American Transmission Co.
Economic Planning Customer and Stakeholder Meeting
ATC Pewaukee Headquarters
January 30, 2012

Participants in the room:

Attendee	Organization
Charlie Higley	Citizens Utility Board
John Thomasen	Madison Gas & Electric
Zheng Zhou	Midwest ISO
Julie Urban	Public Service Commission of Wisconsin
Luke Weber	We Energies
Joann Henry	We Energies
Joe Springhetti	We Energies
Kathy Walkowski	We Energies
Hamish Wong	Wisconsin Public Service
Steven Daavettila	Wisconsin Public Service
Dale Burmester	ATC
Todd Tadych	ATC
Arash Ghodsian	ATC
Mike Schlindwein	ATC
Marty Smith	ATC
Erik Winsand	ATC
Mike Burow	ATC

Participants via webcast:

Attendee	Organization
Kira Loehr	Citizens Utility Board
Terry Torgerson	Dairyland Power
Jim Swanson	Mid-American Energy Co.
Stacy Van Zante	Alliant Energy

MEETING SCHEDULE	
10:00 a.m. – 10:15 a.m.	Opening Remarks and Introductions *Dale Burmester*
10:15 a.m. – 10:45 a.m.	Review of 2011 Futures Matrix and Modifications *Todd Tadych*
10:45 a.m. – 11:45 a.m.	2011 Economic Analysis Results *Todd Tadych*
11:45 a.m. – 12:30 p.m.	Lunch
12:30 p.m. – 1:15 p.m.	ATC Congestion Evaluation Process *Mike Schlindwein* *Arash Ghodsian*
1:15 p.m. – 1:45 p.m.	Review of ATC 2011 Bound Constraints Report *Arash Ghodsian*
1:45 p.m. – 2:00 p.m.	Break
2:00 p.m. – 2:30 p.m.	Overview of Preliminary 2012 Economic Analysis Process *Erik Winsand*

Questions and Answers

Presentation: Review of 2011 Futures Matrix and 2011 Economic Analysis Results (Todd Tadych)

1) **Question:** How much coal retirement outside of ATC was included in the MTEP11 models that were used?

   Answer: ATC did not modify the level of coal retirements outside of the ATC footprint. Page 86 of MISO's MTEP 11 report provides details for the capacity additions and coal retirements that were included in the futures. The report can be found at:

   https://www.midwestiso.org/PLANNING/TRANSMISSIONEXPANSIONPLANNING/Pages/MTEP11.aspx

   As stated on page 86 of MISO's MTEP 11 report, 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 cycle generation and energy efficiency programs. Figure 4.3-1 of MISO's MTEP 11 report provides a summary of the MISO capacity additions made to each future and is reproduced below.

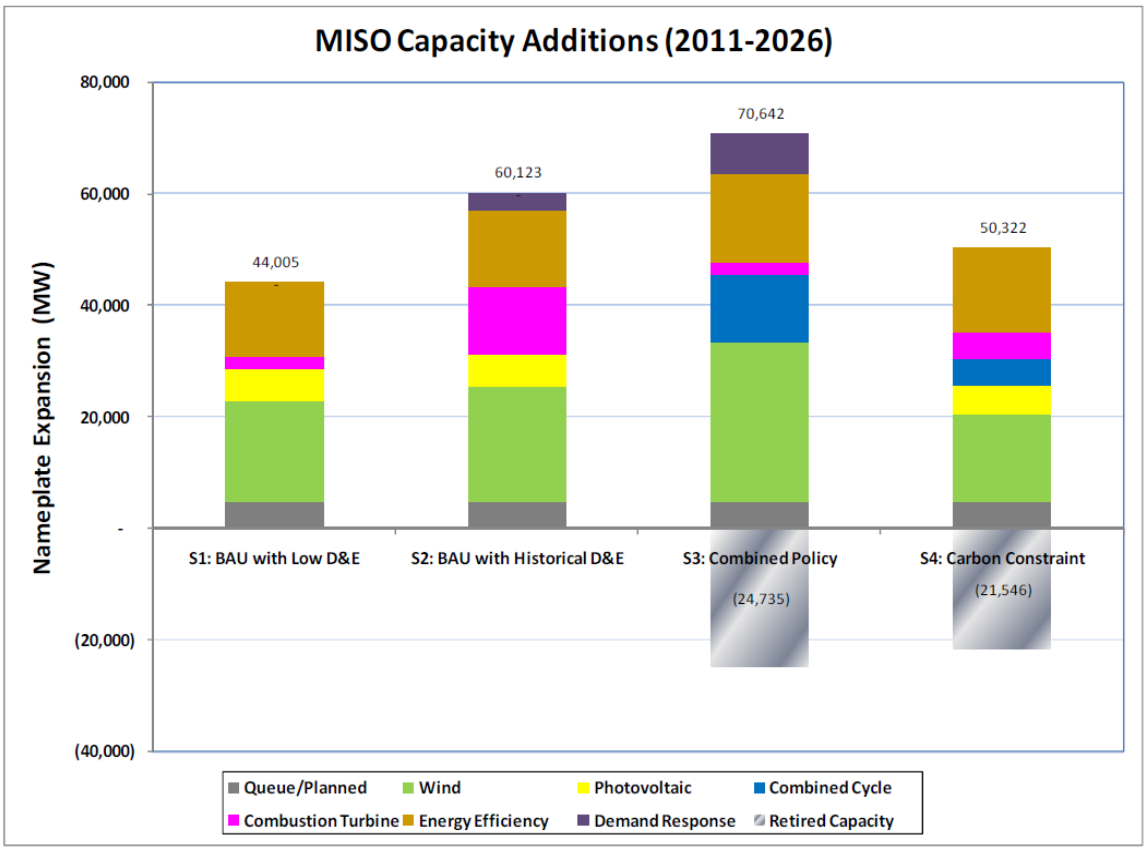

Figure 4.3-1: MISO modeled system aggregate nameplate installed MW from 2026 PROMOD Model.

2) **Question:** How much, and where, was generation added in the models that were used.

Answer: ATC added only gas fired Combustion Turbine (CT) generation within the ATC footprint to maintain adequate reserve margins. The following generation was added to the Clean Robust Economy future. No generation was added to any other future.

Location	Category	Area	Maximum Capacity (MW)
South Fond du Lac	CT	Alliant East - Wisconsin Power and Light	600
De Pere	CT	Wisconsin Public Service Corporation	600
Rockdale	CT	Alliant East - Wisconsin Power and Light	600
		Total:	1800

3) **Question:** When will ATC have benefit/cost ratios completed for the 890 projects, and what benefit/cost ratio will be used as the cut-off for whether or not to pursue the projects.

Answer: ATC is diligently working to develop the benefit/cost ratios for the 890 projects and will use a benefit/cost ratio of approximately 1.0 as the cut-off for pursuing a project further.

Presentation: ATC Congestion Evaluation Process (Mike Schlindwein / Arash Ghodsian)

4) **Question:** What is used for the wind shape (8760) shape in the PROMOD models?

   Answer: ATC uses an 8760 wind shape with hourly variability as provided by MISO.

5) **Question:** What is the data source for your models and analysis?

   Answer: The source can be study dependent but most of our base models come from MISO and updates are made on a case-by-case and study-by-study basis.

6) **Question:** Does ATC add voltage collapse constraints in PROMOD?

   Answer: ATC has attempted to model these conditions in the past but it is very difficult to do and we have not included anything like this in any of our current analysis and event files.

7) **Question:** Please elaborate on the benchmarking that is performed for the Net Ratepayer Benefits analysis. How do you account for Real Time congestion in the market within your models?

   Answer: ATC reviews the historical LMPs as received from The Brattle Group and adjusts our modeling parameters accordingly to match modeled LMPs to historical market LMPs. We also include events based on both the day ahead and real time markets in an effort to capture congestion related to both

8) **Question:** Is the congestion value shown (from IMM report) MISO-wide or just specific to ATC?

   Answer: The values shown in the presentation are for the entire MISO market footprint and represent the Day-Ahead and Real-Time MISO settlement costs. In addition, the IMM report contains a breakdown by area (including WUMS) for the congestion value. The congestion value calculation is similar to the Congestion Severity Index (CSI) that ATC calculates in that it utilizes flow and shadow price information to determine the value.

9) **Question:** What criteria are used to select the Ten Year Assessment (TYA) projects for economic analysis?

   Answer: ATC starts with the full TYA reliability list and then eliminates "non-DC" elements (capacitor banks, etc.). The remaining list is then narrowed to the top 20 projects to analyze based on various criteria including cost and opportunity for acceleration.

Presentation: Review of Bound Constraints Report (Arash Ghodsian)

10) **Question:** Are the Congestion Severity Index (CSI) numbers in millions of dollars?

    Answer: ATC has stripped the units off in order to provide a theoretical maximum for comparative congestion. It should also be noted transmission is only one factor that can impact congestion costs. For example, a lower gas price can reduce the congestion cost when a gas-fired unit is typically dispatched to relieve congestion in a particular area.

11) **Question:** How much of the CSI reduction is attributable to natural gas prices?

Answer: The numbers are cumulative actual values and ATC does not have a breakdown of portions which may be attributable to fuel prices, generation, load, etc.

12) **Question:** What explains the apparent inconsistencies between bound constraints and analytical savings and congestion?

Answer: There are differences between the real-time / historical values and the future models which include future infrastructure and assumptions which may be different from the historical conditions.

13) **Question:** Does it make sense to use element ratings as a proxy for line flows in the CSI?

Answer: Yes, when a constraint is "bound" it is theoretically at the element's rating. The CSI is intended to provide a theoretical maximum and therefore use of the line rating is considered a good proxy for line flows.

14) **Question:** In the past, shadow prices were included in ATC's bound constraint report. Shouldn't they still be included?

Answer: ATC feels that using the theoretical maximum provides a better comparative value for review across all of the constraints.

Presentation: Overview of Preliminary 2012 Economic Analysis Process (Erik Winsand)

15) **Question:** Does ATC plan to weight the futures like MISO does?

Answer: No, ATC utilizes the method of strategic flexibility in developing our futures and therefore does not weight each individual future differently. At this point ATC does not intend to weight the futures like MISO does, but we are interested in getting feedback from stakeholders on this topic.

16) **Question:** How are the various inflation rates in the MISO MTEP 12 assumptions applied in MISO's analysis?

Answer: MISO utilizes the various inflation rates when calculating the Benefit / Cost ratios for various projects and futures.

17) **Question:** Are there any factors within the assumptions for which the studies are particularly sensitive?

Answer: Futures are developed to "bound" the range of options and accommodate many sensitivities. Sensitivity of any given factor is very dependent on the need and purpose for a particular project and every project has unique drivers.

18) **Question:** With regard to alignment with the MISO process, the Top Congested Flowgate Study is anticipated to be complete in the June timeframe. How does ATC anticipate aligning these processes?

Answer: ATC's timing should fit well within the MISO process and we expect our model development and analysis timeframes to essentially be somewhat in parallel with MISO's process.

19) **Question:** When will projects to be analyzed be announced?

Answer: We anticipate determining projects to analyze in the April timeframe, per our Attachment FF timeline.

20) **Question:** Will the 2011 project decisions be done by April?

Answer: ATC will move forward soon to get these projects out of the analysis stage and into the project development stage.

21) **Question:** Should ATC investigate how models and projects are sensitive to certain drivers and assumptions?

Answer: Performing just sensitivity analysis doesn't really provide plausible impacts for a project. This is why ATC utilizes strategic flexibility within our analysis. The drivers are often highly correlated so looking at the impact of changing a single driver can be misleading. For example, a high load growth requires larger generation additions to maintain an adequate reserve margin and higher CO_2 costs should be correlated with higher coal retirements. Such relationships are taken into consideration when developing the various futures.

22) **Question:** Are there drivers that can be combined?

Answer: Drivers are combined within the definition of the various futures.

23) **Question:** How does ATC account for FTR revenues and congestion in the Customer Benefit Metric to ensure that they are not being double counting?

Answer: FTR revenues are calculated as a fraction of the total congestion cost and are used as an offset to the total congestion cost. ATC will provide more detail on the ATC Customer Benefit Metric at the next stakeholder meeting planned for mid-April.

24) **Question:** How does ATC ensure that new projects do not cause additional congestion?

Answer: ATC utilizes the PROMOD Analysis Tool (PAT) to identify previously unidentified flowgates and then runs the analysis with the additional events to capture the impact.