

Alternative 1

Keystone - Sunbury 500 kV

Susquehanna - Lackawanna - Jefferson - Roseland 500 kV

Alternative 2

Keystone - Sunbury 500 kV

Bossards - Jefferson - Roseland 500 kV

Alternative 3

Keystone - TMI 500 kV

Susquehanna - Lackawanna - Jefferson - Roseland 500 kV

Alternative 4

Keystone - TMI 500 kV

Bossards - Jefferson - Roseland 500 kV

Alternative 5

Kammer - TMI 500 kV

Susquehanna - Lackawanna - Jefferson - Roseland 500 kV

Alternative 6

Kammer - TMI 500 kV

Bossards - Jefferson - Roseland 500 kV

Alternative 7

Keystone - Farmers Valley - Lackawanna - Jefferson - Roseland 500 kV

Alternative 8

Possum Pt - Vienna - Salem 500 kV option

Alternative 9

Wylie Ridge - Prexy 500 kV

Mt. Storm - Bedington - Kemptown 500 kV

Alternative 10

Amos - Kemptown - Deans 765 kV

Alternative 11

Amos - Kemptown 765 kV

Kemptown - Rock Springs - Hope Creek 500 kV

Alternative 12

Kammer - TMI 765 kV

Susquehanna - Lackawanna - Jefferson - Roseland 500 kV

Alternative 13

Kammer - TMI 765 kV

Bossards - Jefferson - Roseland 500 kV

	R	X	B	RATEA	RATEB
502 Jct - Mt Storm - Meadowbrook - Loudoun 500 kV					
502 Jct - Mt Storm 500 kV	0.000810	0.018860	1.490000	2731	3502
Mt Storm - Meadowbrook 500 kV	0.000600	0.012000	1.149000	2731	3502
Meadowbrook - Loudoun 500 kV	0.000400	0.008000	0.766000	2731	3502
502 Jct - Prexy 500 kV					
Prexy 138 kV is tap of Peters-Crossgates 138 kV					
HMJ 138 kV is tap of Houston-Manifold 138 kV					
VWJ 138 kV is tap of Vanceville-Washington 138 kV					
502 Jct - Prexy 500 kV	0.000370	0.008720	0.689280	2731	3502
Prexy 500/138 kV transformer	0.000600	0.039500		430	485
Prexy - VWJ 138 kV	0.002700	0.020120	0.005930	242	297
Prexy - HMJ 138 kV	0.001090	0.008130	0.002400	242	297
Peters - Prexy 138 kV	0.004070	0.031100	0.008600	242	297
Crossgates - Prexy 138 kV	0.002450	0.018390	0.005330	242	297
Houston - HMJ 138 kV	0.003600	0.022510	0.006330	200	243
Manifold - HMJ 138 kV	0.002400	0.015010	0.004220	200	243
Vanceville - VWJ 138 kV	0.002610	0.019690	0.005670	176	176
Washington - VWJ 138 kV	0.002410	0.018180	0.005230	176	176
Keystone - Sunbury 500 kV option					
Keystone - Sunbury 500 kV	0.001445	0.036076	2.388657	2500	3500
Keystone - TMI 500 kV option					
Keystone - TMI 500 kV	0.001598	0.038829	2.570820	2500	3500
Kammer - TMI 765 kV option					
Kammer - TMI 765 kV	0.00092	0.01938	9.7448	4257	4465
TMI 765/500 kV transformer #1	0.000090	0.004100		2640	3040
TMI 765/500 kV transformer #2	0.000090	0.004100		2640	3040
Kammer - TMI 500 kV option					
Kammer - TMI 500 kV	0.00209	0.05111	3.49063	2650	3013
Kammer 765/500 kV transformer #2	0.00009	0.00463		1710	1920
Possum Pt - Vienna - Salem 500 kV option					

Possum Pt - Burches Hill 500 kV #2	0.000300	0.006900	0.603760	2598	2598
Burches Hill - Chalk Pt 500 kV #2	0.000190	0.004000	0.381000	2349	2588
Chalk Pt - Calvert Cliffs 500 kV #2	0.000160	0.004090	0.343000	2250	2250
Calvert Cliffs - Vienna 500 kV	0.000320	0.008080	0.853040	1828	2219
Vienna 500/230 kV transformer	0.000200	0.021300		793	1067
Vienna - Indian River 500 kV	0.000320	0.008080	0.853040	1828	2219
Indian River 500/230 kV transformer	0.000200	0.021300		793	1067
Steele - Vienna 230 kV #2	0.003600	0.038800	0.085300	551	551
Indian River - Salem 500 kV	0.000840	0.021210	2.239230	1828	2219
Cardiff - Dennis 230 kV	0.001290	0.029000	0.079400	650	805
Vienna - Loretto 230 kV	0.001290	0.029000	0.079400	650	805
Loretto - Piney Grove 230 kV	0.000650	0.014500	0.039700	650	805
Loretto 230/138 kV transformer	0.000400	0.027200		503	531
Remove Vienna-Loretto-Piney Grove 138 kV					
Alloway 500/230 kV transformer #2	0.000000	0.020000			
Brighton 500/230 kV transformer #2	0.000070	0.012080		1118	1360
Burches Hill 500/230 kV transformer #2	0.000150	0.011640		1119	1340

Jefferson 500 kV substation

Jefferson 500 kV is at 70% of Branchburg-Ramapo from Branchburg

Keystone - Jefferson 500 kV (thru Farmers Valley) option

Keystone - Jefferson 500 kV (North thru Farmers Valley)	0.002900	0.073900	5.475800	2500	3000
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Susquehanna - Lackawanna - Jefferson 500 kV option

Susquehanna - Lackawanna 500 kV	0.000400	0.010100		2500	3000
Lackawanna - Jefferson 500 kV	0.000900	0.019900	1.875800	2500	3000
Lackawanna 500/230 kV transformer	0.000300	0.019900		834	1078
Remove Susquehanna - Stanton 230 kV #2					

Jefferson - Roseland 500 kV option

Jefferson - Roseland 500 kV	0.000400	0.011200	0.850000	2650	3040
Jefferson 230 kV is at 70% of Newton-Montville 230 kV from Newton					
Jefferson 500/230 kV transformer	0.000300	0.019900		834	1078

Roseland 500/230 kV transformer #1	0.000300	0.019900		834	1078
Roseland 500/230 kV transformer #2	0.000300	0.019900		834	1078
Jefferson - W Wharton 230 kV	0.001000	0.014000	0.030000	653	793
Remove W Wharton - Franklin 115 kV D					
Remove W Wharton - Franklin 115 kV J					
Jefferson 230/115 kV transformer	0.000480	0.048500		217	238
Jefferson - Franklin 115 kV D	0.005100	0.055000	0.007000	128	135
Jefferson - Franklin 115 kV J	0.005100	0.055000	0.007000	148	179

Bossards - MC - Portland - Jefferson 500 kV option

Bossards 500 kV is at 25% of Wescosville -
Susquehanna 500 kV from Wescosville

Bossards - Martins Creek 500 kV	0.000300	0.005500	0.435500	2650	3040
Martins Creek - Portland 500 kV	0.000100	0.002000	0.150000	2650	3040
Portland - Jefferson 500 kV	0.000500	0.013700	0.980700	2831	3221
Martins Creek 500/230 kV transformer	0.000470	0.019970		1161	1501
Portland 500/230 kV transformer	0.000470	0.019970		1161	1501
Move Martins Creek unit 3 to 500 kV					
Move Martins Creek unit 4 to 500 kV					
Remove Martins Creek - Portland 230 kV					
Remove Martins Creek - Siegfried 230 kV #2					

Wylie Ridge - Prexy & Mt Storm - Bedington - NW - Kemptown 500 kV option

Wylie Ridge - Prexy 500 kV	0.000370	0.008720	0.689280	2731	3502
Mt Storm - Bedington 500 kV	0.000560	0.014140	1.492820	2650	3015
Bedington - Kemptown 500 kV	0.001280	0.032320	3.412160	2650	3015

Kemptown is 40% of Brighton - Conastone 500 kV from
Brighton and 50% of Brighton - Doubs 500 kV from
Brighton. Four circuits come together at the station:
Brighton 1, Brighton 2, Conastone, Bedington, & Doubs.

Amos - Kemptown - Deans 765 kV option

Amos - Kemptown 765 kV	0.000970	0.024680	14.277980	3975	4570
Kemptown - Deans 765 kV	0.000890	0.022610	13.079830	3975	4570
Kemptown 765/500 kV transformer #1	0.000090	0.004100		2640	3040
Kemptown 765/500 kV transformer #2	0.000090	0.004100		2640	3040

Deans 765/500 kV transformer #1	0.000090	0.004100		2640	3040
Deans 765/500 kV transformer #2	0.000090	0.004100		2640	3040
Rock Springs - Hope Creek 500 kV option					
Rock Springs - Hope Creek 500 kV	0.000580	0.012600	0.890360	2660	3377
Kempton - Rock Springs 500 kV					
Rock Springs - Hope Creek 500 kV	0.000500	0.011600	0.850600	2650	3040
Doubs - Northwest - Rock Springs 500 kV option					
Doubs - Northwest 500 kV	0.000400	0.009800	0.672900	2650	3040
Northwest - Rock Springs 500 kV	0.000500	0.011600	0.850600	2650	3040
Northwest 500/230 kV transformer	0.000300	0.019900		834	1078