



# Regional Planning Update

February 22, 2010

ATC Customer/Stakeholder Meeting





# Objectives

- Provide updates on the following regional planning efforts:
  - MISO Cross Border Congested Flowgate Study
  - MISO Regional Generation Outlet Study
  - SMARTransmission Study
  - Eastern Interconnection Planning Collaborative



# Cross Border Congested Flowgate Study

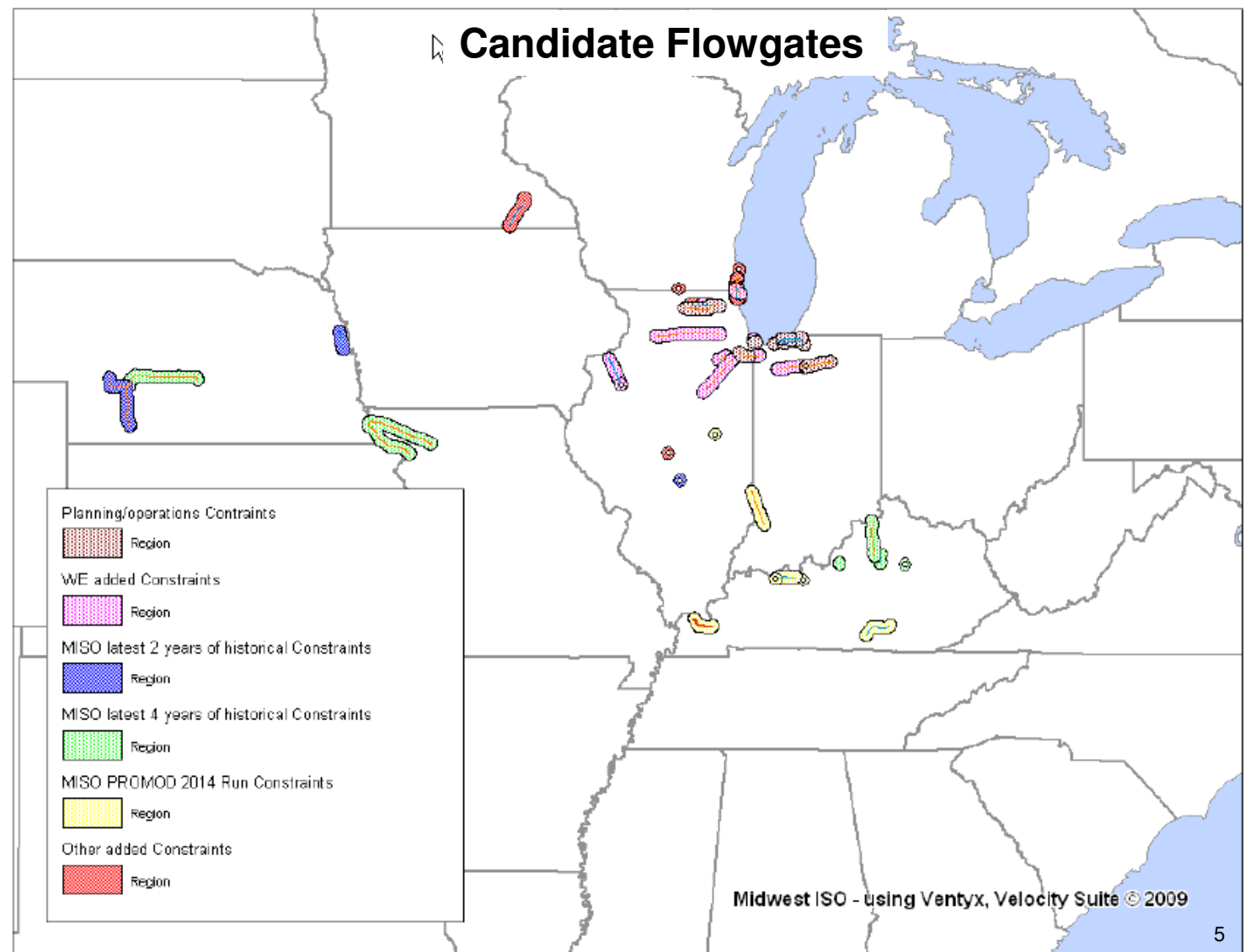
- As part of the MTEP 10 planning cycle, We Energies requested MISO to conduct a targeted planning study into increasing congestion issues in the south Lake Michigan area that are believed to be creating such problems as redispatch of generation in southeast Wisconsin.
- MISO broadened the study to address congestion issues with some of its seams with other RTOs/transmission providers and will focus on these areas:
  - Lake Michigan Area: Southeast Wisconsin, Northern Illinois and Indiana Region
  - Ohio, Pennsylvania Area
  - Indiana, Kentucky Area
  - Iowa, Nebraska Area
- The study will be divided into specific sub-target studies to address each of these areas, with separate stakeholder meetings to target each area.



## Cross Border Congested Flowgate Study (cont.)

- Candidates for congested seam flowgates of PJM, TVA, SPP and MISO are those that have demonstrated to consistently have negative impact on operations of cross border stakeholders in the past and are projected to continue to do so in the future.
- Candidate flowgates will be modeled in PROMOD and a set of priority flowgates will be selected and addressed.

# Cross Border Congested Flowgate Study (cont.)





## Cross Border Congested Flowgate Study (cont.)

- The RTOs with input from the affected TOs and other stakeholders will participate in identifying potential transmission upgrades to address constraints.
- Both near term and longer term transmission upgrades will be considered.
- PROMOD simulations will be run to evaluate the economic benefits of potential upgrades and will determine if they qualify for individual RTO or cross-border cost sharing.
  - MISO also will consider upgrades that may be funded by a Market Participant.
- MISO anticipates proposing a final set of upgrades and their respective cost sharing by 7/31/10.
  - It is anticipated that some projects will be added to Appendix A and B of MTEP 10.



# RGOS

- The objective of MISO's Regional Generation Outlet Study is to develop transmission needed to meet state renewable requirements in the MISO footprint.
- RGOS work includes:
  - Phase I indicative and detailed designs
  - Phase II indicative designs
  - Overall RGOS detailed analysis and designs



## RGOS (cont.)

- RGOS phase I focused on identifying transmission needed to meet RPSs in WI, MN, IA and IL.
  - RGOS I is being used by the Upper Midwest Transmission Development Initiative (WI, MN, IA, ND and SD).
  - Two levels of wind injection considered:
    - “UMTDI Local” – 28 GW total
    - “Intra-Regional Transfer” – 34 GW total
  - Two wind zone configurations developed by UMTDI.
  - Total of 12 transmission designs developed in detailed analysis.
- Draft report of detailed analysis is being reviewed by stakeholders.



## RGOS (cont.)

- RGOS phase II indicative work considered renewable requirements for all non-UMTDI states and new requirements in such states as MO, MI, and OH.
- RGOS phase I plans were used as the starting points for the RGOS II indicative designs.
- Indicative designs were developed for three main scenarios:
  - Local – RPSs and goals of RGOS II states met with in-state resources.
  - Combination – RPSs and goals of RGOS II states met with a combination of resources in UMTDI states and in RGOS II states with the highest capacity factors (50/50 and 75/25).
  - Regional – RPSs and goals of RGOS II states met with highest capacity factor wind zones in MISO.



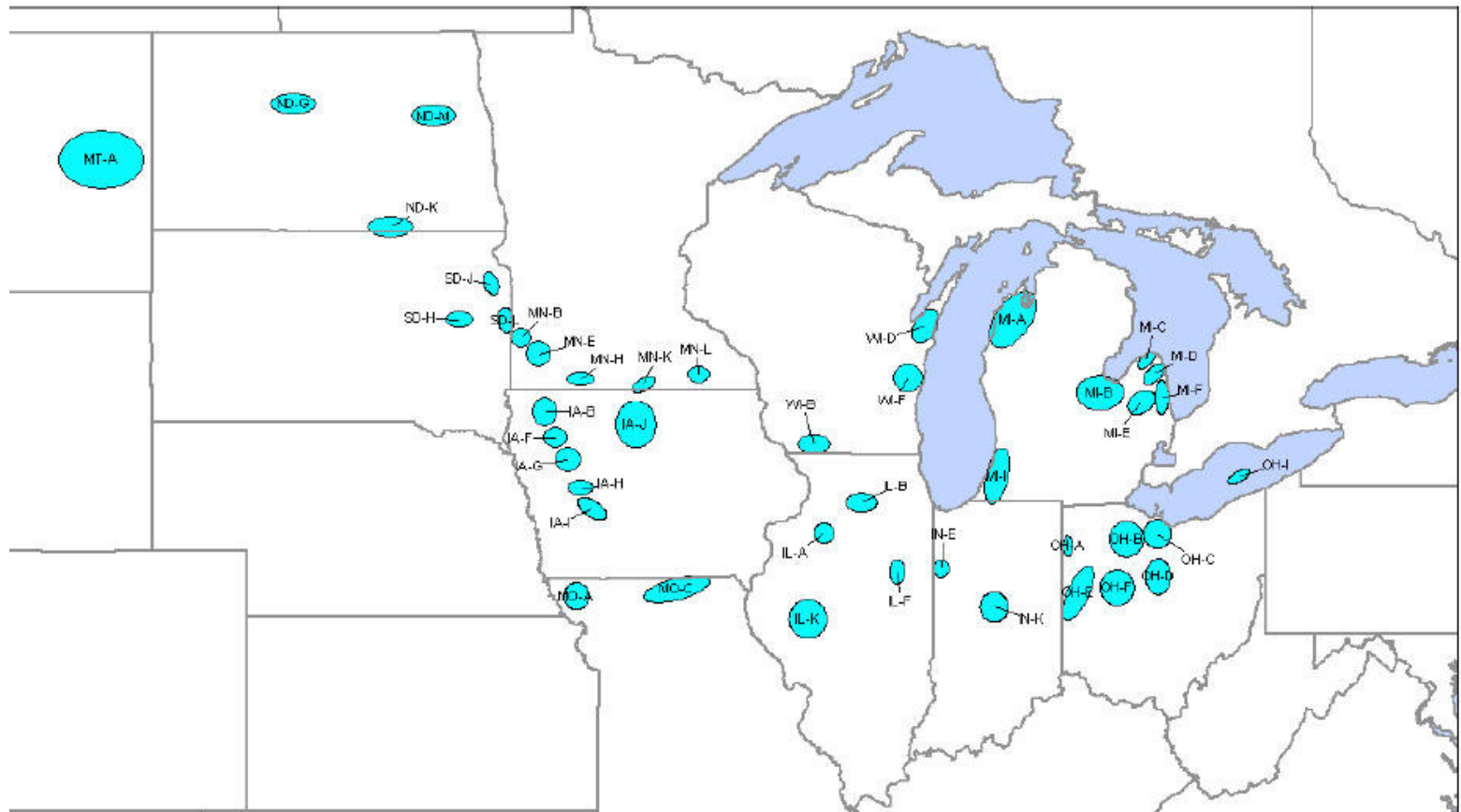
## RGOS (cont.)

- Wind zones for the overall RGOS detailed analysis are finalized.
- Scope is being reviewed by stakeholders.
  - Detailed analysis will leverage work done in RGOS phase I and II.
  - Among the aspects of the scope being worked out is how many different types of transmission solutions will be considered and the amount of wind modeled in the study footprint.
- MISO will develop an RGOS transmission plan and in August it intends to include that plan in Appendix B of MTEP 10.



# RGOS (cont.)

## RGOS Wind Zones





# SMARTransmission Study

- The SMARTransmission Study is a comprehensive study of the transmission needed in the Upper Midwest to support renewable energy development and to transport that energy to consumers. ATC is among a group of transmission owners sponsoring the study.
  - The outcome of the SMARTransmission Study will be used as inputs into regional planning processes.
- Analysis is underway and the study will be done in two phases:
  - Phase One: Identifying the Alternatives (reliability)
    - Steady State Analysis
    - Develop several alternatives
    - Develop performance metrics
    - Identify top performing alternatives
  - Phase Two: Societal Benefits Evaluation (economic)
    - Security Constrained Economic Dispatch
    - Develop Societal Benefits Metrics
    - Evaluate top performing alternative
    - Provide final ranking



# SMARTransmission Study (cont.)

- Meetings have been held with RTOs to get their input and several stakeholder meetings have been held to review the study and assumptions and to answer questions and hear feedback.
  - Additional stakeholder feedback requested – provide to ATC or to [info@smartstudy.biz](mailto:info@smartstudy.biz).
- As part of phase I of the analysis, eight draft conceptual designs were developed that were primarily 345 kV or 765 kV (each with some HVDC) or a combination 345 kV/765 kV.
  - Performance testing of the designs is underway and, with the input of stakeholders, three designs will be selected to analyze.
- Information about the SMARTransmission Study is located at: [www.smartstudy.biz](http://www.smartstudy.biz) and on ATC's Website: [www.atc10yearplan.com](http://www.atc10yearplan.com).



# EIPC

- ATC is among 24 planning authorities in the Eastern Interconnection that have formed the Eastern Interconnection Planning Collaborative.
- EIPC in September 2009 submitted a proposal with DOE for funds to conduct interconnection-wide planning in response to a DOE funding opportunity announcement.
- The DOE in December 2009 announced that it awarded EIPC \$16 million to fund the planning analysis effort described in EIPC's proposal.
  - EIPC is working to finalize the agreement with the DOE.



## EIPC (cont.)

- EIPC is developing the stakeholder process.
  - EIPC is talking with stakeholders about how to get appropriate stakeholder input for the EIPC and to get their thoughts on establishing the Stakeholder Steering Committee (SSC).
  - The SSC is required to have representation from all sectors and to be 1/3 state representatives and will be responsible for providing input on the futures that will be studied by the EIPC.
  - The Keystone Center has been retained by the EIPC to help develop and run the stakeholder process.
  - It is anticipated that the SSC will be established in early 2010.
  - The Eastern Interconnection States' Planning Council is actually responsible for much of the stakeholder input to EIPC and the EIPC is and will continue to coordinate closely with the states.
- EIPC also is forming its model building and analysis working group.
- A narrative of the proposal and other information about the EIPC is located at <http://eipconline.com/> and on ATC's Website: [www.atc10yearplan.com](http://www.atc10yearplan.com). An EIPC stakeholder listserv also has been created.



# Questions?

Bob McKee

[rmckee@atcinc.com](mailto:rmckee@atcinc.com)