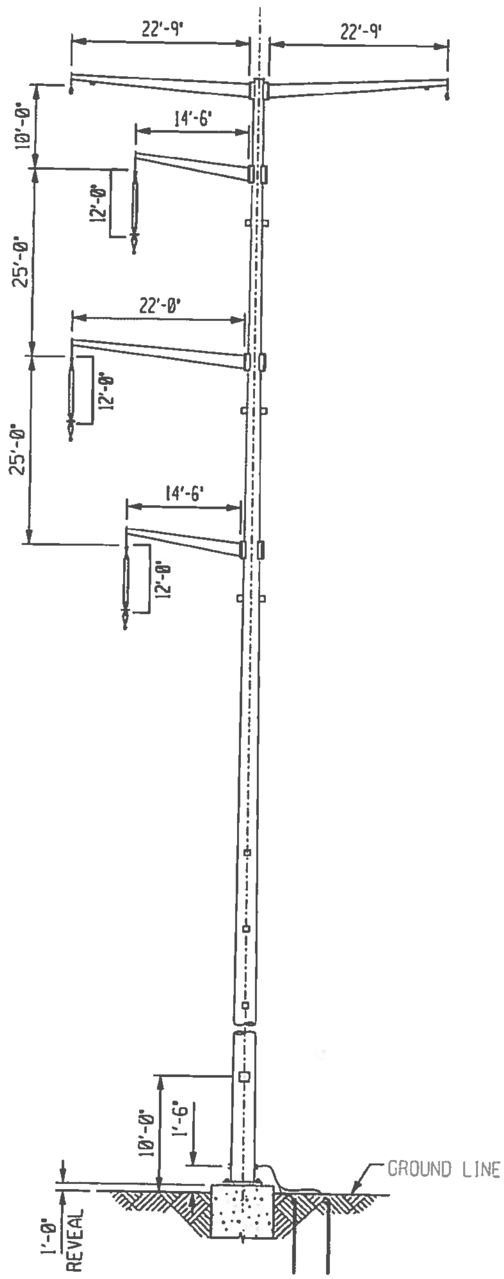
Structure Drawing

Scale:

DWG. NO.

Plotted: $DATE$
File: $FILE$

TB.V8.01.01



CONFIDENTIAL

These documents are for the use of ITC Holdings Corp. ITC Holdings Corp. disclaims all warranties, both expressed and implied. Use by anyone other than ITC Holdings Corp. is at their own risk.

ITC Midwest

NO.	DATE	REVISION	BY	CHK'D	APV'D
0					

ITC

MN-IA 345KV TRANSMISSION PROJECT

Typical 345kV-161kV Vertical Tangent

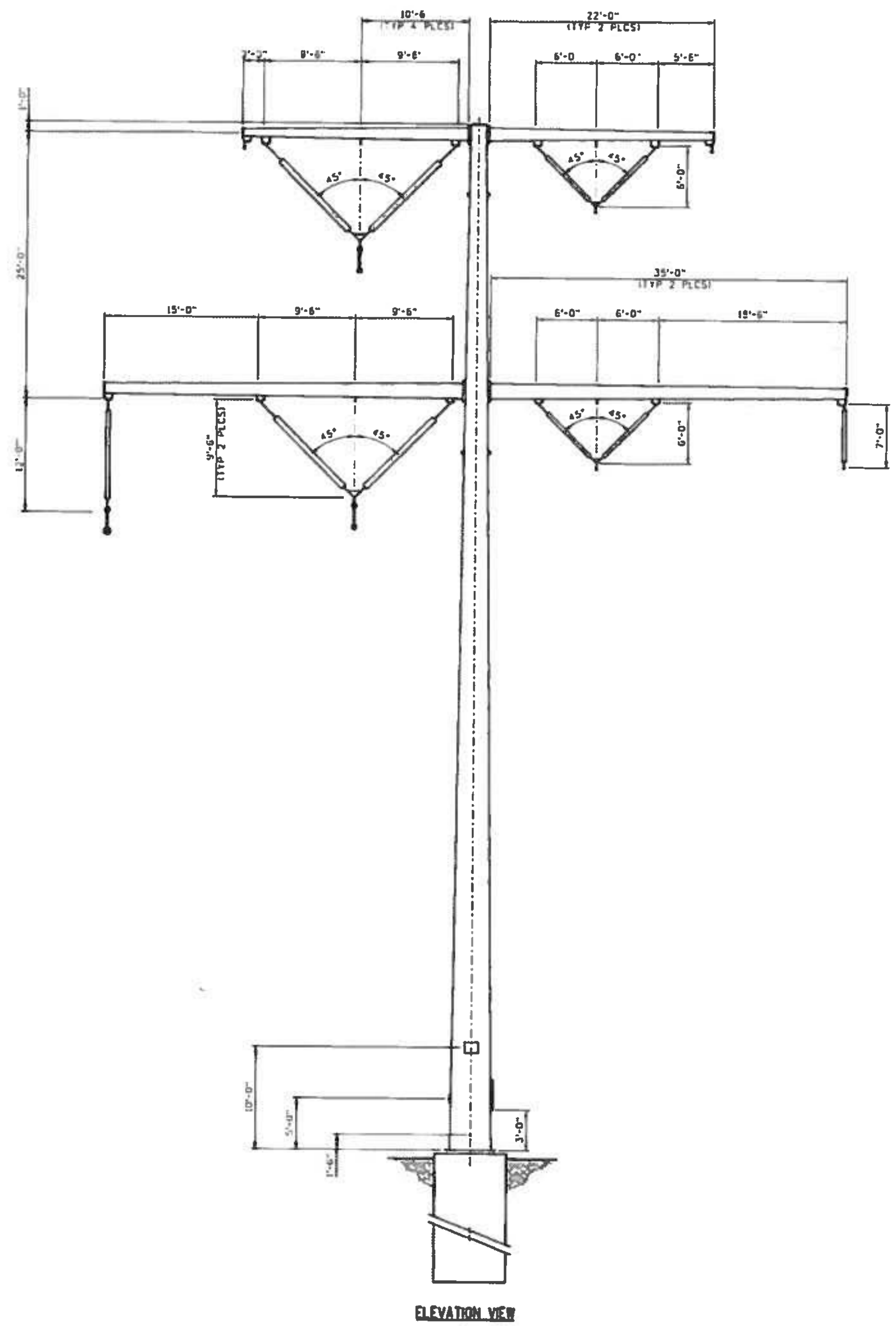
Structure Drawing

345KV ONLY

Scale:

DWG. NO.

Plotted: $DATE$
File: $FILE$



CONFIDENTIAL

These documents are for the use of ITC Holdings Corp. ITC Holdings Corp. disclaims all warranties, both expressed and implied. Use by anyone other than ITC Holdings Corp. is at their own risk.

ITC Midwest

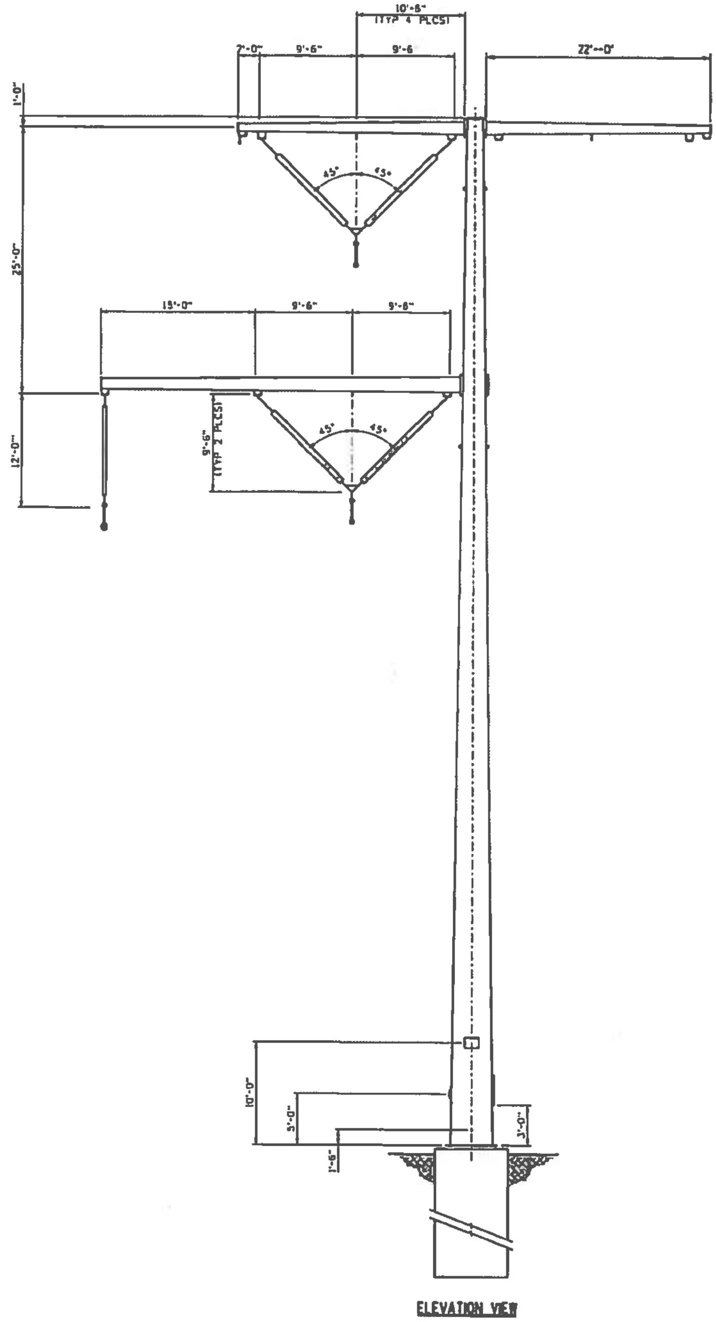
NO.	DATE	REVISION	BY	CHK'D	APV'D
0		ORIGINAL ISSUE [ ]			

ITC

Typical 345kV/161kV Tangent
Structure Drawing
Low Profile

Scale:

DWG. NO.



ELEVATION VIEW

CONFIDENTIAL

These documents are for the use of ITC Holdings Corp. ITC Holdings Corp. disclaims all warranties, both expressed and implied. Use by anyone other than ITC Holdings Corp. is at their own risk.

ITC Midwest

NO.	DATE	REVISION	BY	CHK'D	APV'D
0		ORIGINAL ISSUE ( )			

ITC

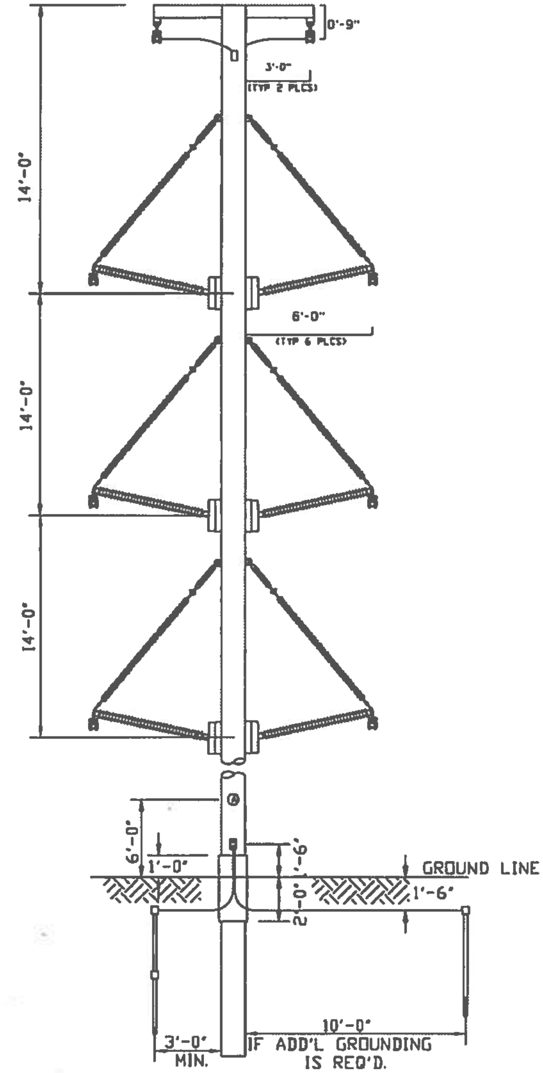
Typical 345kV/161kV Tangent
Structure Drawing
Low Profile 345kV ONLY

Scale:

DWG. NO.

Plotted: $DATE$
File: $FILE$

T8.V8.01.01



CONFIDENTIAL
These documents are for the use of ITC Holdings Corp. ITC Holdings Corp. disclaims all warranties, both expressed and implied. Use by anyone other than ITC Holdings Corp. is at their own risk.

ITC Midwest

NO.	DATE	REVISION	BY	CHK'D	APV'D

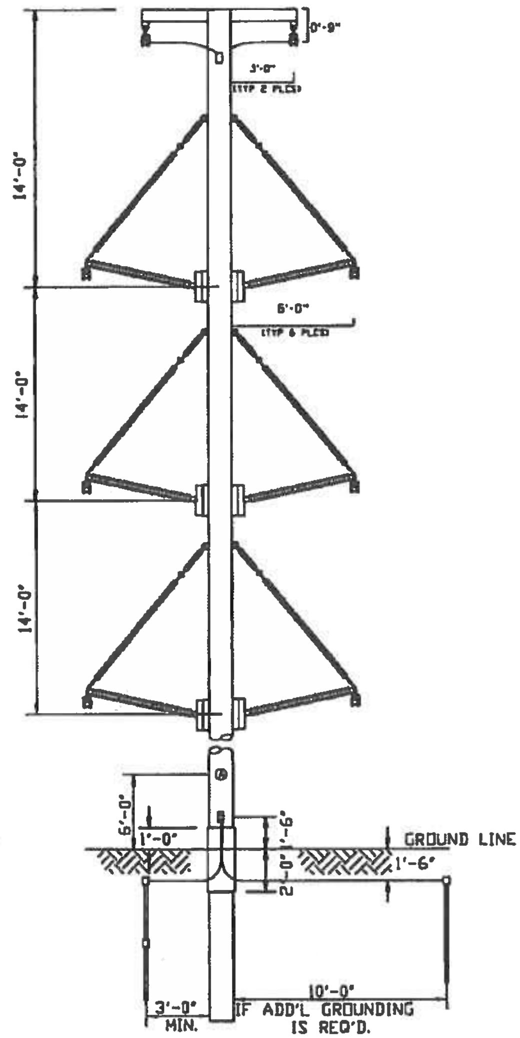
MN-IA 345KV TRANSMISSION PROJECT

TYPICAL 161KV/161KV TANGENT
STRUCTURE DRAWING

Scale: NONE

DWG. NO.

TB.V8.01.01



CONFIDENTIAL
These documents are for the use of ITC Holdings Corp. ITC Holdings Corp. disclaims all warranties, both expressed and implied. Use by anyone other than ITC Holdings Corp. is at their own risk.

ITC Midwest

NO.	DATE	REVISION	BY	CHK'D	APV'D
0					

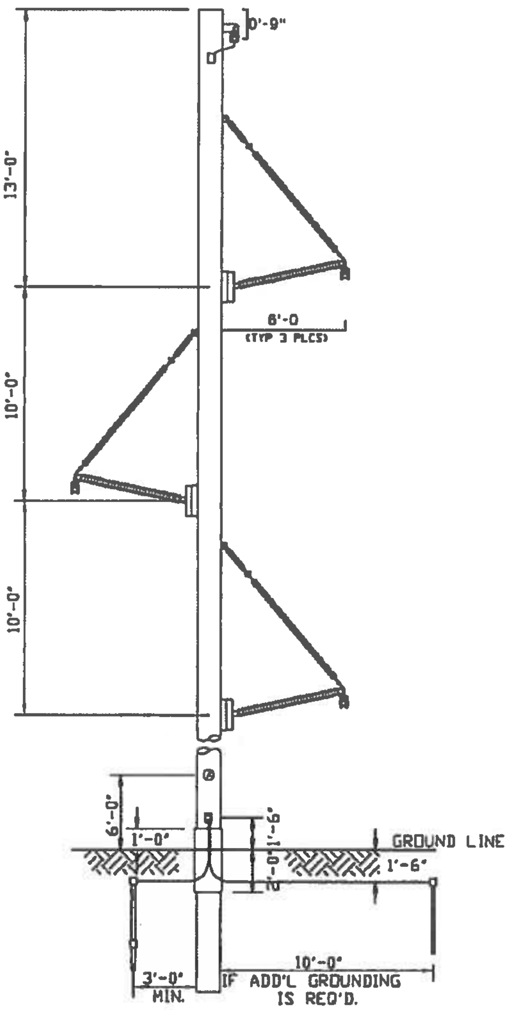
MN-IA 345KV TRANSMISSION PROJECT

Typical 161kV-161kV Vertical Tangent
Structure Drawing
161kV - 69kV Circuits

Scale:

DWG. NO.

Plotted: $DATE$
File: $FILE$



ITC Midwest

NO.	DATE	REVISION	BY	CHK'D	APV'D
					ITC

MN-IA 345KV TRANSMISSION PROJECT

TYPICAL 161KV TANGENT STRUCTURE DRAWING

Scale: NONE

DWG. NO.

MISO Rate Allocation of MN-IA 345 kV Transmission Project

MVP 3 Portion of MN-IA 345 kV Project

Capital cost	$275,100,000
initial Fixed Charge Rate (Attachment MM)	18.62%
Annual Revenue Requirement	$51,223,620

Allocation of Annual Revenue requirement

Zone	%	% in MN	% of Project ATRR in MN rates
ITCM	3.89%	14.00%	0.54%
GRE	2.40%	98.00%	2.35%
MP	2.05%	100.00%	2.05%
NSP	9.11%	79.00%	7.20%
OTP	1.52%	55.00%	0.84%
SMP	0.33%	100.00%	0.33%
Total	19.30%		13.31%

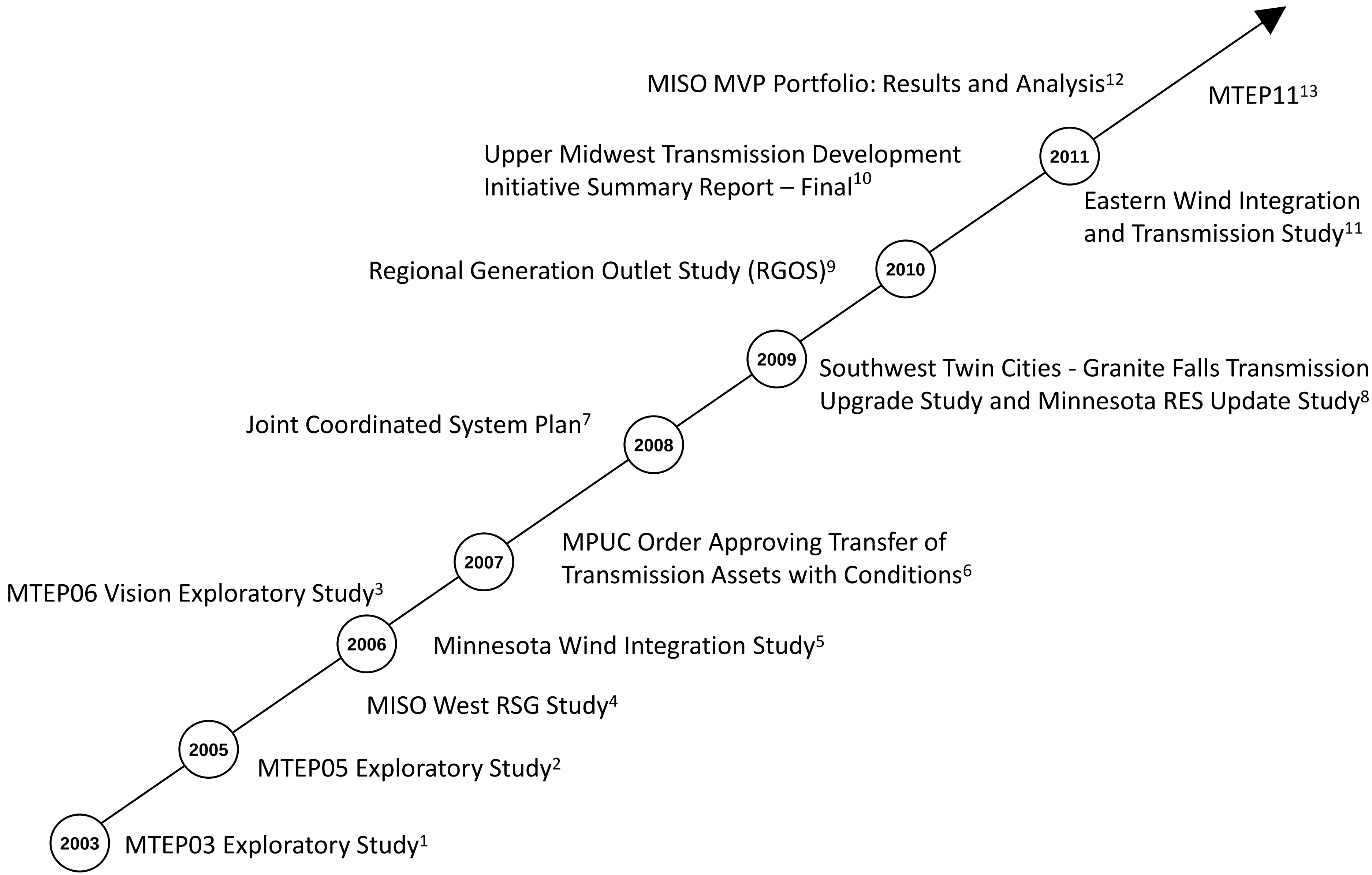
Estimated Project Annual Revenue Requirement in MN	$6,817,608
Range assuming estimate is +/-30%	$4,772,325 to $8,862,890

Zonal Portion (69 kV) of MN-IA 345 kV Project

Captial Cost		$7,400,000
Initial Fixed Charge Rate		16.35%
Annual Revenue Requirement		$1,209,900
MN portion	14.00%	$169,386

Total cost of MN-IA 345 kV Project recovered in MN	$6,986,994
Range assuming estimate is +/-30%	$4,890,896 $9,083,092

Figure 12 : Studies Identifying Need for 345 kV+ Bulk Transmission Lines in Southern Minnesota and Northern Iowa



[1]MISO's MTEP03 High Wind Generation Scenario (June 1, 2003), at 211, available at: https://www.midwestiso.org/Library/Repository/Study/MTEP/MTEP03/MTEP03%20Report.pdf (accessed February 19, 2013.

[2]MISO's MTEP05, Iowa-Minnesota Exploratory Study, (June 2005), at 151, available at: https://www.midwestiso.org/Library/Repository/Study/MTEP/MTEP05/MTEP05%20Report.pdf (accessed February 19, 2013).

[3]MISO MTEP06 Exploratory Study, (revised February 2007), at 278, available at: https://www.midwestiso.org/Library/Repository/Study/MTEP/MTEP06/MTEP06%20Report.pdf (accessed February 19, 2013).

[4]MISO WEST Regional Study Group, as discussed on page 33 and in Appendix A of the Wind Integration Report (see adjacent note)

[5]EnerNex Corporation, "Final Report - 2006 Minnesota Wind Integration Study, Volume I," at xxi (November 30, 2006), available at: http://www.uwig.org/windrpt_vol%201.pdf (accessed December 27, 2012).

[6]ORDER APPROVING TRANSFER OF TRANSMISSION ASSETS WITH CONDITIONS, In the Matter of the Joint Petition for Approval of Transfer of Transmission Assets of Interstate Power and Light Company to ITC Midwest LLC, Docket No. E001/P A-07-540, at ordering point 1.b (issued Feb. 7, 2008; eff. as of Dec. 18, 2007).

[7]Joint Coordinated System Plan (JCSP),Volume 1: Economic Assessment, at 8-9 (2008).

[8]Minnesota Transmission Owners, at 73-74 (March 31, 2009), available at: http://www.minnelectrans.com/documents/MTO-Study-Reports.pdf (accessed February 22, 2013).

[9]MISO's Regional Generation Outlet Study - Combined (November 19, 2010), at 95, available at: https://www.midwestiso.org/Library/Repository/Study/RGOS/Regional%20Generation%20Outlet%20Study.pdf (accessed February 19, 2013).

[10]Upper Midwest Transmission Development Initiative Summary Report - Final (September 30, 2010), at 9, available at: http://www.misostates.org/files/UMTDISummaryReportFinal.pdf (accessed February 19, 2013).

[11] EnerNex Corporation, "Eastern Wind Integration and Transmission Study," prepared for The National Renewable Energy Laboratory, at 38 (Revised February 2011), available at: http://www.nrel.gov/docs/fy11osti/47078.pdf (accessed March 4, 2013).

[12]MISO, Multi Value Project Portfolio: Results and Analysis, (January 10, 2012) at 26, available at: [11]https://www.midwestiso.org/Library/Repository/Study/Candidate%20MVP%20Analysis/MVP%20Portfolio%20Analysis%20Full%20Report.pdf (accessed February 19, 2013).

[13]MISO's MTEP11, at 43, (December 2011), available at: https://www.midwestiso.org/Library/Repository/Study/MTEP/MTEP11/MTEP11%20Report.pdf (accessed February 19, 2013).

UPPER MIDWEST TRANSMISSION DEVELOPMENT INITIATIVE

Executive Committee Final Report

September 29, 2010

BACKGROUND

In 2008, the governors of Iowa, Minnesota, North Dakota, South Dakota and Wisconsin formed the Upper Midwest Transmission Development Initiative (UMTDI). The goal of this effort was to identify and resolve regional transmission planning and cost allocation issues associated with the delivery of renewable energy from wind rich areas within the five-state footprint to the region's customers.

The effort was initiated because of the promise, and the related problems, in delivering more renewable energy from source to load (i.e., energy consumers) in the region.

The Upper Midwest has an enormous renewable energy potential, and the five states in this effort have aggressively sought to tap this clean resource. Iowa has a capacity requirement of 105 megawatts (MW) of wind from its two largest utilities. In the late 1990s, Wisconsin established an electric renewable portfolio standard (RPS) that has been increased to 10 percent by 2015. Minnesota's RPS stands at 30 percent by 2020 for its largest utility, and 25 percent by 2025 for all other utilities. Finally, North Dakota and South Dakota have renewable goals of 10 percent by 2015. Collectively, these five states have more than 6,400 MW of wind installed and operating, providing substantial economic value to the region.

At the federal level, Congress has a long history of extending tax benefits to those who produce renewable energy. More recently, Congress has debated the creation of a federal RPS or carbon constraint mechanisms, either of which would likely lead to the increased production of wind from the Upper Midwest. Federal agencies such as the Federal Energy Regulatory Commission (FERC) and the Department of Energy have prioritized increasing output from the country's renewable resources in support of energy security, environmental goals, and economic development.

This regional and national emphasis on enhanced renewable energy production, particularly wind power, cannot occur without a substantial enhancement to the country's electric transmission grid. The transmission grid began as a mosaic of separate and independent systems to serve individual local utilities, but is now an interconnected network that makes the generation resources and transmission efforts of many states highly interdependent. In the Upper Midwest, the existing electric transmission grid is being used to maintain the day-to-day economies, lifestyles, and existing renewable resources of the five states.

As such, new power lines need to be built to deliver additional renewable power from resource areas to customers. Because the grid was not originally designed for delivering renewable energy across several states, efforts to build regional transmission systems are complicated by institutional and economic barriers. The Upper Midwest has taken the initiative to address these issues, but is not the only region trying to overcome these barriers; they frustrate efforts nationally and are very challenging to address. Issues include:

- **The need for certainty in regional planning for transmission.** Developers and regulators need to know what the rules are for transmission planning. In the absence of such certainty, development stalls and the potential for inaccurate decision-making arises.

- **The right balance between remote and local renewable generation.** There is a need to cost effectively balance highly efficient renewable energy resources far from customers with local renewable energy resources closer to population centers.

- **Large transmission projects are expensive and will impact electric rates.** Billions of dollars of transmission investment may be necessary. Minimizing these costs through sound planning is critical to ensure that projects get built cost effectively.

- **Large transmission projects can cause large land-use impacts.** Transmission projects require the acquisition of sizeable tracts of land for right-of-way easements. Such acquisitions garner strong reactions from landowners and neighbors and the public at large. While recognizing that each state has the ultimate siting authority for transmission lines within that state, sound regional planning is essential to help ensure that potential rights-of-way are most efficiently used to mitigate land-use impacts where ever possible.

- **Cost allocation for the needed transmission is contentious.** Arguably the largest hurdle to new construction is how the costs get distributed. In the absence of an equitable formula, projects will not get built, or parties not benefiting from the projects will end up paying for them.

Recognizing this potential for developing renewable energy, and acknowledging the challenges in translating potential into reality, the governors formed UMTDI. The governors recognize that the challenges are significant, and that they inhibit the full development of wind's economic potential. However, the governors also agree that clean energy will be an increasingly important component of these states' economic growth strategies in the foreseeable future.

ORGANIZATIONAL STRUCTURE

UMTDI is composed of an Executive Committee consisting of a governor's representative and a utility commissioner from each of the UMTDI states. Senior staff from the states have assisted with analysis, as have planners and managers from the Midwest ISO, the regional grid operator. Meetings, both telephonic and in person, were held approximately twice a month, with emphasis not only on UMTDI's internal analysis, but also on parallel processes ongoing in other forums. Public input has been sought through opportunities for comment at various stages of the analysis.

Three working groups were eventually formed within the UMTDI: Legal, Cost Allocation, and Regional Planning. Chairman David Boyd from Minnesota and Chairman Eric Callisto from Wisconsin served as Chairs or Co-chairs of the work groups and Executive Committee.

ACCOMPLISHMENTS

UMTDI's major accomplishments during 2008-2010 include:

- Serving as a catalyst for current transmission policy development, including regional transmission planning techniques and cost allocation approaches.

- Identifying the existing legal structures and impediments to further regional cooperation on transmission siting.

- Developing a set of cost allocation principles that can serve as a foundation for ongoing cost allocation discussions in the region and the country.
- Designating regional renewable energy zones that have been adopted by the Midwest ISO as optimal areas for further wind development as part of broader transmission planning efforts.
- Finally, the UMTDI Executive Committee has identified six renewable transmission corridors that could be considered as primary paths for the first stage of future transmission analysis and development in the region in an effort to advance energy, economic, and environmental progress in the five states.

LEGAL CONSIDERATIONS

Interstate cooperation on transmission siting can only be advanced to the extent that legal structures exist to support that goal. Thus, one of the UMTDI's work groups explored legal issues related to development of multi-state energy corridors.

The workgroup concluded that the states have substantial means under their existing legal authorities for coordinating the siting and construction of interstate projects, especially if the economic development and regulatory perspectives can be harmonized. On the other hand, a binding cost allocation method for transmission facilities is largely subject to FERC's jurisdiction under the Federal Power Act (FPA). Efficiently securing the appropriate results from FERC for a five-state-only effort may depend on the states' willingness to coordinate and work with the Midwest ISO on implementing an appropriate FPA tariff filing. More detail on the legal workgroup's conclusions can be found at Appendix A.

COST ALLOCATION

The UMTDI "tall task" for cost allocation was to develop a formula and process for cost sharing, assuming agreement could be reached on the siting of regional transmission lines. The first step in this effort, with the assistance of stakeholder comments, was the creation of a set of cost allocation principles (Appendix B). These principles are consistent with those created by other entities exploring cost allocation, and can serve as a foundation for ongoing cost allocation efforts in the region.

Simultaneous with the early stages of UMTDI's cost allocation discussion, the Midwest ISO began its own evaluation of this problem, through the MISO Regional Expansion Criteria and Benefits Task Force (RECB-TF). The Organization of MISO States (OMS) also created a separate but consistent process to advise the Midwest ISO regarding cost allocation. OMS is comprised of utility regulators from each of the thirteen Midwest ISO states, and acts in an advisory capacity to the Midwest ISO. These two groups held dozens of meetings over the past two years to help the Midwest ISO develop a cost allocation method for the delivery of renewable energy from local areas as well as remote regions of the Midwest ISO footprint.

Based on the efforts of the OMS and the RECB-TF processes, the Midwest ISO submitted to FERC this past July a tariff filing seeking FERC approval of broad cost sharing of large regional transmission lines in the Midwest ISO. Given the substantial efforts of the RECB-TF and OMS on cost allocation, UMTDI decided to defer any additional discussion of cost sharing beyond that already achieved in the creation of the principles.

While commissioners from individual UMTDI states may have different views on the adequacy, effectiveness, and equity of the Midwest ISO filing at FERC, they all agree that if approved the Midwest ISO tariff will generally provide a known and predictable structure for cost allocation of large transmission lines designed to move renewable energy. UMTDI will continue to monitor the progress of the Midwest ISO's FERC filing on cost allocation, and UMTDI will reinitiate its deliberations on this topic if FERC or Midwest ISO action on the tariff so warrant.

REGIONAL PLANNING AND FIRST MOVER TRANSMISSION PROJECTS

UMTDI Study Process and Wind Zone Selection

Transmission planning for wind power integration no longer follows traditional methods, which assumed that generation would be close to load, and that transmission was necessary only to move energy relatively short distances. The best wind resources are generally far from where energy is needed. If the goal is to access this remote generation source, then transmission planning must be done on a much larger scale. However, such planning must be tempered by careful attention to customers' energy needs, economic factors and existing and developing environmental laws and public policy requirements.

Additionally, given the dynamic energy market implemented through the Midwest ISO, traditional planning methods and tools have to be supplemented to address the real-time dispatch of more than 144,000 MW of power throughout the Midwest ISO wholesale energy market. This is complicated by the variability of some of the resources, including wind, which is non-dispatchable and often blows strongest at times when the demand for energy is relatively low.

Given the complexity of this task, and the limited resources of the utility commissions to conduct this type of analysis, the Midwest ISO and appropriate transmission owners agreed to assist the UMTDI commission staff in assessing transmission requirements.

The first planning task for UMTDI was to more accurately quantify how much renewable energy was needed to fulfill renewable portfolio standards and goals in the five adjacent states. The Midwest ISO, utilities and the states investigated this question and concluded that approximately 15,000 MW of renewable resource capacity would be needed by 2024-25 to fulfill the entire renewable portfolio obligations and goals in the five states. This was based on estimates of capacity factors for wind turbines in different wind regimes throughout the Midwest ISO footprint. While current load growth forecasts are reduced from 2008 levels, 15,000 MW of additional capacity is a reasonable proxy for the region's needs. This number thus became the "target" number for the UMTDI for transmission planning purposes.

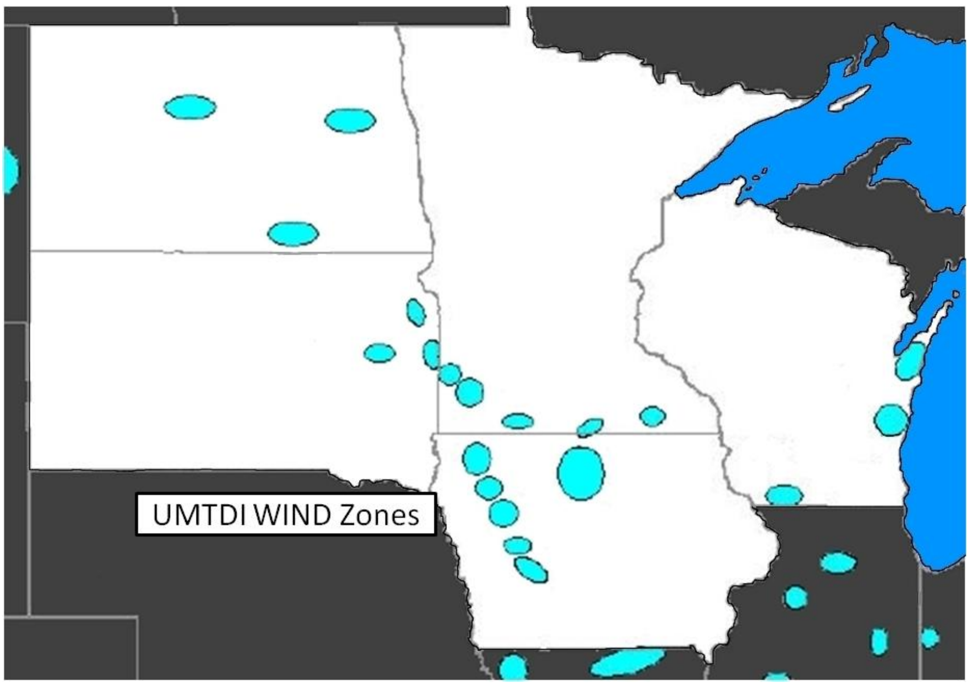
Next, UMTDI explored the question of whether it was better to focus on siting renewable resources locally or remotely.

The local option calls for using resource areas closest to the load that needs renewable energy to fulfill state mandates: primarily Minnesota and Wisconsin. A strong point of this local option is that since the electric generation is located close to its target load, the need for longer Extra High Voltage (EHV) power lines might be reduced. A weakness is that resource areas close to the larger concentrations of customers generally do not produce as much energy as cost effectively as the wind regimes farther away. Put simply, the wind blows stronger in remote areas far from the load. A further concern evidenced in recent wind project siting dockets is the increasing difficulty in siting wind farms in areas near load, which tend to have more heavily-populated land use.

The remote option focuses on selecting resource areas with the greatest potential to generate the most energy (likely in the Dakotas, southwestern Minnesota and Iowa) and then constructing longer EHV transmission lines to the load centers in the eastern side of the UMTDI states. The strength of this option is that the areas with the best wind resource are used, so the cost of generating electricity is cheaper than in the local option. The other strength is that, generally, fewer wind turbines will need to be sited to produce an equal amount of energy when compared to the local option. However, the transmission needed to deliver that more remotely located energy to customers will add an incremental cost as well as environmental impacts within the corridor.

The result of this analysis was that neither extreme approach was cost effective when considering the combined costs of the wind generators and the transmission lines required to move energy into the market without excessive curtailments or economic congestion. A middle option was appropriate, with a combination of wind from both remote and local zones.

Informed by this evidence, the UMTDI Executive Committee then identified likely efficient wind resource development areas. Based on wind profiles, existing wind generation, generation queue requests, and geographic areas to avoid, wind zones were located in each state as likely areas needing major transmission connections to the market. The Executive Committee decided on the probable realistic wind zones depicted by light blue ovals in the following map. For modeling purposes, each of the ovals was assumed to have the potential to produce from 750 to 1,250 MW of wind energy capacity.



The chosen zones represent a reasonable, achievable selection of locations with developable wind resources. These zones served as the initial guiding basis for the Midwest ISO's footprint-wide evaluation of renewable transmission needs. Actual zones developed will likely be different, as a result of the effective winnowing and decision-making that comes from state-specific processes.

Other Studies

While UMTDI was conducting its wind zone analysis, transmission companies were positioning themselves to participate in the potential transmission build-out associated with the delivery of renewable energy in and out of the Midwest.

At least three large network projects have been publicly proposed by transmission companies. In each case, the proposal has included some analysis as well as potential line and voltage configurations. However, none of these proposals has received ultimate approval in the Midwest ISO's transmission planning process - a prerequisite, along with any required state approvals, for actual construction. The three proposals are *Green Power Express* (by ITC Transmission Holdings Corp), *Hartland Transmission Study* (by American Electric Power), and *SMARTransmission Study* (a transmission joint venture of subsidiaries of American Electric Power and MidAmerican Energy Holdings Company, American Transmission Company, Exelon Corporation, NorthWestern Energy, MidAmerican Energy Company – a subsidiary of MidAmerican Energy Holdings Company, and Xcel Energy). These studies include various configurations of 345 kV, 765 kV, and Direct Current (DC) transmission facilities.

Neither UMTDI nor its individual state members takes a position on the merits of these plans, or on the viability and desirability of building lines larger than 345 kV, which is the largest configuration currently in place in the UMTDI states. However, the existence of these proposals supports UMTDI's conclusion that transmission buildout is needed, that competing developers are willing to move forward on appropriate projects, and that regulatory oversight of the buildout remains an important issue.

Midwest ISO's Regional Generation Outlet Study and the UMTDI Transmission Corridors

While providing technical assistance to UMTDI in conducting its work on the wind zone analysis, the Midwest ISO simultaneously worked on a larger, similar project. Designated the "Regional Generation Outlet Study," (RGOS) the project is a transmission planning initiative for the entire Midwest ISO footprint.

For RGOS, the Midwest ISO initially used the previously-mentioned analysis done for UMTDI, and then worked with the remainder of the MISO states to identify renewable energy resource areas in each of the remaining MISO states. This footprint-wide renewable resource inventory was coupled with the projected renewable energy mandate needs in the MISO states resulting in the renewable generation needed by 2024. The Midwest ISO then conducted transmission studies using differing variables regarding fuel costs (particularly natural gas), energy usage rates, and environmental (including carbon) costs. These studies used a variety of sensitivity analyses, and resulted in different transmission scenarios with different voltage overlays, numbers of lines, and location of lines that would be needed to fulfill different scenarios.

The Midwest ISO completed its footprint-wide study to accommodate renewable energy in the summer of 2010, and expects to issue a report this fall. UMTDI asked the Midwest ISO, for the purposes of this final UMTDI report, to identify some of the possible locations and types of projects that could be considered “no regrets” or “first mover” transmission lines for the five states. The Midwest ISO conducted this exercise to identify lines that would provide benefits or fulfill transmission needs in a variety of likely future scenarios. Next generation lines must remain robust in the face of an uncertain future. Variables used to test the robustness of these projects included variations in future energy usage rates, future construction costs, future inflation rates, and costs for future generation fuels.

This RGOS analysis resulted in the identification of new transmission lines that will remain important and economic in a variety of futures. These first-mover transmission lines include specific proposals in North Dakota, South Dakota, Minnesota, Iowa, Wisconsin, Missouri, Illinois, Indiana, Ohio and Michigan. The total cost for these first-mover lines is approximately $5.8 billion with $1.4 billion being funded by customers in PJM, the Midwest ISO’s neighboring independent system operator to the east. Significant transmission owners in the UMTDI states did their own independent analysis of first-mover lines, and their results are largely consistent with the Midwest ISO’s.

The RGOS first-mover subset located within the UMTDI states’ footprint is:

- Big Stone, SD to Brookings, SD 345kV - estimated cost of $150 million.

- Brookings, SD to Twin Cities, MN 345kV - estimated cost of $700 million.

- Lakefield Junction, MN to Mitchell County, IA operated at 345kV but constructed at 765kV specifications to allow full upgrading and operation at 765kV in the future - estimated cost of $600 million.

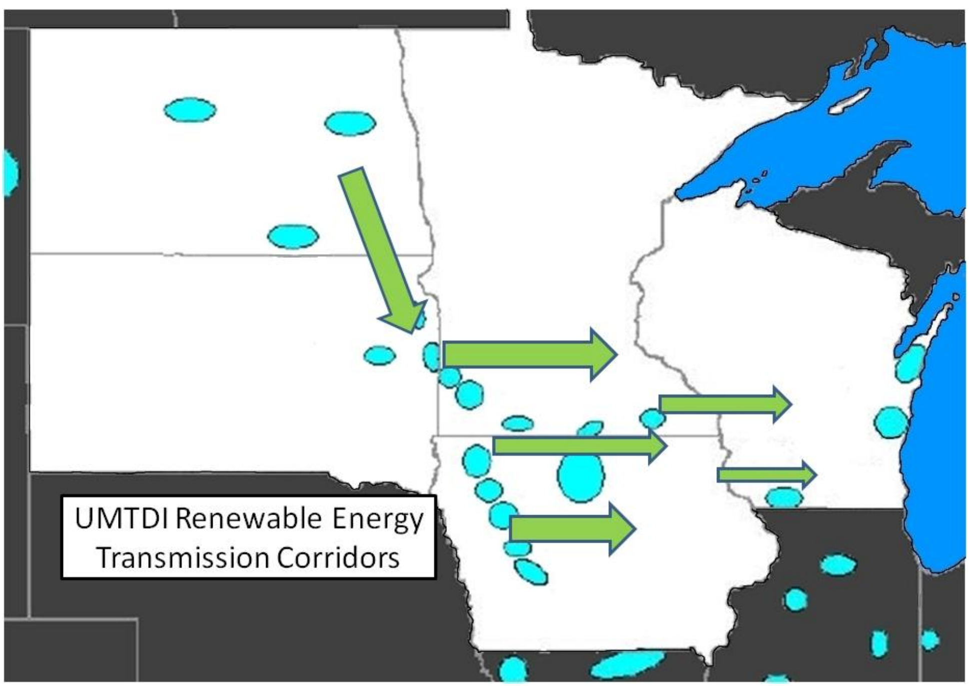
- North La Crosse, WI to North Madison, WI and Dubuque, IA to Spring Green, WI to Cardinal, WI 345kV - estimated cost of $811 million.

- Sheldon, IA to Webster, IA to Hazleton, IA 345kV - estimated cost of $458 million.

In addition to the proposed transmission projects above, the Midwest ISO's Midwest Transmission Expansion Plan (MTEP) for 2011 identifies the following transmission project as an initial candidate for regional cost sharing because of its regional benefits.

- Ellendale, ND to Big Stone, SD 345 kV – estimated cost of $275 million.

Using the Midwest ISO's RGOS and MTEP analyses, as well as that of the participating transmission owners, the figure below, *UMTDI Renewable Energy Transmission Corridors,* reflects the locations that the UMTDI Executive Committee have identified as best representing the general areas where EHV lines could be built in the UMTDI states for the purpose of moving wind energy in the region in a cost effective manner. Using the estimates above, and assuming those lines are built in the corridors noted, the total estimated capital cost for these projects is approximately $3 billion.



Although UMTDI actively engaged in the identification of possible renewable resource areas and potential transmission corridors, this should not be taken as expression of support for particular routes, particular projects, particular voltages, or appropriate levels of spending in any state proceeding. Those decisions remain for a future day, when specific projects might be proposed. However, the Executive Committee sees great value in affirming its support for coordinated state efforts on these multi-state projects, and its general support for these corridors, which appear to have value in all identified reasonable futures.

A key, unresolved issue for construction of projects of this magnitude is cost sharing. The criteria in the Midwest ISO's recent tariff filing at FERC, as well as other activities ongoing at the Midwest ISO, indicate that these first-mover projects would likely all qualify for cost allocation treatment. This designation would mean that all energy users in the Midwest ISO's footprint would share the costs of these "no regrets" lines. FERC has not approved this rate treatment, however, and it is likely that FERC will receive a number of comments and objections to the Midwest ISO's tariff proposal. While the UMTDI Executive Committee has not taken a position on the Midwest ISO's cost allocation filing, it is safe to say that the absence of cost sharing would make construction of EHV transmission lines in these corridors very difficult.

NEXT STEPS

UMTDI has made great strides in meeting its charge to investigate possible paths to facilitate renewable energy development in the five states. The UMTDI Executive Committee established a productive, collaborative relationship and gained an understanding of the goals and challenges faced by each state.

In addition to the early steps taken on cost allocation, UMTDI identified renewable resource areas in each of the states to use as conceptual "end points" in transmission planning and modeling, and potential renewable transmission corridors to move that energy to load centers.

The Executive Committee intends to continue to meet to discuss cost allocation, and any possible role for UMTDI in advancing or supporting a sound solution to the cost allocation problem.

Other areas for collaboration include:

- Coordinating or, where possible, aligning states' planning and permitting processes for multi-state transmission proposals.

- Identifying and coordinating further steps necessary for implementing infrastructure needs (as identified in RGOS).

- Coordinating with other Regional State Committees on inter-regional or inter-ISO issues.

- The potential use of the successful UMTDI model to facilitate governors' and state Commissions' goals on energy issues of regional importance.

Appendix A

UMTDI LEGAL FRAMEWORK SUMMARY

The Legal Framework Study Group reviewed the existing legal avenues for facilitating the authorization, siting, and allocation of costs of the UMTDI Project [or Projects] in a coordinated fashion within each state and among the five states collectively. Thus, the study group looked at indirect and direct means by which a state could advance the contemplated transmission for purposes of construction and cost allocation (a) within each state, and (b) in coordination with the other states or by use in federal agency forums. The cost allocation analysis did not look at the ability to influence or require participation by non-Midwest Independent Transmission System Operator, Inc. ("Midwest ISO") members or beneficiaries.

<u>Transmission Construction and Siting</u>

Those state commissions with approval authority for the siting and construction of high-voltage transmission lines, in Iowa, Minnesota and Wisconsin, may inject the UMTDI Project, where clearly relevant, into the consideration of the public interest. North Dakota and South Dakota utility commissions do not have specific construction approval authority, but may consider the siting of a transmission project in congruence with the UMTDI Project.

All five states have provided state commission authority to order construction of transmission facilities if necessary to ensure adequate utility facilities. North Dakota and South Dakota take a different, "proprietary" tack by having created state agencies to promote and invest in additional transmission construction.

<u>States Together – Interstate Compacts</u>

At the highest levels, all five states have the power to create a compact, with the consent of Congress, to establish a common agreement on how to develop the UMTDI Project. Minnesota and Wisconsin provide specific powers to their respective governors to enter compacts involving transmission lines. Congress has specifically contemplated the compact mechanism by authorizing three or more states to form a compact, subject to Congressional approval to "facilitate siting of future electric energy transmission facilities." Sec. 216(i) of the Federal Power Act (FPA), 16 U.S.C. § 824p. Another FPA provision, little used § 209, authorizes the FERC to delegate any subject matter in its jurisdiction to a group of states, offering another potential avenue of federal approval for joint state action on transmission siting and cost allocation.

<u>States Together – Other Coordination</u>

All five state utility commissions permit entry into non-binding memorandums of understanding to facilitate coordinated action where feasible, and have formal powers to intervene in proceedings before the Federal Energy Regulatory Commission (FERC). North Dakota and South Dakota have executive state agencies, as noted above, geared to the promotion of transmission line development. Those agencies may have to interact with the Iowa, Minnesota and Wisconsin utility commissions - the independent, rather than executive, agencies that are largely responsible for transmission issues in those states.

<u>Transmission Facility Cost Allocation</u>

Apart from a formal interstate compact, the states have no existing, ready mechanism to coordinate the recovery of transmission line costs in a binding cost allocation formula. Each state commission is excluded from jurisdiction over electric cooperatives, but retain jurisdiction in one manner or another to authorize increased rates to permit the recovery of costs of new transmission facilities.

If the UMTDI Project amounts to a transmission-only facility for the interstate transmission of electricity in the wholesale market, the cost allocation formula would be subject to the exclusive jurisdiction of the FERC. To obtain a cost allocation formula, the states could pursue a cooperative path with the Midwest ISO to initiate, in cooperation with transmission line owners, a § 205 filing under the FPA to change the Midwest ISO's tariffs to include the UMTDI cost allocation formula as one of general application or perhaps as one specific to the UMTDI Project. Alternatively, if willing to undertake the burden of proof, the states might jointly pursue a § 206 FPA complaint to the FERC that the existing Midwest ISO cost allocation formula as related to the UMTDI Project is "unjust and unreasonable." If the FERC considers a cost allocation formula applicable only to the five states, and does not burden other states, chances of a FERC approval appear to be substantially increased.

The states have substantial means for coordination of the construction and siting of the UMTDI Project, especially if the economic development and regulatory perspectives can be harmonized. On the other hand, a binding cost allocation method is largely subject to the FERC's jurisdiction under the FPA. Securing the appropriate results from the FERC in the most efficient fashion may depend on the states' willingness to coordinate and work with the Midwest ISO to effect implementing a § 205 FPA tariff filing, rather than pursuing a more difficult § 206 FPA complaint.

- # # -

Appendix B

UMTDI COST ALLOCATION PRINCIPLES

• Principle 1 The UMTDI favors cost allocation that is informed by clearly-defined state, regional and federal public policy goals, economic efficiency, and sound transmission planning and reliability considerations. Applicable UMTDI cost allocations should be flexible and adjust as state and federal changes are approved and implemented. Cost allocations should allow a reasonable opportunity for recovery of prudently-incurred costs.

• Principle 2 The following questions must be answered through a planning process conducted by appropriate stakeholders:

o What is the project's potential cost, purpose, or need?

o Which stakeholders are driving the need for the project?

o Which stakeholders will directly benefit from the project?

o Which stakeholders will be negatively affected by the project?

• Principle 3 Effective transmission planning identifies all who cause costs to be incurred and who benefit from the associated new transmission construction and operation as well as the degree of the causation and benefit.

• Principle 4 As a general rule, cost causers and beneficiaries should pay for the new electric network transmission needed for delivery of renewable energy resources. Determination of beneficiaries should consider more than one single metric as well as current and future needs or uses. With the passage of time there may be a reduced distinction between transmission used for reliability and economic purposes. It may not be possible to identify all beneficiaries over a project's lifetime with precision at the time the project is planned.

• Principle 5 No load serving entity or transmission owner's customers should disproportionately bear the cost of new electric network transmission needed for delivery of renewable energy resources.

• Principle 6 For appropriate cost allocation, effective transmission planning must consider regional impacts. Transmission planning should include all relevant existing and forecast demand loads, including demand and energy use reduction programs, as well as those existing and anticipated supply resources located within the regional level. Transmission planning must factor in the most current topology of the network, proposed projects included in appropriate planning processes, and any anticipated reliability upgrades of the transmission owners.

• Principle 7 For AC lines, the higher the voltage and the longer the transmission line, the greater the likelihood that a broader region will benefit by the project and should hence pay for the improvement.

• Principle 8 To the extent that transmission investment provides benefits to regions outside the UMTDI 5-state region (Iowa, Minnesota, North Dakota, South Dakota, and Wisconsin), proportional costs should be allocated to those non-UMTDI regions.

- # # -

**MISO RESPONSE TO ITC MIDWEST LLC
REGARDING
MINNESOTA PUBLIC UTILITIES COMMISSION
ORDER REQUESTING DATA
DATED MAY 15, 2012**

A) Background Information

The Minnesota Public Utilities Commission issued an order dated May 15, 2012 requesting data from ITC Midwest LLC regarding compliance with commitments in Docket E-001/PA-07-540 to improve the transmission system and relieve constraints. ITC Midwest LLC has requested MISO to assist in responding to Items 1a and 1d of this order. Below is the MISO response for Item 1a and Item 1d.

B) Minnesota Data Request Item 1a and MISO Response:

"1. As a condition in the February 7, 2008 order and the Settlement Agreement it incorporates, ITC must resolve all system constraints in the IPL service territory as reported by the Midwest Independent Transmission System Operator (MISO) and comply with a directive from the Commission to invest in any project the Commission has determined is necessary to ensure safe, adequate, efficient, and reliable service. To determine which binding constraints still exist in the MN NCA and what projects are still needed to resolve these constraints, ITC shall file the following reports by June 30, 2012:

a. A report on the current state of the transmission system in IPL service territory, including all binding constraints, the current impact of these constraints on Minnesota in terms of annual cost differential for energy flow into Minnesota, the duration of the constraint if no longer 500 hours or no longer fully mitigated, as well as the magnitude of that constraint in MWs that are not getting to Minnesota."

MISO's response:

The Minnesota PUC requests a report of the current state of the transmission system in the ITC Midwest service territory. Following receipt of the request from ITCM, MISO performed a historical review of the ITC Midwest transmission system from January 1st 2011 to 2012 year-to-date. The review consisted of analyzing ITC Midwest binding constraints which impacted Minnesota load and generation in MISO's Day-Ahead Energy Market. A total of 261 binding constraints were identified, which are listed in the table below. These constraints resulted in a net congestion cost of $46.78 million in 2011 and $35.37 million in 2012 year to date.

ITC Midwest Binding Constraints Impacting Minnesota Nodes

Year	CONSTRAINTNAME	Binding Hours
2011	FXLAKE_RTLND FLO LKFLDGS_FLDN_WLMRTH	1412
2011	LIME CRK_EMRY_1 FLO LIME_CK TR92 161/69	617
2011	LIME CRK_EMERY_1 FLO LIME_CK TR92 161/69	340

Year	CONSTRAINTNAME	Binding Hours
2011	STILLWL_DUMNT FLO WLTN_DMNT	337
2011	ARNOLD TR 1 FLO ARNOLD UNIT 1	299
2011	HODEN_TIPPY FLO LUDINGTN_KEYSTONE	288
2011	CHARILUCAS FLO OTTUMWA-WAPELLO	279
2011	LIME CRK_BARTN FLO HAYWARD 161/69 TR2	262
2011	8TH ST_KERP FLO LORE_ASHBRY_LULN_SALEM	244
2011	8TH ST TR91 FLO LORE 161/69 TR2	226
2011	FXLAKE_RTLND FLO LKFLD_FLDN_WLMRTH+SPS	203
2011	ADAMS_STWRTVL FLO BVR_HRMY_ADMS_RICE	201
2011	LORE TR1 FLO LORE 161/69 TR2	187
2011	HAZLTN-DNDEE FLO HILS_TIFIN+TIFIN TR1	181
2011	WELSBGCB TR1 FLO DYSART-TRAER-M TOWN	157
2011	WAPELLO_ELDON FLO JEFF CO_WAPELLO	151
2011	FXLAKE_RTLND FLO LAKEFIELD_LAKEFIELD JCT	146
2011	DRAGEGR_JC16 FLO LEHIGH-RAUN_345	138
2011	BURNHM_MUNSTER FLO WLTN_DMNT 765	129
2011	BUTLER_GRNVIL FLO GRNVIL_ARCDN (9911)	129
2011	LORE_SEIP FLO DUNDEE-LIBERTY-LORE 161	128
2011	ADAMS_I TR91 FLO BVR CRK_HRMNY_ADMS_RCE	127
2011	DRAGEGR_JC16 FLO DENISON KV1A_230/161	121
2011	MADLIAJ_MAD FLO LAKEFIELD-FIELDON-WILMAR	96
2011	DRAG-GRJCT FLO CBLUFF-GRIMES	96
2011	RICE2 TR91 FLO BVRCRK_HRMNY_RICE	91
2011	BRLGTN TR91 FLO NIOTA-BURLINGTON 161	87
2011	HAZLTN-DNDEE FLO CDV-NLSN Q2 CRD U2 U3-S	84
2011	MTOWN_WELSBRG FLO MTOWN XFMR 5	83
2011	STNEMN_TRKRVR FLO GENOA_SENCA 161	80
2011	FXLAKE_RTLND FLO NOBLES-SPLIT ROCK 345	80
2011	DRAGEGR_JC16 FLO GRIMES-COUNCIL BLUFF	78
2011	MADLIAJ_MADVL FLO LKFLD-FLDN-WLMRTH + SP	74
2011	CHARILUCAS FLO SCNTRVL_APANOSE	71
2011	E_CALMS TR91 FLO ARNOLD 345/161 TR1	69
2011	AGENCY_4TH FLO BURLNGTN_NIOTA	68
2011	LIME CRK TR91 FLO LIME CRK TR92	67
2011	BVR_CH TR93 FLO TR91+TR92+LINE	66
2011	E CALMS_DAVENPRT FLO QD CTY_ ROCK CRK	60
2011	RUDYARD 6923-4 FLO PNE RIVR-NINE ML 6921	59
2011	E_CALMS TR91 FLO ARNOLD UNIT 1	54
2011	LIBERTY DUNDEE FLO HILLS-TIFFIN 345	54
2011	ADAMS_I TR2 FLO BVR CRK_HRMNY_ADMS_RCE	52

Year	CONSTRAINTNAME	Binding Hours
2011	MQOKETA-WYOMIN FLO WALCOT-SUB92	51
2011	BURNHM_MUNSTER FLO CRETE-EFRNKFRT6607	49
2011	LIBERTY DUNDEE FLO CDV-NLSN Q2 CRD U2	45
2011	LUCAS_LUCAS TP FLO OTTUMWA-MONTEZUMA	44
2011	FERNALD TR2 FLO M TOWN WEST-TIMBRCK 161	42
2011	HIAWATA TR1 FLO PCI-BERTRAM_161	40
2011	OTTMWA_WAPLLO_2 FLO OTTMWA_WAPLLO_1	38
2011	CHARILUCAS FLO APANOSE-SCENTERVL	35
2011	ARNLD HAZELTON BASE	35
2011	WINBAGO_RUTLND FLO LKFLDGS_FLDN_WLMRTH	34
2011	HIAWATA-DRY CRK FLO ARNOLD 345/161 TR1	34
2011	LIBERTY DUNDEE FLO HILS_TIFIN+TIFIN TR1	33
2011	WAPELLO_ELDON FLO HILLS_MNTZUMA_345	33
2011	HAZLTN TR22 FLO D.A.E.C.-VINTON_161	32
2011	FXLAKE_RTLND FLO NOBLES-SPLIT ROCK_345	32
2011	FERNALD TR1 FLO STRY CO_MTWN_W MAIN	31
2011	DRAGER_JC16 FLO WEBSTER-LEHIGH+WBSTR T1	31
2011	LORE-TRKYRVR FLO BYRON_LEE CO 0627	31
2011	LIME CRK_BARTN FLO WORTH CO-GLENWTH	30
2011	GR_JCT TR 92 FLO WBSTR_LEHGH+WBSTR TR1	28
2011	LIME CRK-BARTN FLO LIME CREEK TR92	28
2011	HAZLTN_BLKHWK FLO HAZLTN_WSHBRN	27
2011	HARMONY-LANSING FLO GENOA-LNSNG-PVLTR	27
2011	6TH ST_ARNOLD FLO FAIRFAX-ARNOLD	25
2011	LORE-TRKYRIVR FLO NELSON DEWEY G2	25
2011	HIAWATA TR1 FLO ARNOLD-6_ST-DWNTIND 161	25
2011	HAZLTN_DUNDE FLO ARNOLD-HAZLETON	25
2011	FXLAKE_RTLND FLO LAKEFLD_LAKEFLD JCT	24
2011	PRAR CK_SUTLF FLO OAKGRV_LOUISA	24
2011	GR_JCT TR 93 FLO WBSTR_LEHGH+WBSTR TR1	24
2011	DUNEACRE 13839 FLO BBCK-STLWL+MCHCY_DNE	24
2011	WELCMT_FXLAKE FLO LKFLD_FLDN_WLMRTH	24
2011	HAZLTN TR22 FLO MITCHLCO-ADAMS N345	23
2011	OTTUMWA-WAPLO 161 FLO OTTMWA-MNTZM 345	23
2011	ADAMS_I TR91 FLO EAU CL T9+ KING_ECL_ARP	21
2011	MTOWN_BLRST FLO HILLS_MNTZUMA	21
2011	LUCAS-LUCASTP FLO OTTUMWA XFMR 21	21
2011	IAFI_IAFALLS FLO W SHFFLD_HMPTN-FRNKLN	20
2011	MTOWN_BLRST FLO DYSART_TRAER_M TOWN	20
2011	8THST TR91 FLO 8THST_GALENA	20

Year	CONSTRAINTNAME	Binding Hours
2011	FXLAKE_RTLND FLO LKFLD_LKFLD JCT+SPS	19
2011	LIBERTY DUNDEE FLO ARNOLD-TIFFIN_345	19
2011	E_CALMS_DAVENPRT FLO QD CTY_ ROCK CRK	17
2011	LIBERTY DUNDEE FLO ARNOLD-TIFFIN_345	17
2011	FXLAKE_RTLND FLO LAKEFIELD-LAKEFIELD JCT	16
2011	LIBERTY-DUNDEE FLO ARNLD-HZLTN+SFOX BKR	16
2011	POWESHK TR1 FLO POWESHIEK-BEACON_161	16
2011	LUCAS-LUCASTP FLO BONDURANT-MONTEZUMA	15
2011	WAPELLO XF 92 FLO JEFFERSON CNTY 161/69	15
2011	CHARILUCAS FLO OTTUMWA-WAPELLO_2	15
2011	HERON LK TR1 FLO HERON LAKE 161/69 TR2	15
2011	CHARI-LUCAS FLO BRDGPT TR7	14
2011	FRDA_NOFM_CAPE_1_D FLO LTSVL_STFRAN	14
2011	WELSBGCB TR1 FLO M TOWN 161/115 TR5	14
2011	BVR_CH TR93 FLO TR91+TR92+LINES	14
2011	HIAWATA TR91 FLO FAIRFX-ARNOLD	14
2011	CARBIDE TR1 FLO OG PLMYRA-MRBLHD N 161+T	14
2011	LIME CRK_MANLY FLO HAYWARD TR2	13
2011	E_CALMS TR91 FLO ARNOLD-TIFFIN_345*	13
2011	FXLAKE_RTLND FLO PRAIRIE ISLD UNIT 1	13
2011	E_CALM-DWIT 161 FLO QUAD-ROCKCK 345	13
2011	HAZLTN TR22 FLO MITCHLCO-ADAMS	12
2011	8TH ST TR91 FLO 8TH ST-GALENA_161	12
2011	HBDSNJV_DAVD J FLO GOSS-NELSON RD 345	12
2011	DUNEACRE 13839 FLO BABCK_STLWEL+STWEL XF	11
2011	6TH ST_ARNOLD FLO HIAWATA-ARNOLD	11
2011	DUNDEE-AURORA 69 FLO HAZLTN-WINDSR-PSTVL	11
2011	HAZLTN TR4 FLO HAZLETON 345/161 TR3	11
2011	DECORAH_MADISN FLO RICE_SARTGA_JERICO	11
2011	PCI_BERTRAM FLO ARNOLD UNIT	10
2011	TRK_RIV TRK_RLORE16_1 1 LN	10
2011	WINGER TR51 FLO WILTN_WINGR 230	10
2011	TRKYRVR TR91 FLO GENOA-SENECA_161	9
2011	ARNOLD TR 1 FLO ARNOLD-HAZLETON 345 *	9
2011	STATLIN_ROXANA FLO SHFFLD-GARYAVE	9
2011	HAZLTN TR21 FLO ARNOLD-HAZLETON 345	9
2011	WSHEFLD_EMERY FLO FLOYD-EMERY_161	9
2011	HZLTN XFMR 3 FLO MITCHL_CNTY-HZLTN 345	9
2011	STNEMN_TRKRVR FLO NELSON_ELECTC JCT	8
2011	HIAWATA_ARNLD FLO FAIRFAX-ARNOLD	8

Year	CONSTRAINTNAME	Binding Hours
2011	STILWEL_DUMNT FLO WLTN_DMNT	8
2011	HBDSNJV_DAVD J FLO NELSON RD_MURPHY	8
2011	LANSING TR91 FLO LANS-PSTVL 161	8
2011	HIAWATA TR1 FLO ARNLD_6TH_DWNTND	8
2011	BEHR_EMERY FLO LIME CREEK 161/69 TR91	7
2011	LORE-TRKYRVR FLO BYRON_CHERRYV 345B	7
2011	LIBERTY-LIBERTYTP FLO SUB92-HILLS	7
2011	ROQUETE_KEOKUK FLO PALMYRA -TWIN RIVER	6
2011	HAZLTN TR93 FLO HAZLETON 161/69 TR94	6
2011	DRAGER_GRJCT FLO POMRY-POCHNT	6
2011	8TH ST TR91 FLO LORE 161/69 TR91	6
2011	LANSING TR1 FLO GENOA-LANSING_161	6
2011	BEVRLY_PCI FLO ARNOLD_TIFFIN	6
2011	E_CALMS_DAVENPRT FLO QDCTY_ RCK+ECALM	6
2011	HANCOCK TR91 FLO EMERY-WEST SHEFFIELD	5
2011	8TH_ST_TR91 FLO LORE TR2	5
2011	E_CALMS_GR_MND FLO ROCK CREEK-SALEM	5
2011	LIME CRK_EMRY_1 FLO WORTH CO-GLENWTH	5
2011	AEP-DOM FLO CULLODEN-WYOMING 765	5
2011	WAPELLO_RUTLDG FLO WAPELLO-EXCEL Y1187	5
2011	HAZLTN TR21 FLO HAZLTN TR22	4
2011	ARNOLD TR 1 FLO ROSEHOLLOW-BERTRAM	4
2011	CHARILUCAS FLO N_CENT-SOCTRVIL_69 (Y921)	4
2011	SALEM_JULIEN FLO BVR CHNL_SAVANNA	4
2011	HAZLTN TR22 FLO ARNLD_HAZLTN+SFOX 0420	3
2011	WYMNG_MTVRN FLO QUD CTY-RCK CR+CORD SPS	3
2011	HAZLTN_BLKHWK FLO WASHBURN TR1 161/69	3
2011	CAYLER_WISDM FLO SPLIT ROCK-SIOUX CITY	3
2011	HAZLTN TR22 FLO DYSART-WASHBRN_161	3
2011	MTOWN_WELSBRG FLO DYSRT_TRER_MTWN	3
2011	JEFF2 XF 1 FLO WAPELLO XF 92	2
2011	BRLGTN TR91 FLO DNMRK-BRLNGTN + BRKR	2
2011	GLENWTH GLENWHAYWA16_11 LN	2
2011	E_CALMS TR91 FLO HILLS-TIFFIN	2
2011	FXLAKE_RTLND FLO RAUN-LAKEFIELD 345	1
2011	HAZLTN TR22 FLO ARNOLD-HAZLETON 345	1
2011	FOXLK-RUTLND FLO SHERCO 3	1
2011	8TH ST_KERP FLO ARNLD_HAZLTN+ SFOX BKR	1
2011	LORESEIP 69 FLO DUNDEE-LIBERTY-LORE_161	1
2012	MADLIAJ-MADVL FLO LKFLD-FLDN-WLMRTH+SPS	1763

Year	CONSTRAINTNAME	Binding Hours
2012	FXLAKE-RTLND FLO LKFLDGS-FLDN-WLMRTH	718
2012	FXLAKE_RTLND FLO LKFLDGS_FLDN_WLMRTH	446
2012	MTOWN-BLRST FLO ARNOLD UNIT 1	432
2012	ECALMS-DAVENPRT FLO QUAD CTY-ROCK CRK	417
2012	8TH ST-SO GVW FLO LRE-AHBRY-LULN-SALM	403
2012	BUTLER-GRNVIL FLO GRNVIL-ARCDN (9911)	395
2012	LIME CRK-EMERY 1 FLO LIME CK TR92 161/69	392
2012	8TH ST TR91 FLO LORE 161/69 TR2	375
2012	LIME CRK-BARTON FLO WORTH CO-GLENWTH	338
2012	8TH ST TR91 FLO LORE-ASHB-JULIEN-SALM	313
2012	MADLIAJ_MADVL FLO LKFLD-FLDN-WLMRTH + SP	313
2012	MTOWN-BLRST FLO JASPER-LAURELSS 161	288
2012	8TH ST TR91 FLO ARNOLD-TIFF+SALEM3 CB200	283
2012	LIME CRK-BARTN FLO WORTH CO-GLENWTH	277
2012	DUNDEE-AURORA 69 FLO HAZLTN-WINDSR-PSTVL	247
2012	GLENWRTH-HAYWARD FLO BARTONS-ADAMS	231
2012	RUDYARD 6923-4 FLO PNE RIVR-NINE ML 6921	213
2012	TIMBRCK-MTOWN FLO STORY CO-FERNALD 161	202
2012	OTTMWA-BRDGPRT FLO OTTUMWA-TRI CNTY 161	192
2012	WELSBGCB TR1 FLO DYSART-TRAER-M TOWN	175
2012	FERNALD TR1 FLO AMES-FERNALD	147
2012	LUCAS 161_69 XFMR FLO BEACON-TRICTY	147
2012	ARNOLD TR1 FLO ARNOLD UNIT 1	145
2012	DRAGE-GRJC16 FLO MONONA-CRFRDCO	142
2012	MANLY-LIMECK FLO WORTH CO-GLENWTH	136
2012	LIME CRK_BARTN FLO WORTH CO-GLENWTH	136
2012	ROCKCRK-DEWITT FLO SUB 91 345/161 TR1	127
2012	HIAWATA TR1 FLO ARNOLD-6_ST-DWNTIND 161	123
2012	GLENWTH TR1 FLO GLENWTH-HAYWARD	112
2012	ROQUETE-KEOKUK FLO CARBIDE 161/69 TR1	107
2012	ADAMS-STWERVILL FLO BEVR CK-HARM-ADM-RIC	107
2012	MADLIAJ_MADVL FLO LKFLD-FLDN-WLMRTH+SPS	101
2012	OTTMWA-WAPLLO 2 FLO OTTMWA-WAPLLO 1	101
2012	MTOWN-BLRST FLO 6TH ST-SANTSRN 115	99
2012	NEWTON TR91 FLO POWESHIEK-REASNOR	95
2012	HAZLTN-BLKHWK FLO HAZLTN-WSHBRN	91
2012	CREE-CRES2 FLO CRESTON-SLAK	74
2012	LANSING TR1 FLO LANS-PSTVL 161	74
2012	WELSBGCB TR1 FLO BLKHWK-UNTP-BUTLER	69
2012	GR JCT TR 92 FLO WBSTR-LEHGH	67

Year	CONSTRAINTNAME	Binding Hours
2012	ECALMS-DVNPRT FLO QUAD CTY-RCK CRK+CORDV	64
2012	LORE-GRDNR LN FLO 8TH XF91	61
2012	WELSBGCB TR1 FLO FRANKLIN-BUTLER 161	60
2012	WYOMING-MT VERN FLO ARNOLD 345/161 TR1	59
2012	WINBAGO-RUTLAND FLO LKFLDGS_FLDN_WLMRTH	58
2012	8TH ST_SO GVW FLO LRE_AHBRY_LULN_SALM	58
2012	LUCAS-LUCAST FLO OTTUMWA-WAPELLO	56
2012	BLANEYPK-CURTIS FLO INDLK-HIAWATHA	53
2012	ECALMS-DAVENPRT FLO ROSEHOLLOW-BERT	53
2012	LIME CRK TR1 FLO LIMECRK TR92	41
2012	STILWEL_DUMNT FLO WLTN_DMNT	40
2012	LIMECRK TR1 FLO LIMECRK TR92	40
2012	HAZLTN-DUNDEE FLO RCKCRK-QUADDCTY	36
2012	STELCTR-PRAT FLO LKFLD-FLDN-WLMRTH+SPS	35
2012	LIME CRK-EMERY 1 FLO MITCHLCO-ADAMS_345	34
2012	SLAK-CREST FLO SLAK-CRES (Y1217)	32
2012	DRAGE-GRJC16 FLO LEHIGH-RAUN_345	32
2012	ECALMS TR91 FLO ARNOLD-TIFFIN 345*	32
2012	PCI-BERT FLO ARNLD-TIF+SALEM3 CB 200S	31
2012	POWERSHK TR1 FLO POWESHIEK-BEACON	31
2012	HIAWATA-SAINTRN FLO ARNOLD-6_ST 161	30
2012	MANLY-LIMECK FLO LIMECK-WORTH	30
2012	LUCAS-LUCAS TP FLO OTTUMWA-MONTEZUMA	28
2012	LUAN-MONON FLO LANSING 161/69 TR1	27
2012	E_CALMS TR91 FLO HILLS-TIFFIN	27
2012	LUCAS-LUCT FLO BEACON-TRICTY	27
2012	HODEN_TIPPY FLO LUDINGTN_KEYSTONE	27
2012	NEWTON2 TR1 FLO NEWTON - CASEY W	25
2012	MADLIAJ-MADVL FLO LAKEFIELD-LAKEFLD JCT	25
2012	ROQUETE_KEOKUK FLO CARBIDE 161/69 TR1	24
2012	STELCTR-PRAT BASE	24
2012	E_CALM-DAVNPRT FLO ROSEHOLLOW-BERT	24
2012	IAFI-IAFALLS FLO FRANKLIN-BUTLLER 161	24
2012	GLENWTH XF1 FLO GLENWTH-HAYWARD	23
2012	TOLEDO-MTOWN FLO ARNOLD UNIT 22	23
2012	MANLY-LIME FLO WORTH CO-GLENWTH 161	22
2012	WAPELLO_ELDN2 FLO JEFFRSN CO-WAPELLO_1	22
2012	WELSBGCB TR1 FLO WBSTR_LEHGH+WBSTR1	22
2012	CHARILUCAS FLO APANOSE-SCENTERVL	22
2012	ECALMS-DAVENPRT FLO BVR CH-ROCK CK	20

Year	CONSTRAINTNAME	Binding Hours
2012	BRLGTN TR91 FLO DNMRK-BRLNGTN_VLE	20
2012	8TH ST TR91 FLO 8TH ST-GALENA_161	18
2012	CAYLER-TRIBOJI FLO RAUN-LAKEFIELD 345	18
2012	CARBIDE TR1 FLO OG PLMYRA-MRBLHD N 161+T	18
2012	8TH ST-GALENA FLO MQOKETA-SALEM	17
2012	LIME-MANLY FLO LIME CREEK-BARTON	17
2012	HANCOCK XF3 FLO HANCOCK 161/69 TR1	17
2012	WYMNG-MTVRN FLO ROCK CREEK-SALEM_345	16
2012	ECALMS-DAVENPRT FLO SUB 17 TR1 161/69	15
2012	TRK_RIV TR91 FLO ARNOLD-HAZLETON 345 *	15
2012	AMBER-WYOMING FLO LIBERTY 161/69 TR91	14
2012	ARNOLD TR1 FLO ARNOLD UNIT 1 (609MW)	14
2012	ARNLD HAZELTON BASE	13
2012	GLENWTH TR1 FLO LIME CREEK TR92	13
2012	OTTUMWA-WAPLO 161 FLO OTTMWA-MNTZM 345	12
2012	LIBERTY-LIBERTYTP FLO ROSEHOLLOW-BERTRAM	11
2012	OTTMWA_WAPLLO_2 FLO OTTMWA_WAPLLO_1	11
2012	HARMONY-LANSING FLO GENOA-LANSING	10
2012	LORE TR1 FLO LORE 161/69 TR2	10
2012	TRKYRIV TR91 FLO ARNOLD-HAZLETON 345	10
2012	ECALM-DAVENPRT FLO ARNOLD-TIFFIN_345*	9
2012	LIBRTY-DUNDEE 161 FLO WALCT-SUB 92 345	8
2012	CHARILUCAS FLO N_CENT-SOCTRVIL_69 (Y921)	7
2012	BLPLN-TOLEDO FLO ARNOLD XF1	6
2012	TURKEY RVR-STONE FLO ROCKDALE-PADDOCK	5
2012	SBRDWAY-ALEAWST FLO HAYWARD TR2	4
2012	TRKYRIV TR91 FLO ARNOLD-HAZLETON 345 *	4
2012	LANSING TR1 FLO GENOA-LANSING_161	4
2012	CHARILUCAS FLO OTTUMWA-WAPELLO	4
2012	PRAR_CK_TR1_TR1_XF	4
2012	ECALMS-DAVENPRT FLO ARNOLD-TIFFIN 345	4
2012	STON_PT-BL_PLN FLO MTOWN XFMR 5	4
2012	BL_PLN_ BL_PLTOLED11_11 LN	3
2012	ATLNTC_M-38 FLO M-38 - WINONA 138	3
2012	LANSING LANSIPOSTV16_11 LN	2
2012	LANSING TR1 FLO LNSNG-HRMNY+GNOA-LNSG	2
2012	TOLEDO-MTOWN FLO HILLS-MNTZUMA	2
2012	LIME CRK_EMRY_1 FLO BARTONS-ADAMS_161	1
2012	E_CALMS TR91 FLO ARNOLD-TIFFIN_345*	1
2012	WYOMING-MT VERNON FLO ARNOLD-TIFFIN	1

C) Minnesota Data Request Item 1d and MISO Response:

d. Based on current data, an estimated projected savings over the next 15 years in Minnesota from the completions of (i) the Salem-Hazelton Project and (ii) the Arnold-Vinton Rebuild; and additionally, the extent to which constraints in the area are mitigated by these projects. If they are not fully mitigated, state by how many of the 500 hours annually this area will see constraints with and without the projects."

MISO's response:

Salem-Hazleton Project. The Minnesota PUC requests an estimated projected savings over the next 15 years to Minnesota from the completion of the Salem-Hazleton Project, which was first analyzed for both reliability and economic benefit in the MTEP08 planning cycle. MISO does not have available an analysis of the cost savings specific to Minnesota of the specified project. However, MISO has reviewed the MTEP08 analysis and future scenarios and believes that the results of those analyses of the project benefits are still applicable, and that the benefits ascribed to the project in the 2008 analyses will be achieved or exceeded.

MISO analyzed the Salem-Hazleton project for both reliability benefit and economic benefit in the MTEP08 planning cycle. MISO found that the Salem-Hazleton project provided both reliability and net economic benefit.

With regard to economic benefits, the Salem-Hazleton project was simulated under a reference future case to determine eligibility for cost sharing. The results indicated a Benefit-to-Cost ratio of 1.23, which demonstrates positive economic benefit. Benefits estimated for the west sub region where the State of Minnesota is located were $26 million as a net present value of benefits. In addition, about 12% of the ITC Midwest load is located in Minnesota which means that the benefits to Minnesota are expected to exceed the cost of the project to Minnesota load.

MTEP 08 also analyzed projected constraints for 2011, 2016 and 2021 and the project demonstrated benefits in relieving binding hours on numerous constraints. In 2011, with respect to the flow gates impacted by the Salem-Hazleton project, without the Salem-Hazleton project, there would be a total of 6,635 binding hours spread across 14 flow gates and with the Salem-Hazleton project there would be 6,386 binding hours spread across 9 flow gates, a reduction of 249 binding hours. In 2016, with respect to the flow gates impacted by the Salem-Hazleton project, without the Salem-Hazleton project, there would be a total of 15,237 binding hours spread across 18 flow gates and with the Salem-Hazleton project there would be 13,251 binding hours spread across 13 flow gates, a reduction of 1,986 binding hours. In 2021, with respect to the flow gates impacted by the Salem-Hazleton project, without the Salem-Hazleton project, there would be a total of 19,470 binding hours spread across 26 flow gates and with the Salem-Hazleton project there would be 17,503 binding hours spread across 15 flow gates, a reduction of 1,967 binding hours.

In addition, MISO has evaluated the impact of the Salem-Hazleton project on loading levels and has identified numerous overloading conditions that would be relieved by the project, as demonstrated in the table below.

Thermal Issues in MTEP10 2015 Shoulder (SH) and Summer Peak (SP) Models with (Yes) or without (No) P1340 Salem-Hazleton 345 kV line

	2015 SH		2015 SP	
Limiting Element	**No**	**Yes**	**No**	**Yes**
630003 LANSING8 69.0 631053 LANSING5 161 1			131	130
630046 JASPER 8 69.0 631107 JASPER 5 161 1			102	
630053 NEWTON 8 69.0 630488 MAYTAG 8 69.0 1	101			
630053 NEWTON 8 69.0 631119 NEWTON 5 161 1	100			
630139 ADAMS 8 69.0 631122 ADAMS_N5 161 1	114	111		
630272 KNSASRT8 69.0 630647 TIFFIN R 69.0 1			104	101
630272 KNSASRT8 69.0 630649 TIFFIN 69.0 1			106	103
630297 SANDRDG8 69.0 680066 MENOMINE 69.0 1			119	106
630645 HRTLNDTP 69.0 630647 TIFFIN R 69.0 1			101	
630679 ALTWTIF8 69.0 636421 TIFFIN 5 161 1			135	128
630895 VINTON MUNI869.0 630902 VINTON 8 69.0 1	102			
631051 HAZL S 5 161 631101 DUNDEE 5 161 1	136			
631054 ASBURY 5 161 631055 CNTRGRV5 161 1			117	103
631054 ASBURY 5 161 631056 LORE 5 161 1			106	
631055 CNTRGRV5 161 631120 JULIAN 5 161 1			122	108
631056 LORE 5 161 631125 KERPER 5 161 1			107	
631057 SALEM N5 161 631120 JULIAN 5 161 1			110	
631058 SO.GVW.5 161 631059 8TH ST.5 161 1			105	
631058 SO.GVW.5 161 631061 SALEM S5 161 1			133	118
631059 8TH ST.5 161 631125 KERPER 5 161 1			113	
631095 E CALMS5 161 636616 SB 56 5 161 1			101	
631100 LIBERTY5 161 631101 DUNDEE 5 161 1	115			
631115 OTTUMWA5 161 631143 OTTUMWA3 345 1	101			
636640 LOUISA 3 345 636641 LOUIS31G 24.0 1			100	
698840 ACEC BADGERW 138 699240 SAR 138 138 1	117	113		
698840 ACEC BADGERW 138 699808 PETENWEL 138 1	119	115		

Legend: Yellow are limiters mitigated by the Salem-Hazleton project. Green are limiters reduced by the Salem-Hazleton project.

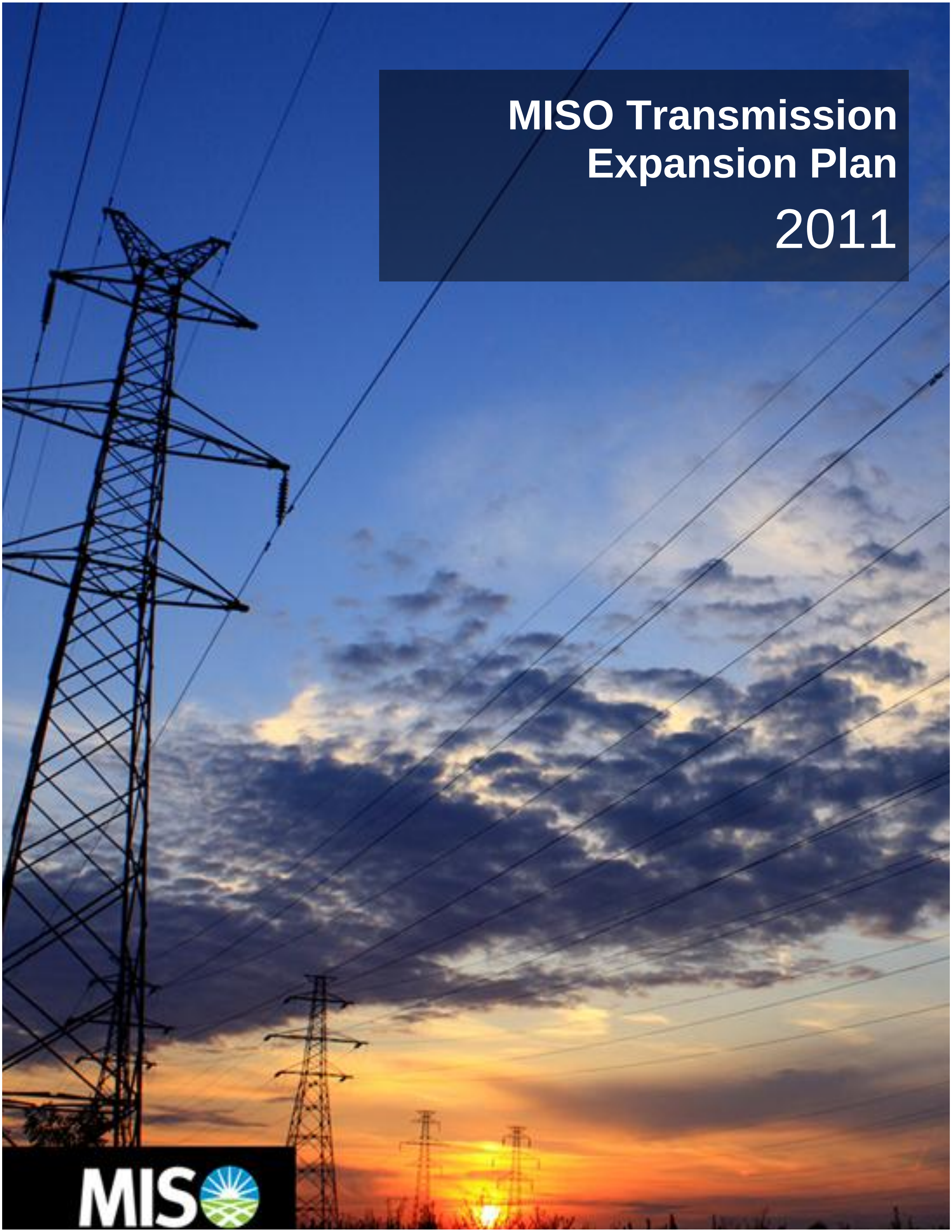
The effect of the project on clearing these loading limits not only demonstrates the reliability benefits of the project but contributes to the ability to serve load in the region without the need to incur congestion costs associated with redispatch.

Since MTEP08, MISO developed the Multi Value Project cost shared project type and conducted the Regional Generation Outlet Study and Candidate Multi Value Project Portfolio study. The results of this initiative were approval of a portfolio of 17 Multi Value Projects designed to enable enough renewable generation to meet all current RPS standards applicable to Load Serving Entities within the MISO footprint. These projects were based on simulating renewable generation throughout the MISO footprint, but with a bias in the wind-rich western areas of the footprint. The development of the Multi Value Project portfolio utilized the Salem-Hazleton line as an integral part in meeting the regional public policy and economic objectives. As stated in the MTEP11 report, the regional portfolio of Multi Value Projects is expected to provide benefit-to-cost ratios in the range of 1.6 to 2.9 in Local Resource Zone 1, which includes the State of Minnesota.

Therefore, MISO concludes that the economic benefits associated with the Salem-Hazleton project that MISO has demonstrated for the State of Minnesota continue to be valid and are likely even higher today.

Arnold-Vinton Rebuild Project. The Arnold-Vinton rebuild project has been completed and is currently in service. This project increased the capacity of the Arnold-Vinton-Dysart-Washburn 161 kV transmission line to 446 MVA. Prior to the rebuild, the Arnold-Vinton transmission line represented one of the most binding transmission constraints in the area and frequently required implementation of Transmission Loading Relief procedures. In addition, the Arnold-Vinton line represented one of the flowgates that defined the SE Minnesota / NE Iowa / SW Wisconsin Narrowly Constrained Area. MISO does not have available an analysis of the cost savings specific to Minnesota of the specified project. However, during the first three years of MISO energy market operation (April 2005 through April 2008), the line was a binding constraint for 456 hours. For the period prior to the start of the MISO energy market from January 2001 through March 2005, the flowgate contributed to enabling Transmission Loading Relief procedures a total of 781 hours. Today, following completion of the Arnold-Vinton rebuild project, this line is no longer a binding constraint, and therefore is not listed in the table under MISO's response to Item 1a which includes congested flowgates impacting Minnesota in 2011 and 2012. Together with the Salem-Hazleton project, the Arnold-Vinton project plays an important role in relieving transmission congestion in the area.

MISO Transmission Expansion Plan 2011



MISO

Appendices

1. Executive Summary

The annual MISO Transmission Expansion Plan (MTEP) identifies solutions to meet transmission needs and create value opportunities over the next decade and beyond. These solutions are defined via the implementation of a comprehensive planning approach which identifies essential transmission projects for approval and subsequent construction. MISO staff recommends the projects listed and described in MTEP11 Appendix A[1] to the MISO Board of Directors for their review and approval.

MTEP11, the eighth edition of this publication, is the culmination of more than 18 months of collaboration between MISO planning staff and stakeholders. The primary purpose of this and other MTEP iterations is to identify transmission projects that:

- Ensure the reliability of the transmission system over the planning horizon.
- Provide economic benefits, such as increased market efficiency.
- Facilitate public policy objectives, such as meeting Renewable Portfolio Standards.
- Address other issues or goals identified through the stakeholder process.

MTEP11 recommends $6.5[2] billion in new transmission expansion through the year 2021 for inclusion in Appendix A and construction. This is part of a continuing effort to ensure a reliable and efficient electric grid that keeps pace with energy and policy demands. Key findings and activities from the MTEP11 cycle include:

- **Recommendation of the first Multi Value Project portfolio for approval by the MISO Board of Directors:** The portfolio is comprised of 17 projects, costing $5.6 billion.[3] The proposed Multi Value Project (MVP) portfolio will create a regional network that provides reliability, public policy and economic benefits spread across MISO, such as
    - **Reliability benefits:** The proposed MVP portfolio mitigates approximately 650 reliability violations for more than 6,700 system conditions, increasing the transmission system's robustness under normal operation and extreme events.
    - **Public policy benefits:** The proposed MVP portfolio enables the delivery of 41 million MWh of renewable energy.
    - **Economic benefits:** The proposed MVP portfolio provides benefits in excess of the portfolio cost under all scenarios studied. These benefits are spread throughout the system, and each zone[4] receives benefits of at least 1.6 and up to 2.8 times the costs it incurs.
    - **Qualitative benefits:** The proposed MVP portfolio provides a number of additional qualitative benefits. For example, the transmission will support a variety of generation policies through utilizing a set of energy zones which support wind, natural gas and other fuel sources
    - **Job creation:** The construction of the proposed MVP portfolio will create between 17,000 and 39,800 direct jobs, or between 28,400 and 74,000 total jobs, including construction, supplier and downstream impacts.
- **Recommendation of 199 new Baseline Reliability, Generation Interconnection, or Other projects totaling $1.4 billion for approval by the MISO Board of Directors[5]:** These projects, together with proposed projects listed in Appendix B, ensure compliance with all reliability standards

[1] Projects in Appendix A reflect planned projects approved by or recommended for approval by the Board of Directors. Projects in Appendix B represent proposed projects for which a need has been identified, but are not timely or require additional analysis. Appendix C contains projects for which the need has not been verified.

[2] $6.5 billion figure includes the $849 million in projects that were either approved or conditionally approved at the June 2011 MISO Board of Directors meeting.

[3] Portfolio cost is as submitted and reflects nominal in-service date costs in whole or in part; the portfolio cost is equivalent to $5.2 billion in 2011 dollars. Total portfolio cost includes the Brookings County project, conditionally approved in June 2011 and the Michigan Thumb project, approved in December 2010.

[4] Benefits were calculated based on the MISO proposed Local Resource Zones for Resource Adequacy

[5] Total includes $118.5 million of projects that were approved during the June approval cycle.

and requirements and allow for the interconnection of approximately 2,700 MW of wind, nuclear, and other generation.

- **Economic assessment of transmission expansion:** In addition to the proposed Multi Value Project portfolio, Appendices A and B contain a variety of planned and proposed transmission projects. Although premised largely on reliability, a subset of these projects will deliver market congestion reduction benefits of 0.9 to 1.0 times their cost beginning in 2016.
- **Confirmation of Long-Term Generation Resource Adequacy:** The system has adequate capacity to meet its reserve requirements or Loss of Load Expectation (LOLE) criteria through 2021 based on currently announced generation retirements. However, these conclusions do not take into account capacity retirements that might be required by regulations imposed by the U.S. Environmental Protection Agency (EPA), which could significantly, and rapidly, erode reserve margins**.**
- **Determination of the potential impacts of EPA regulations on generation retirements:** At the direction of stakeholders and Board of Directors, MISO evaluated the potential impacts of four new EPA regulations, including the impact of carbon reduction requirements. This study found the following potential impacts:
  - **Units at risk for retirement:** Depending on economic conditions, including the cost of environmental regulation compliance, approximately 13 GW of existing coal generation is at-risk for retirement.
  - **Potential cost of compliance:** The total 20-year net present value capital cost of compliance is expected to exceed $30 billion. This value includes the cost of retrofits on the system, the cost of replacement capacity, the cost of fixed operations and maintenance and the cost of transmission upgrades. This cost of compliance could increase the cost of energy by $5/MWh.
  - **Generation Resource adequacy impacts:** If no replacement capacity is identified for Resource Adequacy purposes, then the system reserve margin could decrease to 6.6 percent in 2021. The 2021 reserve requirement is 18.2 percent.
- **Full implementation of a regional transmission planning approach:** The proposed MVP portfolio is the realization of more than eight years of process, policy and engineering analysis. These solutions are premised on the integration of local and regional needs into a transmission solution that, when combined with the existing transmission system, provides the least cost delivered energy to customers.

In MTEP11, MISO completed analyses showing the near and long term affects of proposed transmission lines. In the coming years, MISO, through the continued integration of reliability, economic and public policy projects, will continue to drive grid efficiencies by ensuring that near-term projects support long-term goals.

The MISO planning approach

MISO is guided in its planning efforts by a set of principles established by its Board of Directors. These principles were created to improve and guide transmission investment in the region and to furnish an element of strategic direction to the MISO transmission planning process. These principles, confirmed in August 2011, are as follows:

- **Guiding Principle 1:** Make the benefits of an economically efficient energy market available to customers by providing access to the lowest electric energy costs.
- **Guiding Principle 2:** Provide a transmission infrastructure that safeguards local and regional reliability and supports interconnection-wide reliability.
- **Guiding Principle 3:** Support state and federal energy policy objectives by planning for access to a changing resource mix.
- **Guiding Principle 4:** Provide an appropriate cost mechanism that ensures the realization of benefits over time is commensurate with the allocation of costs.
- **Guiding Principle 5:** Develop transmission system scenario models and make them available to state and federal energy policy makers to provide context and inform the choices they face.

To support these principles, a transmission planning process has been implemented reflecting a view of project value inclusive of reliability, market efficiency, public policy and other value drivers across all planning horizons studied. A number of conditions must be met through this process to build long-term transmission that can support future generation growth and accommodate new energy policy imperatives. These conditions are intertwined with the planning principles put forth by the MISO Board of Directors and include:

- A robust business case for the plan.
- Increased consensus around regional energy policies.
- A regional tariff matching who benefits with who pays over time.
- Cost recovery mechanisms to reduce financial risk.

The following activities were undertaken to fulfill these conditions and—through them—the planning principles enunciated by the Board of Directors:

- **Safeguarding local and regional reliability:** System reliability must be maintained throughout all MISO planning efforts, both on a local and interconnection-wide basis. This requirement can be difficult, in the face of changing generation and energy policy standards. Throughout 2011, MISO continued the transformation of the planning process to create an integrated transmission network that supports current and future reliability needs, while minimizing the cost of delivered energy. This value-based planning approach demonstrates a robust view of project benefits, through the analyses of many potential reliability, economic and policy-driven variables.
- **Distributing benefits commensurate with costs**: The MISO planning approach is premised on the allocation of transmission costs in a manner that is commensurate with their benefits. To ensure this goal was met, MISO created a complete business case for the proposed Multi Value Project portfolio which demonstrated the regional spread of the economic benefits of the portfolio. In the future, MISO will continue to refine the business case for transmission projects and portfolios, as staff seek to optimize the transmission system to deliver the least-cost energy to consumers.
- **Responding to evolving energy policy:** MISO examines multiple future scenarios in order to capture the impact of a wide array of potential policy outcomes. These future scenarios include varied demand and energy growth levels, and they also include the implementation of new policies which may have large impacts on the transmission system. For example, MISO conducted a thorough analysis of the U.S. Environmental Protection Agency (EPA) regulations to determine the impacts and action which will need to be taken as the regulations go into effect.

Investments in system reliability and efficiency

To respond to existing energy mandates and safeguard the system reliability, MTEP11 recommends 215 new projects for inclusion in Appendix A. These projects represent an incremental $6.5 billion in transmission infrastructure investment within the MISO footprint and fall into the following four categories:

- **Multi Value Projects (16 projects, $5.1[6] billion):** Projects providing regional public policy, reliability and/or economic benefits.
- **Baseline Reliability Projects (40 projects, $424 million):** Projects required to meet North American Electric Reliability Corporation (NERC) reliability standards. These standards impact facilities of a voltage greater than 100kV and represent the minimum standard applied across the MISO footprint.
- **Generator Interconnection Projects (26 projects, $273 million[7]):** Projects required to reliably connect new generation to the transmission grid. The projects recommended for approval will allow for the connection of approximately 2,700 MW of wind, nuclear, and other generation
- **Other Projects (133 projects, $681 million):** A wide range of projects, such as those designed to provide local economic benefit but not meeting the threshold requirements for qualification as Market Efficiency Project (MEP), and projects required to support the lower voltage transmission system.

The addition of new transmission projects in MTEP11 brings the total number of projects in Appendix A to 553, representing an expected investment of $10.0 billion through 2021. When completed, the projects will result in approximately 6,600 miles of new or upgraded transmission lines. Since the first MTEP cycle closed in 2003, transmission projects recommended for approval total $14.3 billion, of which $4.3 billion is associated with projects already in service.

MTEP11 contains 24 new Appendix A projects meeting cost-sharing eligibility criteria under the Baseline Reliability Project or Generator Interconnection provisions of the MISO Tariff. This report also features 16 projects meeting Multi Value Project cost sharing methodology criteria.

Economic assessment of planned and proposed projects

As previously described, projects currently contained in Appendices A and B are primarily intended to address a reliability issue or need on the transmission system. However, those projects also have potential to create additional value, including the following:

- Adjusted Production Cost Savings
- Reduced Energy And Capacity Losses
- Reduced Reserve Margins

For example, Table 1-1 shows an estimated Adjusted Production Cost benefit of $867 million in 2016 against a first year modeled transmission portfolio cost of approximately $1.1 billion. This benefit will lead to 20 to 40 year present value benefits of $9.1 to $20.6 billion, and economic benefit-to-cost ratios of 0.9 to 1.0. These economic benefits are in addition to the benefits derived from increased system reliability considerations initially driving the need for the majority of these projects.

	2016 Adjusted Production Cost savings	20 Year Present Value, 3 percent Discount Rate	20 Year Present Value, 8.2 percent Discount Rate	40 Year Present Value, 3 percent Discount Rate	40 Year Present Value, 8.2 percent Discount Rate
MISO East	$367	$5,627	$3,844	$8,742	$4,638
MISO Central	$145	$2,210	$1,509	$3,433	$1,821
MISO West	$355	$5,436	$3,714	$8,447	$4,482
MISO	$867	$13,273	$9,066	$20,622	$10,941

Table 1-1: Adjusted Production Cost benefits, in millions of 2016 dollars

6 Portfolio cost shown is as submitted and reflects nominal in-service date costs in whole or in part; equivalent to $4.7 billion in 2011 dollars. The Michigan Thumb Loop Expansion project with a cost of $510 million (2011 dollars) was approved in MTEP 10 and is part of the proposed Multi Value Project Portfolio. Its costs are not included in the above figure.

7 Project cost shown is the total cost, not just the cost shared or Transmission Owner contribution.

The value-based planning process

Uncertainties surrounding future policy decisions create challenges for those involved in the planning function and cause hesitancy for those with the resources to undertake transmission expansion projects. To minimize the risk in building a system under such conditions, the planning process must allow consideration of transmission projects in the context of potential outcomes. The goal is to identify plans resulting in the optimum amount of future value and the least amount of future regrets in areas such as cost incurred, right of way used, and benefits achieved.

MTEP11 identified and examined a wide array of future scenarios, which include the following:

- **The Business As Usual (BAU) with Mid-Low Demand and Energy Growth Rates Future Scenario** is considered a status quo future scenario and continues the economic downturn-affected growth in demand, energy and inflation rates.
- **The Business as Usual (BAU) with Historic Demand and Energy Growth Rates Future Scenario** is considered a status quo scenario, with a quick recovery from the economic downturn in demand and energy projections.
- **The Carbon Constraint Future Scenario** models a declining cap on future CO_2 emissions. The carbon cap is modeled after the Waxman-Markey Bill, which has an 83 percent reduction of CO_2 emissions from a 2005 baseline by the year 2050.
- **The Combined Energy Policy Future Scenario** includes a 20 percent federal RPS, a carbon cap modeled after the Waxman-Markey Bill, a “smart” transmission grid, and electric vehicles.

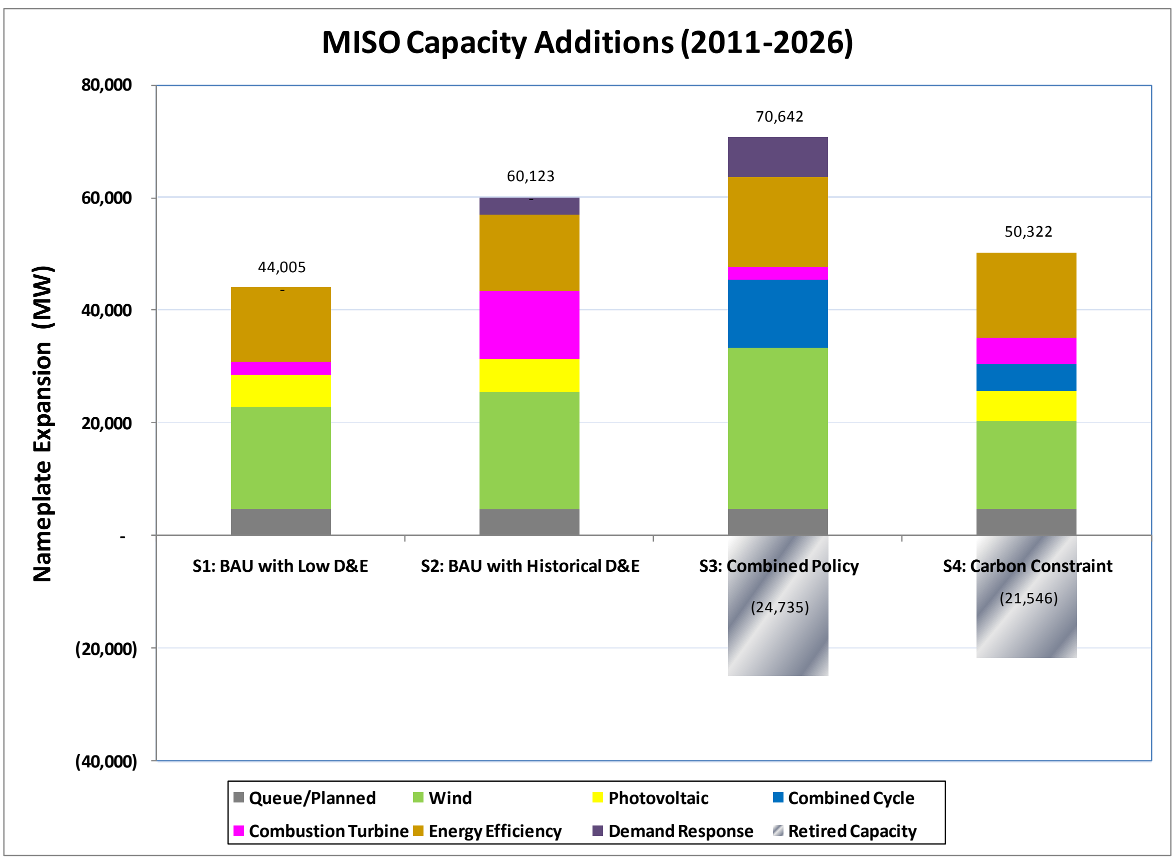


Figure 1-1: Generation Resources per Future Scenario

Potential retail rate impacts for future policy scenarios

To measure the potential impact to rate payers under each of the future scenarios, MISO projected potential impacts to the 2026 retail rate by calculating the impact of wholesale costs related to generation capital investment, production costs, transmission capital investment and distribution costs across the forecasted energy usage levels. In general, these rate impacts reflect differences between the type of generation and the associated transmission needed to integrate the generation in the various scenarios. Refer to Figure 1-1 for additional detail on theoretical impacts under various futures.

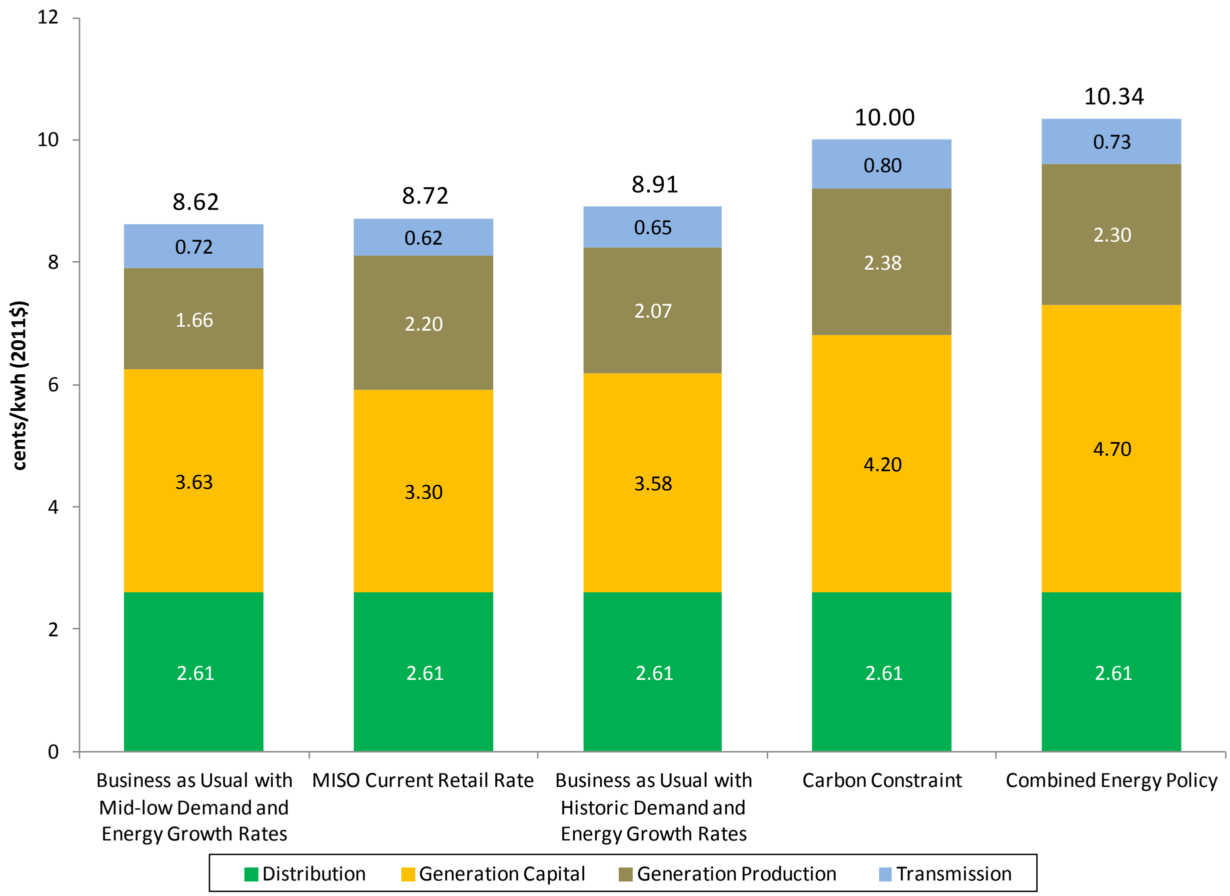


Figure 1-2: Comparison of estimated retail rate for each future scenario (cents per KWh in 2011 dollars)

Assuming that wholesale costs flow through to retail rates, rates for retail customers are projected to increase faster than inflation in all but one scenario, but the magnitude of the rate increases will vary greatly depending on actual economic and policy conditions. Assuming that all of the increase or decrease in wholesale costs flows through to the retail customer, this impact could range from a decrease of 1 percent for the Business as Usual with Mid-low Demand and Energy Growth Rate Future to an increase of 18.7 percent for the Combined Energy Policy Future.

Proposed MVP portfolio

The proposed MVP portfolio is the culmination of more than eight years of transmission planning solutions, as transmission projects identified in MTEP03 through MTEP10 were brought together to form a cohesive, regional plan. Approximately 11 months of intensive studies were performed on the candidate portfolio, with heavy stakeholder involvement and review. At the end of the study, MISO recommends a proposed MVP portfolio for review and approval by the Board of Directors.

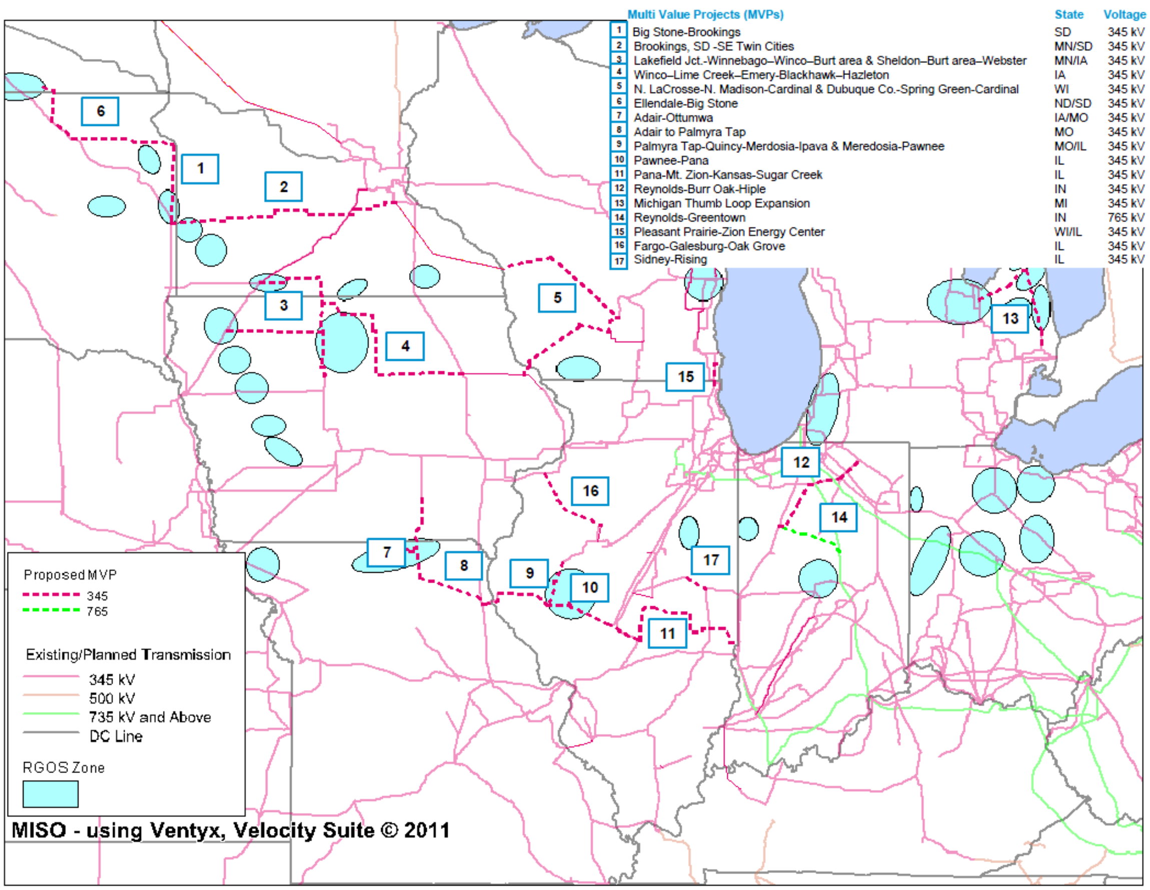


Figure 1-3: Proposed MVP portfolio

The proposed MVP portfolio combines reliability, economic and public policy drivers to provide a transmission solution that provides benefits in excess of its costs throughout the MISO footprint. This portfolio, when integrated into the existing and planned transmission network, resolves about 650 reliability violations for more than 6,700 system conditions, enabling the delivery of 41 million MWh of renewable energy annually to load. The portfolio also provides strong economic benefits; all zones[8] within the MISO footprint see benefits of at least 1.6 to 2.8 times their cost.

[8] Benefits were calculated based on the MISO proposed Local Resource Zones for Resource Adequacy

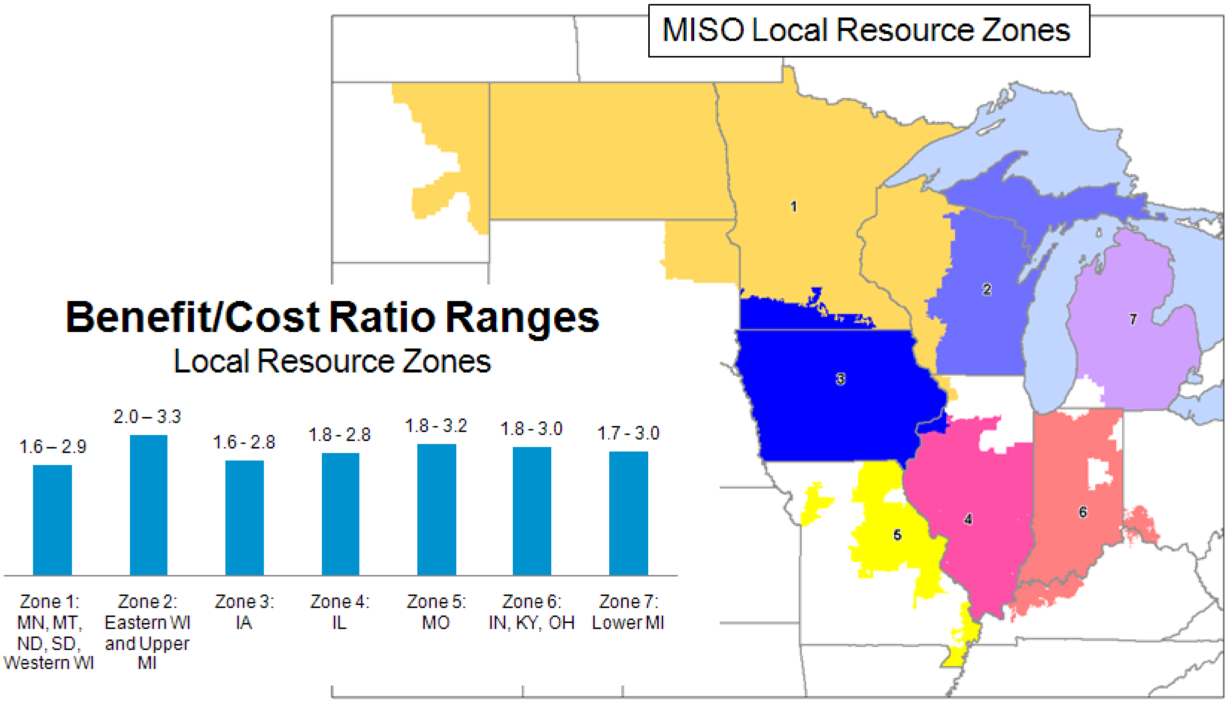


Figure 1-4: Proposed MVP portfolio Zonal benefit-cost ratios

The portfolio also creates a transmission network that is able to respond to the ever-evolving reliability, generation and policy-based needs of the MISO footprint. For example, although the study was premised on a set of energy zones created to distribute wind capacity throughout the footprint in a least-cost pattern, these energy zones were also located with respect to existing infrastructure, such as transmission lines and natural gas pipelines. As a result the transmission will support a variety of different generation fuel sources, and with the fuel sources, a variety of generation policies.

Resource adequacy and risk assessment

MTEP11 includes a forecast of resource adequacy based on projections of future generation and load to supplement and inform the assessment of the transmission system. The results of a study of the period 2012–2021 indicate that MISO will have sufficient generating capacity to meet demand through 2021, excluding the impacts of the EPA regulations. Net internal demand is expected to be 89 GW in 2012 and 97 GW in 2021[9]. A total of 113 GW of resources are expected to be available to meet this demand in 2012 for the MISO region, increasing to 115 GW in 2021.

[9] Net internal demand is equal to the median forecasted load. There is a 50 percent chance that peak load levels will exceed this prediction, while there is a 50 percent likelihood that peak load levels will be less than this prediction.

Reserve margin	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Reserve margin (MW)	23,930	22,438	22,064	21,368	20,760	20,065	19,287	19,950	19,031	18,032
Reserve margin (percent)	27.0	24.8	24.2	23.3	22.5	21.5	20.5	21.0	19.9	18.6
Planning reserve margin requirement (percent)	17.4	17.3	17.3	17.2	17.4	17.8	17.8	18	18.2	18.2

Table 1.2: 2012-2021 forecasted reserves

The MISO Planning Reserve Margin requirement varied throughout the 10-year period studied, from 17.4 percent in 2012 to 18.2 percent in 2021. The reserve margins projected through the assessment time frame varies from 27.0 percent to 18.6 percent for 2012-2021. The expected ability of forecasted resources to meet demand projections is anticipated to exceed the reliability levels represented by the accepted industry standard of one day in 10 years through 2019. However, these conclusions do not take into account capacity retirements that might be required by regulations imposed by the U.S. Environmental Protection Agency (EPA) which could significantly, and rapidly, erode reserve margins**.**

EPA impact analysis

The U.S. Environmental Protection Agency (EPA) is finalizing four proposed regulations that will affect the MISO system. They require utilities to choose between retrofitting their generators with environmental controls or retiring them. At the direction of stakeholders and the Board of Directors, MISO evaluated the potential impacts of the new regulations, including the impact of carbon reduction requirements. This study evaluated the effects on capacity cost, resource adequacy, cost of energy and transmission reliability.[10]

A survey of the current fleet within MISO revealed 298 generation units will be affected by the four proposed regulations. The capacity of the units at risk for retirement is 12.7 GW, based on the assumptions surrounding the cost of environmental regulation compliance.

The compliance cost of retrofitted units and replacement generation due to the EPA regulations are estimated to exceed $30 billion. Identifying all the costs to maintain regulation compliance and system reliability, a 7.0 to 7.6 percent increase in retail rates could be realized.

10 The EPA Regulation Impact Analysis was based on assumptions for proposed EPA regulations. The finalization of these regulations has the potential to introduce change and uncertainty.

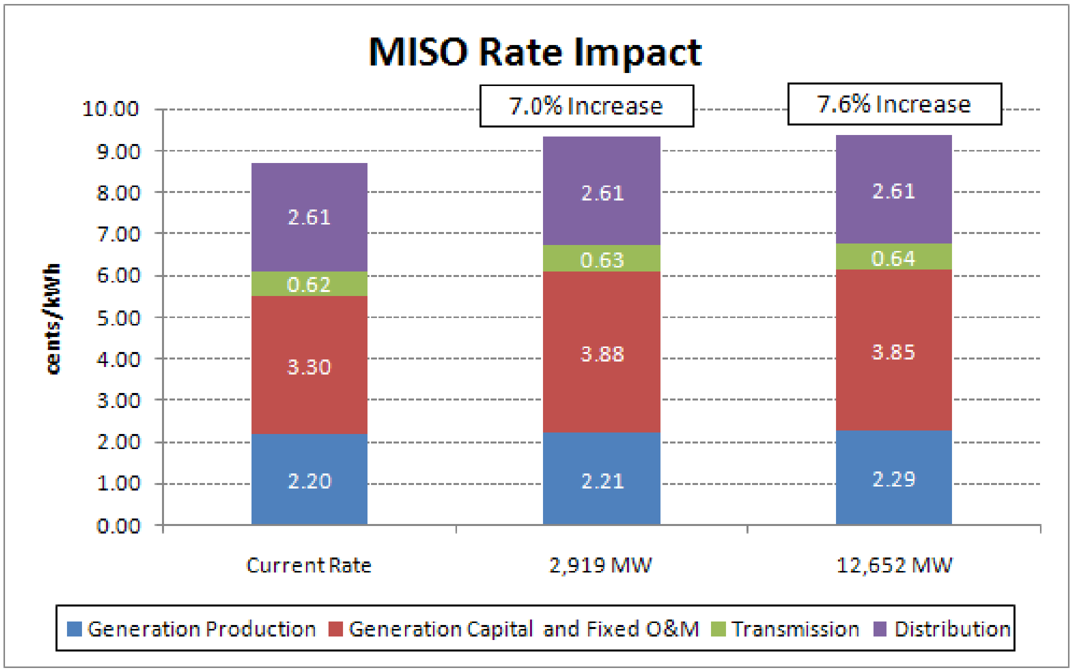


Figure 1-5: MISO rate impact

The proposed EPA regulations could also have an impact on the system's ability to meet demand. If no replacement capacity is identified for Resource Adequacy purposes, then the system reserve margin could decrease to 6.6 percent in 2021. The 2021 reserve requirement is 18.2 percent. However, if capacity is replaced with new and more reliable resources, there is a potential that Planning Reserve Margin (PRM) requirements could decrease by 0.2 to 1.0 percent.

Reserve margin	Forecasted reserves, without EPA regulations		Forecasted reserves, with EPA regulations	
	2016	2021	2016	2021
Adjusted resources (percent)	22.5	18.6	10.1	6.6
Reserve requirement (percent)	17.4	18.2	17.4	18.2

Table 1-3: Potential EPA impacts on resource adequacy

Conclusion

MISO is proud to have an independent, transparent and inclusive planning process that is well positioned to study and address future transmission and policy-based needs in the region. We are also grateful for the input and support from our stakeholder community, which allows us to create well-vetted, cost-effective and innovative solutions to energize the heartland. We welcome feedback and comments from stakeholders, regulators and interested parties on the evolving electric transmission power system. For detailed information about MISO, MTEP11, renewable energy integration, cost allocation and other planning efforts, please visit www.misoenergy.org.

2. MTEP11 overview

2.1 Investment summary

This section provides investment summaries of transmission system upgrades identified in MTEP11 and past MTEP studies that are still in the construction planning or execution processes.[11] Chapter 2.4 describes the definitions of Appendix A, B, and C.

- Approximately $6.5 billion is being added to Appendix A in this planning cycle, of which about $5.1[12] billion is the proposed Multi Value Project portfolio.
- The estimated investment of the projects in MTEP11 Appendix A and Appendix B for 2011–2016 is $7.5 billion.
- Appendix A contains $6.99 billion in investment through 2016 and an additional $3.2 billion from 2017-2021.
- Appendix B contains $0.48 billion of investment through 2016. Appendix B also contains $29 billion in investment for 2017–2026, primarily comprised of two alternate Regional Generation Outlet Study (RGOS) plans.
- Appendix C contains $6.5 billion in investment through 2016 and $37 billion in investment for 2017–2021.

Included in Appendix C is the MTEP08 reference future extra high voltage conceptual transmission overlay in 2018. Portions of the MTEP08 extra high voltage plan have been moved to the RGOS planning effort. There are also a number of large transmission proposals to address the renewable energy requirements in the region, with a $12 billion proposal in 2020. Therefore, there are many alternative and competing plans for renewable energy integration working their way through the planning process. Not all these proposals will reach Appendix A.

> Approximately $6.5 billion is being added to Appendix A in this planning cycle, of which about $5.1 billion is the proposed Multi Value Project portfolio.

The expected project spending by year for Appendices A and B from 2011-2021 is in Figure 2.1-1. Projects may be comprised of multiple facilities. Investment totals by year assume that 100 percent of a project's investment occurs when the facility goes into service. Since a large facility may require capital investment over multiple years, this assumption causes these numbers to appear 'lumpier' than the actual expenditures.

---

[11] A summary of MTEP transmission investment including projects which have gone into service is included in section 3.

[12] Cost shown is as submitted and reflects nominal in-service date costs in whole or in part; equivalent to $4.7 billion in 2011 dollars. The Michigan Thumb Loop Expansion project with a cost of $510 million (2011 dollars) was approved in MTEP 10 and is part of the proposed Multi Value Project Portfolio. Its costs are not included in the above figure.

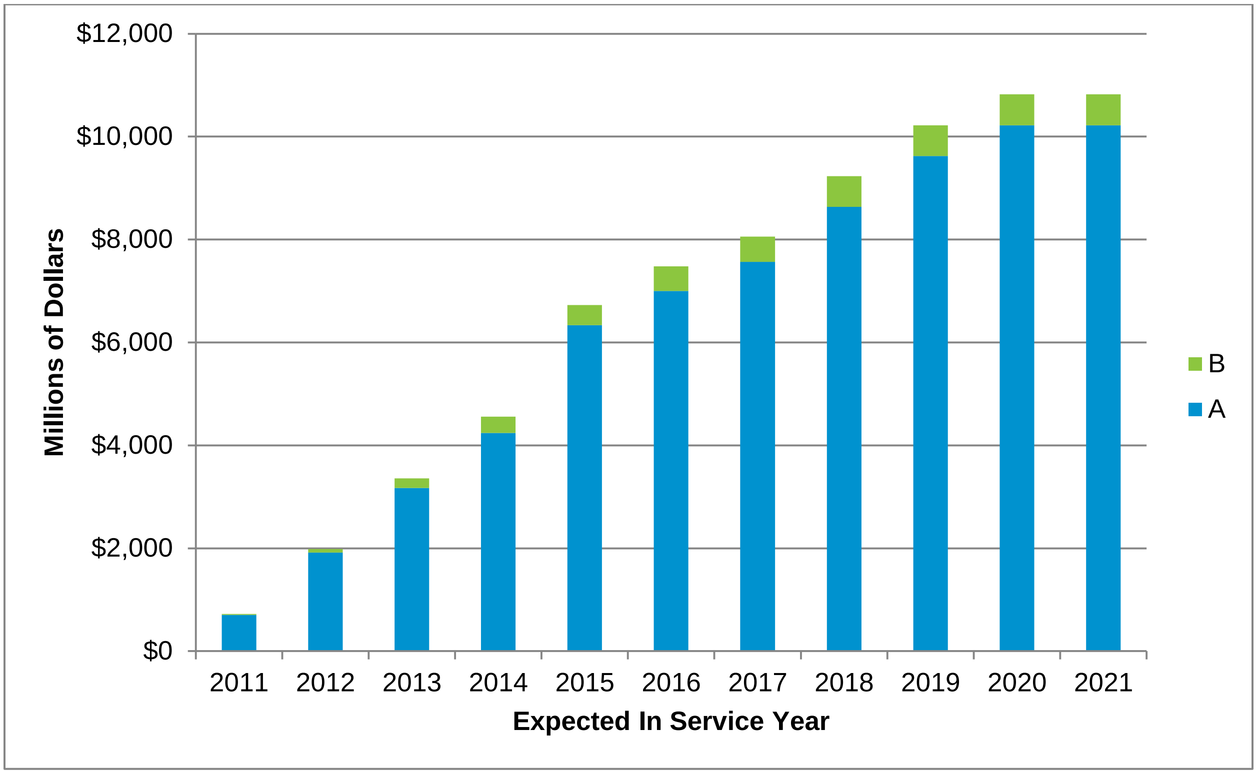


Figure 2.1-1: MTEP11 cumulative projected investment by year and Appendix

Transmission investment by Planning Region through 2021 is shown in Table 2.1-1. This table includes projects in Appendix A approved in prior MTEP planning cycles. Note that the projects are associated with a single planning region, though some projects may be in more than one planning region. These statistics are representative of investment in the planning regions.

Region	Appendix A	Appendix B	Appendix C
Central	$2,265,830,000	$219,152,000	$8,996,773,000
East	$1,537,876,000	$148,701,000	$6,872,277,000
West	$6,415,878,000	$233,899,000	$27,929,197,000
Total	$10,219,584,000	$601,752,000	$43,798,247,000

Table 2.1-1: Projected transmission investment by Planning Region through 2021

Table 2.1-2 shows new investment in 2011 Appendix A projects by preliminary cost allocation category and eligibility for cost sharing. Those categories are Baseline Reliability Project, Generation Interconnection Project, Transmission Service Delivery Project, Multi Value Projects, Market Efficiency Project and other. There were no Market Efficiency Projects and transmission delivery service projects in MTEP11. The numbers in Table 2.1-2 are a subset of Appendix A values shown in Table 2.1-1. These have a target Appendix of 'A in MTEP11' and are new to Appendix A in this planning cycle. Approximately $6.5 billion of investment is being added to Appendix A in this planning cycle. Actual cost allocations for shared projects are based on annual carrying charges and not total project investment; shared means that these projects are eligible for cost sharing. Not all costs of shared projects are eligible for sharing. For example, some Baseline Reliability Project costs and Generation Interconnection Projects are not shared, though only 10 percent of some Generation Interconnection Project costs may be shared to pricing zones. Projects are associated with single planning region, though they may have investment in multiple planning regions.

Region	Share status	BRP	GIP	MVP[13]	Other
Central	Not shared	$8,351,000	$22,620,000		$62,111,000
	Shared	$40,826,000		$1,749,703,000	
Central total		$49,177,000	$22,620,000	$1,749,703,000	$62,111,000
East	Not shared	$11,700,000			$122,661,000
	Shared	$113,900,000	$22,180,000	$271,000,000	
East total		$125,600,000	$22,180,000	$271,000,000	$122,661,000
West	Not shared	$52,094,000	$37,494,000		$491,850,000
	Shared	$197,357,000	$191,094,000	$3,105,021,000	
	Excluded				$4,900,000
West total		$249,451,000	$228,588,000	$3,105,021,000	$496,750,000
Grand total		$424,228,000	$273,388,000	$5,125,724,000	$681,522,000

Table 2.1-2: MTEP11 new Appendix A investment by allocation category & Planning Region

[2] The Michigan Thumb Loop Expansion project with a cost of $510 million (2011 dollars) was approved in MTEP 10 and is part of the proposed Multi Value Project Portfolio. Its costs are not included in the above table. Costs shown is as submitted and reflects nominal in-service date costs in whole or in part; equivalent to $4.7 billion in 2011 dollars.

A breakdown of new Appendix A project data reveals the new transmission build is spread over many states, with Illinois, Wisconsin, Iowa and Minnesota getting around $1 billion in new investment. The majority of that investment comes from the proposed Multi Value Project portfolio. South Dakota, Indiana, and Missouri also have significant projects. These geographic trends change over time as existing capacity in other parts of the system is consumed and new build becomes necessary there.

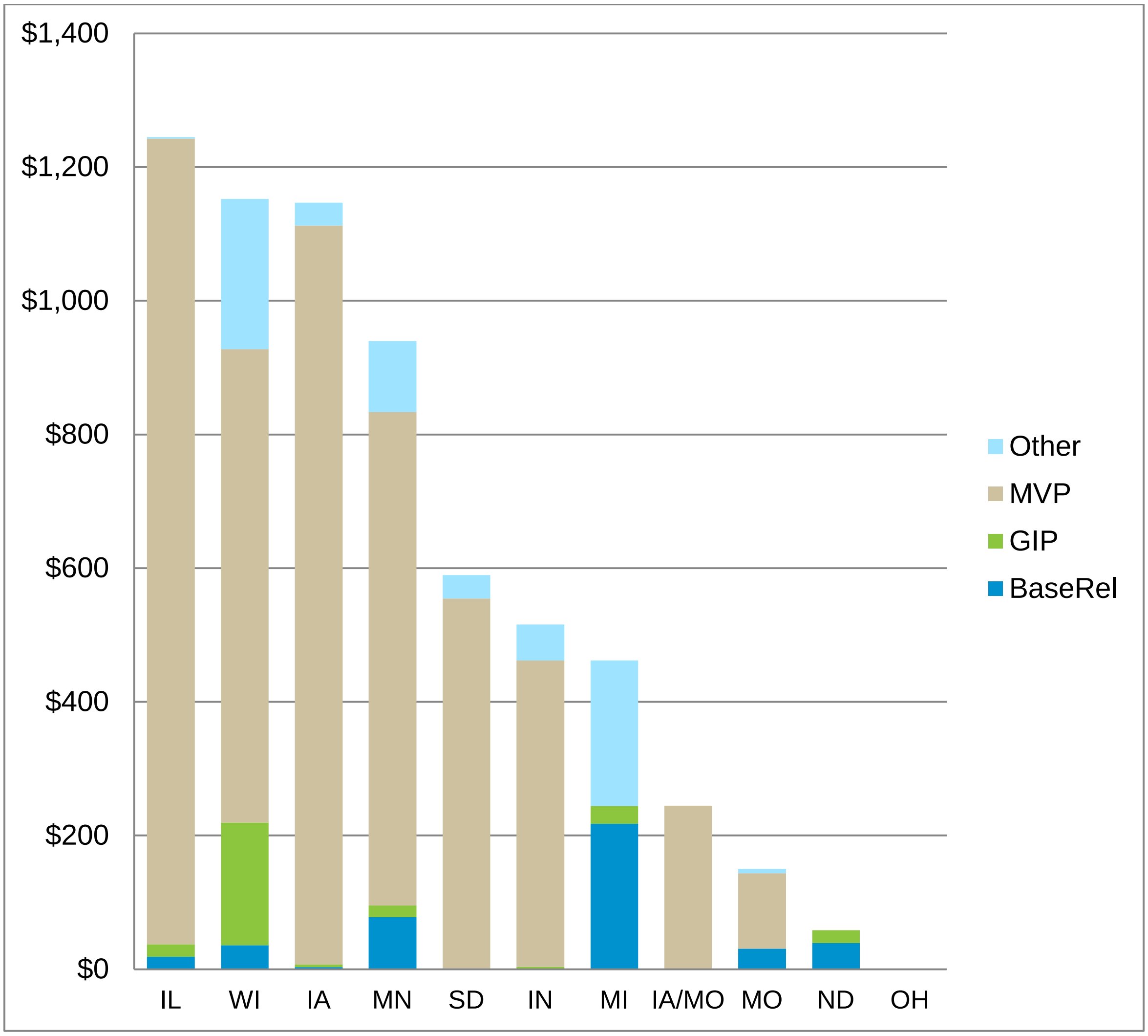


Figure 2.1-2: New Appendix A investment with allocation categorized by state

2.2 Appendix overview

Appendix A and B line summary

There are approximately 6,600 miles of new or upgraded transmission lines projected from 2011-–2021 in MTEP11 Appendices A and B.

- Of approximately 53,200 miles of line under MISO functional control, about 2,965 miles of transmission line upgrades are projected through 2021.
- About 3,695 miles of transmission involving lines on new transmission corridors is projected through 2021.
- Figure 2.2-1 depicts miles of new or upgraded lines by voltage class identified in Appendices A and B.

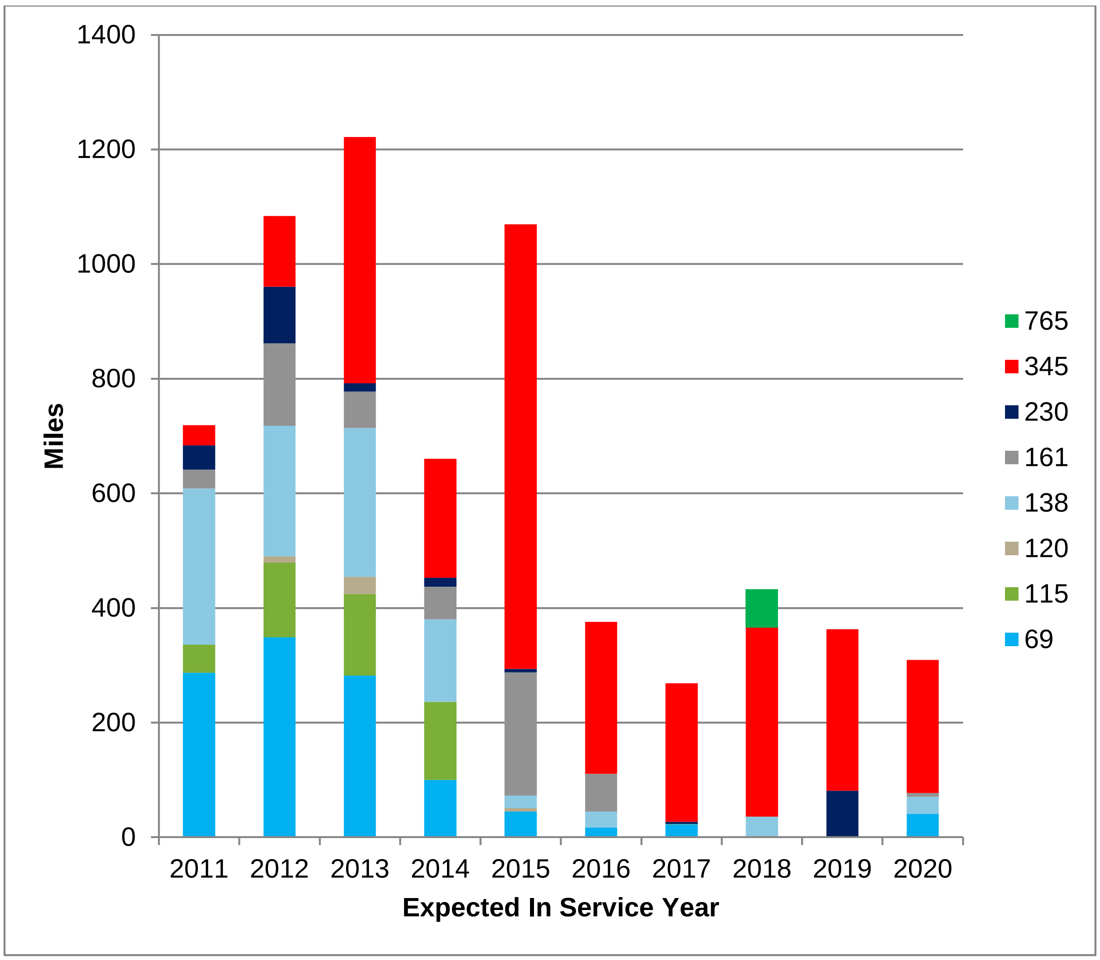


Figure 2.2-1: New or upgraded line miles by voltage class in Appendix A & B through 2021

Refer to Figure 2.2-2, which delineates new transmission line mileage by state for Appendices A and B through expected in service date of 2021.

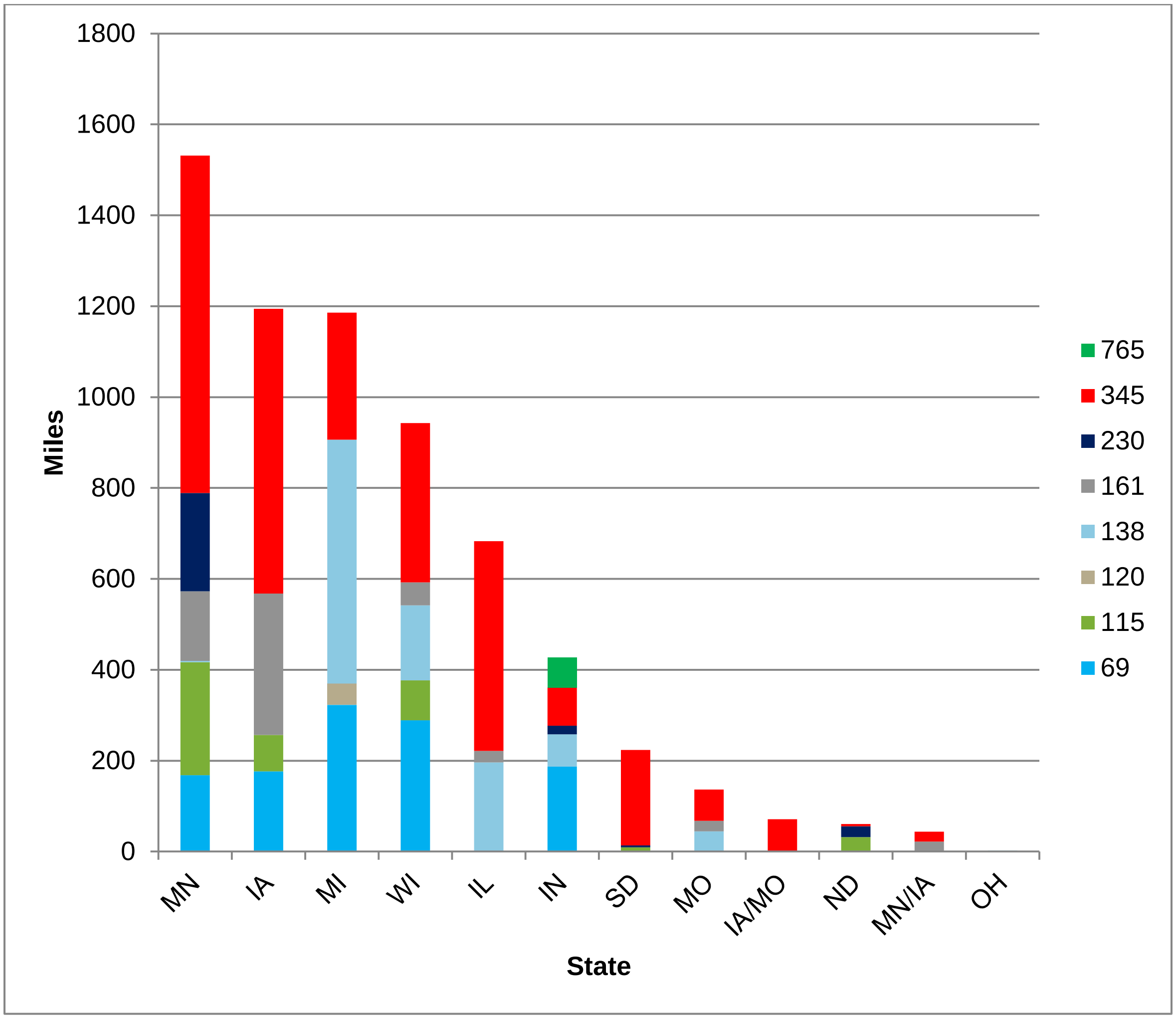


Figure 2.2-2: New or upgraded line miles by state for Appendices A and B through expected in service date of 2021 by voltage class (kV)

Appendix C summary

MTEP11 Appendix C lists and describes $48.6 billion of conceptual and proposed transmission investment. The MTEP08 reference future Extra High Voltage (EHV) conceptual overlay is $14 billion in 2018, comprised of approximately 65 projects. A number of those projects have been integrated into the Regional Generation Outlet Study effort and are now in Appendix B. Eleven of the MTEP08 reference future projects are now part of six proposed projects in the proposed Multi Value Projects portfolio. There are multiple proposals to enable integration and delivery of large amounts of renewable energy. One 765 kV proposal is for $12 billion in 2020. There are two direct current proposals for renewable energy, —$1.9 billion and $1.6 billion, respectively — in 2014. There is a proposal for 765 kV backbone transmission in lower Michigan for $2.5 billion in 2016. Some of these are competing proposals, so not all of the investment is expected. Many of the project proposals in Appendix C were added in order to address traditional reliability needs in the future. Some of these projects have just entered the planning process or are being revisited due to changes, such as load forecast adjustments caused by the economic downturn.

2.3 Cost sharing summary

Multi Value Projects

Multi Value Projects represent a new project type eligible for cost sharing effective since July 16, 2010, and conditionally accepted by the Federal Energy Regulatory Commission on December 16, 2010. Multi Value Projects provide numerous benefits, including, improved reliability, reduced congestion costs, and meeting public policy objectives. As discussed in more detail in Section 4.1, MISO staff is recommending a portfolio of Multi Value Projects to the MISO Board of Directors for inclusion into Appendix A of MTEP 11. The proposed Multi Value Project portfolio includes the Michigan Thumb Loop project, approved in August 2010; the Brookings to Minneapolis-St. Paul project, conditionally approved in June 2011; and 15 additional projects being proposed to the MISO Board of Directors for the first time. The cost of the proposed MVP portfolio in 2011 dollars is $5.2 billion, including the $1.2 billion in projects that have previously been approved or conditionally approved by the MISO Board of Directors. See Table 4.1-1 for individual project costs.

The costs of Multi Value Projects will have a 100 percent regional allocation and will be recovered from customers through a monthly energy usage charge calculated using the applicable MVP Usage Rate.

The costs of Multi Value Projects will have a uniform 100 percent regional allocation based on withdrawals and will be recovered from customers through a monthly energy usage charge. This charge will apply to all MISO load, excluding load under Grandfathered Agreements, and also to export and wheel-through transactions not sinking in PJM.

Figure 2.3-1 shows a 40-year projection of indicative annual MVP Usage Rates based on the proposed MVP portfolio using current year cost estimates and estimated in-service dates. Additional detail on the indicative MVP Usage Rate, including indicative annual MVP charges by Local Balancing Authority, is included in Appendix A-3.

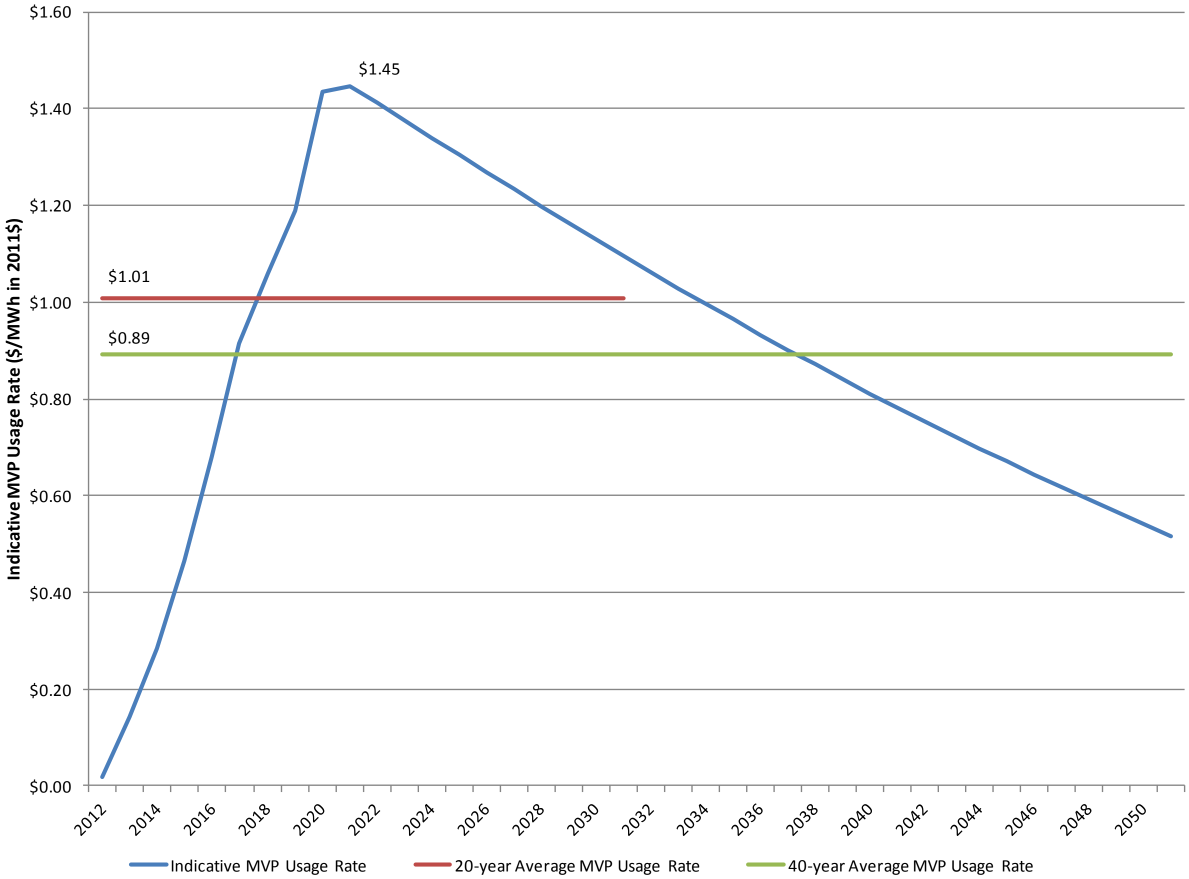


Figure 2.3-1: Indicative MVP usage rate for proposed MVP portfolio from 2012 to 2051

Baseline Reliability, Market Efficiency, and Generation Interconnection Projects

A total project cost of $446.6 million, associated with new Baseline Reliability Projects and Generation Interconnection Projects for inclusion in MTEP 11 Appendix A, are eligible for cost sharing. The cost includes 12 Baseline Reliability Projects at $247.2 million and 10 Generation Interconnection Projects at $199.3 million. A total of $99.7 million of that goes directly to the generator. Of the $346.9 million in project costs, excluding the portion allocated to generators and eligible for cost sharing, 88.7 percent or $307.8 million remains in the pricing zone where the project is located. The remaining 11.3 percent, or $39.1 million, is allocated to neighboring pricing zones or system-wide to all pricing zones. Additional details on the new Baseline Reliability Projects and Generation Interconnection Projects eligible for cost sharing in MTEP 11 are in Appendix A-1.

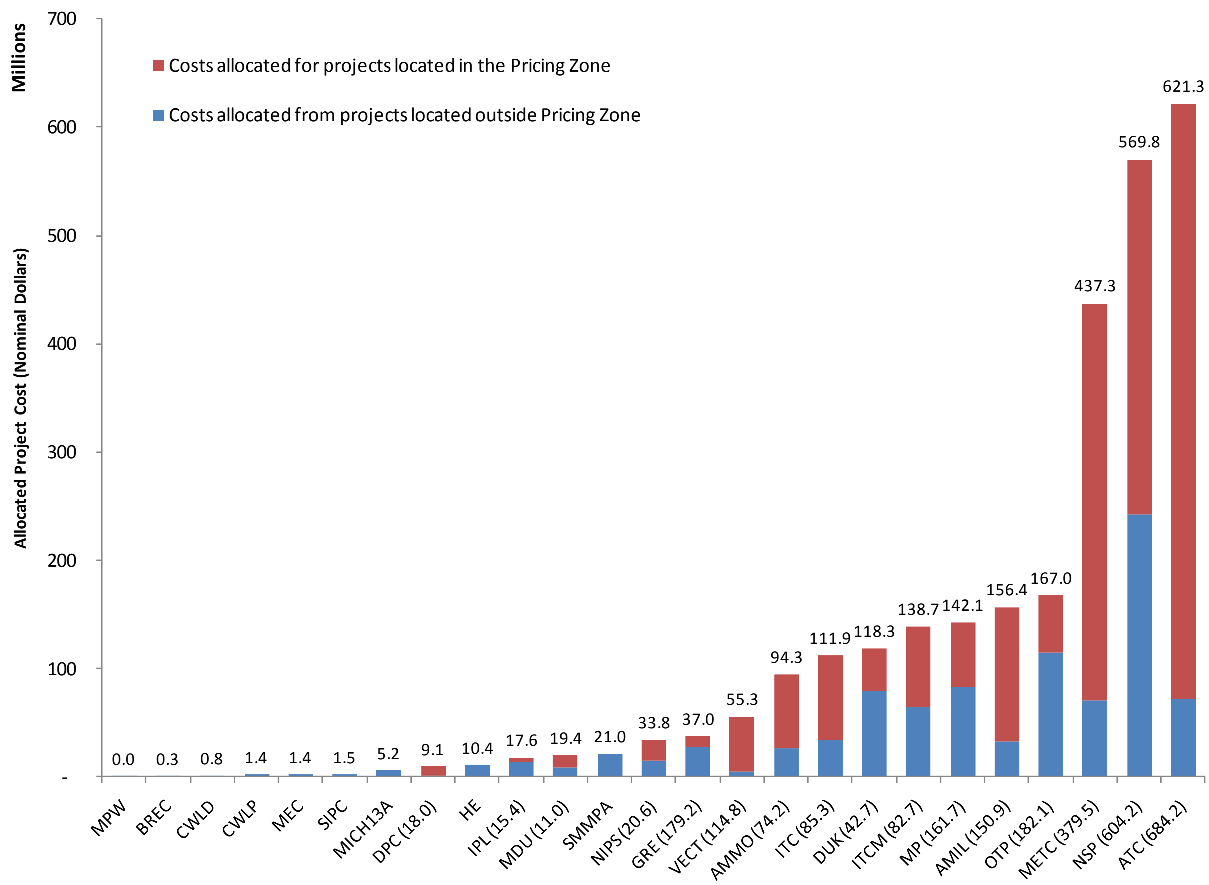
Since the cost sharing methodologies for Baseline Reliability Projects, Generation Interconnection Projects, and Market Efficiency Projects were implemented in 2006, there have been 136 projects eligible for cost sharing. That's $3.4 billion in transmission investment, with each project type representing the following number of projects and total project cost:

- Baseline Reliability Projects – 79 projects, $2.9 billion.
- Generation Interconnection Projects – 56 projects, $550.4 million with $279.1 million allocated directly to the generator.
- Market Efficiency Project – 1 project, $5.6 million.

Figure 2.3-2 provides the breakdown, by pricing zone, of all project costs assigned to the zone based on the cost allocation at the time of approval for Baseline Reliability Projects, Generation Interconnection Projects, and Market Efficiency Projects from MTEP06 to the current MTEP11 report. The costs of approximately $2.8 billion, allocated to each pricing zone from prior MTEP report cycles, have been updated to reflect the current estimates on in-service project cost and in-service date. They do not include projects that have been withdrawn.

The red bar represents the Transmission Owner's share of project costs not allocated to other pricing zones, equal to $1.8 billion across all pricing zones. The blue bar represents the portion of project costs allocated to a pricing zone for projects located in other pricing zones, equal to $927 million across all pricing zones. Note that the values shown in Figure 2.3-2 exclude the portion of Generation Interconnection Projects assigned directly to the generator.

Additional detail by pricing zone on the information shown in Figure 2.3-2 is located in Appendix A-2.2. The cost values for the new MTEP11 cost shared projects have been converted to reflect indicative annual charges for those projects for 2012 to 2021. See Appendix A-2.1.



() = Transmission Owner transmission investment

Figure 2.3-2: Allocated project cost from MTEP06 to MTEP11 for approved Baseline Reliability, Generation Interconnection, and Market Efficiency Projects.[14]

[14] Costs allocated for projects located in the now non-existent First Energy pricing zone are included in the values shown. The MI13AG and MI13ANG zones have been combined into the MICH13A zone.

2.4 MTEP Project types and Appendix overview

MTEP Appendices A, B and C indicate the status of a given project in the MTEP planning process. Projects start in Appendix C when submitted into the MTEP process, transfer to Appendix B when MISO has documented the project need and effectiveness, then move to Appendix A after approval by the MISO Board of Directors. While moving from Appendix C to Appendix B to Appendix A is the most common progression through the appendices, projects may also remain in Appendix C or Appendix B for a number of planning cycles or may go from C to B to A in a single cycle.

MTEP11 Appendix A lists projects approved by the MISO Board of Directors in prior MTEPs but have not been built, and also lists projects and associated facilities recommended to the MISO Board of Directors for approval in this cycle. The new projects are indicated as “A in MTEP11” in the target Appendix field in the Appendix listing. The Appendix ABC field is indicated as B>A, or C>B>A, for new projects and A for previously approved projects. Projects in Appendix A are classified on the basis of their respective designation in Attachment FF to the Tariff.

- Baseline Reliability Projects are required to meet North American Electric Reliability Corp. (NERC) standards. Costs for a Baseline Reliability Projects may be shared if the voltage level and project cost meet the thresholds designated in the Tariff.
- Generation Interconnection Projects are upgrades that ensure the reliability of the system when new generators interconnect. The customer may share the costs of network upgrades if a contract for the purchase of capacity or energy is in place, or if the generator is designated as a network resource. Not all GIPs are eligible for cost sharing.
- Transmission Service Delivery Projects are required to satisfy a Transmission Service request. The costs are assigned to the requestor.
- Market Efficiency Projects, formerly referred to as regionally beneficial projects, meet Attachment FF requirements for reduction in market congestion. Market Efficiency Projects are shared based on benefit to cost ratio of the project, cost and voltage thresholds.
- Multi Value Projects meet Attachment FF requirements to provide regional public policy economic and/or reliability benefits. Costs are shared with loads and export transactions in proportion to metered MWh consumption or export schedules.

Projects start in Appendix C when submitted into the MTEP process, transfer to Appendix B when MISO has documented the project need and effectiveness, then move to Appendix A after approval by the MISO Board of Directors.

A project not meeting any of these classifications is designated as ‘Other.’ The ‘Other’ category incorporates a wide range of projects, including those intended to provide local reliability or economic or similar benefits; but not meeting requirements as Market Efficiency Projects or Multi Value Projects (MVPs). Many other projects are required on the transmission system, less than 100 KV, which is not part of the bulk electric system under MISO functional control.

MTEP Appendix A

MTEP Appendix A contains transmission expansion plan projects recommended by MISO staff and approved by the MISO Board of Directors for implementation by Transmission Owners.

Projects in Appendix A have a variety of drivers. Many are required for maintaining system reliability in accordance with the North American Electric Reliability Corporation (NERC) Planning Standards. Others may be required for Generation Interconnection or Transmission Service. Some projects may be required for regional reliability organization standards. Other projects may be required to provide distribution interconnections for load serving entities. Appendix A projects may be required for economic reasons, to reduce market congestion or losses in a particular area. They may also be needed to reduce resource adequacy requirements through reduced losses during system peak or reduced planning reserve. Projects may be required to enable public policy requirements, such as current state renewable portfolio standards. All projects in Appendix A address one or more MISO documented transmission issues.

Projects in Appendix A may be eligible for regional cost-sharing per provisions in Attachment FF of the Tariff. Such a project must go through the following process to be moved into Appendix A:

- MISO staff must validate that the project addresses one or more transmission issue.
- MISO staff must consider and review alternatives with the Transmission Owner.
- MISO staff must consider and review costs with the Transmission Owner.
- MISO staff must endorse the project.
- MISO staff must verify that the project is qualified for cost-sharing as a Baseline Reliability Project, Generation Interconnection Project, Market Efficiency Project or Multi Value Project per provisions of Attachment FF.
- MISO staff must hold a stakeholder meeting to review any such project or group of projects in which costs can be shared, or other major projects for zones where 100 percent of costs are recovered under Tariff.
- MISO staff must take the new project to the Board of Directors for approval. Projects are moved to Appendix A following a presentation at any regularly scheduled Board meeting.

Appendix A is periodically updated and posted as projects go through the process and are approved. Projects are generally moved to Appendix A in conjunction with the annual review of the MTEP report. A June mid-cycle approval option is available for projects which have been under study in an open process for an appropriate period of time and need to be approved prior to the normal December cycle. However, should circumstances dictate, recommended projects need not wait for completion of the next MTEP for Board of Directors approval and inclusion in Appendix A.

MTEP Appendix B

Projects in Appendix B have been analyzed to ensure they effectively address one or more documented transmission issues. In general, MTEP Appendix B contains projects still in the Transmission Owners planning process or still in the MISO review and recommendation process. It may contain multiple solutions to a common set of transmission issues. Projects in Appendix B are not yet recommended or approved by MISO, so they are not evaluated for cost sharing. There may be some potential Baseline Reliability Projects, Market Efficiency Projects or Multi Value Projects for which MISO staff has not been able to prove the need. Thus, while some projects may eventually become eligible for cost-sharing, the target date does not require a final recommendation for the current MTEP cycle. The project will likely be held in Appendix B until the review process is complete and the project is moved to Appendix A.

MTEP Appendix C

Appendix C may contain projects still in the early stages of the Transmission Owner planning process or have just entered the MTEP study process and have not been reviewed. Like those projects in Appendix B, they are not evaluated for cost sharing. There are also some long-term conceptual projects in Appendix C which will require significant planning before they are ready to go through the MTEP process and move into Appendix B or Appendix A. Appendix C may also contain project alternatives to the best alternative in Appendix B. Therefore, a project could revert from B to C if a better alternative is determined and the Transmission Owner is not ready to withdraw the previous best alternative. Appendix C projects are not included in the MTEP initial power flow models used to perform baseline reliability studies.

2.5 Economic assessment of recommended and proposed expansion

Expansion plan

MISO MTEP Appendix A/B contains planned/proposed projects that primarily address reliability needs. However, these projects may also provide economic benefits, including:[15]

- Adjusted Production Cost (APC) savings
- CO_2 emission reductions
- Energy loss benefits

Study results

This analysis models a subset of Appendix A and B projects scheduled to be in-service by 2016. Not all Appendix A and B projects are modeled. The analysis models projects that have expected in-service dates between July 15, 2011, and December 31, 2016. Except the Michigan Thumb Loop Expansion, the proposed MVP portfolio is excluded. Projects not driving economic benefits, such as capacitor banks, circuit breaker upgrades and control room upgrades, are excluded as well.

The PROMOD® simulations and economic analysis show that the Appendix A/B projects will bring not only reliability, but substantial economic benefit to MISO. In 2016, these projects will create $867 million in annual Adjusted Production Cost savings, when a total of $5.2 billion of new transmission projects are modeled. Over the following 20 to 40 years, these projects will create $9.1 to $20.6 billion dollars in Adjusted Production Cost savings, creating benefits that range from 0.9 to 1.0 times the cost of the projects modeled. Additionally, these projects will provide even greater economic benefits under higher load growth or higher gas price assumptions.

The PROMOD® simulations and economic analysis show that the Appendix A/B projects will bring not only reliability, but substantial economic benefit to MISO. Over the 20 to 40 years following 2016, Appendix A and B projects will create approximately $9.1 to 20.6 billion in present value benefits.

The simulations and analysis also show that the Appendix A/B projects create benefits through a reduction in line losses. In 2016, the annual energy loss decrease is about 45.8 GWH, which equates to about $41 million in annual savings.

Finally, the Appendix A/B projects provide CO_2 relief for the MISO system. The increased transmission capacity will allow for less expensive power to be imported and less wind to be curtailed. This leads to a forecasted decrease in coal unit generation and therefore a CO_2 reduction of 8 million tons.

More detailed methodology and benefit calculation assumptions are described later in this chapter.

[15] MISO benefits include all MISO members as of 12/6/2011. First Energy is excluded.

Economic benefits

Table 2.5-1 shows the Adjusted Production Cost savings for the MTEP11 Appendix A/B projects. The MTEP11 Appendix A/B projects will provide MISO $867 million in Adjusted Production Cost savings.

	2016 Adjusted Production Cost savings	20 Year Present Value, 3 percent Discount Rate	20 Year Present Value, 8.2 percent Discount Rate	40 Year Present Value, 3 percent Discount Rate	40 Year Present Value, 8.2 percent Discount Rate
MISO East	$367	$5,627	$3,844	$8,742	$4,638
MISO Central	$145	$2,210	$1,509	$3,433	$1,821
MISO West	$355	$5,436	$3,714	$8,447	$4,482
MISO	$867	$13,273	$9,066	$20,622	$10,941

Table 2.5-1: Economic benefits, in millions of 2011 dollars

As discussed, the full portfolio of Appendix A and B projects is not modeled. Thus, the total cost of the MTEP11 Appendix A/B projects in the MTEP11 2016 power flow case is $5.2 billion. Table 2.5-2 shows the Benefit- to-Cost ratio of the Appendix A/B projects, based on the economic benefits in 2.5-1 and $5.2 billion project cost, under different timeframes and discount rates.

Discount Rate	Present Value Timeframe	B/C Ratio
3 percent	20 Years	0.88
8.2 percent	20 Years	0.86
3 percent	40 Years	1.00
8.2 percent	40 Years	0.91

Table 2.5-2: B/C ratio of MTEP11 Appendix A/B projects

Benefits will change with variation in the underlying assumptions. To see how the benefits are affected by other factors, MISO conducted sensitivity runs. The sensitivities tested were:

1) Higher load growth: Load is 5 percent higher than the load in reference future;
2) Lower load growth: Load is 5 percent lower than the load in reference future;
3) Higher gas price: Gas prices are 40 percent higher than those in the reference future;
4) Lower gas price: Gas prices are 40 percent lower than those in the reference future;

	Base case	5 percent higher load	5 percent lower load	40 percent higher gas price	40 percent lower gas price
Annual Adjusted Production Cost savings (million $)	$867	$1,047	$748	$1,062	$716
20 Year Present Value, 3 percent Discount Rate (million $)	$13,273	$16,012	$11,457	$16,244	$10,959
20 Year Present Value, 8.2 percent Discount Rate (million $)	$9,066	$10,937	$7,826	$11,096	$7,485
40 Year Present Value, 3 percent Discount Rate (million $)	$20,622	$24,877	$17,800	$25,239	$17,026
20 Year Present Value, 8.2 percent Discount Rate (million $)	$10,941	$13,198	$9,444	$13,390	$9,033

Table 2.5-3: The Adjusted Production Cost savings, Load Cost savings and market congestion benefits of the MTEP11 Appendix A/B project for MISO in different sensitivities

Discount Rate	Present Value Timeframe	Annualized project cost (million $)	Base case	5 percent higher load	5 percent lower load	40 percent higher gas price	40 percent lower gas price
3 percent	20 Years	$901	0.88	1.06	0.76	1.08	0.73
8.2 percent	20 Years	$924	0.86	1.04	0.74	1.05	0.71
3 percent	40 Years	$792	1.00	1.21	0.87	1.23	0.83
8.2 percent	40 Years	$872	0.91	1.10	0.79	1.11	0.75

Table 2.5-4: Benefit-to-cost ratio sensitivity

The base case benefits-to-cost ratio of MTEP11 Appendix A/B projects range from 0.71 to 1.23. The benefits-to-cost ratio tend to be higher in the high load case and high gas price case, and lower in the low load case and low gas price case.

The benefits captured in this section only include the economic benefits in generation production cost savings. Benefits not captured include operating reserve benefits, planning reserve margin benefits and reliability benefits. Benefits to cost ratios will be larger and may be greater than 1.0 if all those benefits are captured. Furthermore, the projects in current MTEP11 Appendix A/B are mainly reliability projects. They need to be built to relieve the reliability violations in the system. Economic benefits are side benefits from those projects. A benefit to cost ratio of less than 1 does not imply the projects are not needed.

The proposed Multi Value Project portfolio provides a wide range of benefits, as described in MTEP11 Chapter 4.1.

Loss benefits

Loss benefits refer to the benefit of reduced line losses that occur when new high voltage transmission lines (Appendix A/B) are added to the system.

Loss benefits refer to the benefit of reduced line losses that occur when new high voltage transmission lines (Appendix A/B) are added to the system.

Loss benefits attributed to Appendix A/B projects are summarized in Table 2.5-5. The decrease in losses in 2016 is 45,781 MWH. Using the company's hourly load-weighted LMP to price this energy loss yields a savings of approximately $41 million.

The loss at peak hour in MISO increases approximately 346.8MW from without Appendix A/B case to with Appendix A/B case, so the capacity loss benefits are actually negative. This is because Appendix A/B projects will allow more long-distance import from non-MISO entities at peak hour to displace MISO generation. Consequently, the long distance power transportation increases losses. Since the capacity loss benefit is negative, the value of capacity loss benefit will be $0.

	Energy loss benefit	Value of energy loss benefit	Capacity of loss (peak) benefit	Value of capacity loss benefit	Maximum hourly loss decrease
MISO	45,781 MWH	$41 million	-346.8 MW	$0	391.4 MW

Table 2.5-5: MISO loss benefits with Appendix A/B project in 2016

Other benefits

Table 2.5-6 shows the annual generation and capacity factor changes for different types of MISO units. After adding the Appendix A/B projects, capacity factors on fossil fuel generators stay the same or decline somewhat. MISO generation (excluding wind) decreases by about 10,457 GWH. Adding the Appendix A/B projects leads to less wind energy being curtailed (10,143 GWH).

This drives annual CO_2 emission to decrease by approximately 8 million tons.

Table 2.5-6 also indicates that coal units and combined cycle units generate less in the case, including Appendix A/B projects. This drives annual CO_2 emission to decrease by approximately 8 million tons. That reduction is relative to the case without Appendix A/B projects, not the case without added wind generation. From Table 2.5-6, we can see the reduction in ST Coal, CT Gas and combined cycle units. The combined effect in CO_2 emission is about 2 percent.

		Generation (MWH)	Capacity Factor
Combined Cycle	No Appendix projects.	25,267,913	21.22 percent
	With Appendix projects.	20,804,817	17.47 percent
	Change	-4,463,096	-3.75 percent
CT Gas	No Appendix projects.	3,252,613	1.61 percent
	With Appendix projects.	2,352,304	1.16 percent
	Change	-900,309	-0.45 percent
CT Oil	No Appendix projects.	68,820	0.16 percent
	With Appendix projects.	15,908	0.04 percent
	Change	-52,913	-0.12 percent
Hydro	No Appendix projects.	3,744,454	34.25 percent
	With Appendix projects.	3,744,116	34.25 percent
	Change	-338	0.00 percent
IGCC	No Appendix projects.	5,860,686	76.29 percent
	With Appendix projects.	5,854,798	76.21 percent
	Change	-5,888	-0.08 percent
Nuclear	No Appendix projects.	71,312,762	88.91 percent
	With Appendix projects.	71,312,762	88.91 percent
	Change	0	0.00 percent
ST Coal	No Appendix projects.	383,096,341	68.34 percent
	With Appendix projects.	378,307,444	67.49 percent
	Change	-4,788,897	-0.85 percent
ST Gas	No Appendix projects.	708,331	2.86 percent
	With Appendix projects.	453,482	1.83 percent
	Change	-254,849	-1.03 percent
ST Oil	No Appendix projects.	12,209	0.24 percent
	With Appendix projects.	12,399	0.24 percent
	Change	189	0.00 percent
Wind	No Appendix Projects	42,108,491	27.99 percent
	With Appendix Projects	52,251,508	34.73 percent
	Change	10,143,018	6.74 percent

Table 2.5-6: 2016 generation and capacity factor change for different type units

	CO_2 emission (ton)
No Appendix projects.	423,370,598
With Appendix projects.	415,237,057
Emission decrease	8,133,541

Table 2.5-7: 2016 annual CO2 emission change for different type units

Study methodology and assumptions

The data for the economic benefit assessment comes from two PROMOD® case runs: one case without the Appendix A and B projects, and one case with these projects.

Only those projects that will not drive economic benefits are excluded to provide a more accurate analysis. Examples of projects not adding economic benefit include capacitor banks, circuit breaker upgrades, rebuilds of existing lines or substations and control room upgrades. These projects will not cause impedance or rating changes to existing lines, and will not affect system topology from steady-state economic study perspective.

PROMOD® cases

The MTEP11 2016 summer peak power flow case, which has been reviewed by MISO stakeholders and incorporates the latest PJM system update, was used as the starting point for this study. Two 2016 PROMOD® cases were developed:

- 2016 PROMOD® case with Appendix A/B projects.
- 2016 PROMOD® case without Appendix A/B projects.

Both cases use the same MTEP11 BAU (Business As Usual with low demand and energy growth rate) Future database (containing all the generator, load, fuel and environmental information). The detailed information associated with the BAU Future can be found in Appendix E2. The only difference between these two PROMOD cases is the power flow cases (i.e., the transmission topologies) that are used.

Power flow case

To develop these two PROMOD® cases, two power flow cases are required:

- One power flow case with Appendix A/B projects.
- One power flow case without Appendix A/B projects.

For both power flow cases, the Transmission Systems outside of the MISO footprint are the same; from the Eastern Interconnection Regional Reliability Organization (ERAG) 2010 series 2016 summer peak power flow case. The MISO portion, in the power flow case with Appendix A/B projects, is from the MTEP11 2016 summer peak power flow case, including all Appendix A/B projects except proposed Multi Value Projects. The MISO portion, in the power flow case without Appendix A/B projects, is from the ERAG 2010 series 2011 summer peak power flow case, representing the current transmission topology in MISO. Table 2.5-8 summarizes the differences between these two power flow cases.

	Power flow case with Appendix A/B	Power flow case without Appendix A/B
MISO transmission	MTEP11 2016 summer peak (ERAG 2011 summer peak + Appendix A/B)	ERAG 2011 summer peak
Non-MISO transmission	ERAG 2016 summer peak	ERAG 2016 summer peak
Generation/load/interchange	Not used in PROMOD(R)	Not used in PROMOD(R)

Table 2.5-8: Power flow cases difference

In the power flow case with the Appendix A/B projects, the Michigan Thumb Loop project is in the case. None of the other proposed Multi Value Projects were included in the case because the proposed MVP portfolio is not finalized. Among them, only 3 out of 16 projects have an expected in-service date on or before 2016. The benefits of proposed MVP projects are evaluated together as a portfolio in the proposed MVP Portfolio Study. They are not included in the power flow case with Appendix A/B projects used in this study.

New generators

The new generators identified in MTEP11 Steps 1 and 2, under the BAU Future, are included in this study. More details on these generators can be found in Appendix E2.

Event file

The event file contains the list of flow gates which will be treated as transmission constraints. The quality of the event file has a big impact on the quality of the study results. As PROMOD® has a limit on the number of events, all N-1 or N-2 contingencies cannot be included in the event file. The event file for this 2016 PROMOD® case includes the flowgates from:

- MISO master flowgates file.
- NERC book of flowgates.
- Appendix A/B projects that have rating upgrades were also included in the event file with different ratings in each of the two PROMOD® cases.

The PROMOD® Analysis Tool (PAT) was also used to identify events with potential reliability problems. Those events were also included in the event file.

Economic benefits

From each PROMOD® case, The Adjusted Production Cost (APC) was calculated. The APC is equal to the production cost adjusted by sales revenue and purchases cost.

The comparison of the economic indices from two PROMOD® cases (with Appendix A/B case, and without Appendix A/B case) yields the Adjusted Production Cost savings. These savings are the annual Adjusted Production Cost decrease from the case without Appendix A/B projects to the case with Appendix A/B projects, so there is a cost savings.

Loss benefits

- Energy loss benefit (MWH) is the annual loss decrease (MWH) from without Appendix A/B case to with Appendix A/B case.
- Capacity loss benefit (MW) for MISO is the loss decrease (MW) from without Appendix A/B case to with Appendix A/B case in MISO's peak load hour.
- Dollar value of energy loss benefit is the annual MISO loss cost decrease from without Appendix A/B case to with Appendix A/B case. Company loss cost is calculated by multiplying a company's hourly losses by its load- weighted LMP. The annual sum of these values for all MISO companies is the annual MISO loss cost.
- Dollar value of capacity loss benefit represents the value of deferring additional generation construction. It is calculated using $650/kW-$1200/kW, the price range for the construction of

different units. If the capacity loss benefit is positive, the corresponding dollar value is the capacity loss benefit multiplied by these prices. If the capacity loss benefit is negative, this value will be 0.

- Maximum hourly loss decrease is the maximum hourly loss decrease (MW) from without Appendix A/B case to with Appendix A/B case.

Other impacts

- Generation, capacity factor and CO_2 emission change compares two things: 1) the change of generation and the capacity factor of different types of units and 2) change of CO_2 emission between with and without Appendix A/B projects cases.

2.6 MTEP 11 futures retail rate impact

The electricity industry is facing significant policy changes from the state and federal level. These changes are generating uncertainty for the industry and its customers, including potential rate increases to retail electricity customers. As shown in Figure 4.1-2, all but 1 of the 12 states in the MISO footprint has enacted a Renewable Portfolio Standard (RPS) mandate or goal. There is a great deal of uncertainty about how these goals will be achieved, including the location of future generation and the required transmission to enable renewable integration. In addition to state policies, there is on-going discussion at the federal level on implementation of policies, including federal RPS, carbon reduction, smart grid and others. To address these potential futures, MISO examines multiple scenarios through its long-term planning process to capture the wide range of potential policy outcomes.

Current retail electricity rates

The current cost of electricity to the retail customer must be considered before examining the potential impact of the future scenarios. In MISO the current average retail rate, weighted by load in each state, for residential, commercial and industrial sector, is 8.7 cents/kWh, about 10 percent lower than the national average of 9.7 cents/kWh.[16] Refer below to Figure 2.6-1, which provides the average retail rate in cents per kWh for each state in the MISO footprint. It shows the rate paid by consumers varies greatly across the MISO footprint. Based on information provided by the Energy Information Administration (EIA) in Annual Energy Outlook 2011; the generation, transmission and distribution cost components of the retail electricity rate in 2011 are estimated to average 63.0 percent, 7.1 percent and 29.9 percent, respectively.[17] This equates to approximately 5.5 cents/kWh for generation, 0.6 cents/kWh for transmission and 2.6 cents/kWh for distribution.[18] For this rate impact analysis, it is assumed the average MISO residential customer uses approximately 1,000 kWh of electricity each month, equivalent to annual electricity charges of $1,044; based on an 8.7 cents/kWh retail rate.

> The electricity industry is facing significant policy changes from the state and federal level. These changes are generating uncertainty for the industry and its customers, including potential rate increases to retail electricity customers.

[16] Data courtesy of the Energy Information Administration (EIA) Electric Power Monthly from March 2011. MISO average rate was calculated by taking the load weighted average of the 12 states in the MISO footprint.

[17] MISO average generation, transmission and distribution components were calculated based on rate component data provided in the EIA Annual Energy Outlook in 2011 for the following modeling regions: MRO-East, MRO-West, RFC-MI, RFC-West, SERC-Central, and SERC-Gateway. The modeling regions were weighted based on MISO load in each of the regions.

[18] Each category assumes some allocation of general and administrative expenses.

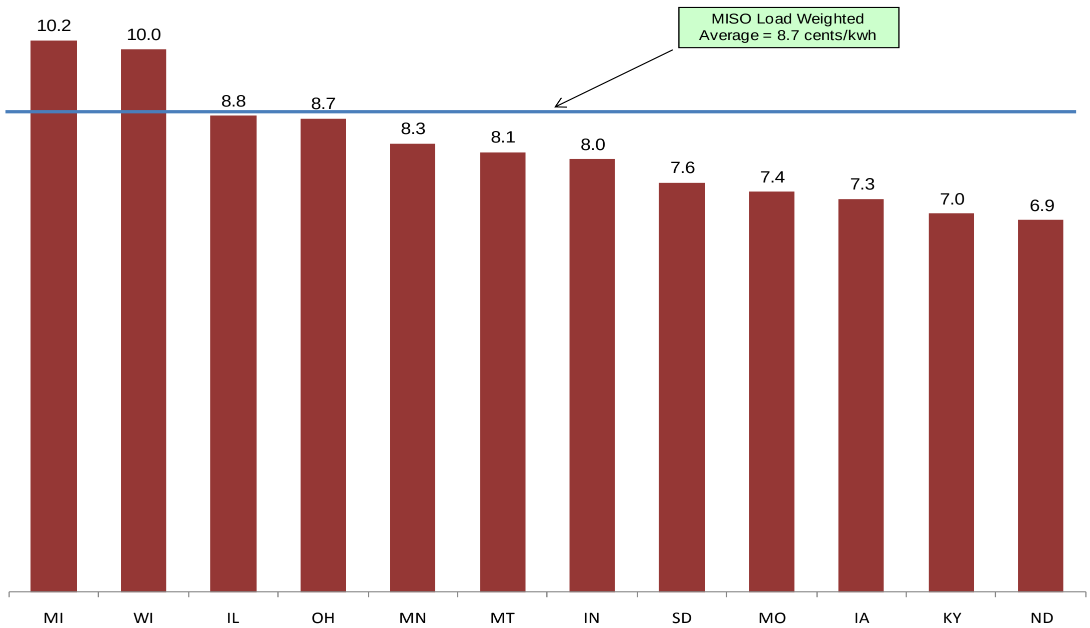


Figure 2.6-1: MISO retail rate for all sectors in cents/kWh (2011 dollars)

Future policy scenarios

MISO examined a number of policy-driven future generation expansion scenarios to develop an array of "best plans" for a range of possible outcomes. These scenarios derive from policy discussions, and they will evolve depending on the direction of legislation. The scenarios represent a range of potential policies and have been used to estimate potential impacts to retail rate payers in the MISO footprint.[19]

- Business as Usual with Mid-low Demand and Energy Growth Rates assumes a slow recovery from the economic downturn and its impact on demand and energy projections. This scenario assumes existing standards for resource adequacy, renewable mandates and little or no change in environmental legislation.

- Business as Usual with Historic Demand and Energy Growth Rates assumes a quicker recovery from the economic downturn and a return to historic demand and energy growth rates. This scenario assumes existing standards for resource adequacy, renewable mandates and little or no change in environmental legislation.

- Carbon Constraint models a declining cap on CO_2 emissions. The carbon cap is modeled after the Waxman-Markey bill, with a modified timeline to reach a 42 percent reduction by 2033 from 2005 levels. For the 2026 rate impacts calculated in this analysis, a 25 percent carbon reduction is targeted.

- Combined Energy Policy combines the impact of multiple policy scenarios into one future. Smart grid is modeled within the demand growth rate. It is assumed an increased penetration of smart grid applications will lower overall demand growth. Growth in electric vehicle usage is captured with a higher energy growth rate and is assumed to increase off-peak energy usage.

[19] For additional description of the MTEP 11 scenarios refer to section 4.3 and Appendix E.2

To meet the various policy objectives, all scenarios included in this rate impact analysis require significant investment in generation and transmission expansion across the 15-year study horizon. This is expected to affect retail electricity rates, especially since a large share of generation and transmission assets have or soon will reach the end of their recoverable book-life. For example, approximately 55 percent of the generating capacity in the MISO footprint is at least 30 years old. As shown in this analysis, all but one of the scenarios shows retail rates increasing at a rate greater than inflation.

Overview of rate impact methodology and results

To measure the potential impact to rate payers under each of the scenarios; MISO projected a 2026 retail rate by estimating annual revenue requirements for the generation, transmission and distribution rate components.[20] This projection was based on the following assumptions:

- Transmission component
  - Includes proposed MVP portfolio (constant across all scenarios).
  - Additional required reliability transmission investment through 2026 (constant across all scenarios).[21]
  - Non-depreciated current transmission that would still be recoverable in 2026 (constant across all scenarios).
- Generation component
  - Production costs for MISO generation resources associated with each scenario in 2026; including fuel, emissions, and variable operations and maintenance expenses.
  - Capital costs, including fixed operations and management, associated with the capacity expansion for each scenario through 2026.[22]
  - Non-depreciated current generation that would still be recoverable in 2026 (constant across all scenarios).
- Distribution component
  - Assumes that the distribution component of the current MISO retail rate at 2.6 cents/kWh will grow at the assumed rate of inflation through 2026.

To calculate MISO's 2026 retail rate, revenue requirements for the generation, transmission and distribution components described above were distributed uniformly across the forecasted 2026 energy usage levels. The 2026 rate was then discounted, using the assumed inflation rate to 2011 for comparison to the current MISO retail rate. The results of this calculation for each scenario are shown in Figure 2.6-2, which depicts the impact the scenarios could have on customer's retail rates. Note that the rates calculated for the future scenarios include costs for generation, transmission and distribution; but do not include general and administrative costs.

All but one of the scenarios shows that retail rates can be expected to grow at a rate faster than would be experienced if rates simply increased by inflation.

All but one of the scenarios shows that retail rates can be expected to grow at a rate faster than would be experienced if rates simply increased by inflation. However, the magnitude of this impact varies greatly across the four scenarios, from a 1 percent decrease for the Business as Usual with Mid-low Demand and Energy Growth Rate scenario to a 19 percent increase for the Combined Energy Policy Future. Major rate drivers for each scenario are discussed in more detail in the next section.

---

[20] Additional detail on the rate calculation methodology is provided in Appendix E.3.

[21] Based on the proposed MVP portfolio listed in Table 4.1-1 in Section 4.1 with a total project cost of more than $5.2 billion.

[22] Refer to Section 4.3 for details on the capacity expansion, by fuel type, for each MTEP 11 Future. Generation siting maps for each MTEP 11 Future are also provided in Section 4.3.

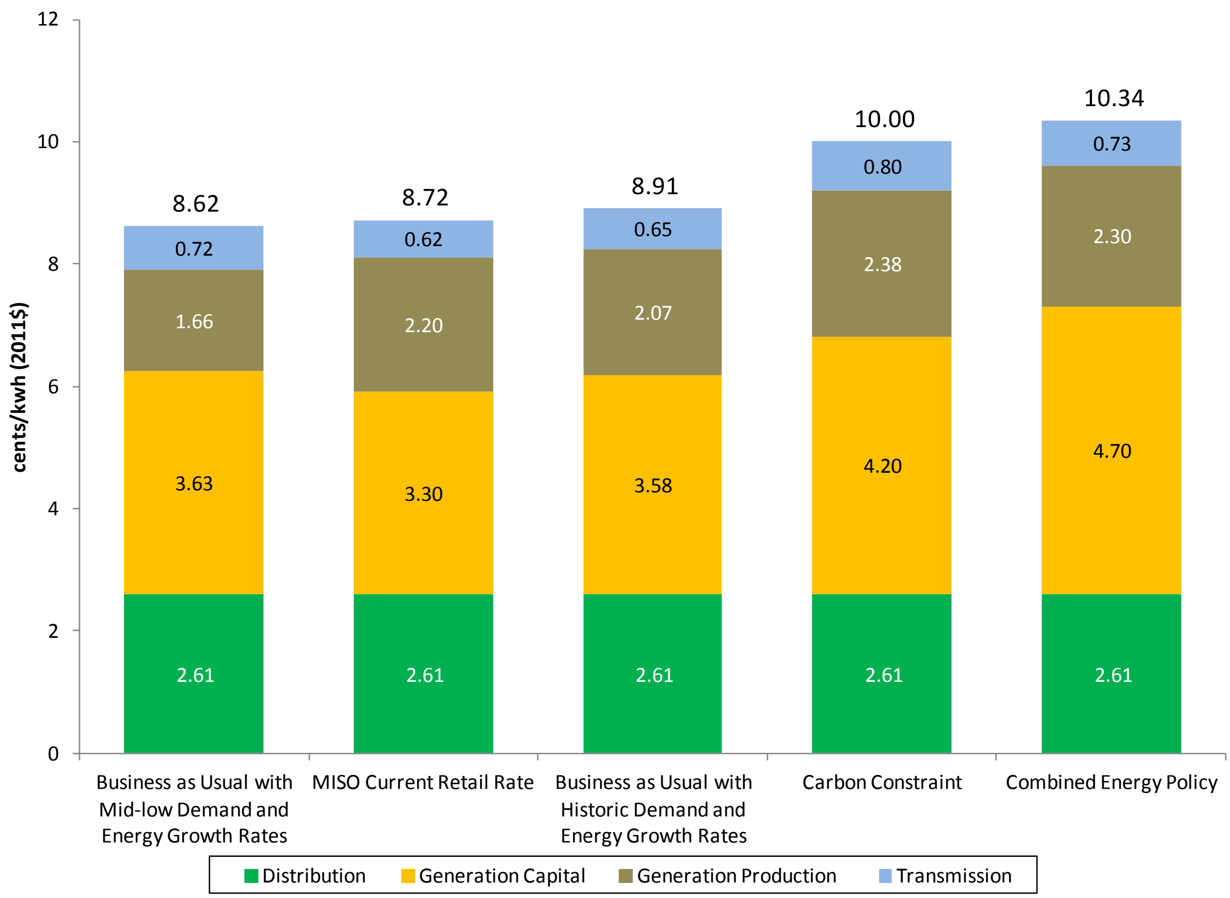


Figure 2.6-2: Comparison of estimated retail rate for each future scenario
(Cents per KWh in 2011 Dollars)

Scenario	Rate (cents/kWh)	Percent (Change from current retail rate)
BAU with Mid-low Demand and Energy Growth Rates	8.62	-1.2 percent
MISO Current Retail Rate	8.72	0.0 percent
BAU with Historic Demand and Energy Growth Rates	8.91	+2.1 percent
Carbon Constraint	10.00	+14.7 percent
Combined Energy Policy	10.34	+18.6 percent

Table 2.6-1: 2026 retail rate impacts in 2011 dollars of for each future scenario

Rate impact drivers under future policy scenarios

Table 2.6-2 compares the Business as Usual with Mid-low Demand and Energy Growth Rates (BAUMLDE) scenario's estimated retail rate to the current retail rate. This is done by using the rate components to illustrate what is driving the overall estimated decrease of $12 to the average residential ratepayer's annual electricity costs.[23] The BAUMLDE is the only scenario where we find an estimated retail rate marginally lower than the current MISO retail rate. Two factors contribute to this lower rate:

1) The lower demand growth rate will require fewer new capacity resources, though there are 23,900 MW of wind and solar resources added to meet the state renewable mandates.
2) The increased output of renewable resources, which typically have no fuel costs, and therefore very low production costs, from 8 percent of output in 2011 to 16 percent in 2026, reduces generation production cost.

	Rate component				
	Generation capital[24]	Generation production	Transmission	Distribution	Total
MISO current retail rate (cents per kWh2011 dollars)	3.30	2.20	0.62	2.61	8.72
BAUMLDE future retail rate (cents per kWh2011 dollars)	3.63	1.66	0.72	2.61	8.62
Percentage change in projected retail rate	10.1 percent	-24.4 percent	16.4 percent	-	-1.2 percent
Projected change in avg. residential rate payer's annual electricity bill	$39.96	$(64.26)	$12.14	-	$ (12.15)

Table 2.6-2: Comparison of BAUMLDE future retail rate to current

[23] Residential annual electricity costs calculated assuming average monthly usage of 1,000 kWh.
[24] Generation Capital includes both annual capital charges and fixed O&M expenses.

Table 2.6-3 below compares the Business as Usual with Historic Demand and Energy Growth Rates (BAUHDE) scenario estimated retail rate to the MISO current retail rate to illustrate which component is influencing the overall estimated annual increase of $22 to the average residential ratepayer's electricity costs. The increase in generation capital and transmission in the BAUHDE scenario is in part driven by the need to meet the state renewable mandates included in the study. To meet the current state RPS mandates in the MISO footprint, an additional 26,800 MW of wind and solar resources are added through 2026. Offsetting the increase in generation and transmission investment is a reduction in generation production costs as low cost renewable resources deliver an increasing share of total energy, accounting for 8 percent of output in 2011 and increasing to 16 percent in 2026.

	Rate component				
	Generation capital	Generation production	Transmission	Distribution	Total
MISO current retail rate (cents per kWh 2011 dollars)	3.30	2.20	0.62	2.61	8.72
BAUHDE future retail rate (cents per kWh 2011 dollars)	3.58	2.07	0.65	2.61	8.91
Percentage change in projected retail rate	8.4 percent	-6.0 percent	6.1 percent	-	2.1 percent
Projected change in avg. residential rate payer's annual electricity bill	$33.33	$ (15.76)	$ 4.52	-	$22.09

Table 2.6-3: Comparison of BAUHDE future retail rate to current

Table 2.6-4 below compares the estimated rate under the Carbon Constraint scenario, which targets a 25 percent reduction in CO_2 emissions by 2026 from 2005 levels, leading to an estimated 15 percent increase over the current MISO retail rate, equating to a $154 increase over the current residential ratepayer's annual electricity costs.

In the Carbon Constraint scenario, there is approximately 21,600 MW of resources retired to achieve required carbon reduction levels. However, due to the very low effective demand growth rate after considering demand response, only 10,000 MW of non-renewable generation is added. Approximately 21,000 MW of renewable resources are added to meet the state RPS mandates. This additional 31,000 MW of resources is driving the 28 percent increase in the generation capital component of the carbon constraint scenario compared to the current retail rate.

One of the drivers for the 9 percent increase in the generation production component is the increase in energy served by natural gas fueled resources -- from 2 percent in 2011 to 18 percent in 2026. For the transmission component, note that while the percentage increase is much higher than for the BAUMLDE and BAUHDE scenarios, this does not represent an increase in transmission investment, since the same level of transmission investment is assumed for all scenarios. The energy growth rate is lower, so the cost per kWh is higher, and the transmission costs are spread over less energy.

	Rate component				
	Generation capital	Generation production	Transmission	Distribution	Total
MISO current retail rate (cents per kWh2011 dollars)	3.30	2.20	0.62	2.61	8.72
Carbon Cap Constraint future retail rate (cents per kWh2011 dollars)	4.20	2.38	0.80	2.61	10.00
Percentage change in projected retail rate	27.5 percent	8.5 percent	30.5 percent	-	14.7 percent
Projected change in average residential rate payer's annual electricity bill	$108.63	$ 22.37	$22.52	-	$153.51

Table 2.6-4: Comparison of Carbon Constraint future retail rate to current

Table 2.6-5 below compares the Combined Energy Policy estimated retail rate - including a 20 percent Federal RPS, carbon constraint, smart grid investment and increased electric vehicle usage - to the MISO current retail rate by rate component. This illustrates the drivers of the overall estimated increase of 19 percent, equating to a $195 increase for the average residential ratepayer's annual electricity cost.

Similar to the Carbon Constraint future, the Combined Energy Policy future assumes the retirement of 24,500 MW of generation resources to achieve the 25 percent reduction in carbon emissions from 2005 levels by 2026. The estimated 43 percent increase in the generation capital component is driven by the 43,200 MW of new resources, including 28,800 MW of new wind generation to meet the 20 percent Federal RPS.

For the generation production component, the increased usage of natural gas resources for the Combined Energy Policy scenario (from 2 percent of energy served in 2011 to 18 percent in 2026) is slightly less than for the Carbon Constraint Future. That's likely due to the increased percentage of energy served by low-production cost wind generation -- from 8 percent in 2011 to 21 percent in 2026.

	Rate Component				
	Generation capital	Generation production	Transmission	Distribution	Total
MISO current retail rate (cents per kWh 2011 dollars)	3.30	2.20	0.62	2.61	8.72
Combined energy policy future retail rate (cents per kWh 2011 dollars)	4.70	2.30	0.73	2.61	10.34
Percentage change in projected retail rate	42.5 percent	4.6 percent	19.0 percent	-	18.6 percent
Projected change in average residential rate payer's annual electricity bill	$168.35	$ 12.25	$14.01	-	$194.61

Table 2.6-5: Comparison of combined energy policy future retail rate to current

Potential rate impacts from the four future scenarios demonstrate that higher electricity rates are likely. The magnitude of the increase will vary, depending on actual economic and policy situations. The range of outcomes illustrates the importance of performing long-term scenario analyses to provide decision-makers with the information needed to minimize rate increases to customers.

3. Historical MTEP plan status

This section provides an update on the implementation of projects approved in the MISO Transmission Expansion Plan (MTEP) - and furnishes a historical perspective of all past MTEP approved plans. These projects were approved by the MISO Board of Directors in previous MTEP cycles or are recommended for approval in MTEP11. Any given MTEP Appendix A contains newly approved projects, along with previously approved projects not in service when the MTEP Appendices were prepared.

3.1 MTEP10 status report

MISO transmission planning responsibilities include monitoring progress and implementation of essential expansions identified in the MTEP. The MISO Board of Directors approved the last MTEP (MTEP10) in December 2010. This section provides a review of the status of previously approved projects listed in MTEP10 Appendix A.

The MISO Board of Directors has been receiving quarterly updates on the status of active plans since December 2006. The information in this report reflects the 2nd Quarter of 2011 status report to the Board of Directors, which included status on MTEP10 Appendix A projects through June 30, 2011.

Tracking the progress of projects ensures a good faith effort to move projects forward, as prescribed in the Transmission Owner's agreement. Most approved projects do move forward, despite possible complications, such as equipment procurement delays, construction difficulties and regulatory processes taking longer than anticipated. A project is only considered 'off-track' if MISO cannot determine a reasonable cause for delays, as described above. These approved MTEP projects have completed the planning process and are the solution to Transmission System issues. They may be driven by reliability issues, Transmission Service requests, Generation Interconnection requests or market flow constraints. More than half of the MTEP Appendix A projects is comprised of multiple facilities.

MTEP10 Appendix A has 586 projects comprised of 1,025 facilities. These figures have been updated to reflect the progress of members' projects. MTEP10 Appendix A includes expansion facilities through 2020. A total of 99 percent of the approved facilities included in MTEP10 are in service, on track or have encountered reasonable delays. That translates to $4.680 billion of the $4.727 billion included in MTEP10 Appendix A.

There were 101 in-service date adjustments to projects. Little or no impact on reliability is expected because in-service date adjustments were primarily driven by the economic slowdown. Transmission Owners may adjust project in-service dates to match system needs.

Withdrawn projects should be examined to ensure the planning process of MISO and its members address required system additions, and there was a good reason for withdrawing the project, or a different project covers the need. MTEP10 Appendix A contains projects approved in past MTEPs not yet in service, so withdrawn facilities may have been approved in prior MTEPs but withdrawn after MTEP10 was approved. There were 33 facilities (3 percent of 1025) withdrawn for the following reasons:

- The customer's plans changed or the service request was withdrawn.
- The plan was replaced with another plan.
- The plan was redefined to better meet the needs.
- The load forecast dictated that the project was no longer needed.

All withdrawn facilities were withdrawn for valid reasons. The majority were cancelled because service requests were withdrawn or load forecast was reduced.

3.2 MTEP implementation history

This section encompasses the implementation and status of all approved MTEP plans, including the current MTEP plan. A historical perspective shows extensive variability in transmission plan development. This is normal, caused by the long development time of transmission plans and the regular and periodic updating of the transmission plans.

Refer to Figure 3.2-1, which depicts cumulative investment dollars for projects, categorized by plan status, for MTEP03 through the current MTEP11 cycle. MTEP11 data depicted in Figure 3.2-1, subject to Board approval, is from the current MTEP study and will be added to the data tracked by the MISO Board of Directors. The steady increase in planned facilities testifies to the coordinated planning efforts of MISO and its Transmission Owners. These statistics include only MISO members who participated in this planning cycle.

- Since MTEP03 $4.4 billion of approved projects have been constructed and are in service.
- $199 million of MTEP projects are currently flagged as being under construction. However, there are over $900 million of projects with expected in service dates in 2011.
- $9.3 billion of MTEP projects are currently planned.
- Since MTEP03 $480 million of MTEP projects have been withdrawn.

Figure 3.2-1: Cumulative approved investment by facility status

Figure 3.2-2 depicts MTEP project investment by facility status for each MTEP iteration. The historical perspective shows extensive variability in development. This is caused by the long development time of transmission plans and the regular and periodic updating of the transmission plans. The irregular shape of the graph represents the maturation of the MTEP process, and demonstrates the good faith effort of MISO Transmission Owners to implement the approved plan.

- MTEP06 and MTEP07 were approved in the same calendar year, which accounts for the comparatively small number of projects in MTEP07.
- In MTEP08, the number of developing needs increased the number of planned projects, including several large upgrades.
- MTEP09 was a year for analysis and determination of the best plans to serve those needs. The in-service category can be seen increasing in past MTEPs as projects are built.
- MTEP10 contains significant adjustments for reduced load forecasts and presents a transmission planning approach driven by proposed Multi Value Projects (MVPs), an adaptable rather than fixed methodology, which takes into account market and policy uncertainties and defines an array of multiple facility scenarios capable of performing well no matter what the future holds, integrating mandated renewable energy sources and providing market benefits.
- MTEP11 contains most of the proposed Multi Value Project (MVP) portfolio which is comprised of approximately $5.1 billion in transmission investment.

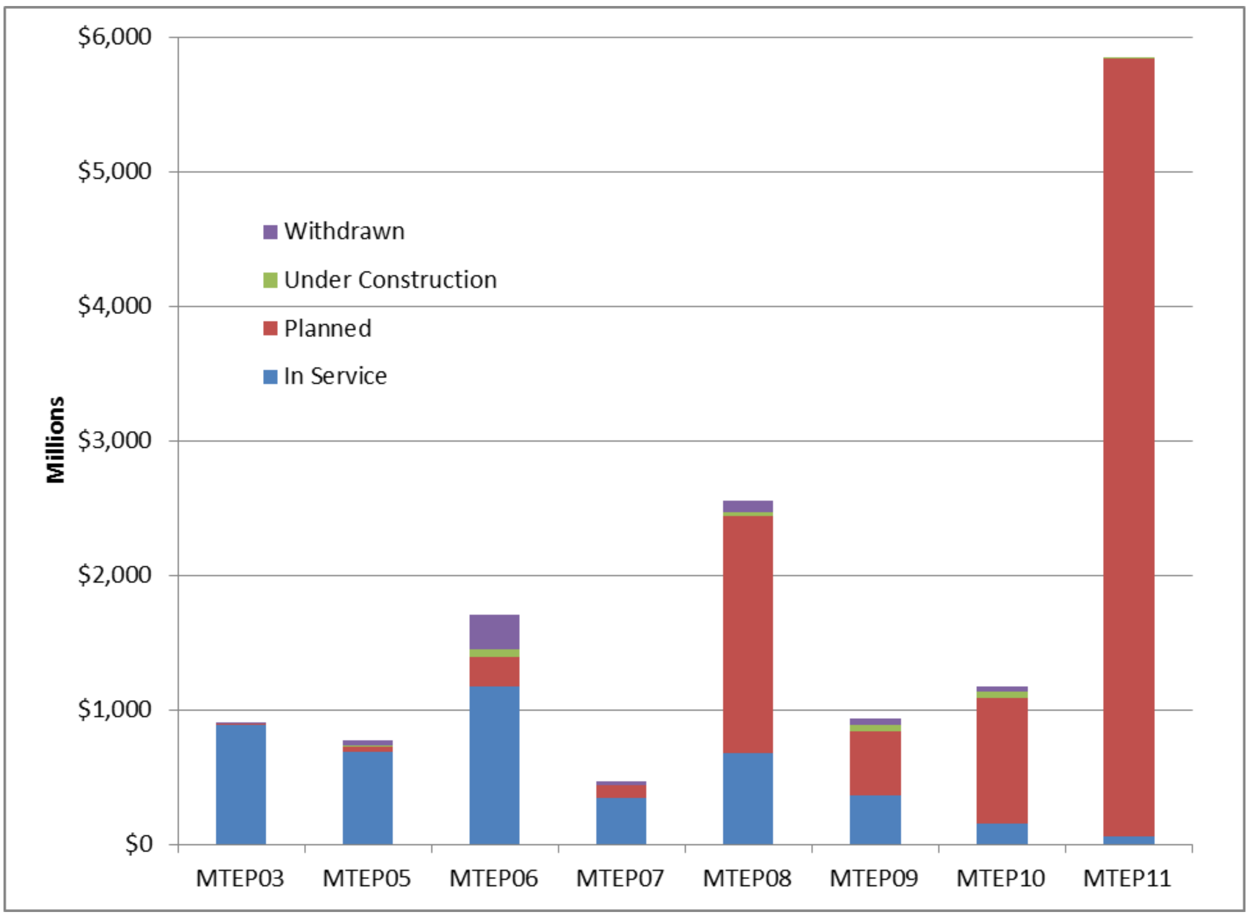


Figure 3.2-2: Approved MTEP investment by facility status

4. Regional energy policy studies

4.1 Proposed Multi Value Project portfolio

MISO staff recommends that the proposed Multi Value Project (MVP) portfolio be approved by the MISO Board of Directors for inclusion into Appendix A of MTEP11. This recommendation is based on the strong reliability, public policy and economic benefits of the portfolio that are distributed across the MISO footprint in a manner that is commensurate with the portfolio's costs. In short, the proposed portfolio will:

- Provide benefits in excess of its costs under all scenarios studied, with its benefit to cost ratio ranging from 1.8 to 3.0.
- Maintain system reliability by resolving reliability violations on approximately 650 elements for more than 6,700 system conditions and mitigating 31 system instability conditions.
- Enable 41 million MWh of wind energy per year to meet renewable energy mandates and goals.
- Provide an average annual value of $1,279 million over the first 40 years of service, at an average annual revenue requirement of $624 million.
- Support a variety of generation policies by using a set of energy zones which support wind, natural gas and other fuel sources.

This report summarizes the key reliability, public policy and economic benefits of the proposed MVP portfolio, as well as the scope of the analyses used to determine these benefits. Additional information on the portfolio and study analyses will be available in the full MVP portfolio report, which is scheduled to be published later in 2011.

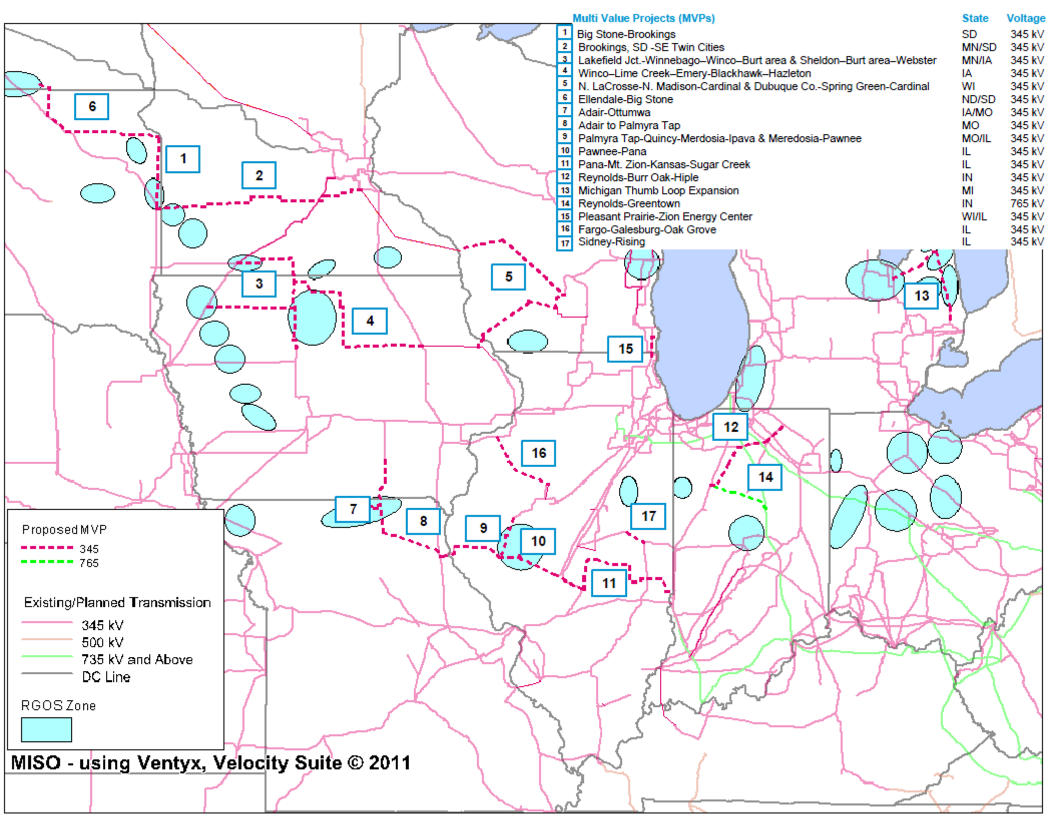


Figure 4.1-1: Proposed MVP portfolio

The proposed MVP portfolio includes the Brookings Project, conditionally approved in June 2011, and the Michigan Thumb Loop project, approved in August 2010. It also includes 15 additional projects which, when integrated into the transmission system, provide multiple kinds of benefits under all studied future scenarios[25].

	Project	State	Voltage (kV)	In Service Year	Cost (M, 2011$)[26]
1	Big Stone–Brookings	SD	345	2017	$191
2	Brookings, SD–SE Twin Cities	MN/SD	345	2015	$695
3	Lakefield Jct. Winnebago–Winco–Burt area & Sheldon–Burt area–Webster	MN/IA	345	2016	$506
4	Winco–Lime Creek–Emery–Black Hawk–Hazleton	IA	345	2015	$480
5	N. LaCrosse–N. Madison–Cardinal & Dubuque Co.–Spring Green–Cardinal	WI	345	2018/2020	$714
6	Ellendale–Big Stone	ND/SD	345	2019	$261
7	Adair–Ottumwa	IA/MO	345	2017	$152
8	Adair–Palmyra Tap	MO/IL	345	2018	$98
9	Palmyra Tap–Quincy–Merdosia–Ipava & Meredosia–Pawnee	IL	345	2016/2017	$392
10	Pawnee–Pana	IL	345	2018	$88
11	Pana–Mt. Zion–Kansas–Sugar Creek	IL/IN	345	2018/2019	$284
12	Reynolds–Burr Oak–Hiple	IN	345	2019	$271
13	Michigan Thumb Loop expansion	MI	345	2015	$510
14	Reynolds–Greentown	IN	765	2018	$245
15	Pleasant Prairie–Zion Energy Center	WI/IL	345	2014	$26
16	Fargo–Galesburg-Oak Grove	IL	345	2018	$193
17	Sidney–Rising	IL	345	2016	$90
	Total				$5,197

Table 4.1-1: Proposed MVP portfolio

25 More information on these scenarios may be found in the business case description.
26 Costs shown are inclusive of transmission underbuild upgrades and upgrades driven by short circuit requirements.

Public policy decisions over the last decade have driven changes in how the transmission system is planned. The recent adoption of Renewable Portfolio Standards (RPS) and clean energy goals across the MISO footprint have driven the need for a more regional and robust transmission system to deliver renewable resources from often remote renewable energy generators to load centers.

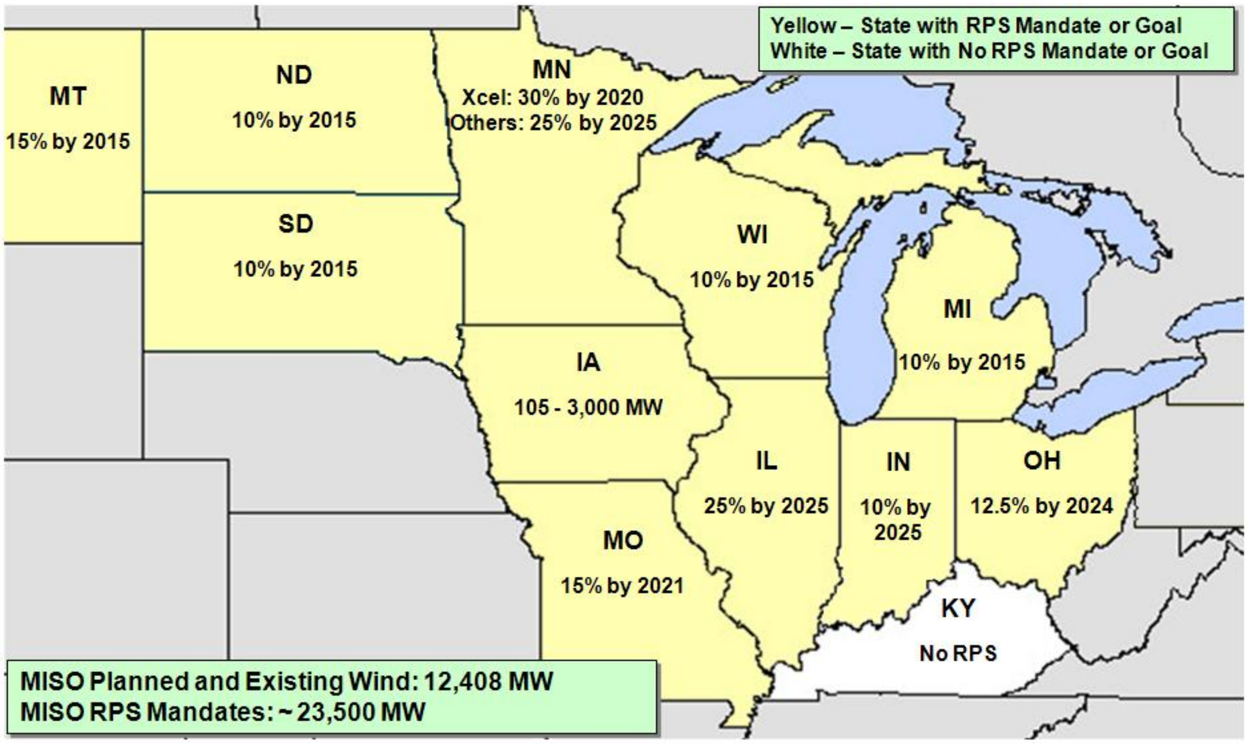


Figure 4.1-2: Renewable energy mandates and clean energy goals within the MISO footprint[27],[28]

Beginning with the MTEP03 Exploratory Studies, MISO and stakeholders began to explore how to best provide a value added regional planning process to complement the local planning of MISO members. These explorations continued in later MTEP cycles and in specific targeted studies. In 2008, MISO, with the assistance of state regulators and industry stakeholders such as the Midwest Governor's Association (MGA), the Upper Midwest Transmission Development Initiative (UMTDI) and the Organization of MISO States (OMS), began the Regional Generation Outlet Study (RGOS) to identify a set of value based transmission portfolios necessary to enable Load Serving Entities (LSEs) to meet their RPS mandates.

The recent adoption of Renewable Portfolio Standards (RPS) across the MISO footprint have driven the need for a more regional and robust transmission system to deliver renewable resources from often remote renewable energy generators to load centers

The goal of the RGOS analysis was to design transmission portfolios that would enable RPS mandates to be met at the lowest delivered wholesale energy cost. The cost calculation combined the expenses of the new transmission portfolios with the capital costs of the new renewable generation, balancing the trade offs of a lower transmission investment to

[27] Existing and planned wind as included in the Candidate MVP Portfolio. State RPS mandates and goals include all policies signed into law by June 1, 2011.
[28] The higher number for Iowa's state RPS mandates and goals reflects the wind online rather than a statutory requirement.

deliver wind from low wind availability areas, typically closer to large load centers; against a larger transmission investment to deliver wind from higher wind availability areas, typically located further from load centers.

While much consideration was given to wind capacity factors when developing the energy zones utilized in the RGOS and Candidate MVP Portfolio Analyses, the zones were chosen with consideration of more factors than wind capacity. Existing infrastructure, such as transmission and natural gas pipelines, also influenced the selection of the zones. As such, although the energy zones were created to serve the renewable generation mandates, they could be used for a variety of different generation types, to serve various future generation policies. Figure 4.1-3 depicts the correlation between the natural gas pipelines in the MISO footprint and the energy zones.

The zones were chosen with consideration of more factors than wind capacity. Existing infrastructure, such as transmission and natural gas pipelines, also influenced the selection of zones.

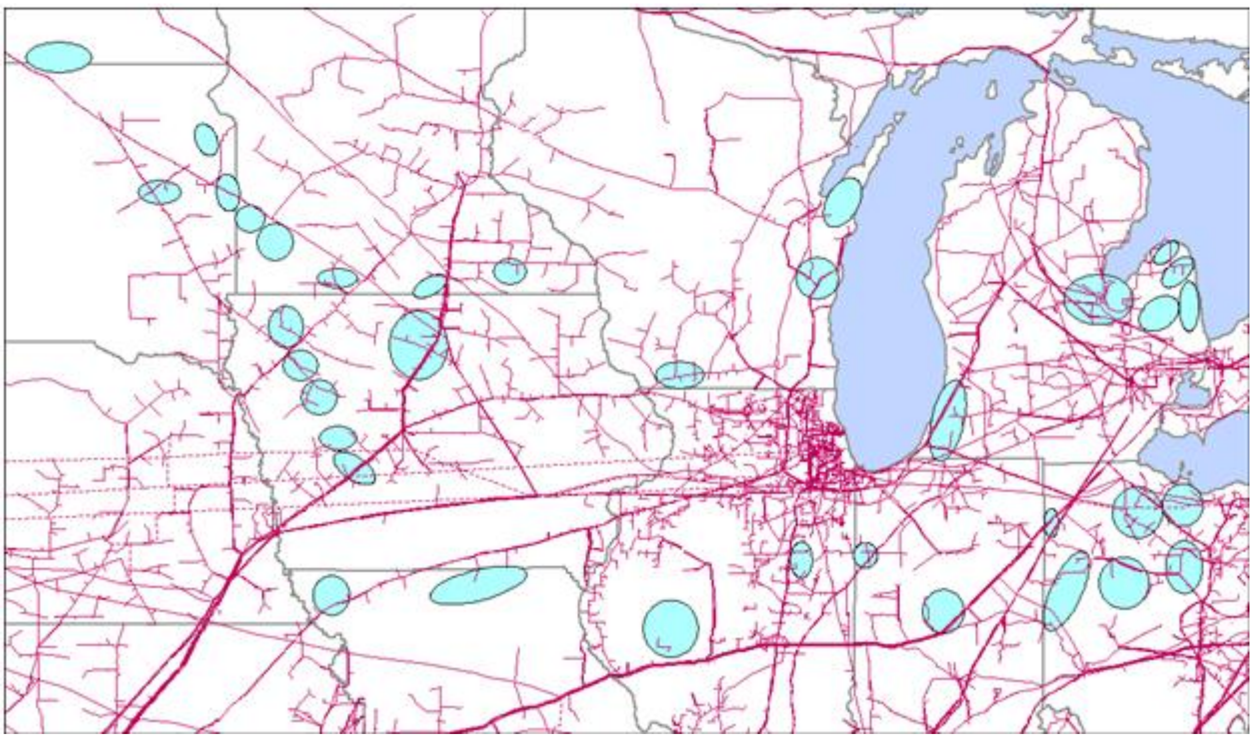


Figure 4.1-3: RGOS and Candidate MVP Incremental Energy Zones and natural gas pipelines

The output from the study, a proposed MVP portfolio, will reduce the wholesale cost of energy delivery for the consumer by enabling the delivery of low cost generation to load, reducing congestion costs and increasing system reliability, regardless of the future generation mix.

The RGOS analysis produced three reliable transmission portfolios. Elements common between these three portfolios, and common with previous reliability, economic and generation interconnection analyses, were identified to create the 2011 Candidate MVP portfolio. This portfolio represented a set of “no regrets” projects which were believed to provide multiple kinds of reliability and economic benefits under all alternate futures studied.

The 2011 Candidate MVP Portfolio Analysis hypothesized that this set of candidate projects creates a high value transmission portfolio, enabling MISO states to meet their near term RPS mandates. This study evaluated the Candidate MVP portfolio against the MVP cost allocation criteria to prove or disprove this hypothesis, as well as to confirm that the benefits of the portfolio would be widely distributed across the footprint. The output from the study, a proposed MVP portfolio, will reduce the wholesale cost of energy delivery for the consumer by enabling the delivery of low cost generation to load, reducing congestion costs and increasing system reliability, regardless of the future generation mix.

Over the course of the Candidate MVP Portfolio Analysis, the MVP portfolio was refined into the proposed portfolio that is now recommended to the MISO Board of Directors for approval. The portfolio was refined to ensure that the portfolio as a group and each project contained within it was justified under the MVP criteria, discussed below, and to ensure that the portfolio benefit to cost ratio was optimized.

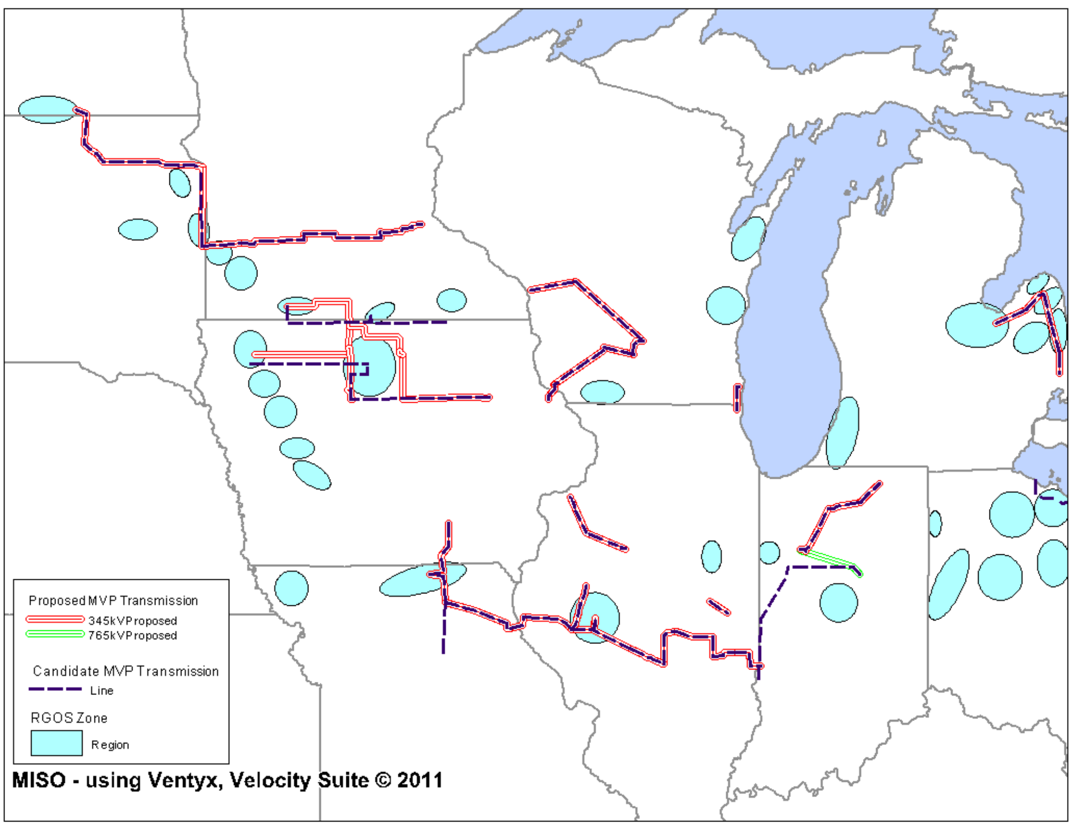


Figure 4.1-4: Candidate versus proposed MVP portfolio

The proposed MVP portfolio will enable the delivery of the renewable energy required by public policy mandates, in a manner more reliable and economic than it would be without the associated transmission upgrades. Specifically, the portfolio mitigates approximately 650 reliability constraints under 6,700 different transmission outage conditions, for steady state and transient conditions under both peak and shoulder load scenarios. Some of these conditions could be severe enough to cause cascading outages on the system. By mitigating these constraints, approximately 41 million MWh per year of renewable generation can be delivered to serve the MISO state renewable portfolio mandates.

Under all future policy scenarios studied, the proposed MVP portfolio delivers widespread regional benefits to the transmission system. For example, based on scenarios that did not consider new energy policies, the benefits of the proposed portfolio were shown to range from 1.8 to 3.0 times its total cost. These benefits are spread across the system, in a manner commensurate with their costs, as demonstrated in Figure 4.1-5.

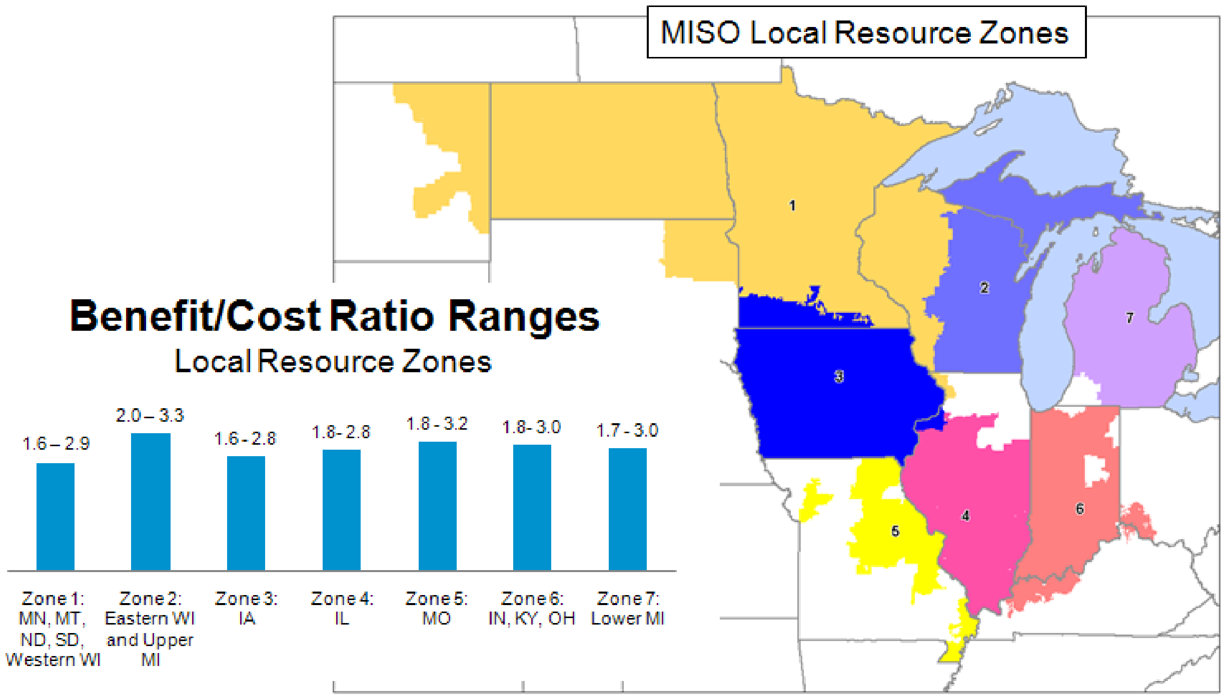


Figure 4.1-5: Proposed MVP portfolio benefits spread

> The benefits created by the proposed MVP portfolio are spread across the system, in a manner commensurate with its costs.

Taking into account the significant economic value created by the portfolio, the distribution of these value, and the ability of the portfolio to meet MVP criterion 1 through its reliability and public policy benefits, MISO staff recommends the 2011 proposed MVP portfolio to the MISO Board of Directors for their review and approval.

Additional information on the proposed MVP portfolio, and the analyses used to design the portfolio, will be summarized in the full MVP portfolio report. This report will be published later in 2011.

MISO planning approach

The goal of the MISO planning process is to develop a comprehensive expansion plan that reflects a fully integrated view of project value inclusive of reliability, market efficiency, public policy and other value drivers across all planning horizons. This process is guided by a set of principles established by the MISO Board of Directors, adopted on August 18, 2005. The principles were created in an effort to improve and guide transmission investment in the region and to furnish an element of strategic direction to the MISO transmission planning process. These principles, modified and approved by the MISO Board of Directors System Planning Committee on May 16, 2011, are:

- **Guiding Principle 1:** Make the benefits of an economically efficient energy market available to customers by providing access to the lowest electric energy costs.
- **Guiding Principle 2:** Provide a transmission infrastructure that safeguards local and regional reliability and supports interconnection-wide reliability.
- **Guiding Principle 3:** Support state and federal energy policy objectives by planning for access to a changing resource mix.
- **Guiding Principle 4:** Provide an appropriate cost mechanism that ensures the realization of benefits over time is commensurate with the allocation of costs.
- **Guiding Principle 5:** Develop transmission system scenario models and make them available to state and federal energy policy makers to provide context and inform the choices they face.

A number of conditions must be met to build longer term transmission able to support future generation growth and accommodate new energy policies. These conditions are intertwined with the planning principles put forth by the MISO Board of Directors and supported by an integrated, inclusive transmission planning approach. The conditions that must be met to build transmission include:

- A robust business case that demonstrates value sufficient to support the construction of the transmission project.
- Increased consensus on current and future energy policies.
- A regional tariff that matches who benefits with who pays over time.
- Cost recovery mechanisms that reduce financial risk.

Multi Value Project portfolio drivers

The 2011 Candidate MVP Portfolio Analysis was based on the need to economically and reliably help states meet their public policy needs. The study identified a regional transmission portfolio that will enable the MISO Load Serving Entities (LSEs) to meet their Renewable Portfolio Standards (RPS). The analyses and their results describe a robust business case for the portfolio. This business case demonstrates that not only will the proposed MVP portfolio reliably enable Renewable Portfolio Standards to be met, but it will do so in a manner where its economic benefits exceed its costs.

While the study focused upon the RPS requirements, the transmission portfolio will ultimately have widespread benefits beyond the delivery of wind and other renewable energy. It will enhance system reliability and efficiency under a variety of different generation build outs. It will also open markets to competition, reducing congestion and spreading the benefits of low cost generation across the MISO footprint. The Candidate MVP Portfolio Analysis focused on identifying and increasing the benefits of the transmission portfolio, including the reliability, economic and public policy drivers.

Tariff requirements

The Candidate MVP Portfolio Analysis and the recommendation of the proposed MVP portfolio were premised on the MVP criteria described in Attachment FF of the MISO Tariff and shown below.

> Criterion 1
>
> A Multi Value Project must be developed through the transmission expansion planning process to enable the transmission system to deliver energy reliably and economically in support of documented energy policy mandates or laws enacted or adopted through state or federal legislation or regulatory requirement. These laws must directly or indirectly govern the minimum or maximum amount of energy that can be generated. The MVP must be shown to enable the transmission system to deliver such energy in a manner that is more reliable and/or more economic than it otherwise would be without the transmission upgrade.
>
> Criterion 2
>
> A Multi Value Project must provide multiple types of economic value across multiple pricing zones with a Total MVP benefit to cost ratio of 1.0 or higher, where the total MVP benefit to cost ratio is described in Section II.C.7 of Attachment FF to the MISO Tariff. The reduction of production costs and the associated reduction of LMPs from a transmission congestion relief project are not additive and are considered a single type of economic value.
>
> Criterion 3
>
> A Multi Value Project must address at least one transmission issue associated with a projected violation of a NERC or Regional Entity standard and at least one economic based transmission issue that provides economic value across multiple pricing zones. The project must generate total financially quantifiable benefits, including quantifiable reliability benefits, in excess of the total project costs based on the definition of financial benefits and Project Costs provided in Section II.C.6 of Attachment FF.

The MVP cost allocation criteria requires evaluation of the portfolio on a reliability, economic and energy delivery basis. The scope of the analysis was designed to demonstrate this value, both on a project and portfolio basis. The projects in the MVP portfolio were evaluated against MVP criteria 1 and their ability to reliably enable the renewable energy mandates of the MISO states was quantified.

In addition, the Tariff identifies specific types of economic value which can be provided by Multi Value Projects. These values are:

- Production cost savings where production costs include generator startup, hourly generator no-load, generator energy and generator Operating Reserve costs. Production cost savings can be realized through reductions in both transmission congestion and transmission energy losses. Productions cost savings can also be realized through reductions in Operating Reserve requirements within Reserve Zones and, in some cases, reductions in overall Operating Reserve requirements for the Transmission Provider.
- Capacity losses savings where capacity losses represent the amount of capacity required to serve transmission losses during the system peak hour including associated planning reserve.
- Capacity savings due to reductions in the overall Planning Reserve Margins resulting from transmission expansion.
- Long-term cost savings realized by Transmission Customers by accelerating a long-term project start date in lieu of implementing a short-term project in the interim and/or long-term cost savings realized by Transmission Customers by deferring or eliminating the need to perform one or more projects in the future.

- Any other financially quantifiable benefit to Transmission Customers resulting from an enhancement to the transmission system and related to the provisions of Transmission Service.

The full proposed portfolio was evaluated against the benefits defined in the Tariff for MVP projects. In addition to the benefits described above, the operating reserve and wind siting benefits for the portfolio were quantified, as allowed under the last Tariff defined economic value. These benefits are described more fully in the economic benefit section later in the report.

Public policy needs

Twelve of 13 states in the MISO footprint have enacted either RPS requirements or renewable energy goals which require or recommend varying amounts of load be served with energy from renewable energy resources. The Candidate MVP Portfolio Analysis focused on the transmission necessary to economically and reliably meet the state RPS mandates. Figure 4.1-6 below provides additional details on these renewable energy requirements and goals.

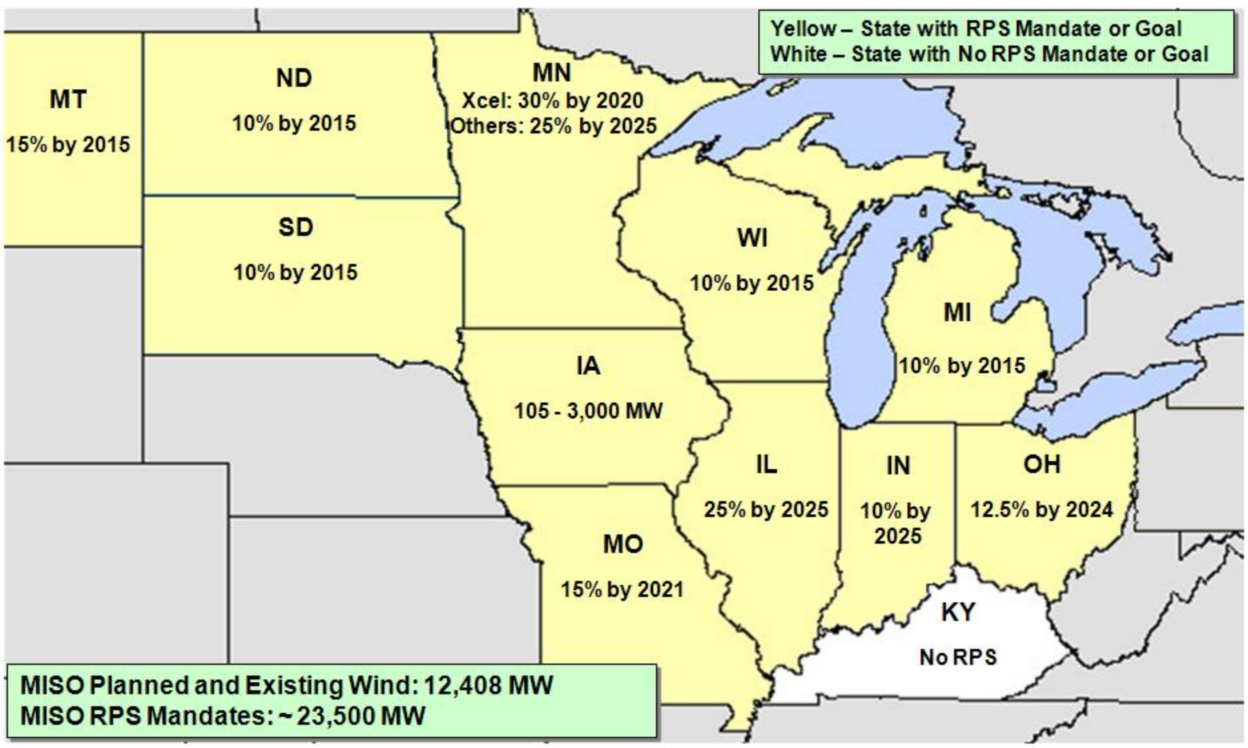


Figure 4.1-6: RPS mandates and goals within the MISO footprint

RPS mandates vary from state to state in their specific requirement details and implementation timing, but they generally start in about 2010 and are indexed to increase with load growth. While state laws support a number of different types of renewable resources, and multiple types of renewable resources will play a role in meeting state RPS mandates, the majority of renewable energy resources installed in the foreseeable future will likely focus on harnessing the abundant wind resources throughout the MISO footprint.

Enhanced reliability and economic drivers

The ultimate goal of the MISO planning process is to reliably deliver energy to load at the lowest possible cost. This requires a strategy premised upon a low cost approach to transmission and generation investment. This premise supports the overall constructability of the transmission portfolio, while reducing financial risk associated with overbuilding the system.

Transmission strategy

A transmission strategy addressing both local needs and regional drivers allows the MISO system to realize significant economic and reliability benefits. Regional transmission, such as the transmission in the proposed MVP portfolio, increases reliability in the MISO footprint, opens the market to increased competition and provides access to low cost generation, regardless of fuel type. Development of a strong regional transmission backbone is analogous to the development of the U.S. Interstate Highway System. While developed for specific wartime reasons, the system has realized significant additional benefits in subsequent years. Similarly, the proposed MVP portfolio will create reliability, economic and public policy benefits that reach beyond the immediate needs exhibited in this analysis.

The goal of the Candidate MVP Portfolio Analysis was to design a transmission portfolio which takes advantage of the linkages between local and regional reliability and economic benefits to bring value to the entire MISO system.

The overall goal for the Candidate MVP Portfolio Analysis was to design a transmission portfolio which takes advantage of the linkages between local and regional reliability and economic benefits to bring value to the entire MISO system. The portfolio was designed using reliability and economic analyses, applying several futures scenarios to determine the robustness of the designed portfolio under a number of future potential energy policies.

Development of the Candidate MVP portfolio

In order to provide widespread benefits commensurate with costs, MISO developed an initial portfolio of candidate MVP projects that were hypothesized to provide widespread benefits across the footprint. The projects selected as candidates for possible inclusion in the broader portfolio were then intensively evaluated in the Candidate MVP Portfolio Analysis to ensure they were justified and contributed to the portfolio business case.

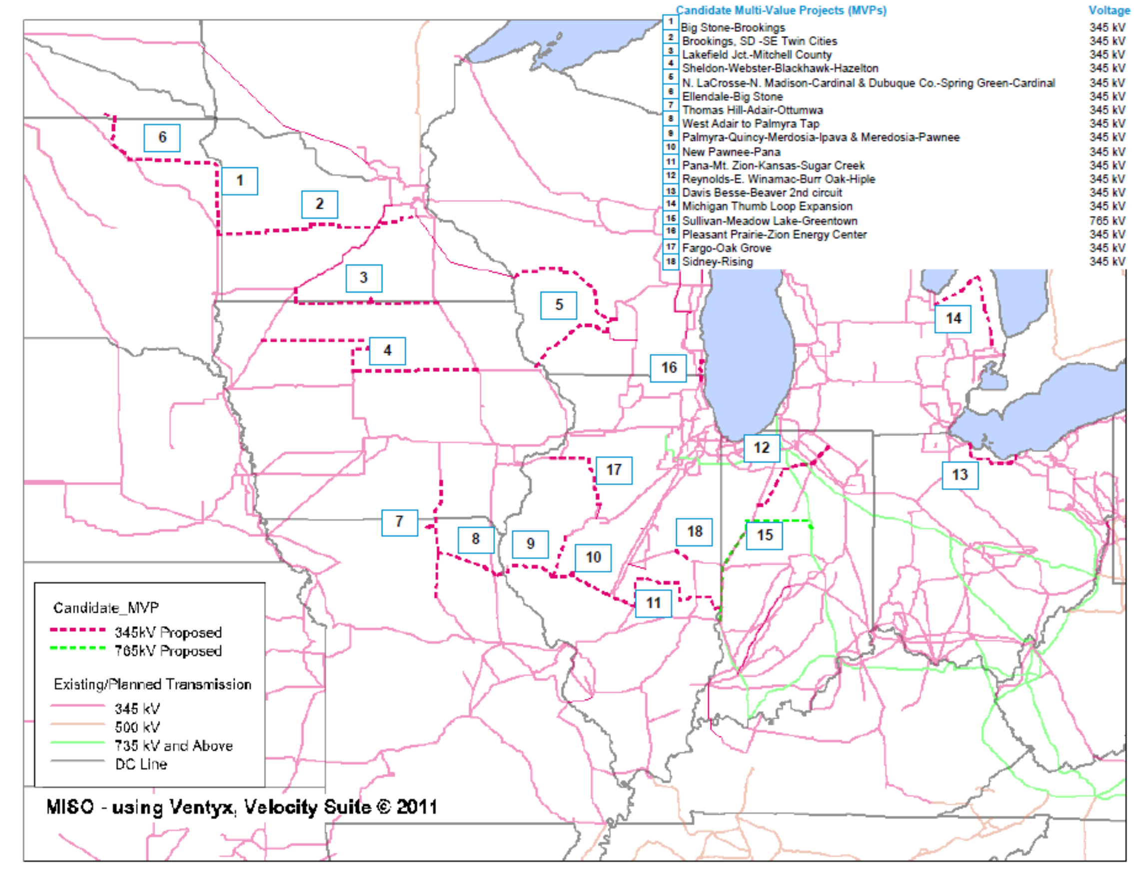


Figure 4.1-7: Initial 2011 Candidate MVP portfolio

The Candidate MVP portfolio was the first portfolio developed for review under the recent Tariff revisions establishing the MVP cost allocation classification. It was developed by considering regional system enhancements that could potentially provide multiple types of value, including enhanced reliability, reduced congestion, increased market efficiency, reduced real power losses and the deferral of otherwise needed capital investments in transmission. The portfolio was designed to enhance and complement the existing system performance, working cohesively with the individual elements of the portfolio and with the existing transmission grid, to produce a more robust and efficient system. Ultimately, the first portfolio represents a set of "no regrets" projects, providing benefits to the system in all futures scenarios studied.

Historical studies

MISO began to investigate the transmission required to integrate wind and provide the best value to consumers in 2002. The analyses continued through subsequent MTEP cycles, with exploratory and energy market analyses. As the demand for renewable energy grew, driven largely by an increasing level of renewable energy mandates or goals, additional regional studies were conducted to determine the transmission necessary to support these policy objectives. These studies included the Joint and Coordinated System Plan (JCSP), the Regional Generation Outlet Studies (RGOS), and analyses by the Organization of MISO States (OMS) Cost Allocation and Regional Planning (CARP) group.

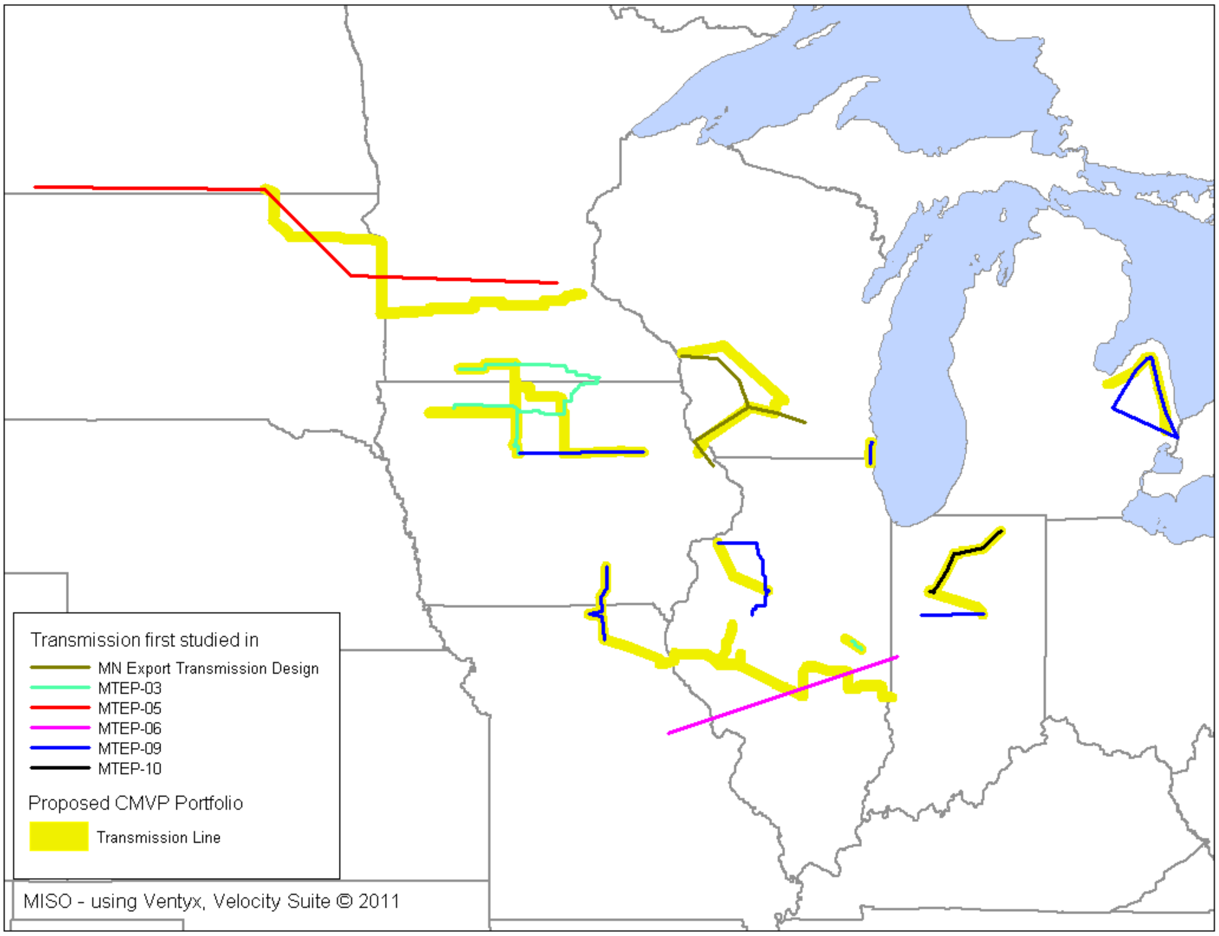


Figure 4.1-8: Prior study input into Candidate MVP portfolio

As analyses continued, the policy and economic drivers behind a regional transmission plan continued to grow. This growth was partly fueled by the development of the MISO energy and operating reserve market, which allows for regional transmission to provide regional benefits through increasing market efficiency, enabling low cost generation to be delivered to load. Simultaneously, an increase in state energy policy mandates drove the need for a robust regional transmission network, capable of responding to legislated changes in generation requirements.

Wind siting strategy

As an increasing number of states in the MISO footprint began to enact renewable energy mandates or goals, a strategy for siting wind generation was required to minimize the cost of delivered energy to consumers. To determine the low cost solution, encompassing generation and transmission capital cost, MISO developed a set of potential energy zones or locations where wind generation could feasibly be located, on a state by state basis[29]. In conjunction with state regulators and other stakeholders, MISO used these zones to explore a number of long term transmission and generation strategies to meet the state RPS requirements. These analyses focused on the tradeoffs between local wind generation, which typically requires less transmission expansion but a larger amount of wind turbines to deliver a given amount of wind energy; versus regional wind generation, which requires fewer wind turbines at the cost of higher levels of transmission expansion.

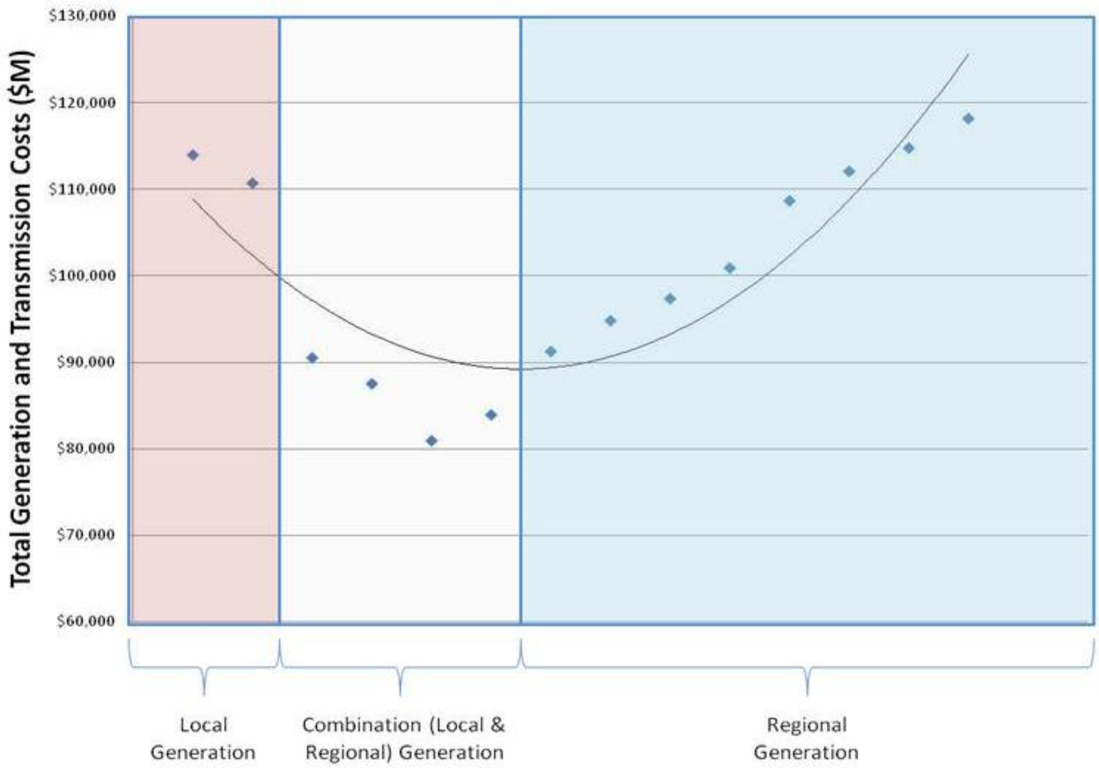


Figure 4.1-9: Capital costs of transmission and generation

[29] More information on the zone development may be found in the RGOS report at http://www.midwestiso.org/Library/Repository/Study/RGOS/Regional percent20Generation percent20Outlet percent20Study.pdf.

The study results demonstrated that the low cost approach to wind generation siting, when both generation and transmission capital costs are considered, is a combination of local and regional wind generation locations, as shown by the white area in Figure 4.1-9. This approach was affirmed by the Midwest Governors' Association as the best method for wind zone selection and used as the basis for the final phase of the RGOS analysis in 2010. It was also used as the basis for the wind siting approach for the Candidate MVP Portfolio Analysis. The set of energy zones chosen for the Candidate MVP Portfolio Analysis are shown below in Figure 4.1-10 as blue ovals.

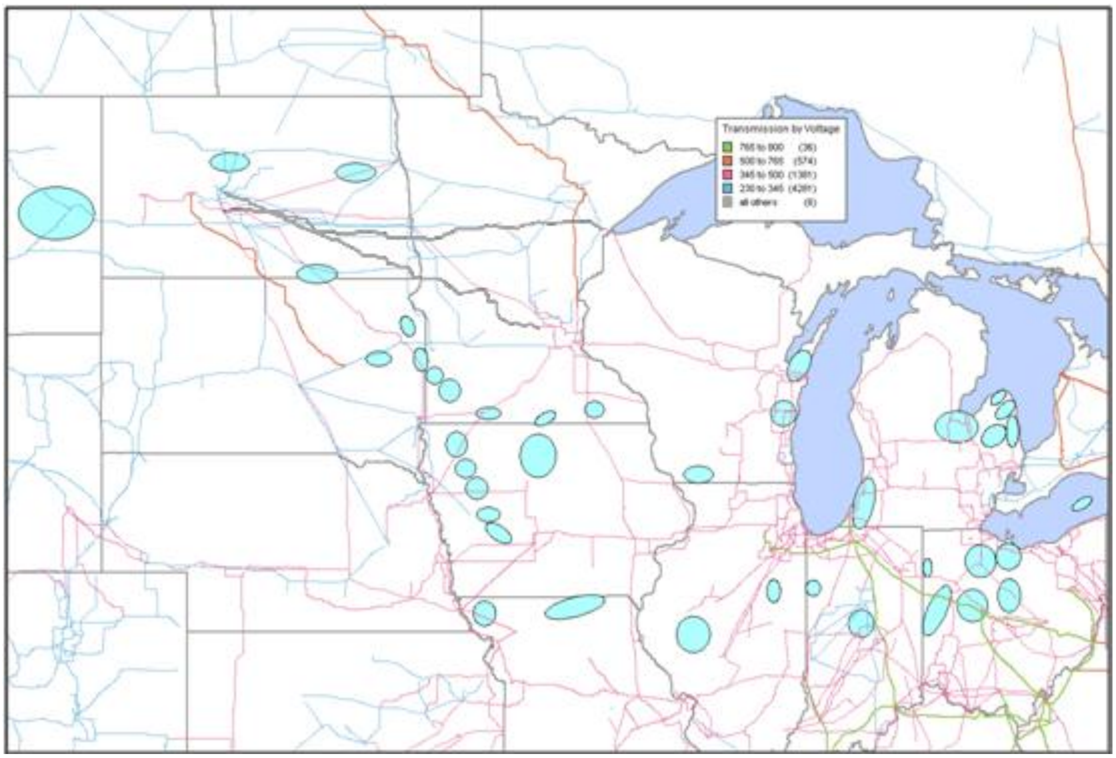


Figure 4.1-10: Candidate MVP Incremental Energy Zones[30]

[30] Zones shown represent the rough geographic area of each energy zone.

Candidate MVP Portfolio Analysis study scope

The Candidate MVP Portfolio Analysis combined the MISO Board of Director Planning Principles and the conditions precedent to transmission construction to develop a transmission portfolio that meets public policy, economic and reliability requirements. The analysis built a robust business case for the recommended transmission, using the newly created Multi Value Project (MVP) cost allocation methodology approved by FERC. The candidate transmission was tested against a variety of potential policy futures. This maximized the value of the transmission portfolio and reduced potential negative risks associated with its construction due to changes in future demand and energy growth. The output of the study was a justified portfolio of proposed MVPs for inclusion in MTEP11 Appendix A and, if approved by the MISO Board of Directors, subsequent construction.

The MVP cost allocation criterion requires the evaluation of the portfolio on a reliability, economic and energy delivery basis.

The MVP cost allocation criteria requires the evaluation of the portfolio on a reliability, economic and energy delivery basis. The analyses were designed to demonstrate this value, both on a project and portfolio basis. To this end, the Candidate MVP Portfolio Analysis included the studies and output shown in table 4.1-2.

These analyses focused on three main areas. The project valuation analyses focused on justifying each individual MVP project against the MVP criteria. The portfolio valuation analyses determined the benefits of the portfolio in aggregate, quantifying additional reliability and economic benefits. Finally, a series of system performance analyses were performed to ensure that the system reliability will be maintained with the proposed MVP portfolio in service.

Analysis Type	Analysis Output	Purpose
Steady state	List of thermal overloads mitigated by the proposed MVP portfolio transmission projects	Project valuation
Alternatives	Relative value of the candidate MVP projects against a stakeholder or MISO identified alternative Can include steady state and production cost analyses	Project valuation
Underbuild requirements	Document any incremental transmission required to mitigate constraints created by the addition of the proposed MVP portfolio	System performance
Short circuit	Document any incremental upgrades required to mitigate any short circuit / breaker duty violations	System performance
Stability	List of violations mitigated by the proposed MVP portfolio transmission projects Includes both transient and voltage stability analysis	System performance / Portfolio valuation
Generation enabled	Document wind curtailed, and additional wind that is enabled by the proposed MVP portfolio	Portfolio valuation
Production cost	Adjusted Production Cost (APC) benefits of the entire proposed MVP portfolio	Portfolio valuation
Robustness testing	Quantification of portfolio benefits under various policy futures or transmission conditions	Portfolio valuation
Operating reserves Impact	Impact of the proposed MVP portfolio on existing operating reserve zones and quantification of this benefit	Portfolio valuation
Planning Reserve Margin (PRM) benefits	Capacity savings due to reductions in the system wide Planning Reserve Margin caused by the addition of the proposed MVP portfolio to the transmission system	Portfolio valuation
Transmission loss reductions	Capacity losses savings, where capacity losses represent the amount of capacity required to serve transmission losses during the system peak hour	Portfolio valuation
Wind generation capital investment	Quantification of the incremental wind generator capital cost savings enabled by the wind siting methodology supported by the proposed MVP portfolio	Portfolio valuation
Avoided capital investment (transmission)	Document the future baseline transmission investment that may be avoided due to the installation of the proposed MVP portfolio	Portfolio valuation

Table 4.1-2: Candidate MVP Portfolio Analyses and Output

Proposed MVP portfolio overview

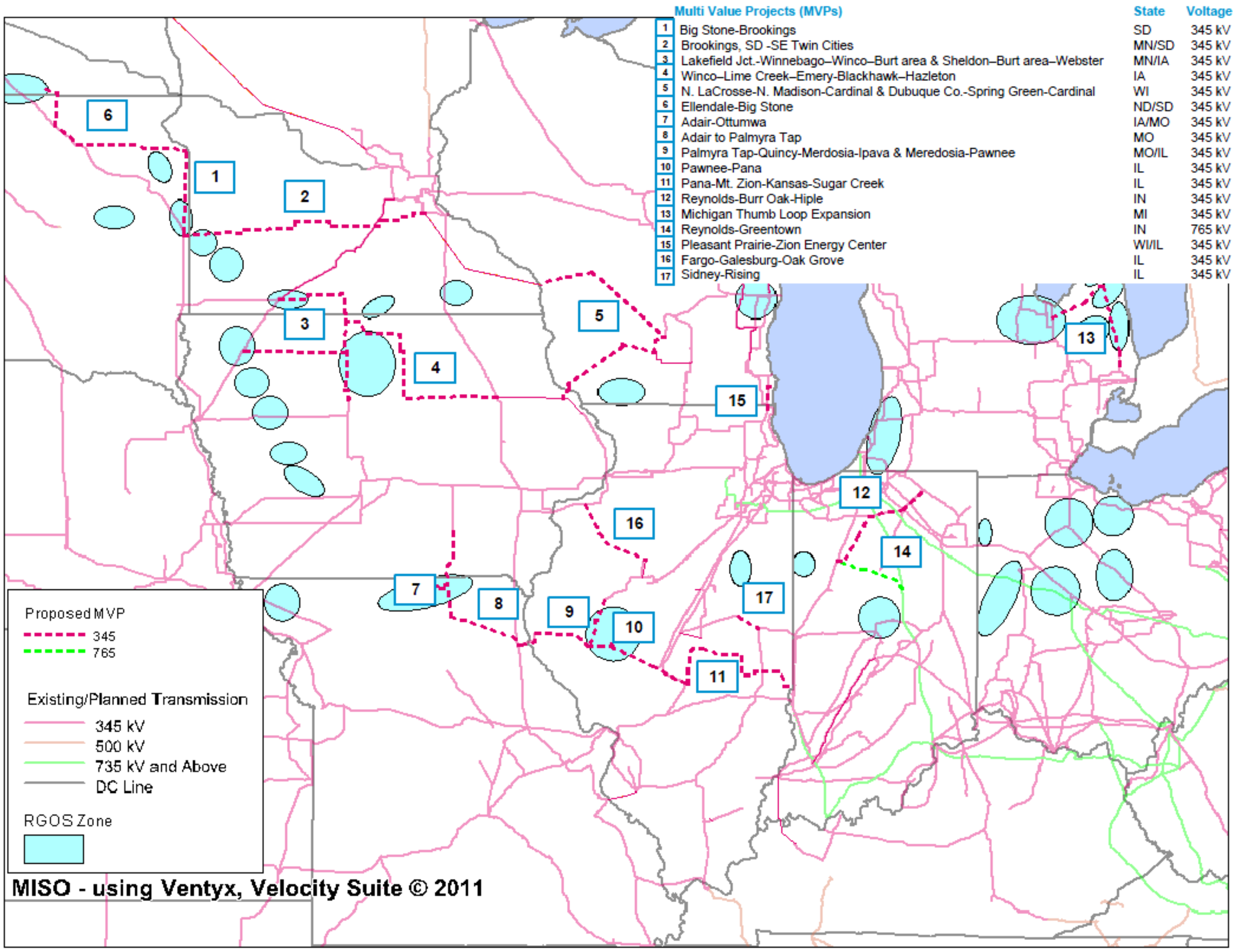


Figure 4.1-11: 2011 proposed MVP portfolio

The proposed MVP portfolio consists of 17 projects spread across the MISO footprint. These projects work together with the existing transmission network to enhance the reliability of the system, support public policy goals and enable the more efficient dispatch of market resources. Table 4.1-3 below describes the projects that make up the proposed MVP portfolio.

	Project	State	Voltage (kV)	In Service Year	Cost (M, 2011$)
1	Big Stone–Brookings	SD	345	2017	$191
2	Brookings, SD–SE Twin Cities	MN/SD	345	2015	$695
3	Lakefield Jct. –Winnebago–Winco–Burt area & Sheldon–Burt area–Webster	MN/IA	345	2016	$506
4	Winco–Lime Creek–Emery–Black Hawk–Hazleton	IA	345	2015	$480
5	N. LaCrosse–N. Madison–Cardinal & Dubuque Co. –Spring Green–Cardinal	WI	345	2018/2020	$714
6	Ellendale–Big Stone	ND/SD	345	2019	$261
7	Adair–Ottumwa	IA/MO	345	2017	$152
8	Adair–Palmyra Tap	MO/IL	345	2018	$98
9	Palmyra Tap–Quincy–Merdosia–Ipava & Meredosia–Pawnee	IL	345	2016/2017	$392
10	Pawnee–Pana	IL	345	2018	$88
11	Pana–Mt. Zion–Kansas–Sugar Creek	IL/IN	345	2018/2019	$284
12	Reynolds–Burr Oak–Hiple	IN	345	2019	$271
13	Michigan Thumb Loop Expansion	MI	345	2015	$510
14	Reynolds–Greentown	IN	765	2018	$245
15	Pleasant Prairie–Zion Energy Center	WI/IL	345	2014	$26
16	Fargo-Galesburg–Oak Grove	IL	345	2018	$193
17	Sidney–Rising	IL	345	2016	$90
Total					$5,197

Table 4.1-3: Proposed MVP portfolio

Reliability benefits and analyses

The proposed MVP portfolio maintains system reliability by resolving violations on approximately 650 transmission elements for more than 6,700 system conditions. It also mitigates 31 system instability conditions. More information on these constraints can be found in Appendix E4, and a full write up of the analyses will be included in the full MVP portfolio report. A description of the reliability analysis results follows in the next section.

Steady state

A series of steady state analyses were conducted to determine the transmission line overloads and system voltage constraints mitigated by the proposed MVP portfolio. The primary steady state analysis was performed on a set of 2021 shoulder peak models, with both 2021 and 2026 mandated wind levels considered. Shoulder peak models were chosen for the primary analysis, as the high wind levels required by the renewable portfolio mandates are more likely to create system constraints under these conditions. A 2021 peak analysis was also conducted to ensure the full reliability benefits of the proposed portfolio were captured. Each set of analyses were performed on: 1) a model with the RPS mandated wind, without any incremental transmission; 2) a model with the RPS mandated wind and the MVP portfolio. The results from the two analyses were compared to determine what constraints were mitigated by the proposed MVP portfolio.

The proposed MVP portfolio maintains system reliability by resolving violations on approximately 650 transmission elements for more than 6,700 system conditions.

A total of 384 thermal overloads were mitigated by the proposed MVP portfolio under shoulder peak conditions, for approximately 4,600 system conditions. In addition, approximately 100 additional thermal overloads and 150 voltage violations were mitigated by the proposed MVP portfolio in the summer peak analysis.

Stability

Transient Stability

MISO performed a set of transient stability analyses to ensure the ability of existing and proposed generation to remain synchronous with other system generation under severe fault conditions, as required by NERC and regional reliability standards. Two scenarios were studied to evaluate the impact of major fault conditions without any voltage or damping criteria violations. The first scenario included all the incremental wind zones with none of the proposed MVPs portfolio modeled, and the second scenario included incremental wind zones and the proposed MVP portfolio.

Based on the comparative analysis involving simulation of approximately 650 fault conditions under both scenarios, there were 31 fault conditions that without the proposed MVP portfolio would cause the system to experience undamped oscillations, causing generators to trip offline or incur damage due to high speed rotation, creating safety risks for plant personnel and potentially causing a large scale loss of load. These conditions were resolved by the addition of the proposed MVP portfolio to the system, and no additional stability violations were determined with the MVP portfolio in service.

Voltage Stability Analysis

MISO performed voltage stability analyses to identify voltage collapse conditions under high energy transfer conditions from major generation resources to major load sinks. Such transfers may occur during critical dispatch scenarios, such as when local area generation near large load centers are offline and remote generation resources are supplying energy to the load centers. Two scenarios were studied to evaluate the incremental energy transfer capability. The first scenario included all the incremental wind zones with none of the proposed MVP portfolio modeled, and the second scenario included all the incremental wind zones and the proposed MVP portfolio.

MISO did not observe any voltage stability issues with the proposed MVP portfolio in place, and with the high energy transfers corresponding to the highest wind resource output levels. Additionally, the comparative transfer analysis simulated high transfer conditions from the wind rich West Region of the MISO footprint to major load centers such as Minneapolis-St. Paul, Madison, St Louis and Des Moines. The results, shown in Appendix E4, illustrate that the addition of the proposed MVP portfolio causes an increase in transfer capability from wind rich regions to major load centers that ranges from 960 to 1,841 MW. This additional transfer capacity will increase system reliability and robustness, allowing additional energy sources to be dispatched to serve load centers as needed.

Short circuit

The addition of significant amounts of new high voltage transmission to the grid can increase the system connectivity, resulting in lowered impedance for short circuit currents. This can cause available fault currents throughout the system to exceed circuit breaker interrupting capabilities. MISO staff and Transmission Owners performed a series of high level short circuit analyses to identify any breaker or substation equipment needing to be upgraded after the addition of the proposed MVP portfolio to the transmission system. These analyses were performed directly by the affected Transmission Owners, with MISO staff providing modeling information for the proposed MVP projects. Any identified circuit breaker upgrades were verified through independent analysis by MISO staff, and their costs were included in the portfolio. Overall, nine circuit breakers were identified for replacement, at a total cost of $2.2 million.

Underbuild requirements

To ensure that the proposed MVP portfolio works well with the existing system to maintain reliability, MISO conducted analyses to determine any constraints that are present with the proposed MVP Portfolio and not present without the proposed portfolio. Any new constraints were identified for mitigations, and the appropriate mitigation was determined in coordination with the impacted Transmission Owners.

Below is a full list of the underbuild upgrades. Overall, approximately $70 million of transmission investment is associated with such underbuild.

Underbuild requirements
Burr Oak to East Winamac 138 kV line uprate
Lake Marian 115/69 kV transformer replacement
Arlington to Green Isle 69 kV line uprate
Columbus 69 kV transformer replacement
Casey to Kansas 345 kV line uprate
Lake Marian to NW Market Tap 69 kV line uprate
Franklin 115/69 kV transformer replacements
Castle Rock to ACEC Quincy 69 kV line uprate
Kokomo Delco to Maple 138 kV line uprate
Wabash to Wabash Container 69 kV line uprate
Spring Green 138/69 kV transformer replacement
Davenport to Sub 85 161 kV line uprate
West Middleton West Towne 69 kV line uprate
Ottumwa Montezuma 345 kV line uprate

Table 4.1-4: Proposed MVP portfolio underbuild requirements

Alternatives assessment

To ensure the proposed MVP portfolio provides cost-effective benefits to the MISO system, MISO considered alternatives to the Candidate MVP portfolio. In addition, similar alternatives were also considered in the prior studies which led to the selection of the initial Candidate MVP portfolio.

A “do-nothing” alternative was first considered. This alternative was used as a baseline to determine the system performance in delivering future generation requirements to load. It was demonstrated that, without major additions to the regional transmission system, significant generation curtailment would be required to maintain system reliability. Such a system would lead to heavy system loading conditions, potential instabilities, reduced reliability margins and would limit the ability of the states in the MISO footprint to meet their renewable energy mandates. As such, it was determined that significant system enhancements would be needed to meet renewable energy mandates and maintain system reliability.

An alternative build-out based on a piecemeal resolution of each facility experiencing an overload was considered. Such a plan would build incremental local upgrades to mitigate the reliability issues directly caused by the injection of the mandated wind into the transmission system. This would result in a minimum of 650 transmission projects, as compared to the 17 larger projects that comprise the proposed

MVP portfolio. MISO does not believe that 650 projects on the existing system could be completed in the same reliable or timely manner as the construction of the proposed MVP portfolio.

Also, this alternative would cost approximately $4.7 billion, based only upon the constraints found in the steady state reliability analysis. Additional investment would most likely be required to mitigate the constraints found in the stability analyses. This alternative would provide much lower benefits to the MISO system, as it does not provide long term solutions that increase the regional transmission capability. This solution would enable less wind to be delivered, endangering the ability of the states in the MISO footprint to meet their renewable energy mandates. It would provide significantly less economic benefits, as the regional values quantified below would be reduced or eliminated.

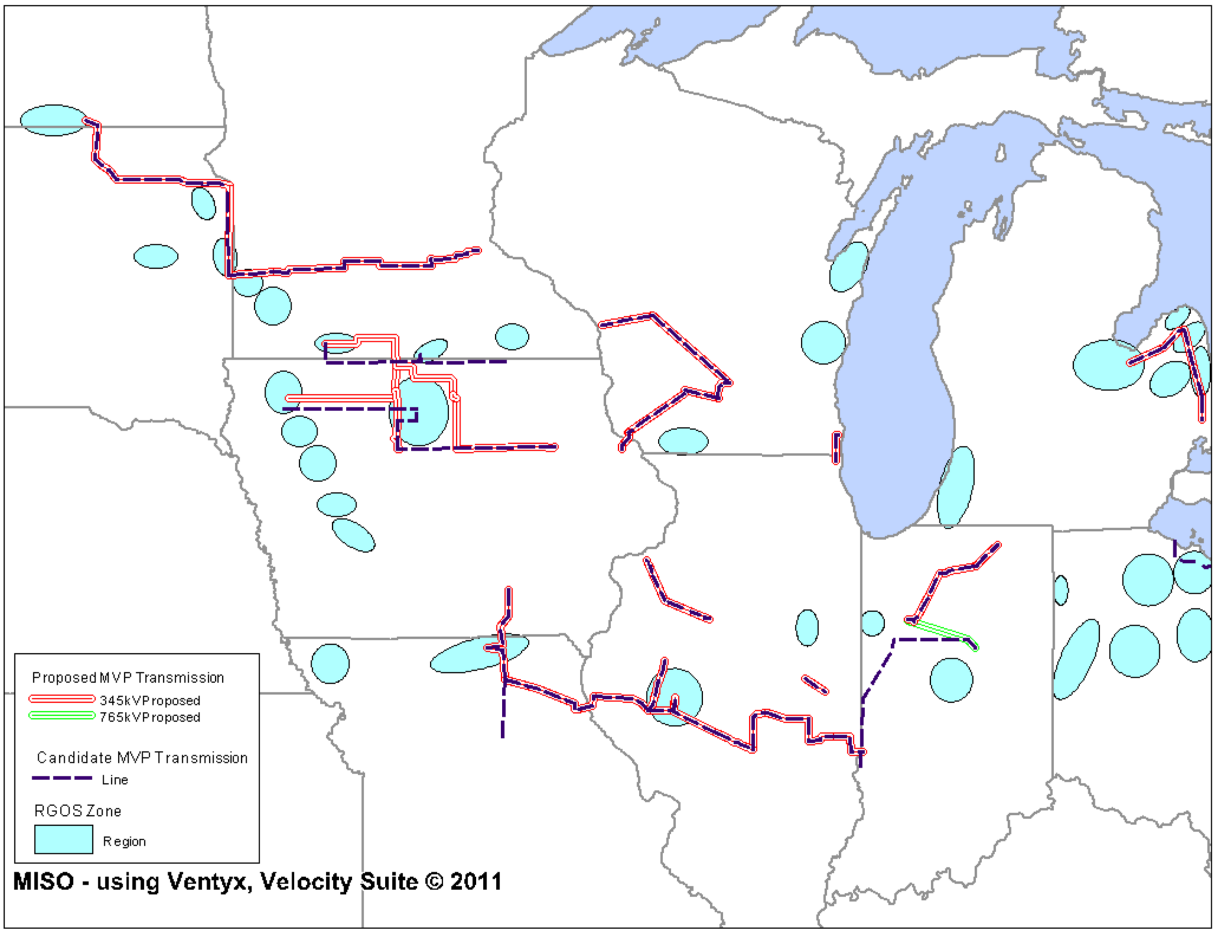


Figure 4.1-12: Candidate versus proposed MVP portfolio

The final alternative considered was the optimization of a regional transmission solution. Analysis surrounding this alternative began with the creation of the Candidate MVP portfolio, a derivative of the highest value transmission solutions from studies beginning in 2003 and continuing to the present. This candidate portfolio was optimized by evaluating each transmission line separately and in the context of other lines in the portfolio. This optimization included analyses of a different transmission configuration in Iowa, the removal of the Adair to Thomas Hill line, an option to reconfigure the transmission lines across southern Illinois and the removal of the Reynolds to Sullivan 765 kV line segment from the candidate portfolio. Although not all these changes were found to be justified, the investigations into the proper portfolio configuration increased the reliability, economic and public policy benefits of the final, proposed MVP portfolio.

Public policy benefits

The proposed MVP portfolio was built upon a set of energy zones that, although they can be used for alternative forms of generation, were premised upon a low cost approach to wind generation siting. Through resolving reliability constraints that would otherwise result in the curtailment of wind generation, the proposed MVP portfolio enables the delivery of 41 million MWh of renewable energy annually to support the renewable energy mandates of the MISO states through at least 2026.

Through resolving reliability constraints that would otherwise result in the curtailment of wind generation, the proposed MVP portfolio enables the delivery of 41 million MWh of renewable energy annually.

Economic benefits

Multi Value Projects represent the next step in the evolution of the MISO transmission system: a regional network that, when combined with the existing system, provides value in excess of its costs under a variety of future policy and economic conditions. These benefits are quantified below. More information on the method used to quantify the values can be found in Appendix E5, and a more detailed analysis will be included in the full MVP portfolio report, which will be published later in 2011.

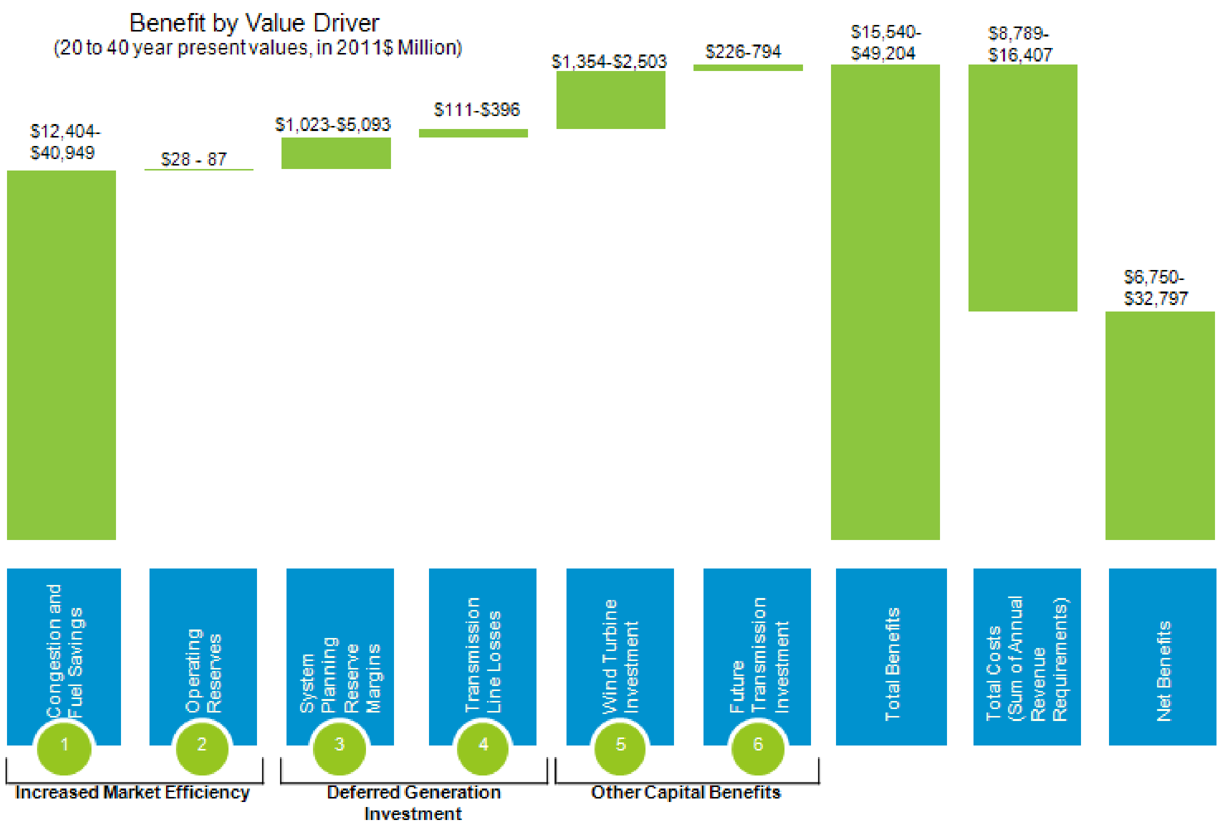


Figure 4.1-13: Proposed MVP portfolio economic benefits

Congestion and fuel savings

The proposed MVP portfolio allows for a more efficient dispatch of generation resources, opening markets to competition and spreading the benefits of low cost generation throughout the footprint. These benefits were quantified through a series of production cost analyses, which captured the economic benefits of the proposed MVP transmission and the wind it enables. These benefits reflect the savings achieved through the reduction of transmission congestion costs and through more efficient generation resource utilization.

In order to show the economic benefits of the portfolio under a variety of different potential policy based futures, MISO calculated four sets of Adjusted Production Cost (APC) benefits. The futures analyzed were designed to ‘bookend’ the range of potential future policy outcomes, ensuring that all of the most likely future policy scenarios and their impacts were within the range bounded by the results. The futures analyzed are described below.

- Business As Usual with Continue Low Demand and Energy Growth assumes that current energy policies will be continued, with continuing recession level low demand and energy growth projections.
- Business As Usual with High Demand and Energy Growth assumes that current energy policies will be continued, with demand and energy returning to pre-recession growth rates
- Carbon Constrained assumes that current energy policies will be continued, with the addition of a carbon cap modeled on the Waxman-Markey Bill.
- Combined Energy Policy assumes multiple energy policies are enacted, including a 20 percent federal RPS, a carbon cap modeled on the Waxman Markey Bill, implementation of a smart grid and widespread adoption of electric vehicles.

More information on these futures may be found in Appendix E2.

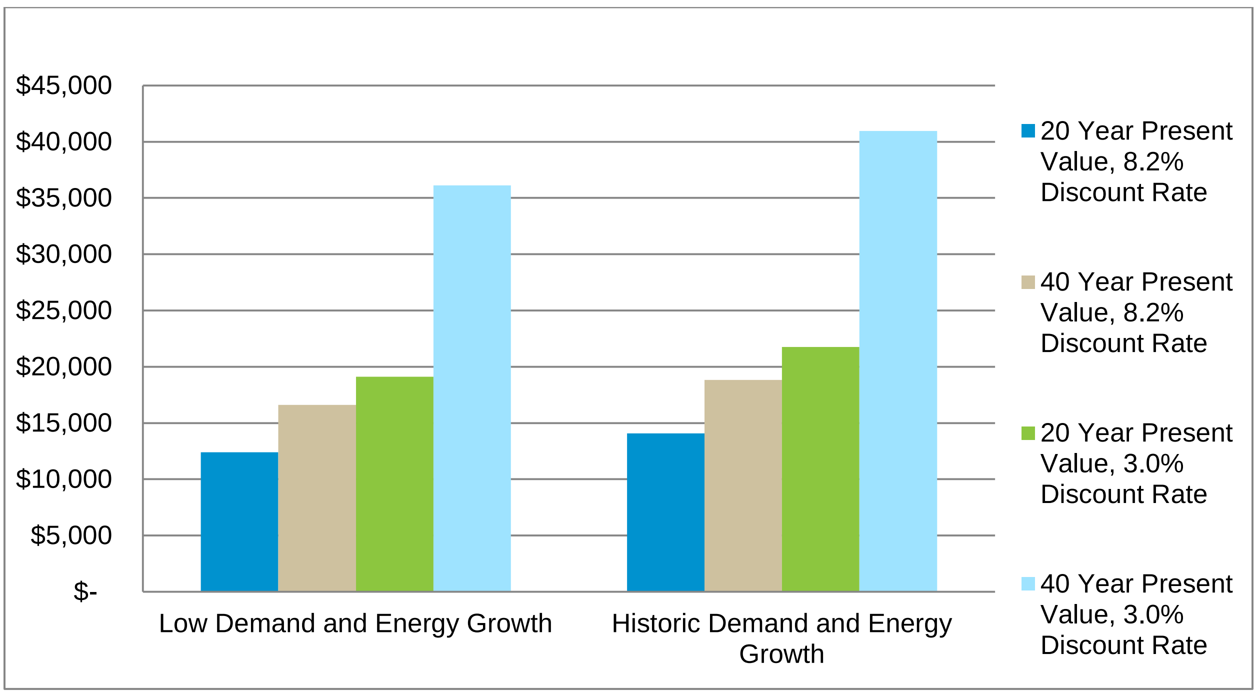


Figure 4.1-14: Proposed MVP portfolio Adjusted Production Cost Benefits

The future scenarios without any new energy policy mandates provide a baseline of the proposed MVP portfolio's benefits under current policy conditions. Additionally, the evaluation of the Carbon Constrained and Combined Policy future scenarios provide 'bookends' which help show the full range of benefits that may be provided by the portfolio. When the 'Business as Usual' future scenarios with no new energy policies were analyzed, the proposed MVP portfolio will produce an estimated $12.4 to $40.9 billion in 20 to 40 year Present Value (PV) Adjusted Production Cost (APC) benefits, depending on the timeframe, discount rate, energy growth rates and demand growth rates considered. This benefit would increase to a maximum present value of $91.7 billion under the Combined Policy future scenario.

Operating reserves

In addition to the energy benefits quantified in production cost analyses, the proposed MVP portfolio will also reduce operating reserve costs. The MVPs decrease congestion on the system, increasing the transfer capability into several key areas that would otherwise have to hold additional operating reserves under certain system conditions.

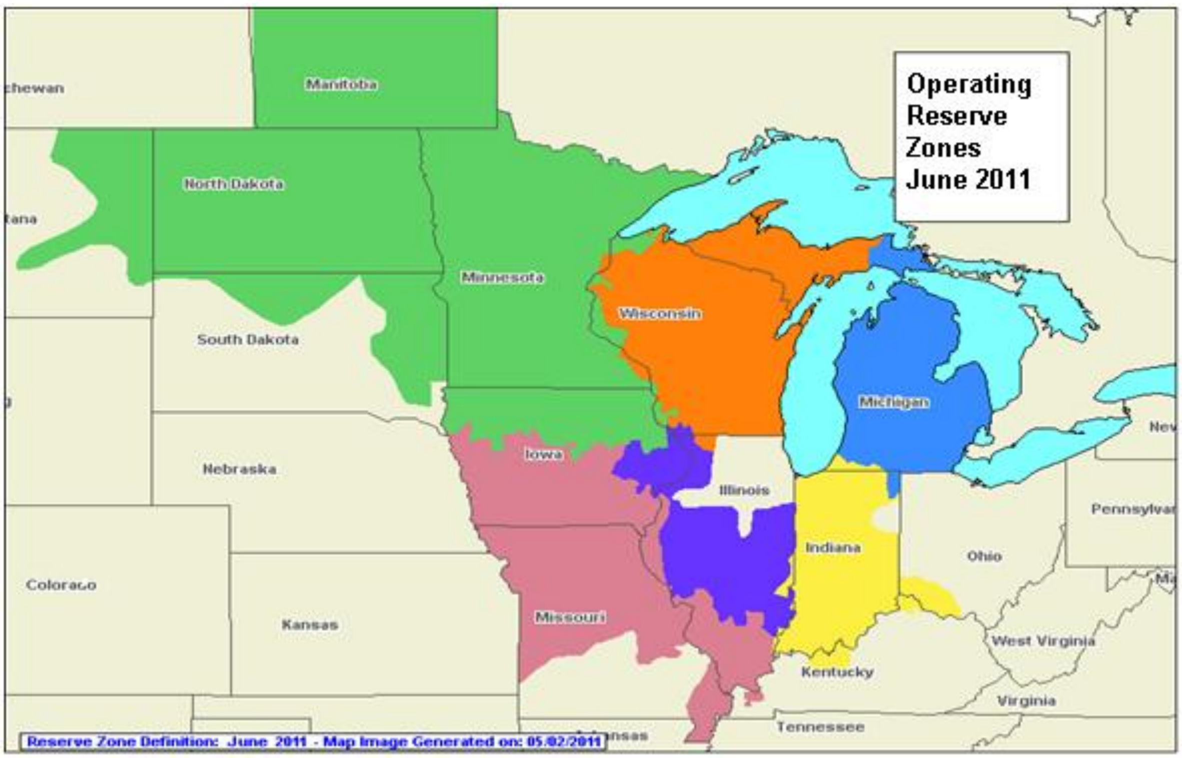


Figure 4.1-15: Operating reserve zones

MISO determined that the addition of the proposed MVP portfolio will eliminate the need for the Indiana operating reserve zone, and the need for additional system reserves to be held in other zones across the footprint would be reduced by half. This creates the opportunity to locate an average of 690,000 MWh of operating reserves annually where it would be most economical to do so, as opposed to holding these reserves in prescribed zones, creating benefits of $28 to $87 million in 20 to 40 year present value terms.

System planning reserve margin

The system planning reserve is calculated by determining the amount of generation required to meet a one day in 10 year Loss of Load Expectation (LOLE). It has two components: the unconstrained system Planning Reserve Margin (PRM), and the congestion contribution. The proposed MVP portfolio reduces transmission congestion across MISO, thereby reducing the system PRM and decreasing the amount of generation needed to maintain the PRM.

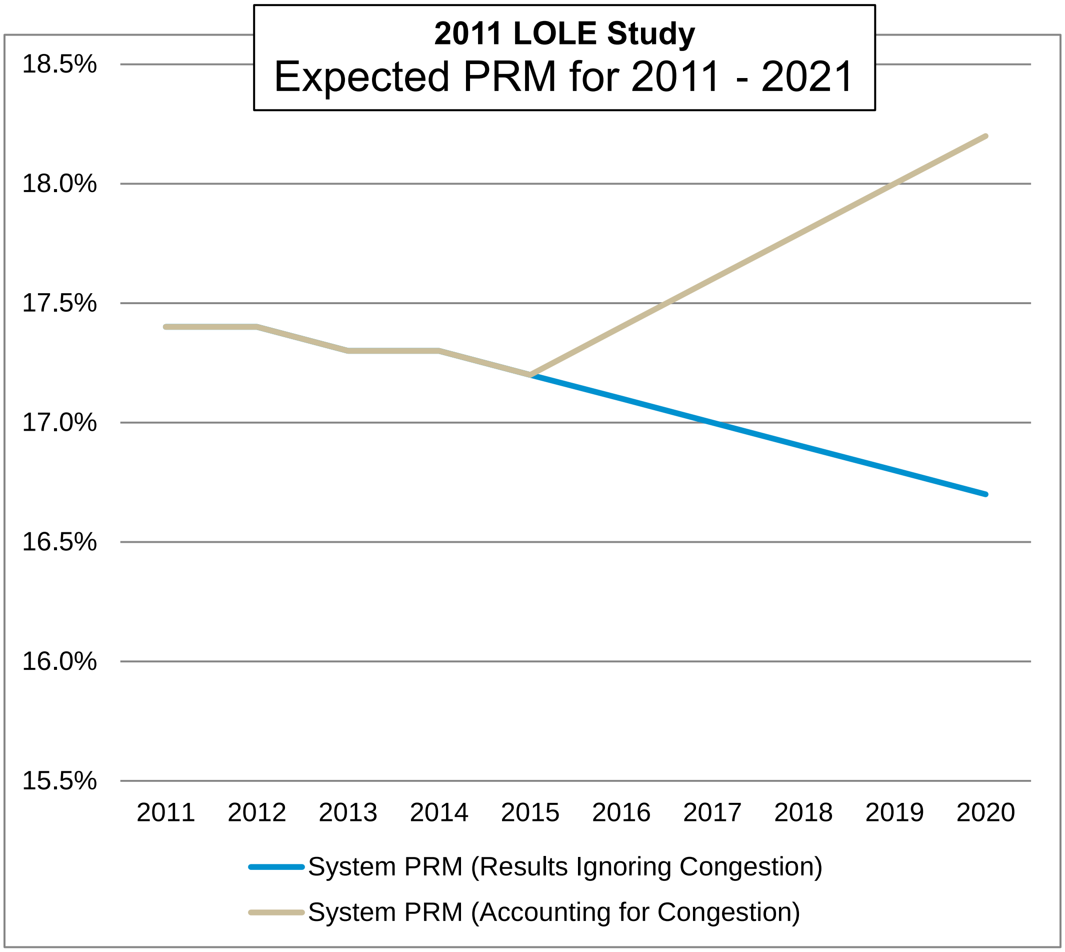


Figure 4.1-16: Expected planning reserve margin, with and without congestion

Through reducing the PRM, the proposed MVP portfolio allows the deferral of new generation, creating $1.0 to $5.1 billion in present value benefits, depending on whether a 20 or 40 year present value is considered, as well as the future growth and discount rates.

Transmission line losses

The addition of the proposed MVP portfolio to the transmission network reduces overall system losses, reducing the generation needed to serve the combined load and transmission line losses. The energy value of these loss reductions is considered in the congestion and fuel savings benefits, but the loss reduction also helps to reduce future generation capacity needs. Specifically, when installed generation capacity is only just sufficient to meet peak system load plus the planning reserve margin, a reduction in transmission losses creates benefits through reducing the amount of generation that must be built. This creates $111 million to $396 million in present value savings, depending on the timeline of the present value calculations, the discount rate and energy/demand growth rates.

Wind turbine investment

As discussed previously, MISO determined a wind siting approach that results in a low cost solution, when transmission and generation capital costs are considered. This approach sources generation in a combination of local and regional locations, placing wind local to load, where less transmission is required; and regionally, where the wind is the strongest. However, this strategy depends on a strong regional transmission system to deliver the wind energy. Without this regional transmission backbone, the wind generation would have to be sited close to load, requiring the construction of significantly larger amounts of wind capacity to produce the renewable energy mandated by public policy.

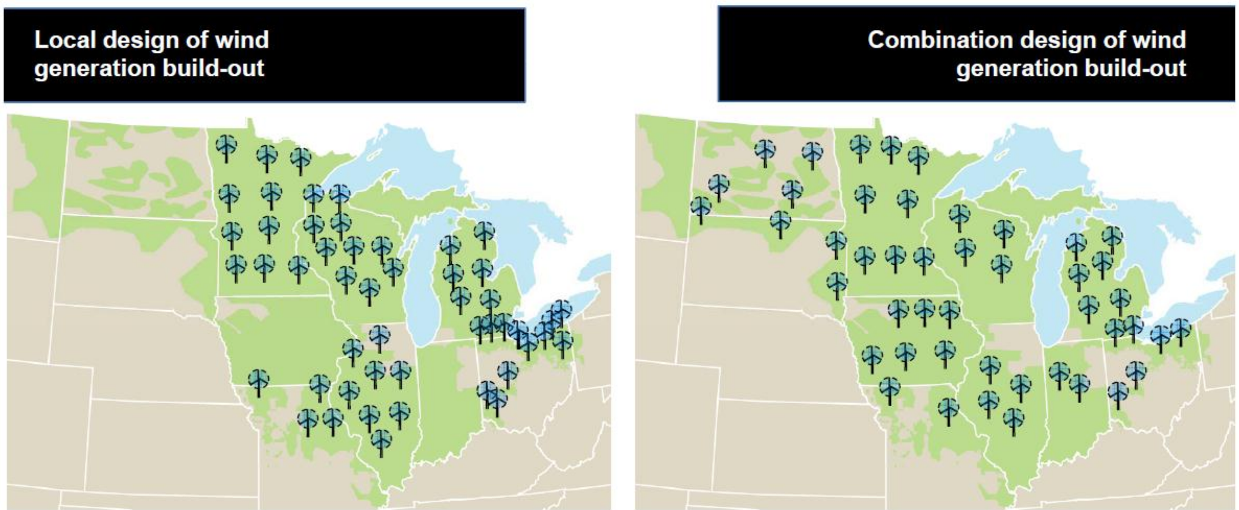


Figure 4.1-17: Local versus combination wind siting

In the RGOS study, it was determined that 11 percent less wind would need to be built to meet renewable energy mandates in a combination local/regional methodology relative to a local only approach. Approximately 2.9 GW less generation capacity is required for the combination siting approach, creating present value benefits of $1.4 billion to $2.5 billion.

Transmission investment

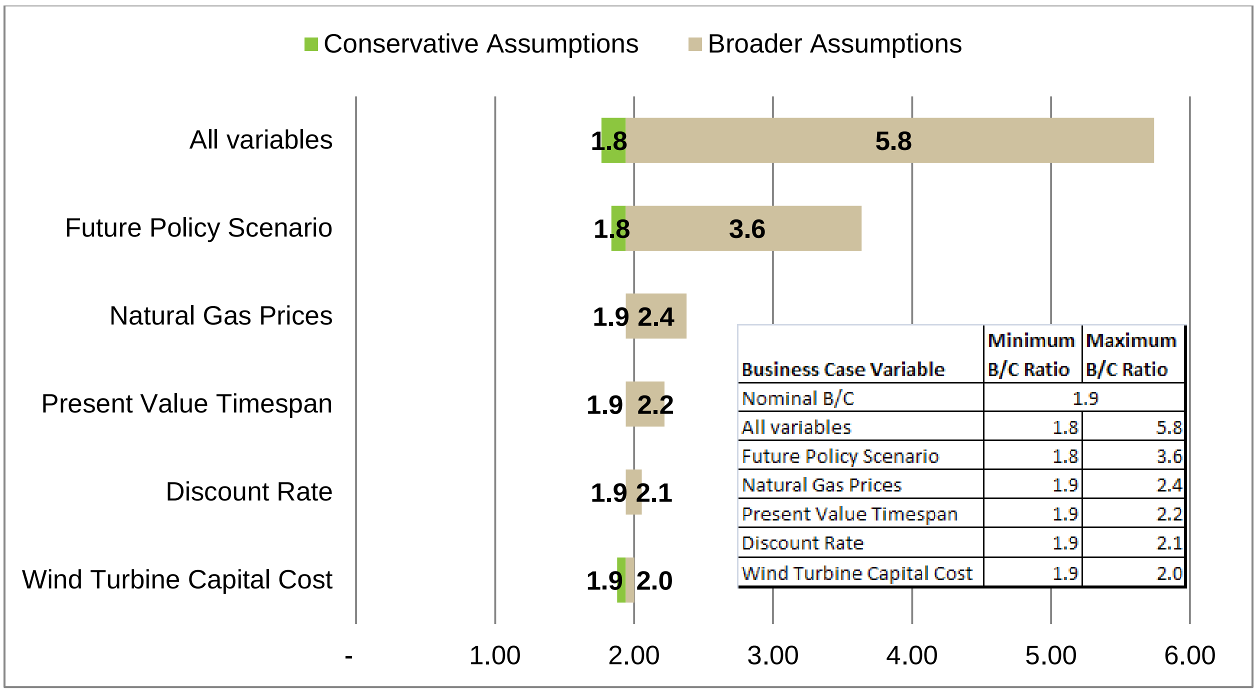
In addition to relieving constraints under shoulder peak conditions, the proposed MVP portfolio will eliminate some future baseline reliability upgrades. A modeling simulating 2031 summer peak load conditions was created to determine what future baseline reliability upgrades would not be needed, and this model was run both with and without the proposed MVP portfolio. The proposed MVP portfolio eliminates the need for baseline reliability upgrades on 23 lines between 2026 and 2031. This creates benefits which have 20 and 40 year present values of $268 and $1,058 million, respectively.

Business case variables and impacts

The projected benefits created by the proposed MVP portfolio are dependent on projections of future policy and economic variables.

The most critical variables considered were:

- Future energy policies
  - Includes a range of policy, demand and energy growth assumptions
  - Sensitivities were conducted to determine the impact of a legislated cost of carbon or national renewable energy mandate
- Length of Present Value Calculations: 20 or 40 years from the portfolio's in service date
- Discount Rate: 3 percent to 8.2 percent
- Natural gas prices: $5-$8 (Business as Usual Scenarios)
  $8-$10 (Combination Policy and Carbon Constrained Futures)
- Wind turbine capital cost: 2.0 to 2.9 $M/MW



Business Case Variable	Minimum B/C Ratio	Maximum B/C Ratio
Nominal B/C	1.9	
All variables	1.8	5.8
Future Policy Scenario	1.8	3.6
Natural Gas Prices	1.9	2.4
Present Value Timespan	1.9	2.2
Discount Rate	1.9	2.1
Wind Turbine Capital Cost	1.9	2.0

Figure 4.1-18: Benefit – cost variations due to business case assumptions

> Under existing energy policies, the proposed MVP portfolio creates benefits that are at least 1.8 times its cost.

Depending on which variables are assumed, the present value of the benefits created by the entire portfolio can vary between $18.5 and $126.0 billion in 20 to 40 year present value terms. This savings yield benefits ranging from 1.8 to 5.7 times the portfolio cost.

It should be noted that the benefits of the portfolio do not depend upon the implementation of any particular future energy policy to exceed the portfolio costs. Under existing energy policies, a conservative discount rate of 8.2 percent and 20 year present value terms, the portfolio produces benefits that are 1.8 times its cost. However, if other energy policies or enacted, or a lower discount rate is used, this benefit has the potential to greatly increase.

Portfolio benefits and cost spread

A key principle of the MISO planning process is that the benefits from a given transmission project must be spread commensurate with its costs. The MVP cost allocation methodology distributes the costs of the portfolio on a load ratio share across the MISO footprint, so the proposed MVP portfolio must be shown to deliver a similar spread of benefits.

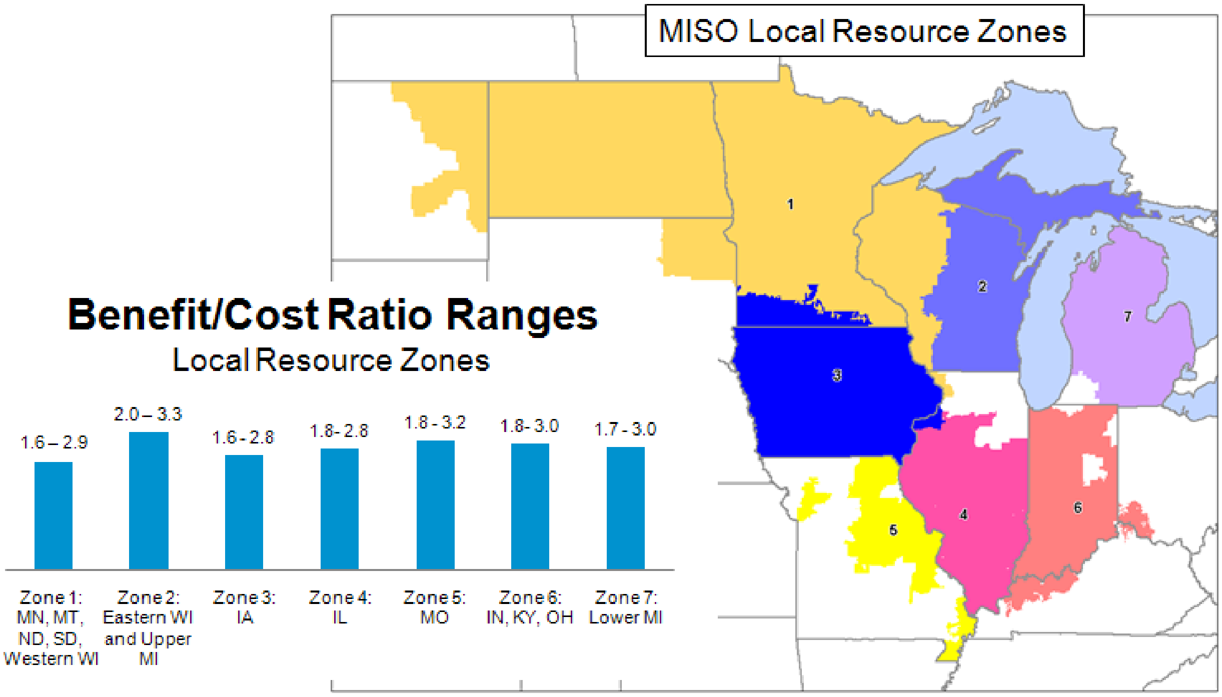


Figure 4.1-19: Proposed MVP portfolio production cost benefits spread

The proposed MVP portfolio provides benefits across the MISO footprint in a manner that is roughly equivalent to its costs allocation. For each of the local resource zones, as shown in Figure 4.1-19 above, the portfolio's benefits are at least 1.6 to 2.9 times the cost allocated to the zone.

Qualitative and social benefits

The previous sections demonstrated that the proposed MVP portfolio provides widespread economic benefits across the MISO system. However, these metrics do not fully quantify the benefits of the portfolio. Other benefits, based on qualitative or social values, are discussed in the next sections. These sections suggest that the quantified values from the economic analysis may be conservative because they do not account for the full potential benefits of the portfolio.

Enhanced generation policy flexibility

Although the proposed Multi Value Project portfolio was primarily evaluated on its ability to reliably deliver energy required by the renewable energy mandates, the portfolio will provide value under a variety of different generation policies. The energy zones, which were a key input into the Candidate MVP portfolio Analysis, were created to support multiple generation fuel types. For example, the correlation of the energy zones to the existing transmission lines and natural gas pipelines were a major factor considered in the design of the zones. This can be seen in Figure 4.1-20, which shows the correlation between the energy zones and natural gas pipelines.

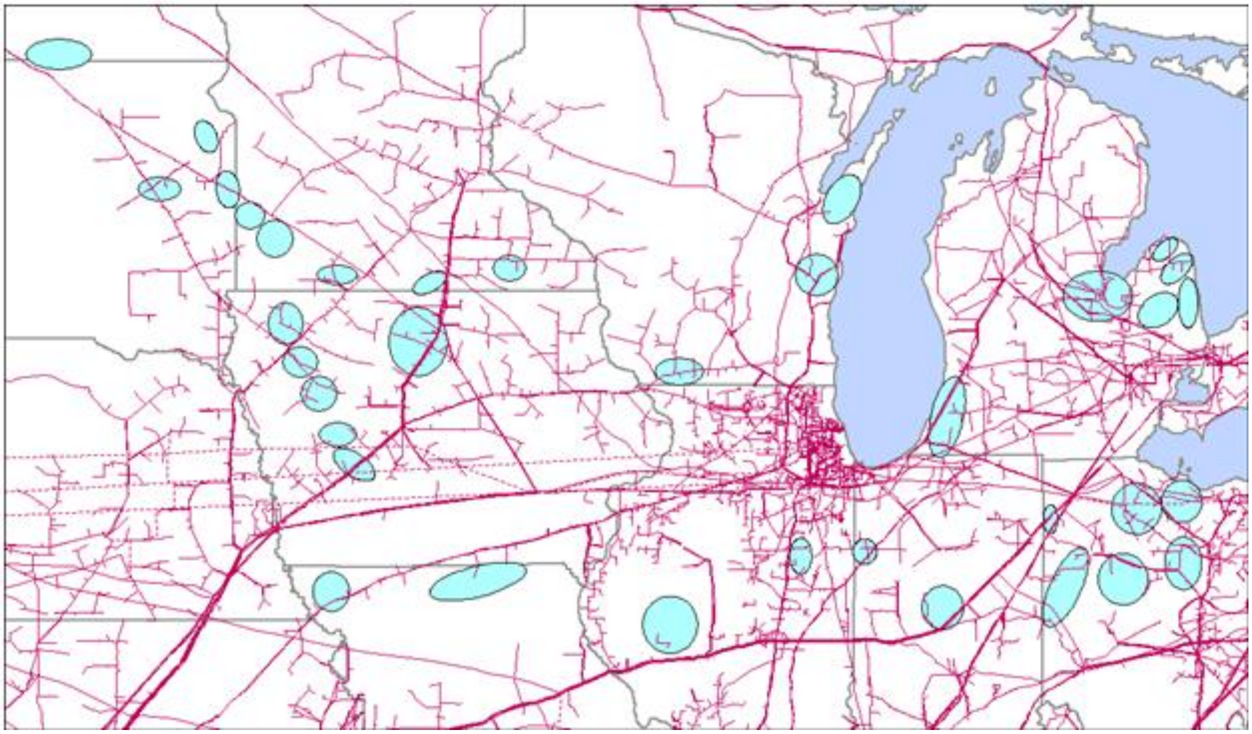


Figure 4.1-20: Energy zone correlation with natural gas pipelines

Increased system robustness

A transmission system blackout, or similar event, can have wide spread repercussions, resulting in billions of dollars of damage. The blackout of the Eastern and Midwestern U.S. during August 2003 affected more than 50 million people and had an estimated economic impact of between $4 and $10 billion.[31]

The proposed MVP portfolio creates a more robust regional transmission system which decreases the likelihood of future blackouts by:

- Strengthening the overall transmission system by decreasing the impacts of transmission outages.
- Increasing access to additional generation under contingent events.
- Enabling additional transfers of energy across the system during severe conditions.

[31] Data sourced from: *The Economic Impacts of the August 2003 Blackout*, The Electricity Consumers Resource Council (ELCON)

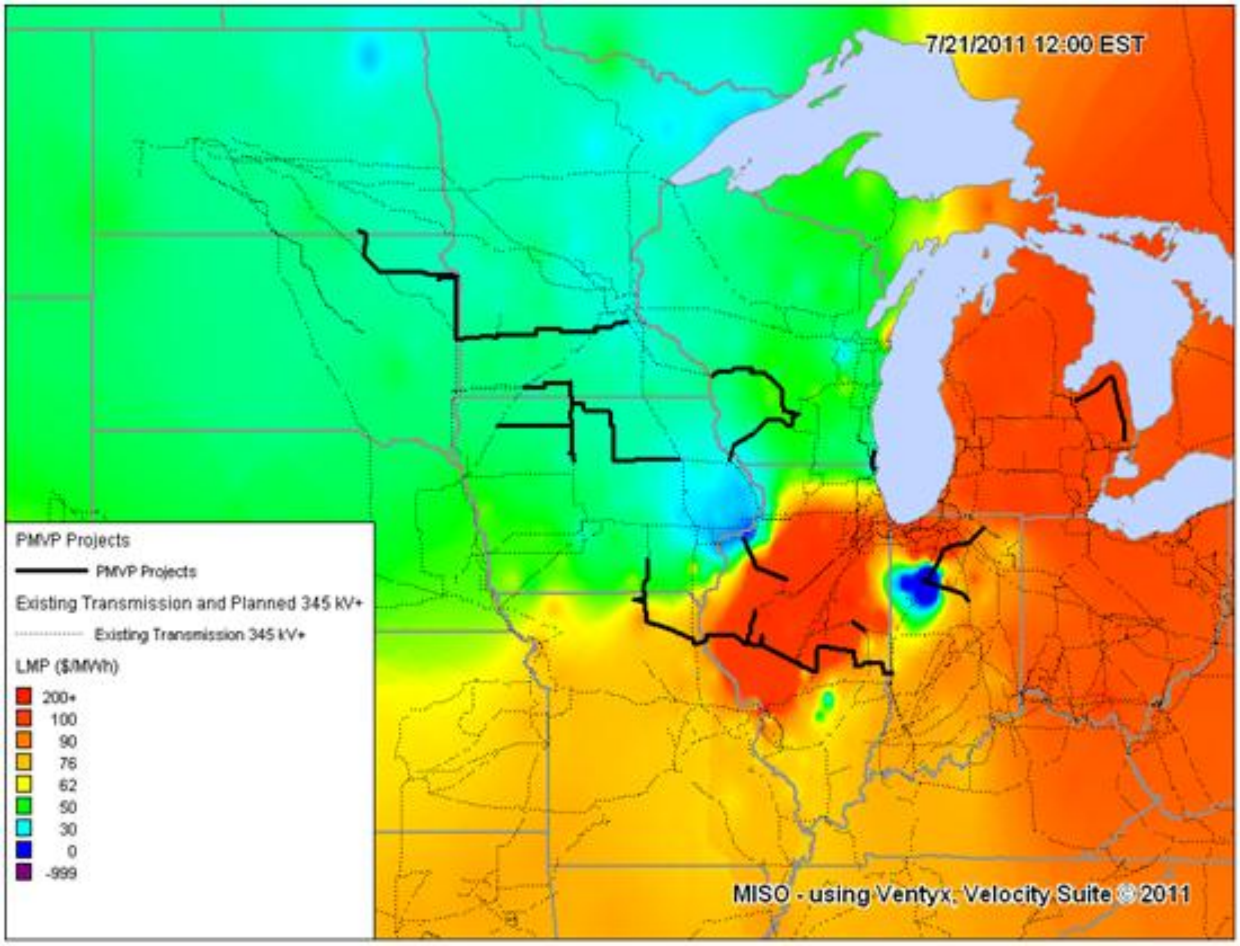


Figure 4.1-21: June 2011 LMP map with proposed MVP portfolio overlay

> The proposed MVP portfolio will increase the transfer capability across the system, allowing access to additional generation resources to offset the impact and cost of severe or emergency conditions.

For example, the proposed MVP portfolio will allow the system to respond more efficiently during high load periods. During the week of July 17, 2011, high load conditions existed in the eastern portion of the MISO footprint, while the western portion of the footprint experienced lower temperatures and loads. Thermal limitations on west to east transfers across the system limited the ability of low cost generation from the west to serve the high load needs in the east, as shown in Figure 4.1-21. The proposed MVP portfolio will increase the transfer capability across the system, allowing access to additional generation resources to offset the impact and cost of severe or emergency conditions.

Decreased natural gas risk

Natural gas prices have historically varied widely, causing corresponding fluctuations in the cost of energy from natural gas fueled generation. Also, recent Environmental Protection Agency (EPA) regulations and proposed regulations limiting the emissions permissible from power plants will likely lead to more natural gas fired generation. This may put additional upward pressure on natural gas costs as demand increases. However, the proposed MVP portfolio can help partially offset the associated natural gas price risk by providing additional access to generation that uses fuels other than natural gas (e.g. nuclear, wind, solar and coal) during periods with high natural gas prices.

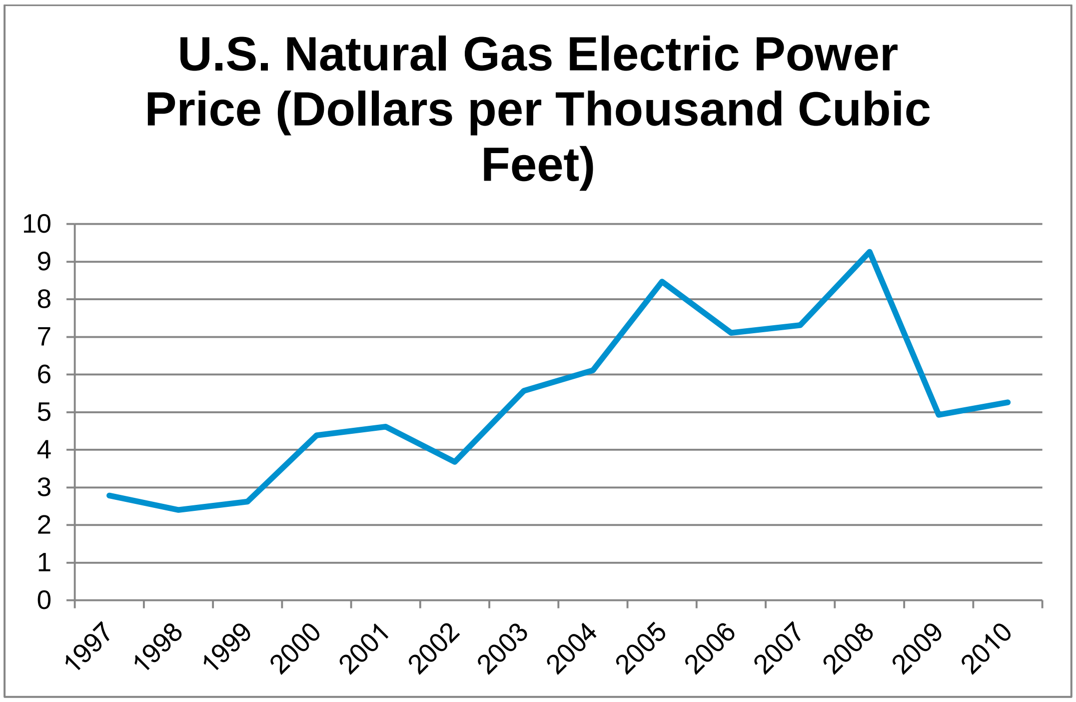


Figure 4.1-22: Historic U.S. natural gas electric power prices

Assuming a natural gas price increase of 25 percent to 60 percent, the proposed MVP portfolio provides 5 percent to 40 percent higher production cost benefits.

Decreased wind generation volatility

As the geographical distance between wind generation increases, the correlation in the wind output decreases. This leads to a higher average output from wind for a geographically diverse set of wind plants, relative to a closely clustered group of wind plants. The proposed MVP portfolio will increase the geographic diversity of wind resources that can be delivered, increasing the average wind output available at any given time.

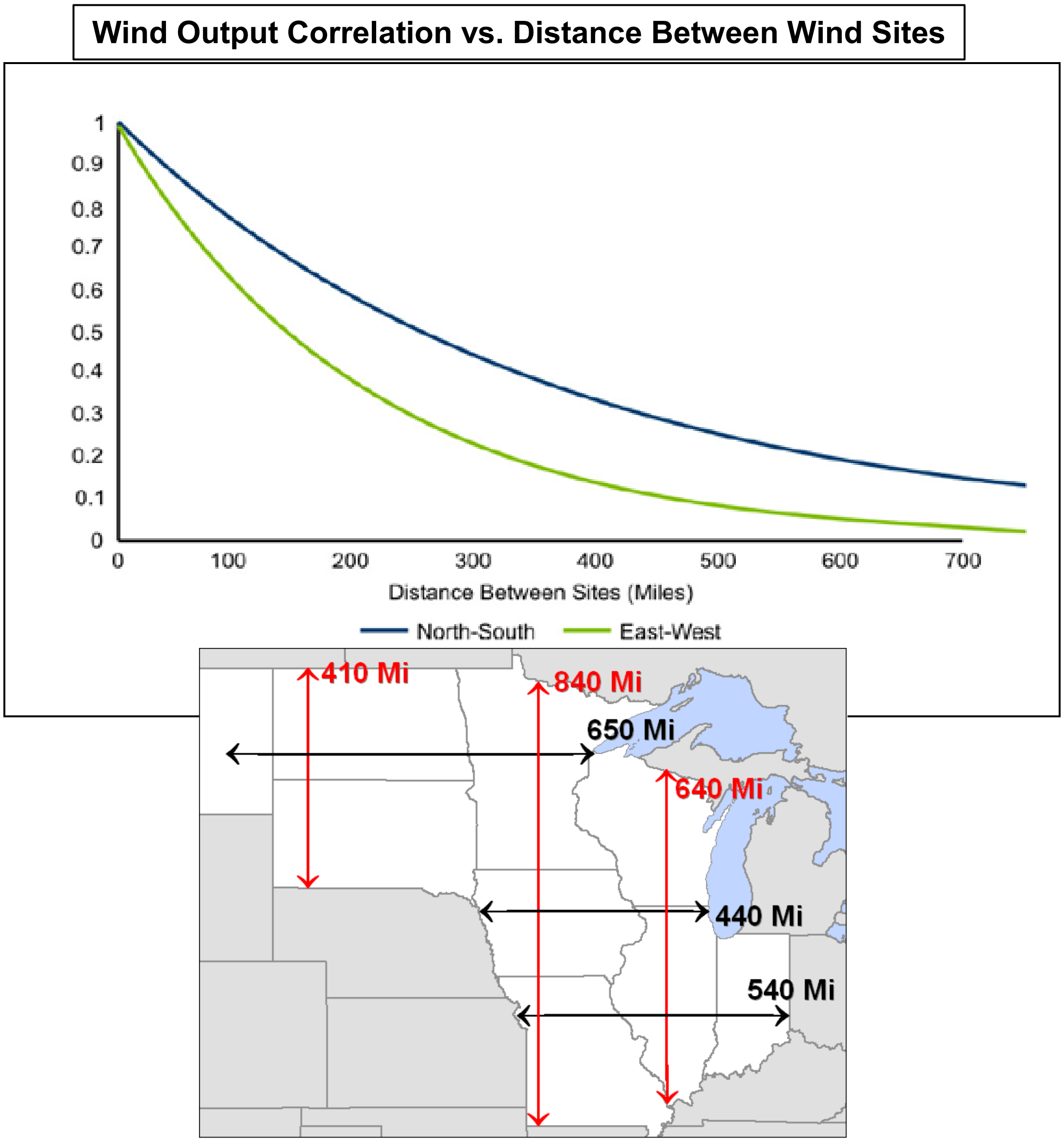


Figure 4.1-23: Wind Output correlation to distance between wind sites

Local investment and job creation

In addition to the direct benefits of the proposed MVP portfolio, studies have shown the indirect economic benefits of transmission investment. They estimated that, for each million dollars of transmission investment:

- Between $0.2 and $2.9 million of local investment is created.
- Between 2 and 18 employment years are created.[32]

The wide variations in these numbers are primarily due to the extent to which materials, equipment and workers can be sourced from a 'local' region. For example, each million dollars of local investment supports 11 to 14 employment years of local employment, as compared to 2 to 18 employment years which are created for non-location specific transmission investment.

The proposed MVP portfolio supports the creation of between 17,000 and 39,800 local jobs, as well as $1.1 to $9.2 billion in local investment. This calculation is based upon a creation of $0.3 to $1.9 million local investment and 3 to 7 employment years per million of transmission investment.

Carbon reductions

The proposed MVP portfolio enables the more economical dispatch of generation, as low cost wind resources displace higher cost generation. This redispatch creates a reduction in the total carbon output produced by MISO generation of between 8.3 to 17.8 million tons annually.

Some of the future policy scenarios included a cost of carbon. This carbon cost is additive to the overall system production cost, and it was based upon a carbon cost of $50 per ton.

If such a carbon cost was to occur, benefits would increase by between $3.8 and $15.4 billion in 20 and 40 year present value terms, respectively.

Conclusions and recommendations

MISO staff recommends the proposed MVP portfolio to the MISO Board of Directors for their review and approval. This recommendation is premised on the ability of the portfolio to meet MVP criterion 1, as each project in the portfolio was shown to more reliably enable the delivery of wind generation in support of the renewable energy mandates of the MISO states in a cost effective manner.

The proposed MVP portfolio reliably enables the delivery of wind generation in support of public policy needs, while delivering value in excess of its cost in all scenarios studied.

The recommendation is also supported by the strong economic benefits of the portfolio, which delivers a large amount of value in excess of costs under all conditions and policy scenarios studied. Furthermore, these benefits are spread across the MISO footprint, in a manner commensurate with the allocation of the portfolio's costs.

[32] Source: *Employment and Economic Benefits of Transmission Infrastructure Investment in the U.S. and Canada*, The Brattle Group

4.2 EPA Regulation Impact Analysis

Study disclaimer

The objective of the MISO EPA Regulation Impact Analysis is to inform stakeholders. MISO has no intention or authority to direct generation unit strategies. That authority belongs exclusively to the individual asset owners. The MISO analysis provides an overview of the impacts from the MISO regional perspective. Any sub regional evaluation of the data would be an incorrect interpretation and application of the results.

The detailed results of the analysis were derived from a limited set of economic assumptions that included low demand and energy growth, low gas prices and variation of carbon prices with sensitivities performed on gas and carbon prices. Retirement impacts can change with different assumptions for these variables. The study also assumes that the natural gas Transmission System is sufficient to accommodate the increased dependence on the natural gas fleet. This addresses some of those issues, but can't capture all future outcomes. To better understand the affects of changing inputs and risks of the uncertainty of carbon, additional analysis needs to be performed.

An additional caveat - since completion of this analysis - the EPA finalized the Cross State Air Pollution Rule (CSAPR). In general, the final regulation mandated more restrictive emission limits for some states than was modeled in this analysis. The final CSAPR has stronger state limitations in most cases but allows for a national trading program, which may allow for more flexibility in meeting the limits. In general, the rule appears to have the greatest impact in the near-term (1-3 years) operation of the generation fleet due to the reduction in the number and availability of both SO_2 and NO_X allowances. The magnitude of this change on the MISO system is being evaluated in a follow-up study.

The EPA Regulation Impact Analysis was based on assumptions for *proposed* EPA regulations. Finalization of the remaining three regulations has the potential to introduce the risk of additional change and uncertainty, similar to what occurred with the CSAPR regulation. Any of the final regulations could differ from what was modeled in this analysis.

EPA impact results summary

Over the last two years the U.S. Environmental Protection Agency (EPA) issued four proposed regulations that will affect the MISO system. One of the rules was finalized in July while the other three are still in draft form. The regulations will impact unit operations in the near-term (1-3 years) in addition to requiring utilities retrofit their generators with environmental controls or retire them in the 2015 timeframe. At the direction of its members, stakeholders and Board of Directors, MISO evaluated the impacts of the new regulations, including carbon requirements. This study evaluated the impacts on capacity cost, Resource Adequacy, cost of energy and transmission reliability.

> A survey of the current fleet within MISO revealed a number of generation units will be affected. Impacts ranged from the installation of control equipment and expected redispatch to meet emission budgets, to potential retirement of units where the costs to comply outweigh the benefits of continued operation.

MISO evaluated the four proposed regulations separately and in combination with each other over a nine month study period. This report focuses on the four rules as they were developed in draft form. The impact of the finalized Clean Air Transport Rule/Cross State Air Pollution Rule will be undertaken in an exhaustive follow-on study that is currently underway.

The four proposed EPA regulations are:

- Cooling Water Intake Structures (CWIS) – section 316(b) of the Clean Water Act (CWA).
- Coal Combustion Residuals (CCR).
- Clean Air Transport Rule (CATR) as proposed in 2010. This regulation was finalized as the Cross State Air Pollution Rule (CSAPR) in July, 2011 after the study work was finalized.
- Mercury and Air Toxics Standards (MATS), formerly known as EGU Maximum Achievable Control Technology (MACT).

A survey of MISO's current fleet revealed that a number of generation units will be affected. Impacts ranged from the installation of control equipment and expected redispatch to meet emission budgets, to potential retirement of units where the costs outweigh the benefits of continued operation. Figure 4.2-1 shows that there are 298 coal units affected by these four proposed regulations and that the majority of the units (63 percent) are affected by three or all four regulations.

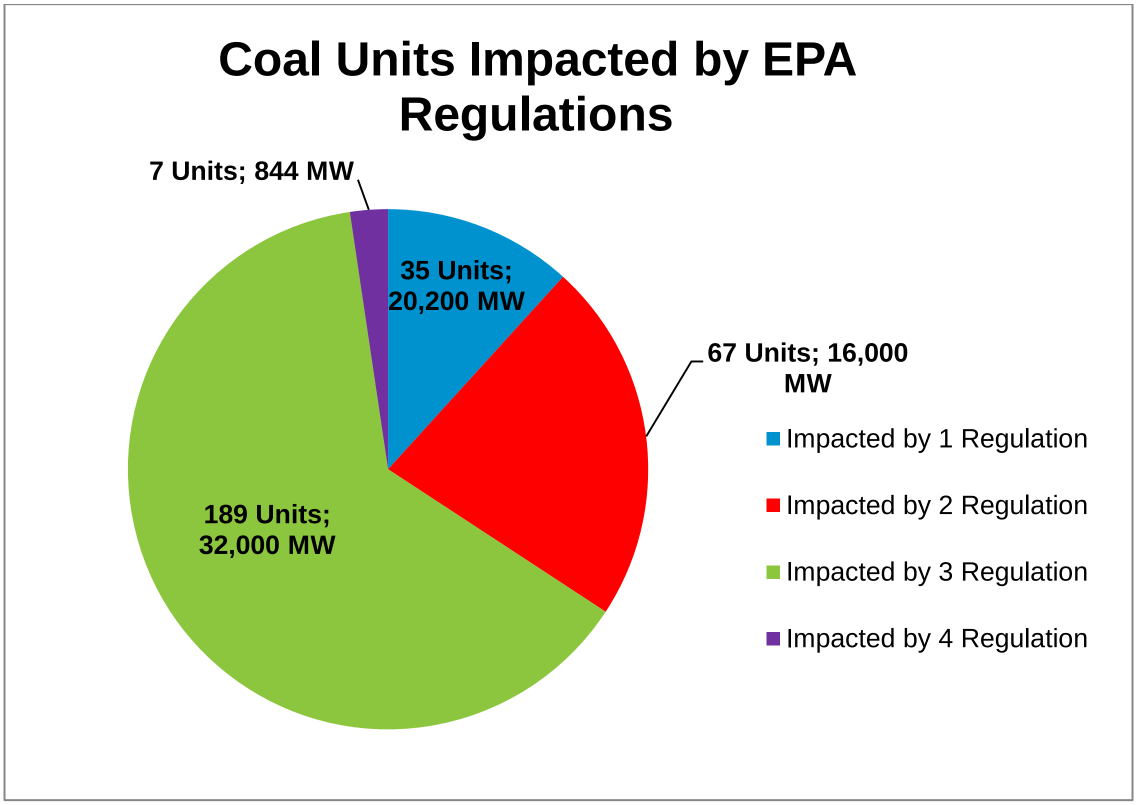


Figure 4.2-1: Number of coal units affected by EPA regulations.

The studies were conducted with the Electric Generation Expansion Analysis System (EGEAS) software package developed by the Electric Power Research Institute (EPRI) commonly used by utility generation planners. MISO performed more than 400 sensitivity screens using the EGEAS capacity expansion model to identify the units most at-risk for retirement. The sensitivities consisted of variation in costs for natural gas, cost uncertainty risk and retrofit compliance.

MISO identified nearly 13,000 MW of units at risk for retirement. Those units were offered to the EGEAS model as an economic choice to retrofit for compliance or retirement. The model makes this decision by comparing alternatives and selecting an expansion forecast that minimizes costs, capital investment, production, emissions and annual fixed operations and maintenance.

Nearly 13GW of generation is at risk of retiring.

MISO ran two economic alternatives. The first evaluated a $4.50 natural gas cost, compliance for all the identified regulations and an expected cost for compliance with the regulations based on MISO stakeholder feedback through the study process. The second analysis evaluated increased compliance costs on the system. These increased costs are represented through a production cost adder coupled with the production of carbon on the system and is proxy for costs associated with the uncertainty around rules not finalized, additional life extension costs needed for balance of plant as well as the considered risk around the uncertainty of the treatment of green-house gases. It is expected that one or all are within the assumption error bounds for this analysis and the impacts will be considered in the fleet strategies of the asset owners. The results of the EGEAS analysis produced:

- 2,919 MW of coal fleet capacity at-risk for retirement under all likely scenarios. As of the publishing of this study, retirement requests of the coal fleet have amounted to 2,500 MW in the MISO Attachment Y process.

- 12,652 MW of coal fleet capacity at-risk for retirement identified to be within prudence considerations and error bounds for the assumptions of the MISO study.

The EGEAS retirement analysis minimizes the total system net present value costs over a twenty year planning period plus a forty year extension period. When the 2,919 MW and 12,652 MW of retired capacity were forced into the model, it was shown that the overall net present value of system costs varied by approximately 1 percent. This value is within the tolerance of assumption error. Additionally, MISO did not consider unit life extension costs in its evaluation. Because of these two considerations, it is expected that the higher value of nearly 13,000 MW is more realistic of the potential retirements on the system.

Using a suite of planning products, MISO's evaluation on the range of potential impacts indicates the following:

- Total 20-year net present value capital cost of compliance may range from $31.6 billion for 2,919 MW of retirement to $33.0 billion for 12,652 MW of retirement. Both values are in 2011 dollars and include the cost of retrofits on the system, replacement capacity, fixed operations and maintenance and transmission upgrades. The perceived balance in total system capital investment occurs because the average cost for installation of control technologies for a unit is approximately equivalent to the cost of a new combustion turbine that represents an alternative solution to compliance with the rules.

It will cost MISO approximately $30 billion to comply with the new regulations, regardless of compliance strategy, increasing rates by more than 7 percent.

    - Capital costs for retrofits are $28.2 billion and $22.5 billion, respectively.

    - Maintenance of the Planning Reserve Margin (PRM) is obligated under the MISO tariff. So it is expected that any capacity retirements would eventually be matched with replacement capacity to support PRM requirements. To maintain this requirement, it is estimated that the replacement costs would be $1.7 billion and $9.6 billion.

- The bulk of the capital investment for the generation fleet is expected to occur in the 2014/2015 time frame to meet 2015/2016 requirements established through the proposed MATS regulation. This includes potential need for replacement resources as 12,652 MW of capacity retirements would erode the current installed reserves to below planning reserve margin values by 6 to 7 percentage points, Table 4.2-1.

- The annual fixed operations and maintenance impacts the total cost impact by $1.1 billion and $0.0, respectively.

- Retirement of units will have an impact on localized Transmission System reliability. To ensure voltage and transmission thermal support on the system, an estimated $580 million and $880 million, respectively, of additional transmission upgrades could be necessary to maintain system reliability. The transmission numbers depend on location and any change from the study assumptions could result in different costs. This assumes that no replacement capacity is at the retired units. If it is, the transmission upgrade costs will decrease.

- By replacing traditionally less reliable capacity with new resources, there is a potential that Planning Reserve Margin (PRM) requirements could decrease by having a more reliable fleet. Loss of Load Expectation (LOLE) analysis showed reductions of 0.2 to 1.0 percent. However, if no replacement capacity is identified for Resource Adequacy purposes, then analysis shows that the LOLE on the system could be on the order of 0.21 to 1.028 days/year. The current target is 0.1 days/year. Refer to Chapter 5.2 for more information on EPA impacts on resource adequacy.

- There will also be an increase in the MISO load-weighted LMP of between $1.2/MWh to $4.8/MWh (2011 dollars). This is driven by two key factors: (1) newly retrofitted units are less efficient because of the emission controls, and (2) retired coal facilities are replaced with natural gas fired capacity resulting in a greater dependence on the higher cost energy.

- Identifying all the costs to maintain regulation compliance and system reliability, retail rates could increase 7.0 to 7.6 percent.

		2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
No retirements	Reserve Margin (MW)	23,930	22,438	22,064	21,368	20,760	20,065	19,287	19,950	19,031	18,032
	Reserve Margin (percent)	27.0%	24.8%	24.2%	23.3%	22.5%	21.5%	20.5%	21.0%	19.9%	18.6%
2.9 GW Retirements (impacts adjusted for expected derates)	Reserve Margin (MW)	21,603	20,111	19,737	19,041	18,433	17,738	16,960	17,623	16,704	15,705
	Reserve Margin (percent)	24.3%	22.2%	21.7%	20.8%	19.9%	19.0%	18.1%	18.6%	17.5%	16.2%
12.6 GW Retirements (impacts adjusted for expected derates)	Reserve Margin (MW)	12,544	11,052	10,678	9,982	9,374	8,679	7,901	8,564	7,645	6,646
	Reserve Margin (percent)	14.1%	12.2%	11.7%	10.9%	10.1%	9.3%	8.4%	9.0%	8.0%	6.6%

Table 4.2-1 Potential system reserve margin impacts of retirements compared to the MISO 2011 Long Term Resource Assessment

The generation capacity cost components include both the costs to retrofit and to build new capacity to eventually replace that which is retired. From the previous information, this twenty year net present value cost for 12,652 MW of retirement is approximately $32.1 billion. Table 4.2-2 shows where those costs are incurred in reference to the fleet to meet the proposed regulations. The investment identified is expected to occur prior to implementation of the MATS regulation and the lead time for the addition of control technology or new resources will include planning, regulatory approval, engineering, procurement, construction and installation that may require three to five years to implement on the system.

Technology	Impacted Capacity (MW)	Average Costs ($/kW)
No Action Required	9,569	0
Require Fabric Filters (Baghouse)	27,921	150
Require DSI and ACI or FGD	20,427	478
Replacement Greenfield Combustion Turbine Capacity for Retirement	12,652	663

Table 4.2-2 Average overnight construction costs to comply with the proposed regulations.

There is a compliance risk with the proposed regulations. Additional investment in the generation fleet and the Transmission System will maintain bulk power system reliability – at a cost. However, another risk not addressed directly that must be recognized is the time in which units must be compliant. Figure 4.2-2 demonstrates a high level timetable of rule implementation and compliance deadlines. If it is determined that capacity should be retired, it would take at least two to three years to build a combustion turbine to replace it. Also, if Transmission System reliability requires bulk transmission upgrades, a minimum of five years could be required for a transmission line to become operational. The time from final regulation to compliance may be difficult for some situations throughout the system.

Perhaps one of the most significant risk factors will be taking the existing units out for maintenance to install the needed compliance equipment. Given the tight window for compliance, much of the capacity on the MISO system will need to take their maintenance outages concurrently. The need to take multiple units out of service on extended outage has significant potential to impact resource adequacy.

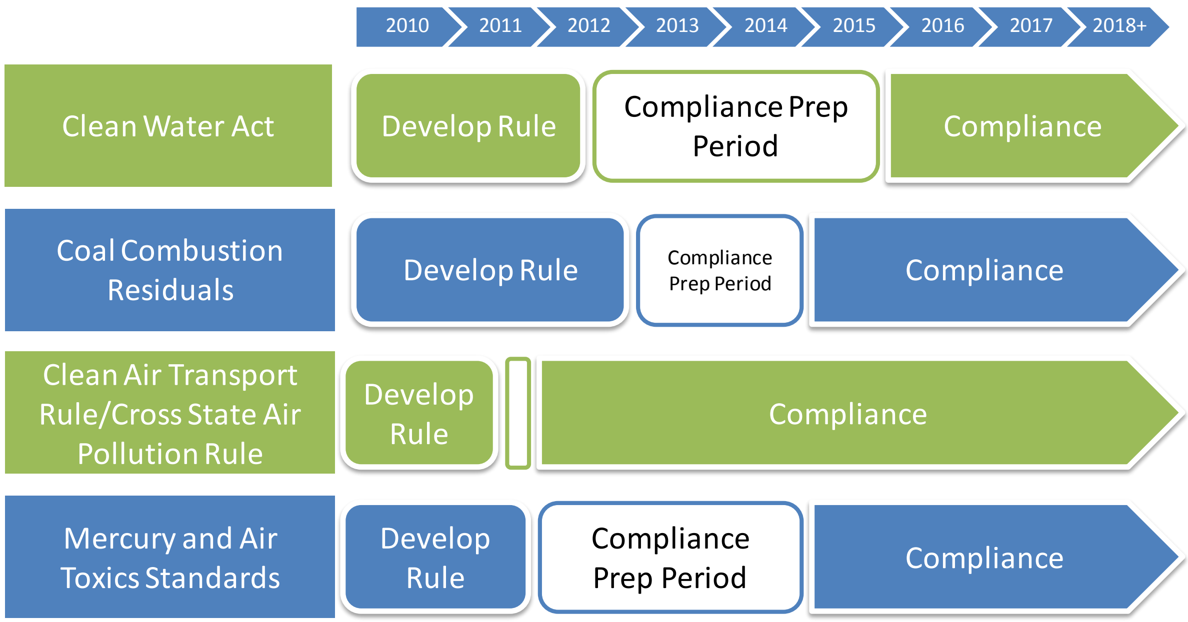


Figure 4.2-2: **Estimated timeline for regulation development and implementation**

Sensitivities impact

Just as in the MISO Transmission Expansion Plan (MTEP), MISO uses a scenario planning process in the analysis and evaluation of these EPA regulations. Evaluating the impact requires that many conditions be considered separately and in combination. MISO evaluated six scenarios with 77 sensitivities for each of the scenarios.

- Base conditions, no new regulations.
- Cooling Water Intake Structures section – 316(b) of the Clean Water Act (CWA).
- Coal Combustion Residuals (CCR).
- Clean Air Transport Rule (CATR) as proposed in 2010. This regulation was finalized as the Cross State Air Pollution Rule (CSAPR) in July, 2011 after the study work was finalized.
- Mercury and Air Toxics Standards (MATS) formerly known as EGU Maximum Achievable Control Technology (MACT).
- Combination of all four regulations.

Figure 4.2-3 demonstrates the sensitivities evaluated for each analysis. Since there are six regulation scenarios there would be six branches to this decision tree. Only the first branch is shown in Figure 4.2-3.

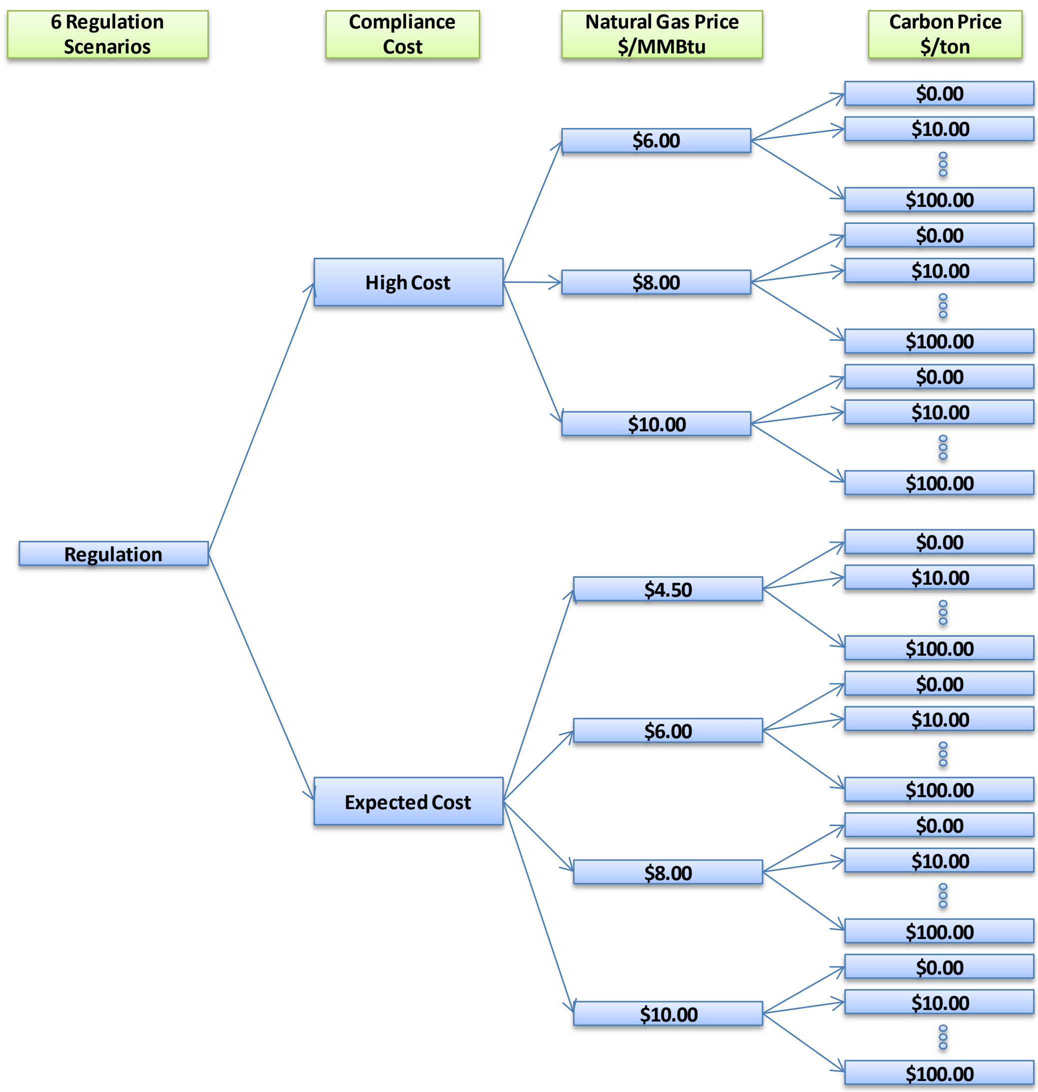


Figure 4.2-3: **Decision tree of EPA cases**

For each of the scenarios, 77 sensitivity cases consisting of two variations in compliance costs, natural gas costs and uncertainty risk costs represented as a cost to carbon production were modeled to produce a combined total of more than 400 sensitivity cases. The results indicated that up to 23,000 MW of coal capacity could be at-risk because of regulation compliance.

From these sensitivity cases, a few general conclusions can be made.

- EPA regulation impacts: Compliance associated with the Mercury and Air Toxics Standards (MATS) produces the most at-risk units, since its compliance costs and emission reductions have the greatest impact of the proposed regulations.

- Stringent Rule Application: Higher compliance costs to meet more stringent rules result in more at risk units. Evaluating all natural gas and carbon sensitivities for the stringent rule application cases resulted in up to 23,000 MW of at-risk capacity. However, running the same sensitivities at the more expected compliance costs as recommended and reviewed through the MISO stakeholder process, up to 13,000 MW of capacity was considered to be at risk.

- Natural gas costs: Lower natural gas prices produced more at-risk capacity than higher gas prices. The lower natural gas prices provide more incentive to retire capacity as the alternative resources provide competitive energy costs for the system. Conversely, when gas prices are high, the coal units find enough revenue on the system to cover compliance costs and keep general energy prices lower.

- Risk costs: MISO evaluated the risks associated with uncertainty in regulation compliance through costs added to megawatt-hour production. This cost was represented by adding a price to carbon. Because of this, higher compliance costs put more economic pressure on the coal units within the system, and the economics favor natural gas and carbon neutral capacity. So more coal units are at-risk for retirement with the higher compliance costs applied.

The units at-risk for retirement range from 0 MW to 23,000 MW based on the economic assumptions within the sensitivities. Cases where no units were identified to be at-risk for retirement include low compliance costs, higher gas prices and no risk costs applied. This occurs because it minimizes cost for compliance while increasing potential revenue within the energy market through higher natural gas prices. Cases that produce at-risk generation of up to 23,000 MW include stringent rule application, low gas prices and varying levels of risk costs.

Figure 4.2-4 depicts an example of the impacts of the cost of compliance, gas and risk from the identified potential retirements of 2,919 MW with all four EPA regulations.

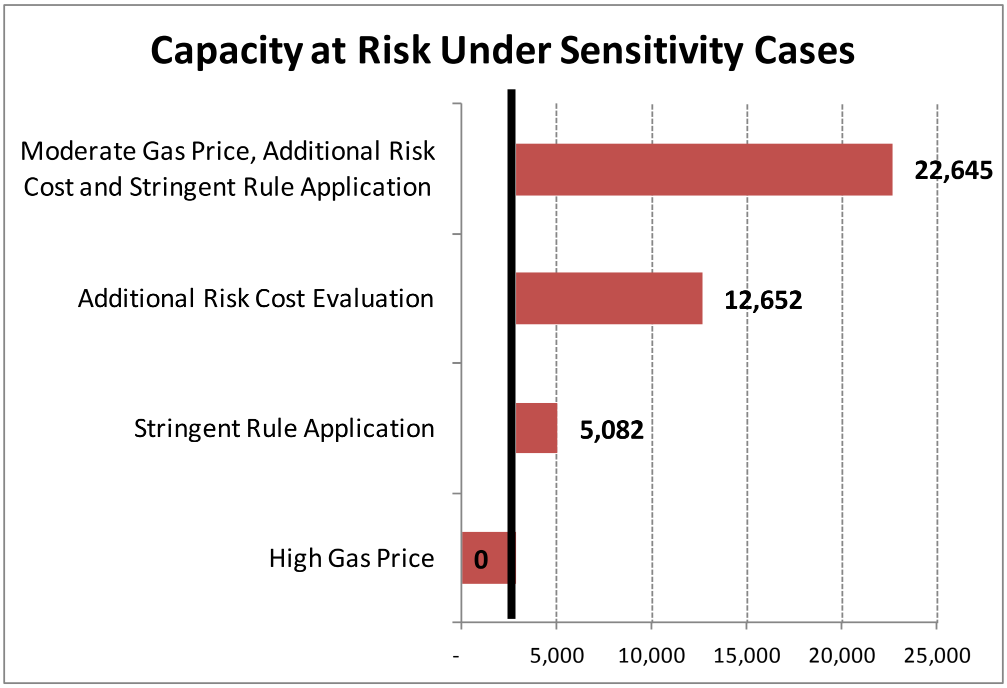


Figure 4.2-4: Tornado chart demonstrating the impacts of sensitivities on potential capacity retirements

Rate impact

In general, the retail rates on the system are driven by the costs of generation production, generation capital, transmission capital and distribution capital. The MISO EPA regulation analysis identifies costs that impact three of the four components of the rates.

The greatest impact on the rates comes from the capital cost component. The capital cost increase comes in two forms, the EPA capital compliance cost and the capital cost for replacement capacity. Figure 4.2-5 demonstrates the comparison of the rate impact of the two retirement scenarios with the current average system rate. The overall increase in the rates because of compliance with the EPA regulations is approximately 7.0 to 7.6 percent.

The relatively small rate increase difference between the two scenarios is due to the balance of capital cost configurations. The total EPA regulation related capital cost comes in three forms - 1) control equipment, 2) capital cost for replacement capacity and 3) transmission capital cost needed for retired capacity. The relationship between the three costs is a balance between retired capacity to forgo costs for control equipment while adding replacement capacity and transmission costs for the forgone capacity, versus more control costs to retrofit generation. In other words, as retirements increase, the total control equipment cost decrease, while replacement capacity and transmission costs increase – and vice versa. A balance of all three costs occurs to end up with the least cost strategy.

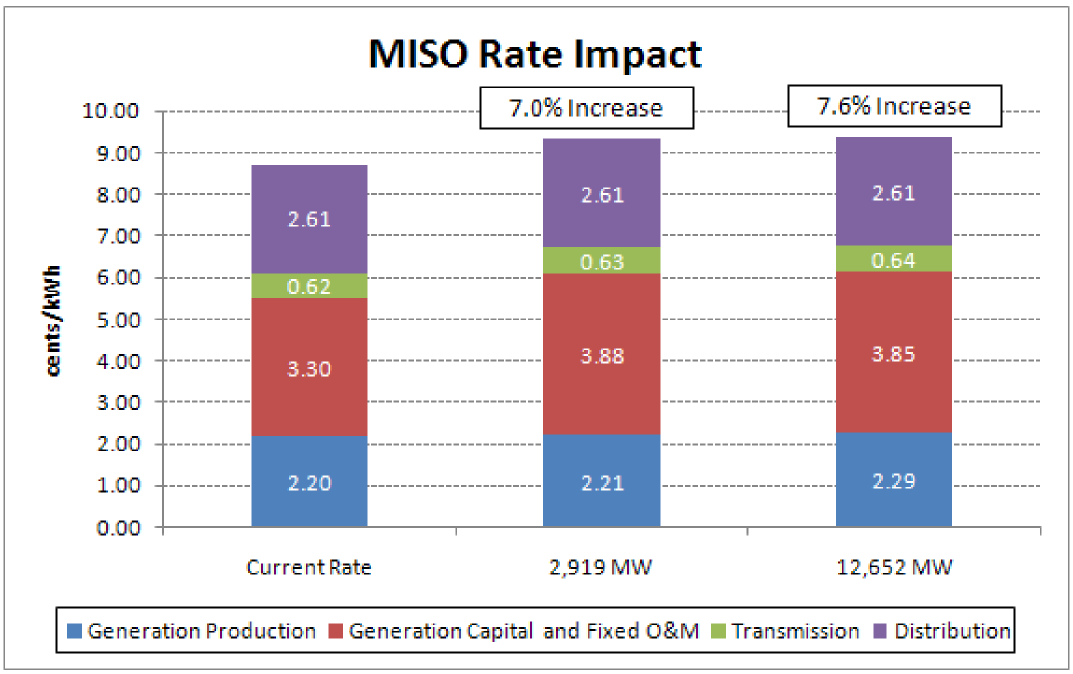


Figure 4.2-5: MISO rate impact

4.3 Generation portfolio analysis

MISO performed regional assessments using the Electric Generation Expansion Analysis System (EGEAS) on the MISO footprint as of June 1, 2011. Using assumed projected demand, energy for each company and common assumptions for resource forecasting, MISO developed models to identify least cost generation portfolios needed to meet resource adequacy requirements of the system for each future scenario.

Future scenario definitions

Scenario-based analysis provides the opportunity to develop plans for different future scenarios. A future scenario is a postulate of what *could be*, which guides the assumptions made about a given model. The outcome of each modeled future scenario is a generation expansion plan, or generation portfolio. Generation portfolios identify the 'least cost' generation required to meet reliability criteria based on the assumptions for each scenario. MTEP11 has examined multiple future scenarios:

MISO developed models to identify least cost generation portfolios needed to meet resource adequacy requirements of the system for each future scenario.

1. Business As Usual with Low Demand and Energy Growth Rates
2. Business As Usual with Historical Demand and Energy Growth Rates
3. Combined Energy Policy
4. Carbon Constraint

A more detailed discussion of the assumptions and methodology around these scenarios is presented later in Section 4.3 and in Appendix E.2.

Figure 4.3-1 on the following page represents capacity expansions for each defined future scenario through the 2026 PROMOD® study year. The capacity added is required to maintain stated reliability targets for each region. Stated targets for MISO are defined by means of the Module E Resource Adequacy Assessment.

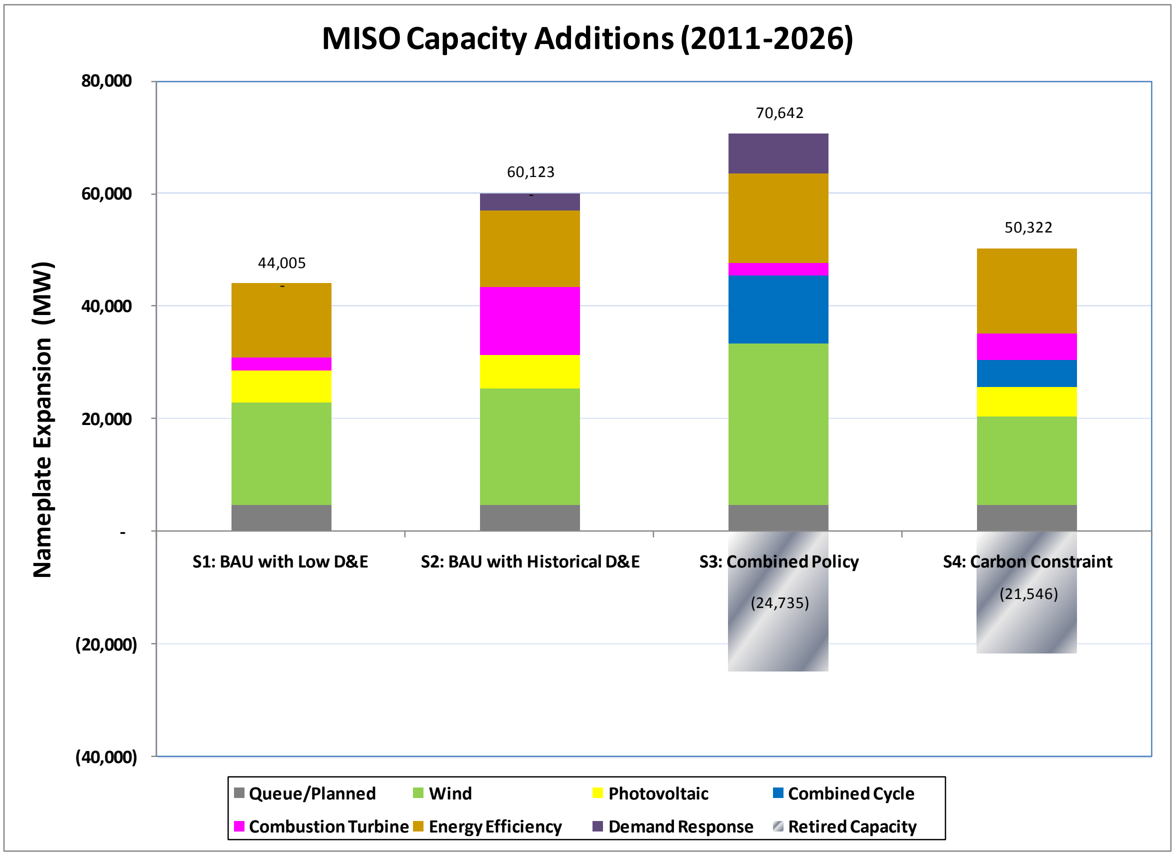


Figure 4.3-1: MISO modeled system aggregate nameplate installed MW from 2026 PROMOD Model.

Recognizing that redundancies across the existing MTEP10 future scenarios and assumptions did not provide any additional information, MISO staff, along with the planning advisory committee, narrowed down to four the scenarios for analysis in MTEP11. A diverse set of generation scenarios emerges when examining the MTEP11 future. While making comparisons across futures with different growth rates for demand and energy can be difficult, some observations can be made when studying future scenarios as a group or when comparing one to another.

Traditionally, most base load capacity needs have been met with coal and nuclear generation. Gas-fired combined cycle units have taken over some of the base load generation role thanks to the discovery of large quantities of shale gas and subsequent lower prices. Rising construction costs, pending EPA regulations and many uncertainties surrounding the future of nuclear generation are also factors. In the combined energy policy and Carbon Constraint scenarios coal units are retired in order to achieve the 42 percent carbon reduction cap. To achieve these targets within the specified time, 55 percent (~44,000 MW) of the oldest and least efficient coal units were retired in the analyses for the combined energy policy scenario and 50 percent (~40,000 MW) were retired in the Carbon Constraint scenario. Much of this base load generation capacity was replaced with natural gas-fired combined cycles and energy efficiency programs.

In all future scenarios, the addition of state-mandated renewable energy capacity overshadows thermal capacity, because most states within the MISO footprint have renewable energy standards and an abundance of existing capacity. The presence of lower demand and energy starting points and growth rates during the study are also factors. A large portion of capacity needs are being met through demand response and energy efficiency programs, which are allowed to compete against traditional supply-side resources in the EGEAS program for the first time in MTEP11. The Global Energy Partners study conducted for MISO in 2010 provided the demand response and energy efficiency estimates.

Figure 4.3-2 demonstrates the value of costs for the study period through 2026. Production and capital costs are provided. Production costs include fuel, variable and fixed operations and maintenance and emissions costs (where applicable). Capital costs represent the annual revenue needed for new capacity. Each future scenario has a unique set of input assumptions, such as demand and energy growth rates, fuel prices, carbon costs and RPS requirements, which drive the future capacity expansion capital investments and total production costs.

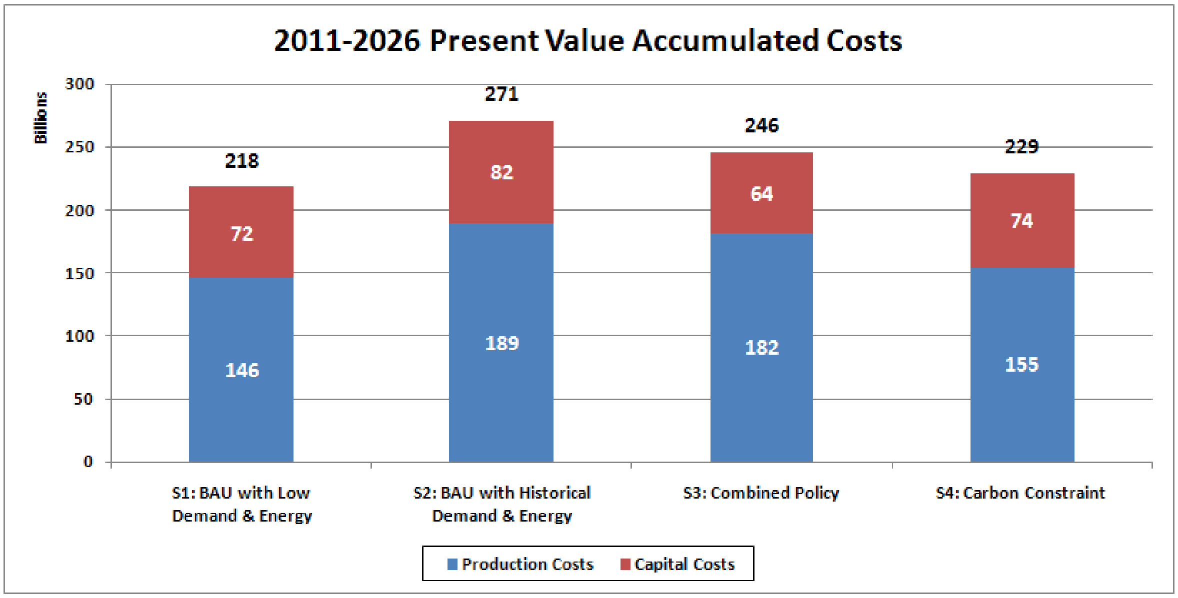


Figure 4.3-2: MISO present value of cumulative costs in 2011 U.S. dollars

Each of the future scenarios has a different impact on carbon dioxide output. Refer to Figure 4.3-3, which demonstrates the varying impact for each of the defined future scenarios. Figure 4.3-3 compares 2005 carbon production provided by the dispatch of a 2005 EGEAS model and year-end 2030 carbon production associated with the capacity expansion for each future scenario.

Continued demand and energy growth at levels close to historic trends will result in the need for additional generating capacity. If this capacity is dominated by coal or natural gas, carbon output will increase on an annual basis. The increased penetration of renewable resources and energy efficiency will result in a system reduction in carbon dioxide.

The increased penetration of renewable resources and energy efficiency will result in a system reduction in carbon dioxide.

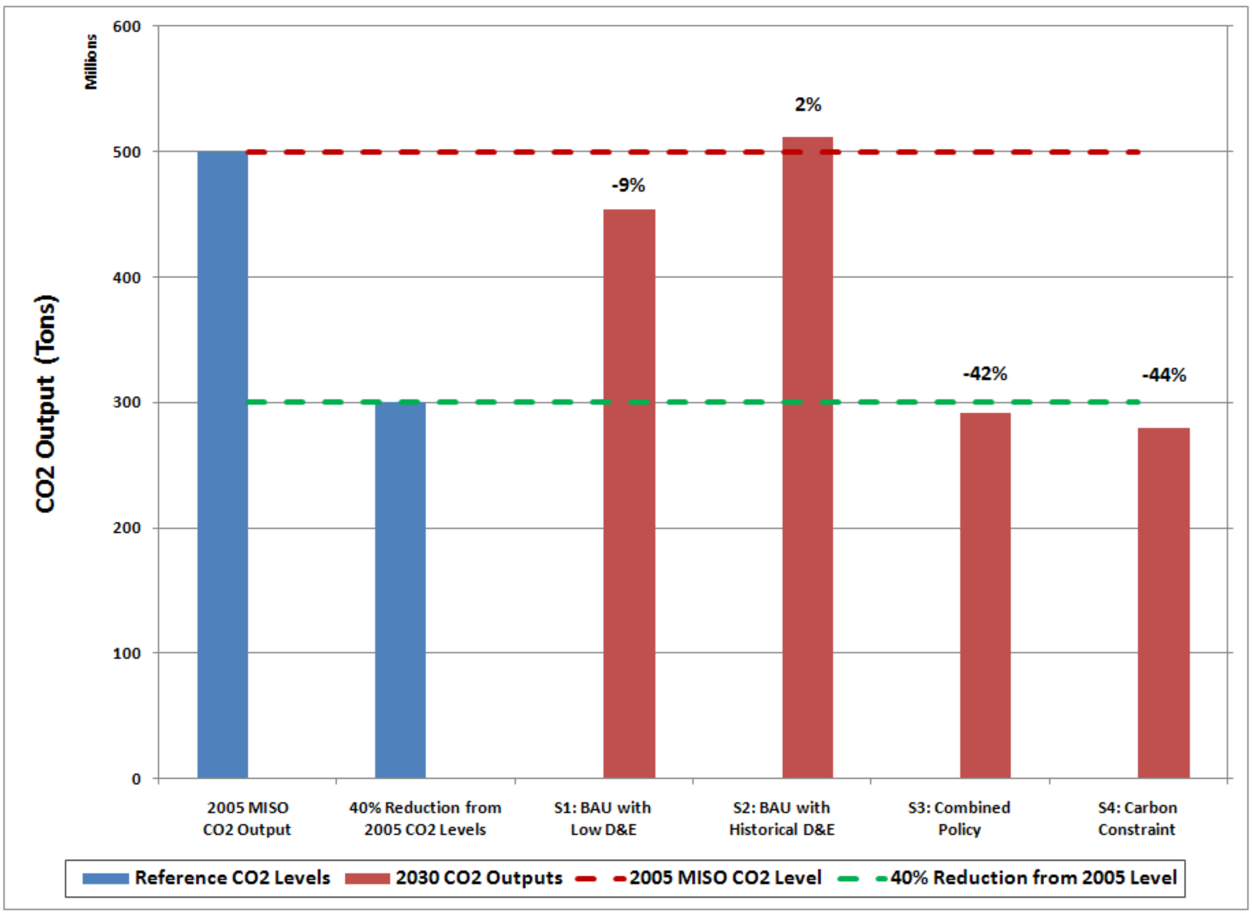


Figure 4.3-3: MISO carbon production

Siting of capacity

Generation resources forecasted from the expansion model for each of the scenarios are specified by fuel type and timing, but these resources are not site-specific. Completing the process requires a siting methodology tying each resource to a specific bus in the power flow model. A guiding philosophy and rule-based methodology, in conjunction with industry expertise, was used to site forecasted generation. Refer to Figure 4.3-4, which depicts capacity siting associated with the Business As Usual with Historical Demand and Energy Growth Rates scenario. Likewise, Figure 4.3-5 shows the associated demand response siting for the BAU with Historical Demand and Energy Growth Rates scenario. The siting methodology used for this and the other future scenarios is explained further in Appendix E2.

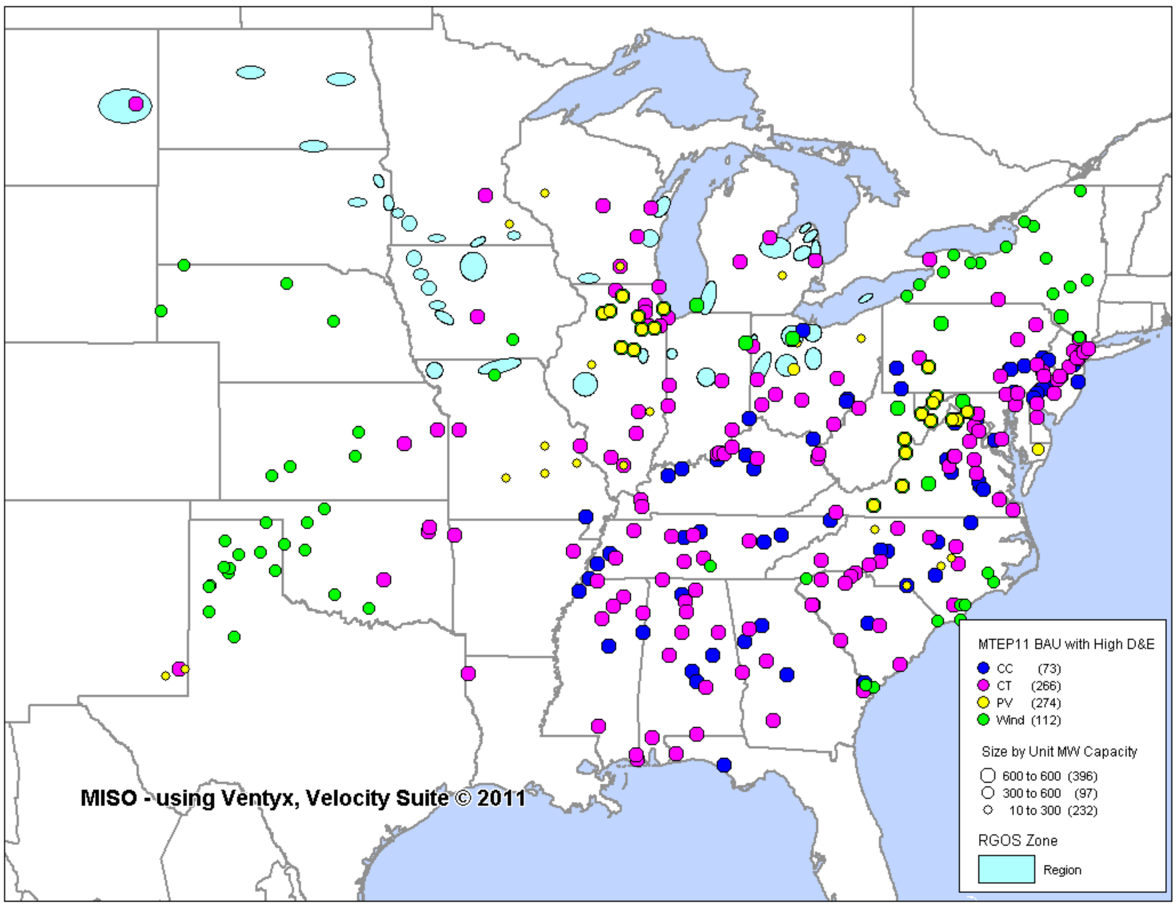


Figure 4.3-4: Future capacity sites for MISO BAU with historical demand and energy growth rates scenario

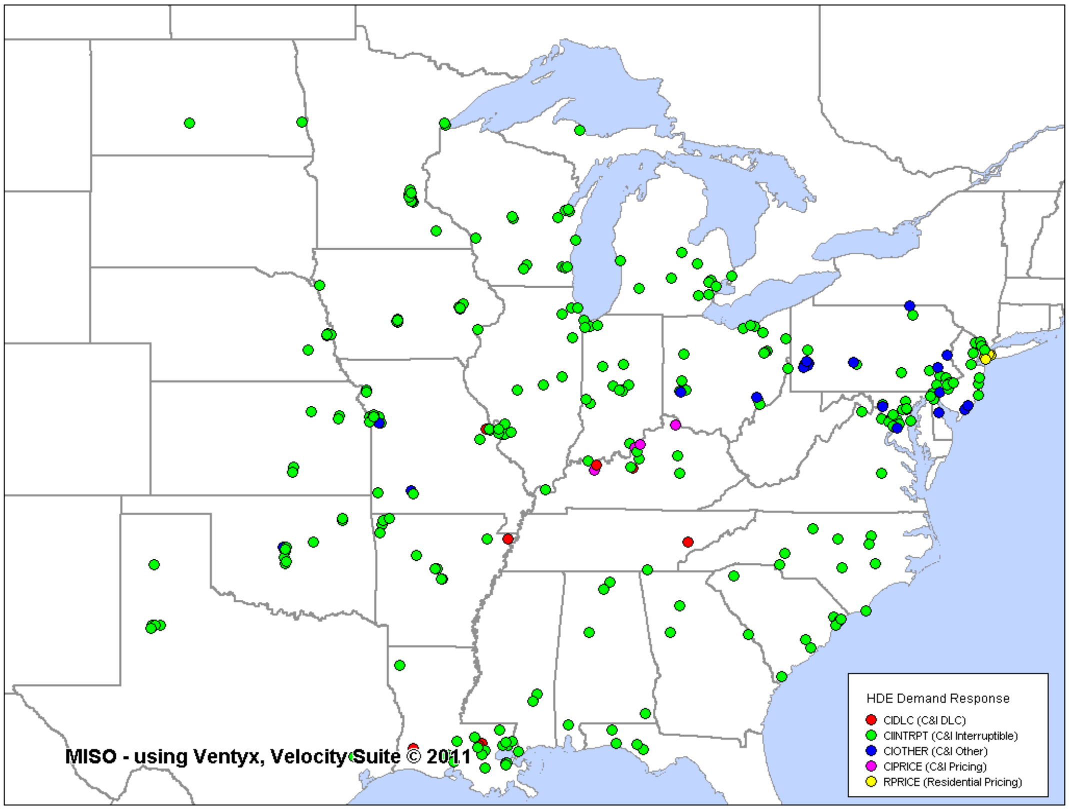


Figure 4.3-5 Future DR sites for MISO BAU with historical demand and energy scenario

Generation futures development

A planning horizon of at least 15 years is needed to accomplish long range economic transmission development, since large projects normally take 10 years to complete. Performing a credible economic assessment over this time is challenging. Long-range resource forecasting, power flow and security constrained economic dispatch models are required to extend to at least 15 years. Since no single model can perform all of the functions for integrated transmission development, a value-based planning process is developed by integrating the best models available. This allows the evaluation of the long-term transmission requirements to proceed.

The following broad steps outline the value-based planning process that MISO has been implementing. It starts with the analysis of value drivers and ends with a reliability assessment to meet both economic and reliability needs.

- Step 1: Create a regional generation resource forecast.
- Step 2: Site the new generation resources into the power flow and economic models for each future scenario.
- Step 3: Design preliminary transmission plans for each future scenario, if needed.
- Step 4: Test for robustness.
- Step 5: Perform reliability assessment, consolidation and sequencing.
- Step 6: Final design of integrated plan.
- Step 7: Cost allocation.

MISO's planning approach continues to evolve to integrate its planning. One focus of the MTEP 11 planning effort is to refresh a set of available future scenarios to capture potential energy policy outcomes.

In recognition of the uncertainty of energy policies and availability of associated resources in the 15-20 year time frame, a multi-dimensional regional resource forecasting is required, to identify what's necessary to supplement generation interconnection queue capacity. The regional resource forecast model determines, on a consistent least-cost basis, the type and timing of new generation and energy efficiency needs driven by energy policies and other long-term integrated resource plans generation not reflected in the current queue.

This section summarizes Steps 1 and 2 of the integrated transmission planning process, where regional resource forecasting is performed using scenario-based analysis to identify and site generation for several potential future scenarios. With the increasingly interconnected nature of organizations and federal interests, forecasting greatly enhances the planning process for electricity infrastructure. The futures analysis provides information on the cost and effects of environmental legislation, wind development, demand-side management programs, legislative actions or inactions and many other potential scenarios which can be postulated and performed.

Future scenarios and assumptions for the models for Steps 1 and 2 were developed with stakeholder involvement. The MISO Planning Advisory Committee (PAC) provided the opportunity for stakeholder input necessary to comply with FERC Order 890 planning protocols. Scenarios have been developed and subsequently refreshed to reflect shifts in energy policies in the last few years, in coordination with the committee, through efforts in MTEP09, MTEP10, the Joint Coordinated System Planning and the Eastern Wind Integration and Transmission Study.

In MTEP11, four primary future scenarios were used for robustness (best-fit) testing of proposed transmission plans associated with major studies, such as the 2011 Candidate MVP Portfolio study and transmission project evaluation under various market efficiency studies. New to MTEP 11 future scenario development is the inclusion of Global energy study estimated DSM projections, which are offered as demand side resources to compete against conventional supply-side resources based on economics. A notable portion of capacity needs are being met through demand side programs which are economically chosen for each of the MTEP11 futures.

MISO consulted with Global Energy Partners LLC (Global) in 2010 to perform an evaluation of Demand Response (DR) and Energy Efficiency (EE) potential in the MISO footprint. This effort developed a 20-year forecast for the MISO region and the rest of the Eastern Interconnection. This study demonstrated the enhanced modeling capabilities of DSM programs in the Electric Power Research Institute's (EPRI) Electric Generation Expansion Analysis System (EGEAS), the regional resource forecasting software tool used to assist in long term resource planning as part of Step 1 of the MTEP seven-step process. The study found DR and EE programs could significantly affect the load growth and future generation needs of the system. In MTEP11, Global provided DR and EE estimates for EGEAS to perform regional resource forecasting. An associated siting methodology for chosen demand response programs was also developed to facilitate business case development of proposed transmission plans. See the links below for more complete study results:

Volume 1: https://www.misoenergy.org/_layouts/MISO/ECM/Redirect.aspx?ID=78818

Volume 2: https://www.misoenergy.org/_layouts/MISO/ECM/Redirect.aspx?ID=78819

The assumptions for the models and the results presented in this document reflect the prices and policies leading to publication. MISO recognizes changes have occurred in many of these assumptions and will continue to update.

A full discussion of the assumptions and results of Steps 1 and 2 of the economic analysis process can be found in Appendix E2 of this document.

The following describes the various future scenarios in greater detail:

- The Business As Usual with Low Demand and Energy Growth Rates future scenario is considered the status quo scenario and continues the impact of the economic downturn on demand, energy and inflation rates. This scenario models the power system as it exists today with reference values and trends, with the exception of demand, energy and inflation growth rates. The demand, energy and inflation growth rates are based on recent historical data and assume existing standards for resource adequacy, renewable mandates and that environmental legislation remains unchanged. Renewable Portfolio Standard (RPS) requirements vary by state, and have many potential resources that can apply.
- The Business As Usual with Historical Demand and Energy Growth Rates future scenario is considered a status quo scenario, with a quick recovery from the economic downturn in demand and energy projections. This scenario models the power system as it exists today with reference values and trends—with the exception of demand and energy growth rates—and is based on recent historical data prior to the economic downturn. This scenario assumes existing standards for resource adequacy renewable mandates and that environmental legislation will remain unchanged. Renewable Portfolio Standard (RPS) requirements vary by state and have many potential renewable resources that can apply.
- The Combined Energy Policy future scenario was developed to capture the effects of multiple future policy scenarios into one future. This scenario includes a federal Renewable Portfolio Standard, a carbon cap and trade, smart grid and electric vehicles. The RPS is modeled assuming all states are required to meet a 20 percent federal RPS mandate by 2025. The carbon cap is modeled after the Waxman-Markey bill, which requires an 83 percent reduction of CO2 emissions from a 2005 baseline by the year 2050. That is achieved through a linear reduction from 2011 to 2050 with mid point goals of 3 percent in 2015, 17 percent in 2023 and 42 percent in 2033. This future employs coal retirements, with the oldest and least efficient coal units retired first. Smart grid is modeled by reducing the demand growth rate, assuming that a higher penetration of smart grid will lower the overall growth of demand. Electric vehicles are modeled by increasing the energy growth rate. They are assumed to increase off-peak energy usage and—increase the overall energy growth rate.
- The Carbon Constraint future scenario models a declining cap on future CO2 emissions. It is modeled in the same way as in the Combined Energy Policy future scenario. Renewable Portfolio Standard (RPS) requirements vary by state, and have many potential renewable resources that can apply.

Refer to Table 4.3-1, which illustrates the key input variables for each future scenario. Each future has a unique set of input assumptions driven by a range of policy decisions. With extensive stakeholder involvement under the Planning Advisory Committee, the consensus has been reached with respect to the methodology for determining baseline demand and energy growth rates for each of MTEP11 futures. The demand and energy growth rates were then adjusted to reflect the economically chosen DSM programs during the EGEAS capacity expansion analyses, which offer Global energy study estimated DSM projections as demand side resource options for each scenario. The resulted effective demand and energy growth rates for the four MTEP 11 futures are tabulated as follows:

Future scenarios	MISO wind penetration (GW)	Effective Demand Growth Rate	Effective Energy Growth Rate	Gas price	Carbon Cost / reduction target
Business As Usual with Low Demand & Energy	29	0.78%	0.79%	$5.00	None
Business As Usual With Historical Demand & Energy	32	1.28%	1.42%	$5.00	None
Combined Energy Policy	40	0.52%	0.68%	$8.00	$50/ton (42 percent by 2033)
Carbon Constraint	27	0.03%	0.05%	$8.00	$50/ton (42 percent by 2033)

Table 4.3-1: Future scenario input assumptions

5. MISO resource assessment

5.1 Reserve margin requirements

As directed under Module E of the MISO Tariff, the system planning reserve is calculated by determining the amount of generation required to meet a 1 day in 10 years (0.1 day per year) Loss of Load Expectation (LOLE). The MISO Planning Reserve Margin (PRM), based on the system-wide MISO concident load peak and resources based on their installed capacity rating (that is, PRMSYSIGEN), for the 2011/2012 Planning Year (PY) is 17.40 percent, increasing 2 percentage points from the 2010/2011's 15.40 percent. The Planning Reserve Margin based on Unforced Capacity (PRM_UCAP) declined from 4.50 percent to 3.81 percent, and applies to the non-coincident peak of each Load Serving Entity (LSE).

The majority of the 2 percent PRMSYSIGEN increase can be attributed to three factors. In approximate values: The increased uncertainty of forecasting the load contributed to 0.8 percent of the increase; the forced outage rates of resources were up and contributed to 0.7 percent of the increase; and the external system support was found less effective and contributed to 0.6 percent of the increase. While these three factors contributed a total increase of 2.1 percent, other factors contributed an offsetting decrease of about 0.1 percent.

The system planning reserve is calculated by determining the amount of generation required to meet a 1 day in 10 years (0.1 day per year) Loss of Load Expectation (LOLE). The MISO Planning Reserve Margin (PRMSYSIGEN) for the 2011/2012 Planning Year (PY) is 17.40 percent.

Unlike previous years, the 2011 PRM reflects no component due to transmission congestion. For example, had there been no congestion in the two previous years, the PY 2009 value would have been 0.6 percent marginally lower than its 15.4 percent, and the PY 2010 value would have been lower by 0.4 percent. All previous congestion was due to effects of bottled-up resources that could not likely be counted as available to serve system wide load. Like previous studies, the 2011 MISO LOLE found no evidence of load pockets where the lack of resources would require importing more than the Transmission System's ability to deliver.

Benefits associated with system-wide diversity must be considered since compliance with Module E Resource Adequacy Requirements is based on representing each Load Serving Entity's (LSE) non-coincident monthly peak demand on the appropriate individual CPnodes. MISO has determined that a diversity factor of 4.55 percent will be used for the 2011/12 Planning Year. This is an increase from the 3.00 percent diversity factor used last year. MISO believes the 1.55 percent increase in diversity factor is appropriate in order to appropriately capture the diversity of all LSEs within the MISO BA without significantly increasing the loss of load risk to the MISO system. After consideration for load diversity, the PRM is based on the Load Serving Entity's non-coincident peak and resources based on their installed capacity rating (that is, PRMLSEIGEN), and the value is 12.06 percent.

Projected planning reserve margin requirements for 2012 through 2020 are also calculated in the LOLE Study and are utilized in Section 5.2 as a comparison to the projected reserves. The complete 2011 report on MISO Loss of Load Expectation (LOLE) study can be found at the following link:

https://www.midwestiso.org/Library/Repository/Meeting percent20Material/Stakeholder/LOLEWG/2011/2011 percent20LOLE percent20Report.pdf

5.2 Long term resource assessment

Although current load and resource forecasts do not predict insufficient capacity within the next 10 years, various uncertainties could change that forecast. Less capacity expansion than expected, increased level of generation unit retirements, uncertainty around load forecast, increased forced outage rates due to an aging generation infrastructure and possible lack of external support - are all uncertainties which may negatively affect future Resource Adequacy. The risk of these uncertainties on reliability is assessed through Loss of Load Expectation (LOLE) analysis and the results summarized in this section.

Absent EPA regulations, MISO projects sufficient capacity relative to demand over the next 10 years ……

With EPA regulations and no replacement capacity, the system reserve margin could decrease to 6.9 percent in 2021

Of specific interest is the uncertainty around the pending EPA regulations, one of which has been finalized. The passage of these regulations could lead to increased unit retirements throughout the MISO region; quickly eroding reserve margins from their projected levels.

Recent proposals from the Environmental Protection Agency (EPA) and the uncertainty around carbon control may force retirements of generation within the MISO footprint, which would quickly erode reserve margins from their projected levels. With the anticipated decline of coal generation due to EPA regulations, environmental and economic trends; approximately 3,000 MW of coal generation could be retired in the MISO system by 2015, for a natural gas cost of $4.5/MMBtu and no carbon cost applied. These coal retirements could grow to 12.6 GW of generation, at a carbon cost of $50/ton. If no replacement capacity is identified for Resource Adequacy purposes, then the system reserve margin could decrease to 6.9 percent in 2021. Table 5.2-1 below shows the impact of these scenarios on 2016 and 2021 reserve margins. Refer to MTEP11 chapter 4.2 for more information about the EPA Regulation Impact Study.

Reserve margin	3 GW coal generation retirements		12.6 GW coal generation retirements	
	2016	2021	2016	2021
Projected reserve margin (percent)	19.9	16.2	10.1	6.9
Planning reserve margin requirements (percent)	17.4	18.2	17.4	18.2

Table 5.2-1: Potential EPA impacts on resource adequacy

Absent EPA regulations, MISO projects sufficient capacity relative to demand over the next 10 years. The following section summarizes this situation, and provides forecasts of future demand, capacity, and reserves through 2021. Risks, such as the proposed EPA regulations, are also examined to gauge the potential affect on resource adequacy.

The MISO 2011 Long Term Resource Assessment report will be posted at:
https://www.misoenergy.org/Planning/SeasonalAssessments/Pages/SeasonalAssessments.aspx

Refer to Appendix E6 for a more detailed discussion and breakdown of the data presented below.

Forecasted demand

MISO Load Serving Entities are required by current resource adequacy practices to report their non-coincident peak forecasted demand to MISO out 10 years. These demands were collected from the Module E Capacity Tracking (MECT) tool and aggregated to a MISO level. MISO's total internal demand and net internal demand for the 10th-year peak are expected to be approximately 101 GW and 97 GW, respectively. The forecasted MISO annual growth rate from 2012-2021 is approximately 1.0 percent, a slight increase from the 2010 LTRA.

Demand (MW)	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Unrestricted non-coincident	97,206	99,149	99,560	100,313	101,034	101,761	102,574	103,515	104,475	105,520
Estimated diversity	4,230	4,315	4,333	4,366	4,397	4,429	4,464	4,505	4,547	4,592
Total internal	92,976	94,834	95,227	95,947	96,637	97,332	98,110	99,010	99,929	100,928
Direct control load management	1,118	1,118	1,118	1,118	1,118	1,118	1,118	1,118	1,118	1,118
Interruptible load	3,093	3,093	3,093	3,093	3,093	3,093	3,093	3,093	3,093	3,093
Net internal demand	88,765	90,623	91,016	91,736	92,426	93,121	93,899	94,799	95,718	96,717

Table 5.2-2: 2012-2021 forecasted demand

Forecasted capacity

MISO's total designated capacity for the 10th year peak is expected to be approximately 115 GW. A total of 2,549 MW of Generation Interconnection queue projects[33] are expected to be available for the 10th year peak based on a thorough study of the queue. Behind-the-Meter Generation (BTMG) is treated as a capacity resource and not a load modifier to align with the current resource adequacy practices outlined within Module E and standard industry practice.

Capacity (MW)	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Internal designated capacity resources	103,698	103,698	103,698	103,698	103,698	103,698	103,698	103,698	103,698	103,698
External designated capacity resources	4,894	4,894	4,894	4,894	4,894	4,894	4,894	4,894	4,894	4,894
Behind-the-meter generation	3,608	3,608	3,608	3,608	3,608	3,608	3,608	3,608	3,608	3,608
Future planned resources	495	862	881	904	986	986	986	2,549	2,549	2,549
Total designated capacity	112,695	113,062	113,081	113,104	113,186	113,186	113,186	114,749	114,749	114,749

Table 5.2-3: 2012-2021 forecasted capacity

Forecasted reserves

The target reserve margin requirement varies throughout the 10-year period, from 17.4 percent in 2012 to 18.2 percent in 2021. The reserve margins projected through the assessment time vary from 27.0 percent to 18.6 percent for 2012-2021. This is in excess of the MISO target reserve margins through 2019.

Reserve margin	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Reserve margin (MW)	23,930	22,438	22,064	21,368	20,760	20,065	19,287	19,950	19,031	18,032
Reserve margin (percent)	27.0	24.8	24.2	23.3	22.5	21.5	20.5	21.0	19.9	18.6
Planning reserve margin requirement (percent)	17.4	17.3	17.3	17.2	17.4	17.8	17.8	18	18.2	18.2

Table 5.2-4: 2012-2021 forecasted reserves

[33] Generator Interconnection Queue data as of March 28th, 2011

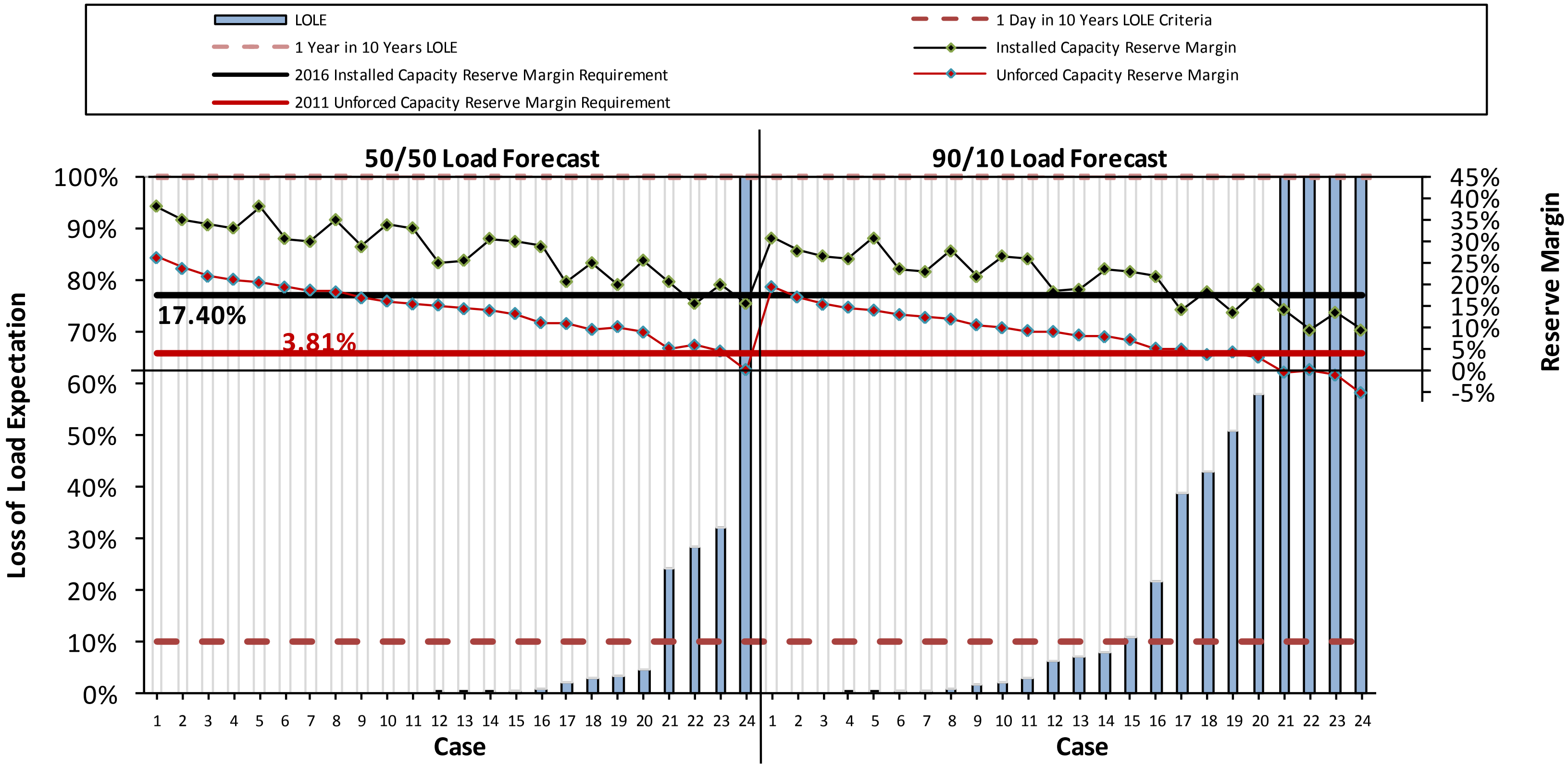
Forecasted risk

To quantify effects each future uncertainty has on the 50/50 and 90/10 load level scenarios, 48 sensitivities were run. The various sensitivities simulate increased forced outage rates across the footprint, no load modifying resources, no external support and increased unit retirements due to the pending EPA regulations (3 GW of coal retirements and 12.6 GW) for both 2016 and 2021. In each case, variables were changed to observe the effects on Loss of Load Expectation (LOLE).

Both 2016 and 2021 had 48 identical cases created to observe its effect on LOLE. An additional eight cases were run for 2021 based on the premise that Generation Interconnection gas-fired projects, approximately 5,000 MW, would have a 100 percent chance of being built, if MISO experiences 12.6 GW of early coal retirement due to EPA regulations.

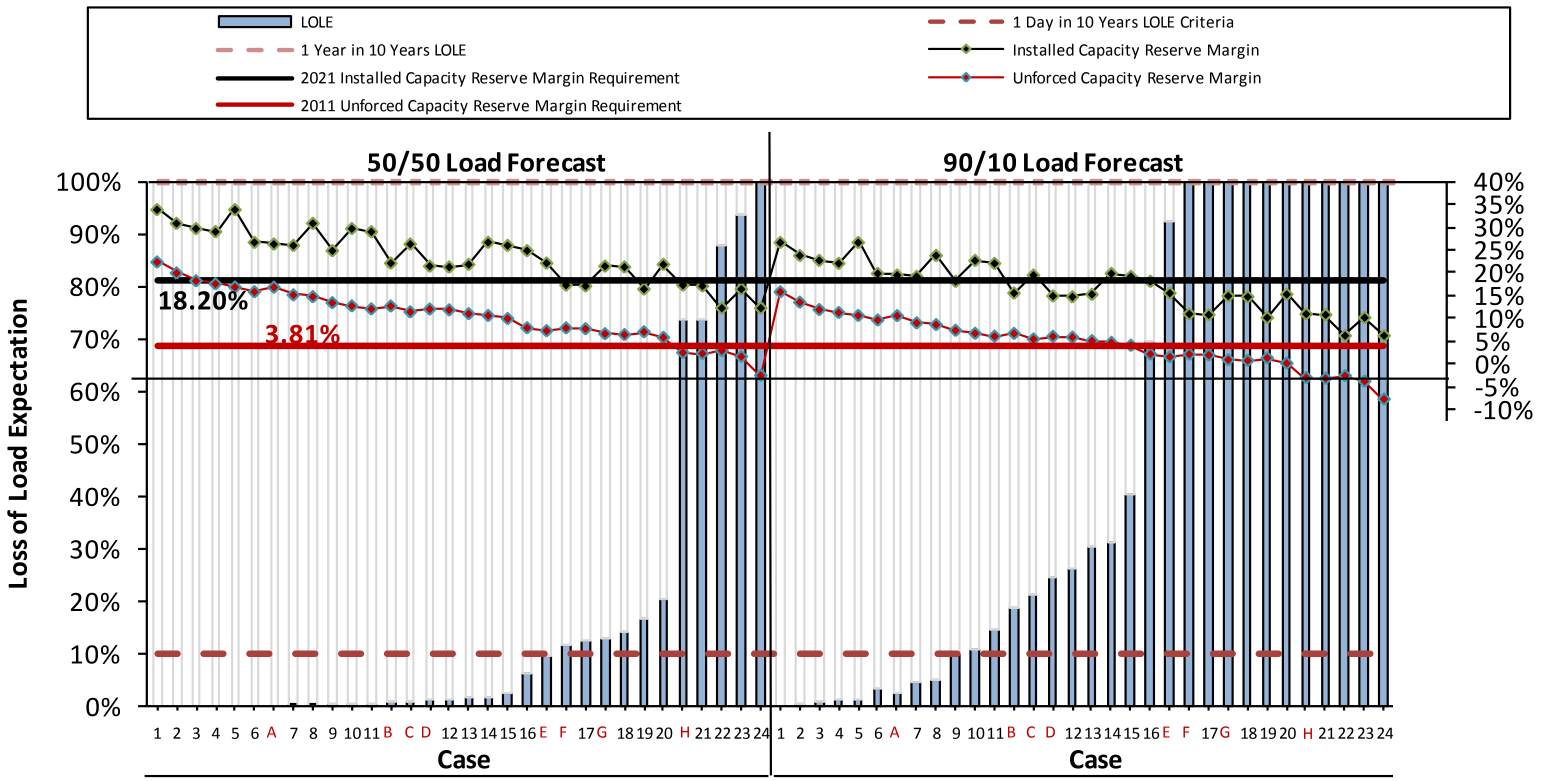
An LOLE of one day in 10 years is an industry standard benchmark for minimum system reliability. When studying the 2016 and 2021 systems, with no early coal facility retirements due to environmental regulations, the analysis shows only a few cases exceeding this benchmark for each year. It should be noted that this is only when unlikely significant impacts occur to the system, such as a 90/10 load forecast with either combination of no external support, no load modifying resources, or 50 percent higher forced outage rates.

A summary of results for 2016 and 2021 is given in figures 5.2-1 and 5.2-2, respectively. The summary shows the LOLE and corresponding reserve margin for each case run in the analysis. Uncertainty exists given the potential effect of pending environmental legislation on MISO's system. The results indicate risk exponentially exceeding one day in 10 years given increased early retirement of MISO base generation, combined with current future generation resources expected to be built in the Generation Interconnection Queue.



1	Base	9	(EXT), (LMR)	17	(12.6 GW), (LMR)
2	3 GW EPA Retire (3 GW)	10	(FOR), (LMR)	18	(12.6 GW), (FOR)
3	No Load Modifying Resources (LMR)	11	(FOR), (EXT)	19	(12.6 GW), (EXT)
4	No External Resources (EXT)	12	12.6 GW EPA Retire (12.6 GW)	20	(3 GW), (FOR), (LMR), (EXT)
5	50% Increased Forced Outage Rates (FOR)	13	(3 GW), (EXT), (LMR)	21	(12.6 GW), (FOR), (LMR)
6	(3 GW), (LMR)	14	(3 GW), (FOR), (LMR)	22	(12.6 GW), (EXT), (LMR)
7	(3 GW), (EXT)	15	(3 GW), (FOR), (EXT)	23	(12.6 GW), (FOR), (EXT)
8	(3 GW), (FOR)	16	(FOR), (LMR), (EXT)	24	(12.6 GW), (FOR), (LMR), (EXT)

Figure 5.2-1: Year 2016 LOLE sensitivity to variable adjustment



1	Base	B	(12.6 GW) (Gas), (LMR)	18	(12.6 GW), (FOR)
2	3 GW EPA Retire (3 GW)	C	(12.6 GW) (Gas), (FOR)	19	(12.6 GW), (EXT)
3	No Load Modifying Resources (LMR)	D	(12.6 GW) (Gas), (EXT)	20	(3 GW), (FOR), (LMR), (EXT)
4	No External Resources (EXT)	12	(12.6 GW)	H	(12.6 GW) (Gas), (FOR), (LMR), (EXT)
5	50% Increased Forced Outage Rates (FOR)	13	(3 GW), (EXT), (LMR)	21	(12.6 GW), (FOR), (LMR)
6	(3 GW), (LMR)	14	(3 GW), (FOR), (LMR)	22	(12.6 GW), (EXT), (LMR)
A	12.6 GW EPA Retire (12.6 GW) w/Partial Gas Replacement (Gas)	15	(3 GW), (FOR), (EXT)	23	(12.6 GW), (FOR), (EXT)
7	(3 GW), (EXT)	16	(FOR), (LMR), (EXT)	24	(12.6 GW), (FOR), (LMR), (EXT)
8	(3 GW), (FOR)	E	(12.6 GW) (Gas), (FOR), (LMR)		
9	(EXT), (LMR)	F	(12.6 GW) (Gas), (EXT), (LMR)		
10	(FOR), (LMR)	17	(12.6 GW), (LMR)		
11	(FOR), (EXT)	G	(12.6 GW) (Gas), (FOR), (EXT)		

Figure 5.2-2: Year 2021 LOLE sensitivity to variable adjustment

6. Near and long-term reliability analyses

MISO performs an annual Reliability Assessment through its MISO Transmission Expansion Plan (MTEP).

MISO also conducts Baseline Reliability studies in support of MTEP to ensure the Transmission System is in compliance with two entities: applicable national Electric Reliability Organization (ERO) reliability standards and reliability standards adopted by Regional Reliability Organizations applicable within the Transmission Provider region. MISO's studies typically include simulations to assess transmission reliability in the near and long term, using power flow models representing conditions two, five and 10 years out.

MISO identified various transmission issues through the studies. Planned and proposed transmission upgrades needed to mitigate identified issues are included in the 2011 MISO Transmission Expansion Plan. Planned transmission upgrades are in MTEP Appendix A following MISO Board of Directors approval. Proposed transmission upgrades are in MTEP Appendix B.

In MTEP 2011, MISO conducted regional studies using the following base models:

- 2013 Summer Peak
- 2016 Summer Peak
- 2016 Shoulder Peak
- 2016 Light Load
- 2021 Summer Peak
- 2021 Shoulder Peak

MISO member companies and external RTO companies use firm drive-in and drive-out transactions to determine net interchanges for these models. These are documented in the 2011 series Multi-Area Modeling Working Group (MMWG) interchange. MISO determines total generation necessary to be dispatched for each of the models after aggregating total load with input received from Transmission Owners.

Generation dispatch within the model building process has become complex. Growing inputs from various planning processes and expected shifts in generation portfolio within the MISO footprint are big reasons.

Inputs in the dispatching process:

- Generation retirements
- Generator market cost curves
- Generator deliverable capacity designation
- Wind generation output modeling under various system conditions
- Incremental generation needed to meet applicable renewable mandates

Scenario	West Sub Region		Central Sub Region		East Sub Region		Total Load (MW)	Total Generation (MW)	Total MISO Interchange (MW)
	Load (MW)	Generation (MW)	Load (MW)	Generation (MW)	Load (MW)	Generation (MW)			
2013 Summer Peak	41,515	40,065	42,004	39,356	24,906	25,896	108,425	105,317	-3,108
2016 Summer Peak	43,271	41,183	42,736	40,931	25,559	27,809	111,567	109,923	-1,644
2016 Shoulder Peak	31,529	32,945	33,467	32,659	21,294	20,847	86,289	86,451	162
2016 Light Load	22,262	20,778	28,185	29,264	9,883	9,511	60,330	59,553	-777
2021 Summer Peak	45,921	41,378	41,126	41,595	26,768	26,816	113,815	109,788	-4,027
2021 Shoulder Peak	34,557	37,749	33,876	30,757	19,932	18,630	88,365	87,136	-1,229

Table 6-1: MTEP11 models summary

Associated power flow models in MISO Planning Regions are modeled above. Loads are received directly from members. Generation dispatched by MISO in each region is derived from a number of factors, such as modeling of wind. The 5- and 10-year out models have wind zones dispatched in wind integration studies (Regional Generation Outlet Study and proposed Multi Value Project study). Wind zone modeling is based on wind generation required to meet state renewable portfolio standards. Wind projects required to meet state renewable portfolio standards are incrementally needed beyond existing and planned wind with signed interconnection agreements. These wind zones are spread throughout the MISO footprint. The size of these wind zones is determined in two ways: 1) consideration of existing and planned wind near the region and 2) aggregate MISO renewable portfolio standards requirements in 5- and 10-year scenarios. MISO models all planned and incremental wind-existing required to meet state mandates at 20 percent of capacity in summer peak and 90 percent of capacity in shoulder and light load scenarios.

A total of 38 Baseline Reliability Projects (6-MISO East, 6-MISO Central and 26-MISO West Region) and 27 Generation Interconnection projects (3-MISO East, 8-MISO Central and 16-MISO West Region), adding up to $702 million, are being recommended in the current planning cycle. More than $676 million in sub-transmission investment is also planned.

Near term assessment

Near term assessment involves study of the MTEP 2- and 5-year out models. A total of 38 Baseline Reliability Projects (6-MISO East, 6-MISO Central and 26-MISO West Region) and 27 Generation Interconnection Projects (3-MISO East, 8-MISO Central and 16-MISO West Region), adding up to $693 million, are recommended in the planning cycle. More than $685 million in sub-transmission investment is also planned. Detailed documentation of these plans is included in Appendix D1.

Straits power flow control – back to back HVDC voltage source converter

A notable near term Baseline Reliability plan in MTEP11 is the Straits HVDC project. Through the years, power transfers through transmission in the Upper Peninsula (UP) of Michigan have increased so much that re-dispatching local generation around the area's constraints is now a formidable task. The peninsula's system has been split for extended periods in the past few years. The split was created by opening the electrical connections between Indian Lake and Hiawatha 138 kV stations. Consequently, the Transmission System east of Hiawatha is supplied by local generation and lower Michigan through two Straits 138 kV cables. While operating in this mode for extended periods has effectively trapped through flows, performing maintenance on METC lines in lower Michigan has become harder because of the eastern Upper Peninsula's reliance on METC tie lines.

The planned addition of 200 MW Straits back-to-back DC Voltage Source Converter (VSC) will eliminate the need to split the system to prevent overloads. This improves reliability by keeping the system intact. This will improve system reliability. Modern voltage source converter HVDC technology, unlike line commutated converter HVDC technology, provides dynamic reactive power to improve system voltages. It can also be tuned to improve system damping during system swings. This VSC is expected to be able to produce approximately 100 MVARs of reactive power.

All transmission plans in the final NERC Reliability Assessment include additional planned and proposed transmission projects or operating steps. They are necessary to meet system performance requirements of applicable standards. Noteworthy MISO near term issues within the RFC footprint have been documented below and grouped into the local regions:

Minnesota

Most constraints in Minnesota are on the 115 kV transmission lines. In most cases, use of existing Special Protection Schemes (SPS) and Operating Guides (Op-Guide) alleviate thermal issues. Coal Creek runback, Taconite Harbor special protection schemes and Ramsey special protection schemes are notable SPS and Operating Guides used in the constraint mitigation.

Iowa

Generation re-dispatch mitigates most identified Iowa constraints. In almost all cases, these constraints are driven by wind. While in the long term, proposed Multi Value Projects will provide needed outlet for these wind resources, in the near term they will need to be curtailed to alleviate thermal constraints.

Southeast Wisconsin

Category C events (See Appendix E1 for descriptions of NERC TPL standards) drive a number of southeast Wisconsin generator outlet issues. Generation curtailment associated with outages local to the generators will be used to relieve these constraints.

Marquette County-Michigan

Thermal loading issues in Marquette County in the Upper Peninsula of Michigan driven by Category C events were identified in both 2- and 5-year-out models. Local mining load curtailment will be used to mitigate these constraints.

Illinois

A few 138 kV constraints in the Mount Vernon and St. Louis metropolitan areas are thermal constraints driven by Category C events. These conditions will be mitigated by reconductoring of a few sections and load curtailment at some stations. Constraints electrically tied closely to the Taum Sauk Pumping Station are identified in the shoulder scenario with Taum Sauk operating in a pumping mode. The situation will be mitigated by a curtailment of interruptible pumping load. Generation redispatch will mitigate a majority of the remaining constraints.

Tippecanoe County-Indiana

A number of 138 kV loadings here are driven by wind. Proposed Multi Value projects, when approved, will alleviate loadings in the long term planning horizon. Use of wind curtailment through established Operating Guides will be employed to alleviate issues in the near term

Cincinnati-Ohio

A couple of 138 kV circuits on the east side of the metropolitan area are overloaded for various category C events. Operating guides involving load switching and operating lines radially will alleviate the thermal constraints in the near term. A proposed project to reconductor circuits is being evaluated for the long term.

Long term assessment

Long term assessment primarily focuses on reliability issues driven by renewable generation. In addition to existing and planned wind, an incremental 8.5 GW of nameplate capacity is needed in the 10-year planning horizon to meet renewable mandates. The mandates grow further to 10.7 GW in the 15-year out horizon. Growth in wind within five years is compelling wind curtailments. These curtailments will be significant in the long term. The proposed Multi Value Project Study (see Chapter 4.1) shows a possible curtailment of more than 34 TWHr wind energy, in lieu of no long term transmission plans to integrate wind. This equates to about 63 percent of the MISO renewable portfolio standards requirement. As part of the MVP Study, significant transmission (about $5 billion) is planned in the current planning cycle. Though primarily intended to alleviate wind driven constraints in MISO, these projects provide long term help by offloading the underlying 100 kV system, and providing increased outlet for conventional generation as well. These CMVP projects mitigate thermal constraints on about 500 branches for more than 6,400 category B and C contingent events, encompassing study of shoulder and summer peak scenarios.

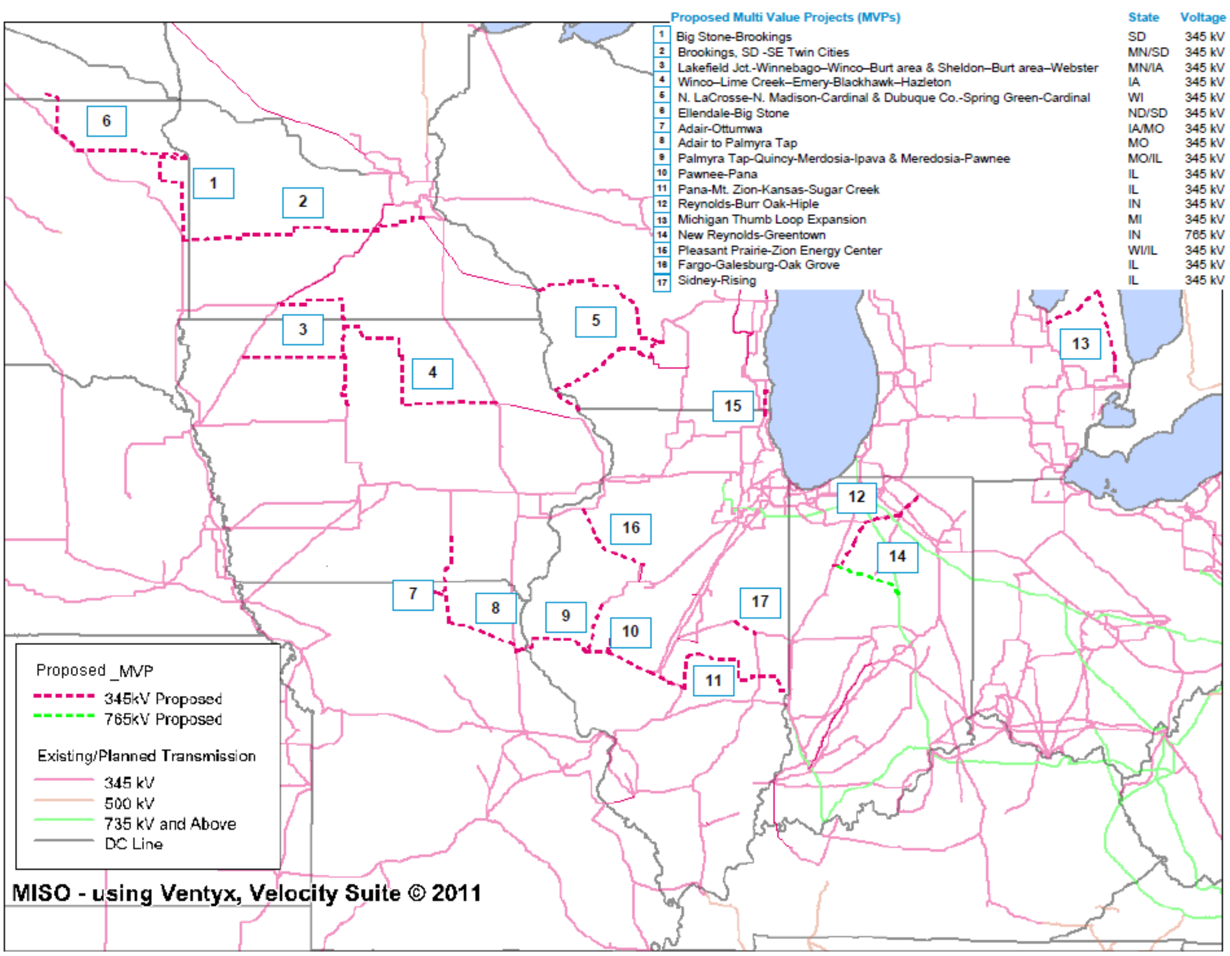


Figure 6-1: 2011 Proposed MVP portfolio

A brief summary of these new plans is documented below:

Ellendale to Big Stone to Brookings

A new line planned from North Dakota into Minnesota provides an outlet to North Dakota wind by directly transferring wind energy at 345 kV, thus offloading the existing 230 kV circuits.

Brookings to Twin Cities

In addition to transferring wind from North Dakota, this new 345 kV line helps transfer additional southwestern Minnesota wind into Minneapolis-St. Paul. Through various transformations throughout the path, this circuit provides on and off ramps for power transfer.

North LaCrosse to North Madison to Cardinal

This new transmission, a continuation of the northern 345 kV path, connects the North Lacrosse station at the Minnesota-Wisconsin border into the Madison load center.

Pleasant Prairie to Zion Energy Center

Creating a new tie line between American Transmission Company (ATC) and Commonwealth Edison (ComEd), this new 345 kV circuit provides an outlet for southeast Wisconsin generation noted in the near term assessment, in addition to allowing wind energy transfer from the Dakotas and Minnesota.

Lakefield to Winnebago to Winco-Burt, Lime Creek to Emery to Blackhawk to Hazleton, Sheldon to Burt to Webster 345kV

These lines facilitate transfer of wind from MISO's West Region closer to large load centers in Illinois and Wisconsin by connecting existing wind heavy areas around Lakefield and Sheldon, and further accessing wind in central Iowa from the Lime Creek area to Hazleton. It provides on and off ramps for power transfer through intermediate transformations.

Dubuque County to Spring Green to Cardinal and Oak Grove to Galesburg to Fargo

Both projects, one connecting to Madison, Wisconsin; and the other to the northern Illinois station at Fargo, provide an outlet for the Western Region wind and connections to load centers. The two projects also help offload transmission constraints out of the Quad Cities Station.

Ottumwa to Adair to Palmyra Tap

This new line provides an outlet for a wind zone in Missouri, and offloads transmission constraints driven through transfers between Iowa and Illinois.

Palmyra Tap to Pawnee to Sugar Creek

This 300 mile line connects Palmyra Tap station at the Missouri-Illinois border to Sugar Creek at the Illinois-Indiana border. The project helps facilitate wind energy transfer between MISO's West and East planning regions.

Sidney to Rising

This new line helps offload underlying transmission and facilitates power transfer between Illinois and Indiana by closing a short electrical distance between two existing 345 stations, providing increased reliability between the states.

Reynolds to Hiple

This new circuit offloads the existing 138 kV parallel circuits by connecting Reynolds station in Indiana's wind heavy Tippecanoe County to Hiple in northeast Indiana.

Reynolds to Greentown

This 765 kV circuit helps further offload existing transmission by creating a new 765 kV station at Reynolds and transferring wind to the closest existing 765 kV station at Greentown. The circuit significantly reduces loadings on 138 kV as well as 345 kV transmission network in Indiana.

6.1 Reliability analysis results

The results of MTEP11 Reliability Analyses are included in Appendix D.2–D.8 and posted at the Midwest ISO File Transfer Protocol (FTP) site at ftp://mtep.midwestiso.org/mtep11/. MISO Planning Regions are separated into West, Central and East. Refer to Table 6.1-1-2 on the following pages, which shows generation, load, losses and interchange modeled in each of the five planning models used in MTEP11 Reliability Analysis.

Planning Region	BA Name	2013 Summer Peak			
		Generation	Load	Loss	Interchange
East	NIPSCO	3,149	3,716	50	-617
	METC	12,730	9,722	317	2,691
	ITCT	10,017	10,883	218	-1,084
Central	HE	1,249	827	34	388
	DEI	6,716	7,980	307	-1,577
	Vectren	1,561	1,708	22	-169
	DEO&K	4,656	5,561	133	-1,042
	IP&L	3,371	3,312	72	-17
	BREC	1,660	1,638	10	11
	CWLD	28	266	1	-239
	AmerenMO	9,350	9,251	148	-49
	AmerenIL	9,948	9,867	186	-104
	CWLP	562	330	3	230
	SIPC	256	345	5	-94
West	WEC	7,208	7,067	142	-9
	XEL	8,704	10,277	267	-1,846
	MP	2,632	1,465	77	1,090
	SMMPA	176	556	1	-381
	GRE	2,960	2,787	87	83

Planning Region	BA Name	2013 Summer Peak			
		Generation	Load	Loss	Interchange
	OTP	1,250	1,702	74	-527
	ALTW	4,056	3,895	73	88
	MPW	242	161	1	80
	MEC	6,294	4,716	93	1,485
	MDU	161	548	9	-395
	DPC	1,215	926	62	228
	ALTE	2,710	2,540	92	75
	WPS	2,164	2,782	71	-691
	MGE	260	795	12	-547
	UPPC	34	224	16	-206

Table 6.1–1: Near term model (2013) generation, load, losses and interchange results by balancing area

Planning Region	BA Name	2016 Summer Peak				2016 Shoulder Peak				2016 Light Load			
		Generation	Load	Loss	Interchange	Generation	Load	Loss	Interchange	Generation	Load	Loss	Interchange
East	NIPSCO	3,150	3,837	52	-739	1,436	2,953	49	-1,565	2,003	2,092	36	-126
	METC	12,806	9,971	299	2,537	7,827	8,351	231	-756	2,347	3,602	126	-1,381
	ITCT	11,853	11,165	236	452	11,584	9,475	235	1,874	5,161	3,908	119	1,135
Central	HE	1,443	827	40	576	1,207	827	28	352	1,625	827	25	773
	DEI	6,846	8,138	307	-1,606	4,863	5,972	185	-1,301	3,485	3,803	82	-408
	Vectren	1,591	1,708	22	-139	899	1,708	26	-835	1,747	1,708	21	19
	DEO&K	4,656	5,569	130	-1,047	3,946	4,040	76	-174	3,169	2,514	42	609
	IP&L	3,415	3,456	73	-118	2,218	2,417	50	-253	1,179	1,174	16	-15
	BREC	1,719	1,671	12	37	1,259	1,473	12	-225	1,449	1,451	13	-15
	CWLD	30	351	3	-325	30	254	2	-225	24	173	1	-150
	AmerenMO	9,513	9,351	172	-10	6,806	7,510	134	-838	7,258	7,456	113	-312
	AmerenIL	10,905	9,988	221	696	10,623	7,986	168	2,468	8,847	8,170	131	546
	CWLP	561	330	3	228	562	330	3	229	330	330	1	-2
	SIPC	253	362	5	-114	247	262	5	-19	154	133	2	19
West	WEC	7,752	7,300	145	298	6,128	5,300	108	712	2,525	3,281	69	-834
	XEL	8,426	10,602	255	-2,437	6,977	7,471	233	-733	5,005	5,392	221	-614

Planning Region	BA Name	2016 Summer Peak				2016 Shoulder Peak				2016 Light Load			
		Generation	Load	Loss	Interchange	Generation	Load	Loss	Interchange	Generation	Load	Loss	Interchange
	MP	2,594	1,525	44	1,018	1,907	1,414	39	416	1,742	1,296	82	372
	SMMPA	185	676	1	-492	43	484	1	-436	22	347	1	-325
	GRE	3,001	2,960	39	-51	1,996	2,074	23	-155	997	1,252	26	-285
	OTP	1,241	1,429	81	-270	1,032	1,016	80	-65	1,198	1,037	74	84
	ALTW	4,307	4,048	81	178	4,697	2,950	97	1,649	2,998	2,926	130	-58
	MPW	247	165	1	81	273	127	1	145	63	98	1	-36
	MEC	6,319	5,427	101	791	4,523	3,848	77	591	2,380	2,036	82	262
	MDU	188	575	9	-396	134	410	6	-283	152	292	7	-147
	DPC	1,187	1,027	60	100	561	752	41	-232	319	478	32	-192
	ALTE	2,892	2,654	87	148	2,033	1,940	64	27	1,524	1,233	37	251
	WPS	2,522	2,829	68	-377	2,603	2,143	57	402	1,789	1,328	41	418
	MGE	288	830	12	-555	10	583	11	-585	40	341	6	-308
	UPPC	35	227	14	-207	29	174	8	-152	25	116	2	-94

Table 6.1–2: Generation, load, losses and interchange results by balancing authority

Long term models

Planning Region	BA Name	2021 Summer Peak				2021 Shoulder Peak			
		Generation	Load	Loss	Interchange	Generation	Load	Loss	Interchange
East	NIPSCO	3,027	4,006	70	-1,049	1,851	4,006	81	-1,206
	METC	12,419	10,368	332	1,720	6,885	10,368	251	-1,074
	ITCT	11,370	11,744	248	-622	9,895	11,744	186	979
Central	HE	1,553	827	32	693	972	827	24	333
	DEI	7,118	6,299	256	557	4,128	6,299	226	-2,257
	Vectren	1,590	1,708	24	-142	1,235	1,708	15	-51
	DEO&K	4,426	5,200	127	-905	3,429	5,200	99	-657
	IP&L	3,247	3,684	70	-511	2,081	3,684	53	-715
	BREC	1,668	1,789	10	-132	1,307	1,789	8	-31
	CWLD	85	266	1	-182	70	266	1	-129
	AmerenMO	9,495	9,042	184	270	6,925	9,042	157	-1,200
	AmerenIL	11,469	10,635	257	577	9,939	10,635	216	1,436
	CWLP	669	330	2	336	444	330	2	197
	SIPC	277	380	6	-109	226	380	5	-62
West	WEC	7,129	7,632	154	-666	5,559	7,632	130	-124
	XEL	8,521	11,186	344	-3,015	7,542	11,186	478	-1,257

Planning Region	BA Name	2021 Summer Peak				2021 Shoulder Peak			
		Generation	Load	Loss	Interchange	Generation	Load	Loss	Interchange
	MP	2,538	1,643	95	800	2,066	1,643	84	760
	SMMPA	176	754	1	-580	99	754	1	-464
	GRE	2,793	3,199	95	-504	1,951	3,199	82	-511
	OTP	1,595	1,575	80	-61	2,256	1,575	113	966
	ALTW	4,382	4,276	102	4	5,352	4,276	148	2,024
	MPW	273	170	2	102	222	170	1	90
	MEC	6,253	5,670	106	477	6,906	5,670	146	2,516
	MDU	250	618	9	-378	427	618	9	-42
	DPC	1,148	1,105	59	-16	830	1,105	70	-61
	ALTE	3,420	2,833	92	492	1,876	2,833	87	-283
	WPS	2,486	2,910	64	-490	2,538	2,910	77	258
	MGE	385	899	12	-527	96	899	24	-560
	UPPC	30	228	7	-205	29	228	3	-147

Table 6.1–3: Long term model generation, load, losses and interchange results by balancing authority

6.2 Steady state analysis results

MTEP11 Appendix E1.1.4 lists contingencies tested in steady state analysis. Contingencies were simulated in MTEP11 2013 summer peak, 2016 summer peak, shoulder peak and light load, 2021 summer peak and shoulder peak models. All steady state analysis-identified constraints and associated mitigations are tabulated in results tables in MTEP11 Appendix D.3.

6.3 Voltage stability analysis results

MTEP11 Appendix E1.1.1 lists types of transfers tested in voltage stability analysis. The study did not find low voltage areas or voltage collapse points for critical contingencies in transfer scenarios close to the base load levels modeled in the MTEP11 2016 summer peak and shoulder peak models. A summary report with associated p-v plots is documented in MTEP11 Appendix D.4.

6.4 Dynamic stability analysis results

MTEP11 Appendix E1.1.4 lists types of disturbances tested in dynamic stability analysis. Disturbances were simulated in MTEP11 2016 light load and shoulder peak load models. The system was stable. Results tables listing all simulated disturbances along with damping ratios are tabulated in MTEP11 Appendix D.5.

6.5 Generator deliverability analysis results

Generator deliverability analysis was performed in MTEP11 to ensure continued deliverability of aggregate deliverable network resources. A total of 370 MW of deliverability is restricted due to constraints identified in MTEP11. These constraints have not been planned for in the current MTEP cycle and will be investigated in the subsequent MTEP cycle (MTEP12). This compares to more than 900 MW in MTEP10 and more than 3,000 MW of restricted deliverability in MTEP09. This progressive reduction in restricted deliverability has been accomplished through planned upgrades in past MTEP cycles.

MTEP10 Deliverability Constraint	Total Generation Restricted	Percentage of MWs Impacted	Rating (MVA)	Percent Overload	MTEP Project ID	Target Appendix MTEP11
Boone Jct.--Ft. Dodge 161 kV line	226	23 percent	147	115.8	2941	C
East Calamus--Grand Mound 161 kV line	237	24 percent	176	112.8	1619	In Service in MTEP11, A in MTEP08

Table 6.5-1: The list of mitigations for the outstanding constraints from MTEP10 that were proven effective

The description of table 6.5-2 column headings is below.

- An Overload Branch is caused by "bottling-up" of aggregate deliverable generation. Deliverability was tested only up to the granted NR (Network Resource) levels of the existing and future NR units modeled in the MTE11 2016 case.
- Use the Map ID to find an approximate location of the overloaded element on Fig. 6.5-1
- Contingency is the outage created in the overload. In some cases, the system may be system intact, so there is no outage. Detailed contingency definitions are included in the Appendix.
- Rating is the rating of the overloaded element used in the analysis. It's normal if the system is intact, but an emergency for post contingent constrained branches.
- Delta Increase is the difference in loading after ramping up generation compared to before ramping up of generation in the "gen pocket."

Overloaded Branch	Area	Map ID	Contingency	Rating (MVA)	Delta Increase
Wilmarth to Swan Lake 115 kV line	XEL	1	Wilmarth to Helena 345 kV line	110	19.19 percent
Wilmarth to Eastwood 115 kV line	XEL	1	Wilmarth to Summit 115 kV line	190.8	4.59 percent
Medford Jct. to Waseca Junction 69 kV line	ALTW	1	Loon Lake to Loon Lake Tap 115 kV line	30	8.23 percent
Turkey Hill 345/138 kV transformer[34]	AMIL	2	C-BLWN-4511 Caokia 345/138 kV transformer Cahokia to Baldwin 345 kV line	672	1.81 percent

Table 6.5-2: The MTEP11 constraints that limit deliverability of about 370 MW of Network Resources. See Appendix D6 for the detailed results with a list of impacted Network Resources.

[34] The Turkey Hill 345/138 kV transformer has a MTEP Appendix C project 3001 that will mitigate the deliverability constraint. Projects targeted as mitigation for deliverability constraints will be moved to Appendix B.

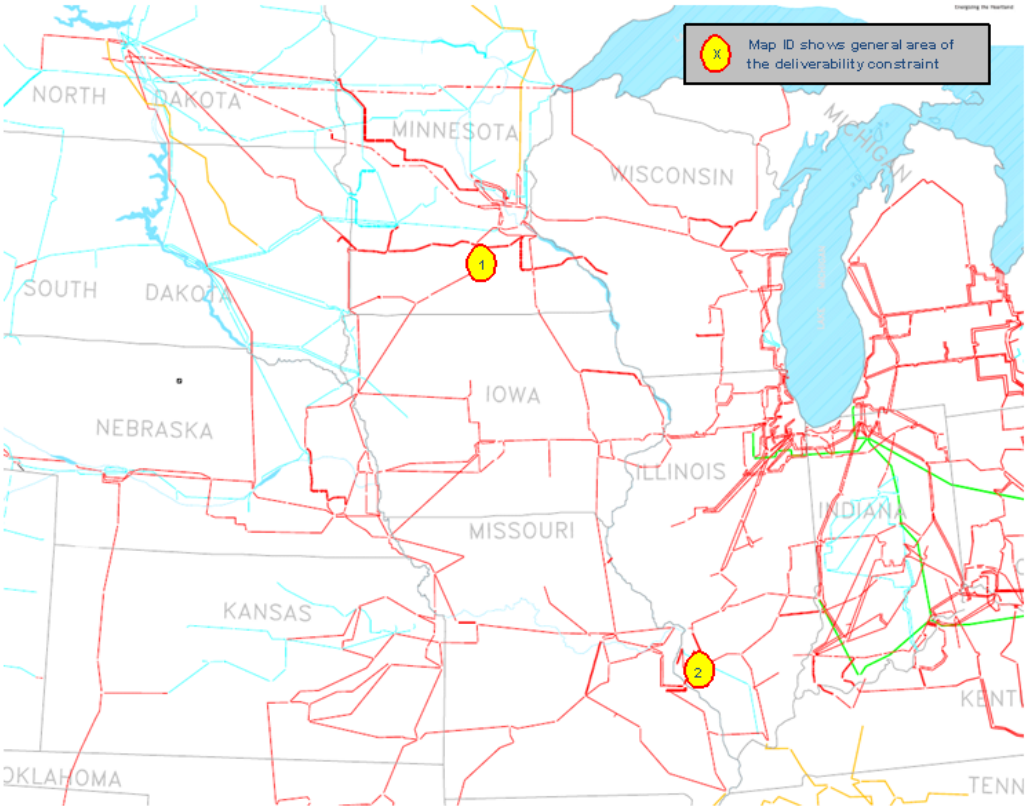


Figure 6.5-1: General location of MTEP11 2016 SUPK baseline generator deliverability constraints

MISO will create a Technical Review Group of stakeholders to address generator deliverability issues in the MTEP12 planning cycle.

6.6 Long Term Transmission Rights (LTTR)

This section documents planned upgrades to address constraints driving infeasibility of Long Term Transmission Rights. Refer to Table 6.6-1, which shows the uplift costs associated with the infeasible LTTRs in the 2011 Annual Allocation.

Year	Total Stage1A (GW)	Total LTTR Payment ($M)	Total Infeasible Uplift ($M)	Uplift Ratio
2011 Allocation	354.3	211.2	7.6	3.60 percent

Table 6.6-1: Uplift costs associated with infeasible LTTR in the 2010 annual allocation

Refer to Table 6.6-2, which further details the infeasible uplift to binding constraints from the annual auction. Binding constraints are filtered for those with values greater than $75,000. Planned mitigations have been documented against constraints where future proposed or planned upgrades have already been identified through other planning studies. MISO constraints with no identified plans in the current planning cycle result in uplift of less than $600 thousand or less than 10 percent. MISO will coordinate with its Transmission Owners on investigation of these constraints in MTEP12 planning cycle. Additionally, MISO will coordinate with adjacent RTOs on seams constraints.

Constraint	Summer 2011	Fall 2011	Winter 2011	Spring 2012	Grand Total	Planned Mitigation
'3442' (Rising 345/138 TR1 (flo) Dresden - Pontiac 345kV)	$0	$1,160,037	$245,685	$0	$1,405,721	P2239 Rising to Sidney 345kV CMVP Line ISD: 11/15/2016
'3191' (IP Rising 345/138 XFMR 1 (flo) Clinton - Brokaw 345 (IP4535))	$661,750	$0	$0	$0	$661,750	P2239 Rising to Sidney 345kV CMVP Line ISD: 11/15/2016
FOX_LK 500 161 kV to RUTLAND 500 161 kV	$93,517	$362,743	$0	$12,870	$469,130	3205 Lakefield-Burt & Sheldon-Webster 345 kV line 3213 Candidate MVP Portfolio 1 - Winco to Hazleton 345 kV
'3570' (Pleasant Prairie-Zion Energy Center 345 flo Cherry Valley-Silver Lake 345 R)	$8,163	$217,895	$317	$5,725	$232,100	P2844 Pleasant Prairie - Zion Energy Center CMVP ISD: 3/6/2014 and P3022 Oak Grove Galesburg- Fargo CMVP ISD: 11/15/2018

Constraint	Summer 2011	Fall 2011	Winter 2011	Spring 2012	Grand Total	Planned Mitigation
'3451' (Edwards-Kewanee (CE) 138kV (flo) Powerton-Goodings Gr (R)+Powerton (R)-Powerton (B) 345kV)	$230,959	$0	$0	$0	$230,959	Palmyra Tap – Meredosia – Pawnee + Meredosia – Ipava CMVP Line ISD: 11/15/2016 and 11/15/2017
CEDAR_RG 3 138 kV to OHMSTEAD 1 138 kV	($153)	$211,978	$2,702	($495)	$214,033	no planned upgrade
LUCAS 358 161 kV to LUCAS 369 69.0 kV	$79,263	$47,607	$0	$79,263	$206,134	P3170 CMVP line from Ottumwa – Adair – Palmyra Tap – Thomas Hill ISD: 11/15/2018
'3443' (Coffeen North-Ramsey 345kV (flo) Praire State-W Mt Vernon 345kV + W Mt Vernon 345/138kV TR4)	$0	$197,097	$0	$0	$197,097	P2237, P2238 and P2240 CMVP line from Pana to Mount Zion to Kansas to Sugar Creek 345 kV ISD: 11/15/2018 and 11/15/2019
'3180' (W. Mt. Vernon-E. W. Frankfort 345 (flo) St. Francois-Lutesville 345)	$7,438	$174,845	$0	$0	$182,282	P2295 Upgrade terminal equipment on W. Mt. Vernon-E. W. Frankfort 345 kV ISD: 6/1/2015
'6214' (Bunge-Hastings 161 kV flo Cooper-St. Joe 345 kV)	$58,400	$79,302	$37,151	($264)	$174,589	No MISO planned upgrade
'3771' (Pleasant Prairie - Zion 345kV)	($188)	$172,630	$0	($2,460)	$169,982	P2844 Pleasant Prairie - Zion Energy Center CMVP ISD: 3/6/2014 and P3022 Oak Grove-Galesburg - Fargo CMVP ISD: 11/15/2018
RICH2 4 230 kV to ROSEAUMP 400 230 kV	$22,475	$100,784	$0	$23,259	$146,518	Manitoba Constraint
'3646' (Nucor-Whitestown 345kV (flo) Rockport-Jefferson 765kV)	$0	$107,761	$17,251	$0	$125,012	P3203 Reynolds to Greentown 345kV CMVP ISD: 12/31/2013

Constraint	Summer 2011	Fall 2011	Winter 2011	Spring 2012	Grand Total	Planned Mitigation
'3737' (Alliat Hills 345/161 Xfmr flo Tiffin-Duane Arnold 345 + Tiffin-Hills 345)	$0	$99,826	$22,465	$0	$122,291	P1344 Build a new 345 kV Morgan Valley (Beverly) substation which taps the Arnold - Tiffin 345 kV line ISD: 12/31/2014
'6061' (Richer -- Roseau 230kV line (R50M))	$0	$113,054	$0	$0	$113,054	Manitoba Constraint
'2571' (Marktown - Inland Steel 5 138kV (flo) Burnham - Munster 345kV)	$0	$104,875	$6,743	$0	$111,618	P2792 Northwest Circuit reconfiguration ISD: 12/1/2013
WINBALTW 572 69.0 kV to DELEAST 794 69.0 kV	$8,288	$0	$0	$102,475	$110,762	no planned upgrade
ROSEAUMP 400 230 kV to MORNVLL 400 230 kV	$48,038	$30,945	$9,035	$21,987	$110,005	Manitoba Constraint
KANSAS00 HAB 138 kV to HARBOR01 4 138 kV	$0	$96,544	$5,946	$0	$102,489	Manitoba Constraint
'1613' (Volunteer - Phipps Bend 500)	$14,828	$101,497	($20,853)	$5,282	$100,754	TVA Constraint
'549' (Dresden-Elwood 1222 345 kV l/o Dresden-Electric 1223 345 kV)	$100,293	$0	$434	$0	$100,727	PJM Constraint
'3312' (Lanesville 345/138kV Xfmr (flo) Lanesville - Brokaw - Pontiac 345kV)	$28,717	$31,182	$33,304	$0	$93,203	P2236, P2237, P2238 345kV loop around area including additional 345/138kV transformers.
'2497' (State Line-Wolf Lake 138)	$0	$90,273	$0	$0	$90,273	P2792 Northwest Circuit reconfiguration ISD: 12/1/2013
'6124' (Sub K/Tiffin-Arnold 345kV)	$84,536	$0	$0	$4,922	$89,459	P3022 Oak Grove Galesburg- Fargo 345kV CMVP line ISD: 6/1/2016 and P3127 Dubuque - Cardinal 345kV CMVP line ISD: 12/31/2020

Constraint	Summer 2011	Fall 2011	Winter 2011	Spring 2012	Grand Total	Planned Mitigation
'3353' (Lanesville 345/138 (flo) Kincaid - Pawnee 345 + 2106 SPS)	$81,727	($14,531)	$16,830	$0	$84,026	P2236, P2237, P2238 345kV loop around area including additional 345/138kV transformers.
6007' (GENTLMN3 345 REDWILO3 345 1)	($270)	$96,112	($14,467)	($639)	$80,737	MRO Contraint
'2336' (BentnHrbr-Palisades345/Cook-Palisades345)	$0	$76,971	$0	$0	$76,971	no planned upgrade

Table 6.6-2: Infeasible uplift to binding constraints from the annual auction

Appendices

Most MTEP11 appendices are available and accessible on the MISO public webpage. Confidential appendices, such as D.2 - D.8, are available on the MISO MTEP11 FTP site. Access to the FTP site requires an id and password.

A link to the MTEP11 appendices, on the MISO public website, is below:

https://www.midwestiso.org/Library/Pages/ManagedFileSet.aspx?SetId=694

The confidential appendices are located at:

ftp://mtep.midwestiso.org/mtep11/

Appendix A: Projects recommended for approval
- Section A.1, A.2, A.3: Cost allocations
- Section A.4: MTEP11 Appendix A new projects

Appendix B: Projects with documented need & effectiveness

Appendix C: Projects in review and conceptual projects

Appendix D: Reliability studies analytical details with mitigation plan (ftp site)
- Section D.1: Project justification
- Section D.2: Modeling documentation
- Section D.3: Steady state
- Section D.4: Voltage stability
- Section D.5: Transient stability
- Section D.6: Generator deliverability
- Section D.7: Contingency coverage
- Section D.8: Nuclear plant assessment

Appendix E: Additional MTEP11 Study support
- Section E.1: Reliability planning methodology
- Section E.2: Generations futures development
- Section E.3: MTEP11 futures retail rate impact methodology
- Section E.4: Proposed MVP portfolio steady state and stability results
- Section E.5: Proposed MVP portfolio business case presentation
- Section E.6: Resource assessment results

Appendix F: Stakeholder substantive comments

ITC Midwest LLC
Multi-Value Project # 3
Planning Study

March 22, 2013

Performed and Submitted by
Jeff Eddy
Joseph Berry

TABLE OF CONTENTS

APPENDICES

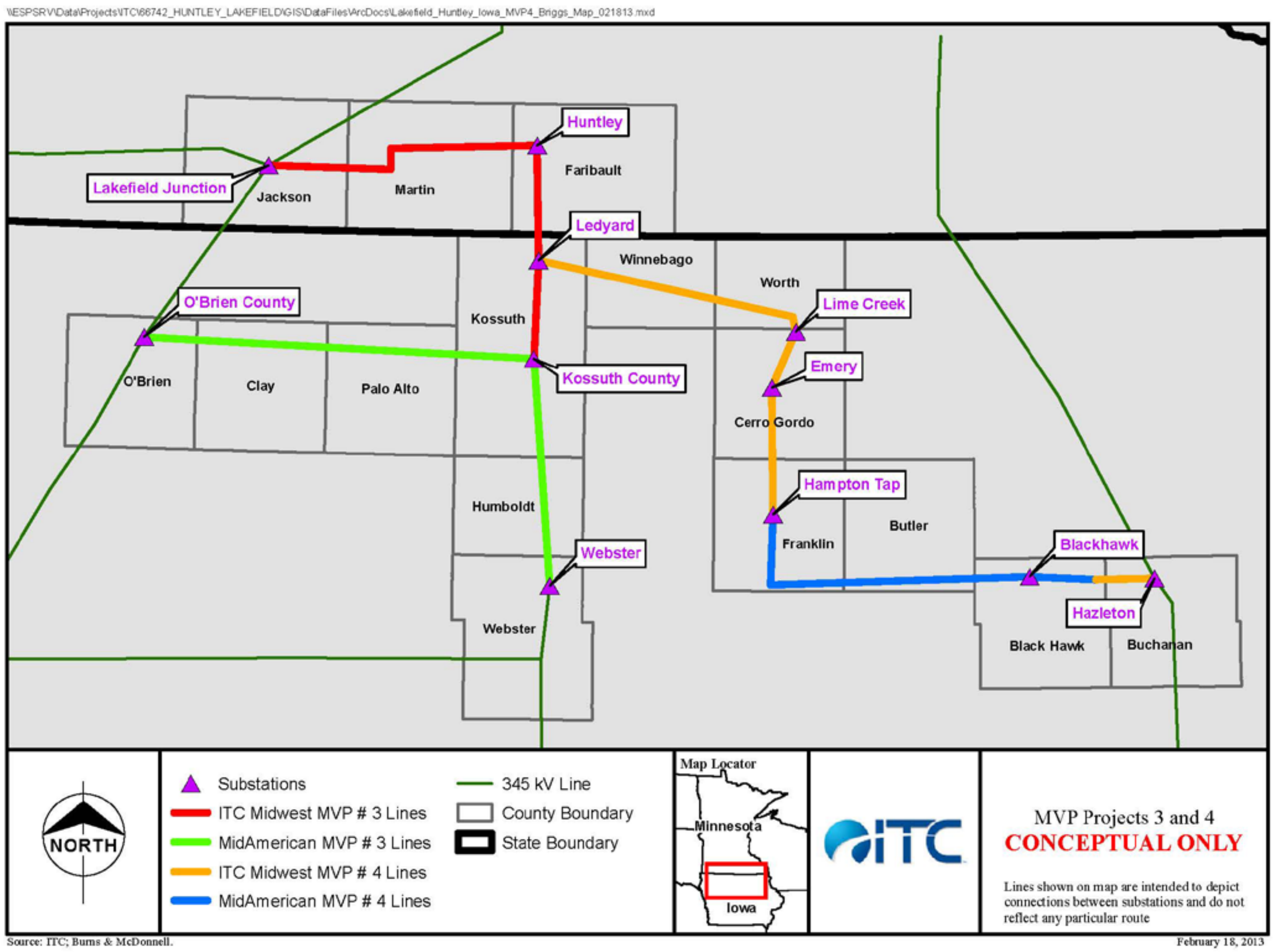
1. Executive Summary

ITC Midwest LLC's ("ITCM") transmission system in southwest Minnesota and northwest Iowa is comprised primarily of 161 kV and 69 kV facilities. This system was initially designed to serve load but has increasingly been called upon to support generation outlet. The primary new generation source is wind, with developers seeking out the high wind speeds available in the Buffalo Ridge region.

As more and more generators have interconnected to the electrical system in the Buffalo Ridge Region, elements on the area's existing 161 kV transmission system in southwest Minnesota have become increasingly constrained. These constraints, including the Fox Lake-Rutland-Winnebago Jct. 161 kV transmission line, have resulted in the implementation of special protection systems ("SPSs") to ensure system reliability in the event of certain contingencies, and wind generation curtailment preventing the maximum delivery of wind-generated energy. The demand for further development of wind generation is expected to continue as utilities seek renewable resources to meet the Renewable Energy Standards ("RES") in Minnesota, as well as the Renewable Portfolio Standards ("RPS") that have been enacted throughout the Midwest Independent Transmission System Operator, Inc. ("MISO") footprint. Currently, 10 of the 11 States in MISO have enacted RPS requiring specific minimum levels of renewable energy to be consumed within their respective borders. These RPSs have been a major driver for the increase in renewable resources (especially wind powered generating facilities) connecting to the transmission system in the Buffalo Ridge region in southwest Minnesota, northwest Iowa, and southeast South Dakota.

In response to the need for a transmission system with the capacity to meet the projected increased demand for renewable resources, MISO developed a portfolio of 17 Multi Value Projects ("MVP") in its 2011 transmission planning process that will enable the regional transmission system to reliably and economically meet the MISO States' RPSs. One of the projects in the MVP Portfolio designated for early construction MVP #3, which includes 345 kV connections in Minnesota and Iowa. Another 345 kV project, MISO's MVP #4, is also located in Iowa and interconnects with MVP #3. All components of MVP #3 and MVP #4 are proposed to be constructed by ITCM and MidAmerican Energy ("MEC"). ITCM's portion of MVP #3 is referred to as the Minnesota-Iowa 345 kV Transmission Project. Figure 1 shows these two MVPs, identifying which company will construct the various components.

Figure 1 MVP 3 and MVP 4



The proposed MVP #3 project would create a 345 kV connection between Minnesota and Iowa, constituting a bulk transmission tie that would enhance efficient and reliable transfer of generation resources on the 345 kV system within Minnesota and to points east.

In its 2011 planning process, MISO conducted analyses that demonstrated the need for MVPs #3 and #4 to reliably and cost effectively serve the MISO footprint as generation is added to meet RPS requirements. This study is intended to complement MISO's analysis on a local level, and demonstrate the benefits of MVP #3 on a stand-alone basis. This study focuses on how MVPs #3 and #4, and a 161 kV transmission alternative, impact ITCM's system in Minnesota under a range of probable future wind generation scenarios. These scenarios projected the existing "base case" transfer capacity to be approximately 425 MW–445 MWs in summer peak models, and approximately 2,040–2,700 MWs in shoulder peak (about 70% of summer peak) models, depending on three different generation scenarios.

The study's transfer capability and contingency analyses show that MVP #3 is the best alternative, alone and in combination with MVP #4, to (i) relieve constraints on the existing 161 kV system (including the Fox Lake-Rutland-Winnebago Jct. 161 kV constraint); (ii) increase the incremental generation transfer capability of the transmission system in southern Minnesota and northern Iowa to support wind and other generation resources; (iii) increase the reliable operation of the transmission system in southern Minnesota by eliminating the need for two SPSs on the existing system; and (iv) reduce the level of energy losses on the transmission system.

ITCM analyzed transmission alternatives based on their performance in southern Minnesota and northern Iowa. The alternatives were also analyzed with respect to how they resolved and/or created constraints on the existing transmission system. The general geographic scope of the study area is shown in Figure 2.

Figure 2 Transmission Study Area

2. Study Models, Input Files, and Assumptions

To study the impact of the transmission alternatives on ITCM's transmission system in Minnesota and Iowa required some assumptions about the nature of the transmission system at the time MVP #3 and MVP #4 would be in service. These assumptions include other new transmission projects expected to be in service, the anticipated peak load in the study area, the likely location of generation for which transfer capability will be needed, and the dispatch patterns for both new and existing generators. These issues are discussed in subsections 2.1 to 2.4.

2.1 Base Case Models

The study was performed using the Midwest Reliability Organization ("MRO") 2011 Series Models[1] for the year 2017, the expected in service date for MVPs #3 and #4. Two base case models were utilized in the study:

- MRO 2017 Summer Shoulder 70% Peak
- MRO 2017 Summer Peak

Summer shoulder is the period when the wind typically blows strongest, and summer peak is when the demand for energy is typically the greatest. Together, these two models represent a range of potential levels of wind energy transfer in the study area as of 2017.

The base case models were reviewed and updated to reflect rating and topology corrections to the 161 kV and 69 kV transmission facilities in the study area. The base case models for 2017 included the CapX2020 projects currently under construction: Fargo – St. Cloud 345 kV; St. Cloud – Monticello 345 kV; Brookings County – Hampton 345 kV; Hampton – Rochester – La Crosse 345 kV; and Bemidji – Grand Rapids 230 kV. The base case models were also updated to reflect approximately 6500 MWs of anticipated generation in the study area as of 2017 based on existing signed Generator Interconnection Agreements ("GIAs").

Generation was modeled differently for each base case model:

- MRO 2017 Summer Shoulder 70% peak
  Base load units were turned on;
  - Wind units were turned on to 90% of nameplate capacity; and
  - Peaking units were turned off.

- MRO 2017 Summer Peak
  - Base load units were turned on;
  - Wind units were turned on to 20% of nameplate capacity; and
  - Peaking units were turned on.

[1] This study was commenced before the MRO 2012 Series became available in mid-October 2012.

These models were used in the AC Contingency Analysis and First Contingency Incremental Transfer Capacity ("FCITC") Analysis described in Sections 3 and 4, respectively.

2.2 Derived Study Models

2.2.1 MISO MVPs

MVP #3 by itself and MVP #3 combined with MVP #4 were evaluated in each of the base cases using the following models:

- MRO 2017 Summer Shoulder 70% Peak (MVP #3)
- MRO 2017 Summer Shoulder 70% Peak (MVPs #3 and #4)
- MRO 2017 Summer Peak (MVP #3)
- MRO 2017 Summer Peak (MVPs #3 and #4)

These models were used in both the AC Contingency Analysis and FCITC analysis described in Sections 3 and 4.

2.2.2 Alternatives Considered

The study considered multiple alternatives. The alternatives included other high voltage lines, lower voltage lines, and a 161 kV line rebuild.[2]

The transmission line voltages higher than 345 kV are 765 kV and 500 kV. Since there are no existing transmission lines operated at those voltages in the study area, any additions at either of these voltages would require significant substation upgrades and costs for interconnection. In addition, no conditions were identified that warranted a higher voltage in the study area. Therefore voltages above 345 kV were eliminated from further analysis.

The transmission line voltages lower than 345 kV include 230 kV, 161 kV, 138 kV, 115 kV, and 69 kV. The 230 kV and 138 kV voltages were eliminated because there are no existing transmission lines operated at 230 kV or 138 kV in the immediate area. As a result, either of these voltage would be non-standard and require significant substation upgrades and costs for interconnection. The lower voltages of 115 kV and 69 kV would not provide enough capacity to address the identified transfer and delivery need for existing and future generation in Minnesota and the region.

Unlike the other lower voltages, a 161 kV alternative is the primary transmission voltage in the study area, and an upgraded 161 kV line has some potential to address the need for greater generation outlet capacity, as well as reduction of existing system constraints in the study area. Further, the main constraint on the electrical system in this area has historically been the Fox Lake-Rutland-Winnebago Jct. 161 kV line.[3] As noted in the 2009 Minnesota Biennial

[2] ITCM also evaluated a "no build alternative," where no new facilities would be constructed. That alternative is discussed in Section 6.

[3] Northern States Power Company's construction of a second 161 kV line south of I-90 between Lakefield Jct. and Fox Lake in 2006 moved the constraint that previously existed between Lakefield Jct. and Fox Lake to points east.

Transmission Projects Report, replacing just the conductor of the line is impractical because of the age of the line's structures. The existing structures cannot support heavier conductors. Accordingly, a 161 kV rebuild alternative that upgraded the Fox Lake-Rutland-Winnebago Jct. 161 kV ("161 kV Rebuild Alternative") was studied. The current rating on this line is 168 MVA. In this study, the line was upgraded to T2 -795 ACSR conductor with a rating 446 MVA, which is ITCM's standard 161 kV conductor used in wind generation areas.

For analysis of the 161 kV Rebuild Alternative, the following two 161 kV rebuild models were used in each of the base cases:

- MRO 2017 Summer Shoulder 70% Peak (FXLK_RTLD_WNBG)
- MRO 2017 Summer Peak (FXLK_RTLD_WNBG)

These models were used in the AC Contingency Analysis and FCITC analysis described in Sections 3 and 4.

2.3 Input Files

For both the AC Contingency Analysis and FCITC Analysis, all branches and ties rated 69 kV and above were monitored in all of Iowa, all of Minnesota, and portions of neighboring states. The model includes the following MISO identified model areas: Xcel Energy ("Xel"), Minnesota Power ("MP"), Southern Minnesota Municipal Power Agency ("SMMPA"), Great River Energy ("GRE"), Otter Tail Power Company ("OTP"), Dairyland Power Cooperative (DPC), Muscatine Power and Water ("MPW"), Western Area Power Administration, ("WAPA"), Montana-Dakota Utilities ("MDU"), Alliant Energy West ("ALTW"), and MidAmerican Energy (MEC). Violations were cited if branch loadings exceeded normal ratings under system intact conditions, or if branch loadings exceeded emergency ratings under contingencies.

Contingencies were simulated on 100 kV and above elements across the states of Minnesota and Iowa in the following control areas: XEL, MP, SMMPA, GRE, OTP, DPC, ALTW, MPW, and MEC. Two types of contingencies were simulated:

1. NERC Category B contingencies, which are generally defined as the loss of a single element; and
2. NERC Category C contingencies, which are generally defined as the loss of two or more (multiple) elements.

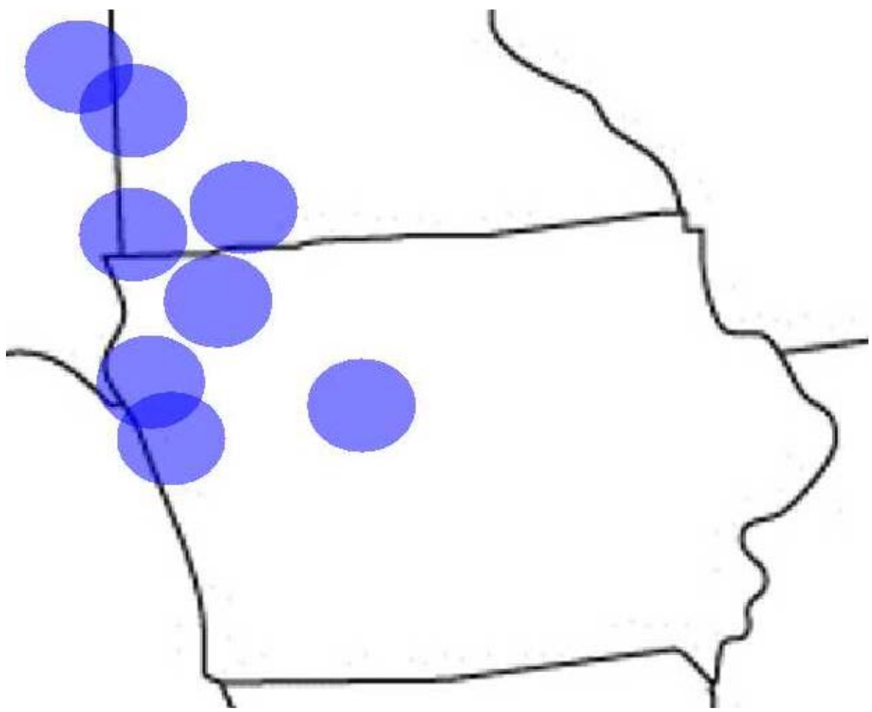
The study recognized that MVPs #3 and #4 may follow existing transmission routes, and consequently common tower contingencies were added to the contingency file.

2.4 Study Assumptions

2.4.1 Wind Zone Determination

Eight (8) wind zones were identified to reflect the continuing growth of renewable energy resources in the Buffalo Ridge area of Minnesota, Iowa, and South Dakota. The starting point was the wind zones developed in MISO's Regional Generation Outlet Study ("RGOS"), which involved extensive analysis of the likely geography of wind generation development. The locations of the RGOS wind zones were then refined to reflect current wind interconnection requests totaling 7,868 MWs, as evidenced by projects participating in MISO's System Planning & Analysis Phase ("SPA") and Definitive Planning Phase ("DPP") studies in Minnesota and Iowa. Figure 3 is a map of the approximate locations of the refined wind zones.

Figure 3 Refined Wind Zone Locations



The maximum nameplate capacity of each wind zone was set at 1000 MWs for the FCITC analysis, discussed in Section 4).

2.4.2 Study Scenario Criteria

Due to the uncertainty of predicting the location of actual generating facilities, several different scenarios where analyzed to determine the effects of the MVPs on the transmission system. The wind zones where divided into two different groups, a Buffalo Ridge North group (the Lakefield, Split Rock White, and Brookings areas), and a Buffalo Ridge South group (Sheldon, Sioux City, Raun, and Webster areas). Modeling scenarios were then developed to reflect different levels of generation from the North and South zones being delivered to two different sinks to provide alternative scenarios where wind energy is consumed. One sink consisted of the Minnesota utility areas, and the other consisted of the utility areas located on the east side of the MISO footprint ("MISO East"), including Illinois, Missouri, Michigan, and Indiana. The resulting generation scenarios that were analyzed in the study:

- Base Case
  The Base Case represents the anticipated transmission system and generation that will exist in 2017, as discussed in Section 2.1 above, with no additional wind zone generation.

- Buffalo Ridge 25%N / 75%S Wind Zones – Minnesota Transfer simulates a 5,000 MW transfer from Buffalo Ridge generation to the Minnesota areas with the generation in the Buffalo Ridge north zone increased by 25% of the total transfer while generation in the south zone is increased by 75% of the total transfer.

- Buffalo Ridge 50%N / 50%S Wind Zones – Minnesota Transfer simulates a 5,000 MW transfer from Buffalo Ridge to the Minnesota areas with generation in the Buffalo Ridge north and south zones each increased by 50% of the total transfer.

- Buffalo Ridge 75%N / 25%S Wind Zones – Minnesota Transfer simulates a 5,000 MW transfer from the Buffalo Ridge generation to the Minnesota areas with the generation in the Buffalo Ridge north zone increased by 75% of the total transfer while generation in the south zone is increased by 25% of the total transfer.

- Buffalo Ridge 25%N / 75%S Wind Zones – MISO East Transfer simulates a 5,000 MW transfer from Buffalo Ridge generation to the areas located south and east in the MISO footprint with the generation in the Buffalo Ridge north zone increased by 25% of the total transfer while generation in the south zone is increased by 75% of the total transfer.

- Buffalo Ridge 50%N / 50%S Wind Zones – MISO East Transfer simulates a 5,000 MW transfer from Buffalo Ridge generation to the areas located south and east in the MISO footprint with generation in the Buffalo Ridge north and south zones each increased by 50% of the total transfer.

- Buffalo Ridge 75%N / 25%S Wind Zones – MISO East Transfer simulates a 5,000 MW transfer from Buffalo Ridge generation to the areas located south and east in the MISO footprint with generation in the Buffalo Ridge north zone increased by 75% of the total transfer while generation in the south zone is increased by 25% of the total transfer.

3. AC Contingency Analysis

An AC Contingency Analysis, with no transfer on the transmission system, was performed on both base cases and then compared to AC Contingency Analysis performed on the MVP cases and the 161 kV rebuild to determine how MVP #3 alone, MVP #3 in combination with MVP #4, and the 161 kV Rebuild Alternative would resolve existing known thermal violations on the transmission system without creating an unacceptable level of new violations. The MRO 2017 Summer Shoulder 70% Peak AC Contingency Analysis results are provided as Appendix 1, and The MRO 2017 Summer Peak AC Contingency Analysis results are provided as Appendix 2.

3.1 MRO 2017 Summer Shoulder 70% Peak

The AC Contingency Analysis for MVP #3 resulted in one new violation of a 69 kV line,[4] while eliminating violations on three others.[5] Otherwise, the level of overloading of the 69 kV system due to contingencies when MVP #3 is added to the system is comparable to what it would be without MVP #3. Typically, overloading on 69 kV system elements because of contingencies is not considered as significant as overloading on higher voltage lines because of the number of lower cost options available to address overloading of lower voltage lines.

The addition of MVP #3 and MVP #4 combined does not result in potential violations of elements that are 100 kV and above. The combination does add an additional 69 kV violation,[6] while eliminating 14 of the violations that exist when MVP #3 alone is added to the system.

AC Contingency Analysis was also performed on the 161 kV Rebuild Alternative. The addition of this option resulted in (i) three violations that did not occur with MVP #3 alone or in combination with MVP #4;[7] (ii) did not create additional violations on the system; and (iii) failed to eliminate 13 of the 14 violations that the combination of MVPs #3 and #4 eliminated.[8] On balance, the upgraded 161 kV line did the poorest job of alleviating existing violations.

3.2 MRO 2017 Summer Peak

The Contingency Analysis for the MRO 2017 Summer Peak models identified some overloading of 69 kV and higher voltage elements. The addition of MVP #3 alone added two violations,[9] while eliminating five.[10] The addition of MVP #4 to MVP #3 did not add any further violations, and eliminated another five violations beyond the five eliminated by MVP #3 alone. The 161 kV upgrade eliminated two violations that occurred when MVP #3 was added to the system alone or in combination with MVP #4, but it did not mitigate ten violations that were mitigated by MVP #3 alone or in combination with MVP #4.[11] Again, the upgraded 161 kV line did the poorest job of eliminating violations.

[4] See Appendix 1, the OSCELCT – ALLNDRF 69 kV branch.
[5] See Appendix 1, the LMCK – MCNWCSS 69 kV branch, and LIME CK – EMERY and CGORDO – HANCOCK 161 kV branches.
[6] See Appendix 1, the ADRIANM – RUSHMRT 69 kV branch.
[7] See Appendix 1, the LMCK – MCNWCSS 69 kV branch, and LIME CK – EMERY and CGORDO – HANCOCK 161 kV branches.
[8] See Appendix 1, "FXLKRTWN" column
[9] See Appendix 2, the CBLUFFS – INDNCRK and LELAND – T FC 69 kV branches.
[10] See Appendix 2, the LORE – LORE E, HAZLTN – BLKHAWK, HZL – WASHBRN, CALMS – GR MND, and CALMS – SB 161 kV branches.
[11] See Appendix 2, "FXLKRTWN" column.

4. FCITC Analysis

4.1 Incremental Transfer Capability

An analysis of the increase in the incremental transfer capability of the transmission system was performed for MVP #3, MVPs #3 and #4 together, and the 161 kV Rebuild Alternative. This involved establishing what the anticipated transfer capability of the system would be under the various generation scenarios discussed above in Section 2.4.2.

The first step was to establish the base case for system transfer capability for each of the six generation scenarios during peak and shoulder conditions without any of the studied transmission options. The summer shoulder condition is generally when wind generation output is at its greatest, system load is lower, and the most transfer capacity is needed. During summer peak, wind generation output is reduced, system load is higher, and less transfer capacity is needed. Then modeling was done to determine the level of incremental gain or loss in system transfer capability for the scenarios when: (i) MVP #3 alone was added to the system; (ii) MVPs #3 and #4 were both added to the system; and (iii) the upgraded 161 kV line alone was added to the system.[12] A 5,000 MW transfer was used in the analysis. At this level, every scenario resulted in a limiting element during peak and shoulder conditions.[13]

As further detailed below, his analysis showed that MVP #3 was superior to the 161 kV Rebuild Alternative in increasing transfer capacity within Minnesota and the region, and that the combination of MVPs #3 and #4 provided the most transfer capacity.

Table 1 shows the increase of the incremental transfer capability of the transmission system in the study area under each generation scenario when MVP #3 alone is added to the transmission system.

[12] Appendices 3-50 contain the complete FCITC results for each case under each generation scenario. Appendices 3-10 contain the results for the Buffalo Ridge 25%N / 75%S Gen – Minnesota scenario; Appendices 11-18 contain the results for the Buffalo Ridge 50%N / 50%S Gen – Minnesota scenario; Appendices 19-26 contain the results for the Buffalo Ridge 75%N / 25%S Gen – Minnesota scenario; Appendices 27-34 contain the results for the Buffalo Ridge 25%N / 75%S Gen – MISO East scenario; Appendices 35- 42 contain the results for the Buffalo Ridge 50%N / 50%S Gen – MISO East scenario; and Appendices 43-50 contain the results for the Buffalo Ridge 75%N / 25%S Gen – MISO East scenario.

[13] Appendix 51 contains summary tables detailing the maximum gross transfer capability and corresponding limiting element for each transmission option under the base cases and each generation scenario.

Table 1 Maximum Incremental Transfer Capability of MVP #3 (MW)

Minnesota Transfer	Summer Shoulder	Summer Peak
Buffalo Ridge- 25% N/75% S	809.3	2463.3
Buffalo Ridge- 50% N/50% S	1640.7	3045.6
Buffalo Ridge- 75% N/25% S	1432.2	2459.7
MISO East Transfer		
Buffalo Ridge- 25% N/75% S	-25	1578.1
Buffalo Ridge- 50% N/50% S	-47	1753.8
Buffalo Ridge- 75% N/25% S	607.6	1973.1

As Table 1 demonstrates, MVP #3's principal impact is in Minnesota. That is, MVP #3 increases transfer capacity for wind generation to be transferred to Minnesota in all generation scenarios in both the summer shoulder and summer peak conditions. In comparison, MVP #3 would actually decrease transfer capacity for generation to be transferred to MISO East under two of the three generation scenarios during summer shoulder.

Table 2 shows the level of incremental transfer capability of the 161 kV Rebuild Alternative based on the analysis of the study area for each generation scenario.

Table 2 Maximum Incremental Transfer Capability of the 161 kV Rebuild Alternative (MW)

Minnesota Transfer	Summer Shoulder	Summer Peak
Buffalo Ridge- 25% N/75% S	573.7	2113.7
Buffalo Ridge- 50% N/50% S	1237.7	2785.8
Buffalo Ridge- 75% N/25% S	792.8	2394.7
MISO East Transfer		
Buffalo Ridge- 25% N/75% S	0.3	1405.9
Buffalo Ridge- 50% N/50% S	142.9	1544.1
Buffalo Ridge- 75% N/25% S	29.2	1610.8

Like MVP #3, the principal impact of the 161 kV Rebuild Alternative is also in Minnesota. The FCITC analysis shows the alternative provides additional transfer capability to the Minnesota sink. However, like MVP #3, the 161 kV Rebuild Alternative provides minimal additional transfer capability to the MISO East sink. Moreover, the 161 kV Rebuild Alternative does not increase generation transfer capacity for Minnesota as much as MVP #3 in four of the six generation scenarios.

Table 3 shows how the combination of MVPs #3 and #4 increase the transfer capability of the transmission system in the study area under the three generation scenarios.

Table 3 Maximum Incremental Transfer Capability of MVPs #3 & #4 (MW)

Minnesota Transfer	Summer Shoulder	Summer Peak
Buffalo Ridge- 25% N/75% S	1484.0	2875.9
Buffalo Ridge- 50% N/50% S	1919.8	3317.9
Buffalo Ridge- 75% N/25% S	1464.2	2498.8
MISO East Transfer		
Buffalo Ridge- 25% N/75% S	773.7	1742.3
Buffalo Ridge- 50% N/50% S	543.2	1935.9
Buffalo Ridge- 75% N/25% S	1228.0	2176.8

The principal impact of adding both MVPs to the transmission system is to improve the transfer capacity for generation to be transferred to MISO East across all six generation scenarios. For example, the 25 to 47 MW decrease in transfer capacity during summer shoulder under two of the scenarios (Buffalo Ridge- 25% N/75% S and Buffalo Ridge- 50% N/50% S respectively) with only MVP #3 added to the system becomes a 543 to 774 MW increase when MVP #4 is added to the system as well.

The transfer capacity also increases across all generation scenarios for the Minnesota sink with the addition of MVP #4, with the largest increase being 675 MW for the 25% north zone/75% south zone generation scenario in the summer shoulder season.

The FCITC Analysis also demonstrates that MVP #3 is better suited to increase transfer capability under the scenario where most of the new wind generation is located in the North Zone in Minnesota. Table 4 shows the transfer capability achieved by MVP #3 alone and in combination with MVP #4 as compared to the 161 kV Rebuild Alternative under the Buffalo Ridge- 75% N/25% S generation scenario. At best, the 161 kV rebuild provides only 55% of the transfer capability of MVP #3 alone, or of MVP #3 in combination with MVP #4.

Table 4 Maximum Incremental Minnesota Transfer Capability-Buffalo Ridge 75% N/25% S Generation (MW)

Transmission Option	Summer Shoulder	Summer Peak
MVP #3	1432.2	2459.7
MVPs #3 and #4	1464.2	2498.8
161 kV Rebuild Alternative	792.8	2394.7

An FCITC analysis was also completed on a hypothetical scenario in which the 161 kV Rebuild Alternative and MPV #4 were constructed. Under this scenario, the 161 kV facilities do not interconnect with MVP #4. As anticipated, FCITC analyses showed that no additional transfer capability (neither for the Minnesota sink nor MISO East sink) would be achieved under any of the three generation scenarios. The results of this analysis are shown in Appendix 52.

4.2 Comparison of Incremental Transfer Capability

The FCITC showed that MVP #3 outperformed the 161 kV Rebuild Alternative in all but two of the six generation scenarios. The FCITC analysis further demonstrated that MVP #3 in combination with MVP # 4 provides the most transfer capability under all scenarios.

Figures showing the performance of each of the alternatives in summer peak and summer shoulder conditions are provided. Figures 4 and 5 show that MVP #3 alone and MVP #3 and MVP #4 together outperform the 161 kV Rebuild Alternative in improving generation transfer capacity in Minnesota.

Figure 4 Incremental Transfer Capability of Transmission Options Minnesota Summer Shoulder

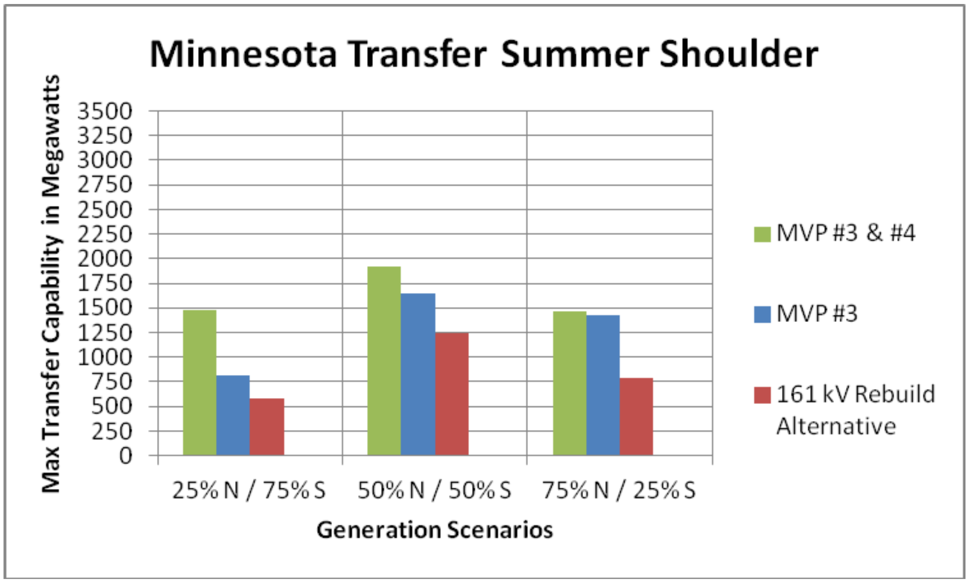


Figure 5 Incremental Transfer Capability of Transmission Options Minnesota Summer Peak

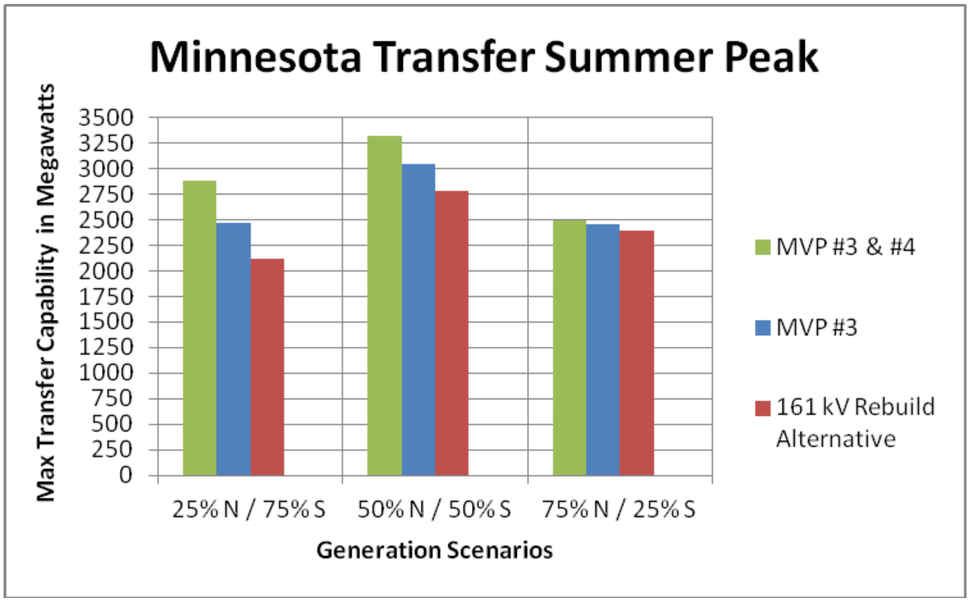


Figure 6 shows that neither MVP #3 nor the 161 Rebuild Alternative significantly increase generation transfer capacity for the eastern portion of the MISO footprint under two of the three generation scenarios during the high wind season. However, a significant increase in generation transfer capacity is achieved under all generation scenarios by a combination of MVPs #3 and #4.

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

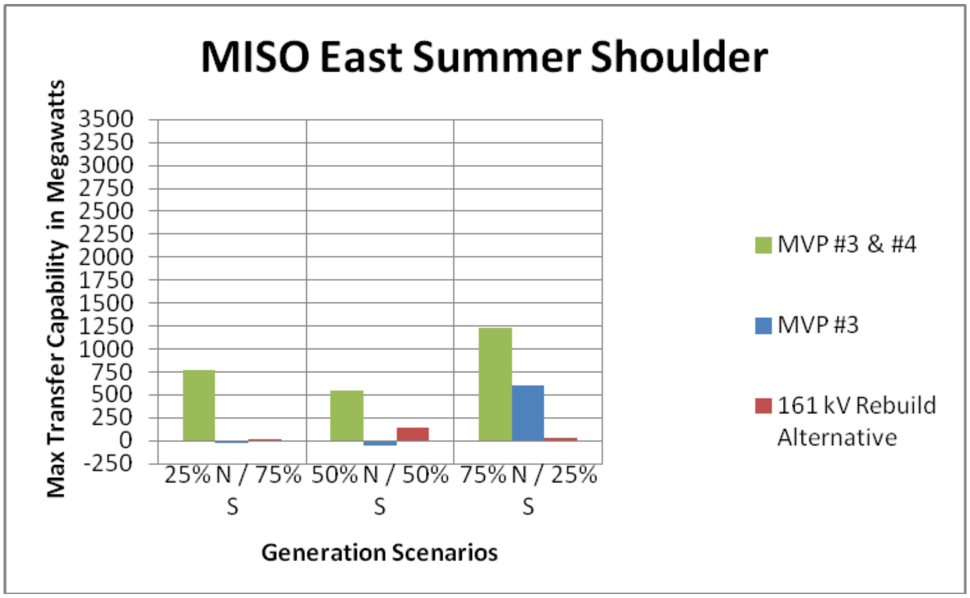
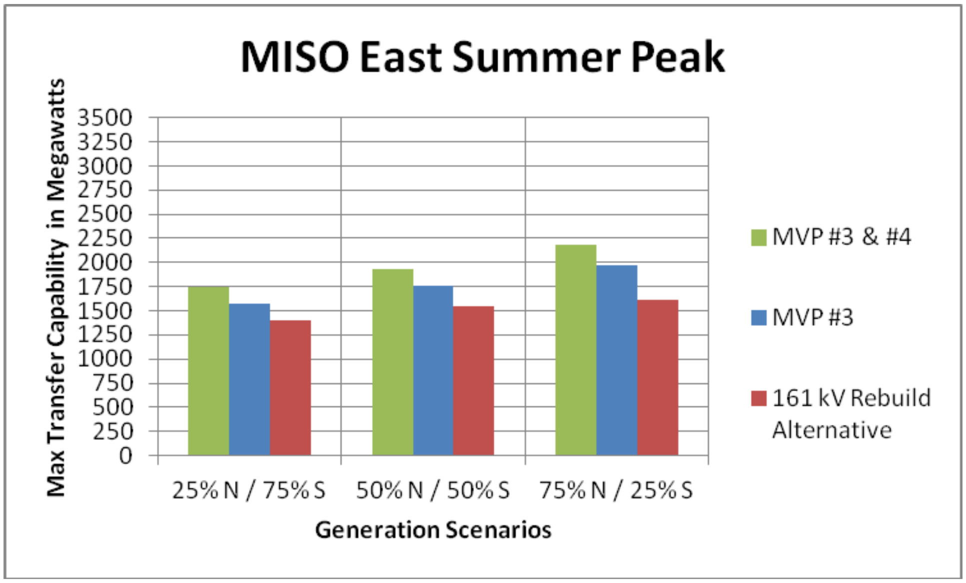


Figure 7 shows that while all three options significantly increase transfer capacity during summer peak, MVP #3 alone and in combination with MVP #4 again outperforms the 161 kV Rebuild Alternative.

Figure 7 Incremental Transfer Capability of Transmission Options MISO East Summer Peak



4.3 Fox Lake-Rutland-Winnebago Jct. 161 kV Constraint

Tables 1 through 6 in Appendix 51 identify the existing Fox Lake-Rutland-Winnebago Jct. 161 line as the "limiting element" that determines the maximum transfer capability under all six generation scenarios for the summer peak base case (i.e., the case before the addition of MVP #3, MVPs #3 and #4, or the 161 kV Rebuild Alternative).[14] This line is also the limiting element under three of the six generation scenarios for the summer shoulder base case.[15]

After the addition of MVP #3, MVPs #3 and #4, or the 161 kV Rebuild Alternative, the Fox Lake-Rutland-Winnebago Jct. 161 kV line is no longer a limiting element in any of the cases under any of the generation scenarios.

4.4 Special Considerations

The wind zones and scenarios analyzed above capture, at a system level, the different transfer capabilities that would be present under those scenarios. Because the ultimate location of actual wind development has a significant effect on its system impacts, further sensitivity analyses were undertaken to evaluate how the 161 kV Rebuild Alternative and MVP #3 alternatives would perform on a more micro level. Specifically, how would each perform if generation were geographically concentrated near the existing 161 kV system. This scenario is particularly realistic in evaluating wind generation areas because existing wind generators seek to take advantage of the best combination of available wind and transmission resources which can be geographically limited. Given the strong wind resources in the area, it is very likely that

---

[14] App. 51, Tables 1-6.
[15] App. 51, Tables 1-3.

additional generators would seek to connect directly to a newly upgraded 345 kV or 161 kV alternative.

An analysis was performed to determine how much generation could be connected to the area transmission system before the capacity provided by the 161 kV Rebuild Alternative would be depleted.[16] Using the Summer Peak base case described in Section 2.2 (MRO 2017 Summer Peak (FXLK_RTLD_WNBG)), the 161 kV Rebuild Alternative was monitored under contingency conditions while generation was increased in the surrounding area. The results showed that directly connecting 500 MWs to the rebuilt line would consume all the capacity provided by the line's upgrade.

Another important consideration when evaluating the 161 kV Rebuild Alternative is its regional impact. MVP #3 in combination with MVP #4 is a needed 345 kV connection between the Minnesota and Iowa 345 kV systems, and that is currently the most efficient voltage system in the region for moving large amounts of energy long distances, such as from the Buffalo Ridge region to load centers in the Twin Cities, Iowa metropolitan areas, and points east. This connection also provides system operators with flexibility in reliably operating the electrical grid when conditions warrant larger transfers of energy between states. While the 161 kV Rebuild Alternative could potentially resolve local overloading problems on the 161 kV system in southwest Minnesota, it provides no regional reliability benefit. As Table 5 demonstrates, the maximum transfer capability of the 161 kV Rebuild Alternative and MVP #4 combined is virtually no different than the maximum transfer capability of the 161 kV Rebuild alone.[17]

Table 5 Maximum Gross Transfer Capability of 161 kV Rebuild Alone and Combination of 161 kV Rebuild and MVP #4 (MW)

	161 kV Rebuild		**Combination of 161 kV Rebuild and MVP #4**	
Minnesota Transfer	**Summer Shoulder**	**Summer Peak**	**Summer Shoulder**	**Summer Peak**
Buffalo Ridge- 25% N/75% S	3087.6	2559.4	3287.2	2559.0
Buffalo Ridge- 50% N/50% S	3841.5	3224.7	3677.6	3272.9
Buffalo Ridge- 75% N/25% S	3490.1	2827.1	3358.9	2841.1
MISO East Transfer				
Buffalo Ridge- 25% N/75% S	2201.3	1842.6	2469.7	1883.5
Buffalo Ridge- 50% N/50% S	2576.8	1974.3	2649.8	2019.4
Buffalo Ridge- 75% N/25% S	2067.5	2034.8	1989.7	1945.6

5. Special Protection System ("SPS") Analysis

There are currently two SPSs affecting ITCM's transmission system in southwestern Minnesota the Fieldon Capacitor Bypass SPS and the Nobles County – Wilmarth SPS. Generally, an SPS is

[16] Appendix 55 contains the generation sensitivity analysis for the 161 kV Rebuild Alternative.
[17] Appendix 52 contains a summary table detailing the maximum gross transfer capability of the 161 kV Rebuild Alternative and MVP #4 combined, including the corresponding limiting element under the base cases and each generation scenario, followed by the the complete FCITC results for that combination under each generation scenario.

a remedial operating solution to a transmission reliability violation, often resulting from the installation of new facilities which either aggravate or initiate the violation. SPSs can function well as operational solutions to address certain transmission deficiencies, but do not obviate the underlying need for new transmission facilities.

The history of the SPSs implemented to prevent overloading of the Fox Lake-Rutland-Winnebago line in the event of certain contingencies began in 2001. At that time, Great River Energy's Lakefield Junction Station ("LGS") power plant connected to the grid on NSP's Lakefield-Wilmarth 345 kV line. A loss of the 345 kV line from LGS to Wilmarth would result in all of the output power being directed to ITC Midwest's Lakefield Junction Substation, which overloads ITC Midwest's Lakefield-Fox Lake-Rutland-Winnebago 161 kV line sections. To alleviate this concern, GRE initially configured the LGS substation to be connected to the system via an unprotected tap off the 345 kV line so that a line fault on either the Lakefield-LGS 345 kV line or LGS-Wilmarth 345 kV line would trip both line sections and effectively isolate the LGS from the grid. But this configuration has the undesirable effect of the plant losing station power during a contingency. To correct this, an SPS was then installed to trip the LGS generators if there was a fault on the line from LGS to Wilmarth.

After this, a series capacitor was installed on the LGS –Wilmarth 345 kV line section to increase flows on the line, which in turn mitigated power flows on transmission lines in Nebraska resulting from the generation additions at Buffalo Ridge. But the series capacitor could produce sub-synchronous resonance oscillations due to the interaction of the series capacitor with the generation at LGS if LGS were radially fed from the LGS-Wilmarth 345 kV line. This led to the Fieldon SPS being installed to bypass the series capacitor if the Lakefield-LGS 345 kV line were lost.

When NSP installed the Split Rock to Lakefield 345 kV line in 2007 to deliver more wind generation from southwest Minnesota and eastern South Dakota to the Twin Cities metropolitan area, the new line further aggravated the loading on ITC Midwest's 161 kV facilities. To address this, NSP implemented the Wilmarth/Nobles SPS to open the Split Rock-Lakefield 345 kV line if any line section is open between Lakefield and Wilmarth. Then when the Elm Creek and Elm Creek II wind farms were constructed in 2009 and 2011, respectively, they were added to Wilmarth/Nobles SPS, as was the existing Trimont wind farm. Now there is a condition that if the LGS-Wilmarth 345 kV line trips, the SPS will trip any units at the LGS, as well as the Trimont and Elm Creek Wind Farms, as well as the 345 kV line from Split Rock to Lakefield

ITCM's experience is that SPSs are generally undesirable because they can lead to exponential growth in demands placed on the transmission system and create operational complexities. As a result of this, and the inherent risks associated with operating its transmission system with multiple SPSs, ITCM has revised its policy on SPSs:

> It is ITC Midwest policy that new Special Protection Schemes (SPS) not be installed on the ITC Midwest system. ITC Midwest will not support the installation of an SPS on a neighboring system whose purpose is to mitigate potential issues on the ITC Midwest system. For those SPSs that have already been placed in service,

> periodic reviews should be performed to ensure that the scheme is deactivated when the conditions requiring its use no longer exist or system improvements to remove the SPS are warranted.[18]

ITCM performed an analysis to determine whether the addition of MVP #3 or the 161 kV Rebuild Alternative would allow for the Fieldon Capacitor Bypass and Nobles County – Wilmarth SPSs to be retired. ITCM developed a model that recreated the scenario, described above, for both the Fieldon Capacity Bypass and the Nobles County – Wilmarth SPSs that drove the need for the installation of the SPSs. MVP #3 was then added to the model and the scenario was again recreated. The results of the analysis indicate that the impact of MVP #3 on the transmission system would allow for the retirement of both SPSs. MISO makes the final determination whether the SPSs can be retired if either alternative were constructed.

6. No Build Alternative Analysis

As part of this study, ITCM evaluated a "no build" alternative. If no new transmission facilities are built, transfer capability will remain at current levels. Planning engineers reached this conclusion based on the anticipated load growth in southwest Minnesota.

Winter and summer peak load forecast information was collected from MISO planning models for the years 2013, 2014, 2018 and 2023 for relevant substations within the study area in southwest Minnesota, where the generation interconnection points are located. The forecast information was developed by load serving entities or their power suppliers for MISO planning purposes. A list of the area substations and forecast loads are provided in Appendix 53.

The forecasts show that load growth in the Project area is expected to be moderate. The coincident Peak load is expected to grow by 38 MW between 2013 and 2023, and off-peak load is estimated to grow 36 MW during the same period. This load growth is insufficient to utilize the thousands of MWHs of energy, primarily from wind, being produced in southwest Minnesota. As a result, if no facilities are built, existing constraints will persist, requiring continued reliance on SPSs and curtailing existing wind energy deliveries from southwest Minnesota. Further development of wind energy in the area will also be inhibited.

7. Losses Evaluation

New transmission lines added to the electric system affect the resistive losses of the system. In turn, the need for capacity and amount of energy generation on the system are affected by these changes in losses. If adding a new transmission line reduces losses, capacity and energy requirements, and costs to provide capacity and energy will be reduced.

Loss effects have been analyzed for MVP #3, MVP #3 and MVP #4 together, and the 161 kV rebuild alternative compared to a scenario without transmission upgrades in this area. The amount of local generation was held constant between the cases compared in order to isolate the impact on losses from each project from other factors that also could impact capacity and energy

---

[18] ITC Midwest Transmission Planning Criteria- 100kV and Above at page 16. A copy of ITC Midwest's Transmission Planning Criteria is included in Appendix 54.

losses. Figure 8 compares the losses performance of the alternatives across the transmission systems serving Minnesota customers (all of Minnesota and portions of North Dakota, South Dakota, Iowa, and Wisconsin).

Figure 8 Losses Performance Comparison

Year Case	System Capacity Loss Savings (MW)	Annual Energy Loss Savings (GWh)
161 kV Rebuild Alternative added	2	5
Proposed MVP #3 added	5	13
Proposed MVP #3 and #4 added	13	34

The loss reduction delivered by MVP #3 alone is more than double that delivered by the 161 kV Rebuild Alternative. And the combination of MVPs #3 and #4 delivers more than double the loss reduction of MVP #3 alone, and more than six times that of the 161 kV Rebuild Alternative.

Based on the calculation shown in Figure 9, the present value of the cost of capacity and energy savings for a 1 MW loss reduction over twenty years is approximately $6.2 million. This calculation was performed to quantify the cost impact of reductions in losses using conservative assumptions (time period, loss factor), since the actual changes in losses will not be static over time as other transmission facilities and generation are added to the system.

Figure 9 Present Value of a 1 MW Reduction in Transmission Losses

Input Assumptions

1.1	Term of Loss Reduction	20	years
2.1	Discount Rate (30 Yr Treasuries)	0.0317	
3.1	Energy value	$30	/ MWH
4.1	Loss Factor	0.3	
5.1	Term of Loss PV Anuity Factor	14.64631	1/line 2.1-1/(line 2.1*(1+line 2.1)^line1.1)

Calculations, Per MW/MWh

		A	B	C	D	E	F	G	H	
		Weight		Cost ($)	per	FCR @ 15%			Levelized Rev Req	
1	capacity value	0.5	peaking	**838**	kW	15%			62850	row 1, col.A * col.C *col.E
2		0.5	baseload	**3282**	kW	15%			246149.9813	row 2, col.A * col.C *col.E
3	Weighted total								$ 308,999.98	col. H, row 1+row 2
4	Plus reserve needed to support generation		11.32%		kW				$ 343,978.78	row 3, col. H * row 4, col. B
						loss factor	Energy Vaue			
5	Energy Value	1	MWH	8760	hrs/yr	0.3	$ 30.00		$ 78,840.00	row 5, col.A *col.C*col.E*col.F
6	**Present Value, Term of Loss Reduction**								**$ 6,192,734.32**	(col. H, row 4+row 5)*line 5.1

Based on a present value savings from a 1 MW loss reduction over twenty years of $6.2 million, MVP #3 would yield approximately $19 million more in present value savings than the 161 Rebuild Alternative, whereas MVP #3 and #4 together would yield over $68 million more in present value savings compared to the 161 kV Rebuild Alternative. These results illustrate that new 345 kV transmission facilities are more effective in achieving energy loss reductions than the addition of lower voltage facilities to the system.

8. Costs

MISO's planning cost estimate in MTEP11 for MVP #3 was $506 million, and for MVP # 4 was $480 million. ITC Midwest's estimated cost for the 161 kV Rebuild Alternative is $52 million, which includes rebuilding the Winnebago Junction Substation and adding to the Lakefield Junction Substation.

9. Double-Circuit Design Issues

When developing the design for the Minnesota portion of MVP #3, ITCM evaluated the feasibility of co-locating the new 345 kV line with the existing Lakefield Jct.-Fox Lake-Winnebago Jct. 161 kV line, as well as the possibility of providing for future expansion opportunities on the same structures.

Electrically, the co-location alternative performed adequately. The contingency analysis demonstrated that the new 345 kV line could be co-located on the same poles as the existing 161 kV line and meet system requirements in compliance with NERC Standard TPL-003-0a (Loss of Two or More Bulk Electric System Elements). ITCM also undertook a transfer analysis to determine whether the double circuit design with the existing 161 kV line (345 kV/161 kV) would provide additional transfer capability if the existing 161 kV line's capacity were increased as proposed in the 161 kV Rebuild Alternative. The analysis showed that no additional transfer capability was achieved, as the flows moved on the 345 kV system regardless of whether the 161 kV line was upgraded.

For future expansion, ITCM considered using double circuit "upsized" structures that could be used for a new circuit in the future when conditions warrant. This included looking at a 345 kV/345 kV double circuit design like that used on the recent CapX2020 projects, as well as a 345 kV/161 kV design. These double-circuit options were relevant in the event the eventual route for the proposed project would include "greenfield" right-of-way. ITCM has concluded that 345 kV/161 kV is the preferred configuration after considering a variety of factors: (i) characteristics of the existing system; (ii) reliability considerations; (iii) costs; and (iv) system development flexibility if the Project is built on new right-of-way.

The characteristics of the existing system and costs favor a 345 kV/161 kV configuration over a 345 kV/345 kV configuration. The existing 161 kV facilities form the backbone of the transmission system in the study area and provide the principal source for the underlying load serving 69 kV system across southern Minnesota and northern Iowa. Removing these 161 kV sources from the underlying 69 kV system would cause reliability and voltage issues affecting the majority of the load on the system. Further, to uprate the existing 161 kV system to 345 kV would require costly upgrades to many of the existing 161 kV facilities. As a result, it appears there will be a need for the existing 161 kV system for the foreseeable planning horizon. Future generation and transmission needs may also call for future expansion of the 161 kV system.

In addition, the costs of the 345 kV/161 kV configuration are lower. The estimated cost for the 345 kV/161 kV configuration is $2.45 million per mile with overheads; the 345 kV/345 kV configuration is estimated to cost $2.76 million per mile, a difference of $310,000 per mile or 12 percent.

Moreover, while MVP #3 provides significant transfer capability for generation in the study area, future generation may develop beyond the capacity provided for by the Project. In that event, and even if a new 345 kV line were to be determined to be the best alternative to meet the increased transfer need, it would not be prudent to double-circuit the new 345 kV line with the Project because that would create a NERC Category C contingency (common tower 345 kV/345 kV). Because two 345 kV lines on a common tower poses the risk that a single incident results in the outage of both circuits, the system must be able to reliably withstand the outage of both circuits under contingency. Therefore the capacity of the system would be limited to the amount of capacity available in the event both circuits were out of service and would not create significant additional capacity.

There is also a positive benefit associated with a future 345 kV line being located in separate right-of-way rather than double-circuited with the Project. Having separate right-of-way for new 345 kV transmission will enlarge the 345 kV footprint within the transmission system and thus provide generation developers with more opportunities to connect to the system.

10. Conclusion

This study confirms that construction of MVP #3 would meet long-standing transmission needs in Minnesota. Specifically, MVP #3 would effectively relieve constraints on the existing 161 kV system. The new 345 kV line would also provide a critical addition to the 345 kV bulk transmission system serving Minnesota, Iowa and the region. This bulk transmission system provides the most robust and efficient means of delivery for thousands of megawatts of new generation from the Buffalo Ridge to points in Minnesota and further east.

The creation of this 345 kV corridor for new generation will also relieve constraints on the underlying 161 kV system serving southwest Minnesota. It is also highly likely to result in the elimination of two SPSs currently in place to protect the system under certain contingencies.

While a rebuild of the Fox Lake-Rutland-Winnebago Jct. 161 kV transmission line would provide certain benefits, it is not a reasonable alternative to MVP #3. Enhancements to the transmission system are needed in southwest Minnesota to support the growing demand for transfer capability to serve new generators. The improvements need to be made to the bulk transmission system where large amounts of energy must be delivered long distances to remote load centers. Further expansion of the existing 161 kV load serving system would not provide the support needed to reliably operate the transmission system to deliver substantial amounts of new wind energy within Minnesota and beyond to points east. The 345 kV voltage is the prudent voltage for meeting this current capacity need with the flexibility to meet additional future need.

Further, the 345 kV alternative also provides a strong tie with Iowa, where wind generation development is also increasing, thus providing additional transfer capability into Minnesota.

Based on the foregoing, the MVP #3 alternative is recommended.

Appendices

Appendix 1: SU70 AC Cont

** From bus ** ** To bus ** CKT	SU70 BC AC Run: Rating	SU70 MVP3 AC Run: Rating	SU70 MVP3n4 AC Run: Rating	FXLKRTW N AC Cont: Rating	SU70 BC AC Run: BaseFlow	SU70 MVP3 AC Run: BaseFlow	SU70 MVP3n4 AC Run: BaseFlow	FXLKRTW N AC Cont: BaseFlow	SU70 BC AC Run: ContMVA	SU70 MVP3 AC Run: ContMVA	SU70 MVP3n4 AC Run: ContMVA	FXLKRTW N AC Cont: ContMVA	SU70 BC AC Run: Loading %	SU70 MVP3 AC Run: Loading %	SU70 MVP3n4 AC Run: Loading %	FXLKRTW N AC Cont: Loading %	Contingency Description
605639 WOLFTAP8 69.0 618923 GRE-RUSHMOR869.0 1	45.4	45.4	45.4	45.4	2.4	3.3	3.0	2.4	72.0	73.6	84.8	72.0	158.5	162.1	186.7	158.5	ITCM-C925-LN-LN(HrnL-Brew-SpRk-RkCo)
605639 WOLFTAP8 69.0 630110 RUSHMRT8 69.0 1	45.4	45.4	45.4	45.4	4.5	5.1	4.7	4.5	70.5	71.8	82.7	70.5	155.3	158.1	182.1	155.3	ITCM-C925-LN-LN(HrnL-Brew-SpRk-RkCo)
618923 GRE-RUSHMOR869.0 630674 SIBLEY 69.0 1	48.0	48.0	48.0	48.0	4.0	4.9	4.6	4.0	72.9	74.4	83.1	72.9	151.9	154.9	173.2	151.9	ITCM-C925-LN-LN(HrnL-Brew-SpRk-RkCo)
630023 TRIBOJI8 69.0 630687 FLYCLD 8 69.0 1	58.0	58.0	58.0	58.0	4.1	5.1	4.9	4.1	78.4	81.3	93.5	78.4	135.2	140.1	161.1	135.2	ITCM-C925-LN-LN(HrnL-Brew-SpRk-RkCo)
630056 MAGNLIA8 69.0 630108 ADRIANT8 69.0 1	47.0	47.0	47.0	47.0	1.9	1.8	1.4	1.9	60.1	59.7	63.0	60.1	127.9	126.9	134.0	127.9	ITCM-C925-LN-LN(HrnL-Brew-SpRk-RkCo)
630057 ADRIANM8 69.0 630110 RUSHMRT8 69.0 1			69.0				4.7				73.9				107.0		ITCM-C925-LN-LN(HrnL-Brew-SpRk-RkCo)
630128 HAYWD#18 69.0 680275 T GLEN 69.0 1	70.0	70.0		70.0	22.8	23.3		22.8	93.1	93.7		93.2	133.1	133.8		133.1	ITCM-C807-TR-LN(LmCk-NIW-Haywd)
630139 ADAMS 8 69.0 680379 MCNEIL_W 69.0 1	45.0	45.0		45.0	19.1	19.0		19.1	46.2	45.5		46.2	102.8	101.1		102.6	ITCM-C807-TR-LN(LmCk-NIW-Haywd)
630197 LMCK W 8 69.0 631047 LIME CK5 161 1	74.7	74.7		74.7	45.2	45.1		45.2	79.5	79.3		79.5	106.4	106.2		106.4	ITCM-B110-NW-LIMECK161_TRE
630197 LMCK W 8 69.0 631047 LIME CK5 161 1	74.7	74.7		74.7	45.2	45.1		45.2	79.5	79.3		79.5	106.4	106.2		106.4	ITCM-C309-NW-SB(LimeCrk1_161kV)
630197 LMCK W 8 69.0 631047 LIME CK5 161 1	74.7	74.7		74.7	45.2	45.1		45.2	164.8	161.4		164.7	220.6	216.1		220.4	ITCM-C816-TR-LN(Emery-LCk-LCkTr)
630198 LMCK E 8 69.0 630208 MCNWCSS8 69.0 1	103.0			103.0	42.9			42.9	105.0			104.8	101.9			101.7	ITCM-C816-TR-LN(Emery-LCk-LCkTr)
630240 MONONA_8 69.0 630274 WAT TAP8 69.0 1	48.0	48.0	48.0	48.0	17.3	17.1	16.0	17.3	51.1	50.8	48.0	51.1	106.4	105.7	100.0	106.4	ITCM-C904-LN-LN(LAN-GEN-LAN-PST)
630243 HAWKTAP 69.0 630249 WINDSOR8 69.0 1	40.0	40.0	40.0	40.0	8.6	8.6	7.7	8.6	66.3	66.3	71.1	66.3	165.7	165.8	177.7	165.7	ITCM-C203-NE-BF(Hazleton_bus_tie)
630243 HAWKTAP 69.0 630250 RICHFLD8 69.0 1	40.0	40.0	40.0	40.0	8.6	8.5	7.7	8.6	66.6	66.7	70.9	66.6	166.5	166.7	177.3	166.5	ITCM-C203-NE-BF(Hazleton_bus_tie)
630250 RICHFLD8 69.0 630251 FRDBRGM8 69.0 1	47.0	47.0	47.0	47.0	6.8	6.7	5.8	6.8	64.4	64.4	67.9	64.4	137.0	137.1	144.6	137.0	ITCM-C203-NE-BF(Hazleton_bus_tie)
630251 FRDBRGM8 69.0 630252 TRIPOLI8 69.0 1	36.0	36.0	36.0	36.0	4.4	4.3	3.5	4.4	61.5	61.5	64.1	61.5	170.7	170.8	178.0	170.7	ITCM-C203-NE-BF(Hazleton_bus_tie)
630464 KLEMME8 69.0 630821 HANCOCK8 69.0 1	36.0	36.0		36.0	18.6	17.7		18.6	39.4	37.6		39.4	109.4	104.5		109.4	ITCM-C918-LN-LN(Emry-Flyd-Emry-Shfd)
630473 OSCELCT8 69.0 630673 ALLNDRF 69.0 1		77.0	77.0			7.2	6.8			77.6	87.9			100.8	114.2		ITCM-C925-LN-LN(HrnL-Brew-SpRk-RkCo)
630473 OSCELCT8 69.0 630687 FLYCLD 8 69.0 1	58.0	58.0	58.0	58.0	9.2	9.3	8.9	9.2	74.7	77.5	89.4	74.7	128.8	133.6	154.2	128.8	ITCM-C925-LN-LN(HrnL-Brew-SpRk-RkCo)
630673 ALLNDRF 69.0 630674 SIBLEY 69.0 1	48.0	48.0	48.0	48.0	5.9	6.7	6.3	5.9	75.0	77.0	86.9	75.0	156.2	160.3	181.0	156.2	ITCM-C925-LN-LN(HrnL-Brew-SpRk-RkCo)
631036 NIW 5 161 631047 LIME CK5 161 1	200.0	200.0		200.0	40.4	44.3		40.4	225.4	227.9		225.5	112.7	113.9		112.8	ITCM-C816-TR-LN(Emery-LCk-LCkTr)
631036 NIW 5 161 631174 GLENWRTH5 161 1	335.0	335.0		335.0	190.0	194.6		190.1	396.9	398.9		397.1	118.5	119.1		118.5	ITCM-C816-TR-LN(Emery-LCk-LCkTr)
631047 LIME CK5 161 631048 EMERY 5 161 1	200.0	200.0		200.0	132.1	127.6		132.1	231.7	225.7		231.5	115.8	112.8		115.8	ITCM-B110-NW-LIMECK161_TRE
631047 LIME CK5 161 631048 EMERY 5 161 1	200.0			200.0	132.1			132.1	200.3			200.1	100.1			100.0	ITCM-C205-NW-BF(Adams_bkr_6620)
631047 LIME CK5 161 631048 EMERY 5 161 1	200.0	200.0		200.0	132.1	127.6		132.1	231.7	225.7		231.5	115.8	112.8		115.8	ITCM-C309-NW-SB(LimeCrk1_161kV)
631049 CGORDO_5 161 631103 HANCOCK5 161 1	223.0			223.0	103.4			103.3	224.3			224.0	100.6			100.5	ITCM-C918-LN-LN(Emry-Flyd-Emry-Shfd)
631174 GLENWRTH5 161 680542 GLENWTH8 69.0 1	100.0	100.0		100.0	59.4	60.0		59.4	115.1	116.8		115.1	115.1	116.8		115.1	631044 HAYWD#25 161 631174 GLENWRTH5 161 1
631174 GLENWRTH5 161 680542 GLENWTH8 69.0 1	100.0	100.0		100.0	59.4	60.0		59.4	111.4	113.8		111.5	111.4	113.8		111.5	ITCM-B109-NW-HAYWARD161_TR2
631174 GLENWRTH5 161 680542 GLENWTH8 69.0 1	100.0	100.0		100.0	59.4	60.0		59.4	111.4	113.8		111.5	111.4	113.8		111.5	ITCM-C306-NW-SB(BUSHayward2_161kV)
631174 GLENWRTH5 161 680542 GLENWTH8 69.0 1	100.0	100.0		100.0	59.4	60.0		59.4	173.5	173.5		173.5	173.5	173.5		173.5	ITCM-C807-TR-LN(LmCk-NIW-Haywd)

Appendix 2: SUM AC Cont

** From bus ** ** To bus ** CKT	SUM BC AC Run: Rating	SUM MVP3 AC Run: Rating	SUM MVP3n4 AC Run: Rating	FKLKRTW N AC Run: Rating	SUM BC AC Run: BaseFlow	SUM MVP3 AC Run: BaseFlow	SUM MVP3n4 AC Run: BaseFlow	FKLKRTW N AC Run: BaseFlow	SUM BC AC Run: ContMVA	SUM MVP3 AC Run: ContMVA	SUM MVP3n4 AC Run: ContMVA	FKLKRTW N AC Run: ContMVA	SUM BC AC Run: Loading %	SUM MVP3 AC Run: Loading %	SUM MVP3n4 AC Run: Loading %	FKLKRTW N AC Run: Loading %	Contingency Description
605083 HENDRSN8 69.0 605223 KELSO SS 8 69.0 1	51.7			51.7	31.7			31.8	53.3			53.3	103.1			103.1	601050 HELENA 3 345 601072 SHEAK LK3 345 1
605089 ARLNGTN8 69.0 618723 GRE-JSNLDTP869.0 1	47.8			47.8	27.2			27.2	48.9			48.9	102.4			102.3	601050 HELENA 3 345 601072 SHEAK LK3 345 1
630023 TRIBOJI8 69.0 631102 TRIBOJI5 161 1	82.0	82.0	82.0	82.0	56.4	55.9	55.9	56.3	90.3	87.0	86.8	90.1	110.2	106.1	105.9	109.9	ITCM-C215-NW-BF(Cayler-Triboji-TribojiTR)
630056 MAGNLIA8 69.0 631038 MAGNLIA5 161 1	51.0			51.0	19.4			19.4	51.9			51.9	101.9			101.8	ITCM-C213-NW-BF(Dksn-TribOji-Cayler)
630195 MANLY 8 69.0 630197 LMCK W 8 69.0 1	45.0			45.0	27.3			27.0	46.0			46.0	102.3			102.3	ITCM-C808-TR-LN(Wnbago-Freebrn-Wnbago)
630281 LORE E 8 69.0 631056 LORE 5 161 1	74.7	74.7		74.7	32.2	32.1		32.2	74.8	74.8		74.8	100.1	100.1		100.1	ITCM-C812-TR-LN(Albny-Yrk-8thSt)
631050 HAZLTON5 161 636200 BLKHAWK5 161 1	200.0	200.0		200.0	105.0	102.0		105.0	219.9	215.2		219.8	110.0	107.6		109.9	ITCM-C936-LN-LN(DYSART-WASH-HAZ)
631051 HAZL S 5 161 636210 WASHBRN5 161 1	196.0	196.0		196.0	77.1	75.0		77.1	202.8	198.6		202.7	103.5	101.3		103.4	ITCM-C937-LN-LN(DYT-WASH-HAZ-BLK)
631095 E CALMS5 161 631096 GR MND 5 161 1	200.0	200.0		200.0	94.9	94.6		94.9	208.8	207.7		208.6	104.4	103.8		104.3	ITCM-C921-LN-LN(RC-Salm-MNV-Tiff)
631095 E CALMS5 161 636616 SB 56 5 161 1	223.0	223.0		223.0	61.6	61.4		61.6	229.0	227.8		228.8	102.7	102.2		102.6	ITCM-C922-LN-LN(QC-RC-MrgnV-Tiff)
635001 CBLUFFS5 161 635011 INDNCRK5 161 1		371.0	371.0			158.2	158.8			371.5	374.0			100.1	100.8		MEC-C547
680297 LELAND 69.0 680301 T FC 69.0 1		27.5	27.5			7.5	6.9			39.3	38.8			143.0	141.0		ITCM-C307-NW-SB(BusWinnebago_161kV)
680297 LELAND 69.0 680301 T FC 69.0 1	27.5			27.5	10.9			10.4	41.0			41.0	149.0			149.0	ITCM-C808-TR-LN(Wnbago-Freebrn-Wnbago)

Appendix 3: SU70 BC Buffalo Ridge 25%N / 75%S Gen – MN Scenario

AC FCIT(	Limiting Constrain	Contingency	PreShift	PostShif	Ratin	AC TD
2513.9	L:613370 RUTLAND5 161 631042 FOX LK 5 161 1		41.3	167.0	167.0	0.05002
		C:ITCM-B102-NW-LAKEFIELD_SPS				
		Open 601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
		Open 601034 NOBLES 3 345 631138 LAKEFLD3 345 1				
		Set bus 615100 GRE-TRIMWNDW.575 generation to0.0 MW				
		Set bus 615041 GRE-LGS 31G13.8 generation to0.0 MW				
		Set bus 615042 GRE-LGS 32G13.8 generation to0.0 MW				
		Set bus 615043 GRE-LGS 33G13.8 generation to0.0 MW				
		Set bus 615044 GRE-LGS 34G13.8 generation to0.0 MW				
		Set bus 615045 GRE-LGS 35G13.8 generation to0.0 MW				
		Set bus 615046 GRE-LGS 36G13.8 generation to0.0 MW				
3028.8	L:613370 RUTLAND5 161 631043 WINBAGO5 161 1		22.3	165.0	165.0	0.04711
		C:ITCM-B102-NW-LAKEFIELD_SPS				
		Open 601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
		Open 601034 NOBLES 3 345 631138 LAKEFLD3 345 1				
		Set bus 615100 GRE-TRIMWNDW.575 generation to0.0 MW				
		Set bus 615041 GRE-LGS 31G13.8 generation to0.0 MW				
		Set bus 615042 GRE-LGS 32G13.8 generation to0.0 MW				
		Set bus 615043 GRE-LGS 33G13.8 generation to0.0 MW				
		Set bus 615044 GRE-LGS 34G13.8 generation to0.0 MW				
		Set bus 615045 GRE-LGS 35G13.8 generation to0.0 MW				
		Set bus 615046 GRE-LGS 36G13.8 generation to0.0 MW				
3053.8	L:613370 RUTLAND5 161 631042 FOX LK 5 161 1		46.8	167.0	167.0	0.03938
		C:601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
		Open 601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
3053.6	L:613370 RUTLAND5 161 631042 FOX LK 5 161 1		46.6	167.0	167.0	0.03943
		C:601032 FIELD_S3 345 601033 FIELD_N3 345 1				
		Open 601032 FIELD_S3 345 601033 FIELD_N3 345 1				
3088.0	L:631079 BNE JCT5 161 636020 FT.DODG5 161 1		15.6	147.0	147.0	0.04254
		C:LEHIGH 0350				
		Open 636000 WEBSTER3 345 636010 LEHIGH 3 345 1				
		Open 635200 RAUN 3 345 636010 LEHIGH 3 345 1				
3088.0	L:631079 BNE JCT5 161 636020 FT.DODG5 161 1		15.6	147.0	147.0	0.04254
		C:LEHIGH-B360				
		Open 635200 RAUN 3 345 636010 LEHIGH 3 345 1				
		Open 635600 GRIMES 3 345 636010 LEHIGH 3 345 1				
		Open 636000 WEBSTER3 345 636010 LEHIGH 3 345 1				
3107.6	L:631079 BNE JCT5 161 636020 FT.DODG5 161 1		43.9	147.0	147.0	0.03315
		C:MEC-C522				
		Open 635590 FALLOW 3 345 635600 GRIMES 3 345 1				
		Open 635600 GRIMES 3 345 636010 LEHIGH 3 345 1				
3286.7	L:636001 WEBSTER5 161 636050 WRIGHT 5 161 1		9.2	212.1	212.0	0.06171
		C:MEC-C519				
		Open 636000 WEBSTER3 345 636010 LEHIGH 3 345 1				
		Open 636001 WEBSTER5 161 636020 FT.DODG5 161 1				
3443.9	L:636001 WEBSTER5 161 636025 HAYES 5 161 1		6.2	210.3	210.0	0.05927
		C:MEC-C519				
		Open 636000 WEBSTER3 345 636010 LEHIGH 3 345 1				
		Open 636001 WEBSTER5 161 636020 FT.DODG5 161 1				
3450.5	L:636001 WEBSTER5 161 636050 WRIGHT 5 161 1		9.3	212.1	212.0	0.05878
		C:LEHIGH-B360				
		Open 635200 RAUN 3 345 636010 LEHIGH 3 345 1				
		Open 635600 GRIMES 3 345 636010 LEHIGH 3 345 1				
		Open 636000 WEBSTER3 345 636010 LEHIGH 3 345 1				

Appendix 4: SU70 MVP 3 Buffalo Ridge 25%N / 75%S Gen – MN Scenario

AC FCIT(	Limiting Constrain	Contingency	PreShift	PostShif	Ratin	AC TD
3323.2	L:613040 AUSTIN 5 161 631044 HAYWD#25 161 1		205.5	307.9	308.0	0.03081
		C:ITCM-C304-NW-SB(BUSAdamsS_161kV)				
		Open 631123 ADAMS_S5 161 631127 HAYWD#15 161 1				
		Open 631123 ADAMS_S5 161 631154 BARTON5 161 1				
		Open 631123 ADAMS_S5 161 681527 BVR CRK5 161 1				
		Open 631046 ADAMS 5 161 631123 ADAMS_S5 161 1				
		Open 631122 ADAMS_N5 161 631123 ADAMS_S5 161 1				
3572.6	L:602003 BLUEETA5 161 631043 WINBAGO5 161 1		46.5	200.4	200.0	0.04308
		C:ITCM-B102-NW-LAKEFIELD_SPS				
		Open 601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
		Open 601034 NOBLES 3 345 631138 LAKEFLD3 345 1				
		Set bus 615100 GRE-TRIMWNDW.575 generation to0.0 MW				
		Set bus 615041 GRE-LGS 31G13.8 generation to0.0 MW				
		Set bus 615042 GRE-LGS 32G13.8 generation to0.0 MW				
		Set bus 615043 GRE-LGS 33G13.8 generation to0.0 MW				
		Set bus 615044 GRE-LGS 34G13.8 generation to0.0 MW				
		Set bus 615045 GRE-LGS 35G13.8 generation to0.0 MW				
		Set bus 615046 GRE-LGS 36G13.8 generation to0.0 MW				
3753.6	L:640386 TWIN CH4 230 652565 SIOUXCY4 230 1		157.5	320.0	320.0	0.04330
		C:MEC-C528				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
3753.6	L:640386 TWIN CH4 230 652565 SIOUXCY4 230 1		157.5	320.0	320.0	0.04330
		C:C2-RAUN-0270				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
3931.7	L:602003 BLUEETA5 161 631043 WINBAGO5 161 1		52.5	200.1	200.0	0.03754
		C:601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
		Open 601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
3932.0	L:602003 BLUEETA5 161 631043 WINBAGO5 161 1		52.5	200.1	200.0	0.03753
		C:601032 FIELD_S3 345 601033 FIELD_N3 345 1				
		Open 601032 FIELD_S3 345 601033 FIELD_N3 345 1				
4000.0	L:602002 SOUTHBE5 161 602003 BLUEETA5 161 1		38.8	210.3	216.3	0.04288
NoLimit		C:ITCM-B102-NW-LAKEFIELD_SPS				
		Open 601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
		Open 601034 NOBLES 3 345 631138 LAKEFLD3 345 1				
		Set bus 615100 GRE-TRIMWNDW.575 generation to0.0 MW				
		Set bus 615041 GRE-LGS 31G13.8 generation to0.0 MW				
		Set bus 615042 GRE-LGS 32G13.8 generation to0.0 MW				
		Set bus 615043 GRE-LGS 33G13.8 generation to0.0 MW				
		Set bus 615044 GRE-LGS 34G13.8 generation to0.0 MW				
		Set bus 615045 GRE-LGS 35G13.8 generation to0.0 MW				
		Set bus 615046 GRE-LGS 36G13.8 generation to0.0 MW				

Appendix 5: SU70 MVP 3 and 4 Buffalo Ridge 25%N / 75%S Gen – MN Scenario

AC FCITC	Limiting Constraint	Contingency	PreShift	PostShift	Rating	AC TDF
3997.9	L:640386 TWIN CH4 230 652565 SIOUXCY4 230 1		155.6	319.9	320.0	0.04111
		C:MEC-C528				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
3997.9	L:640386 TWIN CH4 230 652565 SIOUXCY4 230 1		155.6	319.9	320.0	0.04111
		C:C2-RAUN-0270				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				

Appendix 6: SU70 FXLK-RTLD-WNBG Buffalo Ridge 25%N / 75%S Gen – MN Scenario

AC FCITC	Limiting Constraint	Contingency	PreShift	PostShift	Rating	AC TDF
3087.6	L:631079 BNE JCT5 161 636020 FT.DODG5 161 1		15.6	147.0	147.0	0.04254
		C:LEHIGH 0350				
		Open 636000 WEBSTER3 345 636010 LEHIGH 3 345 1				
		Open 635200 RAUN 3 345 636010 LEHIGH 3 345 1				
3087.7	L:631079 BNE JCT5 161 636020 FT.DODG5 161 1		15.6	147.0	147.0	0.04254
		C:LEHIGH-B360				
		Open 635200 RAUN 3 345 636010 LEHIGH 3 345 1				
		Open 635600 GRIMES 3 345 636010 LEHIGH 3 345 1				
		Open 636000 WEBSTER3 345 636010 LEHIGH 3 345 1				
3108.1	L:631079 BNE JCT5 161 636020 FT.DODG5 161 1		43.9	147.0	147.0	0.03314
		C:MEC-C522				
		Open 635590 FALLOW 3 345 635600 GRIMES 3 345 1				
		Open 635600 GRIMES 3 345 636010 LEHIGH 3 345 1				
3287.8	L:636001 WEBSTER5 161 636050 WRIGHT 5 161 1		9.2	212.1	212.0	0.06170
		C:MEC-C519				
		Open 636000 WEBSTER3 345 636010 LEHIGH 3 345 1				
		Open 636001 WEBSTER5 161 636020 FT.DODG5 161 1				
3688.0	L:631041 LAKEFLD5 161 631042 FOX LK 5 161 1		42.2	160.2	160.0	0.03199
		C:ITCM-B102-NW-LAKEFIELD_SPS				
		Open 601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
		Open 601034 NOBLES 3 345 631138 LAKEFLD3 345 1				
		Set bus 615100 GRE-TRIMWNDW.575 generation to0.0 MW				
		Set bus 615041 GRE-LGS 31G13.8 generation to0.0 MW				
		Set bus 615042 GRE-LGS 32G13.8 generation to0.0 MW				
		Set bus 615043 GRE-LGS 33G13.8 generation to0.0 MW				
		Set bus 615044 GRE-LGS 34G13.8 generation to0.0 MW				
		Set bus 615045 GRE-LGS 35G13.8 generation to0.0 MW				
		Set bus 615046 GRE-LGS 36G13.8 generation to0.0 MW				
3442.2	L:636001 WEBSTER5 161 636025 HAYES 5 161 1		6.2	210.3	210.0	0.05930
		C:MEC-C519				
		Open 636000 WEBSTER3 345 636010 LEHIGH 3 345 1				
		Open 636001 WEBSTER5 161 636020 FT.DODG5 161 1				
3452.2	L:636001 WEBSTER5 161 636050 WRIGHT 5 161 1		9.2	212.1	212.0	0.05875
		C:LEHIGH-B360				
		Open 635200 RAUN 3 345 636010 LEHIGH 3 345 1				
		Open 635600 GRIMES 3 345 636010 LEHIGH 3 345 1				
		Open 636000 WEBSTER3 345 636010 LEHIGH 3 345 1				
3452.2	L:636001 WEBSTER5 161 636050 WRIGHT 5 161 1		9.2	212.1	212.0	0.05875
		C:LEHIGH 0350				
		Open 636000 WEBSTER3 345 636010 LEHIGH 3 345 1				
		Open 635200 RAUN 3 345 636010 LEHIGH 3 345 1				
3510.3	L:636230 FRANKLN5 161 636235 WALL LK5 161 1		17.1	201.4	201.0	0.05251
		C:MEC-C519				
		Open 636000 WEBSTER3 345 636010 LEHIGH 3 345 1				
		Open 636001 WEBSTER5 161 636020 FT.DODG5 161 1				
3603.3	L:640386 TWIN CH4 230 652565 SIOUXCY4 230 1		161.6	320.0	320.0	0.04397
		C:MEC-C528				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				

Appendix 7: SUM BC Buffalo Ridge 25%N / 75%S Gen – MN Scenario

AC FCITC	Limiting Constraint	Contingency	PreShift	PostShift	Rating	AC TDF
445.7	L:613370 RUTLAND5 161 631042 FOX LK 5 161 1		148.3	166.7	167.0	0.04125
		C:601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
		Open 601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
445.7	L:613370 RUTLAND5 161 631042 FOX LK 5 161 1		148.3	166.7	167.0	0.04125
		C:601032 FIELD_S3 345 601033 FIELD_N3 345 1				
		Open 601032 FIELD_S3 345 601033 FIELD_N3 345 1				
445.7	L:613370 RUTLAND5 161 631042 FOX LK 5 161 1		148.3	166.7	167.0	0.04125
		C:601004 WILMART3 345 601033 FIELD_N3 345 1				
		Open 601004 WILMART3 345 601033 FIELD_N3 345 1				
919.6	L:613370 RUTLAND5 161 631043 WINBAGO5 161 1		125.7	165.0	165.0	0.04275
		C:601032 FIELD_S3 345 601033 FIELD_N3 345 1				
		Open 601032 FIELD_S3 345 601033 FIELD_N3 345 1				
919.6	L:613370 RUTLAND5 161 631043 WINBAGO5 161 1		125.7	165.0	165.0	0.04275
		C:601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
		Open 601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
919.6	L:613370 RUTLAND5 161 631043 WINBAGO5 161 1		125.7	165.0	165.0	0.04275
		C:601004 WILMART3 345 601033 FIELD_N3 345 1				
		Open 601004 WILMART3 345 601033 FIELD_N3 345 1				
2552.3	L:636001 WEBSTER5 161 636050 WRIGHT 5 161 1		83.0	212.0	212.0	0.05054
		C:MEC-C522				
		Open 635590 FALLOW 3 345 635600 GRIMES 3 345 1				
		Open 635600 GRIMES 3 345 636010 LEHIGH 3 345 1				
2552.3	L:636001 WEBSTER5 161 636050 WRIGHT 5 161 1		83.0	212.0	212.0	0.05054
		C:GRIMES-B904				
		Open 635590 FALLOW 3 345 635600 GRIMES 3 345 1				
		Open 635600 GRIMES 3 345 636010 LEHIGH 3 345 1				
2680.8	L:636001 WEBSTER5 161 636050 WRIGHT 5 161 1		77.5	212.0	212.0	0.05018
		C:GRIMES-B905				
		Open 635600 GRIMES 3 345 635700 SYCAMOR3 345 2				
		Open 635600 GRIMES 3 345 636010 LEHIGH 3 345 1				
2891.1	L:640386 TWIN CH4 230 652565 SIOUXCY4 230 1		198.0	320.0	320.0	0.04221
		C:MEC-C528				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				

Appendix 8: SUM MVP 3 Buffalo Ridge 25%N / 75%S Gen – MN Scenario

AC FCITC	Limiting Constraint	Contingency	PreShift	PostShift	Rating	AC TDF
2909.0	L:602003 BLUEETA5 161 631043 WINBAGO5 161 1		86.7	199.5	200.0	0.03877
		C:601032 FIELD_S3 345 601033 FIELD_N3 345 1				
		Open 601032 FIELD_S3 345 601033 FIELD_N3 345 1				
2909.6	L:602003 BLUEETA5 161 631043 WINBAGO5 161 1		86.7	199.5	200.0	0.03878
		C:601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
		Open 601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
2926.0	L:602003 BLUEETA5 161 631043 WINBAGO5 161 1		86.7	200.0	200.0	0.03872
		C:601004 WILMART3 345 601033 FIELD_N3 345 1				
		Open 601004 WILMART3 345 601033 FIELD_N3 345 1				
3085.5	L:640386 TWIN CH4 230 652565 SIOUXCY4 230 1		191.4	320.0	320.0	0.04170
		C:C2-RAUN-0270				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
3085.5	L:640386 TWIN CH4 230 652565 SIOUXCY4 230 1		191.4	320.0	320.0	0.04170
		C:MEC-C528				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
2992.6	L:636001 WEBSTER5 161 636050 WRIGHT 5 161 1		94.6	212.0	212.0	0.03924
		C:MEC-C522				
		Open 635590 FALLOW 3 345 635600 GRIMES 3 345 1				
		Open 635600 GRIMES 3 345 636010 LEHIGH 3 345 1				
2992.6	L:636001 WEBSTER5 161 636050 WRIGHT 5 161 1		94.6	212.0	212.0	0.03924
		C:GRIMES-B904				
		Open 635590 FALLOW 3 345 635600 GRIMES 3 345 1				
		Open 635600 GRIMES 3 345 636010 LEHIGH 3 345 1				
3090.6	L:636001 WEBSTER5 161 636050 WRIGHT 5 161 1		120.0	212.0	212.0	0.02978
		C:6-10				
		Remove unit 1 from bus 629074 ARNOLD1G 22.0 577.8 MW				
		Remove unit 1 from bus 629069 EMERYST1 18.0 228.8 MW				
3378.9	L:631043 WINBAGO5 161 631180 FREEBORN5 161 1		50.3	167.0	167.0	0.03452
		C:601004 WILMART3 345 601072 SHEAK LK3 345 1				
		Open 601004 WILMART3 345 601072 SHEAK LK3 345 1				
3409.5	L:631043 WINBAGO5 161 631180 FREEBORN5 161 1		47.0	166.9	167.0	0.03519
		C:601032 FIELD_S3 345 601033 FIELD_N3 345 1				
		Open 601032 FIELD_S3 345 601033 FIELD_N3 345 1				

Appendix 9: SUM MVP 3 and 4 Buffalo Ridge 25%N / 75%S Gen – MN Scenario

AC FCITC	Limiting Constraint	Contingency	PreShift	PostShift	Rating	AC TDF
3321.6	L:640386 TWIN CH4	230 652565 SIOUXCY4 230 1	188.2	320.0	320.0	0.03970
		C:C2-RAUN-0270				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
3321.6	L:640386 TWIN CH4	230 652565 SIOUXCY4 230 1	188.2	320.0	320.0	0.03970
		C:MEC-C528				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
3610.6	L:602003 BLUEETA5	161 631043 WINBAGO5 161 1	79.1	200.1	200.0	0.03351
		C:601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
		Open 601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
3610.3	L:602003 BLUEETA5	161 631043 WINBAGO5 161 1	79.1	200.1	200.0	0.03351
		C:601032 FIELD_S3 345 601033 FIELD_N3 345 1				
		Open 601032 FIELD_S3 345 601033 FIELD_N3 345 1				
3614.9	L:602003 BLUEETA5	161 631043 WINBAGO5 161 1	79.1	200.0	200.0	0.03346
		C:601004 WILMART3 345 601033 FIELD_N3 345 1				
		Open 601004 WILMART3 345 601033 FIELD_N3 345 1				
4000.0	L:636001 WEBSTER5	161 636050 WRIGHT 5 161 1	75.7	210.9	212.0	0.03380
NoLimit		C:631197 WINNCOWEST3 345 635369 BURT3 345 1				
		Open 631197 WINNCOWEST3 345 635369 BURT3 345 1				

Appendix 10: SUM FXLK-RTLD-WNBG Buffalo Ridge 25%N / 75%S Gen – MN Scenario

AC FCITC	Limiting Constraint	Contingency	PreShift	PostShift	Rating	AC TDF
2559.4	L:636001 WEBSTER5 161 636050 WRIGHT 5 161 1		82.8	212.0	212.0	0.05048
		C:GRIMES-B904				
		Open 635590 FALLOW 3 345 635600 GRIMES 3 345 1				
		Open 635600 GRIMES 3 345 636010 LEHIGH 3 345 1				
2559.4	L:636001 WEBSTER5 161 636050 WRIGHT 5 161 1		82.8	212.0	212.0	0.05048
		C:MEC-C522				
		Open 635590 FALLOW 3 345 635600 GRIMES 3 345 1				
		Open 635600 GRIMES 3 345 636010 LEHIGH 3 345 1				
2687.9	L:636001 WEBSTER5 161 636050 WRIGHT 5 161 1		77.3	212.0	212.0	0.05011
		C:GRIMES-B905				
		Open 635600 GRIMES 3 345 635700 SYCAMOR3 345 2				
		Open 635600 GRIMES 3 345 636010 LEHIGH 3 345 1				
2891.6	L:640386 TWIN CH4 230 652565 SIOUXCY4 230 1		197.9	320.0	320.0	0.04221
		C:C2-RAUN-0270				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
2891.6	L:640386 TWIN CH4 230 652565 SIOUXCY4 230 1		197.9	320.0	320.0	0.04221
		C:MEC-C528				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
3744.3	L:631041 LAKEFLD5 161 631042 FOX LK 5 161 1		39.5	160.2	160.0	0.03222
		C:ITCM-B102-NW-LAKEFIELD_SPS				
		Open 601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
		Open 601034 NOBLES 3 345 631138 LAKEFLD3 345 1				
		Set bus 615100 GRE-TRIMWNDW.575 generation to0.0 MW				
		Set bus 615041 GRE-LGS 31G13.8 generation to0.0 MW				
		Set bus 615042 GRE-LGS 32G13.8 generation to0.0 MW				
		Set bus 615043 GRE-LGS 33G13.8 generation to0.0 MW				
		Set bus 615044 GRE-LGS 34G13.8 generation to0.0 MW				
		Set bus 615045 GRE-LGS 35G13.8 generation to0.0 MW				
		Set bus 615046 GRE-LGS 36G13.8 generation to0.0 MW				
3588.1	L:631138 LAKEFLD3 345 635368 SHELDON 3 345 1		183.9	864.0	864.0	0.18953
		C:C2-RAUN-0270				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
3588.1	L:631138 LAKEFLD3 345 635368 SHELDON 3 345 1		183.9	864.0	864.0	0.18953
		C:MEC-C528				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
3598.3	L:601004 WILMART3 345 601033 FIELD_N3 345 1		509.3	1195.2	1195.1	0.19061
		C:601031 BRKNGCO3 345 601048 LYON CO 3 345 1				
		Open 601031 BRKNGCO3 345 601048 LYON CO 3 345 1				
3682.8	L:631079 BNE JCT5 161 636020 FT.DODG5 161 1		29.4	147.0	147.0	0.03195
		C:GRIMES-B904				
		Open 635590 FALLOW 3 345 635600 GRIMES 3 345 1				
		Open 635600 GRIMES 3 345 636010 LEHIGH 3 345 1				

Appendix 11: SU70 BC Buffalo Ridge 50%N / 50%S Gen – MN Scenario

AC FCITC	Limiting Constraint	Contingency	PreShift	PostShift	Rating	AC TDF
2603.8	L:613370 RUTLAND5 161 631042 FOX LK 5 161 1		41.3	167.1	167.0	0.04833
		C:ITCM-B102-NW-LAKEFIELD_SPS				
		Open 601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
		Open 601034 NOBLES 3 345 631138 LAKEFLD3 345 1				
		Set bus 615100 GRE-TRIMWNDW.575 generation to0.0 MW				
		Set bus 615041 GRE-LGS 31G13.8 generation to0.0 MW				
		Set bus 615042 GRE-LGS 32G13.8 generation to0.0 MW				
		Set bus 615043 GRE-LGS 33G13.8 generation to0.0 MW				
		Set bus 615044 GRE-LGS 34G13.8 generation to0.0 MW				
		Set bus 615045 GRE-LGS 35G13.8 generation to0.0 MW				
		Set bus 615046 GRE-LGS 36G13.8 generation to0.0 MW				
3110.1	L:613370 RUTLAND5 161 631043 WINBAGO5 161 1		22.3	165.0	165.0	0.04588
		C:ITCM-B102-NW-LAKEFIELD_SPS				
		Open 601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
		Open 601034 NOBLES 3 345 631138 LAKEFLD3 345 1				
		Set bus 615100 GRE-TRIMWNDW.575 generation to0.0 MW				
		Set bus 615041 GRE-LGS 31G13.8 generation to0.0 MW				
		Set bus 615042 GRE-LGS 32G13.8 generation to0.0 MW				
		Set bus 615043 GRE-LGS 33G13.8 generation to0.0 MW				
		Set bus 615044 GRE-LGS 34G13.8 generation to0.0 MW				
		Set bus 615045 GRE-LGS 35G13.8 generation to0.0 MW				
		Set bus 615046 GRE-LGS 36G13.8 generation to0.0 MW				
3000.1	L:613370 RUTLAND5 161 631042 FOX LK 5 161 1		46.8	167.0	167.0	0.04009
		C:601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
		Open 601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
2999.5	L:613370 RUTLAND5 161 631042 FOX LK 5 161 1		46.6	167.1	167.0	0.04015
		C:601032 FIELD_S3 345 601033 FIELD_N3 345 1				
		Open 601032 FIELD_S3 345 601033 FIELD_N3 345 1				
3593.2	L:613370 RUTLAND5 161 631043 WINBAGO5 161 1		23.9	165.0	165.0	0.03925
		C:601032 FIELD_S3 345 601033 FIELD_N3 345 1				
		Open 601032 FIELD_S3 345 601033 FIELD_N3 345 1				
3593.1	L:613370 RUTLAND5 161 631043 WINBAGO5 161 1		23.7	165.0	165.0	0.03933
		C:601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
		Open 601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
4000.0	L:631041 LAKEFLD5 161 631042 FOX LK 5 161 1		41.9	159.7	160.0	0.02944
		C:ITCM-B102-NW-LAKEFIELD_SPS				
		Open 601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
		Open 601034 NOBLES 3 345 631138 LAKEFLD3 345 1				
		Set bus 615100 GRE-TRIMWNDW.575 generation to0.0 MW				
		Set bus 615041 GRE-LGS 31G13.8 generation to0.0 MW				
		Set bus 615042 GRE-LGS 32G13.8 generation to0.0 MW				
		Set bus 615043 GRE-LGS 33G13.8 generation to0.0 MW				
		Set bus 615044 GRE-LGS 34G13.8 generation to0.0 MW				
		Set bus 615045 GRE-LGS 35G13.8 generation to0.0 MW				
		Set bus 615046 GRE-LGS 36G13.8 generation to0.0 MW				
4000.0	L:640386 TWIN CH4 230 652565 SIOUXCY4 230 1		161.5	319.8	320.0	0.03956
		C:MEC-C528				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
4000.0	L:640386 TWIN CH4 230 652565 SIOUXCY4 230 1		161.5	319.8	320.0	0.03956
		C:C2-RAUN-0270				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				

Appendix 12: SU70 MVP 3 Buffalo Ridge 50%N / 50%S Gen – MN Scenario

AC FCIT(	Limiting Constrai	Contingency	PreShift	PostShif	Ratin	AC TD
4244.5	L:640386 TWIN CH4	230 652565 SIOUXCY4 230 1	157.5	320.0	320.0	0.03829
		C:MEC-C528				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
4244.5	L:640386 TWIN CH4	230 652565 SIOUXCY4 230 1	157.5	320.0	320.0	0.03829
		C:C2-RAUN-0270				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
4240.0	L:602003 BLUEETA5	161 631043 WINBAGO5 161 1	46.5	200.3	200.0	0.03629
		C:ITCM-B102-NW-LAKEFIELD_SPS				
		Open 601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
		Open 601034 NOBLES 3 345 631138 LAKEFLD3 345 1				
		Set bus 615100 GRE-TRIMWNDW.575 generation to0.0 MW				
		Set bus 615041 GRE-LGS 31G13.8 generation to0.0 MW				
		Set bus 615042 GRE-LGS 32G13.8 generation to0.0 MW				
		Set bus 615043 GRE-LGS 33G13.8 generation to0.0 MW				
		Set bus 615044 GRE-LGS 34G13.8 generation to0.0 MW				
		Set bus 615045 GRE-LGS 35G13.8 generation to0.0 MW				
		Set bus 615046 GRE-LGS 36G13.8 generation to0.0 MW				
4493.5	L:602003 BLUEETA5	161 631043 WINBAGO5 161 1	52.5	200.0	200.0	0.03284
		C:601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
		Open 601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
4493.8	L:602003 BLUEETA5	161 631043 WINBAGO5 161 1	52.5	200.1	200.0	0.03283
		C:601032 FIELD_S3 345 601033 FIELD_N3 345 1				
		Open 601032 FIELD_S3 345 601033 FIELD_N3 345 1				
4903.7	L:602002 SOUTHBE5	161 602003 BLUEETA5 161 1	38.8	216.7	216.3	0.03628
		C:ITCM-B102-NW-LAKEFIELD_SPS				
		Open 601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
		Open 601034 NOBLES 3 345 631138 LAKEFLD3 345 1				
		Set bus 615100 GRE-TRIMWNDW.575 generation to0.0 MW				
		Set bus 615041 GRE-LGS 31G13.8 generation to0.0 MW				
		Set bus 615042 GRE-LGS 32G13.8 generation to0.0 MW				
		Set bus 615043 GRE-LGS 33G13.8 generation to0.0 MW				
		Set bus 615044 GRE-LGS 34G13.8 generation to0.0 MW				
		Set bus 615045 GRE-LGS 35G13.8 generation to0.0 MW				
		Set bus 615046 GRE-LGS 36G13.8 generation to0.0 MW				

Appendix 13: SU70 MVP 3 and 4 Buffalo Ridge 50%N / 50%S Gen – MN Scenario

AC FCIT(	Limiting Constrai	Contingency	PreShift	PostShif	Ratin	AC TD
4523.6	L:640386 TWIN CH4 230 652565 SIOUXCY4 230 1		155.6	319.9	320.0	0.03632
		C:C2-RAUN-0270				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
4523.6	L:640386 TWIN CH4 230 652565 SIOUXCY4 230 1		155.6	319.9	320.0	0.03632
		C:MEC-C528				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
5000.0	L:602003 BLUEETA5 161 631043 WINBAGO5 161 1		46.1	197.2	200.0	0.03022
NoLimit		C:ITCM-B102-NW-LAKEFIELD_SPS				
		Open 601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
		Open 601034 NOBLES 3 345 631138 LAKEFLD3 345 1				
		Set bus 615100 GRE-TRIMWNDW.575 generation to0.0 MW				
		Set bus 615041 GRE-LGS 31G13.8 generation to0.0 MW				
		Set bus 615042 GRE-LGS 32G13.8 generation to0.0 MW				
		Set bus 615043 GRE-LGS 33G13.8 generation to0.0 MW				
		Set bus 615044 GRE-LGS 34G13.8 generation to0.0 MW				
		Set bus 615045 GRE-LGS 35G13.8 generation to0.0 MW				
		Set bus 615046 GRE-LGS 36G13.8 generation to0.0 MW				

Appendix 14: SU70 FXLK-RTLD-WNBG Buffalo Ridge 50%N / 50%S Gen – MN Scenario

AC FCIT(	Limiting Constrai	Contingency	PreShift	PostShif	Ratin	AC TD
3841.5	L:631041 LAKEFLD5 161 631042 FOX LK 5 161 1		42.2	160.4	160.0	0.03077
		C:ITCM-B102-NW-LAKEFIELD_SPS				
		Open 601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
		Open 601034 NOBLES 3 345 631138 LAKEFLD3 345 1				
		Set bus 615100 GRE-TRIMWNDW.575 generation to0.0 MW				
		Set bus 615041 GRE-LGS 31G13.8 generation to0.0 MW				
		Set bus 615042 GRE-LGS 32G13.8 generation to0.0 MW				
		Set bus 615043 GRE-LGS 33G13.8 generation to0.0 MW				
		Set bus 615044 GRE-LGS 34G13.8 generation to0.0 MW				
		Set bus 615045 GRE-LGS 35G13.8 generation to0.0 MW				
		Set bus 615046 GRE-LGS 36G13.8 generation to0.0 MW				
4006.8	L:640386 TWIN CH4 230 652565 SIOUXCY4 230 1		161.6	320.0	320.0	0.03953
		C:MEC-C528				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
4006.8	L:640386 TWIN CH4 230 652565 SIOUXCY4 230 1		161.6	320.0	320.0	0.03953
		C:C2-RAUN-0270				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
4285.2	L:631079 BNE JCT5 161 636020 FT.DODG5 161 1		15.6	147.0	147.0	0.03065
		C:LEHIGH 0350				
		Open 636000 WEBSTER3 345 636010 LEHIGH 3 345 1				
		Open 635200 RAUN 3 345 636010 LEHIGH 3 345 1				
4285.2	L:631079 BNE JCT5 161 636020 FT.DODG5 161 1		15.6	147.0	147.0	0.03065
		C:LEHIGH-B360				
		Open 635200 RAUN 3 345 636010 LEHIGH 3 345 1				
		Open 635600 GRIMES 3 345 636010 LEHIGH 3 345 1				
		Open 636000 WEBSTER3 345 636010 LEHIGH 3 345 1				
4722.5	L:631041 LAKEFLD5 161 631138 LAKEFLD3 345 2		75.2	335.6	335.0	0.05513
		C:ITCM-B102-NW-LAKEFIELD_SPS				
		Open 601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
		Open 601034 NOBLES 3 345 631138 LAKEFLD3 345 1				
		Set bus 615100 GRE-TRIMWNDW.575 generation to0.0 MW				
		Set bus 615041 GRE-LGS 31G13.8 generation to0.0 MW				
		Set bus 615042 GRE-LGS 32G13.8 generation to0.0 MW				
		Set bus 615043 GRE-LGS 33G13.8 generation to0.0 MW				
		Set bus 615044 GRE-LGS 34G13.8 generation to0.0 MW				
		Set bus 615045 GRE-LGS 35G13.8 generation to0.0 MW				
		Set bus 615046 GRE-LGS 36G13.8 generation to0.0 MW				
4722.5	L:631041 LAKEFLD5 161 631138 LAKEFLD3 345 1		75.2	335.6	335.0	0.05513
		C:ITCM-B102-NW-LAKEFIELD_SPS				
		Open 601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
		Open 601034 NOBLES 3 345 631138 LAKEFLD3 345 1				
		Set bus 615100 GRE-TRIMWNDW.575 generation to0.0 MW				
		Set bus 615041 GRE-LGS 31G13.8 generation to0.0 MW				
		Set bus 615042 GRE-LGS 32G13.8 generation to0.0 MW				
		Set bus 615043 GRE-LGS 33G13.8 generation to0.0 MW				
		Set bus 615044 GRE-LGS 34G13.8 generation to0.0 MW				
		Set bus 615045 GRE-LGS 35G13.8 generation to0.0 MW				
		Set bus 615046 GRE-LGS 36G13.8 generation to0.0 MW				
4661.1	L:636001 WEBSTER5 161 636050 WRIGHT 5 161 1		9.2	212.0	212.0	0.04351
		C:MEC-C519				
		Open 636000 WEBSTER3 345 636010 LEHIGH 3 345 1				
		Open 636001 WEBSTER5 161 636020 FT.DODG5 161 1				

Appendix 15: SUM BC Buffalo Ridge 50%N / 50%S Gen – MN Scenario

AC FCITC	Limiting Constraint	Contingency	PreShift	PostShift	Rating	AC TDF
438.9	L:613370 RUTLAND5 161 631042 FOX LK 5 161 1		148.3	166.7	167.0	0.04190
		C:601032 FIELD_S3 345 601033 FIELD_N3 345 1				
		Open 601032 FIELD_S3 345 601033 FIELD_N3 345 1				
438.9	L:613370 RUTLAND5 161 631042 FOX LK 5 161 1		148.3	166.7	167.0	0.04190
		C:601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
		Open 601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
439.0	L:613370 RUTLAND5 161 631042 FOX LK 5 161 1		148.3	166.7	167.0	0.04190
		C:601004 WILMART3 345 601033 FIELD_N3 345 1				
		Open 601004 WILMART3 345 601033 FIELD_N3 345 1				
898.1	L:613370 RUTLAND5 161 631043 WINBAGO5 161 1		125.7	165.0	165.0	0.04377
		C:601032 FIELD_S3 345 601033 FIELD_N3 345 1				
		Open 601032 FIELD_S3 345 601033 FIELD_N3 345 1				
898.1	L:613370 RUTLAND5 161 631043 WINBAGO5 161 1		125.7	165.0	165.0	0.04377
		C:601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
		Open 601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
898.1	L:613370 RUTLAND5 161 631043 WINBAGO5 161 1		125.7	165.0	165.0	0.04377
		C:601004 WILMART3 345 601033 FIELD_N3 345 1				
		Open 601004 WILMART3 345 601033 FIELD_N3 345 1				
3224.0	L:640386 TWIN CH4 230 652565 SIOUXCY4 230 1		198.0	320.0	320.0	0.03784
		C:C2-RAUN-0270				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
3224.0	L:640386 TWIN CH4 230 652565 SIOUXCY4 230 1		198.0	320.0	320.0	0.03784
		C:MEC-C528				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
3333.2	L:601004 WILMART3 345 601033 FIELD_N3 345 1		511.7	1195.1	1195.1	0.20502
		C:601031 BRKNGCO3 345 601048 LYON CO 3 345 1				
		Open 601031 BRKNGCO3 345 601048 LYON CO 3 345 1				
3381.4	L:636001 WEBSTER5 161 636050 WRIGHT 5 161 1		83.0	212.0	212.0	0.03815
		C:MEC-C522				
		Open 635590 FALLOW 3 345 635600 GRIMES 3 345 1				
		Open 635600 GRIMES 3 345 636010 LEHIGH 3 345 1				

Appendix 16: SUM MVP 3 Buffalo Ridge 50%N / 50%S Gen – MN Scenario

AC FCITC	Limiting Constrain	Contingency	PreShift	PostShift	Ratin	AC TD
3484.5	L:640386 TWIN CH4	230 652565 SIOUXCY4 230 1	191.4	319.5	320.0	0.03678
		C:C2-RAUN-0270				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
3484.5	L:640386 TWIN CH4	230 652565 SIOUXCY4 230 1	191.4	319.5	320.0	0.03678
		C:MEC-C528				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
3351.4	L:602003 BLUEETA5	161 631043 WINBAGO5 161 1	86.7	200.2	200.0	0.03386
		C:601032 FIELD_S3 345 601033 FIELD_N3 345 1				
		Open 601032 FIELD_S3 345 601033 FIELD_N3 345 1				
3352.0	L:602003 BLUEETA5	161 631043 WINBAGO5 161 1	86.7	200.2	200.0	0.03387
		C:601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
		Open 601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
3351.4	L:602003 BLUEETA5	161 631043 WINBAGO5 161 1	86.7	200.1	200.0	0.03382
		C:601004 WILMART3 345 601033 FIELD_N3 345 1				
		Open 601004 WILMART3 345 601033 FIELD_N3 345 1				
3646.3	L:636001 WEBSTER5	161 636050 WRIGHT 5 161 1	94.6	211.9	212.0	0.03216
		C:MEC-C522				
		Open 635590 FALLOW 3 345 635600 GRIMES 3 345 1				
		Open 635600 GRIMES 3 345 636010 LEHIGH 3 345 1				
3646.3	L:636001 WEBSTER5	161 636050 WRIGHT 5 161 1	94.6	211.9	212.0	0.03216
		C:GRIMES-B904				
		Open 635590 FALLOW 3 345 635600 GRIMES 3 345 1				
		Open 635600 GRIMES 3 345 636010 LEHIGH 3 345 1				
3546.7	L:631043 WINBAGO5	161 631180 FREEBORN5 161 1	47.0	167.0	167.0	0.03382
		C:601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
		Open 601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
3548.0	L:631043 WINBAGO5	161 631180 FREEBORN5 161 1	47.0	167.0	167.0	0.03382
		C:601032 FIELD_S3 345 601033 FIELD_N3 345 1				
		Open 601032 FIELD_S3 345 601033 FIELD_N3 345 1				
3546.8	L:631043 WINBAGO5	161 631180 FREEBORN5 161 1	47.0	167.0	167.0	0.03383
		C:601004 WILMART3 345 601033 FIELD_N3 345 1				
		Open 601004 WILMART3 345 601033 FIELD_N3 345 1				

Appendix 17: SUM MVP 3 and 4 Buffalo Ridge 50%N / 50%S Gen – MN Scenario

AC FCITC	Limiting Constraint	Contingency	PreShift	PostShift	Rating	AC TDF
3756.8	L:640386 TWIN CH4 230 652565 SIOUXCY4 230 1		188.2	319.6	320.0	0.03497
		C:MEC-C528				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
3756.8	L:640386 TWIN CH4 230 652565 SIOUXCY4 230 1		188.2	319.6	320.0	0.03497
		C:C2-RAUN-0270				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				

Appendix 18: SUM FXLK-RTLD-WNBG Buffalo Ridge 50%N / 50%S Gen – MN Scenario

AC FCITC	Limiting Constraint	Contingency	PreShift	PostShift	Rating	AC TDF
3224.7	L:640386 TWIN CH4 230 652565 SIOUXCY4 230 1		197.9	320.0	320.0	0.03784
		C:C2-RAUN-0270				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
3224.7	L:640386 TWIN CH4 230 652565 SIOUXCY4 230 1		197.9	320.0	320.0	0.03784
		C:MEC-C528				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
3359.7	L:601004 WILMART3 345 601033 FIELD_N3 345 1		509.3	1195.2	1195.1	0.20414
		C:601031 BRKNGCO3 345 601048 LYON CO 3 345 1				
		Open 601031 BRKNGCO3 345 601048 LYON CO 3 345 1				
3392.5	L:636001 WEBSTER5 161 636050 WRIGHT 5 161 1		82.8	212.0	212.0	0.03808
		C:GRIMES-B904				
		Open 635590 FALLOW 3 345 635600 GRIMES 3 345 1				
		Open 635600 GRIMES 3 345 636010 LEHIGH 3 345 1				
3392.5	L:636001 WEBSTER5 161 636050 WRIGHT 5 161 1		82.8	212.0	212.0	0.03808
		C:MEC-C522				
		Open 635590 FALLOW 3 345 635600 GRIMES 3 345 1				
		Open 635600 GRIMES 3 345 636010 LEHIGH 3 345 1				
3564.1	L:636001 WEBSTER5 161 636050 WRIGHT 5 161 1		77.3	212.0	212.0	0.03779
		C:GRIMES-B905				
		Open 635600 GRIMES 3 345 635700 SYCAMOR3 345 2				
		Open 635600 GRIMES 3 345 636010 LEHIGH 3 345 1				
3583.3	L:601004 WILMART3 345 601033 FIELD_N3 345 1		507.3	1195.1	1195.1	0.19194
		C:ITCM-C206-NW-BF(Lakefld_161_bus_tie)				
		Open 631041 LAKEFLD5 161 631042 FOX LK 5 161 1				
		Open 631041 LAKEFLD5 161 631124 DKSN_CO5 161 1				
		Open 631041 LAKEFLD5 161 658066 JACKSON 161 2				
		Open 631041 LAKEFLD5 161 631138 LAKEFLD3 345 1				
		Open 631041 LAKEFLD5 161 631138 LAKEFLD3 345 2				
		Open 630081 LKFLD698 69.0 631041 LAKEFLD5 161 1				
		Open 631040 HRN LK 5 161 631041 LAKEFLD5 161 1				
3882.9	L:631041 LAKEFLD5 161 631042 FOX LK 5 161 1		39.5	160.2	160.0	0.03108
		C:ITCM-B102-NW-LAKEFIELD_SPS				
		Open 601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
		Open 601034 NOBLES 3 345 631138 LAKEFLD3 345 1				
		Set bus 615100 GRE-TRIMWNDW.575 generation to0.0 MW				
		Set bus 615041 GRE-LGS 31G13.8 generation to0.0 MW				
		Set bus 615042 GRE-LGS 32G13.8 generation to0.0 MW				
		Set bus 615043 GRE-LGS 33G13.8 generation to0.0 MW				
		Set bus 615044 GRE-LGS 34G13.8 generation to0.0 MW				
		Set bus 615045 GRE-LGS 35G13.8 generation to0.0 MW				
		Set bus 615046 GRE-LGS 36G13.8 generation to0.0 MW				

Appendix 19: SU70 BC Buffalo Ridge 75%N / 25%S Gen – MN Scenario

AC FCIT	Limiting Constraint	Contingency	PreShift	PostShif	Ratin	AC TD
2697.3	L:613370 RUTLAND5	161 631042 FOX LK 5 161 1	41.3	167.0	167.0	0.04661
		C:ITCM-B102-NW-LAKEFIELD_SPS				
		Open 601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
		Open 601034 NOBLES 3 345 631138 LAKEFLD3 345 1				
		Set bus 615100 GRE-TRIMWNDW.575 generation to0.0 MW				
		Set bus 615041 GRE-LGS 31G13.8 generation to0.0 MW				
		Set bus 615042 GRE-LGS 32G13.8 generation to0.0 MW				
		Set bus 615043 GRE-LGS 33G13.8 generation to0.0 MW				
		Set bus 615044 GRE-LGS 34G13.8 generation to0.0 MW				
		Set bus 615045 GRE-LGS 35G13.8 generation to0.0 MW				
		Set bus 615046 GRE-LGS 36G13.8 generation to0.0 MW				
3201.3	L:613370 RUTLAND5	161 631043 WINBAGO5 161 1	22.3	164.9	165.0	0.04456
		C:ITCM-B102-NW-LAKEFIELD_SPS				
		Open 601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
		Open 601034 NOBLES 3 345 631138 LAKEFLD3 345 1				
		Set bus 615100 GRE-TRIMWNDW.575 generation to0.0 MW				
		Set bus 615041 GRE-LGS 31G13.8 generation to0.0 MW				
		Set bus 615042 GRE-LGS 32G13.8 generation to0.0 MW				
		Set bus 615043 GRE-LGS 33G13.8 generation to0.0 MW				
		Set bus 615044 GRE-LGS 34G13.8 generation to0.0 MW				
		Set bus 615045 GRE-LGS 35G13.8 generation to0.0 MW				
		Set bus 615046 GRE-LGS 36G13.8 generation to0.0 MW				
2945.0	L:613370 RUTLAND5	161 631042 FOX LK 5 161 1	46.6	167.1	167.0	0.04090
		C:601032 FIELD_S3 345 601033 FIELD_N3 345 1				
		Open 601032 FIELD_S3 345 601033 FIELD_N3 345 1				
2945.3	L:613370 RUTLAND5	161 631042 FOX LK 5 161 1	46.8	167.1	167.0	0.04085
		C:601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
		Open 601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
3416.0	L:631102 TRIBOJI5	161 631124 DKSN_CO5 161 1	113.4	223.0	223.0	0.03209
		C:ITCM-B102-NW-LAKEFIELD_SPS				
		Open 601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
		Open 601034 NOBLES 3 345 631138 LAKEFLD3 345 1				
		Set bus 615100 GRE-TRIMWNDW.575 generation to0.0 MW				
		Set bus 615041 GRE-LGS 31G13.8 generation to0.0 MW				
		Set bus 615042 GRE-LGS 32G13.8 generation to0.0 MW				
		Set bus 615043 GRE-LGS 33G13.8 generation to0.0 MW				
		Set bus 615044 GRE-LGS 34G13.8 generation to0.0 MW				
		Set bus 615045 GRE-LGS 35G13.8 generation to0.0 MW				
		Set bus 615046 GRE-LGS 36G13.8 generation to0.0 MW				
3499.6	L:613370 RUTLAND5	161 631043 WINBAGO5 161 1	23.9	165.0	165.0	0.04031
		C:601032 FIELD_S3 345 601033 FIELD_N3 345 1				
		Open 601032 FIELD_S3 345 601033 FIELD_N3 345 1				
3499.6	L:613370 RUTLAND5	161 631043 WINBAGO5 161 1	23.7	165.0	165.0	0.04038
		C:601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
		Open 601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
4000.0	L:631041 LAKEFLD5	161 631042 FOX LK 5 161 1	41.9	154.7	160.0	0.02821
NoLimit		C:ITCM-B102-NW-LAKEFIELD_SPS				
		Open 601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
		Open 601034 NOBLES 3 345 631138 LAKEFLD3 345 1				
		Set bus 615100 GRE-TRIMWNDW.575 generation to0.0 MW				
		Set bus 615041 GRE-LGS 31G13.8 generation to0.0 MW				
		Set bus 615042 GRE-LGS 32G13.8 generation to0.0 MW				
		Set bus 615043 GRE-LGS 33G13.8 generation to0.0 MW				
		Set bus 615044 GRE-LGS 34G13.8 generation to0.0 MW				
		Set bus 615045 GRE-LGS 35G13.8 generation to0.0 MW				
		Set bus 615046 GRE-LGS 36G13.8 generation to0.0 MW				
4000.0	L:652504 BROOKNG7	115 652538 WHITE 7 115 1	32.4	174.6	176.0	0.03556
NoLimit		C:652529 WATERTN3 345 652537 WHITE 3 345 1				
		Open 652529 WATERTN3 345 652537 WHITE 3 345 1				

Appendix 20: SU70 MVP 3 Buffalo Ridge 75%N / 25%S Gen – MN Scenario

AC FCITC	Limiting Constraint	Contingency	PreShift	PostShift	Rating	AC TDF
4129.5	L:652504 BROOKNG7 115 652538 WHITE 7 115 1		31.4	176.3	176.0	0.03511
		C:652529 WATERTN3 345 652537 WHITE 3 345 1				
		Open 652529 WATERTN3 345 652537 WHITE 3 345 1				
4882.5	L:640386 TWIN CH4 230 652565 SIOUXCY4 230 1		157.5	320.0	320.0	0.03329
		C:C2-RAUN-0270				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
4882.5	L:640386 TWIN CH4 230 652565 SIOUXCY4 230 1		157.5	320.0	320.0	0.03329
		C:MEC-C528				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
4590.2	L:652529 WATERTN3 345 652537 WHITE 3 345 1		102.3	812.6	792.0	0.15472
NotConv		C:601031 BRKNGCO3 345 601048 LYON CO 3 345 1				
		Open 601031 BRKNGCO3 345 601048 LYON CO 3 345 1				
5000.0	L:601029 LKFLDXL3 345 631138 LAKEFLD3 345 1		49.5	843.7	918.0	0.15884
NoLimit		C:ITCM-B102-NW-LAKEFIELD_SPS				
		Open 601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
		Open 601034 NOBLES 3 345 631138 LAKEFLD3 345 1				
		Set bus 615100 GRE-TRIMWNDW.575 generation to0.0 MW				
		Set bus 615041 GRE-LGS 31G13.8 generation to0.0 MW				
		Set bus 615042 GRE-LGS 32G13.8 generation to0.0 MW				
		Set bus 615043 GRE-LGS 33G13.8 generation to0.0 MW				
		Set bus 615044 GRE-LGS 34G13.8 generation to0.0 MW				
		Set bus 615045 GRE-LGS 35G13.8 generation to0.0 MW				
		Set bus 615046 GRE-LGS 36G13.8 generation to0.0 MW				
4940.8	L:601004 WILMART3 345 601033 FIELD_N3 345 1		205.0	1176.1	1195.1	0.19654
TDF_Sign		C:601031 BRKNGCO3 345 601048 LYON CO 3 345 1				
		Open 601031 BRKNGCO3 345 601048 LYON CO 3 345 1				

Appendix 21: SU70 MVP 3 and 4 Buffalo Ridge 75%N / 25%S Gen – MN Scenario

AC FCITC	Limiting Constraint	Contingency	PreShift	PostShift	Rating	AC TDF
4161.5	L:652504 BROOKNG7 115 652538 WHITE 7 115 1		31.3	176.1	176.0	0.03479
		C:652529 WATERTN3 345 652537 WHITE 3 345 1				
		Open 652529 WATERTN3 345 652537 WHITE 3 345 1				
4661.4	L:652529 WATERTN3 345 652537 WHITE 3 345 1		101.7	795.6	792.0	0.14886
NotConv		C:601031 BRKNGCO3 345 601048 LYON CO 3 345 1				
		Open 601031 BRKNGCO3 345 601048 LYON CO 3 345 1				
5000.0	L:640386 TWIN CH4 230 652565 SIOUXCY4 230 1		155.6	313.3	320.0	0.03155
NoLimit		C:MEC-C528				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
5000.0	L:640386 TWIN CH4 230 652565 SIOUXCY4 230 1		155.6	313.3	320.0	0.03155
NoLimit		C:C2-RAUN-0270				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
5000.0	L:601029 LKFLDXL3 345 631138 LAKEFLD3 345 1		45.7	843.8	918.0	0.15961
NoLimit		C:ITCM-B102-NW-LAKEFIELD_SPS				
		Open 601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
		Open 601034 NOBLES 3 345 631138 LAKEFLD3 345 1				
		Set bus 615100 GRE-TRIMWNDW.575 generation to0.0 MW				
		Set bus 615041 GRE-LGS 31G13.8 generation to0.0 MW				
		Set bus 615042 GRE-LGS 32G13.8 generation to0.0 MW				
		Set bus 615043 GRE-LGS 33G13.8 generation to0.0 MW				
		Set bus 615044 GRE-LGS 34G13.8 generation to0.0 MW				
		Set bus 615045 GRE-LGS 35G13.8 generation to0.0 MW				
		Set bus 615046 GRE-LGS 36G13.8 generation to0.0 MW				

Appendix 22: SU70 FXLK-RTLD-WNBG Buffalo Ridge 75%N / 25%S Gen – MN Scenario

AC FCITC	Limiting Constraint	Contingency	PreShift	PostShift	Rating	AC TDF
3490.1	L:631102 TRIBOJI5 161 631124 DKSN_CO5 161 1		113.3	223.1	223.0	0.03148
		C:ITCM-B102-NW-LAKEFIELD_SPS				
		Open 601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
		Open 601034 NOBLES 3 345 631138 LAKEFLD3 345 1				
		Set bus 615100 GRE-TRIMWNDW.575 generation to0.0 MW				
		Set bus 615041 GRE-LGS 31G13.8 generation to0.0 MW				
		Set bus 615042 GRE-LGS 32G13.8 generation to0.0 MW				
		Set bus 615043 GRE-LGS 33G13.8 generation to0.0 MW				
		Set bus 615044 GRE-LGS 34G13.8 generation to0.0 MW				
		Set bus 615045 GRE-LGS 35G13.8 generation to0.0 MW				
		Set bus 615046 GRE-LGS 36G13.8 generation to0.0 MW				
3997.7	L:631041 LAKEFLD5 161 631042 FOX LK 5 161 1		42.2	160.5	160.0	0.02959
		C:ITCM-B102-NW-LAKEFIELD_SPS				
		Open 601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
		Open 601034 NOBLES 3 345 631138 LAKEFLD3 345 1				
		Set bus 615100 GRE-TRIMWNDW.575 generation to0.0 MW				
		Set bus 615041 GRE-LGS 31G13.8 generation to0.0 MW				
		Set bus 615042 GRE-LGS 32G13.8 generation to0.0 MW				
		Set bus 615043 GRE-LGS 33G13.8 generation to0.0 MW				
		Set bus 615044 GRE-LGS 34G13.8 generation to0.0 MW				
		Set bus 615045 GRE-LGS 35G13.8 generation to0.0 MW				
		Set bus 615046 GRE-LGS 36G13.8 generation to0.0 MW				
4045.0	L:652504 BROOKNG7 115 652538 WHITE 7 115 1		32.4	176.4	176.0	0.03560
		C:652529 WATERTN3 345 652537 WHITE 3 345 1				
		Open 652529 WATERTN3 345 652537 WHITE 3 345 1				
4529.7	L:640386 TWIN CH4 230 652565 SIOUXCY4 230 1		161.6	320.0	320.0	0.03497
		C:C2-RAUN-0270				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
4529.7	L:640386 TWIN CH4 230 652565 SIOUXCY4 230 1		161.6	320.0	320.0	0.03497
		C:MEC-C528				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
4783.1	L:631041 LAKEFLD5 161 631138 LAKEFLD3 345 2		75.2	335.0	335.0	0.05431
		C:ITCM-B102-NW-LAKEFIELD_SPS				
		Open 601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
		Open 601034 NOBLES 3 345 631138 LAKEFLD3 345 1				
		Set bus 615100 GRE-TRIMWNDW.575 generation to0.0 MW				
		Set bus 615041 GRE-LGS 31G13.8 generation to0.0 MW				
		Set bus 615042 GRE-LGS 32G13.8 generation to0.0 MW				
		Set bus 615043 GRE-LGS 33G13.8 generation to0.0 MW				
		Set bus 615044 GRE-LGS 34G13.8 generation to0.0 MW				
		Set bus 615045 GRE-LGS 35G13.8 generation to0.0 MW				
		Set bus 615046 GRE-LGS 36G13.8 generation to0.0 MW				
4783.1	L:631041 LAKEFLD5 161 631138 LAKEFLD3 345 1		75.2	335.0	335.0	0.05431
		C:ITCM-B102-NW-LAKEFIELD_SPS				
		Open 601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
		Open 601034 NOBLES 3 345 631138 LAKEFLD3 345 1				
		Set bus 615100 GRE-TRIMWNDW.575 generation to0.0 MW				
		Set bus 615041 GRE-LGS 31G13.8 generation to0.0 MW				
		Set bus 615042 GRE-LGS 32G13.8 generation to0.0 MW				
		Set bus 615043 GRE-LGS 33G13.8 generation to0.0 MW				
		Set bus 615044 GRE-LGS 34G13.8 generation to0.0 MW				
		Set bus 615045 GRE-LGS 35G13.8 generation to0.0 MW				
		Set bus 615046 GRE-LGS 36G13.8 generation to0.0 MW				
4536.8	L:601004 WILMART3 345 601033 FIELD_N3 345 1		227.3	1195.2	1195.1	0.21335
		C:601031 BRKNGCO3 345 601048 LYON CO 3 345 1				
		Open 601031 BRKNGCO3 345 601048 LYON CO 3 345 1				

Appendix 23: SUM BC Buffalo Ridge 75%N / 25%S Gen – MN Scenario

AC FCIT(	Limiting Constrain	Contingency	PreShift	PostShif	Ratin	AC TD
432.4	L:613370 RUTLAND5 161 631042 FOX LK 5 161 1		148.3	166.7	167.0	0.04251
		C:601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
		Open 601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
432.4	L:613370 RUTLAND5 161 631042 FOX LK 5 161 1		148.3	166.7	167.0	0.04251
		C:601032 FIELD_S3 345 601033 FIELD_N3 345 1				
		Open 601032 FIELD_S3 345 601033 FIELD_N3 345 1				
432.4	L:613370 RUTLAND5 161 631042 FOX LK 5 161 1		148.3	166.7	167.0	0.04251
		C:601004 WILMART3 345 601033 FIELD_N3 345 1				
		Open 601004 WILMART3 345 601033 FIELD_N3 345 1				
878.1	L:613370 RUTLAND5 161 631043 WINBAGO5 161 1		125.7	165.0	165.0	0.04477
		C:601032 FIELD_S3 345 601033 FIELD_N3 345 1				
		Open 601032 FIELD_S3 345 601033 FIELD_N3 345 1				
878.1	L:613370 RUTLAND5 161 631043 WINBAGO5 161 1		125.7	165.0	165.0	0.04477
		C:601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
		Open 601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
878.2	L:613370 RUTLAND5 161 631043 WINBAGO5 161 1		125.7	165.0	165.0	0.04477
		C:601004 WILMART3 345 601033 FIELD_N3 345 1				
		Open 601004 WILMART3 345 601033 FIELD_N3 345 1				
2825.7	L:652504 BROOKNG7 115 652538 WHITE 7 115 1		72.7	176.1	176.0	0.03658
		C:652529 WATERTN3 345 652537 WHITE 3 345 1				
		Open 652529 WATERTN3 345 652537 WHITE 3 345 1				
3157.8	L:601004 WILMART3 345 601033 FIELD_N3 345 1		511.7	1195.2	1195.1	0.21643
		C:601031 BRKNGCO3 345 601048 LYON CO 3 345 1				
		Open 601031 BRKNGCO3 345 601048 LYON CO 3 345 1				
3899.2	L:631102 TRIBOJI5 161 631124 DKSN_CO5 161 1		101.2	223.4	223.0	0.03133
		C:ITCM-B102-NW-LAKEFIELD_SPS				
		Open 601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
		Open 601034 NOBLES 3 345 631138 LAKEFLD3 345 1				
		Set bus 615100 GRE-TRIMWNDW.575 generation to0.0 MW				
		Set bus 615041 GRE-LGS 31G13.8 generation to0.0 MW				
		Set bus 615042 GRE-LGS 32G13.8 generation to0.0 MW				
		Set bus 615043 GRE-LGS 33G13.8 generation to0.0 MW				
		Set bus 615044 GRE-LGS 34G13.8 generation to0.0 MW				
		Set bus 615045 GRE-LGS 35G13.8 generation to0.0 MW				
		Set bus 615046 GRE-LGS 36G13.8 generation to0.0 MW				
3665.5	L:640386 TWIN CH4 230 652565 SIOUXCY4 230 1		198.0	320.0	320.0	0.03328
		C:C2-RAUN-0270				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				

Appendix 24: SUM MVP 3 Buffalo Ridge 75%N / 25%S Gen – MN Scenario

AC FCITC	Limiting Constraint	Contingency	PreShift	PostShift	Rating	AC TDF
2892.1	L:652504 BROOKNG7 115 652538 WHITE 7 115 1		71.5	176.1	176.0	0.03617
		C:652529 WATERTN3 345 652537 WHITE 3 345 1				
		Open 652529 WATERTN3 345 652537 WHITE 3 345 1				
3586.9	L:652529 WATERTN3 345 652537 WHITE 3 345 1		96.7	791.9	792.0	0.19381
		C:601031 BRKNGCO3 345 601048 LYON CO 3 345 1				
		Open 601031 BRKNGCO3 345 601048 LYON CO 3 345 1				
3644.0	L:601004 WILMART3 345 601033 FIELD_N3 345 1		452.6	1195.1	1195.1	0.20376
		C:601031 BRKNGCO3 345 601048 LYON CO 3 345 1				
		Open 601031 BRKNGCO3 345 601048 LYON CO 3 345 1				
3696.5	L:631043 WINBAGO5 161 631180 FREEBORN5 161 1		47.0	166.9	167.0	0.03245
		C:601032 FIELD_S3 345 601033 FIELD_N3 345 1				
		Open 601032 FIELD_S3 345 601033 FIELD_N3 345 1				
3695.3	L:631043 WINBAGO5 161 631180 FREEBORN5 161 1		47.0	167.0	167.0	0.03246
		C:601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
		Open 601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
3695.3	L:631043 WINBAGO5 161 631180 FREEBORN5 161 1		47.0	166.9	167.0	0.03246
		C:601004 WILMART3 345 601033 FIELD_N3 345 1				
		Open 601004 WILMART3 345 601033 FIELD_N3 345 1				
4000.0	L:640386 TWIN CH4 230 652565 SIOUXCY4 230 1		191.4	318.2	320.0	0.03170
NoLimit		C:C2-RAUN-0270				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
4000.0	L:640386 TWIN CH4 230 652565 SIOUXCY4 230 1		191.4	318.2	320.0	0.03170
NoLimit		C:MEC-C528				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
3991.3	L:601029 LKFLDXL3 345 631138 LAKEFLD3 345 1		282.6	918.2	918.0	0.15927
		C:601032 FIELD_S3 345 601033 FIELD_N3 345 1				
		Open 601032 FIELD_S3 345 601033 FIELD_N3 345 1				
3987.0	L:601029 LKFLDXL3 345 631138 LAKEFLD3 345 1		281.7	918.0	918.0	0.15959
		C:601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
		Open 601029 LKFLDXL3 345 601032 FIELD_S3 345 1				

Appendix 25: SUM MVP 3 and 4 Buffalo Ridge 75%N / 25%S Gen – MN Scenario

AC FCITC	Limiting Constraint	Contingency	PreShift	PostShift	Rating	AC TDF
2931.2	L:652504 BROOKNG7 115 652538 WHITE 7 115 1		71.1	176.2	176.0	0.03583
		C:652529 WATERTN3 345 652537 WHITE 3 345 1				
		Open 652529 WATERTN3 345 652537 WHITE 3 345 1				
3640.9	L:652529 WATERTN3 345 652537 WHITE 3 345 1		93.8	791.9	792.0	0.19173
		C:601031 BRKNGCO3 345 601048 LYON CO 3 345 1				
		Open 601031 BRKNGCO3 345 601048 LYON CO 3 345 1				
3987.0	L:601029 LKFLDXL3 345 631138 LAKEFLD3 345 1		281.4	918.0	918.0	0.15966
		C:601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
		Open 601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
3988.2	L:601029 LKFLDXL3 345 631138 LAKEFLD3 345 1		282.3	918.0	918.0	0.15940
		C:601032 FIELD_S3 345 601033 FIELD_N3 345 1				
		Open 601032 FIELD_S3 345 601033 FIELD_N3 345 1				
3956.2	L:601004 WILMART3 345 601033 FIELD_N3 345 1		435.5	1195.3	1195.1	0.19204
		C:601031 BRKNGCO3 345 601048 LYON CO 3 345 1				
		Open 601031 BRKNGCO3 345 601048 LYON CO 3 345 1				
3988.2	L:601029 LKFLDXL3 345 631138 LAKEFLD3 345 1		282.3	918.0	918.0	0.15940
		C:601004 WILMART3 345 601033 FIELD_N3 345 1				
		Open 601004 WILMART3 345 601033 FIELD_N3 345 1				

Appendix 26: SUM FXLK-RTLD-WNBG Buffalo Ridge 75%N / 25%S Gen – MN Scenario

AC FCITC	Limiting Constraint	Contingency	PreShift	PostShift	Rating	AC TDF
2827.1	L:652504 BROOKNG7 115 652538 WHITE 7 115 1		72.7	176.1	176.0	0.03657
		C:652529 WATERTN3 345 652537 WHITE 3 345 1				
		Open 652529 WATERTN3 345 652537 WHITE 3 345 1				
3179.7	L:601004 WILMART3 345 601033 FIELD_N3 345 1		509.3	1195.2	1195.1	0.21573
		C:601031 BRKNGCO3 345 601048 LYON CO 3 345 1				
		Open 601031 BRKNGCO3 345 601048 LYON CO 3 345 1				
3666.0	L:640386 TWIN CH4 230 652565 SIOUXCY4 230 1		197.9	320.0	320.0	0.03329
		C:C2-RAUN-0270				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
3666.0	L:640386 TWIN CH4 230 652565 SIOUXCY4 230 1		197.9	320.0	320.0	0.03329
		C:MEC-C528				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
4010.1	L:631102 TRIBOJI5 161 631124 DKSN_CO5 161 1		100.0	223.6	223.0	0.03081
		C:ITCM-B102-NW-LAKEFIELD_SPS				
		Open 601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
		Open 601034 NOBLES 3 345 631138 LAKEFLD3 345 1				
		Set bus 615100 GRE-TRIMWNDW.575 generation to0.0 MW				
		Set bus 615041 GRE-LGS 31G13.8 generation to0.0 MW				
		Set bus 615042 GRE-LGS 32G13.8 generation to0.0 MW				
		Set bus 615043 GRE-LGS 33G13.8 generation to0.0 MW				
		Set bus 615044 GRE-LGS 34G13.8 generation to0.0 MW				
		Set bus 615045 GRE-LGS 35G13.8 generation to0.0 MW				
		Set bus 615046 GRE-LGS 36G13.8 generation to0.0 MW				
3454.7	L:601004 WILMART3 345 601033 FIELD_N3 345 1		507.3	1195.0	1195.1	0.19906
		C:ITCM-C206-NW-BF(Lakefld_161_bus_tie)				
		Open 631041 LAKEFLD5 161 631042 FOX LK 5 161 1				
		Open 631041 LAKEFLD5 161 631124 DKSN_CO5 161 1				
		Open 631041 LAKEFLD5 161 658066 JACKSON 161 2				
		Open 631041 LAKEFLD5 161 631138 LAKEFLD3 345 1				
		Open 631041 LAKEFLD5 161 631138 LAKEFLD3 345 2				
		Open 630081 LKFLD698 69.0 631041 LAKEFLD5 161 1				
		Open 631040 HRN LK 5 161 631041 LAKEFLD5 161 1				
3526.4	L:652529 WATERTN3 345 652537 WHITE 3 345 1		103.7	791.9	792.0	0.19518
		C:601031 BRKNGCO3 345 601048 LYON CO 3 345 1				
		Open 601031 BRKNGCO3 345 601048 LYON CO 3 345 1				
3762.8	L:601015 BLUE LK3 345 601050 HELENA 3 345 1		505.9	1277.2	1277.1	0.20499
		C:601050 HELENA 3 345 601052 LKMARION3 345 1				
		Open 601050 HELENA 3 345 601052 LKMARION3 345 1				
4043.6	L:631041 LAKEFLD5 161 631042 FOX LK 5 161 1		39.5	160.2	160.0	0.02985
		C:ITCM-B102-NW-LAKEFIELD_SPS				
		Open 601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
		Open 601034 NOBLES 3 345 631138 LAKEFLD3 345 1				
		Set bus 615100 GRE-TRIMWNDW.575 generation to0.0 MW				
		Set bus 615041 GRE-LGS 31G13.8 generation to0.0 MW				
		Set bus 615042 GRE-LGS 32G13.8 generation to0.0 MW				
		Set bus 615043 GRE-LGS 33G13.8 generation to0.0 MW				
		Set bus 615044 GRE-LGS 34G13.8 generation to0.0 MW				
		Set bus 615045 GRE-LGS 35G13.8 generation to0.0 MW				
		Set bus 615046 GRE-LGS 36G13.8 generation to0.0 MW				
3793.8	L:631041 LAKEFLD5 161 631138 LAKEFLD3 345 1		170.2	335.1	335.0	0.04346
		C:601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
		Open 601029 LKFLDXL3 345 601032 FIELD_S3 345 1				

Appendix 27: SU70 BC Buffalo Ridge 25%N / 75%S Gen – MISO East Scenario

AC FCITC	Limiting Constraint	Contingency	PreShift	PostShift	Rating	AC TDF
2201.0	L:631079 BNE JCT5 161 636020 FT.DODG5 161 1		43.9	147.0	147.0	0.04683
		C:GRIMES-B904				
		Open 635590 FALLOW 3 345 635600 GRIMES 3 345 1				
		Open 635600 GRIMES 3 345 636010 LEHIGH 3 345 1				
2201.0	L:631079 BNE JCT5 161 636020 FT.DODG5 161 1		43.9	147.0	147.0	0.04683
		C:MEC-C522				
		Open 635590 FALLOW 3 345 635600 GRIMES 3 345 1				
		Open 635600 GRIMES 3 345 636010 LEHIGH 3 345 1				
2402.6	L:640386 TWIN CH4 230 652565 SIOUXCY4 230 1		161.5	320.1	320.0	0.06598
		C:MEC-C528				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
2402.6	L:640386 TWIN CH4 230 652565 SIOUXCY4 230 1		161.5	320.1	320.0	0.06598
		C:C2-RAUN-0270				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
2489.6	L:631079 BNE JCT5 161 636020 FT.DODG5 161 1		15.6	147.0	147.0	0.05277
		C:LEHIGH 0350				
		Open 636000 WEBSTER3 345 636010 LEHIGH 3 345 1				
		Open 635200 RAUN 3 345 636010 LEHIGH 3 345 1				
2965.8	L:631110 WAPELLO5 161 631115 OTTUMWA5 161 2		250.9	334.8	335.0	0.02829
		C:ITCM-C207-SE-BF(OGS-Wap-OGS345-161)				
		Open 631110 WAPELLO5 161 631115 OTTUMWA5 161 1				
		Open 631115 OTTUMWA5 161 631143 OTTUMWA3 345 1				
2646.6	L:613370 RUTLAND5 161 631042 FOX LK 5 161 1		41.3	167.0	167.0	0.04751
		C:ITCM-B102-NW-LAKEFIELD_SPS				
		Open 601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
		Open 601034 NOBLES 3 345 631138 LAKEFLD3 345 1				
		Set bus 615100 GRE-TRIMWNDW.575 generation to0.0 MW				
		Set bus 615041 GRE-LGS 31G13.8 generation to0.0 MW				
		Set bus 615042 GRE-LGS 32G13.8 generation to0.0 MW				
		Set bus 615043 GRE-LGS 33G13.8 generation to0.0 MW				
		Set bus 615044 GRE-LGS 34G13.8 generation to0.0 MW				
		Set bus 615045 GRE-LGS 35G13.8 generation to0.0 MW				
		Set bus 615046 GRE-LGS 36G13.8 generation to0.0 MW				
2910.8	L:613370 RUTLAND5 161 631042 FOX LK 5 161 1		46.6	167.0	167.0	0.04137
		C:601032 FIELD_S3 345 601033 FIELD_N3 345 1				
		Open 601032 FIELD_S3 345 601033 FIELD_N3 345 1				
2911.1	L:613370 RUTLAND5 161 631042 FOX LK 5 161 1		46.8	167.0	167.0	0.04131
		C:601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
		Open 601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
3120.4	L:613370 RUTLAND5 161 631043 WINBAGO5 161 1		22.3	165.0	165.0	0.04572
		C:ITCM-B102-NW-LAKEFIELD_SPS				
		Open 601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
		Open 601034 NOBLES 3 345 631138 LAKEFLD3 345 1				
		Set bus 615100 GRE-TRIMWNDW.575 generation to0.0 MW				
		Set bus 615041 GRE-LGS 31G13.8 generation to0.0 MW				
		Set bus 615042 GRE-LGS 32G13.8 generation to0.0 MW				
		Set bus 615043 GRE-LGS 33G13.8 generation to0.0 MW				
		Set bus 615044 GRE-LGS 34G13.8 generation to0.0 MW				
		Set bus 615045 GRE-LGS 35G13.8 generation to0.0 MW				
		Set bus 615046 GRE-LGS 36G13.8 generation to0.0 MW				

Appendix 28: SU70 MVP 3 Buffalo Ridge 25%N / 75%S Gen – MISO East Scenario

AC FCITC	Limiting Constraint	Contingency	PreShift	PostShift	Rating	AC TDF
2176.0	L:631079 BNE JCT5 161 636020 FT.DODG5 161 1		51.2	147.0	147.0	0.04403
		C:MEC-C522				
		Open 635590 FALLOW 3 345 635600 GRIMES 3 345 1				
		Open 635600 GRIMES 3 345 636010 LEHIGH 3 345 1				
2176.0	L:631079 BNE JCT5 161 636020 FT.DODG5 161 1		51.2	147.0	147.0	0.04403
		C:GRIMES-B904				
		Open 635590 FALLOW 3 345 635600 GRIMES 3 345 1				
		Open 635600 GRIMES 3 345 636010 LEHIGH 3 345 1				
2488.6	L:631079 BNE JCT5 161 636020 FT.DODG5 161 1		36.3	147.0	147.0	0.04450
		C:LEHIGH 0350				
		Open 636000 WEBSTER3 345 636010 LEHIGH 3 345 1				
		Open 635200 RAUN 3 345 636010 LEHIGH 3 345 1				
2563.0	L:640386 TWIN CH4 230 652565 SIOUXCY4 230 1		157.5	320.0	320.0	0.06339
		C:C2-RAUN-0270				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
2563.0	L:640386 TWIN CH4 230 652565 SIOUXCY4 230 1		157.5	320.0	320.0	0.06339
		C:MEC-C528				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
2889.4	L:631110 WAPELLO5 161 631115 OTTUMWA5 161 2		252.3	334.8	335.0	0.02853
		C:ITCM-C207-SE-BF(OGS-Wap-OGS345-161)				
		Open 631110 WAPELLO5 161 631115 OTTUMWA5 161 1				
		Open 631115 OTTUMWA5 161 631143 OTTUMWA3 345 1				
3482.7	L:631110 WAPELLO5 161 631115 OTTUMWA5 161 2		213.1	334.6	335.0	0.03487
		C:631110 WAPELLO5 161 631115 OTTUMWA5 161 1				
		Open 631110 WAPELLO5 161 631115 OTTUMWA5 161 1				
3270.6	L:636001 WEBSTER5 161 636050 WRIGHT 5 161 1		31.5	212.1	212.0	0.05521
		C:MEC-C522				
		Open 635590 FALLOW 3 345 635600 GRIMES 3 345 1				
		Open 635600 GRIMES 3 345 636010 LEHIGH 3 345 1				
3270.6	L:636001 WEBSTER5 161 636050 WRIGHT 5 161 1		31.5	212.1	212.0	0.05521
		C:GRIMES-B904				
		Open 635590 FALLOW 3 345 635600 GRIMES 3 345 1				
		Open 635600 GRIMES 3 345 636010 LEHIGH 3 345 1				
3374.5	L:635201 RAUN 5 161 640377 TEKAMAH5 161 1		33.8	217.2	217.0	0.05435
		C:C2-RAUN-0270				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				

Appendix 29: SU70 MVP 3 and 4 Buffalo Ridge 25%N / 75%S Gen – MISO East Scenario

AC FCIT(	Limiting Constrain	Contingency	PreShift	PostShif	Ratin	AC TD
2974.7	L:631110 WAPELLO5 161 631115 OTTUMWA5 161 2		252.2	334.8	335.0	0.02779
		C:ITCM-C207-SE-BF(OGS-Wap-OGS345-161)				
		Open 631110 WAPELLO5 161 631115 OTTUMWA5 161 1				
		Open 631115 OTTUMWA5 161 631143 OTTUMWA3 345 1				
2717.1	L:631079 BNE JCT5 161 636020 FT.DODG5 161 1		45.2	147.0	147.0	0.03746
		C:MEC-C522				
		Open 635590 FALLOW 3 345 635600 GRIMES 3 345 1				
		Open 635600 GRIMES 3 345 636010 LEHIGH 3 345 1				
2717.1	L:631079 BNE JCT5 161 636020 FT.DODG5 161 1		45.2	147.0	147.0	0.03746
		C:GRIMES-B904				
		Open 635590 FALLOW 3 345 635600 GRIMES 3 345 1				
		Open 635600 GRIMES 3 345 636010 LEHIGH 3 345 1				
2743.8	L:640386 TWIN CH4 230 652565 SIOUXCY4 230 1		155.6	320.1	320.0	0.05997
		C:MEC-C528				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
2743.8	L:640386 TWIN CH4 230 652565 SIOUXCY4 230 1		155.6	320.1	320.0	0.05997
		C:C2-RAUN-0270				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
3090.7	L:631079 BNE JCT5 161 636020 FT.DODG5 161 1		35.0	147.0	147.0	0.03626
		C:GRIMES-B905				
		Open 635600 GRIMES 3 345 635700 SYCAMOR3 345 2				
		Open 635600 GRIMES 3 345 636010 LEHIGH 3 345 1				
3541.3	L:631110 WAPELLO5 161 631115 OTTUMWA5 161 2		213.4	334.6	335.0	0.03423
		C:631110 WAPELLO5 161 631115 OTTUMWA5 161 1				
		Open 631110 WAPELLO5 161 631115 OTTUMWA5 161 1				
3712.0	L:631110 WAPELLO5 161 631115 OTTUMWA5 161 2		208.5	334.9	335.0	0.03406
		C:ITCM-B111-SW-OGS-WAPELLO-1				
		Open 631110 WAPELLO5 161 631115 OTTUMWA5 161 1				
		Open 630048 WAPELLO8 69.0 631110 WAPELLO5 161 1				
3622.5	L:635201 RAUN 5 161 640377 TEKAMAH5 161 1		32.1	217.2	217.0	0.05110
		C:MEC-C528				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				

Appendix 30: SU70 FXLK-RTLD-WNBG Buffalo Ridge 25%N / 75%S Gen – MISO East Scenario

AC FCITC	Limiting Constraint	Contingency	PreShift	PostShift	Rating	AC TDF
2201.3	L:631079 BNE JCT5 161 636020 FT.DODG5 161 1		43.9	147.0	147.0	0.04682
		C:GRIMES-B904				
		Open 635590 FALLOW 3 345 635600 GRIMES 3 345 1				
		Open 635600 GRIMES 3 345 636010 LEHIGH 3 345 1				
2201.3	L:631079 BNE JCT5 161 636020 FT.DODG5 161 1		43.9	147.0	147.0	0.04682
		C:MEC-C522				
		Open 635590 FALLOW 3 345 635600 GRIMES 3 345 1				
		Open 635600 GRIMES 3 345 636010 LEHIGH 3 345 1				
2403.4	L:640386 TWIN CH4 230 652565 SIOUXCY4 230 1		161.6	320.1	320.0	0.06595
		C:MEC-C528				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
2403.4	L:640386 TWIN CH4 230 652565 SIOUXCY4 230 1		161.6	320.1	320.0	0.06595
		C:C2-RAUN-0270				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
2489.3	L:631079 BNE JCT5 161 636020 FT.DODG5 161 1		15.6	147.0	147.0	0.05278
		C:LEHIGH 0350				
		Open 636000 WEBSTER3 345 636010 LEHIGH 3 345 1				
		Open 635200 RAUN 3 345 636010 LEHIGH 3 345 1				
2965.5	L:631110 WAPELLO5 161 631115 OTTUMWA5 161 2		250.9	334.8	335.0	0.02829
		C:ITCM-C207-SE-BF(OGS-Wap-OGS345-161)				
		Open 631110 WAPELLO5 161 631115 OTTUMWA5 161 1				
		Open 631115 OTTUMWA5 161 631143 OTTUMWA3 345 1				
3021.1	L:636001 WEBSTER5 161 636050 WRIGHT 5 161 1		9.2	212.0	212.0	0.06714
		C:MEC-C519				
		Open 636000 WEBSTER3 345 636010 LEHIGH 3 345 1				
		Open 636001 WEBSTER5 161 636020 FT.DODG5 161 1				
3143.1	L:635201 RAUN 5 161 640377 TEKAMAH5 161 1		37.5	217.1	217.0	0.05714
		C:C2-RAUN-0270				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
3143.1	L:635201 RAUN 5 161 640377 TEKAMAH5 161 1		37.5	217.1	217.0	0.05714
		C:MEC-C528				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
3146.2	L:636230 FRANKLN5 161 636235 WALL LK5 161 1		17.1	201.3	201.0	0.05856
		C:MEC-C519				
		Open 636000 WEBSTER3 345 636010 LEHIGH 3 345 1				
		Open 636001 WEBSTER5 161 636020 FT.DODG5 161 1				

Appendix 31: SUM BC Buffalo Ridge 25%N / 75%S Gen – MISO East Scenario

AC FCIT(	Limiting Constraint	Contingency	PreShift	PostShif	Ratin	AC TD
436.7	L:613370 RUTLAND5 161 631042 FOX LK 5 161 1		148.3	166.7	167.0	0.04215
		C:601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
		Open 601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
436.7	L:613370 RUTLAND5 161 631042 FOX LK 5 161 1		148.3	166.7	167.0	0.04215
		C:601032 FIELD_S3 345 601033 FIELD_N3 345 1				
		Open 601032 FIELD_S3 345 601033 FIELD_N3 345 1				
436.7	L:613370 RUTLAND5 161 631042 FOX LK 5 161 1		148.3	166.7	167.0	0.04215
		C:601004 WILMART3 345 601033 FIELD_N3 345 1				
		Open 601004 WILMART3 345 601033 FIELD_N3 345 1				
878.0	L:613370 RUTLAND5 161 631043 WINBAGO5 161 1		125.7	165.0	165.0	0.04477
		C:601032 FIELD_S3 345 601033 FIELD_N3 345 1				
		Open 601032 FIELD_S3 345 601033 FIELD_N3 345 1				
878.0	L:613370 RUTLAND5 161 631043 WINBAGO5 161 1		125.7	165.0	165.0	0.04477
		C:601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
		Open 601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
878.0	L:613370 RUTLAND5 161 631043 WINBAGO5 161 1		125.7	165.0	165.0	0.04477
		C:601004 WILMART3 345 601033 FIELD_N3 345 1				
		Open 601004 WILMART3 345 601033 FIELD_N3 345 1				
1842.1	L:640386 TWIN CH4 230 652565 SIOUXCY4 230 1		198.0	320.0	320.0	0.06626
		C:MEC-C528				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
0.0	L:640386 TWIN CH4 230 652565 SIOUXCY4 230 1		0.0	0.0	320.0	*****
		C:C2-RAUN-0270				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
0.0	L:636001 WEBSTER5 161 636050 WRIGHT 5 161 1		0.0	0.0	212.0	*****
		C:GRIMES-B904				
		Open 635590 FALLOW 3 345 635600 GRIMES 3 345 1				
		Open 635600 GRIMES 3 345 636010 LEHIGH 3 345 1				
0.0	L:636001 WEBSTER5 161 636050 WRIGHT 5 161 1		0.0	0.0	212.0	*****
		C:MEC-C522				
		Open 635590 FALLOW 3 345 635600 GRIMES 3 345 1				
		Open 635600 GRIMES 3 345 636010 LEHIGH 3 345 1				

Appendix 32: SUM MVP 3 Buffalo Ridge 25%N / 75%S Gen – MISO East Scenario

AC FCITC	Limiting Constraint	Contingency	PreShift	PostShift	Rating	AC TDF
2014.8	L:640386 TWIN CH4 230 652565 SIOUXCY4 230 1		191.4	320.0	320.0	0.06385
		C:MEC-C528				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
2014.8	L:640386 TWIN CH4 230 652565 SIOUXCY4 230 1		191.4	320.0	320.0	0.06385
		C:C2-RAUN-0270				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
2005.4	L:636001 WEBSTER5 161 636050 WRIGHT 5 161 1		130.5	212.0	212.0	0.04064
		C:ITCM-C918-LN-LN(Emry-Flyd-Emry-Shfd)				
		Open 631048 EMERY 5 161 636300 FLOYD 5 161 1				
		Open 631048 EMERY 5 161 656201 SHEFFLD5 161 1				
2126.8	L:636001 WEBSTER5 161 636050 WRIGHT 5 161 1		94.6	212.0	212.0	0.05520
		C:MEC-C522				
		Open 635590 FALLOW 3 345 635600 GRIMES 3 345 1				
		Open 635600 GRIMES 3 345 636010 LEHIGH 3 345 1				
2126.8	L:636001 WEBSTER5 161 636050 WRIGHT 5 161 1		94.6	212.0	212.0	0.05520
		C:GRIMES-B904				
		Open 635590 FALLOW 3 345 635600 GRIMES 3 345 1				
		Open 635600 GRIMES 3 345 636010 LEHIGH 3 345 1				
2451.3	L:631079 BNE JCT5 161 636020 FT.DODG5 161 1		39.7	147.0	147.0	0.04376
		C:GRIMES-B904				
		Open 635590 FALLOW 3 345 635600 GRIMES 3 345 1				
		Open 635600 GRIMES 3 345 636010 LEHIGH 3 345 1				
2451.3	L:631079 BNE JCT5 161 636020 FT.DODG5 161 1		39.7	147.0	147.0	0.04376
		C:MEC-C522				
		Open 635590 FALLOW 3 345 635600 GRIMES 3 345 1				
		Open 635600 GRIMES 3 345 636010 LEHIGH 3 345 1				
0.0	L:631043 WINBAGO5 161 631180 FREEBORN5 161 1		0.0	0.0	167.0	*****
		C:B-MT-960				
		Open 636000 WEBSTER3 345 636010 LEHIGH 3 345 1				
		Open 636000 WEBSTER3 345 B$0195 1.00 1				
		Open 636001 WEBSTER5 161 B$0195 1.00 1				
		Open 636002 WEBS1XT9 13.8 B$0195 1.00 1				
0.0	L:631079 BNE JCT5 161 636020 FT.DODG5 161 1		0.0	0.0	147.0	*****
		C:GRIMES-B905				
		Open 635600 GRIMES 3 345 635700 SYCAMOR3 345 2				
		Open 635600 GRIMES 3 345 636010 LEHIGH 3 345 1				
0.0	L:635201 RAUN 5 161 640377 TEKAMAH5 161 1		0.0	0.0	217.0	*****
		C:MEC-C528				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				

Appendix 33: SUM MVP 3 and 4 Buffalo Ridge 25%N / 75%S Gen – MISO East Scenario

AC FCITC	Limiting Constrain	Contingency	PreShift	PostShift	Rating	AC TDF
2179.0	L:640386 TWIN CH4 230 652565 SIOUXCY4 230 1		188.2	320.0	320.0	0.06051
		C:C2-RAUN-0270				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
2179.0	L:640386 TWIN CH4 230 652565 SIOUXCY4 230 1		188.2	320.0	320.0	0.06051
		C:MEC-C528				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
3064.0	L:631079 BNE JCT5 161 636020 FT.DODG5 161 1		32.6	147.0	147.0	0.03734
		C:GRIMES-B904				
		Open 635590 FALLOW 3 345 635600 GRIMES 3 345 1				
		Open 635600 GRIMES 3 345 636010 LEHIGH 3 345 1				
3064.0	L:631079 BNE JCT5 161 636020 FT.DODG5 161 1		32.6	147.0	147.0	0.03734
		C:MEC-C522				
		Open 635590 FALLOW 3 345 635600 GRIMES 3 345 1				
		Open 635600 GRIMES 3 345 636010 LEHIGH 3 345 1				
3071.8	L:636001 WEBSTER5 161 636050 WRIGHT 5 161 1		78.3	212.0	212.0	0.04353
		C:GRIMES-B904				
		Open 635590 FALLOW 3 345 635600 GRIMES 3 345 1				
		Open 635600 GRIMES 3 345 636010 LEHIGH 3 345 1				
3071.8	L:636001 WEBSTER5 161 636050 WRIGHT 5 161 1		78.3	212.0	212.0	0.04353
		C:MEC-C522				
		Open 635590 FALLOW 3 345 635600 GRIMES 3 345 1				
		Open 635600 GRIMES 3 345 636010 LEHIGH 3 345 1				
3189.0	L:635201 RAUN 5 161 640377 TEKAMAH5 161 1		53.7	217.2	217.0	0.05127
		C:MEC-C528				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
3189.0	L:635201 RAUN 5 161 640377 TEKAMAH5 161 1		53.7	217.2	217.0	0.05127
		C:C2-RAUN-0270				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
3126.8	L:636001 WEBSTER5 161 636050 WRIGHT 5 161 1		79.7	212.0	212.0	0.04232
		C:631197 WINNCOWEST3 345 631198 COLBY3 345 1				
		Open 631197 WINNCOWEST3 345 631198 COLBY3 345 1				
3331.4	L:640386 TWIN CH4 230 652565 SIOUXCY4 230 1		185.1	320.1	320.0	0.04052
		C:635200 RAUN 3 345 640226 HOSKINS3 345 1				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				

Appendix 34: SUM FXLK-RTLD-WNBG Buffalo Ridge 25%N / 75%S Gen – MISO East Scenario

AC FCITC	Limiting Constraint	Contingency	PreShift	PostShift	Rating	AC TDF
1842.6	L:640386 TWIN CH4	230 652565 SIOUXCY4 230 1	197.9	320.0	320.0	0.06627
		C:C2-RAUN-0270				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
1842.6	L:640386 TWIN CH4	230 652565 SIOUXCY4 230 1	197.9	320.0	320.0	0.06627
		C:MEC-C528				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
2132.9	L:636001 WEBSTER5	161 636050 WRIGHT 5 161 1	82.8	212.0	212.0	0.06057
		C:GRIMES-B904				
		Open 635590 FALLOW 3 345 635600 GRIMES 3 345 1				
		Open 635600 GRIMES 3 345 636010 LEHIGH 3 345 1				
2132.9	L:636001 WEBSTER5	161 636050 WRIGHT 5 161 1	82.8	212.0	212.0	0.06057
		C:MEC-C522				
		Open 635590 FALLOW 3 345 635600 GRIMES 3 345 1				
		Open 635600 GRIMES 3 345 636010 LEHIGH 3 345 1				
2247.1	L:636001 WEBSTER5	161 636050 WRIGHT 5 161 1	76.3	212.0	212.0	0.06039
		C:MEC-C549				
		Open 635600 GRIMES 3 345 636010 LEHIGH 3 345 1				
		Open 631077 PERRY 5 161 635607 BITRSWT5 161 1				
2520.4	L:631079 BNE JCT5	161 636020 FT.DODG5 161 1	29.4	147.1	147.0	0.04669
		C:GRIMES-B904				
		Open 635590 FALLOW 3 345 635600 GRIMES 3 345 1				
		Open 635600 GRIMES 3 345 636010 LEHIGH 3 345 1				
2520.4	L:631079 BNE JCT5	161 636020 FT.DODG5 161 1	29.4	147.1	147.0	0.04669
		C:MEC-C522				
		Open 635590 FALLOW 3 345 635600 GRIMES 3 345 1				
		Open 635600 GRIMES 3 345 636010 LEHIGH 3 345 1				
0.0	L:635201 RAUN 5	161 640377 TEKAMAH5 161 1	0.0	0.0	217.0	*****
		C:C2-RAUN-0270				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
0.0	L:635201 RAUN 5	161 640377 TEKAMAH5 161 1	0.0	0.0	217.0	*****
		C:MEC-C528				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
0.0	L:631079 BNE JCT5	161 636020 FT.DODG5 161 1	0.0	0.0	147.0	*****
		C:GRIMES-B905				
		Open 635600 GRIMES 3 345 635700 SYCAMOR3 345 2				
		Open 635600 GRIMES 3 345 636010 LEHIGH 3 345 1				

Appendix 35: SU70 BC Buffalo Ridge 50%N / 50%S Gen – MISO East Scenario

AC FCITC	Limiting Constraint	Contingency	PreShift	PostShift	Rating	AC TDF
2575.9	L:640386 TWIN CH4 230 652565 SIOUXCY4 230 1		161.5	320.1	320.0	0.06154
		C:MEC-C528				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
2575.9	L:640386 TWIN CH4 230 652565 SIOUXCY4 230 1		161.5	320.1	320.0	0.06154
		C:C2-RAUN-0270				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
2610.0	L:631079 BNE JCT5 161 636020 FT.DODG5 161 1		43.9	147.1	147.0	0.03951
		C:GRIMES-B904				
		Open 635590 FALLOW 3 345 635600 GRIMES 3 345 1				
		Open 635600 GRIMES 3 345 636010 LEHIGH 3 345 1				
2610.0	L:631079 BNE JCT5 161 636020 FT.DODG5 161 1		43.9	147.1	147.0	0.03951
		C:MEC-C522				
		Open 635590 FALLOW 3 345 635600 GRIMES 3 345 1				
		Open 635600 GRIMES 3 345 636010 LEHIGH 3 345 1				
2588.9	L:631183 CAYLER5 161 656570 WISDOM5 161 1		131.7	209.0	209.0	0.02984
		C:ITCM-B102-NW-LAKEFIELD_SPS				
		Open 601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
		Open 601034 NOBLES 3 345 631138 LAKEFLD3 345 1				
		Set bus 615100 GRE-TRIMWNDW.575 generation to0.0 MW				
		Set bus 615041 GRE-LGS 31G13.8 generation to0.0 MW				
		Set bus 615042 GRE-LGS 32G13.8 generation to0.0 MW				
		Set bus 615043 GRE-LGS 33G13.8 generation to0.0 MW				
		Set bus 615044 GRE-LGS 34G13.8 generation to0.0 MW				
		Set bus 615045 GRE-LGS 35G13.8 generation to0.0 MW				
		Set bus 615046 GRE-LGS 36G13.8 generation to0.0 MW				
2744.8	L:613370 RUTLAND5 161 631042 FOX LK 5 161 1		41.3	167.0	167.0	0.04581
		C:ITCM-B102-NW-LAKEFIELD_SPS				
		Open 601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
		Open 601034 NOBLES 3 345 631138 LAKEFLD3 345 1				
		Set bus 615100 GRE-TRIMWNDW.575 generation to0.0 MW				
		Set bus 615041 GRE-LGS 31G13.8 generation to0.0 MW				
		Set bus 615042 GRE-LGS 32G13.8 generation to0.0 MW				
		Set bus 615043 GRE-LGS 33G13.8 generation to0.0 MW				
		Set bus 615044 GRE-LGS 34G13.8 generation to0.0 MW				
		Set bus 615045 GRE-LGS 35G13.8 generation to0.0 MW				
		Set bus 615046 GRE-LGS 36G13.8 generation to0.0 MW				
2858.4	L:613370 RUTLAND5 161 631042 FOX LK 5 161 1		46.6	167.0	167.0	0.04213
		C:601032 FIELD_S3 345 601033 FIELD_N3 345 1				
		Open 601032 FIELD_S3 345 601033 FIELD_N3 345 1				
2858.6	L:613370 RUTLAND5 161 631042 FOX LK 5 161 1		46.8	167.0	167.0	0.04208
		C:601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
		Open 601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
2974.1	L:631079 BNE JCT5 161 636020 FT.DODG5 161 1		33.3	147.0	147.0	0.03822
		C:GRIMES-B905				
		Open 635600 GRIMES 3 345 635700 SYCAMOR3 345 2				
		Open 635600 GRIMES 3 345 636010 LEHIGH 3 345 1				

Appendix 36: SU70 MVP 3 Buffalo Ridge 50%N / 50%S Gen – MISO East Scenario

AC FCITC	Limiting Constraint	Contingency	PreShift	PostShift	Rating	AC TDF
2386.9	L:631079 BNE JCT5 161 636020 FT.DODG5 161 1		51.2	147.0	147.0	0.04014
		C:GRIMES-B904				
		Open 635590 FALLOW 3 345 635600 GRIMES 3 345 1				
		Open 635600 GRIMES 3 345 636010 LEHIGH 3 345 1				
2386.9	L:631079 BNE JCT5 161 636020 FT.DODG5 161 1		51.2	147.0	147.0	0.04014
		C:MEC-C522				
		Open 635590 FALLOW 3 345 635600 GRIMES 3 345 1				
		Open 635600 GRIMES 3 345 636010 LEHIGH 3 345 1				
3001.0	L:631110 WAPELLO5 161 631115 OTTUMWA5 161 2		252.3	334.8	335.0	0.02747
		C:ITCM-C207-SE-BF(OGS-Wap-OGS345-161)				
		Open 631110 WAPELLO5 161 631115 OTTUMWA5 161 1				
		Open 631115 OTTUMWA5 161 631143 OTTUMWA3 345 1				
2745.0	L:631079 BNE JCT5 161 636020 FT.DODG5 161 1		36.3	147.0	147.0	0.04034
		C:LEHIGH 0350				
		Open 636000 WEBSTER3 345 636010 LEHIGH 3 345 1				
		Open 635200 RAUN 3 345 636010 LEHIGH 3 345 1				
2776.2	L:640386 TWIN CH4 230 652565 SIOUXCY4 230 1		157.5	320.0	320.0	0.05852
		C:MEC-C528				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
2776.2	L:640386 TWIN CH4 230 652565 SIOUXCY4 230 1		157.5	320.0	320.0	0.05852
		C:C2-RAUN-0270				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
3619.0	L:631110 WAPELLO5 161 631115 OTTUMWA5 161 2		213.1	334.6	335.0	0.03356
		C:631110 WAPELLO5 161 631115 OTTUMWA5 161 1				
		Open 631110 WAPELLO5 161 631115 OTTUMWA5 161 1				
3789.6	L:631110 WAPELLO5 161 631115 OTTUMWA5 161 2		208.2	334.5	335.0	0.03332
		C:ITCM-B111-SW-OGS-WAPELLO-1				
		Open 631110 WAPELLO5 161 631115 OTTUMWA5 161 1				
		Open 630048 WAPELLO8 69.0 631110 WAPELLO5 161 1				
3968.9	L:631110 WAPELLO5 161 631115 OTTUMWA5 161 1		206.0	334.4	335.0	0.03235
		C:631110 WAPELLO5 161 631115 OTTUMWA5 161 2				
		Open 631110 WAPELLO5 161 631115 OTTUMWA5 161 2				
3704.6	L:635201 RAUN 5 161 640377 TEKAMAH5 161 1		33.8	217.2	217.0	0.04951
		C:MEC-C528				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				

Appendix 37: SU70 MVP 3 and 4 Buffalo Ridge 50%N / 50%S Gen – MISO East Scenario

AC FCITC	Limiting Constraint	Contingency	PreShift	PostShift	Rating	AC TDF
2977.1	L:640386 TWIN CH4 230 652565 SIOUXCY4 230 1		155.6	320.1	320.0	0.05526
		C:MEC-C528				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
2977.1	L:640386 TWIN CH4 230 652565 SIOUXCY4 230 1		155.6	320.1	320.0	0.05526
		C:C2-RAUN-0270				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
2989.6	L:631079 BNE JCT5 161 636020 FT.DODG5 161 1		45.2	147.0	147.0	0.03405
		C:GRIMES-B904				
		Open 635590 FALLOW 3 345 635600 GRIMES 3 345 1				
		Open 635600 GRIMES 3 345 636010 LEHIGH 3 345 1				
2989.6	L:631079 BNE JCT5 161 636020 FT.DODG5 161 1		45.2	147.0	147.0	0.03405
		C:MEC-C522				
		Open 635590 FALLOW 3 345 635600 GRIMES 3 345 1				
		Open 635600 GRIMES 3 345 636010 LEHIGH 3 345 1				
3408.9	L:631079 BNE JCT5 161 636020 FT.DODG5 161 1		35.0	147.0	147.0	0.03287
		C:GRIMES-B905				
		Open 635600 GRIMES 3 345 635700 SYCAMOR3 345 2				
		Open 635600 GRIMES 3 345 636010 LEHIGH 3 345 1				
3671.5	L:631110 WAPELLO5 161 631115 OTTUMWA5 161 2		213.4	334.6	335.0	0.03302
		C:631110 WAPELLO5 161 631115 OTTUMWA5 161 1				
		Open 631110 WAPELLO5 161 631115 OTTUMWA5 161 1				
3848.7	L:631110 WAPELLO5 161 631115 OTTUMWA5 161 2		208.5	334.7	335.0	0.03280
		C:ITCM-B111-SW-OGS-WAPELLO-1				
		Open 631110 WAPELLO5 161 631115 OTTUMWA5 161 1				
		Open 630048 WAPELLO8 69.0 631110 WAPELLO5 161 1				
4000.0	L:631110 WAPELLO5 161 631115 OTTUMWA5 161 1		206.3	333.9	335.0	0.03191
NoLimit		C:631110 WAPELLO5 161 631115 OTTUMWA5 161 2				
		Open 631110 WAPELLO5 161 631115 OTTUMWA5 161 2				
4000.0	L:631110 WAPELLO5 161 631115 OTTUMWA5 161 1		201.6	328.3	335.0	0.03168
NoLimit		C:ITCM-B112-SW-OGS-WAPELLO-2				
		Open 631110 WAPELLO5 161 631115 OTTUMWA5 161 2				
		Open 630048 WAPELLO8 69.0 631110 WAPELLO5 161 2				

Appendix 38: SU70 FXLK-RTLD-WNBG Buffalo Ridge 50%N / 50%S Gen – MISO East Scenario

AC FCITC	Limiting Constraint	Contingency	PreShift	PostShift	Rating	AC TD
2576.8	L:640386 TWIN CH4	230 652565 SIOUXCY4 230 1	161.6	320.1	320.0	0.06151
		C:MEC-C528				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
2576.8	L:640386 TWIN CH4	230 652565 SIOUXCY4 230 1	161.6	320.1	320.0	0.06151
		C:C2-RAUN-0270				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
2610.4	L:631079 BNE JCT5	161 636020 FT.DODG5 161 1	43.9	147.1	147.0	0.03951
		C:GRIMES-B904				
		Open 635590 FALLOW 3 345 635600 GRIMES 3 345 1				
		Open 635600 GRIMES 3 345 636010 LEHIGH 3 345 1				
2610.4	L:631079 BNE JCT5	161 636020 FT.DODG5 161 1	43.9	147.1	147.0	0.03951
		C:MEC-C522				
		Open 635590 FALLOW 3 345 635600 GRIMES 3 345 1				
		Open 635600 GRIMES 3 345 636010 LEHIGH 3 345 1				
2642.9	L:631183 CAYLER5	161 656570 WISDOM5 161 1	131.6	209.0	209.0	0.02928
		C:ITCM-B102-NW-LAKEFIELD_SPS				
		Open 601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
		Open 601034 NOBLES 3 345 631138 LAKEFLD3 345 1				
		Set bus 615100 GRE-TRIMWNDW.575 generation to0.0 MW				
		Set bus 615041 GRE-LGS 31G13.8 generation to0.0 MW				
		Set bus 615042 GRE-LGS 32G13.8 generation to0.0 MW				
		Set bus 615043 GRE-LGS 33G13.8 generation to0.0 MW				
		Set bus 615044 GRE-LGS 34G13.8 generation to0.0 MW				
		Set bus 615045 GRE-LGS 35G13.8 generation to0.0 MW				
		Set bus 615046 GRE-LGS 36G13.8 generation to0.0 MW				
2974.4	L:631079 BNE JCT5	161 636020 FT.DODG5 161 1	33.4	147.0	147.0	0.03821
		C:GRIMES-B905				
		Open 635600 GRIMES 3 345 635700 SYCAMOR3 345 2				
		Open 635600 GRIMES 3 345 636010 LEHIGH 3 345 1				
3107.8	L:631102 TRIBOJI5	161 631124 DKSN_CO5 161 1	113.3	223.1	223.0	0.03534
		C:ITCM-B102-NW-LAKEFIELD_SPS				
		Open 601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
		Open 601034 NOBLES 3 345 631138 LAKEFLD3 345 1				
		Set bus 615100 GRE-TRIMWNDW.575 generation to0.0 MW				
		Set bus 615041 GRE-LGS 31G13.8 generation to0.0 MW				
		Set bus 615042 GRE-LGS 32G13.8 generation to0.0 MW				
		Set bus 615043 GRE-LGS 33G13.8 generation to0.0 MW				
		Set bus 615044 GRE-LGS 34G13.8 generation to0.0 MW				
		Set bus 615045 GRE-LGS 35G13.8 generation to0.0 MW				
		Set bus 615046 GRE-LGS 36G13.8 generation to0.0 MW				
3360.5	L:631102 TRIBOJI5	161 631124 DKSN_CO5 161 1	120.0	223.1	223.0	0.03069
		C:601032 FIELD_S3 345 601033 FIELD_N3 345 1				
		Open 601032 FIELD_S3 345 601033 FIELD_N3 345 1				
3360.7	L:631102 TRIBOJI5	161 631124 DKSN_CO5 161 1	120.1	223.1	223.0	0.03066
		C:601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
		Open 601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
3407.5	L:635201 RAUN 5	161 640377 TEKAMAH5 161 1	37.5	217.1	217.0	0.05271
		C:MEC-C528				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				

Appendix 39: SUM BC Buffalo Ridge 50%N / 50%S Gen – MISO East Scenario

AC FCITC	Limiting Constraint	Contingency	PreShift	PostShift	Rating	AC TDF
430.2	L:613370 RUTLAND5 161 631042 FOX LK 5 161 1		148.3	166.6	167.0	0.04266
		C:601032 FIELD_S3 345 601033 FIELD_N3 345 1				
		Open 601032 FIELD_S3 345 601033 FIELD_N3 345 1				
430.2	L:613370 RUTLAND5 161 631042 FOX LK 5 161 1		148.3	166.6	167.0	0.04266
		C:601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
		Open 601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
430.3	L:613370 RUTLAND5 161 631042 FOX LK 5 161 1		148.3	166.6	167.0	0.04266
		C:601004 WILMART3 345 601033 FIELD_N3 345 1				
		Open 601004 WILMART3 345 601033 FIELD_N3 345 1				
858.7	L:613370 RUTLAND5 161 631043 WINBAGO5 161 1		125.7	165.0	165.0	0.04578
		C:601032 FIELD_S3 345 601033 FIELD_N3 345 1				
		Open 601032 FIELD_S3 345 601033 FIELD_N3 345 1				
858.7	L:613370 RUTLAND5 161 631043 WINBAGO5 161 1		125.7	165.0	165.0	0.04578
		C:601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
		Open 601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
858.7	L:613370 RUTLAND5 161 631043 WINBAGO5 161 1		125.7	165.0	165.0	0.04578
		C:601004 WILMART3 345 601033 FIELD_N3 345 1				
		Open 601004 WILMART3 345 601033 FIELD_N3 345 1				
1973.8	L:640386 TWIN CH4 230 652565 SIOUXCY4 230 1		198.0	320.0	320.0	0.06185
		C:C2-RAUN-0270				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
0.0	L:640386 TWIN CH4 230 652565 SIOUXCY4 230 1		0.0	0.0	320.0	*****
		C:MEC-C528				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
0.0	L:631102 TRIBOJI5 161 631124 DKSN_CO5 161 1		0.0	0.0	223.0	*****
		C:601032 FIELD_S3 345 601033 FIELD_N3 345 1				
		Open 601032 FIELD_S3 345 601033 FIELD_N3 345 1				
0.0	L:631102 TRIBOJI5 161 631124 DKSN_CO5 161 1		0.0	0.0	223.0	*****
		C:601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
		Open 601029 LKFLDXL3 345 601032 FIELD_S3 345 1				

Appendix 40: SUM MVP 3 Buffalo Ridge 50%N / 50%S Gen – MISO East Scenario

AC FCITC	Limiting Constraint	Contingency	PreShift	PostShift	Rating	AC TDF
2184.0	L:640386 TWIN CH4 230 652565 SIOUXCY4 230 1		191.4	320.0	320.0	0.05887
		C:MEC-C528				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
2184.0	L:640386 TWIN CH4 230 652565 SIOUXCY4 230 1		191.4	320.0	320.0	0.05887
		C:C2-RAUN-0270				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
2273.3	L:636001 WEBSTER5 161 636050 WRIGHT 5 161 1		130.5	212.0	212.0	0.03586
		C:ITCM-C918-LN-LN(Emry-Flyd-Emry-Shfd)				
		Open 631048 EMERY 5 161 636300 FLOYD 5 161 1				
		Open 631048 EMERY 5 161 656201 SHEFFLD5 161 1				
2441.0	L:636001 WEBSTER5 161 636050 WRIGHT 5 161 1		94.6	212.0	212.0	0.04810
		C:MEC-C522				
		Open 635590 FALLOW 3 345 635600 GRIMES 3 345 1				
		Open 635600 GRIMES 3 345 636010 LEHIGH 3 345 1				
2441.0	L:636001 WEBSTER5 161 636050 WRIGHT 5 161 1		94.6	212.0	212.0	0.04810
		C:GRIMES-B904				
		Open 635590 FALLOW 3 345 635600 GRIMES 3 345 1				
		Open 635600 GRIMES 3 345 636010 LEHIGH 3 345 1				
2691.6	L:631079 BNE JCT5 161 636020 FT.DODG5 161 1		39.7	147.0	147.0	0.03986
		C:MEC-C522				
		Open 635590 FALLOW 3 345 635600 GRIMES 3 345 1				
		Open 635600 GRIMES 3 345 636010 LEHIGH 3 345 1				
2691.6	L:631079 BNE JCT5 161 636020 FT.DODG5 161 1		39.7	147.0	147.0	0.03986
		C:GRIMES-B904				
		Open 635590 FALLOW 3 345 635600 GRIMES 3 345 1				
		Open 635600 GRIMES 3 345 636010 LEHIGH 3 345 1				
0.0	L:631043 WINBAGO5 161 631180 FREEBORN5 161 1		0.0	0.0	167.0	*****
		C:B-MT-960				
		Open 636000 WEBSTER3 345 636010 LEHIGH 3 345 1				
		Open 636000 WEBSTER3 345 B$0195 1.00 1				
		Open 636001 WEBSTER5 161 B$0195 1.00 1				
		Open 636002 WEBS1XT9 13.8 B$0195 1.00 1				
0.0	L:631102 TRIBOJI5 161 631124 DKSN_CO5 161 1		0.0	0.0	223.0	*****
		C:B-MT-960				
		Open 636000 WEBSTER3 345 636010 LEHIGH 3 345 1				
		Open 636000 WEBSTER3 345 B$0195 1.00 1				
		Open 636001 WEBSTER5 161 B$0195 1.00 1				
		Open 636002 WEBS1XT9 13.8 B$0195 1.00 1				
0.0	L:631079 BNE JCT5 161 636020 FT.DODG5 161 1		0.0	0.0	147.0	*****
		C:GRIMES-B905				
		Open 635600 GRIMES 3 345 635700 SYCAMOR3 345 2				
		Open 635600 GRIMES 3 345 636010 LEHIGH 3 345 1				

Appendix 41: SUM MVP 3 and 4 Buffalo Ridge 50%N / 50%S Gen – MISO East Scenario

AC FCITC	Limiting Constraint	Contingency	PreShift	PostShift	Rating	AC TDF
2038.3	L:631183 CAYLER5 161 656570 WISDOM5 161 1		137.4	208.9	209.0	0.03511
		C:601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
		Open 601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
2038.2	L:631183 CAYLER5 161 656570 WISDOM5 161 1		137.3	208.9	209.0	0.03514
		C:601032 FIELD_S3 345 601033 FIELD_N3 345 1				
		Open 601032 FIELD_S3 345 601033 FIELD_N3 345 1				
2038.2	L:631183 CAYLER5 161 656570 WISDOM5 161 1		137.3	208.9	209.0	0.03514
		C:601004 WILMART3 345 601033 FIELD_N3 345 1				
		Open 601004 WILMART3 345 601033 FIELD_N3 345 1				
2507.1	L:631102 TRIBOJI5 161 631124 DKSN_CO5 161 1		120.2	223.1	223.0	0.04104
		C:601032 FIELD_S3 345 601033 FIELD_N3 345 1				
		Open 601032 FIELD_S3 345 601033 FIELD_N3 345 1				
2507.2	L:631102 TRIBOJI5 161 631124 DKSN_CO5 161 1		120.2	223.1	223.0	0.04102
		C:601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
		Open 601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
2507.1	L:631102 TRIBOJI5 161 631124 DKSN_CO5 161 1		120.2	223.1	223.0	0.04104
		C:601004 WILMART3 345 601033 FIELD_N3 345 1				
		Open 601004 WILMART3 345 601033 FIELD_N3 345 1				
2782.7	L:640386 TWIN CH4 230 652565 SIOUXCY4 230 1		161.5	320.0	320.0	0.05696
		C:MEC-C528				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
2782.7	L:640386 TWIN CH4 230 652565 SIOUXCY4 230 1		161.5	320.0	320.0	0.05696
		C:C2-RAUN-0270				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
2809.2	L:613370 RUTLAND5 161 631042 FOX LK 5 161 1		46.6	167.1	167.0	0.04287
		C:601032 FIELD_S3 345 601033 FIELD_N3 345 1				
		Open 601032 FIELD_S3 345 601033 FIELD_N3 345 1				
2809.5	L:613370 RUTLAND5 161 631042 FOX LK 5 161 1		46.8	167.1	167.0	0.04282
		C:601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
		Open 601029 LKFLDXL3 345 601032 FIELD_S3 345 1				

Appendix 42: SUM FXLK-RTLD-WNBG Buffalo Ridge 50%N / 50%S Gen – MISO East Scenario

AC FCITC	Limiting Constraint	Contingency	PreShift	PostShift	Rating	AC TDF
1974.3	L:640386 TWIN CH4 230 652565 SIOUXCY4 230 1		197.9	320.0	320.0	0.06185
		C:C2-RAUN-0270				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
1974.3	L:640386 TWIN CH4 230 652565 SIOUXCY4 230 1		197.9	320.0	320.0	0.06185
		C:MEC-C528				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
2687.3	L:631102 TRIBOJI5 161 631124 DKSN_CO5 161 1		141.7	223.1	223.0	0.03028
		C:601032 FIELD_S3 345 601033 FIELD_N3 345 1				
		Open 601032 FIELD_S3 345 601033 FIELD_N3 345 1				
2687.2	L:631102 TRIBOJI5 161 631124 DKSN_CO5 161 1		141.7	223.1	223.0	0.03028
		C:601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
		Open 601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
2689.8	L:631102 TRIBOJI5 161 631124 DKSN_CO5 161 1		141.7	223.1	223.0	0.03026
		C:601004 WILMART3 345 601033 FIELD_N3 345 1				
		Open 601004 WILMART3 345 601033 FIELD_N3 345 1				
2679.8	L:636001 WEBSTER5 161 636050 WRIGHT 5 161 1		82.8	212.1	212.0	0.04822
		C:GRIMES-B904				
		Open 635590 FALLOW 3 345 635600 GRIMES 3 345 1				
		Open 635600 GRIMES 3 345 636010 LEHIGH 3 345 1				
2679.8	L:636001 WEBSTER5 161 636050 WRIGHT 5 161 1		82.8	212.1	212.0	0.04822
		C:MEC-C522				
		Open 635590 FALLOW 3 345 635600 GRIMES 3 345 1				
		Open 635600 GRIMES 3 345 636010 LEHIGH 3 345 1				
0.0	L:635201 RAUN 5 161 640377 TEKAMAH5 161 1		0.0	0.0	217.0	*****
		C:MEC-C528				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
0.0	L:635201 RAUN 5 161 640377 TEKAMAH5 161 1		0.0	0.0	217.0	*****
		C:C2-RAUN-0270				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
0.0	L:636001 WEBSTER5 161 636050 WRIGHT 5 161 1		0.0	0.0	212.0	*****
		C:MEC-C549				
		Open 635600 GRIMES 3 345 636010 LEHIGH 3 345 1				
		Open 631077 PERRY 5 161 635607 BITRSWT5 161 1				

Appendix 43: SU70 BC Buffalo Ridge 75%N / 25%S Gen – MISO East Scenario

AC FCIT(	Limiting Constrain	Contingency	PreShift	PostShif	Ratin	AC TD
2038.3	L:631183 CAYLER5 161 656570 WISDOM5 161 1		137.4	208.9	209.0	0.03511
		C:601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
		Open 601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
2038.2	L:631183 CAYLER5 161 656570 WISDOM5 161 1		137.3	208.9	209.0	0.03514
		C:601032 FIELD_S3 345 601033 FIELD_N3 345 1				
		Open 601032 FIELD_S3 345 601033 FIELD_N3 345 1				
2038.2	L:631183 CAYLER5 161 656570 WISDOM5 161 1		137.3	208.9	209.0	0.03514
		C:601004 WILMART3 345 601033 FIELD_N3 345 1				
		Open 601004 WILMART3 345 601033 FIELD_N3 345 1				
2507.1	L:631102 TRIBOJI5 161 631124 DKSN_CO5 161 1		120.2	223.1	223.0	0.04104
		C:601032 FIELD_S3 345 601033 FIELD_N3 345 1				
		Open 601032 FIELD_S3 345 601033 FIELD_N3 345 1				
2507.2	L:631102 TRIBOJI5 161 631124 DKSN_CO5 161 1		120.2	223.1	223.0	0.04102
		C:601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
		Open 601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
2507.1	L:631102 TRIBOJI5 161 631124 DKSN_CO5 161 1		120.2	223.1	223.0	0.04104
		C:601004 WILMART3 345 601033 FIELD_N3 345 1				
		Open 601004 WILMART3 345 601033 FIELD_N3 345 1				
2782.7	L:640386 TWIN CH4 230 652565 SIOUXCY4 230 1		161.5	320.0	320.0	0.05696
		C:MEC-C528				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
2782.7	L:640386 TWIN CH4 230 652565 SIOUXCY4 230 1		161.5	320.0	320.0	0.05696
		C:C2-RAUN-0270				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
2809.2	L:613370 RUTLAND5 161 631042 FOX LK 5 161 1		46.6	167.1	167.0	0.04287
		C:601032 FIELD_S3 345 601033 FIELD_N3 345 1				
		Open 601032 FIELD_S3 345 601033 FIELD_N3 345 1				
2809.5	L:613370 RUTLAND5 161 631042 FOX LK 5 161 1		46.8	167.1	167.0	0.04282
		C:601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
		Open 601029 LKFLDXL3 345 601032 FIELD_S3 345 1				

Appendix 44: SU70 MVP 3 Buffalo Ridge 75%N / 25%S Gen – MISO East Scenario

AC FCITC	Limiting Constrain	Contingency	PreShift	PostShift	Rating	AC TDF
2645.9	L:631079 BNE JCT5 161 636020 FT.DODG5 161 1		51.2	147.0	147.0	0.03620
		C:GRIMES-B904				
		Open 635590 FALLOW 3 345 635600 GRIMES 3 345 1				
		Open 635600 GRIMES 3 345 636010 LEHIGH 3 345 1				
2645.9	L:631079 BNE JCT5 161 636020 FT.DODG5 161 1		51.2	147.0	147.0	0.03620
		C:MEC-C522				
		Open 635590 FALLOW 3 345 635600 GRIMES 3 345 1				
		Open 635600 GRIMES 3 345 636010 LEHIGH 3 345 1				
2909.1	L:631183 CAYLER5 161 656570 WISDOM5 161 1		125.1	209.0	209.0	0.02883
		C:B-MT-960				
		Open 636000 WEBSTER3 345 636010 LEHIGH 3 345 1				
		Open 636000 WEBSTER3 345 B$0195 1.00 1				
		Open 636001 WEBSTER5 161 B$0195 1.00 1				
		Open 636002 WEBS1XT9 13.8 B$0195 1.00 1				
3042.2	L:640386 TWIN CH4 230 652565 SIOUXCY4 230 1		157.5	320.1	320.0	0.05343
		C:MEC-C528				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
3042.2	L:640386 TWIN CH4 230 652565 SIOUXCY4 230 1		157.5	320.1	320.0	0.05343
		C:C2-RAUN-0270				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
3062.2	L:631079 BNE JCT5 161 636020 FT.DODG5 161 1		40.2	147.0	147.0	0.03487
		C:GRIMES-B905				
		Open 635600 GRIMES 3 345 635700 SYCAMOR3 345 2				
		Open 635600 GRIMES 3 345 636010 LEHIGH 3 345 1				
3365.4	L:601043 NLAX 5 161 681531 LAC TAP5 161 1		59.2	177.9	178.0	0.03525
		C:601043 NLAX 5 161 602026 MAYFAIR5 161 1				
		Open 601043 NLAX 5 161 602026 MAYFAIR5 161 1				
3802.9	L:631110 WAPELLO5 161 631115 OTTUMWA5 161 2		213.1	335.0	335.0	0.03205
		C:631110 WAPELLO5 161 631115 OTTUMWA5 161 1				
		Open 631110 WAPELLO5 161 631115 OTTUMWA5 161 1				
3547.1	L:631102 TRIBOJI5 161 631124 DKSN_CO5 161 1		105.5	223.2	223.0	0.03317
		C:B-MT-960				
		Open 636000 WEBSTER3 345 636010 LEHIGH 3 345 1				
		Open 636000 WEBSTER3 345 B$0195 1.00 1				
		Open 636001 WEBSTER5 161 B$0195 1.00 1				
		Open 636002 WEBS1XT9 13.8 B$0195 1.00 1				
3966.6	L:631110 WAPELLO5 161 631115 OTTUMWA5 161 2		208.2	334.4	335.0	0.03182
		C:ITCM-B111-SW-OGS-WAPELLO-1				
		Open 631110 WAPELLO5 161 631115 OTTUMWA5 161 1				
		Open 630048 WAPELLO8 69.0 631110 WAPELLO5 161 1				

Appendix 45: SU70 MVP 3 and 4 Buffalo Ridge 75%N / 25%S Gen – MISO East Scenario

AC FCITC	Limiting Constraint	Contingency	PreShift	PostShift	Rating	AC TDF
3266.3	L:640386 TWIN CH4 230 652565 SIOUXCY4 230 1		155.6	320.1	320.0	0.05036
		C:MEC-C528				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
3266.3	L:640386 TWIN CH4 230 652565 SIOUXCY4 230 1		155.6	320.1	320.0	0.05036
		C:C2-RAUN-0270				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
3345.8	L:631079 BNE JCT5 161 636020 FT.DODG5 161 1		45.2	147.0	147.0	0.03041
		C:MEC-C522				
		Open 635590 FALLOW 3 345 635600 GRIMES 3 345 1				
		Open 635600 GRIMES 3 345 636010 LEHIGH 3 345 1				
3345.8	L:631079 BNE JCT5 161 636020 FT.DODG5 161 1		45.2	147.0	147.0	0.03041
		C:GRIMES-B904				
		Open 635590 FALLOW 3 345 635600 GRIMES 3 345 1				
		Open 635600 GRIMES 3 345 636010 LEHIGH 3 345 1				
3838.5	L:631110 WAPELLO5 161 631115 OTTUMWA5 161 2		213.4	334.6	335.0	0.03158
		C:631110 WAPELLO5 161 631115 OTTUMWA5 161 1				
		Open 631110 WAPELLO5 161 631115 OTTUMWA5 161 1				
4000.0	L:631110 WAPELLO5 161 631115 OTTUMWA5 161 2		208.5	334.0	335.0	0.03138
NoLimit		C:ITCM-B111-SW-OGS-WAPELLO-1				
		Open 631110 WAPELLO5 161 631115 OTTUMWA5 161 1				
		Open 630048 WAPELLO8 69.0 631110 WAPELLO5 161 1				
3820.6	L:631079 BNE JCT5 161 636020 FT.DODG5 161 1		35.0	147.1	147.0	0.02936
		C:GRIMES-B905				
		Open 635600 GRIMES 3 345 635700 SYCAMOR3 345 2				
		Open 635600 GRIMES 3 345 636010 LEHIGH 3 345 1				
3747.3	L:601043 NLAX 5 161 681531 LAC TAP5 161 1		55.8	178.0	178.0	0.03261
		C:601043 NLAX 5 161 602026 MAYFAIR5 161 1				
		Open 601043 NLAX 5 161 602026 MAYFAIR5 161 1				
4000.0	L:631110 WAPELLO5 161 631115 OTTUMWA5 161 1		206.3	328.2	335.0	0.03049
NoLimit		C:631110 WAPELLO5 161 631115 OTTUMWA5 161 2				
		Open 631110 WAPELLO5 161 631115 OTTUMWA5 161 2				

Appendix 46: SU70 FXLK-RTLD-WNBG Buffalo Ridge 75%N / 25%S Gen – MISO East Scenario

AC FCITC	Limiting Constraint	Contingency	PreShift	PostShift	Rating	AC TDF
2067.5	L:631183 CAYLER5 161 656570 WISDOM5 161 1		137.2	208.9	209.0	0.03469
		C:601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
		Open 601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
2067.5	L:631183 CAYLER5 161 656570 WISDOM5 161 1		137.2	208.9	209.0	0.03471
		C:601032 FIELD_S3 345 601033 FIELD_N3 345 1				
		Open 601032 FIELD_S3 345 601033 FIELD_N3 345 1				
2067.5	L:631183 CAYLER5 161 656570 WISDOM5 161 1		137.2	208.9	209.0	0.03471
		C:601004 WILMART3 345 601033 FIELD_N3 345 1				
		Open 601004 WILMART3 345 601033 FIELD_N3 345 1				
2544.3	L:631102 TRIBOJI5 161 631124 DKSN_CO5 161 1		120.1	223.1	223.0	0.04050
		C:601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
		Open 601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
2544.2	L:631102 TRIBOJI5 161 631124 DKSN_CO5 161 1		120.0	223.1	223.0	0.04052
		C:601032 FIELD_S3 345 601033 FIELD_N3 345 1				
		Open 601032 FIELD_S3 345 601033 FIELD_N3 345 1				
2544.2	L:631102 TRIBOJI5 161 631124 DKSN_CO5 161 1		120.0	223.1	223.0	0.04052
		C:601004 WILMART3 345 601033 FIELD_N3 345 1				
		Open 601004 WILMART3 345 601033 FIELD_N3 345 1				
2783.8	L:640386 TWIN CH4 230 652565 SIOUXCY4 230 1		161.6	320.0	320.0	0.05693
		C:MEC-C528				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
2783.8	L:640386 TWIN CH4 230 652565 SIOUXCY4 230 1		161.6	320.0	320.0	0.05693
		C:C2-RAUN-0270				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
3176.5	L:601043 NLAX 5 161 681531 LAC TAP5 161 1		61.9	178.0	178.0	0.03655
		C:601043 NLAX 5 161 602026 MAYFAIR5 161 1				
		Open 601043 NLAX 5 161 602026 MAYFAIR5 161 1				
3220.6	L:631079 BNE JCT5 161 636020 FT.DODG5 161 1		43.9	147.0	147.0	0.03198
		C:MEC-C522				
		Open 635590 FALLOW 3 345 635600 GRIMES 3 345 1				
		Open 635600 GRIMES 3 345 636010 LEHIGH 3 345 1				

Appendix 47: SUM BC Buffalo Ridge 75%N / 25%S Gen – MISO East Scenario

AC FCIT(	Limiting Constrain	Contingency	PreShift	PostShift	Ratin	AC TD
424.0	L:613370 RUTLAND5 161 631042 FOX LK 5 161 1		148.3	166.6	167.0	0.04328
		C:601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
		Open 601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
424.0	L:613370 RUTLAND5 161 631042 FOX LK 5 161 1		148.3	166.6	167.0	0.04328
		C:601032 FIELD_S3 345 601033 FIELD_N3 345 1				
		Open 601032 FIELD_S3 345 601033 FIELD_N3 345 1				
424.0	L:613370 RUTLAND5 161 631042 FOX LK 5 161 1		148.3	166.6	167.0	0.04328
		C:601004 WILMART3 345 601033 FIELD_N3 345 1				
		Open 601004 WILMART3 345 601033 FIELD_N3 345 1				
840.6	L:613370 RUTLAND5 161 631043 WINBAGO5 161 1		125.7	165.0	165.0	0.04677
		C:601032 FIELD_S3 345 601033 FIELD_N3 345 1				
		Open 601032 FIELD_S3 345 601033 FIELD_N3 345 1				
840.7	L:613370 RUTLAND5 161 631043 WINBAGO5 161 1		125.7	165.0	165.0	0.04677
		C:601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
		Open 601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
840.7	L:613370 RUTLAND5 161 631043 WINBAGO5 161 1		125.7	165.0	165.0	0.04677
		C:601004 WILMART3 345 601033 FIELD_N3 345 1				
		Open 601004 WILMART3 345 601033 FIELD_N3 345 1				
1984.4	L:631102 TRIBOJI5 161 631124 DKSN_CO5 161 1		143.0	223.1	223.0	0.04035
		C:601032 FIELD_S3 345 601033 FIELD_N3 345 1				
		Open 601032 FIELD_S3 345 601033 FIELD_N3 345 1				
0.0	L:631102 TRIBOJI5 161 631124 DKSN_CO5 161 1		0.0	0.0	223.0	*****
		C:601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
		Open 601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
0.0	L:631102 TRIBOJI5 161 631124 DKSN_CO5 161 1		0.0	0.0	223.0	*****
		C:601004 WILMART3 345 601033 FIELD_N3 345 1				
		Open 601004 WILMART3 345 601033 FIELD_N3 345 1				

Appendix 48: SUM MVP 3 Buffalo Ridge 75%N / 25%S Gen – MISO East Scenario

AC FCITC	Limiting Constraint	Contingency	PreShift	PostShift	Rating	AC TDF
2397.1	L:640386 TWIN CH4 230 652565 SIOUXCY4 230 1		191.4	320.0	320.0	0.05367
		C:C2-RAUN-0270				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
2397.1	L:640386 TWIN CH4 230 652565 SIOUXCY4 230 1		191.4	320.0	320.0	0.05367
		C:MEC-C528				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
2627.0	L:636001 WEBSTER5 161 636050 WRIGHT 5 161 1		130.5	212.0	212.0	0.03103
		C:ITCM-C918-LN-LN(Emry-Flyd-Emry-Shfd)				
		Open 631048 EMERY 5 161 636300 FLOYD 5 161 1				
		Open 631048 EMERY 5 161 656201 SHEFFLD5 161 1				
2804.0	L:631102 TRIBOJI5 161 631124 DKSN_CO5 161 1		131.8	223.1	223.0	0.03257
		C:B-MT-960				
		Open 636000 WEBSTER3 345 636010 LEHIGH 3 345 1				
		Open 636000 WEBSTER3 345 B$0195 1.00 1				
		Open 636001 WEBSTER5 161 B$0195 1.00 1				
		Open 636002 WEBS1XT9 13.8 B$0195 1.00 1				
3136.6	L:601043 NLAX 5 161 681531 LAC TAP5 161 1		75.0	178.0	178.0	0.03284
		C:601043 NLAX 5 161 602026 MAYFAIR5 161 1				
		Open 601043 NLAX 5 161 602026 MAYFAIR5 161 1				
2864.2	L:636001 WEBSTER5 161 636050 WRIGHT 5 161 1		94.6	212.0	212.0	0.04100
		C:MEC-C522				
		Open 635590 FALLOW 3 345 635600 GRIMES 3 345 1				
		Open 635600 GRIMES 3 345 636010 LEHIGH 3 345 1				
0.0	L:636001 WEBSTER5 161 636050 WRIGHT 5 161 1		0.0	0.0	212.0	*****
		C:GRIMES-B904				
		Open 635590 FALLOW 3 345 635600 GRIMES 3 345 1				
		Open 635600 GRIMES 3 345 636010 LEHIGH 3 345 1				
0.0	L:631079 BNE JCT5 161 636020 FT.DODG5 161 1		0.0	0.0	147.0	*****
		C:GRIMES-B904				
		Open 635590 FALLOW 3 345 635600 GRIMES 3 345 1				
		Open 635600 GRIMES 3 345 636010 LEHIGH 3 345 1				
0.0	L:631079 BNE JCT5 161 636020 FT.DODG5 161 1		0.0	0.0	147.0	*****
		C:MEC-C522				
		Open 635590 FALLOW 3 345 635600 GRIMES 3 345 1				
		Open 635600 GRIMES 3 345 636010 LEHIGH 3 345 1				

Appendix 49: SUM MVP 3 and 4 Buffalo Ridge 75%N / 25%S Gen – MISO East Scenario

AC FCIT(	Limiting Constrain	Contingency	PreShift	PostShif	Ratin	AC TD
2600.8	L:640386 TWIN CH4 230 652565 SIOUXCY4 230 1		188.2	320.0	320.0	0.05070
		C:C2-RAUN-0270				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
2600.8	L:640386 TWIN CH4 230 652565 SIOUXCY4 230 1		188.2	320.0	320.0	0.05070
		C:MEC-C528				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
3143.9	L:652504 BROOKNG7 115 652538 WHITE 7 115 1		71.1	176.2	176.0	0.03341
		C:652529 WATERTN3 345 652537 WHITE 3 345 1				
		Open 652529 WATERTN3 345 652537 WHITE 3 345 1				
3561.1	L:601043 NLAX 5 161 681531 LAC TAP5 161 1		70.6	178.5	178.0	0.03029
		C:601043 NLAX 5 161 602026 MAYFAIR5 161 1				
		Open 601043 NLAX 5 161 602026 MAYFAIR5 161 1				
3401.1	L:601007 SPLTRTA3 345 652537 WHITE 3 345 1		276.0	717.0	717.0	0.12967
		C:601031 BRKNGCO3 345 601048 LYON CO 3 345 1				
		Open 601031 BRKNGCO3 345 601048 LYON CO 3 345 1				
3408.7	L:601006 SPLT RK3 345 601007 SPLTRTA3 345 1		276.4	717.1	717.1	0.12928
		C:601031 BRKNGCO3 345 601048 LYON CO 3 345 1				
		Open 601031 BRKNGCO3 345 601048 LYON CO 3 345 1				
3426.0	L:601029 LKFLDXL3 345 631138 LAKEFLD3 345 1		282.3	918.0	918.0	0.18555
		C:601032 FIELD_S3 345 601033 FIELD_N3 345 1				
		Open 601032 FIELD_S3 345 601033 FIELD_N3 345 1				
3424.7	L:601029 LKFLDXL3 345 631138 LAKEFLD3 345 1		281.4	918.0	918.0	0.18587
		C:601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
		Open 601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
3426.0	L:601029 LKFLDXL3 345 631138 LAKEFLD3 345 1		282.3	918.0	918.0	0.18555
		C:601004 WILMART3 345 601033 FIELD_N3 345 1				
		Open 601004 WILMART3 345 601033 FIELD_N3 345 1				
3798.7	L:631079 BNE JCT5 161 636020 FT.DODG5 161 1		32.6	147.0	147.0	0.03011
		C:GRIMES-B904				
		Open 635590 FALLOW 3 345 635600 GRIMES 3 345 1				
		Open 635600 GRIMES 3 345 636010 LEHIGH 3 345 1				

Appendix 50: SUM FXLK-RTLD-WNBG Buffalo Ridge 75%N / 25%S Gen – MISO East Scenario

AC FCITC	Limiting Constraint	Contingency	PreShift	PostShift	Rating	AC TDF
2034.8	L:631102 TRIBOJI5 161 631124 DKSN_CO5 161 1		141.7	223.1	223.0	0.03999
		C:601032 FIELD_S3 345 601033 FIELD_N3 345 1				
		Open 601032 FIELD_S3 345 601033 FIELD_N3 345 1				
2034.8	L:631102 TRIBOJI5 161 631124 DKSN_CO5 161 1		141.7	223.1	223.0	0.03999
		C:601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
		Open 601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
2034.8	L:631102 TRIBOJI5 161 631124 DKSN_CO5 161 1		141.7	223.1	223.0	0.03999
		C:601004 WILMART3 345 601033 FIELD_N3 345 1				
		Open 601004 WILMART3 345 601033 FIELD_N3 345 1				
2132.5	L:640386 TWIN CH4 230 652565 SIOUXCY4 230 1		197.9	320.0	320.0	0.05724
		C:C2-RAUN-0270				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
2132.5	L:640386 TWIN CH4 230 652565 SIOUXCY4 230 1		197.9	320.0	320.0	0.05724
		C:MEC-C528				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
2908.1	L:601043 NLAX 5 161 681531 LAC TAP5 161 1		77.6	178.0	178.0	0.03453
		C:601043 NLAX 5 161 602026 MAYFAIR5 161 1				
		Open 601043 NLAX 5 161 602026 MAYFAIR5 161 1				
2984.4	L:652504 BROOKNG7 115 652538 WHITE 7 115 1		72.7	176.1	176.0	0.03466
		C:652529 WATERTN3 345 652537 WHITE 3 345 1				
		Open 652529 WATERTN3 345 652537 WHITE 3 345 1				
0.0	L:631041 LAKEFLD5 161 631124 DKSN_CO5 161 1		0.0	0.0	240.0	*****
		C:601032 FIELD_S3 345 601033 FIELD_N3 345 1				
		Open 601032 FIELD_S3 345 601033 FIELD_N3 345 1				
0.0	L:631041 LAKEFLD5 161 631124 DKSN_CO5 161 1		0.0	0.0	240.0	*****
		C:601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
		Open 601029 LKFLDXL3 345 601032 FIELD_S3 345 1				

Appendix 51: Summary Tables of First Contingency Incremental Transfer Capability Analysis

Table 1: Buffalo Ridge 25%N / 75%S – Minnesota Scenario Results

Case	Maximum Gross Transfer Capability (MW)	Limiting Element
SU 70 Base Case	2513.9	Rutland – Fox Lake 161 kV
SU 70 MVP #3	3323.2	Austin – Hayward 161 kV
SU 70 MVP #3 and #4	3997.9	Twin Church – Sioux City 230 kV
SU 70 FXLK-RTLD-WNBG	3087.6	Boone Jct. – Fort Dodge 161 kV
SUM Base Case	445.7	Rutland – Fox Lake 161 kV
SUM MVP #3	2909.0	Blue Earth – Winnebago Jct. 161 kV
SUM MVP #3 and #4	3321.6	Twin Church – Sioux City 230 kV
SUM FXLK-RTLD-WNBG	2559.4	Webster – Wright 161 kV

Table 2: Buffalo Ridge 50%N / 50%S – Minnesota Scenario Results

Case	Maximum Gross Transfer Capability (MW)	Limiting Element
SU 70 Base Case	2603.8	Rutland – Fox Lake 161 kV
SU 70 MVP #3	4244.5	Twin Church – Sioux City 230 kV
SU 70 MVP #3 and #4	4523.6	Twin Church – Sioux City 230 kV
SU 70 FXLK-RTLD-WNBG	3841.5	Lakefield – Fox Lake Ckt. 1 161 kV
SUM Base Case	438.9	Rutland – Fox Lake 161 kV
SUM MVP #3	3484.5	Twin Church – Sioux City 230 kV
SUM MVP #3 and #4	3756.8	Twin Church – Sioux City 230 kV
SUM FXLK-RTLD-WNBG	3224.7	Twin Church – Sioux City 230 kV

Table 3: Buffalo Ridge 75%N / 25%S – Minnesota Scenario Results

Case	Maximum Gross Transfer Capability (MW)	Limiting Element
SU 70 Base Case	2697.3	Rutland – Fox Lake 161 kV
SU 70 MVP #3	4129.5	Brookings – White 115 kV
SU 70 MVP #3 and #4	4161.5	Brookings – White 115 kV
SU 70 FXLK-RTLD-WNBG	3490.1	Triboji – Dickinson Co. 161 kV
SUM Base Case	432.4	Rutland – Fox Lake 161 kV
SUM MVP #3	2892.1	Brookings – White 115 kV
SUM MVP #3 and #4	2931.2	Brookings – White 115 kV
SUM FXLK-RTLD-WNBG	2827.1	Brookings – White 115 kV

Table 4: Buffalo Ridge 25%N / 75%S – MISO East Scenario Results

Case	Maximum Gross Transfer Capability (MW)	Limiting Element
SU 70 Base Case	2201.0	Boone Jct. – Fort Dodge 161 kV
SU 70 MVP #3	2176.0	Boone Jct. – Fort Dodge 161 kV
SU 70 MVP #3 and #4	2974.7	Wapello – Ottumwa 161 kV
SU 70 FXLK-RTLD-WNBG	2201.3	Boone Jct. – Fort Dodge 161 kV
SUM Base Case	436.7	Rutland – Fox Lake 161 kV
SUM MVP #3	2014.8	Twin Church – Sioux City 230 kV
SUM MVP #3 and #4	2179.0	Twin Church – Sioux City 230 kV
SUM FXLK-RTLD-WNBG	1842.6	Twin Church – Sioux City 230 kV

Table 5: Buffalo Ridge 50%N / 50%S – MISO East Scenario Results

Case	Maximum Gross Transfer Capability (MW)	Limiting Element
SU 70 Base Case	2433.9	Twin Church – Sioux City 230 kV
SU 70 MVP #3	2386.9	Boone Jct. – Fort Dodge 161 kV
SU 70 MVP #3 and #4	2977.1	Twin Church – Sioux City 230 kV
SU 70 FXLK-RTLD-WNBG	2576.8	Twin Church – Sioux City 230 kV
SUM Base Case	430.2	Rutland – Fox Lake 161 kV
SUM MVP #3	2184.0	Twin Church – Sioux City 230 kV
SUM MVP #3 and #4	2366.1	Twin Church – Sioux City 230 kV
SUM FXLK-RTLD-WNBG	1974.3	Twin Church – Sioux City 230 kV

Table 6: Buffalo Ridge 75%N / 25%S – MISO East Scenario Results

Case	Maximum Gross Transfer Capability (MW)	Limiting Element
SU 70 Base Case	2038.3	Cayler – Wisdom 161 kV
SU 70 MVP #3	2645.9	Boone Jct. – Fort Dodge 161 kV
SU 70 MVP #3 and #4	3266.3	Twin Church – Sioux City 230 kV
SU 70 FXLK-RTLD-WNBG	2067.5	Cayler – Wisdom 161 kV
SUM Base Case	424.0	Rutland – Fox Lake 161 kV
SUM MVP #3	2397.1	Twin Church – Sioux City 230 kV
SUM MVP #3 and #4	2600.8	Twin Church – Sioux City 230 kV
SU 70 FXLK-RTLD-WNBG	2034.8	Triboji – Dickinson Co. 161 kV

Appendix 52: Transfer Capability of 161 kV Rebuild Alternative with MVP #4

Fox Lake – Rutland – Winnebago and MVP #4 Scenario Summary

Scenario	Maximum Gross Transfer Capability (MW)	Limiting Element
SU 70 BR 25% - 75% - MN	3287.2	Webster – Wright 161 kV
SU 70 BR 50% - 50% - MN	3677.6	Lakefield – Fox Lake 161 kV
SU 70 BR 75% - 25% - MN	3358.9	Triboji – Dickinson Co. 161 kV
SU 70 BR 25% - 75% - MISO	2469.7	Twin Church – Sioux City 230 kV
SU 70 BR 50% - 50% - MISO	2649.8	Twin Church – Sioux City 230 kV
SU 70 BR 75% - 25% - MISO	1989.7	Cayler – Wisdom 161 kV
SUM BR 25% - 75% - MN	2559.0	Webster – Wright 161 kV
SUM BR 50% - 50% - MN	3272.9	Twin Church – Sioux City 230 kV
SUM BR 75% - 25% - MN	2841.1	Brookings – White 115 kV
SUM BR 25% - 75% - MISO	1883.5	Twin Church – Sioux City 230 kV
SUM BR 50% - 50% - MISO	2019.4	Twin Church – Sioux City 230 kV
SUM BR 75% - 25% - MISO	1945.6	Triboji – Dickinson Co. 161 kV

SU70 FXLK-RTLD-WNBG and MVP#4 Buffalo Ridge 25%N / 75%S Gen – MN Scenario

AC FCITC	Limiting Constraint	Contingency	PreShift	PostShift	Rating	AC TDF
3287.2	L:636001 WEBSTER5 161 636050 WRIGHT 5 161 1		12.3	212.1	212.0	0.06078
		C:MEC-C519				
		Open 636000 WEBSTER3 345 636010 LEHIGH 3 345 1				
		Open 636001 WEBSTER5 161 636020 FT.DODG5 161 1				
3537.5	L:631041 LAKEFLD5 161 631042 FOX LK 5 161 1		46.6	160.1	160.0	0.03209
		C:ITCM-B102-NW-LAKEFIELD_SPS				
		Open 601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
		Open 601034 NOBLES 3 345 631138 LAKEFLD3 345 1				
		Set bus 615100 GRE-TRIMWNDW.575 generation to0.0 MW				
		Set bus 615041 GRE-LGS 31G13.8 generation to0.0 MW				
		Set bus 615042 GRE-LGS 32G13.8 generation to0.0 MW				
		Set bus 615043 GRE-LGS 33G13.8 generation to0.0 MW				
		Set bus 615044 GRE-LGS 34G13.8 generation to0.0 MW				
		Set bus 615045 GRE-LGS 35G13.8 generation to0.0 MW				
		Set bus 615046 GRE-LGS 36G13.8 generation to0.0 MW				
3377.8	L:636001 WEBSTER5 161 636050 WRIGHT 5 161 1		23.3	212.1	212.0	0.05589
		C:ITCM-C923-LN-LN(CGrd-Hnck-Web-Leh)				
		Open 631049 CGORDO_5 161 631103 HANCOCK5 161 1				
		Open 636000 WEBSTER3 345 636010 LEHIGH 3 345 1				
3388.7	L:631079 BNE JCT5 161 636020 FT.DODG5 161 1		10.2	147.1	147.0	0.04041
		C:LEHIGH 0350				
		Open 636000 WEBSTER3 345 636010 LEHIGH 3 345 1				
		Open 635200 RAUN 3 345 636010 LEHIGH 3 345 1				
3388.8	L:631079 BNE JCT5 161 636020 FT.DODG5 161 1		10.2	147.1	147.0	0.04041
		C:LEHIGH-B360				
		Open 635200 RAUN 3 345 636010 LEHIGH 3 345 1				
		Open 635600 GRIMES 3 345 636010 LEHIGH 3 345 1				
		Open 636000 WEBSTER3 345 636010 LEHIGH 3 345 1				
3423.9	L:631079 BNE JCT5 161 636020 FT.DODG5 161 1		37.3	146.9	147.0	0.03204
		C:MEC-C522				
		Open 635590 FALLOW 3 345 635600 GRIMES 3 345 1				
		Open 635600 GRIMES 3 345 636010 LEHIGH 3 345 1				
3418.3	L:636001 WEBSTER5 161 636050 WRIGHT 5 161 1		12.1	212.1	212.0	0.05851
		C:LEHIGH-B360				
		Open 635200 RAUN 3 345 636010 LEHIGH 3 345 1				
		Open 635600 GRIMES 3 345 636010 LEHIGH 3 345 1				
		Open 636000 WEBSTER3 345 636010 LEHIGH 3 345 1				
3535.3	L:636230 FRANKLN5 161 636235 WALL LK5 161 1		17.3	201.0	201.0	0.05196
		C:ITCM-C923-LN-LN(CGrd-Hnck-Web-Leh)				
		Open 631049 CGORDO_5 161 631103 HANCOCK5 161 1				
		Open 636000 WEBSTER3 345 636010 LEHIGH 3 345 1				
3563.3	L:636230 FRANKLN5 161 636235 WALL LK5 161 1		11.1	201.5	201.0	0.05343
		C:MEC-C519				
		Open 636000 WEBSTER3 345 636010 LEHIGH 3 345 1				
		Open 636001 WEBSTER5 161 636020 FT.DODG5 161 1				
3683.8	L:640386 TWIN CH4 230 652565 SIOUXCY4 230 1		159.1	319.9	320.0	0.04363
		C:MEC-C528				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				

SU70 FXLK-RTLD-WNBG and MVP#4 Buffalo Ridge 50%N / 50%S Gen – MN Scenario

AC FCITC	Limiting Constraint	Contingency	PreShift	PostShift	Rating	AC TDF
3677.6	L:631041 LAKEFLD5 161 631042 FOX LK 5 161 1		46.6	160.2	160.0	0.03089
		C:ITCM-B102-NW-LAKEFIELD_SPS				
		Open 601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
		Open 601034 NOBLES 3 345 631138 LAKEFLD3 345 1				
		Set bus 615100 GRE-TRIMWNDW.575 generation to0.0 MW				
		Set bus 615041 GRE-LGS 31G13.8 generation to0.0 MW				
		Set bus 615042 GRE-LGS 32G13.8 generation to0.0 MW				
		Set bus 615043 GRE-LGS 33G13.8 generation to0.0 MW				
		Set bus 615044 GRE-LGS 34G13.8 generation to0.0 MW				
		Set bus 615045 GRE-LGS 35G13.8 generation to0.0 MW				
		Set bus 615046 GRE-LGS 36G13.8 generation to0.0 MW				
4100.8	L:640386 TWIN CH4 230 652565 SIOUXCY4 230 1		159.1	319.9	320.0	0.03921
		C:MEC-C528				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
4100.8	L:640386 TWIN CH4 230 652565 SIOUXCY4 230 1		159.1	319.9	320.0	0.03921
		C:C2-RAUN-0270				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
4607.8	L:631041 LAKEFLD5 161 631138 LAKEFLD3 345 2		79.7	335.5	335.0	0.05551
		C:ITCM-B102-NW-LAKEFIELD_SPS				
		Open 601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
		Open 601034 NOBLES 3 345 631138 LAKEFLD3 345 1				
		Set bus 615100 GRE-TRIMWNDW.575 generation to0.0 MW				
		Set bus 615041 GRE-LGS 31G13.8 generation to0.0 MW				
		Set bus 615042 GRE-LGS 32G13.8 generation to0.0 MW				
		Set bus 615043 GRE-LGS 33G13.8 generation to0.0 MW				
		Set bus 615044 GRE-LGS 34G13.8 generation to0.0 MW				
		Set bus 615045 GRE-LGS 35G13.8 generation to0.0 MW				
		Set bus 615046 GRE-LGS 36G13.8 generation to0.0 MW				
4607.8	L:631041 LAKEFLD5 161 631138 LAKEFLD3 345 1		79.7	335.5	335.0	0.05551
		C:ITCM-B102-NW-LAKEFIELD_SPS				
		Open 601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
		Open 601034 NOBLES 3 345 631138 LAKEFLD3 345 1				
		Set bus 615100 GRE-TRIMWNDW.575 generation to0.0 MW				
		Set bus 615041 GRE-LGS 31G13.8 generation to0.0 MW				
		Set bus 615042 GRE-LGS 32G13.8 generation to0.0 MW				
		Set bus 615043 GRE-LGS 33G13.8 generation to0.0 MW				
		Set bus 615044 GRE-LGS 34G13.8 generation to0.0 MW				
		Set bus 615045 GRE-LGS 35G13.8 generation to0.0 MW				
		Set bus 615046 GRE-LGS 36G13.8 generation to0.0 MW				
4656.0	L:636001 WEBSTER5 161 636050 WRIGHT 5 161 1		12.3	212.1	212.0	0.04291
		C:MEC-C519				
		Open 636000 WEBSTER3 345 636010 LEHIGH 3 345 1				
		Open 636001 WEBSTER5 161 636020 FT.DODG5 161 1				
4737.2	L:631079 BNE JCT5 161 636020 FT.DODG5 161 1		10.2	147.1	147.0	0.02890
		C:LEHIGH 0350				
		Open 636000 WEBSTER3 345 636010 LEHIGH 3 345 1				
		Open 635200 RAUN 3 345 636010 LEHIGH 3 345 1				
4737.2	L:631079 BNE JCT5 161 636020 FT.DODG5 161 1		10.2	147.1	147.0	0.02890
		C:LEHIGH-B360				
		Open 635200 RAUN 3 345 636010 LEHIGH 3 345 1				
		Open 635600 GRIMES 3 345 636010 LEHIGH 3 345 1				
		Open 636000 WEBSTER3 345 636010 LEHIGH 3 345 1				
4730.3	L:636001 WEBSTER5 161 636050 WRIGHT 5 161 1		23.3	212.1	212.0	0.03991
		C:ITCM-C923-LN-LN(CGrd-Hnck-Web-Leh)				
		Open 631049 CGORDO_5 161 631103 HANCOCK5 161 1				
		Open 636000 WEBSTER3 345 636010 LEHIGH 3 345 1				
4807.7	L:636001 WEBSTER5 161 636050 WRIGHT 5 161 1		12.1	212.0	212.0	0.04160
		C:LEHIGH-B360				
		Open 635200 RAUN 3 345 636010 LEHIGH 3 345 1				
		Open 635600 GRIMES 3 345 636010 LEHIGH 3 345 1				
		Open 636000 WEBSTER3 345 636010 LEHIGH 3 345 1				

SU70 FXLK-RTLD-WNBG and MVP#4 Buffalo Ridge 75%N / 25%S Gen – MN Scenario

AC FCITC	Limiting Constraint	Contingency	PreShift	PostShift	Rating	AC TDF
3358.9	L:631102 TRIBOJI5 161 631124 DKSN_CO5 161 1		115.6	223.1	223.0	0.03200
		C:ITCM-B102-NW-LAKEFIELD_SPS				
		Open 601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
		Open 601034 NOBLES 3 345 631138 LAKEFLD3 345 1				
		Set bus 615100 GRE-TRIMWNDW.575 generation to0.0 MW				
		Set bus 615041 GRE-LGS 31G13.8 generation to0.0 MW				
		Set bus 615042 GRE-LGS 32G13.8 generation to0.0 MW				
		Set bus 615043 GRE-LGS 33G13.8 generation to0.0 MW				
		Set bus 615044 GRE-LGS 34G13.8 generation to0.0 MW				
		Set bus 615045 GRE-LGS 35G13.8 generation to0.0 MW				
		Set bus 615046 GRE-LGS 36G13.8 generation to0.0 MW				
3817.8	L:631041 LAKEFLD5 161 631042 FOX LK 5 161 1		46.6	160.2	160.0	0.02977
		C:ITCM-B102-NW-LAKEFIELD_SPS				
		Open 601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
		Open 601034 NOBLES 3 345 631138 LAKEFLD3 345 1				
		Set bus 615100 GRE-TRIMWNDW.575 generation to0.0 MW				
		Set bus 615041 GRE-LGS 31G13.8 generation to0.0 MW				
		Set bus 615042 GRE-LGS 32G13.8 generation to0.0 MW				
		Set bus 615043 GRE-LGS 33G13.8 generation to0.0 MW				
		Set bus 615044 GRE-LGS 34G13.8 generation to0.0 MW				
		Set bus 615045 GRE-LGS 35G13.8 generation to0.0 MW				
		Set bus 615046 GRE-LGS 36G13.8 generation to0.0 MW				
4054.7	L:652504 BROOKNG7 115 652538 WHITE 7 115 1		32.1	176.4	176.0	0.03558
		C:652529 WATERTN3 345 652537 WHITE 3 345 1				
		Open 652529 WATERTN3 345 652537 WHITE 3 345 1				
4678.3	L:631041 LAKEFLD5 161 631138 LAKEFLD3 345 2		79.7	335.6	335.0	0.05469
		C:ITCM-B102-NW-LAKEFIELD_SPS				
		Open 601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
		Open 601034 NOBLES 3 345 631138 LAKEFLD3 345 1				
		Set bus 615100 GRE-TRIMWNDW.575 generation to0.0 MW				
		Set bus 615041 GRE-LGS 31G13.8 generation to0.0 MW				
		Set bus 615042 GRE-LGS 32G13.8 generation to0.0 MW				
		Set bus 615043 GRE-LGS 33G13.8 generation to0.0 MW				
		Set bus 615044 GRE-LGS 34G13.8 generation to0.0 MW				
		Set bus 615045 GRE-LGS 35G13.8 generation to0.0 MW				
		Set bus 615046 GRE-LGS 36G13.8 generation to0.0 MW				
4678.3	L:631041 LAKEFLD5 161 631138 LAKEFLD3 345 1		79.7	335.6	335.0	0.05469
		C:ITCM-B102-NW-LAKEFIELD_SPS				
		Open 601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
		Open 601034 NOBLES 3 345 631138 LAKEFLD3 345 1				
		Set bus 615100 GRE-TRIMWNDW.575 generation to0.0 MW				
		Set bus 615041 GRE-LGS 31G13.8 generation to0.0 MW				
		Set bus 615042 GRE-LGS 32G13.8 generation to0.0 MW				
		Set bus 615043 GRE-LGS 33G13.8 generation to0.0 MW				
		Set bus 615044 GRE-LGS 34G13.8 generation to0.0 MW				
		Set bus 615045 GRE-LGS 35G13.8 generation to0.0 MW				
		Set bus 615046 GRE-LGS 36G13.8 generation to0.0 MW				
4638.4	L:640386 TWIN CH4 230 652565 SIOUXCY4 230 1		159.1	320.0	320.0	0.03467
		C:MEC-C528				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
4638.4	L:640386 TWIN CH4 230 652565 SIOUXCY4 230 1		159.1	320.0	320.0	0.03467
		C:C2-RAUN-0270				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
4554.2	L:601004 WILMART3 345 601033 FIELD_N3 345 1		225.5	1198.5	1195.1	0.21365
NotConv		C:601031 BRKNGCO3 345 601048 LYON CO 3 345 1				
		Open 601031 BRKNGCO3 345 601048 LYON CO 3 345 1				
4556.4	L:652529 WATERTN3 345 652537 WHITE 3 345 1		101.1	795.4	792.0	0.15239
NotConv		C:601031 BRKNGCO3 345 601048 LYON CO 3 345 1				
		Open 601031 BRKNGCO3 345 601048 LYON CO 3 345 1				
4821.7	L:601004 WILMART3 345 601033 FIELD_N3 345 1		257.4	1195.2	1195.1	0.19451
		C:ITCM-C206-NW-BF(Lakefld_161_bus_tie)				
		Open 631041 LAKEFLD5 161 631042 FOX LK 5 161 1				
		Open 631041 LAKEFLD5 161 631124 DKSN_CO5 161 1				
		Open 631041 LAKEFLD5 161 658066 JACKSON 161 2				
		Open 631041 LAKEFLD5 161 631138 LAKEFLD3 345 1				
		Open 631041 LAKEFLD5 161 631138 LAKEFLD3 345 2				
		Open 630081 LKFLD698 69.0 631041 LAKEFLD5 161 1				
		Open 631040 HRN LK 5 161 631041 LAKEFLD5 161 1				

SU70 FXLK-RTLD-WNBG and MVP#4 Buffalo Ridge 25%N / 75%S Gen – MISO Scenario

AC FCITC	Limiting Constraint	Contingency	PreShift	PostShift	Rating	AC TDF
2469.7	L:640386 TWIN CH4 230 652565 SIOUXCY4 230 1		159.1	320.1	320.0	0.06515
		C:C2-RAUN-0270				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
2469.7	L:640386 TWIN CH4 230 652565 SIOUXCY4 230 1		159.1	320.1	320.0	0.06515
		C:MEC-C528				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
2449.9	L:631079 BNE JCT5 161 636020 FT.DODG5 161 1		37.3	147.0	147.0	0.04479
		C:MEC-C522				
		Open 635590 FALLOW 3 345 635600 GRIMES 3 345 1				
		Open 635600 GRIMES 3 345 636010 LEHIGH 3 345 1				
2449.9	L:631079 BNE JCT5 161 636020 FT.DODG5 161 1		37.3	147.0	147.0	0.04479
		C:GRIMES-B904				
		Open 635590 FALLOW 3 345 635600 GRIMES 3 345 1				
		Open 635600 GRIMES 3 345 636010 LEHIGH 3 345 1				
3015.2	L:631110 WAPELLO5 161 631115 OTTUMWA5 161 2		250.5	334.8	335.0	0.02795
		C:ITCM-C207-SE-BF(OGS-Wap-OGS345-161)				
		Open 631110 WAPELLO5 161 631115 OTTUMWA5 161 1				
		Open 631115 OTTUMWA5 161 631143 OTTUMWA3 345 1				
2764.7	L:631079 BNE JCT5 161 636020 FT.DODG5 161 1		27.1	147.0	147.0	0.04337
		C:GRIMES-B905				
		Open 635600 GRIMES 3 345 635700 SYCAMOR3 345 2				
		Open 635600 GRIMES 3 345 636010 LEHIGH 3 345 1				
3017.7	L:636001 WEBSTER5 161 636050 WRIGHT 5 161 1		12.3	212.1	212.0	0.06620
		C:MEC-C519				
		Open 636000 WEBSTER3 345 636010 LEHIGH 3 345 1				
		Open 636001 WEBSTER5 161 636020 FT.DODG5 161 1				
3005.7	L:636001 WEBSTER5 161 636050 WRIGHT 5 161 1		25.9	212.4	212.0	0.06207
		C:GRIMES-B904				
		Open 635590 FALLOW 3 345 635600 GRIMES 3 345 1				
		Open 635600 GRIMES 3 345 636010 LEHIGH 3 345 1				
3005.7	L:636001 WEBSTER5 161 636050 WRIGHT 5 161 1		25.9	212.4	212.0	0.06207
		C:MEC-C522				
		Open 635590 FALLOW 3 345 635600 GRIMES 3 345 1				
		Open 635600 GRIMES 3 345 636010 LEHIGH 3 345 1				
3223.7	L:635201 RAUN 5 161 640377 TEKAMAH5 161 1		35.5	217.0	217.0	0.05631
		C:C2-RAUN-0270				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				

SU70 FXLK-RTLD-WNBG and MVP#4 Buffalo Ridge 50%N / 50%S Gen – MISO Scenario

AC FCITC	Limiting Constraint	Contingency	PreShift	PostShift	Rating	AC TDF
2649.8	L:640386 TWIN CH4 230 652565 SIOUXCY4 230 1		159.1	320.1	320.0	0.06073
		C:MEC-C528				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
2649.8	L:640386 TWIN CH4 230 652565 SIOUXCY4 230 1		159.1	320.1	320.0	0.06073
		C:C2-RAUN-0270				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
2569.6	L:631183 CAYLER5 161 656570 WISDOM5 161 1		132.5	209.0	209.0	0.02976
		C:ITCM-B102-NW-LAKEFIELD_SPS				
		Open 601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
		Open 601034 NOBLES 3 345 631138 LAKEFLD3 345 1				
		Set bus 615100 GRE-TRIMWNDW.575 generation to0.0 MW				
		Set bus 615041 GRE-LGS 31G13.8 generation to0.0 MW				
		Set bus 615042 GRE-LGS 32G13.8 generation to0.0 MW				
		Set bus 615043 GRE-LGS 33G13.8 generation to0.0 MW				
		Set bus 615044 GRE-LGS 34G13.8 generation to0.0 MW				
		Set bus 615045 GRE-LGS 35G13.8 generation to0.0 MW				
		Set bus 615046 GRE-LGS 36G13.8 generation to0.0 MW				
2917.5	L:631079 BNE JCT5 161 636020 FT.DODG5 161 1		37.3	147.0	147.0	0.03762
		C:GRIMES-B904				
		Open 635590 FALLOW 3 345 635600 GRIMES 3 345 1				
		Open 635600 GRIMES 3 345 636010 LEHIGH 3 345 1				
2917.5	L:631079 BNE JCT5 161 636020 FT.DODG5 161 1		37.3	147.0	147.0	0.03762
		C:MEC-C522				
		Open 635590 FALLOW 3 345 635600 GRIMES 3 345 1				
		Open 635600 GRIMES 3 345 636010 LEHIGH 3 345 1				
2967.3	L:631102 TRIBOJI5 161 631124 DKSN_CO5 161 1		115.6	223.1	223.0	0.03623
		C:ITCM-B102-NW-LAKEFIELD_SPS				
		Open 601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
		Open 601034 NOBLES 3 345 631138 LAKEFLD3 345 1				
		Set bus 615100 GRE-TRIMWNDW.575 generation to0.0 MW				
		Set bus 615041 GRE-LGS 31G13.8 generation to0.0 MW				
		Set bus 615042 GRE-LGS 32G13.8 generation to0.0 MW				
		Set bus 615043 GRE-LGS 33G13.8 generation to0.0 MW				
		Set bus 615044 GRE-LGS 34G13.8 generation to0.0 MW				
		Set bus 615045 GRE-LGS 35G13.8 generation to0.0 MW				
		Set bus 615046 GRE-LGS 36G13.8 generation to0.0 MW				
3150.6	L:631102 TRIBOJI5 161 631124 DKSN_CO5 161 1		123.2	223.2	223.0	0.03174
		C:601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
		Open 601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
3150.8	L:631102 TRIBOJI5 161 631124 DKSN_CO5 161 1		123.1	223.2	223.0	0.03175
		C:601032 FIELD_S3 345 601033 FIELD_N3 345 1				
		Open 601032 FIELD_S3 345 601033 FIELD_N3 345 1				
3305.2	L:631079 BNE JCT5 161 636020 FT.DODG5 161 1		27.1	147.0	147.0	0.03627
		C:GRIMES-B905				
		Open 635600 GRIMES 3 345 635700 SYCAMOR3 345 2				
		Open 635600 GRIMES 3 345 636010 LEHIGH 3 345 1				
3497.7	L:635201 RAUN 5 161 640377 TEKAMAH5 161 1		35.5	217.1	217.0	0.05192
		C:MEC-C528				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				

SU70 FXLK-RTLD-WNBG and MVP#4 Buffalo Ridge 75%N / 25%S Gen – MISO Scenario

AC FCITC	Limiting Constraint	Contingency	PreShift	PostShift	Rating	AC TDF
1989.7	L:631183 CAYLER5 161 656570 WISDOM5 161 1		138.7	209.0	209.0	0.03530
		C:601032 FIELD_S3 345 601033 FIELD_N3 345 1				
		Open 601032 FIELD_S3 345 601033 FIELD_N3 345 1				
1989.7	L:631183 CAYLER5 161 656570 WISDOM5 161 1		138.8	209.0	209.0	0.03529
		C:601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
		Open 601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
1989.7	L:631183 CAYLER5 161 656570 WISDOM5 161 1		138.7	209.0	209.0	0.03530
		C:601004 WILMART3 345 601033 FIELD_N3 345 1				
		Open 601004 WILMART3 345 601033 FIELD_N3 345 1				
2407.5	L:631102 TRIBOJI5 161 631124 DKSN_CO5 161 1		123.1	223.1	223.0	0.04152
		C:601032 FIELD_S3 345 601033 FIELD_N3 345 1				
		Open 601032 FIELD_S3 345 601033 FIELD_N3 345 1				
2407.5	L:631102 TRIBOJI5 161 631124 DKSN_CO5 161 1		123.2	223.1	223.0	0.04150
		C:601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
		Open 601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
2407.4	L:631102 TRIBOJI5 161 631124 DKSN_CO5 161 1		123.1	223.1	223.0	0.04152
		C:601004 WILMART3 345 601033 FIELD_N3 345 1				
		Open 601004 WILMART3 345 601033 FIELD_N3 345 1				
2865.2	L:640386 TWIN CH4 230 652565 SIOUXCY4 230 1		159.1	320.0	320.0	0.05615
		C:MEC-C528				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
2865.2	L:640386 TWIN CH4 230 652565 SIOUXCY4 230 1		159.1	320.0	320.0	0.05615
		C:C2-RAUN-0270				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
3304.9	L:631036 NIW 5 161 631203 COLBY5 161 1		74.6	200.0	200.0	0.03792
		C:631139 HAZLTON3 345 631144 MITCHLCO3 345 1				
		Open 631139 HAZLTON3 345 631144 MITCHLCO3 345 1				
3364.2	L:631036 NIW 5 161 631203 COLBY5 161 1		79.2	200.1	200.0	0.03596
		C:ITCM-C939-LN-LN(HAZ-MCO-RC-SALEM)				
		Open 631139 HAZLTON3 345 631144 MITCHLCO3 345 1				
		Open 631140 SALEM 3 345 631141 ROCK CK3 345 1				

SUM FXLK-RTLD-WNBG and MVP#4 Buffalo Ridge 25%N / 75%S Gen – MN Scenario

AC FCITC	Limiting Constraint	Contingency	PreShift	PostShift	Rating	AC TDF
2559.0	L:636001 WEBSTER5 161 636050 WRIGHT 5 161 1		78.6	212.1	212.0	0.05216
		C:GRIMES-B904				
		Open 635590 FALLOW 3 345 635600 GRIMES 3 345 1				
		Open 635600 GRIMES 3 345 636010 LEHIGH 3 345 1				
2559.0	L:636001 WEBSTER5 161 636050 WRIGHT 5 161 1		78.6	212.1	212.0	0.05216
		C:MEC-C522				
		Open 635590 FALLOW 3 345 635600 GRIMES 3 345 1				
		Open 635600 GRIMES 3 345 636010 LEHIGH 3 345 1				
2683.1	L:636001 WEBSTER5 161 636050 WRIGHT 5 161 1		73.1	212.1	212.0	0.05180
		C:GRIMES-B905				
		Open 635600 GRIMES 3 345 635700 SYCAMOR3 345 2				
		Open 635600 GRIMES 3 345 636010 LEHIGH 3 345 1				
2933.6	L:640386 TWIN CH4 230 652565 SIOUXCY4 230 1		196.4	320.0	320.0	0.04212
		C:C2-RAUN-0270				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
2933.6	L:640386 TWIN CH4 230 652565 SIOUXCY4 230 1		196.4	320.0	320.0	0.04212
		C:MEC-C528				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
3724.1	L:631041 LAKEFLD5 161 631042 FOX LK 5 161 1		40.9	160.3	160.0	0.03208
		C:ITCM-B102-NW-LAKEFIELD_SPS				
		Open 601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
		Open 601034 NOBLES 3 345 631138 LAKEFLD3 345 1				
		Set bus 615100 GRE-TRIMWNDW.575 generation to0.0 MW				
		Set bus 615041 GRE-LGS 31G13.8 generation to0.0 MW				
		Set bus 615042 GRE-LGS 32G13.8 generation to0.0 MW				
		Set bus 615043 GRE-LGS 33G13.8 generation to0.0 MW				
		Set bus 615044 GRE-LGS 34G13.8 generation to0.0 MW				
		Set bus 615045 GRE-LGS 35G13.8 generation to0.0 MW				
		Set bus 615046 GRE-LGS 36G13.8 generation to0.0 MW				
3576.0	L:631138 LAKEFLD3 345 635368 SHELDON 3 345 1		186.4	864.0	864.0	0.18947
		C:MEC-C528				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
3576.0	L:631138 LAKEFLD3 345 635368 SHELDON 3 345 1		186.4	864.0	864.0	0.18947
		C:C2-RAUN-0270				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
3619.6	L:601004 WILMART3 345 601033 FIELD_N3 345 1		509.3	1195.0	1195.1	0.18942
		C:601031 BRKNGCO3 345 601048 LYON CO 3 345 1				
		Open 601031 BRKNGCO3 345 601048 LYON CO 3 345 1				
3853.1	L:631041 LAKEFLD5 161 631138 LAKEFLD3 345 2		111.9	335.3	335.0	0.05799
		C:ITCM-B102-NW-LAKEFIELD_SPS				
		Open 601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
		Open 601034 NOBLES 3 345 631138 LAKEFLD3 345 1				
		Set bus 615100 GRE-TRIMWNDW.575 generation to0.0 MW				
		Set bus 615041 GRE-LGS 31G13.8 generation to0.0 MW				
		Set bus 615042 GRE-LGS 32G13.8 generation to0.0 MW				
		Set bus 615043 GRE-LGS 33G13.8 generation to0.0 MW				
		Set bus 615044 GRE-LGS 34G13.8 generation to0.0 MW				
		Set bus 615045 GRE-LGS 35G13.8 generation to0.0 MW				
		Set bus 615046 GRE-LGS 36G13.8 generation to0.0 MW				

SUM FXLK-RTLD-WNBG and MVP#4 Buffalo Ridge 50%N / 50%S Gen – MN Scenario

AC FCITC	Limiting Constraint	Contingency	PreShift	PostShift	Rating	AC TDF
3272.9	L:640386 TWIN CH4 230 652565 SIOUXCY4 230 1		196.4	319.9	320.0	0.03774
		C:C2-RAUN-0270				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
3272.9	L:640386 TWIN CH4 230 652565 SIOUXCY4 230 1		196.4	319.9	320.0	0.03774
		C:MEC-C528				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
3375.8	L:601004 WILMART3 345 601033 FIELD_N3 345 1		509.3	1195.0	1195.1	0.20311
		C:601031 BRKNGCO3 345 601048 LYON CO 3 345 1				
		Open 601031 BRKNGCO3 345 601048 LYON CO 3 345 1				
3378.6	L:636001 WEBSTER5 161 636050 WRIGHT 5 161 1		78.6	212.1	212.0	0.03951
		C:MEC-C522				
		Open 635590 FALLOW 3 345 635600 GRIMES 3 345 1				
		Open 635600 GRIMES 3 345 636010 LEHIGH 3 345 1				
3378.6	L:636001 WEBSTER5 161 636050 WRIGHT 5 161 1		78.6	212.1	212.0	0.03951
		C:GRIMES-B904				
		Open 635590 FALLOW 3 345 635600 GRIMES 3 345 1				
		Open 635600 GRIMES 3 345 636010 LEHIGH 3 345 1				
3854.4	L:631041 LAKEFLD5 161 631042 FOX LK 5 161 1		40.9	160.4	160.0	0.03101
		C:ITCM-B102-NW-LAKEFIELD_SPS				
		Open 601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
		Open 601034 NOBLES 3 345 631138 LAKEFLD3 345 1				
		Set bus 615100 GRE-TRIMWNDW.575 generation to0.0 MW				
		Set bus 615041 GRE-LGS 31G13.8 generation to0.0 MW				
		Set bus 615042 GRE-LGS 32G13.8 generation to0.0 MW				
		Set bus 615043 GRE-LGS 33G13.8 generation to0.0 MW				
		Set bus 615044 GRE-LGS 34G13.8 generation to0.0 MW				
		Set bus 615045 GRE-LGS 35G13.8 generation to0.0 MW				
		Set bus 615046 GRE-LGS 36G13.8 generation to0.0 MW				
3546.4	L:636001 WEBSTER5 161 636050 WRIGHT 5 161 1		73.1	212.0	212.0	0.03919
		C:GRIMES-B905				
		Open 635600 GRIMES 3 345 635700 SYCAMOR3 345 2				
		Open 635600 GRIMES 3 345 636010 LEHIGH 3 345 1				
3578.8	L:601004 WILMART3 345 601033 FIELD_N3 345 1		510.8	1195.2	1195.1	0.19123
		C:ITCM-C206-NW-BF(Lakefld_161_bus_tie)				
		Open 631041 LAKEFLD5 161 631042 FOX LK 5 161 1				
		Open 631041 LAKEFLD5 161 631124 DKSN_CO5 161 1				
		Open 631041 LAKEFLD5 161 658066 JACKSON 161 2				
		Open 631041 LAKEFLD5 161 631138 LAKEFLD3 345 1				
		Open 631041 LAKEFLD5 161 631138 LAKEFLD3 345 2				
		Open 630081 LKFLD698 69.0 631041 LAKEFLD5 161 1				
		Open 631040 HRN LK 5 161 631041 LAKEFLD5 161 1				
3906.3	L:631041 LAKEFLD5 161 631138 LAKEFLD3 345 1		111.9	335.2	335.0	0.05717
		C:ITCM-B102-NW-LAKEFIELD_SPS				
		Open 601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
		Open 601034 NOBLES 3 345 631138 LAKEFLD3 345 1				
		Set bus 615100 GRE-TRIMWNDW.575 generation to0.0 MW				
		Set bus 615041 GRE-LGS 31G13.8 generation to0.0 MW				
		Set bus 615042 GRE-LGS 32G13.8 generation to0.0 MW				
		Set bus 615043 GRE-LGS 33G13.8 generation to0.0 MW				
		Set bus 615044 GRE-LGS 34G13.8 generation to0.0 MW				
		Set bus 615045 GRE-LGS 35G13.8 generation to0.0 MW				
		Set bus 615046 GRE-LGS 36G13.8 generation to0.0 MW				

SUM FXLK-RTLD-WNBG and MVP#4 Buffalo Ridge 75%N / 25%S Gen – MN Scenario

AC FCITC	Limiting Constraint	Contingency	PreShift	PostShift	Rating	AC TDF
2841.1	L:652504 BROOKNG7 115 652538 WHITE 7 115 1		72.3	176.1	176.0	0.03654
		C:652529 WATERTN3 345 652537 WHITE 3 345 1				
		Open 652529 WATERTN3 345 652537 WHITE 3 345 1				
3191.9	L:601004 WILMART3 345 601033 FIELD_N3 345 1		509.3	1195.2	1195.1	0.21489
		C:601031 BRKNGCO3 345 601048 LYON CO 3 345 1				
		Open 601031 BRKNGCO3 345 601048 LYON CO 3 345 1				
3865.2	L:631102 TRIBOJI5 161 631124 DKSN_CO5 161 1		100.9	223.0	223.0	0.03160
		C:ITCM-B102-NW-LAKEFIELD_SPS				
		Open 601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
		Open 601034 NOBLES 3 345 631138 LAKEFLD3 345 1				
		Set bus 615100 GRE-TRIMWNDW.575 generation to0.0 MW				
		Set bus 615041 GRE-LGS 31G13.8 generation to0.0 MW				
		Set bus 615042 GRE-LGS 32G13.8 generation to0.0 MW				
		Set bus 615043 GRE-LGS 33G13.8 generation to0.0 MW				
		Set bus 615044 GRE-LGS 34G13.8 generation to0.0 MW				
		Set bus 615045 GRE-LGS 35G13.8 generation to0.0 MW				
		Set bus 615046 GRE-LGS 36G13.8 generation to0.0 MW				
3724.6	L:640386 TWIN CH4 230 652565 SIOUXCY4 230 1		196.4	319.9	320.0	0.03317
		C:C2-RAUN-0270				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
3724.6	L:640386 TWIN CH4 230 652565 SIOUXCY4 230 1		196.4	319.9	320.0	0.03317
		C:MEC-C528				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
3454.9	L:601004 WILMART3 345 601033 FIELD_N3 345 1		510.8	1195.3	1195.1	0.19813
		C:ITCM-C206-NW-BF(Lakefld_161_bus_tie)				
		Open 631041 LAKEFLD5 161 631042 FOX LK 5 161 1				
		Open 631041 LAKEFLD5 161 631124 DKSN_CO5 161 1				
		Open 631041 LAKEFLD5 161 658066 JACKSON 161 2				
		Open 631041 LAKEFLD5 161 631138 LAKEFLD3 345 1				
		Open 631041 LAKEFLD5 161 631138 LAKEFLD3 345 2				
		Open 630081 LKFLD698 69.0 631041 LAKEFLD5 161 1				
		Open 631040 HRN LK 5 161 631041 LAKEFLD5 161 1				
3537.6	L:652529 WATERTN3 345 652537 WHITE 3 345 1		102.3	792.4	792.0	0.19507
		C:601031 BRKNGCO3 345 601048 LYON CO 3 345 1				
		Open 601031 BRKNGCO3 345 601048 LYON CO 3 345 1				
3657.1	L:631041 LAKEFLD5 161 631138 LAKEFLD3 345 2		172.4	336.9	335.0	0.04500
TDF_Sign		C:601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
		Open 601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
3657.1	L:631041 LAKEFLD5 161 631138 LAKEFLD3 345 1		172.4	336.9	335.0	0.04500
TDF_Sign		C:601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
		Open 601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
3658.6	L:631041 LAKEFLD5 161 631138 LAKEFLD3 345 1		172.4	337.3	335.0	0.04507
TDF_Sign		C:601032 FIELD_S3 345 601033 FIELD_N3 345 1				
		Open 601032 FIELD_S3 345 601033 FIELD_N3 345 1				

SUM FXLK-RTLD-WNBG and MVP#4 Buffalo Ridge 25%N / 75%S Gen – MISO Scenario

AC FCITC	Limiting Constraint	Contingency	PreShift	PostShift	Rating	AC TDF
1883.5	L:640386 TWIN CH4 230 652565 SIOUXCY4 230 1		196.8	320.0	320.0	0.06544
		C:MEC-C528				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
1883.5	L:640386 TWIN CH4 230 652565 SIOUXCY4 230 1		196.8	320.0	320.0	0.06544
		C:C2-RAUN-0270				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
2109.3	L:636001 WEBSTER5 161 636050 WRIGHT 5 161 1		78.7	212.0	212.0	0.06322
		C:MEC-C522				
		Open 635590 FALLOW 3 345 635600 GRIMES 3 345 1				
		Open 635600 GRIMES 3 345 636010 LEHIGH 3 345 1				
2109.3	L:636001 WEBSTER5 161 636050 WRIGHT 5 161 1		78.7	212.0	212.0	0.06322
		C:GRIMES-B904				
		Open 635590 FALLOW 3 345 635600 GRIMES 3 345 1				
		Open 635600 GRIMES 3 345 636010 LEHIGH 3 345 1				
2219.0	L:636001 WEBSTER5 161 636050 WRIGHT 5 161 1		72.2	212.1	212.0	0.06303
		C:MEC-C549				
		Open 635600 GRIMES 3 345 636010 LEHIGH 3 345 1				
		Open 631077 PERRY 5 161 635607 BITRSWT5 161 1				
2745.4	L:635201 RAUN 5 161 640377 TEKAMAH5 161 1		62.4	217.1	217.0	0.05635
		C:C2-RAUN-0270				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
2745.4	L:635201 RAUN 5 161 640377 TEKAMAH5 161 1		62.4	217.1	217.0	0.05635
		C:MEC-C528				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
2703.0	L:631079 BNE JCT5 161 636020 FT.DODG5 161 1		26.5	147.1	147.0	0.04460
		C:GRIMES-B904				
		Open 635590 FALLOW 3 345 635600 GRIMES 3 345 1				
		Open 635600 GRIMES 3 345 636010 LEHIGH 3 345 1				
0.0	L:631079 BNE JCT5 161 636020 FT.DODG5 161 1		0.0	0.0	147.0	*****
		C:MEC-C522				
		Open 635590 FALLOW 3 345 635600 GRIMES 3 345 1				
		Open 635600 GRIMES 3 345 636010 LEHIGH 3 345 1				
0.0	L:640386 TWIN CH4 230 652565 SIOUXCY4 230 1		0.0	0.0	320.0	*****
		C:635200 RAUN 3 345 640226 HOSKINS3 345 1				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				

SUM FXLK-RTLD-WNBG and MVP#4 Buffalo Ridge 50%N / 50%S Gen – MISO Scenario

AC FCITC	Limiting Constraint	Contingency	PreShift	PostShift	Rating	AC TDF
2019.4	L:640386 TWIN CH4 230 652565 SIOUXCY4 230 1		196.8	320.0	320.0	0.06104
		C:C2-RAUN-0270				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
2019.4	L:640386 TWIN CH4 230 652565 SIOUXCY4 230 1		196.8	320.0	320.0	0.06104
		C:MEC-C528				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
2545.0	L:631102 TRIBOJI5 161 631124 DKSN_CO5 161 1		143.2	223.1	223.0	0.03140
		C:601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
		Open 601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
2545.1	L:631102 TRIBOJI5 161 631124 DKSN_CO5 161 1		143.2	223.1	223.0	0.03140
		C:601032 FIELD_S3 345 601033 FIELD_N3 345 1				
		Open 601032 FIELD_S3 345 601033 FIELD_N3 345 1				
2545.1	L:631102 TRIBOJI5 161 631124 DKSN_CO5 161 1		143.2	223.1	223.0	0.03140
		C:601004 WILMART3 345 601033 FIELD_N3 345 1				
		Open 601004 WILMART3 345 601033 FIELD_N3 345 1				
2641.4	L:636001 WEBSTER5 161 636050 WRIGHT 5 161 1		78.7	212.0	212.0	0.05049
		C:MEC-C522				
		Open 635590 FALLOW 3 345 635600 GRIMES 3 345 1				
		Open 635600 GRIMES 3 345 636010 LEHIGH 3 345 1				
2641.4	L:636001 WEBSTER5 161 636050 WRIGHT 5 161 1		78.7	212.0	212.0	0.05049
		C:GRIMES-B904				
		Open 635590 FALLOW 3 345 635600 GRIMES 3 345 1				
		Open 635600 GRIMES 3 345 636010 LEHIGH 3 345 1				
2780.3	L:636001 WEBSTER5 161 636050 WRIGHT 5 161 1		72.2	212.0	212.0	0.05030
		C:MEC-C549				
		Open 635600 GRIMES 3 345 636010 LEHIGH 3 345 1				
		Open 631077 PERRY 5 161 635607 BITRSWT5 161 1				
0.0	L:635201 RAUN 5 161 640377 TEKAMAH5 161 1		0.0	0.0	217.0	*****
		C:MEC-C528				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
0.0	L:635201 RAUN 5 161 640377 TEKAMAH5 161 1		0.0	0.0	217.0	*****
		C:C2-RAUN-0270				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				

SUM FXLK-RTLD-WNBG and MVP#4 Buffalo Ridge 75%N / 25%S Gen – MISO Scenario

AC FCITC	Limiting Constraint	Contingency	PreShift	PostShift	Rating	AC TDF
1945.6	L:631102 TRIBOJI5 161 631124 DKSN_CO5 161 1		143.2	222.9	223.0	0.04099
		C:601032 FIELD_S3 345 601033 FIELD_N3 345 1				
		Open 601032 FIELD_S3 345 601033 FIELD_N3 345 1				
1945.5	L:631102 TRIBOJI5 161 631124 DKSN_CO5 161 1		143.2	222.9	223.0	0.04099
		C:601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
		Open 601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
1945.6	L:631102 TRIBOJI5 161 631124 DKSN_CO5 161 1		143.2	222.9	223.0	0.04099
		C:601004 WILMART3 345 601033 FIELD_N3 345 1				
		Open 601004 WILMART3 345 601033 FIELD_N3 345 1				
2183.7	L:640386 TWIN CH4 230 652565 SIOUXCY4 230 1		196.8	320.0	320.0	0.05644
		C:C2-RAUN-0270				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
2183.7	L:640386 TWIN CH4 230 652565 SIOUXCY4 230 1		196.8	320.0	320.0	0.05644
		C:MEC-C528				
		Open 635200 RAUN 3 345 640226 HOSKINS3 345 1				
		Open 635200 RAUN 3 345 645451 S3451 3 345 1				
3053.3	L:601043 NLAX 5 161 681531 LAC TAP5 161 1		74.9	178.3	178.0	0.03384
		C:601043 NLAX 5 161 602026 MAYFAIR5 161 1				
		Open 601043 NLAX 5 161 602026 MAYFAIR5 161 1				
3076.5	L:631041 LAKEFLD5 161 631124 DKSN_CO5 161 1		113.3	240.3	240.0	0.04130
		C:601032 FIELD_S3 345 601033 FIELD_N3 345 1				
		Open 601032 FIELD_S3 345 601033 FIELD_N3 345 1				
0.0	L:631041 LAKEFLD5 161 631124 DKSN_CO5 161 1		0.0	0.0	240.0	*****
		C:601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
		Open 601029 LKFLDXL3 345 601032 FIELD_S3 345 1				
0.0	L:631041 LAKEFLD5 161 631124 DKSN_CO5 161 1		0.0	0.0	240.0	*****
		C:601004 WILMART3 345 601033 FIELD_N3 345 1				
		Open 601004 WILMART3 345 601033 FIELD_N3 345 1				

Appendix 53: Load Forecast by Project Area Substation

Sub Name	PSS/E Bus Num	PSS/E Bus Name	ITC Owned or Co-Owned ?	Pload (MW)	Pload (MW)	Pload (MW)	Pload (MW)	Pload (MW)	Pload (MW)	Pload (MW)	Pload (MW)
Tenth Street	613000	10TH STR 69.000	no	20.378	16.685	20.478	16.785	21.078	17.285	21.478	17.585
City of Adrian	630057	ADRIANM8	no	2.88	3	2.91	3.03	3.05	3.18	3.22	3.36
Amboy	630105	AMBOY	no	0.939	0.747	0.942	0.75	0.998	0.796	1.059	0.848
Bat Lake	630073	BATLAKE8	no	0.551	0.438	0.553	0.44	0.586	0.467	0.621	0.497
Blue Earth	630100	BL EART8 69.000	yes	1.138	0.905	1.142	0.908	1.209	0.965	1.283	1.027
Briclyn	630103	BRICLYN8	yes	2.844	2.262	2.854	2.27	3.024	2.412	3.208	2.567
Butterfield	605279	BUTRFLD8	no	1.443	1.159	1.45	1.167	1.476	1.189	1.486	1.204
Comfrey	630071	COMFREY8	no	1.255	0.998	1.259	1.002	1.334	1.064	1.416	1.133
Corn Plus	630702	CORNPLUS	no	8.82	8.82	8.82	8.82	8.82	8.82	8.82	8.82
Delavan	630099	DELAVAN8	no	1.119	0.89	1.124	0.894	1.19	0.95	1.263	1.011
Dovray	630062	DOVRAY	no	0.262	0.208	0.263	0.209	0.278	0.222	0.295	0.236
Elmore	630102	ELMORE	no	2.429	1.931	2.437	1.939	2.582	2.06	2.74	2.192
Fairmont	613080	FAIRMONT	no	10.2	8.2	10.3	8.2	10.5	8.4	10.7	8.6
Farmland	630093	FARMLND8	no	0.325	0.258	0.326	0.259	0.346	0.276	0.367	0.293
Fox Lake (station svc)	629046	FOXLK53G	yes	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Fulda Jct	629079	FULDA	yes	3.816	3.519	3.827	3.528	4.1	3.774	4.29	4.032
Garden City	630092	GARDNCY8	no	0.623	0.495	0.625	0.497	0.662	0.528	0.703	0.562
Adrian	618924	GRE-ADRIAN	no	1.2	2.3	2.5	2.4	2.7	2.5	2.8	2.7
Albin	616235	GRE-ALBIN	no	1.2	1.3	1.2	1.3	1.2	1.4	1.3	1.5
Buffalo Lake	617310	GRE-BFFLKET869.000	no	14.2	13.4	14.3	13.6	15.3	14.5	16.1	15.4
Blue Earth (GRE)	617222	GRE-BLUEEAR869.000	no	1.2	1.2	1.2	1.2	1.3	1.3	1.4	1.3

Bingham Lake	619319	GRE-BNGHMLK869.000	no	1	1.1	1	1.1	1	1.2	1.1	1.3
Brewster	618900	GRE-BREWSTR5	no	3.7	5.5	3.8	5.6	4	6	4.2	6.4
Briclyn (GRE)	617227	GRE-BRICLYN869.000	no	2	1.8	2	1.9	2.2	2	2.3	2.1
Brookville	619013	GRE-BROOKVL869.000	no	0.9	0.8	0.9	0.9	1	0.9	1	1
Ceylon	617314	GRE-CEYLON	no	1.5	1.7	1.6	1.7	1.7	1.8	1.8	1.9
Clark	617228	GRE-CLARK	no	1.4	1.1	1.4	1.1	1.5	1.2	1.6	1.2
Cobden	616241	GRE-COBDEN	no	0.8	0.9	0.8	0.9	0.9	0.9	0.9	1
Cottonwood	619014	GRE-CTTNWD	no	1.1	0.9	1.1	1	1.2	1	1.3	1.1
Dotson	616232	GRE-DOTSON	no	0.7	1	0.7	1	0.8	1.1	0.8	1.1
Dunnell	617318	GRE-DUNNEL	no	1.7	1.9	1.7	1.9	1.9	2	2	2.2
East Chain	617312	GRE-EASTCHN869.000	no	1.6	2.1	1.6	2.2	1.7	2.3	1.8	2.5
Easton	617229	GRE-EASTON	no	0.7	0.5	0.7	0.5	0.7	0.6	0.7	0.6
Echols	619328	GRE-ECHOLS	no	1	1	1	1.1	1.1	1.1	1.1	1.2
Enterprise	617322	GRE-ENTRPRS869.000	no	1.4	1.5	1.4	1.5	1.5	1.6	1.6	1.7
Fulda (GRE)	618922	GRE-FULDA	no	1.4	1.5	1.4	1.5	1.5	1.7	1.5	1.8
Garden City (GRE)	617225	GRE-GARDENC869.000	no	1.1	0.9	1.1	0.9	1.1	1	1.2	1.1
Harvest States	617328	GRE-HARVSTA869.000	no	6	6.3	6.1	6.3	6.5	6.8	6.8	7.2
Highwater Ethanol	619022	GRE-HIGHWAT869.000	no	4.2	4.8	4.3	4.8	4.6	5.1	4.8	5.5
Jeffers	619312	GRE-JEFFERS869.000	no	2.1	1.4	2.1	1.4	2.2	1.5	2.3	1.6
Johnsonville	619010	GRE-JHNSNVL869.000	no	1	0.7	1	0.7	1.1	0.7	1.1	0.8

Lakeside	619310	GRE-LAKESD	no	5.8	3.4	5.8	3.4	6.2	3.7	6.6	3.9
Lewisville (GRE)	619311	GRE-LEWISVL869.000	no	1.1	1.2	1.1	1.2	1.2	1.3	1.2	1.3
Linden	616251	GRE-LINDEN	no	0.9	0.9	0.9	0.9	1	1	1	1
Leavenworth	616233	GRE-LVNWRTH869.000	no	1.2	1.2	1.2	1.2	1.3	1.3	1.4	1.4
Madelia	619324	GRE-MADELIA869.000	no	1.2	1.2	1.3	1.2	1.3	1.3	1.4	1.3
Middletown	617320	GRE-MIDLTWN869.000	no	1.6	1.9	1.6	1.9	1.7	2	1.8	2.1
Miloma	617311	GRE-MILOMA	no	1	1.1	1	1.1	1.1	1.2	1.2	1.2
Minneota	617313	GRE-MNNEOTA869.000	no	1.1	1.1	1.1	1.1	1.2	1.1	1.3	1.2
Mountain Lake (GRE)	619318	GRE-MNTN	no	1.7	1.8	1.7	1.9	1.8	2	1.9	2.1
North Storden	619322	GRE-NSTORDN869.000	no	0.8	0.9	0.8	0.9	0.9	0.9	0.9	1
Odin	619314	GRE-ODIN	no	1.3	1.2	1.3	1.3	1.4	1.3	1.5	1.4
Round Lake	617325	GRE-RNDLAKE869.000	no	2.3	1.8	2.4	1.9	2.5	2	2.7	2.1
Rushmore	618923	GRE-RUSHMOR869.000	no	2.5	1.7	1.2	1.7	1.3	1.8	1.4	2
South Branch	619331	GRE-SBRANCH869.000	no	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.8
Sherburn (GRE)	619317	GRE-SHERBRN869.000	no	1.2	1.1	1.3	1.1	1.3	1.2	1.4	1.2
South Storden	619323	GRE-SSTORDN869.000	no	0.7	0.8	0.7	0.8	0.7	0.9	0.7	0.9
Sterling	617224	GRE-STERLNG869.000	no	1.5	1.4	1.5	1.4	1.6	1.5	1.7	1.6

St. James (GRE)	619327	GRE-STJAMES869.000	no	1.2	1.4	1.2	1.4	1.3	1.5	1.3	1.6
Sundown	619012	GRE-SUNDOWN869.000	no	0	0.8	0	0.8	0	0.9	0	0.9
Sveadahl	619325	GRE-SVEADHL869.000	no	1	1.1	1	1.1	1.1	1.2	1.1	1.2
Trimont (GRE)	619316	GRE-TRIMONT869.000	no	1	0.9	1.1	0.9	1.1	0.9	1.2	1
Truman (GRE)	617329	GRE-TRUMAN	no	2	2.4	2	2.5	2.1	2.6	2.2	2.8
Verasun	617334	GRE-VERASUN869.000	no	7.2	7.9	7.3	8	7.8	8.5	8.2	9.1
Wanda	619011	GRE-WANDA	no	0.8	0.8	0.8	0.8	0.8	0.8	0.9	0.9
Welcome (GRE)	617330	GRE-WELCOME869.000	no	2.3	2.1	2.3	2.2	2.5	2.3	2.6	2.4
Wilbert	617317	GRE-WILBERT869.000	no	1.5	1.8	1.5	1.8	1.6	1.9	1.7	2.1
Wilder (GRE)	617316	GRE-WILDER	no	1.6	1.9	1.6	1.9	1.8	2.1	1.8	2.2
Wisconsin	617336	GRE-WISCONS869.000	no	1.3	1.7	1.3	1.7	1.4	1.8	1.5	1.9
West Lakefield	617326	GRE-WLAKFLD869.000	no	0.9	0.9	0.9	0.9	1	1	1	1
Willow Creek	617223	GRE-WLL CRK869.000	no	1.4	1.4	1.4	1.4	1.5	1.5	1.6	1.6
Winnebago (GRE)	617230	GRE-WNNBAGO869.000	no	1.6	1.4	1.6	1.4	1.7	1.5	1.8	1.6
Worthington	618925	GRE-WRTHNG	no	3.1	3.5	3.1	3.6	3.3	3.8	3.5	4.1

Westside	618929	GRE-WSTSIDE869.000	no	0.6	0.6	0.6	0.6	0.6	0.7	0.6	0.7
Hanska	630091	HANSKA	no	1.706	1.357	1.712	1.362	1.814	1.447	1.925	1.54
Heron Lake	630066	HERONLK8	yes	2.067	1.644	2.075	1.651	2.198	1.754	2.332	1.866
Heron Lake Ethanol	630163	HLK ETH8 69.000	no	7.06	7.06	7.06	7.06	7.06	7.06	7.06	7.06
Jackson North	658066	JACKSON	yes	10.514	8.517	10.594	8.587	11.084	8.977	11.734	9.507
City of Lakefield	630076	LAKFLDM8	no	3.556	2.854	3.576	2.874	3.706	2.974	3.886	3.124
Lamberton	630068	LAMBRTN8	no	3.079	2.448	3.09	2.458	3.273	2.611	3.473	2.779
Lewisville	630089	LEWSVL_8	yes	0.767	0.61	0.77	0.613	0.816	0.651	0.866	0.693
Madeliavill e	605063	MADELVL8	no	6.081	4.569	6.172	4.637	6.551	4.922	7.057	5.302
Magnolia	629076	MAGNLIA9	yes	9.166	8.038	9.293	8.061	9.838	8.633	10.422	9.139
Mountain Lake	630072	MT LAKE8 69.000	yes	5.702	4.9	5.902	5	6.402	5.5	7.202	6.1
Sherburn	630084	SHERBRN8	no	2.23	1.773	2.238	1.78	2.371	1.892	2.516	2.013
City of Springfield	630070	SPRINGM8	no	6.095	5.098	6.195	5.298	6.795	5.898	7.595	6.398
City of St. James East	605075	STJ EAS8 69.000	no	2.44	2.44	2.44	2.43	2.65	2.6	2.94	2.84
City of St. James	605070	STJMSMU8	no	9.714	7.46	9.714	7.45	9.924	7.62	10.214	7.86
Storden Jct.	630067	STORDEN8	yes	1.192	0.948	1.196	0.951	1.267	1.011	1.344	1.076
Trimont	630083	TRIMONT8	no	2.067	1.644	2.075	1.651	2.198	1.754	2.332	1.866
Truman	630088	TRUMAN	no	0.767	0.61	0.77	0.613	0.816	0.651	0.866	0.693
City of Truman	630087	TRUMANM8	no	3.164	2.595	3.212	2.634	3.409	2.796	3.672	3.012
Vernon Center	630094	VERNNCY8	no	0.831	0.661	0.834	0.663	0.883	0.705	0.937	0.75
Wabasso	630069	WABASSO8	yes	3.331	2.649	3.343	2.66	3.542	2.826	3.758	3.007

Walters	630104	WALTERS8	yes	1.715	1.364	1.721	1.369	1.824	1.455	1.935	1.548
Winnebago Local	630095	WBGO	yes	3.927	3.123	3.941	3.135	4.176	3.331	4.43	3.545
Wells	613410	WELLS	no	4.7	3.8	4.8	3.8	4.8	3.8	4.9	3.9
City of Westbrook	630063	WESTBKM8	no	1.641	1.656	1.651	1.666	1.741	1.736	1.861	1.846
City of Windom	630074	WINDMMU8	no	16.204	13.402	16.404	13.602	17.504	14.602	18.904	15.602
City of Worthington 1	630059	WORTHMN8	no	25.983	20.333	26.333	20.613	27.713	21.693	29.493	23.093
City of Worthington 2	630085	WRTHMN28	no	17.33	13.56	17.56	13.74	18.48	14.47	19.67	15.4
			Total	323.751	289.728	326.681	292.756	344.068	308.657	362.173	325.826

Appendix 54: ITC Midwest's Transmission Planning Criteria

ITC MIDWEST

TRANSMISSION PLANNING CRITERIA

100 KV AND ABOVE[1]

May, 2012

[1] This manual defines and explains the current planning criteria **and will be reviewed and updated as required**. The planning criteria contained in this manual are, in general, to be uniformly interpreted and utilized in the testing and planning of the transmission system unless some deviation is justified as a result of special, economic or unusual considerations. Such instances should not necessarily be considered to conflict with this criterion or to justify revising the criteria, but should be recognized as unusual and special cases. The reliability implications of all such deviations shall be quantified to the extent possible or otherwise qualified sufficiently to ensure minimal reliability impacts. The planning criteria in this manual are guidelines to assist the planning engineer in making capital project and/or operating solution proposals for anticipated system needs.

TABLE OF CONTENTS

1 Goal

This document describes the criteria to be used in assessing the reliability of the ITC Midwest transmission (100 kV and above[2]) system. This transmission planning criteria is intended to result in an ITC Midwest transmission system that economically and reliably allows our transmission system customers to serve load from generation of choice.

2 NERC & MRO Reliability Criteria

ITC Midwest adheres to the NERC Reliability Standards and the MRO Standards.

In Table 1 of the NERC TPL Standards (TPL-001-0, TPL-002-0, TPL-003-0 & TPL-004-0), four categories of conditions have been defined as follows (SLG is single line ground and 3ϕ is three phase):

[2] For these criteria, this includes transformers with a low side voltage rating above 100 kV.

Table 1 – Transmission System Standards – Normal and Emergency Conditions

Category	Contingencies	System Limits or Impacts		
	Initiating Event(s) and Contingency Elements(s)	System Stable and both Thermal and Voltage Limits within Applicable Rating[a]	Loss of Demand or Curtailed Firm Transfers	Cascading Outages
A No Contingencies	All Facilities in Service	Yes	No	No
B Event resulting in the loss of a single element.	Single Line to Ground (SLG) or 3-Phase (3Ø) Fault, with Normal Clearing: 1. Generator 2. Transmission Circuit 3. Transformer Loss of an Element without Fault	 Yes Yes Yes Yes	 No[b] No[b] No[b] No[b]	 No No No No
	Single Pole Block, Normal Clearing[e]: 4. Single Pole (dc) Line	Yes	No[b]	No
C Event(s) resulting in the loss of two or more (multiple) elements.	SLG Fault, with Normal Clearing[e]: 1. Bus Section 2. Breaker (failure or internal fault)	 Yes Yes	 Planned/Controlled[c] Planned/Controlled[c]	 No No
	SLG or 3Ø Fault, with Normal Clearing[e], Manual System Adjustments, followed by another SLG or 3Ø Fault, with Normal Clearing[e]: 3. Category B (B1, B2, B3 or B4) contingency, manual system adjustments, followed by another Category B (B1, B2, B3 or B4) contingency	Yes	Planned/ Controlled[c]	No
	Bipolar Block, with Normal Clearing: 4. Bipolar (dc) Line Fault (non 3Ø), with Normal Clearing[e]: 5. Any two circuits of a multiple circuit towerline[f]	 Yes Yes	 Planned/ Controlled[c] Planned/ Controlled[c]	 No No
	SLG Fault, with Delayed Clearing[e] (stuck breaker or protection system failure): 6. Generator 7. Transformer 8. Transmission Circuit 9. Bus Section	 Yes Yes Yes Yes	 Planned/ Controlled[c] Planned/ Controlled[c] Planned/ Controlled[c] Planned/ Controlled[c]	 No No No No

D[d] Extreme event resulting in two or more (multiple) elements removed or cascading out of service.	3Ø Fault, with Delayed Clearing[e] (stuck breaker or protection system failure): 1. Generator 2. Transmission Circuit 3. Transformer 4. Bus Section	Evaluate for risks and consequences - May involve substantial loss of customer demand and generation in a widespread area or areas. - Portions of all of the interconnected systems may or may not achieve a new, stable operating point. - Evaluation of these events may require joint studies with neighboring systems.
	3Ø Fault, with Normal Clearing[e]: 5. Breaker (failure or internal fault)	
	6. Loss of towerline with three or more circuits	
	7. All transmission lines on a common right of way	
	8. Loss of a substation (one voltage level plus transformers)	
	9. Loss of a switching station (one voltage level plus transformers)	
	10. Loss of all generating units at a station	
	11. Loss of a large load or major load center	
	12. Failure of a fully redundant Special Protection Scheme (or Remedial Action Scheme) to operate when required.	
	13. Operation, partial operation, or misoperation of a fully redundant Special Protection Scheme (or Remedial Action Scheme) in response to an event or abnormal system condition for which it was not intended to operate.	
	14. Impact of severe power swings or oscillations from disturbances in another Regional Reliability Organization.	

a) Applicable rating refers to the applicable Normal and Emergency facility thermal Rating or system voltage limit as determined and consistently applied by the system or facility owner. Applicable Ratings may include Emergency Ratings applicable for short durations as required to permit operating steps necessary to maintain system control. All Ratings must be established consistent with applicable NERC Reliability Standards addressing Facility Ratings.

b) Planned or controlled interruption of electric supply to radial customers or some local Network customers, connected to or supplied by the Faulted element or by the affected area, may occur in certain areas without impacting the overall reliability of the interconnected transmission systems. To prepare for the next contingency, system adjustments are permitted, including curtailments of contracted Firm (non-recallable reserved) electric power Transfers.

c) Depending on system design and expected system impacts, the controlled interruption of electric supply to customers (load shedding), the planned removal from service of certain generators, and/or the curtailment of contracted Firm (non-recallable reserved) electric power Transfers may be necessary to maintain the overall reliability of the interconnected transmission systems.

d) A number of extreme contingencies that are listed under Category D and judged to be critical by the transmission planning entity(ies) will be selected for evaluation. It is not expected that all possible facility outages under each listed contingency of Category D will be evaluated.

e) Normal clearing is when the protection system operates as designed and the Fault is cleared in the time normally expected with proper functioning of the installed protection systems. Delayed clearing of a Fault is due to failure of any protection system component such as a relay, circuit breaker, or current transformer, and not because of an intentional design delay.

f) System assessments may exclude these events where multiple circuit towers are used over short distances (e.g., station entrance, river crossings) in accordance with Regional exemption criteria.

The following requirements are specified in the MRO Standard TPL-503-MRO-01 System Performance.

Table 2 – MRO System Performance Table[1]

NERC Categories	Transient Voltage Deviation Limits	Rotor Angle Oscillation Damping Ratio Limits
A	Nothing in addition to NERC Requirements	
B (See Notes 2 and 6)	Minimum 0.70 p.u. at any bus. (See Note 5)	Not to be less than 0.0081633 for disturbances with faults or less than 0.0167660 for line trips. (See Note 7)
C (See Notes 2, 3, and 6)	Minimum 0.70 p.u. at any bus. (See Note 5)	Not to be less than 0.0081633 for disturbances with faults or less than 0.0167660 for line trips. (See Note 7)
D (See Notes 2, 3, and 4)	Nothing in addition to NERC Requirements	

Notes:

1. The MRO System Performance Table including the notes applies to the initial transient period following the contingency (up to 20 seconds) and the post-disturbance period (20 seconds to the end of the allowed readjustment period as described in MRO Regional Reliability Standard TPL-503-MRO-01_R1.4).

2. The following summarizes the automatic and manual readjustments that are permissible for all NERC Category B disturbances.

   A. Generation adjustments - Reducing or increasing generation while keeping the units on-line or by bringing additional units on line. The amount of generation change is limited to that amount that can be accomplished within the allowed readjustment period. Due consideration shall be given to start up time and ramp rates of the units.

   B. Capacitor and reactor switching - The number of capacitors and reactors which may be switched is limited to those which could be switched during the allowed readjustment period. This includes those capacitors and reactors that would be switched by automatic controls within the same period.

   C. Adjustment of Load Tap Changers (LTCs) to the extent possible within the allowed readjustment period. This includes both LTCs which would automatically adjust and those under operator control which could be adjusted within the allowed readjustment period.

   D. Adjustment of phase shifters to the extent possible within the allowed readjustment period.

E. An increase or decrease to the flow on HVDC facilities to the extent possible within the allowed readjustment period.

F. Generation rejection to the extent possible within the allowed readjustment period. Shall not exceed the normal operating reserve of the generation reserve sharing pool to which the MRO Member belongs or of the MRO Member itself if the MRO Member self-provides generation reserves.

G. Transmission reconfiguration - Automatic and operator initiated tripping of transmission lines or transformers to the extent possible within the allowed readjustment period.

H. Automatic or manual tripping of interruptible load or curtailment of or pre-determined redispatching of Firm Point-to-Point Transmission Service to the extent possible within the allowed readjustment period. Curtailment of Firm Transmission Service within the readjustment period is permitted only to prepare for the next contingency.

3. The following additional readjustment may be considered for all NERC Category C contingencies.

   A. Automatic or manual tripping of firm Network or Native Load or curtailment of or predetermined redispatching of Firm Transmission Service to the extent possible within the allowed readjustment period.

4. The following additional readjustments may be considered for all NERC Category D contingencies.

   A. Planned and/or controlled islanding - Automatic underfrequency load shedding, as specified in NERC PRC-006-0, is permitted to arrest declining frequency and generation rejection is permitted to arrest increasing frequency in order to assure continued operation within the resulting islands.

   B. Automatic undervoltage load shedding is permissible to arrest declining voltages and prevent widespread voltage collapse.

5. The voltage of 0.7 per unit is the point at which load dropping begins to occur due to motor contactors dropping out and induction motors stalling and also the point where sensitive (power electronics) begin to drop out.

6. Apparent impedance transient swings into the inner two zones of distance relays are unacceptable for NERC Category B disturbances, unless documentation is provided showing the actual relays will not trip for the event. Apparent impedance transient swings into the inner two zones of distance relays are unacceptable for NERC Category C disturbances, unless documentation is provided that demonstrates that a relay trip will not result in instability (including voltage instability), uncontrolled separation, or cascading outages.

7. Damping is required during the initial transient period following the disturbance (up to 20 seconds). The machine rotor angle damping ratio is determined by appropriate modal analysis (for example. Prony analysis). Alternatively, the Rotor Angle Oscillation Damping Factor or Successive Positive Peak Ratio (SPPR) can be calculated directly from the rotor angle, where the rotor angle response allows such direct calculation. For a disturbance with a fault, the SPPR must be less than 0.95 or the damping factor must be greater than 5%. For a disturbance without a fault, the SPPR must be less than 0.90 or the damping factor must be greater than 10%. (The SPPR criteria were chosen to define positive rotor angle damping for study purposes in MAPP. The Rotor Angle Oscillation Damping Ratio Limits were derived from the SPPR criteria.)

3 Introduction to ITC Midwest Planning Criteria

This planning criteria manual sets down the planning guidelines used to determine system needs and justify modifications to the transmission system. This manual defines and explains the current planning criteria and will be reviewed and updated as required.

The planning criteria contained in this manual are, in general, to be uniformly interpreted and utilized in the testing and planning of the transmission system unless some deviation is justified as a result of special, economical or unusual considerations. Such instances should not necessarily be considered to conflict with this criterion or to justify revising the criteria, but should be recognized as unusual and special cases. The reliability implications of all such deviations shall be quantified to the extent possible or otherwise qualified sufficiently to ensure minimal reliability impacts. The planning criteria in this manual are guidelines to assist the planning engineer in making capital project and/or operating solution proposals for anticipated system needs.

Planning for the transmission system is intended to provide a network capable of transmitting power between generating sources and loads. The ITC Midwest system is utilized by various generation sources and load throughout the Eastern Interconnection via Network Integration Transmission Service or various other forms of Transmission Service. The implementation of the projects and operating solutions identified by application of this planning criteria shall result in a ITC Midwest system for which the probability of initiating cascading failures is very low. The system should also provide operating flexibility including, but not limited to, allowing maintenance outages. Non-consequential loss of load may be tolerated for extreme contingencies.

In meeting the above objectives, the planning engineer must recognize the present state-of-the-art with regard to equipment, construction practices, scheduling and the practical needs of operating the electrical system. It must be recognized that thermal overloading can shorten the equipment life and lead to sudden failures and that abnormal voltages can also cause equipment failures and/or voltage sensitive equipment to be affected. The planning engineer also needs to be cognizant of intangible considerations, such as the social and political implications of his work as well as visual and ecological effects. In particular, one social implication that the planning engineer needs to consider is the social benefit of the loads being able to access the most economical generation available. Many of these elements cannot be guided by exact rules and the engineer's judgment must be factored into the proposed projects. In summary, the material gathered in this manual is intended to provide basic system planning guidelines. The planning engineer, however, must still apply ingenuity, experience and judgment in order to develop projects which lead to an economic and reliable power system and supports the access to economical generation. Where judgment is used, it should be recognized as such and documented so as to be part of the record for future planning.

4 Thermal Loading and Voltage Planning Criteria

4.1 Description

The transmission system is used to transmit power and energy from interconnected generation plants to interconnected loads. Some of the generation and load that utilize the ITC Midwest system are not directly interconnected with the ITC Midwest system but are part of the larger interconnected grid and utilize the ITC Midwest system through its ties with neighboring systems.

4.2 Design Considerations

The ITC Midwest system should be designed such that foreseeable normal and contingency conditions do not result in equipment damage or in exceeding acceptable loss of load (see Table 3 – ITC Midwest Planning Criteria for allowable load loss by contingency type). Planning studies are to be carried out for projected annual peak system load conditions, but the planning criteria also holds for load levels less than annual peak. Additionally, the planning criteria evaluates projected shutdown conditions (a single element shutdown plus a single element forced out) at a lower load level.

The ITC Midwest system will be planned to be within its thermal capacity, to remain stable, to be within equipment short circuit capabilities, and to be within acceptable voltage limits while meeting projected needs of users of the transmission system. These needs may be communicated by reservations on the transmission system including network service or through other mechanisms.

Studies to determine transmission needs for a given power plant will be based on the maximum reasonable expected generation output from that plant and adverse, but credible, dispatch scenarios for other nearby generation.

MRO models are typically used to evaluate system performance for compliance with the NERC TPL Standards. Details of model development can be found in the MRO Model Building Manual.

For those conditions and events that do not meet the performance requirements of Table 3 – ITC Midwest Planning Criteria, corrective plans involving capital projects will be developed. Operating guides will only be used as interim solutions, prior to completion of system upgrades.

4.3 Project Proposal Guidelines

Project proposals will be submitted if one or more of the following guidelines are met.

- Replacement of equipment which is unsafe to operate and/or presents a hazard. This includes projects required to replace interrupting devices that could be subjected to fault currents which exceed momentary or interrupting ratings, as well as projects required to replace equipment that periodic maintenance tests have shown to have incipient failure.

- Replacement of equipment that presents a costly maintenance burden. This includes projects required to replace equipment that periodic maintenance tests have shown increasing economic costs to maintain for reasons such as that equipment that is, or is becoming, obsolete.

- Interconnection of reasonably documented new customers or committed increases in load at existing customer stations. Related projects should be proposed if one or more of the planning criteria are violated.

- Relocation of ITC Midwest facilities on public property as required by federal, state, county or local governmental units. Other requests for relocations are to be done only if the requestor has contracted to pay for the relocation or if economic justification exists.

- Repair, rebuild or replacement of equipment which has failed.

- Repair, rebuild or replacement of facilities needed to provide acceptable reliability. This includes facilities which due to design no longer provides acceptable reliability and/or facilities in which normal maintenance is not effective to maintain reliability due to the overall condition of the facilities.

- Requirements to maintain spare equipment to a level sufficient to provide timely replacements for normal failure rates.

- Mitigation of instances with violations or projected violations of the planning criteria.

- Purchase of corridor, station and/or substation sites as needed for other projects. Approved property purchases can also be associated with reasonable expected future needs.

Reasonable future conditions such as load growth, changes in regional and interregional system flow patterns and future generators must be considered when developing projects. The goal is to develop a robust transmission system today which can be efficiently expanded to reliably and economically accommodate tomorrow’s load and generation patterns.

4.4 Voltage and Facility Loading Criteria

4.4.1 Generally Applicable Criteria

Table 3 – ITC Midwest Planning Criteria

Description	NERC Category	Allowable Load Loss	Ratings Used [c]	Load Level [h]	Minimum Voltage [b, e, f]	Maximum Voltage [b, e, f]
System Normal	A	none	normal	100%	95%	105% [k]
Single Generator	B1	none	emergency	100%	93% [j]	110% [j, l]
Single UG Cable	B2	none [a]	emergency	100%	93% [j]	110% [j, l]
Single OH Line	B2	none [a]	emergency	100%	93% [j]	110% [j, l]
Single Transformer	B3	none [a]	emergency	100%	93% [j]	110% [j, l]
Bus Section	C1	none [a,g]	emergency	100%	93% [j]	110% [j, l]
Circuit Breaker	C2	none [a,g]	emergency	100%	93% [j]	110% [j, l]
Shutdown + Contingency	B1, B2 or B3	none [a,g]	emergency	70%	93%	110% [j, l]
Double Circuit Tower [i]	C5	none [a,g]	emergency	100%	93% [j]	110% [j, l]
Double Contingencies [d]						
1. After First Contingency (Prior to System Re-Adjustment)	C3	none [a]	emergency	100%	93%	110% [l]
2. After First Contingency (After System Re-Adjustment)	C3	none [a]	normal	100%	95%	105% [k]
3. After Second Contingency (Prior to System Re-Adjustment)	C3	none [a,g]	emergency	100%	90%	110% [l]
4. After Second Contingency (After System Re-Adjustment)	C3	none [a,g]	emergency	100%	93%	105% [k]
Extreme Contingencies [d]	D	no cascading	emergency	100%	no cascading	no cascading

a) There may be some consequential load loss in the event of the loss of a radial circuit, a transformer in direct series with a radial circuit or the loss of a load fed from a radial tap off of a network circuit provided the load lost was served directly by the outaged facility.
b) System Normal voltage limits represent pre-contingent system voltage limits (SOLs) under normal system conditions. Post-contingent system voltage limits (SOLs) are emergency voltage limits under abnormal or emergency system conditions.
c) The normal and emergency ratings are developed in accordance with PWR-601 ITC Midwest Equipment Thermal Load Ratings. The normal and emergency rating may be the same.
d) The NERC Planning Standards consider a single category B event followed by operator intervention followed by another category B event as a category C event. Action must be taken within 30 minutes of initial disturbance. The loss of two elements without time between for operator action is interpreted by ITC Midwest to be more severe than category C and is treated like an extreme contingency.
e) All Nuclear Plant Interface Requirements (NPIRs) in the ITCMW footprint shall be monitored and upheld. The normal and contingent DAEC 161 kV voltage requirement is a minimum of 99.2% and a maximum of 104.14%.
f) The voltage limits listed are steady state voltage limits. Voltage control devices (e.g., tap changers, switched shunts, and phase shifting transformers) should be set to control during the analysis.
g) There may be some load loss to a defined pocket of load as a direct consequence of the system topology.
h) The Load Level shown is the maximum load level (in percent of the system peak) to which this part of the criteria should be applied. It is also valid at any load level less than that shown.
i) Any two circuits of a multiple circuit towerline excludes transmission circuits where multiple circuit towers are used over a cumulative distance of 1 mile or less in length.
j) Voltage must be restorable to the System Normal range after system adjustments. Action must be taken within 30 minutes of disturbance.
k) 107% for 115 kV buses.
l) System studies should monitor at the System Normal Maximum Voltage.

Tests should be applied as appropriate to examine the system's susceptibility to voltage collapse. The system should be monitored for voltage deviations greater than 5%. The reactive reserve in an area (comprised of "unused" reactive capability of generators or shunt capacitors) may be monitored in studies to identify possible voltage collapse scenarios. Low reactive reserves may be an indication of being near the "knee" of the PV curve.

When contingencies result in buses being isolated from all sources of the same or higher voltage, it is not considered a violation of the planning criteria for voltages on the isolated buses to be outside the parameters of Table 3 - ITC Midwest Planning Criteria, provided that the voltages on the underlying system are within acceptable limits.

Projects should be proposed if the loading on system elements (overhead conductors, underground cables and/or station equipment), minimum voltages, maximum voltages, or the amount of load loss are outside of the applicable contingency category parameters as set forth in of Table 3 - ITC Midwest Planning Criteria for any reasonably expected generation dispatch pattern, or a dispatch that represent an average condition. Where projects are proposed for additional dispatch scenarios, their use will be justified and documented.

4.4.2 Shutdown Conditions

For load levels at or below the maximum planned for load level with shutdowns (see Table 3 - ITC Midwest Planning Criteria) it is expected that the shutdown of a single component would result in element loadings and system voltage within normal ranges. Further, it is expected that contingent loss of a component on top of the shutdown of a single component would result in element loadings and system voltages within emergency ranges.

There must be a significant, continuous time during the year when a system element can be shutdown for inspection, maintenance, adjacent hazard and/or element replacement. Planning studies must therefore evaluate the system under shutdown conditions using the maximum planned load level with shutdowns (see Table 3 - ITC Midwest Planning Criteria). The maximum planned for load level with shutdowns should periodically be re-evaluated to ensure that the application of that criterion is consistent with the requirement of having a significant, continuous time during the year when a system element can be shutdown for inspection, maintenance, adjacent hazard and/or element replacement.

MRO summer off-peak models are typically used to evaluate system performance for shutdown conditions. MRO defines summer off-peak (shoulder) load as 70% of summer peak load conditions.

4.4.3 Single Contingency Followed by Operator Action Followed by Another Single Contingency

The forced outage of a single generator, transmission circuit (or portion thereof) or transformer followed by operator interaction and then followed by another forced outage of a single generator, transmission circuit (or portion thereof) or transformer is considered to be a NERC Category C event. For these events, NERC Reliability Standard TPL-003-0 requires all remaining system elements to be within applicable thermal and voltage limits and also allows load shedding. ITC Midwest has separated the allowable load shedding in the Standard into two categories. In the first category, load is shed via operator-initiated actions following the loss of two elements in order to keep the loading of system elements within established longer-term emergency ratings and system voltages within established limits. Following the loss of two elements and prior to load shed, the loading of system elements must be within established short-term emergency ratings. Since ITC Midwest does not use short-term emergency ratings, this type of load shedding is not allowed. In the second category, supply to a defined pocket of load is lost as the direct consequence of the system topology. An example of the second category would be a substation which serves distribution load and has only two supplies. The concurrent outage of both supplies will result in the load at that substation being dropped. This type of load shedding is allowed.

4.4.5 NERC Category D – Extreme Event

The ITC Midwest system will be evaluated using a number of extreme contingencies that are judged by Planning to be critical. It is not expected that it will be possible to evaluate all possible facility outages that fall into NERC Category D. These events may involve substantial load and generation loss in a widespread area. These critical category D contingencies should not result in cascading outages beyond the ITC Midwest system area and any immediately adjacent areas.

5 Stability Criteria

Stability is the ability of a generator or power system to reach an acceptable steady-state operating point following a disturbance. This requires that thermal loadings, load loss, and voltage following the disturbance are within the guidelines established in Table 3 – ITC Midwest Planning Criteria.

Generator and system stability shall be maintained during and after the most severe of the contingencies listed below:

1. With the transmission system normal, a three-phase fault at the most critical location[a] with normal[b] clearing.
2. Simultaneous phase-to-ground faults on two transmission circuits on a multiple circuit tower with normal[b] clearing.
3. A single phase-to-ground fault at the most critical location[a] with delayed[c] clearing.

4. With one element (transmission line, transformer, protective relay, or circuit breaker) initially out of service, a three phase-to-ground fault at the most critical location[a] with normal[b] clearing.
5. A single phase-to-ground internal breaker fault with normal[b] clearing.
6. Where single pole tripping is enabled, single phase-to-ground faults on the transmission circuit with successful reclosing, and unsuccessful reclosing due to permanent single phase-to-ground faults with normal[b] clearing.

a) Faults should be placed on generators, transmission circuits, transformers, and bus sections.
b) Norma1 clearing means that all protective equipment worked as intended and within design guidelines.
c) Delayed clearing means that a circuit breaker, relay or communication channel has malfunctioned or failed to operate within design guidelines. If the delayed clearing is due to a failure to operate, local and remote backup clearance is appraised.

Performance during and after the disturbance shall meet the requirements of the NERC TPL standard's Table 1 – Transmission System Standards – Normal and Emergency Conditions, and the MRO System Performance Table of MRO Standard TPL-503-MRO-01.

A one-cycle[3] safety margin must be added to the actual or planned fault clearing time.

6 Short Circuit Criteria

Short circuit currents are evaluated in accordance with industry standards as specified in American National Standards report ANSI C37.5-1981 for older breakers rated on the total current (asymmetrical) basis and American Standards Association report C37.010-1979 (Reaff 1988) for new breakers rated on a symmetrical current basis.

In general, fault currents must be within specified momentary and/or interrupting ratings for studies made with all facilities in service, and with generators and synchronous motors represented by their appropriate (usually sub-transient saturated) reactance.

7 Power Quality/Reliability Criteria for Delivery Points

Details of Power Quality and Reliability Criteria for Delivery Points are covered in the individual Interconnection Agreement Documents with the Load Serving Entities. The Planning Engineer shall propose projects as required in those agreements.

[3] The basis for the one-cycle safety margin is that it has historically been used by MAPP and is listed in the MAPP Members Reliability Criteria and Study Procedures Manual dated April 2009, and the MISO Transmission Planning Business Practices Manual dated 11-20-10.

8 Voltage Deviation Standards

8.1 Capacitor Switching

The maximum percent change (step-change) in system voltage under normal system conditions shall be 3% when sizing capacitor banks.

8.2 Loss of Generation

Over the normal generation availability range, with all transmission elements in service, the voltage change measured anywhere in the system shall be considered for a single generator tripping.

8.3 Loss of an Element

Over the normal generation availability range, the voltage change measured anywhere in the system shall be considered for a single transmission element tripping.

9 Coordination with Other Transmission Systems

9.1 Joint Planning

The ITC Midwest system has interconnections with neighboring systems. These systems include neighboring transmission systems as well as distribution systems. The contractual commitments with the interconnected neighbors, as well as the properties of interconnected operations require coordinated joint planning with others of not only the interconnection facilities, but also consideration of the networks contiguous to those interconnections. Joint planning is accomplished by participation in several regional planning groups.

9.2 Interchange Capability

Interconnections with other transmission systems are intended to facilitate the economic and reliability needs of generators and loads directly interconnected with the ITC Midwest system. In addition, these interconnections can also support the economic and reliability needs of generators and loads not directly interconnected with the ITC Midwest system. Interchange capability is the amount of power that can be transferred across transmission systems without exceeding transmission system facility limitations. Accordingly, the evaluation and planning of interchange capability is necessarily a joint effort by the concerned utilities. ITC Midwest participates in the transfer analysis performed by several regional planning groups.

10 Special Protection Systems (SPS)

It is ITC Midwest policy that new Special Protection Schemes (SPS) not be installed on the ITC Midwest system. ITC Midwest will not support the installation of an SPS on a neighboring system whose purpose is to mitigate potential issues on the ITC Midwest system.

For those SPS's that have already been placed in service, periodic reviews should be performed to ensure that the scheme is deactivated when the conditions requiring its use no longer exist or system improvements to remove the SPS are warranted.

Appendix 55: Generation Sensitivity Analysis of 161 kV Rebuild Alternative

Limiting element: 613370 RUTLAND5 161 631043 WINBAGO5 161 1
Contingency : 2698 ITCM-C206-NW-BF(Lakefld_161_bus_tie)

Worst dispatch FCITC : 514.2 MW Worst Dispatch Rating: 1
Study Transfer FCITC : 21068.0 MW Study Transfer Rating: O(P)TDF below 0.030
Change in FCITC : 20553.8 MW

=================== Generator Adjustments ======================

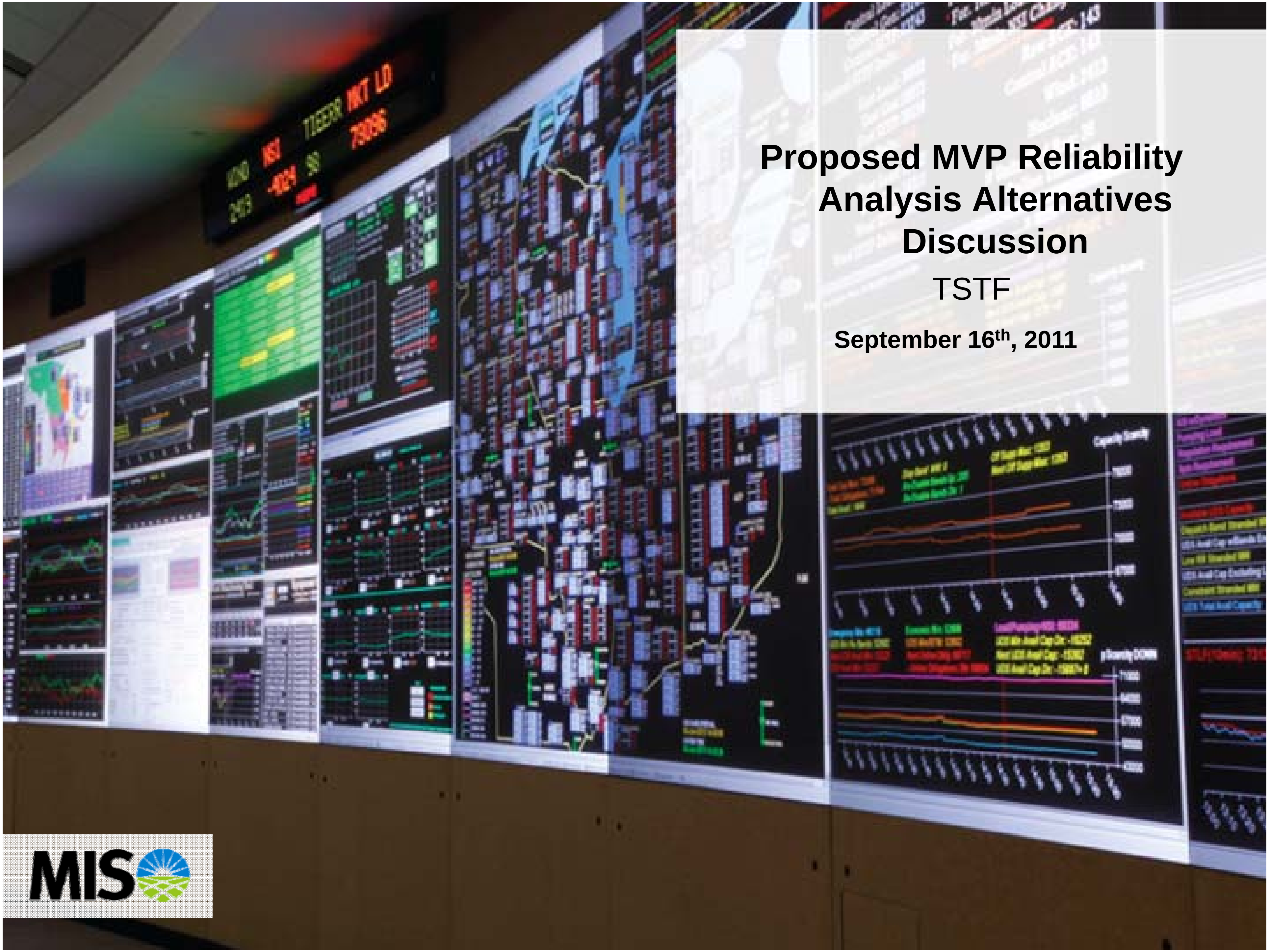
Generator bus		Worst Dispatch	StdAdj 514.2	Study ParFact	Gen Loss DistFact	Pmin	Pmax	Porig	Pnew	WrstDisp FlowChng	Status
601006 SPLT RK3	345	--	4.2	0.0083	0.0111	0.0	500.0	0.0			
601029 LKFLDXL3	345	--	4.2	0.0083	0.0053	0.0	500.0	0.0			
601031 BRKNGCO3	345	--	8.5	0.0165	0.0093	0.0	1000.0	0.0			
602002 SOUTHBE5	161	--	4.2	0.0083	-0.0253	0.0	500.0	0.0			
602003 BLUEETA5	161	--	4.2	0.0083	-0.1073	0.0	500.0	0.0			
602005 SPLT RK5	161	--	4.2	0.0083	0.0298	0.0	500.0	0.0			
602008 MINVALY4	230	--	4.2	0.0083	0.0074	0.0	500.0	0.0			
602039 ROCK CO5	161	--	4.2	0.0083	0.0428	0.0	500.0	0.0			
613240 OWATNNA5	161	--	4.2	0.0083	-0.0043	0.0	500.0	0.0			
613370 RUTLAND5	161	500.0	4.2	0.0083	0.8281	0.0	500.0	0.0	500.0	414.1	
613380 S FARIB5	161	--	4.2	0.0083	-0.0027	0.0	500.0	0.0			
618900 GRE-BREWSTR5	161	--	4.2	0.0083	0.0986	0.0	500.0	0.0			
619600 GRE-AL-CORN5	161	--	4.2	0.0083	-0.0046	0.0	500.0	0.0			
631029 IAFINDP5	161	--	4.2	0.0083	-0.0043	0.0	500.0	0.0			
631035 OSCEOLA_WF5	161	--	4.2	0.0083	0.0052	0.0	500.0	0.0			
631036 NIW 5	161	--	5.0	0.0097	-0.0223	0.0	610.0	24.4			
631038 MAGNLIA5	161	--	4.2	0.0083	0.0550	0.0	500.0	0.0			
631039 ELK 5	161	--	4.2	0.0083	0.0893	0.0	500.0	0.0			
631040 HRN LK 5	161	--	4.2	0.0083	0.1184	0.0	500.0	0.0			
631041 LAKEFLD5	161	--	4.2	0.0083	0.1184	0.0	500.0	0.0			
631042 FOX LK 5	161	--	4.2	0.0083	0.8016	0.0	500.0	0.0			
631043 WINBAGO5	161	--	4.2	0.0083	-0.1116	0.0	500.0	0.0			
631044 HAYWD#25	161	--	4.2	0.0083	-0.0306	0.0	500.0	0.0			
631045 WNBAGOS5	161	--	4.2	0.0083	-0.1114	0.0	500.0	0.0			
631047 LIME CK5	161	--	4.2	0.0083	-0.0170	0.0	500.0	0.0			
631048 EMERY 5	161	--	4.2	0.0083	-0.0129	0.0	500.0	0.0			
631049 CGORDO_5	161	--	4.2	0.0083	-0.0108	0.0	500.0	0.0			
631102 TRIBOJI5	161	--	4.2	0.0083	0.0052	0.0	500.0	0.0			
631103 HANCOCK5	161	--	4.2	0.0083	-0.0087	0.0	500.0	0.0			
631124 DKSN_CO5	161	--	4.2	0.0083	0.0052	0.0	500.0	0.0			
631127 HAYWD#15	161	--	4.2	0.0083	-0.0307	0.0	500.0	0.0			
631154 BARTON5	161	--	4.2	0.0083	-0.0154	0.0	500.0	0.0			
631155 CRYSTLK5	161	--	4.2	0.0083	-0.0170	0.0	500.0	0.0			
631163 FARIBLT5	161	--	4.2	0.0083	-0.1103	0.0	500.0	0.0			
631164 G298_WF5	161	--	4.2	0.0083	0.0049	0.0	500.0	0.0			
631166 NUTHTCH5	161	--	4.2	0.0083	-0.0045	0.0	500.0	0.0			
631169 CRYSTLKII5	161	--	4.2	0.0083	-0.0170	0.0	500.0	0.0			
631171 WHISWIL5	161	--	4.2	0.0083	-0.0045	0.0	500.0	0.0			
631174 GLENWRTH5	161	--	4.2	0.0083	-0.0284	0.0	500.0	0.0			
631180 FREEBORN5	161	--	4.2	0.0083	-0.0476	0.0	500.0	0.0			
631181 G870_TAP5	161	--	4.2	0.0083	-0.0476	0.0	500.0	0.0			
631183 CAYLER5	161	--	4.2	0.0083	0.0049	0.0	500.0	0.0			
635200 RAUN 3	345	--	8.5	0.0165	0.0051	0.0	1000.0	0.0			
635223 PLYMOTH5	161	--	4.2	0.0083	0.0055	0.0	500.0	0.0			
635280 BVISTA 5	161	--	4.2	0.0083	0.0033	0.0	500.0	0.0			
635340 SAC 5	161	--	4.2	0.0083	0.0032	0.0	500.0	0.0			
635350 CLIPPER5	161	--	4.2	0.0083	0.0033	0.0	500.0	0.0			
635360 LIT SX 5	161	--	4.2	0.0083	0.0040	0.0	500.0	0.0			
635368 SHELDON 3	345	--	8.5	0.0165	0.0058	0.0	1000.0	0.0			
636000 WEBSTER3	345	--	4.2	0.0083	0.0012	0.0	500.0	0.0			
636001 WEBSTER5	161	--	4.2	0.0083	0.0004	0.0	500.0	0.0			
636023 TATELYL5	161	--	4.2	0.0083	0.0007	0.0	500.0	0.0			
636025 HAYES 5	161	--	4.2	0.0083	0.0007	0.0	500.0	0.0			
636029 POCHNTC5	161	--	4.2	0.0083	0.0020	0.0	500.0	0.0			
636030 POMEROY5	161	--	4.2	0.0083	0.0017	0.0	500.0	0.0			
636050 WRIGHT 5	161	--	4.2	0.0083	-0.0012	0.0	500.0	0.0			
636230 FRANKLN5	161	--	4.2	0.0083	-0.0045	0.0	500.0	0.0			
636235 WALL LK5	161	--	4.2	0.0083	-0.0026	0.0	500.0	0.0			
636240 BUTLER 5	161	--	4.2	0.0083	-0.0046	0.0	500.0	0.0			
640386 TWIN CH4	230	--	4.2	0.0083	0.0057	0.0	500.0	0.0			
652508 S3 7	115	--	4.2	0.0083	0.0117	0.0	500.0	0.0			
652509 FTRANDL4	230	--	4.2	0.0083	0.0066	0.0	500.0	0.0			
652536 RASMUSN4	230	--	4.2	0.0083	0.0066	0.0	500.0	0.0			
652537 WHITE 3	345	--	8.5	0.0165	0.0093	0.0	1000.0	0.0			
652551 GRANITF7	115	--	4.2	0.0083	0.0078	0.0	500.0	0.0			
652552 MARS ER7	115	--	4.2	0.0083	0.0117	0.0	500.0	0.0			
652563 SPENCER5	161	--	4.2	0.0083	0.0036	0.0	500.0	0.0			
652564 SIOUXCY3	345	--	4.2	0.0083	0.0063	0.0	500.0	0.0			
652565 SIOUXCY4	230	--	4.2	0.0083	0.0061	0.0	500.0	0.0			
652566 SIOUXCY5	161	--	4.2	0.0083	0.0055	0.0	500.0	0.0			
652567 DENISON4	230	--	4.2	0.0083	0.0045	0.0	500.0	0.0			
652578 PAHOJA 4	230	--	4.2	0.0083	0.0092	0.0	500.0	0.0			
656191 HAMPTON5	161	--	4.2	0.0083	-0.0066	0.0	500.0	0.0			
656201 SHEFFLD5	161	--	4.2	0.0083	-0.0093	0.0	500.0	0.0			
656353 HOPE5	161	--	4.2	0.0083	-0.0005	0.0	500.0	0.0			
656423 BURT5	161	--	4.2	0.0083	-0.0027	0.0	500.0	0.0			
656527 OSGOOD5	161	--	4.2	0.0083	0.0006	0.0	500.0	0.0			
656570 WISDOM5	161	--	4.2	0.0083	0.0036	0.0	500.0	0.0			
658066 JACKSON	161	14.2	4.2	0.0083	0.8016	0.0	500.0	0.0	14.2	11.4	
681529 WINNCO 5	161	--	4.2	0.0083	-0.1011	0.0	500.0	0.0			
---- Generators with best sensitivities ----											
631043 WINBAGO5	161	--	4.2	0.0083	-0.1116	0.0	500.0	0.0			
631045 WNBAGOS5	161	--	4.2	0.0083	-0.1114	0.0	500.0	0.0			
631163 FARIBLT5	161	--	4.2	0.0083	-0.1103	0.0	500.0	0.0			
602003 BLUEETA5	161	--	4.2	0.0083	-0.1073	0.0	500.0	0.0			
681529 WINNCO 5	161	--	4.2	0.0083	-0.1011	0.0	500.0	0.0			
631181 G870_TAP5	161	--	4.2	0.0083	-0.0476	0.0	500.0	0.0			
631180 FREEBORN5	161	--	4.2	0.0083	-0.0476	0.0	500.0	0.0			
631127 HAYWD#15	161	--	4.2	0.0083	-0.0307	0.0	500.0	0.0			
631044 HAYWD#25	161	--	4.2	0.0083	-0.0306	0.0	500.0	0.0			
631174 GLENWRTH5	161	--	4.2	0.0083	-0.0284	0.0	500.0	0.0			
602002 SOUTHBE5	161	--	4.2	0.0083	-0.0253	0.0	500.0	0.0			
631036 NIW 5	161	--	5.0	0.0097	-0.0223	0.0	610.0	24.4			

============ MW Flow (at Fixed Participation Factor) Table ============

	Base Case PreShift	FCITC WrstDisp	WrstDisp Flow 514.2	FCITC Flow 21068.0	Study DistFact
Limiting Element Flow:					
with outage	20.6	446.0	30.9	446.0	0.0202
without outage	74.0	284.1	71.7	-19.9	-0.0045

Contingency 2698 ITCM-C206-NW-BF(Lakefld_161_bus_tie) Complex Contingency

Detailed analysis of worst dispatches ordered by transfer capability.
Maximum export - 5000.0 MW



Proposed MVP Reliability Analysis Alternatives Discussion

TSTF

September 16th, 2011

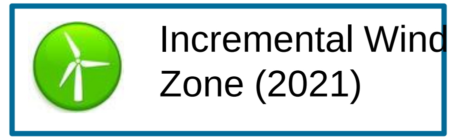
Iowa MVPs

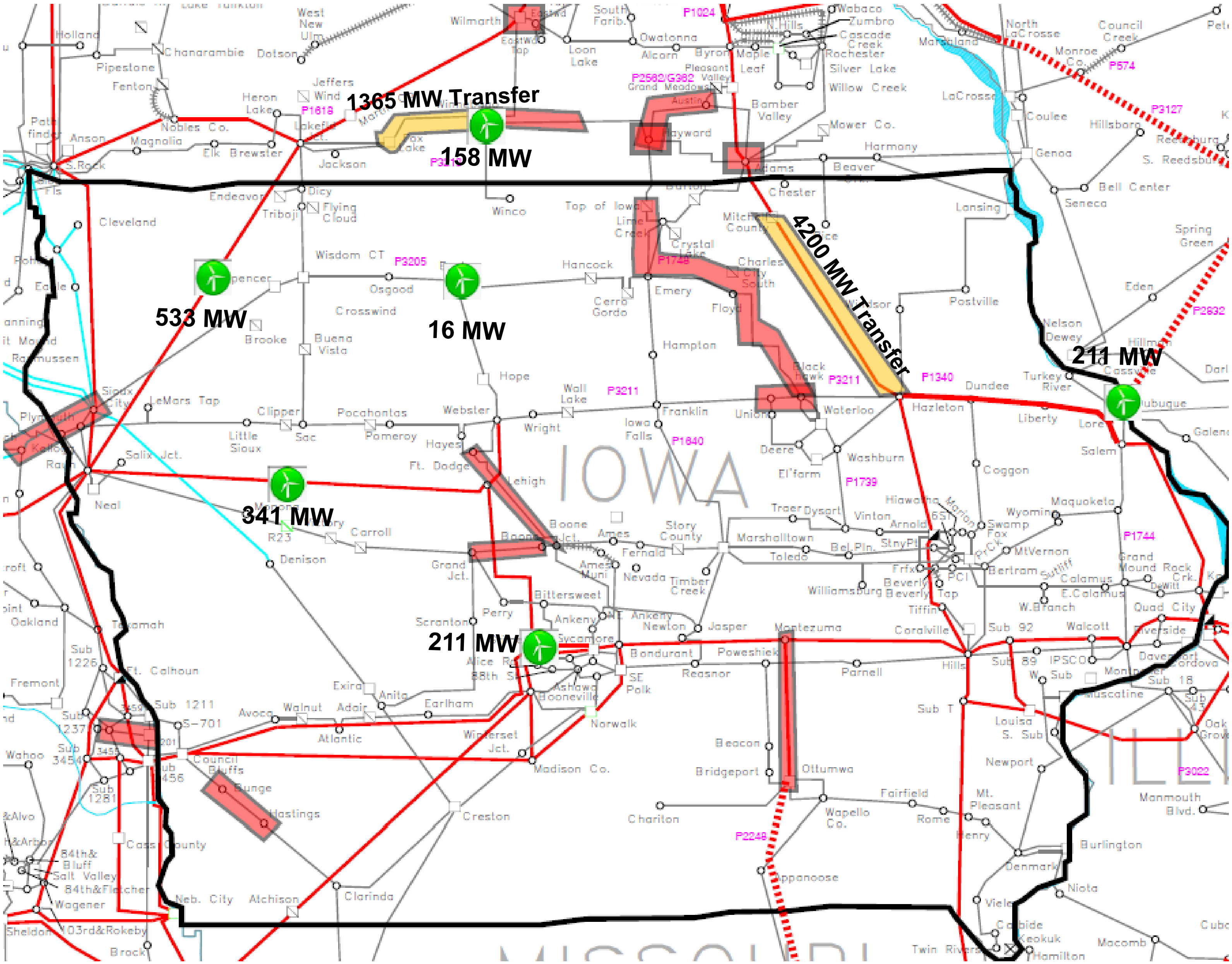
Constraint Analyses

- **Constraints shown based on:**
  - Contingency analysis on 2021 cases with and without proposals
  - Transfer analyses starting at 2021 levels and increasing until limits found
  - Transfer sources are all incremental wind zones
  - Transfer sinks are non-wind merit order
  - RPS milestone wind levels:
    - 2022 ~ 454 MW
    - 2023 ~ 909 MW
    - 2024 ~ 1363 MW
    - 2025 ~ 1818 MW
    - 2026 ~ 2272 MW

MISO

Iowa Constraints

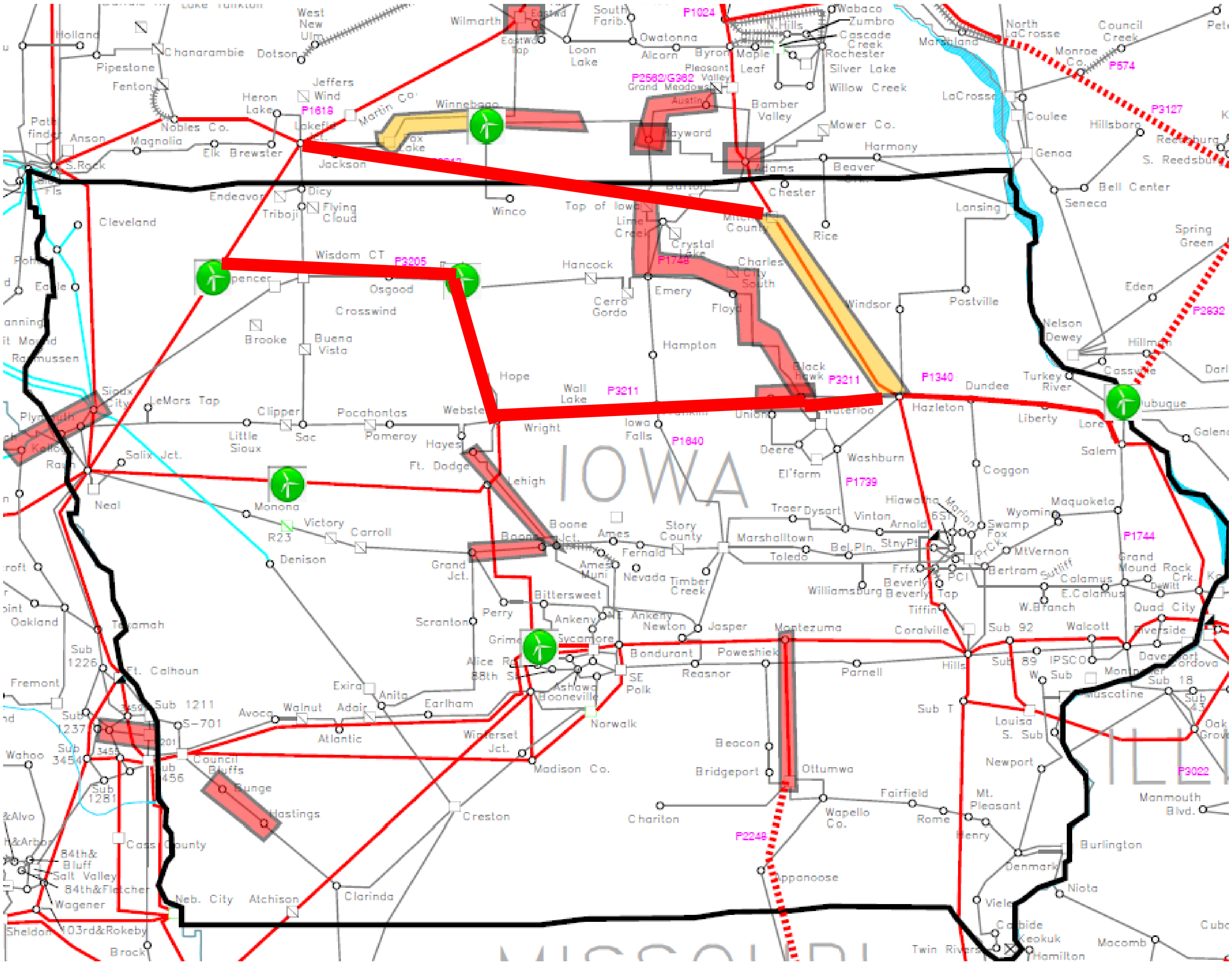




- **Red Highlights-** Constraints in CMVP Study 2021 Shoulder pre-IA CMVP Case
- **Yellow Highlights-** Constraints in Transfer Study (Beyond 2021 Wind Levels)
  - 2022 ~ 454 MW
  - 2023 ~ 909 MW
  - 2024 ~ 1363 MW
  - 2025 ~ 1818 MW
  - 2026 ~ 2272 MW

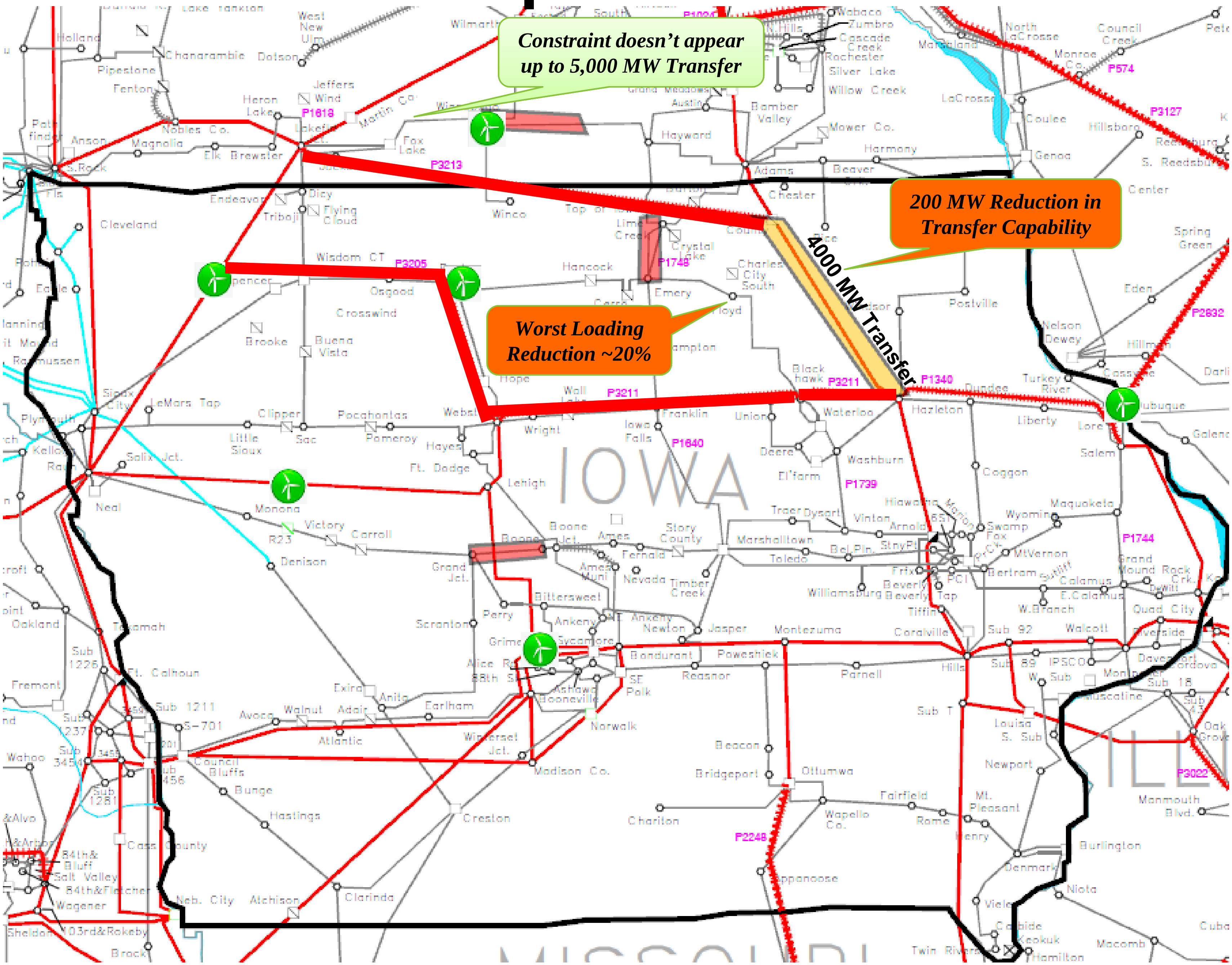
CMVP Routes

Incremental Wind Zone



17

CMVP Impact on Constraints



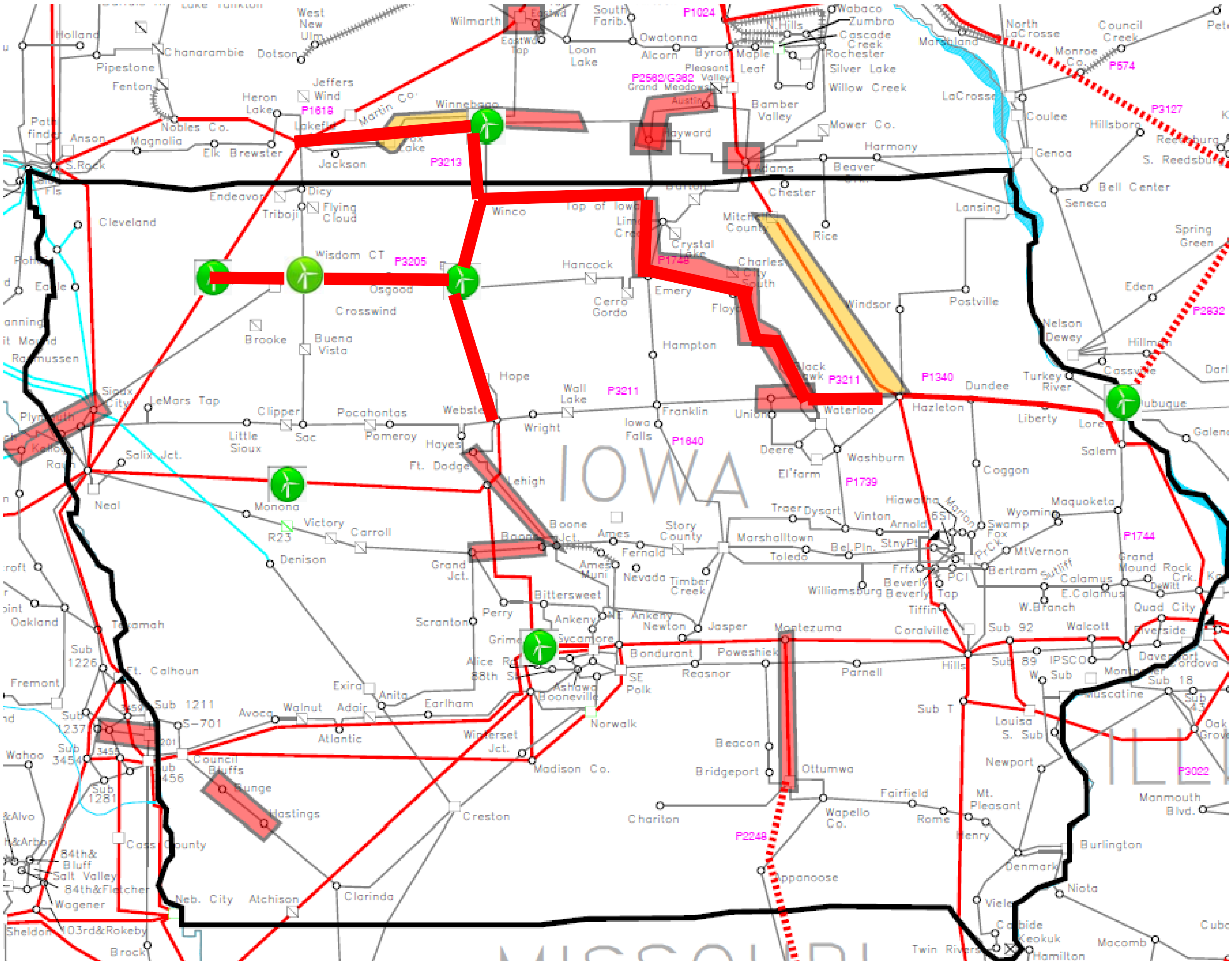
Proposed CMVP Effects

- Effectively mitigates Fox Lake-Rutland-Winnebago constraint (FCITC limit at ~1,300 MW doesn't appear post project for upto 5,000 MW of RPS wind transfer)
- Mitigates Emery-Floyd-Bremer-Blackhawk constraint
  - Though loading reduction on path is less than 20%

- Doesn't mitigate Lime Creek-Emery constraint
- Reduces transfer capability on Mitchell County-Hazelton 345 kV path (FCITC limit reduced by 200 MW for RPS wind transfer)

MISO

Alternate Route

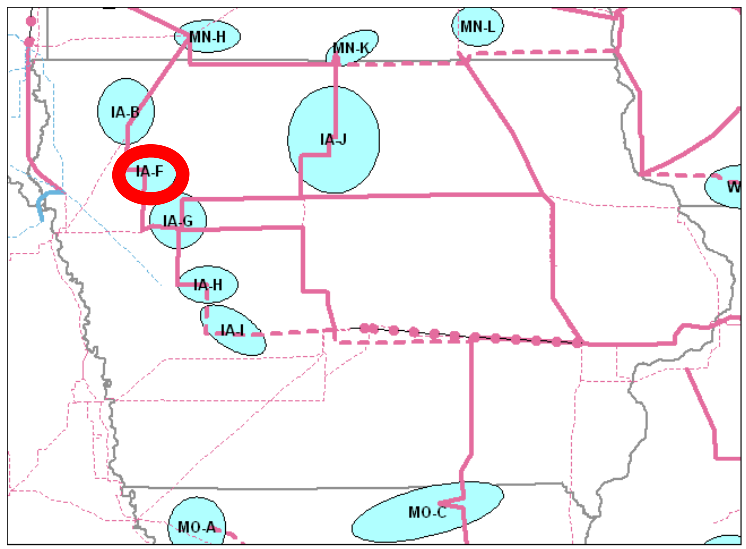


Alternate Route

- Lakefield to Winnebago 345 kV
  - Winnebago 345/161 kV transformer
- Winnebago to Webster 345 kV
- Tie Winnebago to Webster at new station and extend to Lime Creek 345 kV
  - Lime Creek 345/161 kV transformer
- Lime Creek to Emery 345 kV
  - Emery 345/161 kV transformer
- Emery to Floyd to Bremer to Blackhawk 345 kV
  - Blackhawk 345/161 kV transformer
- Blackhawk to Hazelton 345 kV
- Connect Sheldon to Winnebago-Webster ROW near Burt

Wind Zone Adjustment

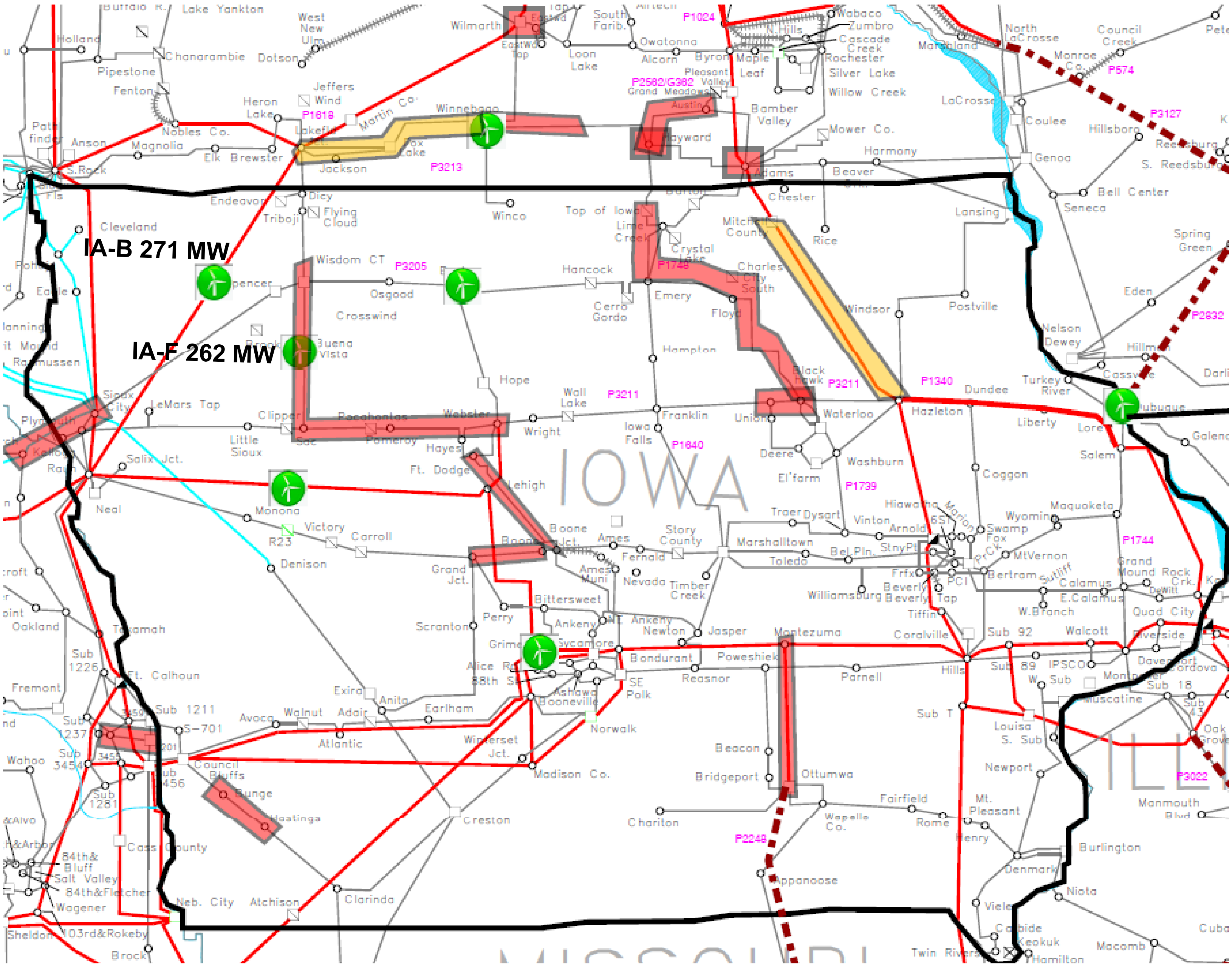
- IA-F originally in RGOS closer to Buena Vista 161 kV area
- Two zones (IA-B and IA-F) had been lumped at Sheldon 345 kV pre-MVP (533 MW) because RGOS Line from Sheldon to Lehigh not part of CMVP portfolio



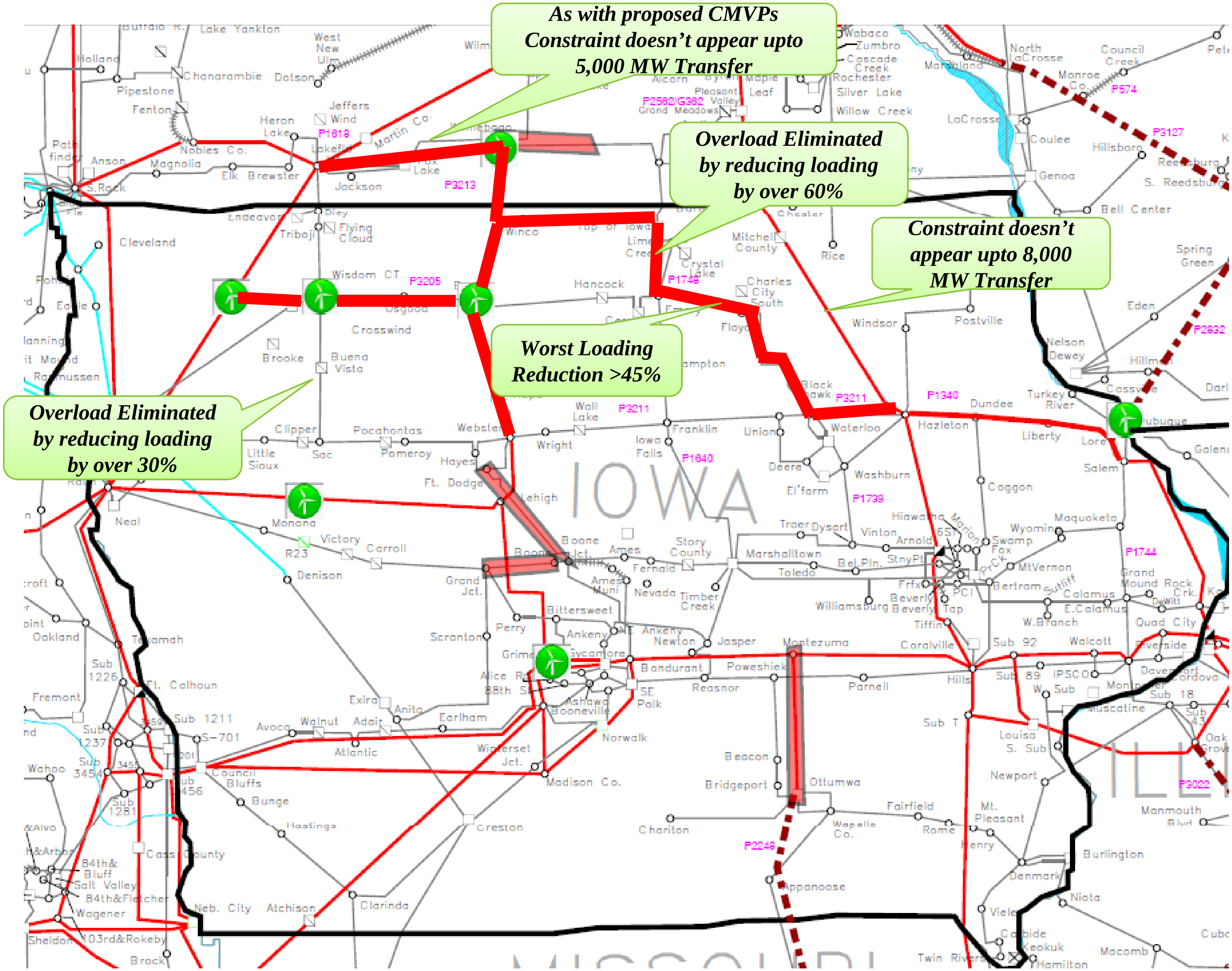
- Reasonable to assume IA-F (262 MW) on 161 kV pre-MVP
- With MVP, connect to new 345 kV MVP sub in area

Constraints

Incremental Wind Zone



Impact of Alternative on Constraints



Alternative Impact

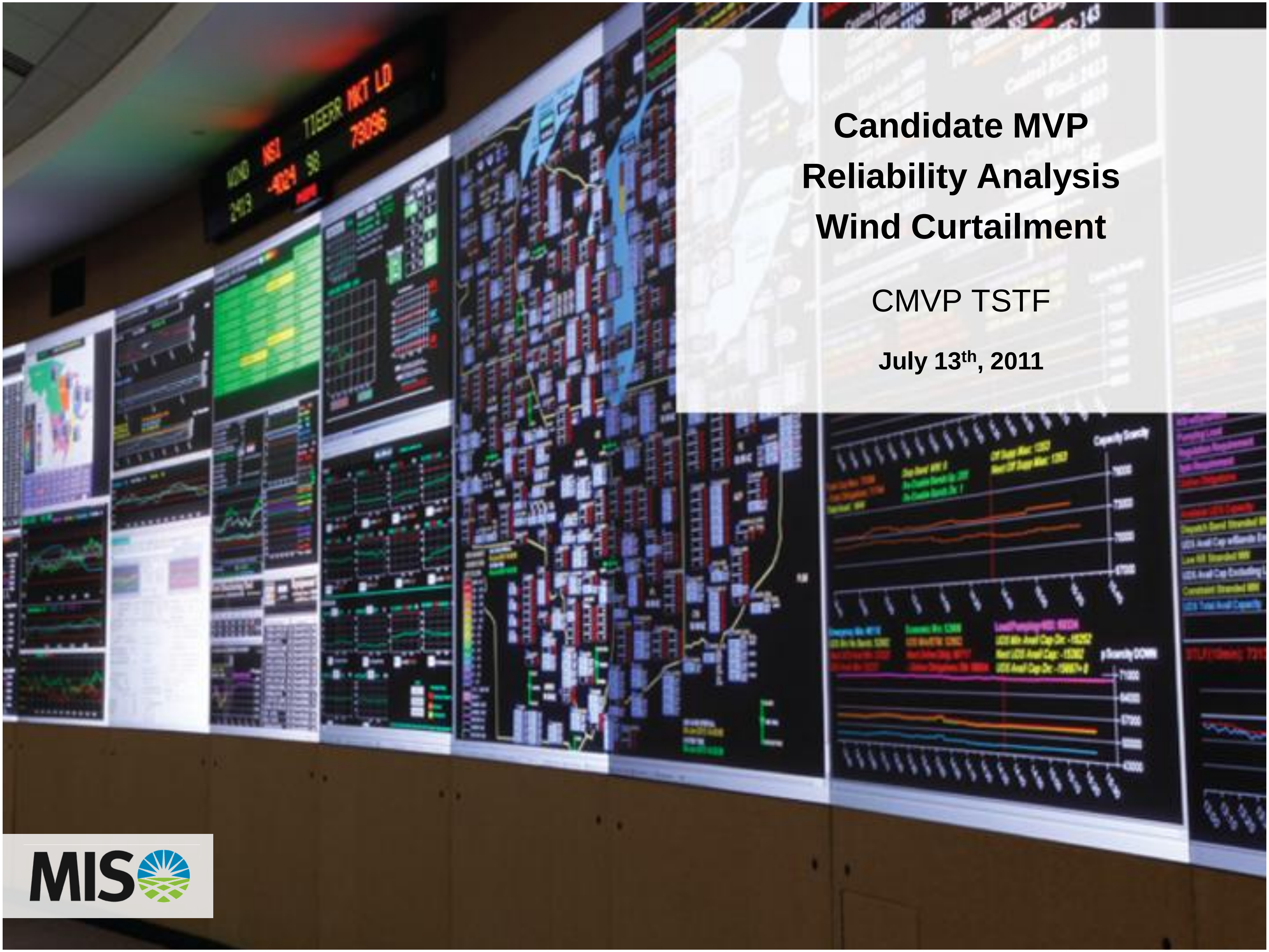
- Continues to effectively mitigate Fox Lake-Rutland-Winnebago constraint (FCITC limit at ~1,300 MW doesn't appear post project for up to 5,000 MW of RPS wind transfer). Step Down Transformation at Winnebago provides additional loading reduction.
- Mitigates Lime Creek-Emery-Floyd-Bremer-Blackhawk constraint
  – Offloads existing transmission by at least over 45% on all sections
    - Attributed to transformers at Lime Creek and Emery which help pick up wind of about 225 MW and 130 MW respectively onto the 345 kV line in base shoulder scenario acting as step up transformers.
- Does not negatively impact transfer limit on Mitchell County-Hazelton 345 kV path
  – Significant increase in transfer capability of over 4,000 MW
    - No Iowa CMVP FCITC limit on Mitchell County line at about 4,200 MW increases to over 8,500 with limit on Hazelton to Arnold

MISO

Iowa Summary

- Alternate Route is superior to proposed CMVPs
  - Routed through Lime Creek wind heavy area constraints aggravated by through transfers
    - Alternate Route helps reduce loading on existing transmission path by about half
  - Relieves congestion on Mitchell-Hazelton 345 kV path increasing wind transfer capability through Iowa by over 4,000 MW
  - Circumvents wind heavy northern Iowa regions with reliable 345 kV looped system with various transformation stations which would help facilitate future wind connections

MISO



Candidate MVP Reliability Analysis Wind Curtailment

CMVP TSTF

July 13th, 2011

MISO

Wind Curtailment

- Percentage of RPS that cannot be enabled ‘but for’ Multi Value Project (MVP) Portfolio (in lieu of MVPs)
  - Assimilate all constraints identified as mitigated by proposed MVP portfolio
  - Calculate impact of all wind-existing, planned and incremental wind zones on all constraints
  - Utilize impacts to calculate MISO net optimal wind curtailment required to bring constraint loadings within line capacity
  - Estimate energy curtailment through MISO wide weighted capacity factor
  - Calculate percentage of RPS curtailment as a ratio of curtailed energy over full RPS energy

Wind Curtailment Methodology

- Constraints
  - Worst Cat B and Cat C contingent overload on each constrained element
  - Blend of 2021 and 2026 constraints
    - Final calculations based on 2026 levels
      - Since majority of west region MVPs justification based on 2021 levels-assumed all incremental increase in RPS wind to 2026 is curtailed
  - Target loading $\leq$ 95%
    - Loading reductions on each constrained element is based on 95% of its applicable rating
- Linear optimization
  - Tools Employed
    - MUST - Linear shift factor impact on flowgate (constraint-contingent pair)
      - Wind sunk to system swing
    - Excel Solver - Iterative optimal solution
      - Too complex for nonlinear optimization
      - Linear optimization achieved using simplex method
      - Solution Constraint: Minimize wind curtailment while reducing flowgate loadings

MISO

Flowgates

- 429 Total Monitored Element-Contingent Element pairs
  - 205 Cat B
  - 224 Cat C
- Wind Units - 193

↓

- 24 cannot achieve target loading reduction
  - Target reduction decreased in order to find solution

Optimization Logic

{WindRed}

Wind Unit	Pgen	Reduction
1	$Pgen_1$	red_1
2	$Pgen_2$	red_2
⋮	⋮	⋮
i	$Pgen_i$	red_i
		Σ

{DF}

FG_1	FG_2	⋯	FG_j
df_{11}	df_{12}	⋯	df_{1j}
df_{21}	df_{22}	⋯	df_{2j}
⋮	⋮	⋱	⋮
df_{i1}	df_{i2}	⋯	df_{ij}

{=MMULT(WindRed', DF)}

FG Reduction	FG_red_1	FG_red_2	⋯	FG_red_j
Target Reduction	$Target_1$	$Target_2$	⋯	$Target_j$

OBJECTIVE

Minimize Reduction Sum
by adjusting {WindRed}
and satisfying:
{FG Reduction} >= {Target Reduction}
{WindRed} >= {0}
{WindRed} <= {Pgen}

MISO

Conservative Estimate

- Only worst contingency-constraint pair studied: Other contingencies may yield additional wind curtailment
- Target loading reductions reduced to obtain solution
- Capacity factors weighted MISO wide: Capacity factors associated with individual wind units may yield higher wind energy curtailment
- Algorithm is by definition tuned to select optimal wind reduction: Actual wind curtailment for these aggregate constraints may be higher

MISO

Wind Curtailment Result

- Net Wind Curtailment (Dispatched) = 10,885 MW
- Net Wind Curtailment (Connected) = 12,095 (10,885 / 90%) MW
- MISO Wide Capacity Factor (Weighted based on 2026 incremental wind zone capacity) = 32.8%
- Calculated Curtailed Energy = 34,711,578 MWHr (12,095 MW X 32.8% X 8760 hr)
- 2026 Full RPS Energy = 55,010,629 MWHr

↓

- Calculated Percentage Curtailed Energy = 63.1% (34,711,578 / 55,010,629)

MISO

Conclusion

- 63% RPS curtailment in lieu of MVP portfolio indicates existing and planned wind (not including incremental required to meet 2026 RPS mandate) generation in MISO footprint is already constrained

- Additional calculations to be done to determine wind enabled by the MVP portfolio in excess of 2026 RPS mandate levels

Questions?

- **Digaunto Chatterjee (dichatterjee@misoenergy.org)**
- **West Sub Region and Wind Curtailment Engineering Questions**
  - Adam Solomon (asolomon@misoenergy.org)
- **Central and East Sub Region Engineering Questions**
  - Mike Dantzler (mdantzler@misoenergy.org)

MISO

LMP Impacts of Proposed Minnesota-Iowa 345 kV Transmission Project

Rodney Frame
Todd Schatzki
Pavel Darling

Analysis Group

March 2013

LMP Impacts of Proposed Minnesota-Iowa 345 kV Transmission Project

Rodney Frame
Todd Schatzki
Pavel Darling

Executive Summary

ITC Midwest LLC is proposing to develop the Minnesota – Iowa 345 kV Transmission Project (the Project). The Project involves construction of new 345 kV transmission lines and associated facilities in Minnesota and Iowa with the purpose of providing economic, policy and reliability benefits. The Project is part of MVP 3, one of the 17 Multi-Value Project (MVP) Portfolio of the Midwest Independent Transmission System Operator, Inc. (MISO).

Using the PROMOD market simulation model, the analyses herein estimate the change in locational marginal prices (LMPs) in Minnesota from implementing the Project and other components of MVPs 3 and 4. MVP 4 interconnects to MVP 3 at a substation in Kossuth County, Iowa.

With development of MVPs 3 and 4, average LMPs for Minnesota fall by $0.70 per MWh (2.4%) in 2021 and $0.71 per MWh (2.2%) in 2026 under Business As Usual: Low Demand market conditions. Under Business As Usual: High Demand market conditions, price reductions are similar: $0.61 per MWh (1.7%) in 2021 and $0.90 per MWh (2.0%) in 2026. These LMP changes result in annual reductions in wholesale energy payments for Minnesota load that range from $48.3 million (2021 Business As Usual: High Demand) to $76.6 million (2026 Business As Usual: High Demand).

LMP reductions from the implementation of MVPs 3 and 4 are also estimated to be widespread across the eight individual load-serving entities (LSEs) in Minnesota included in the PROMOD analysis. Average LMPs decline for all eight LSEs in 2021 and for seven of the eight LSEs in 2026.

ANALYSIS GROUP
ECONOMIC, FINANCIAL and STRATEGY CONSULTANTS

LMP Impacts of Proposed Minnesota-Iowa 345 kV Transmission Project

Rodney Frame
Todd Schatzki
Pavel Darling

1. BACKGROUND ON THE MINNESOTA-IOWA PROJECT

ITC Midwest LLC (ITC Midwest) is proposing to construct new 345 kV transmission lines and associated facilities with the purpose of providing economic, policy and reliability benefits. This project, the Minnesota – Iowa 345 kV Transmission Project (the "Project" or "MN-IA Project"), is being developed as part of the Midwest Independent Transmission System Operator, Inc.'s (MISO) 17 Multi-Value Project (MVP) portfolio. MVPs are transmission projects in the MISO footprint that have been "determined to enable the reliable and economic delivery of energy in support of documented energy policy mandates or laws that address, through the development of a robust transmission system, multiple reliability and/or economic issues affecting multiple transmission zones."[1] The costs of MVPs are recovered from all load within and exports from MISO via a per MWh charge.[2]

Among other things, the portfolio of MVPs is intended to help enable the reliable delivery of renewable energy, including wind power, within the MISO footprint, allow for a more efficient dispatch of generation resources, open markets to further competition and spread the benefits of low-cost

---

[1] Federal Energy Regulatory Commission, Order, Docket No. ER10-1791-00, December 16, 2010 Order (133 FERC ¶ 61,221), at Para 1. See also the listing of the three MVP criteria in Section II.C.2 of Attachment FF of the MISO Tariff, as follows:
Criterion 1. A Multi Value Project must be developed through the transmission expansion planning process for the purpose of enabling the Transmission System to reliably and economically deliver energy in support of documented energy policy mandates or laws that have been enacted or adopted through state or federal legislation or regulatory requirement that directly or indirectly govern the minimum or maximum amount of energy that can be generated by specific types of generation. The MVP must be shown to enable the transmission system to deliver such energy in a manner that is more reliable and/or more economic than it otherwise would be without the transmission upgrade.

Criterion 2. A Multi Value Project must provide multiple types of economic value across multiple pricing zones with a Total MVP Benefit-to-Cost ratio of 1.0 or higher ….

Criterion 3. A Multi Value Project must address at least one Transmission Issue associated with a projected violation of a NERC or Regional Entity standard and at least one economic-based Transmission Issue that provides economic value across multiple pricing zones. The project must generate total financially quantifiable benefits, including quantifiable reliability benefits, in excess of the total project costs ….

[2] See MISO Tariff, Schedule 26A, Multi-Value Project Usage Rate, and Attachment MM, Multi-Value Project Charge.

generation. The Federal Energy Regulatory Commission (FERC) approved the methodology used by MISO to identify the MVP portfolio as "an important step in facilitating investment in new transmission facilities to integrate large amounts of location-constrained resources, including renewable generation resources, to further support documented energy policy mandates or laws, reduce congestion, and accommodate new or growing loads."[3]

MISO's *Multi Value Project Portfolio, Results and Analysis*, January 10, 2012 (MISO MVP Report) provides a comprehensive assessment of the complete 17 MVP portfolio and recommends that each of the 17 projects be approved by MISO's Board of Directors for inclusion in Appendix A of the MISO Transmission Expansion Plan process and implemented. On December 8, 2011, the MISO Board approved this recommendation.

The MN-IA Project consists of a 345 kV transmission line and associated facilities located in Jackson, Martin, and Faribault counties in Minnesota, and Kossuth County in Iowa.[4] The MN-IA Project, together with other facilities being proposed by MidAmerican to be constructed in Iowa [5] comprises what is referred to as MVP 3 in MISO's MVP portfolio. The development of MVP 3 is closely tied to MVP 4, which is also being proposed by ITC Midwest and MidAmerican.[6] Together, MVPs 3 and 4 provide new pathways to help power flow from western Minnesota and Iowa to eastern Iowa, along with providing reliability and congestion relief benefits. The analysis herein relies on MISO-developed information on changes in system resources for MVPs 3 and 4 combined. As a result, the locational marginal price (LMP) results that are reported reflect the combined effects of both MVPs 3 and 4.[7]

---

[3] Midwest Indep. Transmission Sys. Operator, Inc., 133 FERC ¶ 61,221 at Para 3 (Dec. 16, 2010 Order).

[4] In Minnesota, ITC Midwest's existing Lakefield Junction Substation will be expanded for a new 345 kV line to be constructed between the substation and a new Huntley Substation, proposed to be located south of the existing Winnebago Junction Substation. The Winnebago Junction Substation will be removed and the four existing 161 kV lines connecting to Winnebago Junction will be re-connected to the Huntley Substation. From Huntley, the 345 kV transmission line will run south to cross the Minnesota/Iowa border and connect first to a new ITC Midwest Ledyard Substation, and then to a new Kossuth County Substation owned by MidAmerican Energy Company ("MidAmerican"), both in Kossuth County, Iowa. Details on the route taken by the Project, and new and modified changes to substations and transformers, are provided in Section 2.3 of Chapter 2, Project Description and Regulatory Overview. The expected total cost of the Project is approximately $271 to $283 million (plus or minus 30 percent.) Chapter 2, Project Description and Regulatory Overview.

[5] As a part of MVP 3, MidAmerican is proposing to (1) construct a 345 kV connection that runs from the Kossuth County Substation south to its existing Webster Substation, near Fort Dodge, Iowa, and (2) construct a 345 kV line running west from the Kossuth County Substation to its new O'Brien Substation, near Sanborn, Iowa.

[6] MVP 4 includes new transmission infrastructure that runs across Iowa through Winco, Lime Creek, Emery, Blackhawk and Hazelton.

[7] Changes in wind generation capacity resulting from a failure to construct MVPs 3 and 4 (in comparison to a base case where all 17 MVPs are constructed) are described in greater detail in Appendix A.

2. METHODOLOGY

Wholesale electricity price changes resulting from MVPs 3 and 4 have been examined using the PROMOD IV (PROMOD) market simulation model. PROMOD, which is marketed by Ventyx, simulates the operation of the regional generation and transmission system, in so doing reflecting a variety of generator operating characteristics and constraints, and transmission system topology and limits. Among other things, PROMOD allows the estimation of time-varying LMPs [8] under different sets of operating conditions and infrastructure development. The PROMOD analysis and the data set employed are described more fully in Appendix A. The PROMOD market simulation model and the data set employed are identical to those used by MISO in the MISO MVP Report assessing the 17 projects in the MVP portfolio package.

The hour-by-hour LMP values produced by the PROMOD analysis were used, along with the amount of load served from each of the pricing nodes, to develop load-weighted average wholesale energy prices. These load weighted prices were determined for Minnesota taken as a whole and for each of the eight individual Minnesota load-serving entities (LSEs) that are represented in the PROMOD database.[9] Appendix A provides further detail on these computations. The PROMOD analysis uses a "base case" in which all 17 projects in the MVP portfolio except MVPs 3 and 4 are assumed to be in service, and computes LMP differences between that base case and a "study case" in which all 17 MVPs are assumed to be in service. The difference between the load-weighted average electric energy prices without MVPs 3 and 4 (base case) and the load-weighted average electric energy prices with MVPs 3 and 4 (study case) then represents the wholesale energy price effect from implementing MVPs 3 and 4. If this difference is negative, as turns out generally to be the case, then this is an indication that MVPs 3 and 4 will lower average wholesale electric energy prices in Minnesota. The annual change in total wholesale market energy payments for Minnesota load is calculated by multiplying these differences by total Minnesota load.

The PROMOD analyses were run for two future study years, 2021 and 2026, using two different scenarios for each year. These scenarios, which are described further below and which were also used in the MISO MVP Report, contain different assumptions about load growth. The geographic region covered by the PROMOD analysis includes a large portion of the Eastern Interconnection,[10] including all of MISO

[8] In MISO, electricity prices are developed for individual "nodes" on the system. These location-specific "nodal" prices commonly are referred to as locational marginal prices or LMPs. Differences in LMPs from location to location occur because of differences in marginal losses as well as the presence of congestion. When congestion is present, it is not possible fully to exploit differences in marginal generating costs at different locations and LMPs in transmission-constrained areas will rise above LMPs outside those transmission-constrained areas.

[9] These eight Minnesota LSEs are Alliant West—Interstate Power & Light, Dairyland Power Cooperative, Great River Energy, Minnesota Power and Light Company, Minnkota Power Cooperative, Northern States Power Company, Otter Tail Power Company and Southern Minnesota Municipal Power Agency. All but three of these entities also have retail load in states other than Minnesota, requiring the development of a means to unbundle the Minnesota portion of the LMP effects.

[10] The Eastern Interconnection includes roughly the eastern two-thirds of the "lower 48" (with the exception of portions of Texas) plus Canadian provinces to the east of Alberta.

and the footprint of the adjacent PJM Interconnection and other directly and indirectly interconnected systems.

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 capacity requirements and prices. Focusing just on 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.

The following two scenarios were included:

(i) Business as Usual: Low Demand—assumes the continuation of current energy policies and continuing "recession-level" demand and energy growth; and

(ii) Business as Usual: High Demand—assumes the continuation of current energy policies and a return to pre-recession demand and energy growth levels.

These two scenarios are described more completely in Appendix A, attached.

The PROMOD analysis relies on the same data used by MISO in its economic analysis of the MVP portfolio. These data include information on customer loads, transmission infrastructure, forecasted fuel prices, and existing and new generation resources. Similarly, the Business as Usual: Low Demand and Business as Usual: High Demand scenarios analyzed were also analyzed by MISO in the MISO MVP Report (in addition to other scenarios that MISO examined). The assumptions regarding customer demand and energy growth, fuel prices, wind penetration and carbon prices are the same as employed by MISO. New renewable resources are added so that each state in the MISO region can comply with its state Renewable Portfolio Standards. Aside from MVPs 3 and 4, the only difference between the study case and the base case is the quantity of wind power assumed. As discussed more fully in Appendix A, the quantity of wind power resources is reduced in the base case based on MISO's determination that fewer wind resources can be reliably supported without the construction of MVPs 3 and 4.

3. RESULTS

The estimated price impacts arising from the Project are reported in Tables 1 to 3. Table 1 shows the price impacts in each of the study years for Minnesota taken as a whole, for each of the two scenarios evaluated. Tables 2 (Business as Usual: Low Demand) and 3 (Business as Usual: High Demand) then provide the results for the individual Minnesota LSEs.[11] As indicated, Table 1 shows the weighted average prices for Minnesota for each of the two scenarios evaluated. The weighted average prices shown reflect each of the eight Minnesota LSEs represented in PROMOD, with weightings in turn reflecting the portion of each company's load that is in Minnesota. In the Business as Usual: Low Demand case for 2021, the Minnesota average LMP is $27.95 with MVPs 3 and 4 in service and $28.66

[11] The LSEs for which weighted average LMPs are estimated include some that serve only Minnesota customers and others that serve customers in Minnesota and other states. Tables 2 and 3 provide an estimate of the share of each LSE's total load that is accounted for by Minnesota customers developed using data from the Energy Information Administration.

without MVPs 3 and 4 in service. The results indicate a weighted average LMP reduction of $0.70 per MWH from the implementation of MVPs 3 and 4, or 2.4%. In the Business as Usual: High Demand case, the weighted average LMP in 2021 is reduced by $0.61 per MWH from the implementation of MVPs 3 and 4, or 1.7%. When these weighted average LMP reductions are multiplied by Minnesota load levels, the resulting change in annual wholesale energy payments for those Minnesota loads range from $48.3 million for the 2021 Business As Usual: High Demand Case to $76.6 million for the 2026 Business As Usual: High Demand Case.

Table 2 reports, for the Business As Usual: Low Demand Case, the load weighted LMPs for each Minnesota LSE with and without MVPs 3 and 4. Table 3 reports similar figures for the Business as Usual: High Demand Case. The price effects vary across companies and generally show significant price decreases for all LSEs across study years and growth scenarios after the inclusion of MVPs 3 and 4. The principal exception, Dairyland Power Cooperative, which has only about 12 percent of its load in Minnesota, experiences a slight price increase in both scenarios in the 2026 analysis (but not the 2021 analysis). The largest (beneficial) price impacts are for the Southern Minnesota Municipal Power Agency (SMMPA). For example, as shown in Table 2, for SMMPA in 2021 the average LMP is $26.54 with MVPs 3 and 4 in service, and $27.73 without MVPs 3 and 4 in service. Thus, the effect of MVPs 3 and 4 is to lower average LMPs for SMMPA by $1.19, or 4.3% in 2021. (The effects are similar for the Business as Usual: High Demand Case shown in Table 3.) The smallest price impacts are for Dairyland Power Cooperative. For Dairyland, in 2021, for the Business as Usual: Low Demand Case, the average LMP is $30.96 with MVPs 3 and 4 in service, and $31.11 without MVPs 3 and 4 in service. Thus, the effect of implementing Projects 3 and 4 is to lower LMPs by $0.15, or 0.5%.

Table 1
LMP Changes From MVPs 3 and 4
Minnesota

		Load Weighted LMP ($ per MWh)			
	Year	With MVPs 3 and 4	Without MVPs 3 and 4	LMP Change	Percent Difference
		[A]	[B]	[C] = [A] - [B]	[D] = [C]/[B]
Business as Usual: Low Demand	2021	$27.95	$28.66	-$0.70	-2.4%
	2026	$31.15	$31.86	-$0.71	-2.2%
Business as Usual: High Demand	2021	$34.47	$35.08	-$0.61	-1.7%
	2026	$45.21	$46.11	-$0.90	-2.0%

Notes:
[1] Both scenarios include all other projects in the MVP portfolio.

Table 2
LMP Changes From MVPs 3 and 4
Business as Usual: Low Demand

Area	Percent of Sales in Minnesota	Year	Load Weighted LMP ($ per MWh) With MVPs 3 and 4	Without MVPs 3 and 4	LMP Change	Percent Difference
			[A]	[B]	[C] = [A] - [B]	[D] = [C]/[B]
Alliant West - Interstate Power & Light	5.5%	2021	$29.08	$29.56	-$0.48	-1.6%
		2026	$33.07	$33.25	-$0.18	-0.5%
Dairyland Power Cooperative	11.5%	2021	$30.96	$31.11	-$0.15	-0.5%
		2026	$35.51	$35.04	$0.48	1.4%
Great River Energy	99.6%	2021	$27.47	$28.27	-$0.80	-2.8%
		2026	$29.82	$30.67	-$0.85	-2.8%
Minnesota Power and Light Company	100.0%	2021	$28.22	$28.79	-$0.57	-2.0%
		2026	$31.41	$32.06	-$0.66	-2.1%
Minnkota Power Coop	45.1%	2021	$30.22	$30.71	-$0.49	-1.6%
		2026	$34.44	$35.20	-$0.76	-2.2%
Northern States Power Company	74.8%	2021	$27.91	$28.61	-$0.70	-2.4%
		2026	$31.44	$32.15	-$0.70	-2.2%
Otter Tail Power Company	48.4%	2021	$28.53	$29.13	-$0.60	-2.0%
		2026	$31.02	$31.76	-$0.74	-2.3%
Southern Minnesota Municipal Power Agency	100.0%	2021	$26.54	$27.73	-$1.19	-4.3%
		2026	$28.60	$29.42	-$0.82	-2.8%

Notes:
[1] Percent of sales in MN is calculated using data from 2011 Form EIA-861.
[2] Both scenarios include all other projects in the MVP portfolio.

Table 3
LMP Changes From MVPs 3 and 4
Business as Usual: High Demand

Area	Percent of Sales in Minnesota	Year	Load Weighted LMP ($ per MWh) With MVPs 3 and 4	Load Weighted LMP ($ per MWh) Without MVPs 3 and 4	LMP Change	Percent Difference
			[A]	[B]	[C] = [A] - [B]	[D] = [C]/[B]
Alliant West - Interstate Power & Light	5.5%	2021	$32.46	$33.34	-$0.89	-2.7%
		2026	$39.62	$40.63	-$1.01	-2.5%
Dairyland Power Cooperative	11.5%	2021	$36.04	$36.27	-$0.23	-0.6%
		2026	$44.84	$44.31	$0.53	1.2%
Great River Energy	99.6%	2021	$33.58	$34.37	-$0.79	-2.3%
		2026	$42.40	$43.52	-$1.11	-2.6%
Minnesota Power and Light Company	100.0%	2021	$33.77	$34.36	-$0.59	-1.7%
		2026	$42.00	$42.90	-$0.90	-2.1%
Minnkota Power Coop	45.1%	2021	$36.01	$36.57	-$0.56	-1.5%
		2026	$44.87	$45.95	-$1.08	-2.4%
Northern States Power Company	74.8%	2021	$35.19	$35.68	-$0.49	-1.4%
		2026	$48.10	$48.91	-$0.82	-1.7%
Otter Tail Power Company	48.4%	2021	$33.97	$34.64	-$0.67	-1.9%
		2026	$41.00	$42.18	-$1.18	-2.8%
Southern Minnesota Municipal Power Agency	100.0%	2021	$31.55	$32.84	-$1.30	-4.0%
		2026	$38.60	$39.53	-$0.93	-2.3%

Notes:
[1] Percent of sales in MN is calculated using data from 2011 Form EIA-861.
[2] Both scenarios include all other projects in the MVP portfolio.

Appendix A

PROMOD Modeling and Data

This appendix provides a summary of the PROMOD IV (PROMOD) model, data and assumptions used in analyzing the Minnesota-Iowa 345 kV Transmission Project in Jackson, Martin, and Faribault Counties, Minnesota (the Project), and the methodology for estimating the effect of the Project on wholesale electric energy prices in Minnesota.

1. THE PROMOD MODEL

PROMOD is an electric market simulation model marketed by Ventyx. PROMOD provides a geographically and electrically detailed representation of the topology of the electric power system, including generation resources, transmission resources, and load. This detailed representation allows the model to capture the effect of transmission constraints on the ability to flow power from generators to load, and thus calculates Locational Marginal Prices (LMPs) at individual nodes within the system. PROMOD and similar dispatch modeling programs are used to forecast electricity prices, understand transmission flows and constraints, and predict generator output. It can also perform and support various reliability analyses, including calculation of loss-of-load probability, expected unserved energy, and effective capacity support.

2. DATA AND ASSUMPTIONS

The analysis relies on data developed by the Midwest Independent Transmission System Operator, Inc. (MISO) in its Multi Value Project (MVP) process. A detailed description of MISO's MVP process and data analysis is provided in the MVP Report.[12] As described by MISO, the principal purposes of the MVPs are "to meet one or more of three goals: reliably and economically enable regional public policy needs; provide multiple types of economic value; and provide a combination of regional reliability and economic value."[13] To identify these transmission projects, MISO has performed detailed economic and engineering analyses of many alternative transmission projects and portfolios using PROMOD. The analyses herein are based on the same data sets and analyses developed by MISO to perform its analysis.

The data and assumptions used by MISO in its MVP analysis are based on Ventyx-provided data, and have been modified as needed by MISO. These data include:

---

[12] MISO, Multi Value Project Portfolio: Results and Analyses, January 10, 2012 (hereafter "MVP Report").

[13] MISO website, available at https://www.midwestiso.org/Planning/Pages/MVPAnalysis.aspx, accessed November 6, 2012.

1. load forecasts provided by individual utilities within MISO,[14]
2. transmission line data from transmission operators,[15]
3. unit specifications for existing generation resources,[16]
4. new generation resources based on units planned and under construction,[17]
5. future generation resource additions developed by a capacity expansion model,[18]
6. retirement of generation facilities based on currently announced retirements, but not in response to economic or regulatory factors, including EPA regulation,[19]
7. "hurdle rates" for transactions between NERC regions,[20] and
8. fuel and emission price forecasts.

The system modeled includes individual generator data and complete transmission information for the Eastern Interconnection,[21] at the bus[22] level.

---

[14] Demand and energy growth rates for each region are provided in: MISO, *MISO Transmission Expansion Plan 2011: PROMOD Case Assumptions Document*, p 23 ("MTEP PROMOD Assumptions" hereafter).

[15] Transmission constraints are based on the most recent Book of Flowgates from MISO and North American Electric Reliability Corporation (NERC), updated to include rating and configuration changes from studies performed during the MTEP 11 process. Transmission line data includes items such as the voltage rating of the line and the buses that each line runs between.

[16] Individual unit specifications include maximum operating capacity; fuel type; variable costs; no-load and startup costs; minimum run times; emission rates; and heat rate curves.

[17] Detailed information on the existing, under construction and planned units in each region is provided in MTEP PROMOD Assumptions, p 17.

[18] MISO relies upon the Electric Generation Expansion Analysis System (EGEAS) model developed by the Electric Power Research Institute. EGEAS is designed to find the optimized capacity expansion plan to meet forecast demand (load plus planning reserve margin target minus losses) through a least cost-mix of supply-side and demand-side resources. Planning reserve margins are identified in MTEP PROMOD Assumptions, pp 23-24.

[19] As part of MTEP 2011, MISO has performed an EPA Regulation Impact Analysis that identifies planning needs arising from the retirement of coal-fired generation facilities due to EPA regulations and other market factors (*e.g.*, competition from natural gas-fired generation). Aside from those already announced, MISO's MVP analysis does not incorporate any retirements of coal-fired generation.

[20] PROMOD allows power to flow between regions based on economic transactions (subject to security constraints and congestion) such that prices must exceed generator costs in a neighboring region by a dollar per MWh "hurdle rate" in order for power to flow across regions.

[21] The Eastern Interconnection comprises roughly the eastern two-thirds of the "lower 48" (excluding portions of Texas), including the Canadian provinces east of Alberta and the following NERC regions: Midwest Reliability Organization (MRO), Southwest Power Pool (SPP), SERC Reliability Corporation (SERC), Florida Reliability Coordinating Council (FRCC), Reliability*First* Corporation (RFC), and Northeast Power Coordinating Council (NPCC). MISO's PROMOD modeling excludes Peninsular Florida, New England, and Eastern Canada, but

The quantity and location of future renewable resources, including wind and solar, are determined by MISO both to meet state RPS requirements and reduce the combined cost of renewable and transmission resources.[23] Based on these requirements, MISO's analysis assumes that 8,765 MW of new wind resources are added in 2021, and an additional 2,272 MW of new wind resources are added by 2026.[24]

MVPs 3 and 4 represent two separate projects within the MVP portfolio.[25] These two projects are listed in Table A1, and are shown geographically in Figure A1. The analysis herein compares scenarios with and without MVPs 3 and 4. Both scenarios include all of MISO's other (*i.e.*, non-MVPs 3 and 4) MVP projects.[26] Apart from the presence of MVPs 3 and 4 themselves, the only other difference between the "with MVPs 3 and 4" and "without MVPs 3 and 4" cases is the capacity of wind resources in service. In the "without MVPs 3 and 4" case, the quantity of new wind resources has been reduced because the transmission system cannot support all new MVP wind resources without introducing reliability risks. Unless new wind additions are reduced from "study case" levels (where all 17 MVPs are assumed in service), power flows may exceed line capacities under certain contingencies. To determine the quantity of wind capacity that can be supported, MISO performs an analysis that identifies the minimum quantity of wind capacity curtailments that allow line loading to be kept within limits.[27] Based on MISO's analysis, there is 1,740 MW less wind capacity in cases "without MVPs 3 and 4" than in cases "with MVPs 3 and 4".[28]

---

accounts for aggregate regional flows to and from these areas through the use of fixed transactions. For more detail, see MTEP PROMOD Assumptions, p 24.

[22] A bus is the specific geographical point that a generator is located at or that a transmission line connects to.

[23] MISO determined the amount of wind enabled by the MVP portfolio by first determining the amount of wind needed to meet RPS targets, and then determining what amount of wind would not be supported but for the MVP portfolio. This process is detailed by MISO in the MVP Report, pp 17-20 and 48-49.

[24] Table 4.2, MVP Report. MISO also finds that the MVP portfolio can support an additional 2,230 MW of additional wind power from the wind zones without incurring additional reliability constraints. MVP Report, pp 48-49.

[25] These two are: (1) Lakefield Jct. –Winnebago–Winco–Burt area & Sheldon–Burt area–Webster and (2) Winco–Lime Creek–Emery–Black Hawk–Hazleton.

[26] These "other" MVPs are identified in Table 1.1 of the MVP Report.

[27] For further detail on this analysis, see MVP Report at p 48.

[28] Direct communication with MISO, March 7, 2013. For more detail, see MVP Report at pp 17-18.

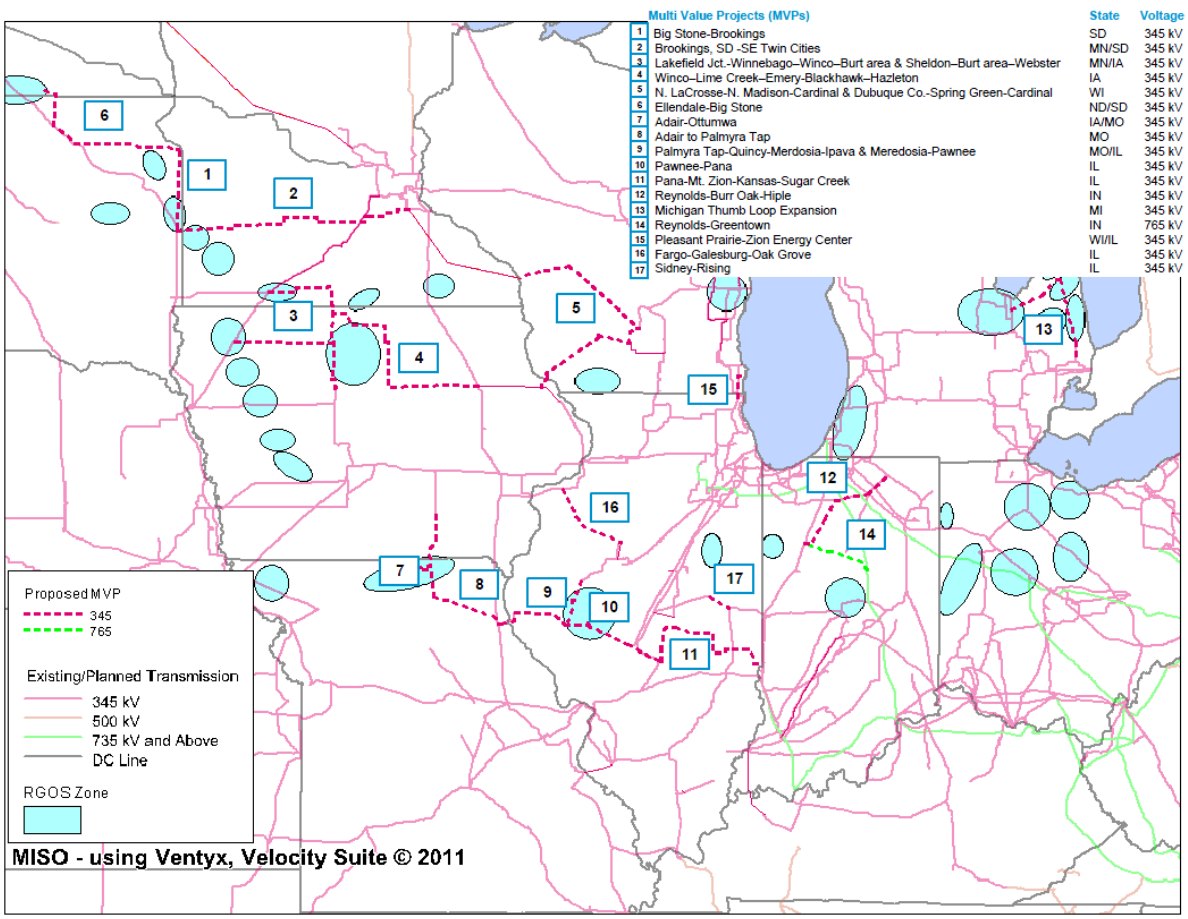
Table A1

Project Elements

MVP Element	Project	Voltage	In-Service Year
3	Lakefield Jct.–Winnebago–Winco–Burt area & Sheldon–Burt area–Webster	345	2016
4	Winco–Lime Creek–Emery–Black Hawk–Hazleton	345	2015

Figure A1

Map of MVP Portfolio



3. ANALYTICAL METHOD

The analysis estimates the change in wholesale electric energy prices, measured through LMPs, as a result of implementing MVPs 3 and 4, and the resulting change in annual wholesale energy payments for Minnesota. Computation of wholesale electric energy prices and annual payments is based on two outputs from the PROMOD model: area LMPs and area loads. Within PROMOD, areas generally correspond to the service territories of load-serving entities. A "Minnesota area" as used below refers to a PROMOD area that includes some portion of Minnesota. The process used to develop changes in wholesale energy prices is as follows:

1. Area LMPs are calculated by PROMOD and reflect the load-weighted LMP of all nodes within the area.
2. Area load is based on the PROMOD inputs developed by MISO, and reflects hour-by-hour load forecasts for individual areas within MISO.[29] The hourly area LMP is weighted by the hourly area load to calculate the annual cost of wholesale electric energy for each area across all hours in the year.[30] For areas that include portions of both Minnesota and one or more neighboring states, the Minnesota area LMPs are assumed to equal the prices across the entire area.
3. A Minnesota load-weighted LMP is calculated, which reflects each Minnesota area's weighted average LMP and each Minnesota area's load. Because some Minnesota areas include portions of both Minnesota and one or more neighboring states, an adjustment must be made to the MISO area loads to estimate the quantity of load only inside Minnesota. To make this adjustment, the percent of each area's load that is in Minnesota is calculated. These percentages, which are reported in Tables 2 and 3, are developed using data from the Energy Information Administration.[31] To calculate the Minnesota area load, each area's total load is multiplied by the percent of that area's load that is in Minnesota. To calculate the load-weighted LMP for Minnesota, each Minnesota area's LMP, calculated as described above in #2, is weighted by the estimated load for each Minnesota area, as described above.
4. The change in annual wholesale energy payments for Minnesota is calculated by multiplying the total Minnesota load, based on the calculations noted in #3 above, and the change in LMP between the "with MVPs 3 and 4" and "without MVPs 3 and 4".

---

[29] These loads reflect forecasts for annual peak load and annual energy shaped over 8,760 hours.

[30] Hours in which the LMP for a Minnesota area is less than -$10/MWh are dropped for the purposes of calculating an annual load-weighted average LMP. Hours in which the LMP for a Minnesota area is greater than $1,000/MWh are capped at $1,000/MWh.

[31] See Form EIA-861 data files, available at http://www.eia.gov/electricity/data/eia861/index.html, accessed September 20, 2012.

4. SCENARIOS

The results presented in the body of this report reflect two scenarios, which are detailed below and in Table A2. Each scenario was designed by MISO in its MVP portfolio analysis, and no additional changes have been made. The definitions are provided by MISO in its MVP portfolio analysis report.[32]

- **Business As Usual: Low Demand –** assumes that current energy policies will be continued, with continuing recession level low demand and energy growth projections.[33]
- **Business As Usual: High Demand –** assumes that current energy policies will be continued, with demand and energy returning to pre-recession growth rates.[34]

Table A2

Scenario Assumptions[35]

Future Scenarios	Wind Penetration	Effective Demand Growth Rate	Effective Energy Growth Rate	Gas Price	Carbon Cost / Reduction Target
Business As Usual: Low Demand	State RPS	0.78 percent	0.79 percent	BAU	None
Business As Usual: High Demand	State RPS	1.28 percent	1.42 percent	BAU	None

[32] MVP Report, p 52.

[33] Note that the MVP Report titles this case "Business As Usual with Continued Low Demand and Energy Growth (BAULDE)."

[34] Note that the MVP Report titles this case "Business As Usual with Historic Demand and Energy Growth (BAUHDE)."

[35] Table A2 is based on Table 8.1 from the MVP Report.