



MTEP19 MCPS North-South Interface Focus Area Conclusions

Market Congestion Planning Study
Technical Study Task Force
May 27, 2020

Executive Summary



- The N-S interface study shows several promising projects under the defined scope of work
- MISO will provide study results and conclusions in the MTEP20 report but will not recommend any projects for Appendix A at this time
- Further N-S transmission planning efforts will be considered in the MTEP21 planning cycle this fall

Study Background and Timeline

- April 2019 TSTF
 - Began discussion around North-South Interface Study
 - Requested solution ideas from stakeholders
- July 2019 TSTF
 - Received and screened 35 solutions
 - Nine projects passed initial screening analysis
- January 2020 TSTF
 - Three solutions had aggregate B/C ratios ≥ 1.0 after full PV analysis on MTEP20 economic models
 - HVDC solutions were screened but no project had a screening index ≥ 0.9

Project candidates warrant possible further consideration in MTEP21

ID	Transmission Solution	Cost Estimate (2019-\$M)	20-yr B/C Ratio					Assumed Contract Path Increase (MVA)
			AFC	CFC	DET	LFC	Aggregate	
PC-1	New 345kV, 2574MVA line from Jim Hill-Berntie Rebuild 161kV line from Berntie-Stoddard	152	2.33	2.18	1.90	1.75	2.04	2574
PC-2	New 345kV, 2574MVA line from Jim Hill-Lutesville	249	1.43	1.13	1.01	1.08	1.16	2574
PC-3	New 345kV, 1793MVA line from Jim Hill-Kelso. New 161kV, 509MVA lines from Jim Hill-Berntie. Upgrade existing Stoddard-Berntie, Stoddard-Morley, Oran-Morley and Oran-Kelso lines to 509MVA.	262	1.19	1.14	1.04	1.02	1.10	2302

- Additional project details provided in the appendix slides

Additional analysis under the MTEP20 data set has not altered the conclusions

- Additional testing did not yield any new or different results to project candidates
- No alternate configurations were identified that improved project candidate B/C ratios
- Reliability no-harm analysis did not identify any violations or additional mitigation expenses

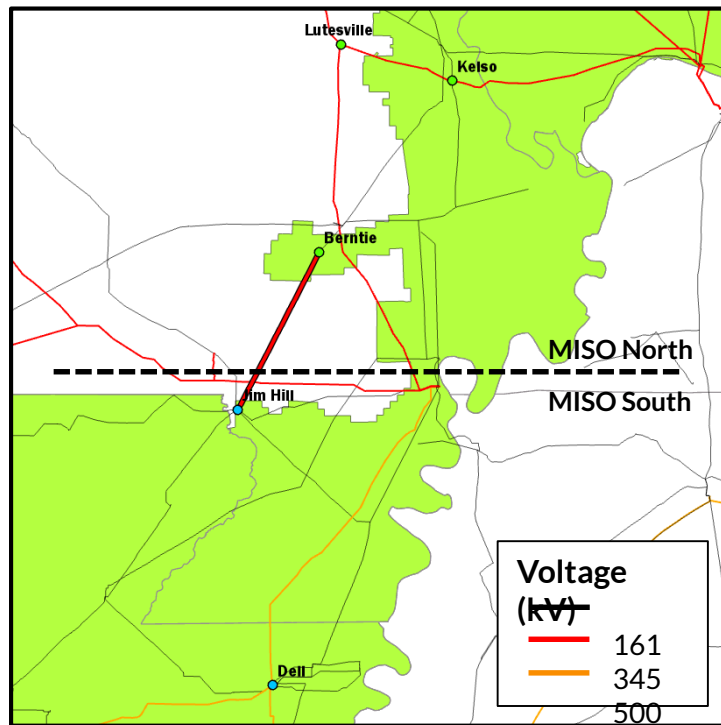
The next phase of the N-S Interface Study will be considered under the MTEP21 cycle

- The scope and intention of the North-South study has been carried out as defined in MTEP19 MCPS
 - No solution will be recommended for Appendix A at this time
 - Project candidates remain viable solutions for future study efforts
- MTEP21 Futures are in progress and will be ready this fall
 - Further study efforts under an expanded scope would be better served under MTEP21 future assumptions and models
- FERC approval of cost allocation metrics is still pending
 - FERC recently accepted request for re-hearing on March Order
- Discussions with SPP and the Joint Parties on the Settlement Agreement are on-going and will be brought to stakeholders when appropriate

Appendix

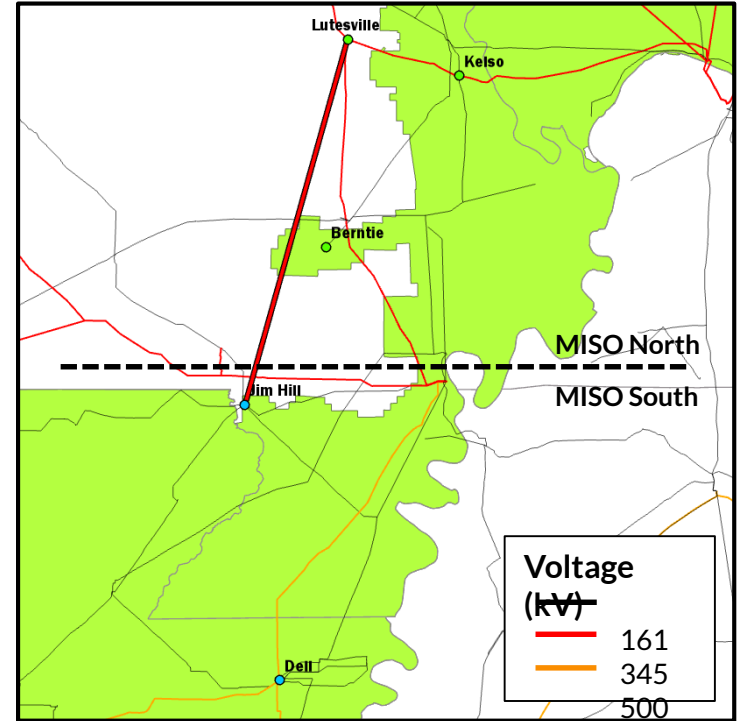
PC-1 – New Jim Hill - Berntie 345 kV line

- Two new 161/345kV 675MVA transformers at Jim Hill and Berntie
- Upgrade Berntie-Stoddard 161kV line to 891MVA
- Planning Level Cost Estimate: \$152M
- Settlement Agreement PV Benefit: \$272M
- APC PV Benefit: \$68M
- Contract Path Increase: 2574
- Aggregate B/C: 2.04



PC-2 – New Jim Hill – Lutesville 345 kV line

- Three 161/345kV 675MVA transformers at Jim Hill
- Planning Level Cost Estimate: \$249M
- Settlement Agreement PV Benefit: \$272M
- APC PV Benefit: \$45M
- Contract Path Increase: 2574
- Aggregate B/C: 1.16



PC-3 – New Jim Hill – Kelso 345 kV line and Jim Hill – Berntie 161kV line

- One 161/345kV 700MVA transformer at Jim Hill
- Upgrade multiple 161kV lines around Berntie and Kelso substations
- Planning Level Cost Estimate: \$262M
- Settlement Agreement PV Benefit: \$259M
- APC PV Benefit: \$42M
- Contract Path Increase: 2302
- Aggregate B/C: 1.10

