

Draft Facility Construction Agreement

- Explanation
- Basis
- Who are the customers

Eastern Line Proposal

- Reasons for performing studies
- Will this proposal help in getting the existing TSR's approved
- Work done so far
- Work to be done

Moving from Western to Eastern Line proposal

- Comparison based on Cost
- Comparison based on system stability
- Other applicable factors

Decision by TO'S and customers

Who is willing to pay?

Next Steps



Draft Facility Construction Agreement

 This agreement is based on MISO's Facility study completed in May of 2010

Manitoba Hydro TSR 500kV Option 1

- Adding 1100 MW of hydro generation from Manitoba, Canada to the upper Midwest, US
- Dorsey Substation Canada to the Bison, ND and Helena, MN Substations
- Estimated cost \$1,463,690,000 (US facilities only included)

TSR Customers included in study and FCA

Manitoba Hydro – F088, WPPI Energy – F091, Minnesota Power – F089,
Wisconsin Public Service – F090, Great River Energy – F092



Eastern Line Proposal

- The purpose of this study was to perform sensitivity analysis on alternative transmission options for the MH, US south bound TSRs.
 - MP has entered into a 250MW MH PPA beginning in June 2020
 - Other TSR customers are more towards a 2025 time frame

Scenario studied

- Reil- Shannon 230kV (250MW)
 - Additional mitigation cost: \$0 (G519 online \$0)
- Dorsey-Iron Range 500kV (750MW)
 - Additional mitigation cost: \$0 (G519 online \$5.52 mil.)
- Dorsey-Iron Range 500kV (1100MW)
 - Additional mitigation cost: \$0 (G519 online \$9.66 mil.)

NOTE: MISO project G519 (600 MW) is currently in suspension



Eastern Line Proposal

Work done so far

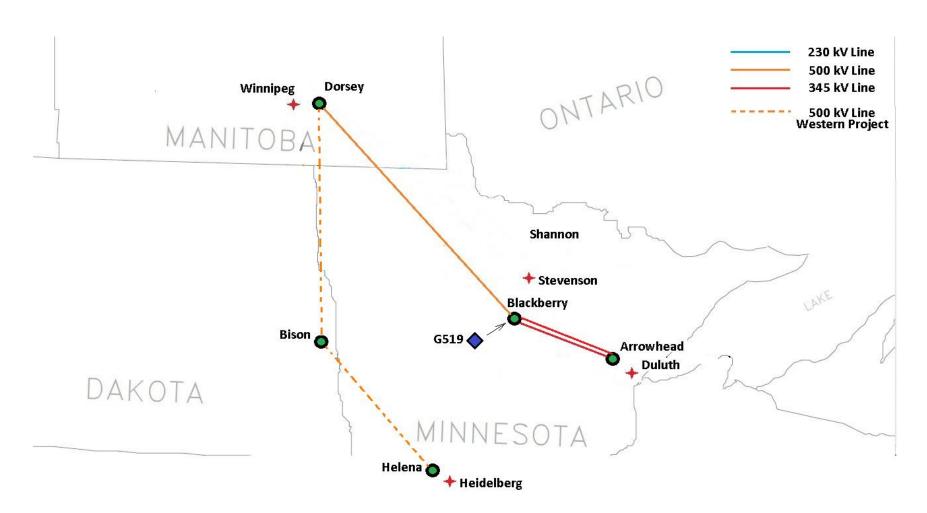
- DC sensitivity analysis
- AC Sensitivity analysis
- Affected systems TOs contacted
- Cost estimates
- Draft report

Work to be done

- Send report to area TOs for review
- Finalize report
- Manitoba Hydro will be preparing its own studies and FCA for facilities north of the US boarder



Eastern and Western Proposals





Moving from Western to Eastern plan Proposal

- The MP Eastern 1100MW plan is presently in draft form
 - Estimated new facilities cost (US facilities only included)
 - 500kV Dorsey to Blackberry \$566,911,729
 - 345kV Dbl Cir Blackberry to Arrowhead \$220,637,542
 - Total \$796,549,721 (2012 dollars)
 - Additional \$9,660,000 mitigations costs (G519 online)
- The Western 1100MW plan Option 1
 - May 2010 Facility study cost (US facilities only included)
 - \$1,463,690,000
- A preliminary Stability Analysis comparing the two proposals has also been conducted.



Decision by TO's and customers

- Need final plans determined by TO's and MISO
- Need commitment from TSR Customers to fund upgrades

Because

- Upgrades are required for the TSR's to be approved
 - Finalizing which upgrade plan is preferred
- Funding plan required
- Once (Multi-Party) Facility Construction Agreement executed, TSRs confirmed subject to upgrades in service



How Does the Upgrade Get into MTEP Appendix A?

- Two paths: TSR or "Other" project
- Both paths require funding commitment and peer review
- TSR Path
 - Funding comes from customers/sponsors
 - Peer review in ad hoc process
 - Board approval implicit with confirmed TSR
 - MISO would inform the Board at the next meeting after the confirmation
- "Other" Path
 - Funding must be determined
 - Peer review comes from FERC 890 process
 - Earliest possible Board approval is June



Next Steps

MISO Next Steps:

- Work MP and area TOs to finalize Eastern studies (1/18/13)
- Follow up on any unanswered questions (1/18/13)
- Receive Customer comments on final proposals (1/31/13)
- Work with Customers and TOs to finalize plan (2/15/13)
- Finalize FCA (2/28/13)

TO Next Steps:

- Follow up on TO related questions (1/18/13)
- Review Eastern studies (1/25/13)
- Work with MISO on final plan (2/15/13)
- Finalize FCA (2/28/13)

All dates are tentative based on meeting discussions



Next Steps

Manitoba Hydro Next Steps:

 Manitoba Hydro will be preparing its own studies and FCA for facilities north of the US boarder (1/31/13)

Customer Next Steps:

- Additional proposals and questions (1/18/13)
- Need commitment to fund upgrades (1/25/13)
- Work with MISO on final plan (2/15/13)
- Finalize FCA (2/28/13)

All dates are tentative based on meeting discussions

