

**Michigan Planning Consortium**

*Docket Number U-15590*

*Staff Report to the Michigan Public Service Commission*

---

**July 31, 2009**

## **Background**

In July 2008, the Michigan Public Service Commission (MPSC) issued an Order<sup>1</sup> in Case No. U-15590 that established the Michigan Planning Consortium (MPC, or Consortium) to improve the planning process for electricity infrastructure projects and identify possible ways to reduce costs to ratepayers. The Order states in part, "...the public is better served, and the regional planning process is stronger, when there is adequate coordination among different Michigan entities contributing to energy infrastructure planning."<sup>1</sup> The Consortium was created to act as this coordinating agent. In addition, the Order cites FERC Order 890 as requiring "coordinated, open, and transparent transmission planning on both a local and regional level. The nine planning principles adopted by the FERC require coordination with transmission customers, neighboring transmission providers, affected state commissions, and other stakeholders to develop transmission plans."<sup>1</sup> FERC Order 890 processes have undergone refinements and the MPC was established as a complement to that Order.

The Commission Order further directed that the initial goals of the MPC should include the following:

- Ensuring adequate sharing of information throughout the planning process on a local and detailed level.
- Evaluating energy infrastructure alternatives, including, but not limited to proposed transmission projects.
- Examining the cost effects of various alternatives on Michigan customers.
- Recommending the most effective ways for Michigan stakeholders to participate in regional planning processes, and related state and Federal Energy Regulatory Commission (FERC) proceedings, including MPSC Act 30 certification proceedings.

The Commission directed the MPSC Staff to work with involved stakeholders, including, but not limited to, representatives from regional transmission organizations, transmission owners, generation owners, local distribution companies, and alternative energy suppliers. Through the Order, the Commission directed the Consortium to report by July 31, 2009 on its accomplishments, the efficacy of the Consortium in impacting electricity infrastructure improvements, and whether or how the Consortium should continue. This report is a product of the Consortium participants members offered to the Commission to serve as the report directed by the Commission Order.

---

<sup>1</sup> Commission Order in Case No. U-15590, <http://efile.mpsc.state.mi.us/efile/docs/15590/0001.pdf>

## **Formation of the Michigan Planning Consortium**

To start the process, Commission Staff issued a press release for an open kick-off meeting for the Consortium on July 23, 2008. In addition to the press release, a webpage<sup>2</sup> was developed to serve as a communications platform to post materials for upcoming meetings. The kick-off meeting was attended by representatives from Michigan load serving entities, Michigan transmission companies, Midwest ISO (MISO), PJM Interconnection (PJM), Commission Staff, the renewable energy industry, and other interested stakeholders.

At the kick-off meeting, Commission Staff reviewed the contents of the Commission Order that established the MPC. Staff pointed out that the Order did not suggest that the Consortium develop integrated resource plans, nor did it suggest a continuation or updating of the 21<sup>st</sup> Century Energy Plan or the Capacity Needs Forum previously initiated by the Commission. Commission Staff presented the following potential areas for the MPC to focus its work:

- Information sharing
- Planning assumptions
- Evaluation of infrastructure proposals, cost effects, and alternatives
- Coordination between state and regional processes
- Enhancements to the PA 30 certification process
- Other (such as the implementation of new legislation)

The above ideas were presented for discussion only, and feedback and input from the Michigan Planning Consortium participants regarding future areas of focus for the MPC was requested. Commission Staff distributed a proposal for the structure of the Consortium and its possible future activities, and requested written comments and feedback from Michigan Planning Consortium participants on that proposal. Twelve Michigan Planning Consortium participants submitted written comments<sup>3</sup> and these were discussed by the group at the August 26 meeting of the MPC. Parties expressed concerns including jurisdictional issues, the proposed process overlapping existing planning processes, and sharing of confidential information.

Without reaching complete consensus, the group proceeded to have members sign up to participate in three workgroups. The workgroup membership was open to the public and was voluntary. The first workgroup focused on information sharing and local

---

<sup>2</sup> MPC webpage, [http://www.michigan.gov/mpsc/0,1607,7-159-16377\\_47107\\_51195---,00.html](http://www.michigan.gov/mpsc/0,1607,7-159-16377_47107_51195---,00.html).

<sup>3</sup> Comments Received from MPC Participants August 2008, [http://www.dleg.state.mi.us/mpsc/electric/workgroups/mpc/comments\\_received\\_from\\_mpc\\_participants08\\_08.pdf](http://www.dleg.state.mi.us/mpsc/electric/workgroups/mpc/comments_received_from_mpc_participants08_08.pdf).

planning assumptions, tackling such issues as the identification of information gaps and needs of Michigan stakeholders, load forecasting, and the process for developing and evaluating project alternatives. The second workgroup focused on infrastructure expansion for renewables, and based upon the feedback, was expanded to have a focus of infrastructure expansion for all generation including renewables. The third workgroup was formed to look at the proposed extra-high voltage transmission line project proposals through Michigan and the surrounding region, including discussions on the cost and benefits of such projects.

American Transmission Company (ATC) and ITC Holdings Corp (ITC) both presented an overview of their internal planning processes. ITC and ATC each described their planning methodologies and how they comply with FERC Order 890 transparency and open planning requirements, and answered questions from the Consortium participants.

Following the first two MPC meetings where the structure and scope of the MPC was being developed, the Consortium conducted most of its work throughout the year within the three workgroups (Information Sharing and Local Planning Assumptions Workgroup, 765 kV Loop Workgroup, Renewable and Other Generation Integration Workgroup). Web pages<sup>4</sup> were developed on the MPSC website for each of the three separate workgroups and the MPC workgroups generally met on a monthly basis. The following sections describe the discussions and actions that took place within the workgroups.

### **Information Sharing and Local Planning Assumptions Workgroup**

#### **Objective**

The overarching goal of the **Information Sharing and Local Planning Assumptions Workgroup** was to increase information sharing related to electric system planning and to pro-actively discuss and attempt to reach agreement on planning processes, practices, and assumptions. The initial focus of the workgroup was on transmission planning processes at the local and regional levels. Specifically, the workgroup researched, discussed, and convened meetings to accomplish the following:

---

<sup>4</sup> Michigan Planning Consortium Webpage, [http://www.michigan.gov/mpsc/0,1607,7-159-16377\\_47107\\_51195---.00.html](http://www.michigan.gov/mpsc/0,1607,7-159-16377_47107_51195---.00.html);

Michigan Planning Consortium Information Sharing and Local Planning Assumptions Workgroup Webpage, [http://www.michigan.gov/mpsc/0,1607,7-159-16377\\_47107\\_52010-201612--.00.html](http://www.michigan.gov/mpsc/0,1607,7-159-16377_47107_52010-201612--.00.html);

Michigan Planning Consortium 765 kV Loop Workgroup Webpage, [http://www.michigan.gov/mpsc/0,1607,7-159-16377\\_47107\\_52010-201611--.00.html](http://www.michigan.gov/mpsc/0,1607,7-159-16377_47107_52010-201611--.00.html);

Michigan Planning Consortium Renewable and Other Generation Integration Workgroup Webpage, [http://www.michigan.gov/mpsc/0,1607,7-159-16377\\_47107\\_52010-201613--.00.html](http://www.michigan.gov/mpsc/0,1607,7-159-16377_47107_52010-201613--.00.html).

- Improve information sharing among Michigan entities associated with regional and local planning activities, including load forecasting and other planning-related inputs and assumptions.
- Review and discuss applicable planning standards, criteria and assumptions to ensure common understanding of and attempt to reach consensus on how they are applied in Michigan.
- Discuss tools and processes to evaluate resource alternatives, including demand response, generation, distribution, and transmission, in light of Michigan's electric industry structure while being mindful of impacts to cost and the environment.

### Major Activities and Discussions

Discussions of Load Forecasting were among the important activities to occur during the meetings of the Information Sharing Workgroup. Interest in more detail on the various forecasts that are utilized led to the development of a survey that was given to each Michigan Planning Consortium participants. The survey was developed with the intent of gathering answers to those questions for various different load forecasts that are developed by MPC participants. The group sought to gather information that would highlight any differences between various types of load forecasts, such as forecasts developed for corporate purposes, transmission planning purposes or for resource adequacy purposes, and also provide insight into the methodologies, assumptions, and basis used for various load forecasts. The goal of the survey was to gather information and open up the lines of communication between the infrastructure planning participants within Michigan. A copy of the matrix of questions that was distributed to participants is located on the MPC Info Sharing webpage.<sup>5</sup> Responses to the load forecasting survey were received from Alpena Power, ATC, Consumers Energy, Detroit Edison, Indiana Michigan, ITC, MPPA, Michigan South Central Power Agency, PJM, and Wolverine.

An important piece of information that was collected was the name and contact information for individuals from each company regarding load forecasts. As forecasts are updated by planning participants in Michigan, other parties expressed an interest in having a direct contact that would be able to answer questions regarding the updated forecast, including the assumptions that were made to develop the updated forecast. The contact information was requested in order to facilitate answers to questions and further informal discussion surrounding load forecasts between the various planning participants in Michigan.

Survey question number three asked Michigan Planning Consortium participants to describe the primary purpose of each forecast, and also describe any other uses there

---

<sup>5</sup> Information Sharing and Local Planning Assumptions Webpage, [http://www.michigan.gov/mpsc/0,1607,7-159-16377\\_47107\\_52010-201612--00.html](http://www.michigan.gov/mpsc/0,1607,7-159-16377_47107_52010-201612--00.html).

may be for that specific forecast. Several participants reported that one forecast is used for several purposes. For instance, Indiana Michigan reported that one forecast is used for their financial plan, integrated resource plan, and for transmission planning. Consumers Energy also reported that they use one forecast for financial and operational planning including rate cases, PSCR plan, budgets / forecasts, strategic plans, and integrated resource planning.

The survey gathered some detailed information from Michigan Planning Consortium participants regarding the frequency, methodology, extent, and basis for the various electric load demand forecasts. Many different sources and methodologies for developing forecasts were reported by the participants. Some areas where similarities existed between the majority of the responses include:

- Weather, economics, demographics, AC saturation, and historical loads are key drivers of forecasts developed by Michigan Planning Consortium participants.
- Forecasts are updated at least annually (and some more frequently).
- Most entities submit forecasts using a 50/50 confidence interval, especially for longer term resource planning.
- Energy efficiency, demand side resources, and new loads are included only to the extent that they are predictable with reasonable certainty.

Some key differences in the survey responses worthy of noting include:

- Sources and methodologies used to develop forecasts are varied within the State of Michigan and the Midwest region.
- Although Wolverine, ATC and the Midwest ISO roll up the load forecasts that they are provided from load serving entities (LSEs) within their territories, others such as ITC and PJM develop their own forecasts.
- Outside of rate cases or PSCR cases, there is not a consistent location or time to obtain updated load forecasts from other parties.
- Outside of participating in a rate case or PSCR case, there is not any specific process outlined to obtain the underlying details and assumptions that are utilized to develop updated forecasts.
- The level of load forecast uncertainty to use for transmission planning was debated but not fully resolved, although the majority of participants continue to support the use of a 50/50 load forecast for transmission planning. The Midwest ISO did note, that 90/10 forecasts are used in various parts of the Midwest ISO footprint.

The complete set of responses to the load forecasting survey may be found on the MPC Info Sharing Webpage<sup>6</sup>.

Following up on that effort, each Consortium member had the opportunity to present their company's load forecasting methodologies and assumptions. The following is a list of presentations with the date of the presentation, and a link to the presentation as posted on the MPC website:

- ITC – September 18, 2008  
([http://www.dleg.state.mi.us/mpsc/electric/workgroups/mpc/sep18\\_08\\_itc.pdf](http://www.dleg.state.mi.us/mpsc/electric/workgroups/mpc/sep18_08_itc.pdf))
- Midwest ISO – October 28, 2008  
([http://www.michigan.gov/documents/mpsc/oct28\\_08\\_miso\\_planning\\_load\\_forecasts\\_source\\_and\\_applications\\_254255\\_7.pdf](http://www.michigan.gov/documents/mpsc/oct28_08_miso_planning_load_forecasts_source_and_applications_254255_7.pdf))
- Consumers Energy - November 18, 2008  
([http://www.michigan.gov/documents/mpsc/Load\\_Forecasting\\_-\\_Consumers\\_Energy\\_-\\_MPC\\_10-18-08\\_256969\\_7.pdf](http://www.michigan.gov/documents/mpsc/Load_Forecasting_-_Consumers_Energy_-_MPC_10-18-08_256969_7.pdf))
- DTE Energy – January 9, 2009  
([http://www.dleg.state.mi.us/mpsc/electric/workgroups/mpc/infoshare/load-forecasting\\_dte.pdf](http://www.dleg.state.mi.us/mpsc/electric/workgroups/mpc/infoshare/load-forecasting_dte.pdf))
- PJM – February 27, 2009  
([http://www.dleg.state.mi.us/mpsc/electric/workgroups/mpc/infoshare/michigan\\_planning\\_consortium\\_load\\_forecast2.pdf](http://www.dleg.state.mi.us/mpsc/electric/workgroups/mpc/infoshare/michigan_planning_consortium_load_forecast2.pdf))
- I&M – February 27, 2009  
([http://www.dleg.state.mi.us/mpsc/electric/workgroups/mpc/infoshare/indiana\\_michigan\\_power\\_company\\_02\\_09.pdf](http://www.dleg.state.mi.us/mpsc/electric/workgroups/mpc/infoshare/indiana_michigan_power_company_02_09.pdf))
- ITC – February 27, 2009  
([http://www.dleg.state.mi.us/mpsc/electric/workgroups/mpc/infoshare/mpc\\_long\\_term.pdf](http://www.dleg.state.mi.us/mpsc/electric/workgroups/mpc/infoshare/mpc_long_term.pdf))
- Wolverine Power Cooperative – March 27, 2009  
([http://www.dleg.state.mi.us/mpsc/electric/workgroups/mpc/mpsc\\_forecast\\_presentation\\_final.pdf](http://www.dleg.state.mi.us/mpsc/electric/workgroups/mpc/mpsc_forecast_presentation_final.pdf))

From these presentations, Michigan planning participants gained a greater understanding of the load forecasting process, as well as an understanding of each entities' updated forecasts. The workgroup also discussed the possibility of holding annual load forecasting meetings at the MPSC where each participant would make a presentation of their most up-to-date forecast and field questions on the forecast. While each presentation made by the workgroup members was informative, no consensus was reached on any particular forecasting methodology as being more or less appropriate to use on a going-forward basis.

The Midwest ISO also presented on several other topics such as their Resource Adequacy Assessment Standards, the Midwest ISO Transmission Expansion Plan (MTEP) process, and historical operation of the Ludington Pumped Storage facility. The

---

<sup>6</sup> MPC Info Sharing Webpage, [http://www.michigan.gov/mpsc/0,1607,7-159-16377\\_47107\\_52010-201612--00.html](http://www.michigan.gov/mpsc/0,1607,7-159-16377_47107_52010-201612--00.html).

Midwest ISO discussed the MTEP schedule and process with the Information Sharing and Local Planning Assumptions Workgroup, and the specific information for proposed MTEP projects was discussed outside of the Consortium but within the MTEP process.

The Information Sharing and Local Planning Assumptions Workgroup discussed the process for requesting system and grid-based information from the Midwest ISO and raising issues for investigation to the Midwest ISO. The Midwest ISO made a presentation<sup>7</sup> on how to request information from the Midwest ISO and how information requests are tracked through the Midwest ISO by their Stakeholder Relations group. The workgroup discovered that many stakeholders in Michigan were unaware before this presentation of the appropriate method to obtain information from the Midwest ISO.

In October 2008, MPSC Staff produced a document entitled *MPSC Expectations for MTEP 2009*<sup>8</sup> that laid out Staff's positions on how Consortium activities would integrate with established MTEP processes. The MPSC Staff expectations were discussed as a group. In January 2009, ITC, the Midwest ISO, and Wolverine, submitted their own expectations and comments documents<sup>9</sup> in response to the MPSC Staff expectations document. Responses from the participants contend that many improvements have been made to the MTEP process for MTEP 09, based upon the requirements of FERC Order 890 and stakeholder feedback. Midwest ISO's response spoke of the improvements of the MTEP process and also pledged to take some of the concerns raised in the Staff Expectations document into consideration for the current MTEP process.

Consumers Energy and Detroit Edison supplied documentation on "Identification of Information Needs" regarding MTEP projects so that they may be able to evaluate whether or not they may wish to propose alternatives to proposed transmission projects. The transmission owners responded to this information request, to the extent they could, to both Consumers and Detroit Edison.

### Accomplishments

The Information Sharing and Local Planning Assumptions Workgroup was able to recommend some improvements to the Midwest ISO MTEP process. Midwest ISO

---

<sup>7</sup> Midwest ISO presentation on tracking information requests,  
[http://www.dleg.state.mi.us/mpsc/electric/workgroups/mpc/infoshare/work\\_process\\_flow\\_mpsc\\_2\\_09.pdf](http://www.dleg.state.mi.us/mpsc/electric/workgroups/mpc/infoshare/work_process_flow_mpsc_2_09.pdf).

<sup>8</sup> MPSC Staff Expectations Document,  
[http://www.michigan.gov/documents/mpsc/MPSC\\_Expectations\\_for\\_MTEP\\_09\\_254362\\_7.pdf](http://www.michigan.gov/documents/mpsc/MPSC_Expectations_for_MTEP_09_254362_7.pdf).

<sup>9</sup> ITC Expectations Document,  
[http://www.dleg.state.mi.us/mpsc/electric/workgroups/mpc/infoshare/mtep\\_expectations-itc.pdf](http://www.dleg.state.mi.us/mpsc/electric/workgroups/mpc/infoshare/mtep_expectations-itc.pdf),

Wolverine Expectations Document,  
[http://www.dleg.state.mi.us/mpsc/electric/workgroups/mpc/infoshare/mtep\\_expectations-wolverine.pdf](http://www.dleg.state.mi.us/mpsc/electric/workgroups/mpc/infoshare/mtep_expectations-wolverine.pdf).

MISO Expectations Document,  
[http://www.dleg.state.mi.us/mpsc/electric/workgroups/mpc/infoshare/mtep\\_expectations-miso.pdf](http://www.dleg.state.mi.us/mpsc/electric/workgroups/mpc/infoshare/mtep_expectations-miso.pdf).



adopted some of the items from MTEP expectations document and now has proposed deadlines for project submissions, justification documents, and alternative submissions. Stakeholder relations personnel from Midwest ISO have started attending Sub-regional planning meetings (SPMs) and have begun tracking issues raised at the SPMs.

The workgroup served as an educational forum on different forecasting methods used by each participant. This workgroup also increased information sharing among the Michigan stakeholders. Additionally, this workgroup facilitated meetings outside the Planning Consortium among the participants to further discuss the issues highlighted by the group.

### Issues of Note

Although the Information Sharing and Local Planning Assumptions Workgroup was able to open up the lines of communication between Michigan Planning Consortium participants, there were still some areas where the group was unable to reach agreement.

- Operational definitions regarding Ludington Pumped Storage (although a majority of the discussion happened outside of the MPC). The operational definitions will play a role in future transmission operating and planning activities and are being addressed by the owners of Ludington.
- The level of detail shared or not shared regarding underlying assumptions for load forecasts. Consumers Energy and ITC representatives were able to meet outside of the Planning Consortium to discuss underlying assumptions for load forecasts.
- Specific details regarding overloaded transmission elements not being specific enough (such as “overloaded station equipment”.) Some information on these elements has been shared between Consumers Energy, Detroit Edison and ITC.

### 765 kV Loop Workgroup

#### Objective

The original objectives of the 765 kV Loop Workgroup were as follows:

The **765 kV Loop Workgroup** will review existing studies and plans regarding high voltage transmission expansion in lower Michigan, and possibly the Midwest ISO region, including the ITC / AEP proposed 765 kV loop through lower Michigan. The workgroup would then identify the qualitative and quantitative

advantages or implications of the projects, as well as roadblocks to project implementation. This workgroup will investigate quantifying potential reliability or operational benefits of proposed economic transmission projects to determine if they should be included as potential value drivers when analyzing larger scale economic transmission proposals. This workgroup will examine the potential impact of proposed economic transmission projects on the Michigan network and retail customers. Any recommendations developed by this group will be taken forward to the entire Michigan Planning Consortium for consideration.

### Major Activities and Discussions

Much of the initial meetings of the 765 kV Loop Workgroup focused on developing a greater understanding of the existing proposal by ITC and AEP to jointly construct a 765 kV transmission traversing the lower peninsula of Michigan, from AEP's DC Cook Nuclear Power Station in Southwest Michigan, up through the Grand Rapids area, across towards Flint, and down the eastern side of Michigan, where it eventually would cross into Ohio connecting to existing AEP facilities at South Canton and near the Indiana/Ohio border.



ITC presented<sup>10</sup> the Michigan Planning Consortium participants with an overview of the proposed 765 kV project through Michigan, which outlines potential benefits to the region along with some discussion regarding the application of the Midwest ISO's economic benefit metric<sup>11</sup> that is part of the RECB II cost allocation methodology

<sup>10</sup> ITC Presentation on 765 kV loop, [http://www.michigan.gov/documents/mpsc/9\\_18\\_08\\_etc\\_thumm\\_252981\\_7.pdf](http://www.michigan.gov/documents/mpsc/9_18_08_etc_thumm_252981_7.pdf).

<sup>11</sup> RECB II Economic Benefit Metric is discussed in section 4.4.4 of the Midwest ISO Transmission Planning BPM, <http://oasis.midwestiso.org/documents/miso/Transmission%20Planning%20BPM.pdf>.

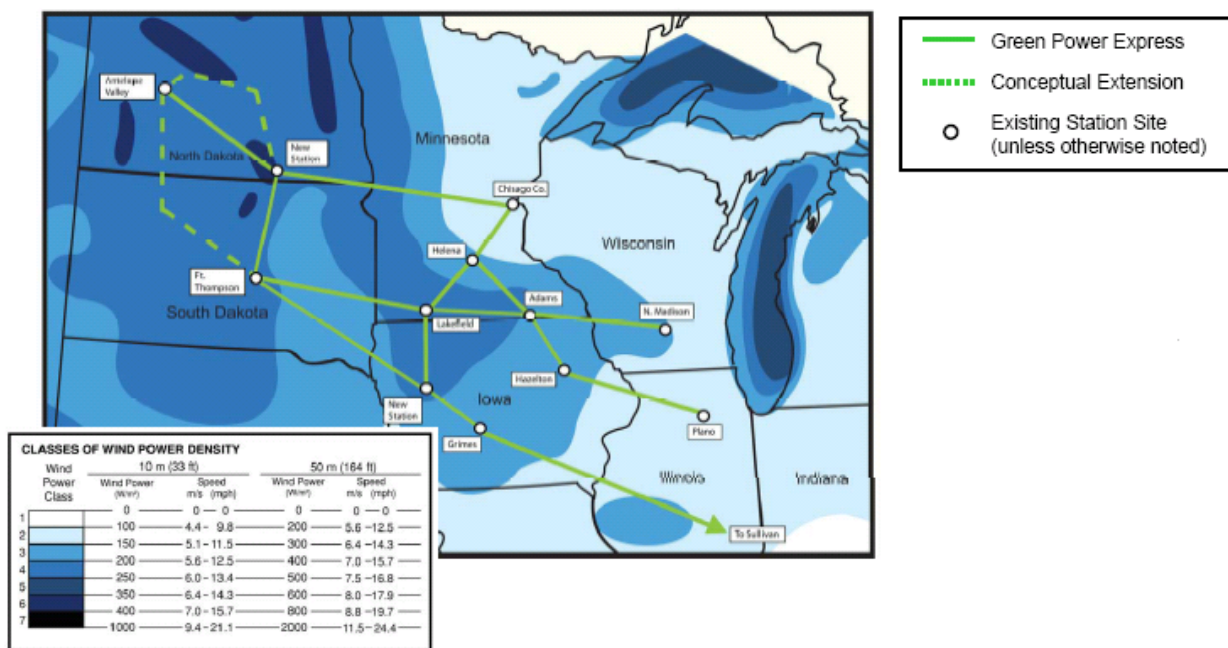
employed by the Midwest ISO for regionally beneficial projects (RBPs). The 765 kV Loop Workgroup examined draft study reports from the Midwest ISO which performed a benefit/cost analysis using the RECB II methodology – one which considers changes in adjusted production cost and locational marginal pricing to derive a benefit from the facility, and compares it to the anticipated cost of the transmission investment. It was noted by some participants that the RECB II analysis is not well suited for the analysis of large Regional projects, since the benefits are derived solely from the two aforementioned metrics, and requires a very high benefit-to-cost ratio threshold for further consideration of a project in the context of regional cost allocation. The Midwest ISO report contained analytical results based on an assumed cost-sharing between the Midwest ISO and PJM. Since the report was published, Midwest ISO and PJM have filed a cost sharing methodology that would impact the evaluation of the project. The project has not been evaluated under the proposed cost-sharing methodology.

The 765 kV Loop Workgroup participants devoted some time to the discussion of alternative metrics for the analysis of large-scale EHV projects. The Midwest ISO presented some recent metrics they have been developing to try to improve the RECB process. This included a discussion of not only quantitative metrics, but also more qualitative metrics which are not easily monetized in a benefit calculation. At a subsequent meeting, ATC presented benefit metrics and calculations for its recent Paddock – Rockdale 345 kV line, to give the 765 kV Loop Workgroup a different perspective on benefit calculations, and how different analysis methodologies can lead to a more robust quantification of transmission benefits. The 765 kV Loop Workgroup heard updates from other Regional efforts to revamp cost allocation methodologies and the attendant benefit metric calculations, including the recently formed CARP group and the RECB III initiative. Finally, the 765 kV Loop Workgroup debated additional metrics to propose to the Commission and to the external groups. Although no consensus was reached on a specific set of recommendations, the 765 kV Loop Workgroup was generally in agreement that longer asset life can be considered when performing benefit calculations (something longer than the 10 years used by the current RECB process). The 765 kV Loop Workgroup was also generally in agreement that metrics which monetized greater reliability in the system; metrics which quantified transmission losses are good metrics to capture in a comprehensive assessment of transmission investment benefits.

The Midwest ISO ran some additional analysis on a transmission system overlay which did not include the Michigan 765 kV Loop. This analysis was based on the recent work at the Joint Coordinated System Plan (JCSP) meetings, and attempted to show the distribution of benefits of different scenarios which did not include the Michigan project. The analysis provided insight into the benefits of including a Michigan 765 kV loop in the JCSP. Benefits and costs were predicated on the total benefits and costs of the JCSP overlay. Including the 765 kV loop through Michigan was projected to reduce the annual adjusted production cost in Michigan by \$5.3 million vs. the base case without

the JCSP overlay. If the JCSP overlay was implemented without a 765 kV loop through Michigan the adjusted production cost increases by \$57.8 million. The gross benefit that can be attributed to looping a 765 kV line through Michigan with the implementation of the JCSP overlay is \$63.1 million. The annual cost of the 765 kV loop through Michigan was \$479 million<sup>12</sup> producing a benefit to cost ratio of 0.13.

During the February 765 kV Workgroup meeting, ITC presented an overview of their proposed Green Power Express<sup>13</sup> 765 kV project. ITC revealed that, since early 2008, the Company has been studying how to effectively and efficiently bring wind power to demand centers. As a result, the Green Power Express project was established to address the challenge of moving wind from resource rich areas to population centers. The proposed project consists of 3000 miles of extra high-voltage 765 kV transmission lines that will traverse six states and part of a seventh, two RTO regions (MISO & PJM), and some areas that are not currently within an RTO.



The project is designed to connect over 23,000 MW of renewable energy from the wind-rich areas in the western Midwest ISO footprint, namely the Dakotas, Minnesota, and Iowa, and transmit much of it to load centers such as Chicago. The projected cost of

<sup>12</sup> MISO projected the annual cost on the basis of a \$3,190 million investment for the 765 kV loop through Michigan.

<sup>13</sup> ITC's Green Power Express Presentation, [http://www.dleg.state.mi.us/mpsc/electric/workgroups/mpc/planning\\_consortium\\_green\\_pwr\\_express.pdf](http://www.dleg.state.mi.us/mpsc/electric/workgroups/mpc/planning_consortium_green_pwr_express.pdf).

this project was given to be in the range of \$10 to \$12 billion. ITC's presentation discussed the benefits and advantages of the 765 kV Green Power Express project and their regulatory filing with FERC seeking rate treatment and various incentives. Additionally, the presentation indicated that the project aligned with the objectives of various regional planning initiatives including: the Regional Generation Outlet Study phase I (RGOS-I), the Upper Midwest Transmission Development Initiative (UMTDI), and the Joint Coordinated System Planning Initiative (JCSP). The group recognized that this EHV project, too, much like the Michigan 765 kV Loop, would require a more robust complement of benefits to be accurately portrayed in the upcoming studies it would be analyzed with.

### Accomplishments

The 765 kV Loop Workgroup participants feel that they have achieved a greater level of understanding of the specific projects proposed within both the state and the Region. The participants feel they have been engaged in discussions which brought a greater understanding of the mechanisms and methodologies that are used and can be used to evaluate and value the benefits of transmission investment. Although the 765 kV Loop Workgroup participants could not reach consensus on all aspects of the benefit metrics, there was an understanding that some common ground can be reached in the proper forums. Much of the work contemplated by the 765 kV Loop Workgroup at the outset was preempted by various stakeholder initiatives throughout the Region, but each participant on such 765 kV Loop Workgroups can bring with them the perspectives gained from the discussions had at the MPSC Planning Consortium 765 kV Loop Workgroup meetings.

### **Renewable and Other Generation Workgroup**

#### Objective

The Renewable and Other Generation Integration Workgroup was initially formed within the Michigan Planning Consortium to facilitate discussions around various questions under consideration by Michigan policy makers such as:

- What resources are available to meet possible RPS mandates?
- Can the existing Michigan electric grid accommodate significant new generation development?
- How much grid expansion would be necessary to accommodate Michigan wind developments assuming that most new resources will be wind driven?
- How should grid improvements be scheduled and made?

The original scope for the Renewable and Other Generation Integration Workgroup focused on transmission planning related to wind energy resource development and other generation integration issues with the intent of examining the costs and benefits of different generation scenarios within Michigan. The Renewable and Other Generation Integration Workgroup also was tasked with developing a framework for the transmission expansion studies that would take place to support future generation within the state external to the 765 kV project.

As the MPC was forming, the Michigan Wind Energy Transmission Study (MI-WETS), a study focusing on possible wind development in the Upper and Lower peninsulas of Michigan, was in its final stages. The Renewable and Other Generation Integration Workgroup intended to build on and advance this study by continuing to explore transmission needs for various levels of future wind energy development along with the addition of other possible future generation within the state.

On October 26, 2008, Governor Granholm signed the “Clean, Renewable, and Efficient Energy Act” (PA295) <sup>14</sup> into law. In many respects, the signing of this landmark legislation supplanted the goals initially established by the Renewable and Other Generation Integration Workgroup. 2008 PA 295 established a 10% Renewable Portfolio Standard that electric providers in Michigan must achieve by 2015 and generally required that the renewable energy systems necessary to support the RPS be located within the state. Additionally, 2008 PA 295 required the Michigan Public Service Commission to establish a Wind Energy Resource Zone Board<sup>15</sup> whose role is to identify regions in the state with the highest wind potential and to quantify minimum and maximum expected wind generation potential within those regions. Upon issuance of the Board’s final report on these issues, transmission companies within the state are to identify existing and new transmission facilities necessary to deliver the minimum/maximum capacity for each region identified and are to submit their analyses to the Board for its review. Also, considering the Board’s findings, the MPSC is to issue an order identifying one or more primary wind energy resource zone(s).

With the passage of 2008 PA 295, the Renewable and Other Generation Integration Workgroup shifted its focus to reviewing ongoing transmission planning activities within the Midwest ISO addressing RPS mandates within the Midwest ISO states. In addition, the Renewable and Other Generation Integration Workgroup focused on developing consensus on the scope of transmission studies to be performed by Michigan’s transmission companies to determine transmission upgrades necessary to support the minimum and maximum generation potential in the regions identified by the Wind Resource Zone Board.

---

<sup>14</sup> Michigan Public Act 295 of 2008, <http://www.legislature.mi.gov/documents/2007-2008/publicact/pdf/2008-PA-0295.pdf>.

<sup>15</sup> Wind Energy Resource Zone Web Page, [http://www.michigan.gov/mpsc/0,1607,7-159-16393\\_52375---,00.html](http://www.michigan.gov/mpsc/0,1607,7-159-16393_52375---,00.html).

### Major Activities and Discussions

Two regional planning initiatives are currently underway within the Midwest ISO that are intended to address the needs of certain of the Midwest ISO states' RPS mandates. They are the Regional Generator Outlet Study (RGOS) Phases I and II. The progress and end results of the RGOS Phases I and II initiatives may be informative to Michigan's transmission infrastructure studies that are under development by Michigan transmission owners in order to support the recently passed RPS.

In anticipation of the need for transmission infrastructure to accommodate existing renewable mandates in Minnesota, Wisconsin, Illinois and Iowa, the Midwest ISO initiated the RGOS phase I effort. This study is intended to develop transmission projects to support the renewable mandates of those states. The first phase of the RGOS initiative is intended to result in the development of new transmission infrastructure that will be coordinated with affected utilities and states and is expected to garner the regulatory support of the affected states.

During the initial development of the RGOS scope, in order to encourage the construction of interstate transmission lines necessary to serve cost-effective renewable generation, the governors of Minnesota, Iowa, Wisconsin and South and North Dakota formed the Upper Midwest Transmission Development Initiative (UMTDI). The UMTDI then provided direction (or input) to the RGOS study team with the intention of ultimately leading to the inclusion of agreed-upon transmission projects within Midwest ISO's transmission expansion plans (MTEP). The UMTDI initiative may, in the future, provide guidance with respect to cost allocation in other areas.

While RGOS phase I is still underway, the Midwest ISO has recently commenced the second phase of the RGOS initiative (RGOS II) which is intended to build upon the transmission planning efforts of the first phase and identify transmission upgrades necessary to also meet RPS mandates in Michigan, Ohio, Missouri, Illinois, Indiana and Pennsylvania.

As previously indicated, one of the initial goals of the Renewable and Other Generation Integration Workgroup was to continue and advance the work of the previously-established Michigan Wind Energy Transmission Study through its second phase (MI-WETS Phase II). This study will focus on developing transmission plans to serve the wind-rich regions identified by the Wind Resource Zone Board and it is anticipated that this Michigan-centric study will be incorporated in the second phase of the RGOS initiative and will ultimately be included and approved as a component of the Midwest ISO's transmission expansion plans.

Much of the discussion at this Renewable and Other Generation Integration Workgroup focused on the three study efforts mentioned above. Other discussions within the

Renewable and Other Generation Integration Workgroup focused on policies and practices with regard to integrating renewables into the existing Michigan system. Regarding the initial funding of transmission network upgrades to accommodate yet-to-be-determined generation developers, the transmission companies will design and construct facilities agreed upon to service the expected wind generation capacity to the zone identified upon the issuance of an order by the Michigan Public Service Commission designating one or more primary wind energy resource zones.

### Accomplishments

Developing the scope for the transmission analysis to determine the existing and new transmission facilities necessary to deliver the minimum and maximum wind generation capacity for each region identified by the Wind Energy Resource Zone Board, or the second phase of the MI-WETS initiative, was one of the major accomplishments of the Renewable and Other Generator Integration Workgroup.

The scope document for this study:

- Establishes the base system topology from which any system upgrades will be determined.
- Established existing system loads, generation dispatch assumptions, and the status of interconnection ties.
- Describes how the capacity of expected wind generation will be modeled.
- Defines the timeline for the study.
- Describes the various scenarios that will be modeled.

### MPC Report Development

In April of 2009, after having worked individually for 8 months, the Workgroups started to meet jointly again to attempt to check the Consortium's progress toward meeting the objectives set forth in the Commission Order. Staff developed a memorandum<sup>16</sup> regarding developing proposals for inclusion in the MPC report to the Commission that outlined some key points from the Commission Order and asked for feedback from Michigan Planning Consortium participants to sixteen specific questions to help frame the MPC report to the Commission. Written responses<sup>17</sup> that were submitted answering

---

<sup>16</sup> MPSC Staff Memorandum to MPC participants,  
[http://www.dleg.state.mi.us/mpsc/electric/workgroups/mpc/mpc\\_memo03\\_23\\_09.pdf](http://www.dleg.state.mi.us/mpsc/electric/workgroups/mpc/mpc_memo03_23_09.pdf).

<sup>17</sup> MPC written responses for MPC report,  
[http://www.dleg.state.mi.us/mpsc/electric/workgroups/mpc/comments\\_for\\_report4\\_15\\_09.pdf](http://www.dleg.state.mi.us/mpsc/electric/workgroups/mpc/comments_for_report4_15_09.pdf).



those sixteen questions, or were provided as comments to be considered when drafting the MPC report, are also posted on the MPC website.

The Michigan Planning Consortium participants reviewed all of the responses that were received, and there were some areas where the responses were divergent, however, there were several areas where the participants were in agreement. Some of the key areas of agreement include the following:

- Generation of meaningful discussions between Michigan transmission companies, Michigan load serving entities, the Midwest ISO, and Michigan stakeholders regarding the Midwest ISO Transmission Expansion Planning (“MTEP”) process.
- Generation of meaningful discussions on load forecasting, including discussions on different types of load forecasting methodologies used by regional transmission operators, load serving entities and transmission owners.
- Improvement of stakeholders awareness regarding the appropriate channels for getting their concerns or questions answered by the Midwest ISO.
- Many felt that the activities of the MPC overlapped existing transmission planning processes that take place through the Midwest ISO MTEP process.
- Many felt that the MPC should not act as a forum to collect needed planning information, or be a source to collect transmission planning information, but instead, help to facilitate discussions between planning entities within Michigan and our region.
- The MPC, collectively, does not have any recommendations to make to the Commission regarding any specific infrastructure projects.
- Changes made to implement the open and transparent transmission planning processes outlined in FERC Order 890, have resulted in improvements in the transmission planning process, and Michigan Planning Consortium participants should continue to work with the Midwest ISO to further improve the transmission planning processes.
- Many recommended that the most effective method for Michigan entities to participate in the transmission planning processes is through the Midwest ISO’s Michigan Technical Study Task Force, and the Midwest ISO MTEP process.
- Many of the Michigan Planning Consortium participants felt that the Consortium should not continue in its current form.

Within the written responses, there were some areas where the Michigan Planning Consortium participants did not agree, and there were also some new proposals made that were not available to the Consortium for comment when the initial responses were being developed. In order to obtain feedback on the new proposals, and clarify the

position of the Michigan Planning Consortium participants, additional feedback was requested from participants in four areas.

First, additional feedback was gathered on a proposal made by Consumers Energy, which was to continue the Consortium on an ad hoc basis with agenda items that would be developed surrounding “hot topics.” Michigan Planning Consortium participants felt that the MPC in its current form should be concluded but supported the concept of limited future ad hoc meetings as proposed in the hot topic proposal.

Another proposal made by Consumers Energy was to recommend a legislative change expanding 1995 PA 30 to include all facilities rated at 100 kV and above. Consumers Energy stated that if there is a disagreement on the need for a transmission project, the Midwest ISO will defer to the transmission owner’s request to include the project in the MTEP with a discussion of the potential opposition, whereas, certification proceedings would allow the impact of the proposed project on the customers in Michigan to be adjudicated by interested stakeholders. This proposal did not receive support from the other Michigan Planning Consortium participants.

Several other proposals and questions were raised within the comments received from the Michigan Planning Consortium participants, such as a proposal that the Consortium should attempt to develop a consensus position on changes to future EHV transmission cost allocation. Several other similar proposals and questions were raised within the comments, and for some of those issues, the only consensus that the group could come to regarding all of these proposals is that they might be considered as hot topics for future Consortium meetings.

Another proposal was made by Constellation NewEnergy that was centered on the consideration of competition in the planning process. Additional feedback on this proposal was requested from Michigan Planning Consortium participants, and there were responses in support and also responses stating that it was outside of the scope of the MPC discussions to date. The recommended course of action with this proposal is for the group to consider whether or not this topic fits within the scope of a future hot topic item for the Consortium. Written responses<sup>18</sup> to this second round of questions, including the additional comments received, are posted on the MPC website.

### **MPC Accomplishments**

Several accomplishments were made through the work of the Michigan Planning Consortium participants throughout the course of the last year. Many of the Michigan

---

<sup>18</sup> Written responses to MPC’s second round of questions,  
[http://www.dleg.state.mi.us/mpsc/electric/workgroups/mpc/grouped\\_round2\\_questions\\_mpc\\_report05\\_15\\_09.pdf](http://www.dleg.state.mi.us/mpsc/electric/workgroups/mpc/grouped_round2_questions_mpc_report05_15_09.pdf).

Planning Consortium participants reported that a major accomplishment made by the Michigan Planning Consortium was to open up the lines of communication between the MPSC Staff, independent transmission companies, load serving entities, generation companies, and other stakeholders within Michigan. The Consortium learned about each participant's load forecasting methods and processes, and the participants were able to extend those discussions to forums outside of the Planning Consortium to have more informal discussions surrounding updated load forecasts.

The Michigan Planning Consortium participants had several discussions centered on the Midwest ISO MTEP process. Several planning participants, including MPSC Staff, outlined informational needs or expectations from participants in the Midwest ISO MTEP process. From this process, planning entities gained an understanding of what the other participants expected from them through the planning process and, in addition, the Midwest ISO took some recommendations from the Michigan Planning Consortium participants regarding proposed deadlines for project submissions, justification documents, and alternative submissions back to their stakeholders for review. Some of the recommendations regarding the MTEP schedule, such as the creation of a timeline for project information exchange within the MTEP process, were able to be implemented by the Midwest ISO for MTEP 09.

Another key accomplishment made through the Information Sharing Working Group was to educate Michigan planning stakeholders with respect to the issues tracking process at the Midwest ISO. Midwest ISO Staff made a presentation to the Consortium describing the process for requesting information from the Midwest ISO or reporting an issue to the Midwest ISO. In addition to the presentation made at the MPC meeting, Midwest ISO stakeholder relations Staff has started attending the Midwest ISO sub-regional planning meetings in order to track the issues raised during those meetings.

The major accomplishments made by the 765 kV Workgroup include educating Michigan planning stakeholders regarding the transmission projects going on throughout the region, and discussions surrounding the potential benefits to be gained within and beyond the local and surrounding regions from extra high voltage transmission projects. The participants have engaged in discussions which brought a greater understanding of the mechanisms and methodologies that are used and can be used to evaluate and value the benefits of transmission investment. Although the participants did not reach consensus on all aspects of the benefit metrics, there was a significant understanding that some common ground can be reached in the proper forums.

One of the major accomplishments of the Renewable and Other Generator Integration Workgroup was to define the scope of the transmission analysis required by 2008 PA 295 to determine the existing and new transmission facilities necessary to deliver the minimum and maximum wind generation capacity for each zone identified by the Wind Resource Zone Board. The scope document establishes the base system topology

from which any system upgrades will be determined. In addition, the scope document establishes existing system loads, generation dispatch assumptions, the status of interconnection ties and how the capacity of expected wind generation will be modeled. The scope document defines the timeline for the studies and describes various scenarios that will be modeled.

Other discussions within the Renewable and Other Generation Workgroup focused on policies and practices with regard to integrating renewables with the energy delivery system. Discussions regarding the funding of upgrades for the transmission system, the distribution system, and interconnections helped to bring Michigan planning participants to the same page with respect to how the new legislation in Michigan fits together with the Midwest ISO process.

### **Efficacy of the Consortium in Impacting Electricity Infrastructure Improvements**

In addition to reporting on the accomplishments made by the MPC, the Commission Order requested that the MPC report on the “efficacy of the consortium in impacting electricity infrastructure improvements.” The formation of the MPC was key to bringing the Michigan planning participants together to work together jointly, and although the participants continue to agree to disagree about certain projects or planning assumptions, the MPC has provided a venue for discussions between Michigan planning stakeholders.

Regional planning for the electrical grid is influenced by many factors including NERC standards, FERC policy, RTO / ISO processes, existing generation, future generation, and changing loads, etc. The mandatory reliability standards enforced by NERC include reliability analyses of the transmission system. At times, there may be several vastly different upgrades or changes made to the electrical grid that could produce the same end result. An example for a potentially overloaded transmission line could include a transmission line rebuild, strategically placed new generation, strategically placed demand response or energy efficiency programs, strategically placed energy storage, and other potential solutions as well. ITC will develop a transmission solution for that potentially overloaded line, but may not investigate any of the other potential solutions, because it may believe generation, demand response, energy efficiency and energy storage are outside of its scope of business. The only way that generation, energy efficiency, demand response, and other potential solutions to a transmission overload in Lower Michigan will be evaluated is if they are proposed by a utility, generator, demand response aggregator or some other stakeholder in the Lower Peninsula within the region. In order to make such proposals, Michigan planning participants need to participate in the MTEP process at the Midwest ISO where they can access transmission planning information in order to determine whether or not alternative solutions exist.

ATC's approach to transmission planning was presented. ATC described the collaborative process it follows to involve all interested stakeholders (including the MPSC) in considering alternatives to new transmission. In addition to load forecasts of load-serving entities, ATC considers generation, renewable resources, energy efficiency and distribution solutions when devising transmission plans. This "Best Value Planning" is described in some detail in Attachment FF-ATCLLC of the Midwest ISO tariff<sup>19</sup>. ATC seeks to resolve all concerns about project needs before reaching the Midwest ISO MTEP process. It is noteworthy that ATC has accomplished very extensive transmission upgrades and expansion in the Upper Peninsula and in Wisconsin by following this open process.

The formation of the MPC allowed the Michigan planning participants to come together and discuss their information needs, as well as educate planning participants regarding the best ways to become engaged in the transmission planning process. The MPC helped to increase involvement from stakeholders in the planning process, and attempted to improve the sharing of information, which all leads to better planning. Better planning leads to more effective infrastructure improvements for ratepayers. Despite these accomplishments, the RTO planning processes are the best forums outside of the transmission company itself, to obtain specific information regarding transmission planning projects.

### **Recommended Future of the MPC**

Although the MPC made great strides toward educating and bringing planning participants together to discuss transmission planning from a Michigan stakeholder perspective, there were many participants who felt that several areas of the MPC had significant overlaps with existing regional transmission planning processes. There are, however, several items brought up by participants throughout the MPC process that may prove to be beneficial agenda items for the Michigan Planning Consortium participants to discuss at some point in the future. They include the following:

- Continuing discussions around the MI-WETS studies.
- Cost allocation for EHV transmission projects.
- Identifying additional benefits of transmission (local and regional) and how to include those benefits in an RTO review of costs/benefits.
- The role of the distribution system in accommodating RPS mandates.

---

<sup>19</sup> FERC Electric Tariff, Midwest ISO Original Sheet No. 3490, et. seq., "Attachment FF -ATCLLC, Local Planning Process," issued on October 1, 2008. (Attachment FF is the ATC-specific portion of the MISO tariff that complies with FERC Order 890.)

- The development of distribution feeder systems for renewables to support the transmission plans for renewables.
- Future planning assumptions as experience is gained with intermittent generation.
- Review of planning assumptions prior to the start of annual MTEP studies.

The Michigan Planning Consortium participants recommend that the MPC, in its current format, should be concluded. The Michigan Planning Consortium participants would like to continue the discussions of “hot topics” proposed by Michigan Planning Consortium participants on an ad hoc basis. Given this recommendation, it would not be necessary to continue the three separate simultaneous workgroups. Instead, those participants that had taken part in the Michigan Planning Consortium would propose hot topics to the MPSC Staff. MPSC Staff would then poll the rest of the interested parties for concurrence and for agenda items and presentations for the proposed hot topic. MPSC Staff will continue to facilitate the ad-hoc meetings, and provide support as long as the participants have the will to continue.

### **Conclusion**

The Consortium brought Michigan planning participants together throughout the past year, and provided a venue for participants to become better educated on the transmission planning process, become more involved, and exchange information with each other regarding transmission plans, assumptions, and the planning process. Although significant progress was made in the area of communication and information sharing, there are still several areas where Michigan planning participants do not agree and that is expected to continue due to the varying business strategies and scopes of the planning participants. The Michigan Planning Consortium participants recommend that the MPC be concluded in its current form. Continuing ad hoc meetings may take place so that planning participants may engage in discussions surrounding transmission planning hot topics, but without overlapping the existing regional transmission planning processes.