

Total System Losses @ 2000 MW Buffalo Ridge area generation  
 NDEX = 2080, MHEX = 2175 MW

Option	Description	Total System Losses, MW			Loss Reduction w/r to Base Plan		
		1200	1600	2000	1200	1600	2000
		Buffalo Ridge Generation MW:					
0	Existing System						
1	Base Plan	18,053	18,134	18,227	0	0	0
1C	Base Plan, with Lyon Co-Franklin-Helena 60% series compensation	18,032	18,108	18,193	21	26	34
1D	Base Plan, with Lyon Co-Franklin-Helena double circuit 345 kV	18,014	18,085	18,166	39	49	61
2A	System Alternative A Brookings-Lyon Co 115 kV, Lyon Co-Hazel-Blue Lk 345	18,045	18,130	18,234	8	4	-7
2B	System Alternative B Brookings Co-Lyon Co-Hazel-W Waconia-Blue Lk 345 kV & W Waconia-Helena-Lk Marion-Hampton Corner 345						

Computation of Equivalent Capitalized value for losses  
 (based on 1.00 MW loss on-peak)  
 (pool reserve requirement of 15%)

Term of loss reduction	20 yrs	Present Value of annuity factor	11.47	20 yrs	
Assumed life, xmsn	35 yrs		14.50	35 yrs	
Discount rate	6 %/yr				
Energy value	\$25 /MWh				
Loss Factor	0.30				
Fixed Charge Rate, xmsn	0.16				
				Levelized Annual	Cum PW
Capacity value:				FCR	Revenue Rqmt
	50 % peaking @	\$400 /kW	0.15	\$30,000	
	50 % baseload @	\$1,200 /kW	0.15	\$90,000	
				\$ 120,000	\$
	add 15% reserve requirement:			138,000	1,582,849
Energy Value:	1.00	8760 hr/yr	0.30	\$25 /MWh	65,700
					\$ 753,574
				Total annual cost, capacity & energy: \$	203,700
				Present Value factor	11.47
				Cum PV	\$ 2,336,423
				Equivalent Transmission investment \$	1,007,201

Losses.summary