

**PRE-STUDY COMMENTS OF IOWA UTILITIES BOARD ON  
DOE 2012 ELECTRIC TRANSMISSION CONGESTION STUDY**

**JANUARY 2012**

The Iowa Utilities Board (Board) is pleased to provide these comments as the Department of Energy (DOE) commences its next transmission congestion study (2012). These comments are organized to give DOE a perspective on electric transmission issues in Iowa - transmission planning, congestion, and siting.

Iowa has been a leader in wind generation installation as well as manufacturing of wind turbines. Iowa has the second most installed wind capacity of any state. Since the DOE 2009 congestion study, Iowa added 884 MW of wind generation in 2009 -2010. MidAmerican Energy Company (MidAmerican), an Iowa investor owned utility added 593.5 MW in 2011 and plans to add another 407 MW by the end of 2012. This means, by the end of 2012, MidAmerican will have 2,284 MW of wind generated capacity, the most of any investor-owned utility in the U.S. In 2011, more than 43,000 MW of wind generation was added nation-wide. Of this, 14,969 MW of wind generation was added in the Midwest. Pursuit of wind resource installations is well underway in Iowa and should be considered in the DOE study.

There are two utilities in Iowa that own transmission lines – MidAmerican, and ITC Midwest LLC (ITCM). MISO has operational control of transmission lines in the Midwest, including transmission lines owned by MidAmerican and ITCM. MISO has an elaborate stakeholder process that is used to develop its regional transmission plan, Midwest Transmission Expansion Plan or MTEP. Midwest regulators participate in the MISO planning process through the Organization of MISO States (OMS). Iowa regulators actively participate in MISO processes through OMS.

All new generators in the Midwest have to join the interconnection queue managed by MISO and request interconnection. MISO has been working to improve its generation interconnection queue process. Currently approximately 9,500 MW of generation in Iowa is in the MISO interconnection queue. Economic congestion studies are a part of MISO's planning process. Specifically, MISO's annual top congested flowgate study identifies and implements processes for transmission upgrades to mitigate or remove congestion. Different areas of an electric system experience capacity limits at different times when new generation is injected, deliveries are required for existing or new loads, or energy markets are enhanced. DOE should factor in the regional and state processes that are being implemented to efficiently plan transmission.

Iowa continues to make progress in planning for the transmission needs of Iowa's electric consumers as well as for the development of transmission in the region. Specific Board activities related to transmission in Iowa are discussed in a later section. Iowa hosted the Midwestern Governors Association meeting, the *Transmission Collaboration: Midwestern Current and Future Success*, in September 2011, to highlight recent regional accomplishments, discuss the benefits of regional collaborative efforts and to continue the discussion on overcoming upcoming transmission challenges and the methods to fully leverage Midwestern energy opportunities and assets. Iowa regulators are actively involved in the Eastern Interconnection States' Planning Council (EISPC) which is working to evaluate transmission development options throughout the eastern interconnection.

## **DOE QUESTIONS**

### **1. *Pertinent studies in the region***

#### **MISO Top Congested Flowgate Studies**

Annually MISO conducts the “Top Congested Flowgate Study” that identifies points of congestion in MISO footprint and neighboring systems and evaluates transmission solutions to mitigate the identified congestion. These solutions are then assessed for either cross-border or internal cost sharing.

For 2011, the objective of the MTEP11 Top Congested Flowgate Study was expanded to identify and implement transmission upgrades to relieve congestion associated with MISO market footprint and RTO seams flowgates. This study was a combined effort of the MISO Top Congested Flowgate Study and Cross Border Top Congested Flowgate Study. Study results are due to be published in March 2012.

DOE should give consideration to the historical MISO Top Congested Flowgate Studies as well as the upcoming flowgate study.

#### **EISPC**

During 2012, EISPC, along with the Argonne National Laboratory, Oak Ridge National Laboratory, and the National Renewable Energy Laboratory will be completing its clean energy zone studies. DOE should give consideration to this clean energy study information when it becomes available.

#### **Environmental Protection Agency (EPA) Rules Impact Studies**

New EPA rules are expected to increase the number of coal-fired power plants that will be retired early or temporarily shut down to install compliance equipment in the next several years. This has led to concerns that the grid could face reliability issues. It is important that the impact of these new regulations be factored in future studies that are conducted to analyze transmission congestion. DOE should consider the following:

NERC Studies:

2010 Special Reliability Scenario Assessment: Resource Adequacy Impacts of Potential U.S.

Environmental Regulations:

[http://www.nerc.com/files/EPA\\_Scenario\\_Final\\_v2.pdf](http://www.nerc.com/files/EPA_Scenario_Final_v2.pdf).

2011 Long-term Reliability Assessment

[http://www.nerc.com/files/2011%20LTRA\\_Final.pdf](http://www.nerc.com/files/2011%20LTRA_Final.pdf)

MISO EPA Impact Studies:

<https://www.misoenergy.org>

Board Notice of Inquiry – Utility Coal Plant Planning – IUB docket No. NOI-2011-0003:

<https://efs.iowa.gov/efs/ShowDocketSummary.do?docketNumber=NOI-2011-0003>

## **Multi Value Project Portfolio – Results and Analysis**

On November 22, 2011, MISO issued its report on the multi value project (MVP) portfolio. The recommended portfolio included 17 projects in the MISO region. Three 345 kV projects were recommended for the state of Iowa. The MVP portfolio was approved by the MISO Board of Directors on December 8, 2011. DOE should factor this analysis in its congestion study.

<https://www.misoenergy.org/Library/Repository/Study/Candidate%20MVP%20Analysis/MVP%20Portfolio%20Analysis%20Full%20Report.pdf>

### **2. *Iowa agency actions since the 2009 study***

#### **Iowa Transmission Siting**

The Board has the authority to grant or deny franchises to a person (utility companies) so they can construct, maintain, and operate 69 kV and above electric transmission lines in Iowa. (Iowa Code § 478.1). The Board does not have authority over transmission lines that run inside of city limits. To obtain a franchise, an applicant must show that the proposed transmission line is necessary to serve a public use and is reasonably related to an overall plan of transmitting electricity in the region. The applicant can also request a right of eminent domain.

#### **Ames Proposal:**

On January 13, 2010, Ames Municipal Electric System (Ames) filed petitions with the Board requesting franchises to construct, maintain, and operate a total of 20.35 miles of 161 kV electric transmission line in Polk and Story Counties. The petitions are identified as Docket No. E-21988 (Polk County) and E-21989 (Story County). As proposed, the transmission line would begin at an existing Ames substation located within the city limits of Ames in Story County and end at MidAmerican's northeast Ankeny substation located just inside the city limits of Ankeny. The hearing in the case was held on December 8 and 9, 2011. Post-hearing initial briefs are due January 18, 2012, and post-hearing reply briefs are due February 3, 2012. A proposed decision is expected in March.

<https://efs.iowa.gov/efs/ShowDocketSummary.do?docketNumber=E-21988>

#### **Salem-Hazleton Line/ ITC Midwest proposal:**

On June 1, 2011, the Board approved the necessary electric line franchises for ITCM to construct a 345 kV transmission line from the Salem Substation in Dubuque County, Iowa to the Hazleton Substation in Buchanan County, Iowa (Docket Nos. E-21948, E-21948, E21950, and E-21951). The area where the line is being constructed is part of an area that has been designated a Narrow Constrained Area by the MISO Independent Market Monitor. The Board's June 1, 2011, order has been appealed by affected landowners and the Iowa Office of Consumer Advocate. The appeal will be heard in the Dubuque County District Court. Briefs are being filed and the oral argument is scheduled for March 2012.

<https://efs.iowa.gov/efs/ShowDocketSummary.do?docketNumber=E-21948>

#### **Various Board E-dockets:**

Since 2009, the Board has issued franchises for the construction of 90 miles of new 345 kV lines, 130 miles of new 161 kV lines, approximately 100 miles of upgrading of existing 115 kV to 161 kV lines, and 340 miles of new 69 kV line construction (much of it related to upgrade of 34.5 kV to 69 kV).

## **Transmission Notice of Inquiry (Docket No. NOI-2011-0002)**

On August 16, 2011, the Board opened an inquiry to gather information regarding planned major transmission projects in Iowa, including the potential Iowa rate impacts and how the projects may reduce transmission congestion in Iowa, improve delivery of low-cost generation to market, and impact reliability of transmission service. The Board has received initial and reply comments from several parties. <https://efs.iowa.gov/efs/ShowDocketSummary.do?docketNumber=NOI-2011-0002>

### **3. *Metrics for transmission congestion***

Transmission congestion is a multi-faceted issue. Congestion in different regions may be caused by different factors. The DOE is urged to consider each region's operational challenges and system characteristics. Congestion metrics for the region are calculated by MISO. <https://www.misoenergy.org>

### **4. *Obstacles to removal or mitigation of significant congestion***

Siting and permitting of transmission lines is sometimes seen as an obstacle because it can result in delays which increases project costs and schedules – especially for those involving multiple states. It should be noted that Iowa law allows for consideration of public interest issues as well consideration of an overall plan for transmission in the region in its transmission line franchise process and this has generally helped the decision making process in Iowa.

A balanced and equitable cost allocation mechanism for new transmission is a key driver in the infrastructure development as it provides financial certainty.

Regional cooperation (for both transmission planning and cost allocation) is important to address transmission issues.

Lack of recognition that new transmission infrastructure not only enhances reliability but can also impact electricity delivery costs by reducing congestion has been a challenging issue that competitive markets are quantifying and developing metrics to measure various aspects of congestion to address this issue.