



Zone 2 - 2013 study results

Refer to [Table ZS-2](#) and [Figure ZS-6](#)

Summary of key findings

- ❑ The completion of the Morgan-Werner West and Northern Umbrella Plan projects will result in dramatic increases in Wisconsin-Michigan transfer capability, likely reducing the locational marginal price of energy. In addition, substantial reliability benefits will be realized with these sets of projects.
- ❑ Low voltages were observed in the Eastern U.P. which will be addressed as part of the review performed for this portion of the ATC system.
- ❑ The poor condition of the line and system reliability considerations will require developing a plan to replace the Blaney Park-Munising 69-kV line.

A complete review of ATC's needs in the Eastern Upper Peninsula (U.P.) is underway. Earlier 10-Year Assessments specified various projects in the Eastern U.P., including the creation of a double-circuit 138-kV conduit from Indian Lake to Hiawatha. This review will assess if all or some of those projects should still be constructed in the near-term, constructed in a phased manner, or perhaps a different set of projects proposed.

A collaborative planning effort is underway in Zone 2 to assess the needs of the Upper Peninsula of Michigan. The ATC Energy Collaborative – Michigan will include participation from ATC stakeholders and customers, as well as other regional utilities and entities which have an impact on ATC's northern system performance and needs. This collaborative is scheduled to be completed by late 2008/early 2009 and will result in a plan to address the immediate and long-term energy needs in the Upper Peninsula.

Conversion of the Conover to Plains 69-kV corridor to 138 kV, along with the addition of 138/69-kV transformations at Iron Grove (formerly Iron River Substation) and Aspen (formerly Brule Substation) will greatly improve the reliability and voltage profile on the western U.P. 69-kV system.

The 2010 addition of the North Bluff 69-kV and Indian Lake 138-kV capacitor banks will address remaining voltage violations in the Upper Peninsula.

Portions of the Blaney Park-Munising 69-kV line will need to be rebuilt due to poor physical condition. Reliability of service to customers served by this line is also a concern because this relatively long line is currently operated radially from Munising (open at Blaney Park). The condition and rating of the line prevents us from closing both ends at the same time. This provisional project has been deferred from 2013 to at least 2014 to allow time to



10-Year Assessment

An annual report summarizing proposed additions and expansions to the transmission system to ensure electric system reliability.

2008

September 2008 10-Year Assessment
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establish an appropriate long-term plan for the area that considers whether the line should be rebuilt at 138 kV or at 69 kV.