765 kV single circuit EHV path versus 500kv double circuit EHV path

		R	X	Line B C (pu)	Line MVar pu	Losses at given MW flow		Net MW & MVAR Losses	
765 kV S/C line	Miles					**R losses in MW**	**X losses in MVAR**	**Net MW losses**	**Net MVAR losses**
765kV S/C line, 6-795 kcmil ACSR, pu per mile		0.0000035	0.0000863	0.049923		0.25	6.07	0.25	6.02
System Backup Transfer Impedance		0.00000	0.00000						
765kV, S/C Line Z	250	0.000875	0.02158	12.48	1248.08	61.56	1517.94	61.56	269.87
Transformer 765/500kV bank (2-2250MVA, 0.00007+j0.00728 each)		0.000035	0.00364	0		2.46	256.10	3.66	256.10
765 kV option, with series Transformer, total transfer Z ~=		0.000910	**0.02522**			1.20	NL xfrmr loss		
Max MW Power transfer capability at 90degrees = 100MVA base * (1/x)			**3966**						
765kV actual power flow assuming angle =	39.1		**2501**			65.22	1774.04	65.22	525.97
500 kV D/C line	Miles								
500 kV, D/C construction 3-1590 ACSR, per mi, parallel 6 wire, in pu		0.0000045	0.000104	0.040642		0.32	7.39	0.32	7.35
System Backup Transfer Impedance		0.00000	0.00000						
500 kV - Line Z	250	0.001125	0.02600	10.161	1016.05	79.97	1848.30	79.97	832.25
500 kV option, no transformers needed, total transfer Z~=		0.001125	**0.02600**						
Max MW Power transfer capability at 90degrees = 100MVA base * (1/x)			**3846**						
500kV actual power flow assuming angle =	**40.6**		**2503**			79.97	1848.30	79.97	832.25
% MW transfer improvement, 765kV Line verses 500kV Double Circuit at 90 degrees			**3%**						
MW & MVAR Losses for 765 kV alternative								**65.22**	**525.97**
MW & MVAR Losses for 500 kV D/C alternative								**79.97**	**832.25**
MW & MVAR loss improvement of 765kV S/C Line versus 500kV Double Circuit @ given MW flow =	**2500 MW**							**14.75**	**306.28**

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