



ATC Access Initiative and Wholesale Power Markets

Mark Williamson, Vice President, Major Projects



American Transmission Co.

- We are responsible for building, operating, upgrading and maintaining the transmission system in most of Wisconsin and Michigan's Upper Peninsula.
- We help ensure the reliability of the transmission system that delivers power to all customers using the grid in the upper Midwest.
- We are the critical link between generating plants and the utilities that provide power to your homes and businesses.



Types of Transmission

- Reliability reinforcement: Expand, upgrade and maintain the electric transmission system to ensure adequacy, reliability and security
- Access to markets: An adequate system that allows access to regional generation
- Generation: Connecting a generator to the electric power grid and delivering to local utilities

Today's Transmission System

- ATC system at its limits
 - Little new growth/generation/service can be accommodated without reinforcement
 - Enabling ongoing reliability requires reinforcement
 - Low voltage problems are a particular concern
 - Very little system operating margin
 - Insufficient import/transfer capability
- Key drivers
 - Load growth and location of growth
 - Generation
 - MISO and access to markets
 - Other need drivers

Types of Transmission Solutions

- Line projects
 - New line
 - Rebuilt line
 - Reconductor line
 - Uprate line
 - Convert voltage

- Substation projects
 - New substation
 - Existing substation expansion
 - Substation equipment additions and replacements

- Other

Transmission Solutions

Regional Access



- Examining the value of expanding the transmission system for greater to regional and in-state generation
- Many meetings held over last 24 months with a variety of stakeholders
- Five geographically diverse options evaluated: one to Minnesota; one to Illinois; one to Iowa; one to Michigan under Lake Michigan; one to Canada via the UP...examining new option to Minnesota
- Projects to Iowa and Illinois hold greatest technical and economic promise

Transmission Solutions Regional Access



- Have asked Public Service Commission of Wisconsin for policy guidance on appropriateness of developing specific proposal for a new line
- End of year hope to have heard from PSC and settled with stakeholders on one option
- 2006 begin characterization of potential route corridors
- File application with PSC in mid-2007
- Proposed in-service date of 2013



Wholesale Energy Market

- Feb. 2002: Midwest Independent System Operator became transmission provider
- April 2005: MISO begins operation of energy markets
- Benefits of a regional market in the Midwest:
 - Reduce costs through more economic and efficient dispatch of generation
 - Monitor and react quickly to grid problems on a wide area basis
 - Solve congestion within the region every 5 minutes, *before* it happens, and resolve most congestion in the day-ahead market
 - Simplify the coordination needed to ensure regional reliability

Wholesale Energy Market

- Concerns for Wisconsin
 - WUMS and Northern WUMS are the only two Narrowly Constrained Areas in the MISO Region
 - Potential for higher local energy prices in Wisconsin due to congestion and lack of sufficient generator competition
- Mitigation efforts
 - Limitations on generator bids in NCA
 - Five-year protection on congestion from network resources outside of WUMS
 - Congestion from outside resources uplifted to MISO market

Wisconsin Congestion Analysis

Report Issued: Sept. 23, 2005, prepared by: Customized Energy Solutions

Midwest Independent System Operator (MISO)

Real-time LMP Prices

April-August 2005

Location	Average RT LMP (April - August)	LMP Premium (\$/mwh)	LMP Premium (%)
EASTERN WISCONSIN LOAD	\$56.51	--	--
REST of MISO	\$45.46	\$11.05	24%
MINN HUB	\$46.69	\$9.82	21%
ILLINOIS HUB	\$38.87	\$17.64	45%
CINERGY HUB	\$47.43	\$9.08	19%
MICHIGAN HUB	\$49.60	\$6.92	14%

Average Off- and On-Peak LMP Prices

April-August 2005

Location	Average Apr-Aug Off-Peak	Average Apr-Aug On-Peak	Off-Peak Premium	On-Peak Premium
EASTERN WISCONSIN LOAD	\$41.75	\$75.91	--	--
MINN HUB	\$25.85	\$62.56	\$15.90	\$13.35
ILLINOIS HUB	\$33.42	\$63.28	\$8.33	\$12.63
CINERGY HUB	\$34.03	\$63.70	\$7.72	\$12.20
MICHIGAN HUB	\$36.02	\$67.96	\$5.72	\$7.96

- Much of Wisconsin (Eastern Wisconsin Load) has experienced higher real-time and day-ahead electricity rates than its neighbors over the first five months of MISO operation.

- Significant congestion on the transmission system in the Eastern Wisconsin load is a cause of the higher electricity rates in Wisconsin.



Wisconsin Congestion Analysis

Causes of Higher Rates in Wisconsin

■ Transmission limitations

- Even a very small amount of transmission deficiency will cause significant increases in congestion costs.

■ Fuel price separations

- Overall, the premium for natural gas has been increasing, as well as the spread between natural gas and coal.

■ Generation efficiency differences

- For those hours where natural gas is on the margins in multiple areas and there is still congestion, the degree of the price separation is due to relatively less efficient generation being dispatched in the higher priced area and relatively more efficient generation being dispatched in the lower priced area.



Reliable Transmission

- Will satisfy the economic needs and generate economic benefits for Wisconsin
 - By providing reliable electricity for existing jobs
 - By providing reliable electricity for the growth of the high-tech sector



Reliable Transmission

- Will satisfy the social needs and generate social benefits for Wisconsin by providing the reliable electricity needed for
 - Quality health care
 - Education
 - Public safety
 - Public security

- Will provide Wisconsin residents the power they require



Ensuring Reliability

- ATC is a public utility, working for the public good
- Our job is to deliver the electricity that powers homes, businesses, industries and public health and safety organizations
- Together we can and will help Wisconsin meet its electricity needs



Thank You

Questions?