

**Northern States Power Company/Northern States Power Company
(Wisconsin)**

**Meeting Notice
In Compliance with 18 C.F.R. Part 358.5(a)(2)**

The Transmission Provider must ensure that any employee of its Marketing or Energy Affiliates is prohibited from obtaining information about the Transmission Provider's transmission system (including, but not limited to, information about available transmission capability, price, curtailments, storage, ancillary services, balancing, maintenance activity, capacity expansion plans or similar information) through access to information not posted on the OASIS or Internet website or that is not otherwise also available to the general public without restriction.

To: SW MN -Twin Cities EHV Study Group

Re: SW MN Twin Cities EHV Study to be discussed at Otter Tail Power Co Offices, Fergus Falls, MN on Monday October 10, 2005 10:00 am - 1:00 pm Central Time (Map attached)

For those participating via telephone: 612-330-6677 Conf ID: 33

AGENDA

1. Introductions, Review Study Purpose/Scope/Goals
 - Relationship to CapX 2020 vision plan & MISO Exploratory Studies' results
 - Buffalo Ridge generation outlet
 - Coordination with Big Stone II development
2. Review Study Schedule
3. Review Study Assumptions
4. Review Base Transmission Plan
& "Helena 345/115 kV" option
5. Review "System Alternative" & its revisions per direction from last meeting
6. Review Dynamic Stability results
7. Hand-out of revised powerflow maps
(System intact & relevant contingencies)
8. Losses
(single vs double circuit & effect of series compensation)
9. Revised TLTG summaries (Base Plan and revised "System Alternative")
10. Cost vs. MW outlet graphs:
 - a. installed cost
 - b. adjusted for losses

VERSION 3
Date Posted: 10/7/2005

11. Constrained Interface Analysis (revised to show incremental outlet accommodated)
(single vs double circuit & effect of series compensation)
12. Discussion of next steps
13. Next Study Group Meeting: Wed Oct 19, 2005, 9:00.

Documents in the Meeting Material file for this meeting are:

20051010-SWMNTC-EVH-Meeting-NSP-Doc1-LOSSES-SUMMARY.PDF
20051010-SWMNTC-EVH-Meeting-NSP-Doc2-TLTG OPK-SUMMARY.PDF

Richard Gonzalez

APPENDIX 1 – ADDITIONAL NOTICE INFORMATION

Attached are two handouts we will be reviewing at the meeting next Monday. (More coming later today)

1. In the "TLTG summary" file, there is now an "installed cost + losses" graph. This graph shows that the "series compensation" and "double circuit" options for the Lyon Co-Franklin-Helena segments of the new 345 kV are each economically beneficial (compared to the single circuit, no compensation Base Plan) at all SW Minnesota generation outlet levels over 1800 MW.

This is good, since at the last meeting we determined that we will need to do either series compensation or double circuit in order to provide enough relief on the Dorsey-Forbes 500 kV line.

This TLTG summary file also has a graph ("cost 4") showing the "cost vs.

MW" performance of adding a 345/115 kV transformer at Helena, and developing a Helena-Jordan-Scott Co 115 kV line (the Jordan-Scott Co segment is already constructed to 115 kV standard). Although this development was successful at

- delaying the Helena-Blue Lk 345 kV overload to slightly over 2000 MW of SW MN generation outlet;
 - preventing the Eden Prairie 345/115 kV transformer overload;
 - preventing the Lk Marion 345/115 kV transformer overload,
- it does not appear economical to develop this 115 kV outlet at this time because its incremental cost is greater than the cost of the projects which it defers or eliminates.

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Graph "cost 5" shows the effect of updating the "System Alternative" per

our decisions made at the last Study Group meeting. If we

- add the Twin Cities "Southern outer loop" (W Waconia-Helena-Lk Marion-Hampton Corner 345 kV) [to make this option equivalent to the "Base Configuration w/r to load serving capability] and then
- change Brookings Co-Lyon Co to be 345 kV rather than 115 kV [motivated by WAPA loadings and Manitoba throughflow considerations]

we have the two yellow lines shown on "cost 5". These indicate that the

System Alternative becomes more expensive than the "Base Configuration" when those adjustments are made:

The bottom yellow line (has yellow triangle markers) represents the System Alternative with the Twin Cities "South Outer Loop" ["South Loop"] added (W Waconia-Helena-Lk Marion-Hampton Corner 345 kV). This option starts with a \$7.5 million credit relative to the Base Plan due to its installed cost being that amount lower. However, beyond approximately 1450 MW total SW MN generation outlet, it no longer is lower-cost.

The upper yellow line (purple X markers) represents the System Alternative with the "South Loop" addition and the revision to the Brookings-Lyon Co line to have it be 345 kV rather than 115 kV. This option starts with a \$19.8 million higher cost than the Base Plan, and is consistently higher in cost than the Base Plan.

2. Losses economic computations

This sheet shows the computations made to arrive at an "equivalent installed cost" for losses. The MW loss differences between the various

transmission options were converted into an equivalent capitalized value

per the factor derived on this sheet: 1.00 MW of loss reduction is seen

to be equivalent in cumulative present value of revenue requirements to a transmission investment of \$1,007,201. This MW to capital investment factor was used in generating the "adjusted for losses" graph in the TLTG summary spreadsheet discussed in item 1 above.

Please review these materials in preparation for our discussions on Monday.

Richard Gonzalez, PE

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Otter Tail Power Building Locations

