# Table 1 - Rutland / Cold River / Blissville Deficiency Study Results

| A | B | C | D | E | F | G | H | I | J | K | bus 87300 L | M | N | bus 82467 O | bus 82467 P | bus 82494 Q | bus 82470 R | S | T | bus 87250 U | V |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **entry** | **case name** | **general area configuration & conditions** | **special configuration details** | **area load** | **Rut GT** | **area hydro output** | **Area caps[6]** | **special conditions (if any)** | **contingency (if any)** | **time frame** | **Castleton-W Rut 46 kV Flow** | **worst area 46 kV line overload** | **2nd worst area 46 kV line overload** | **Southern Tie Outflow** | **Blissville 115/46 kV xformer loading** | **N Rutland 115/46 kV xformer loading[4]** | **Cold Riv 115/46 kV xformer loading[4]** | **new xformer loading (if applicable)** | **worst area 46 kV voltage** | **Dorset 46 kV voltage** | **comments** |
| 1 | Rut-ColdRiv-Blissv-1.sav[3] | existing, with southernmost VT tie exporting to NY precont. | none | present peak summer | off | 2.0 Mw | all on | none | none | SS | 2.8 Mw | none | none | 22.1 Mw | 20.6 Mva / 33% nameplate | 45.9 Mva / 81% nameplate | 42.6 Mva / 77% nameplate | N/A | 93% at Chester | 96% | |
| 2 | Rut-ColdRiv-Blissv-1a.sav[3] | existing, with southernmost VT tie exporting to NY precont. | none | present peak summer | off | zero[2] | all on | none | none | SS | 3.0 Mw | none | none | 21.8 Mw | 20.8 Mva / 34% nameplate | 46.8 Mva / 82% nameplate | 43.0 Mva / 78% nameplate | N/A | 93% at Chester | 96% | |
| 3 | Rut-ColdRiv-Blissv-1aa.sav[3] | existing, with southernmost VT tie importing from NY precont. | none | present peak summer | off | zero[2] | all on | none | none | SS | 5.2 Mw | none | none | **-24.7 Mw** | 23.2 Mva / 38% nameplate | 44.6 Mva / 78% nameplate | 42.5 Mva / 77% nameplate | N/A | 92% at Chester | 95% | |
| 4 | Rut-ColdRiv-Blissv-2.sav[3] | existing, with southernmost VT tie exporting to NY precont. | none | present peak summer | off | zero[2] | all on | none | E Rut tap - N Rut 46 kV line | $T_0$+ | 1.9 Mw | none | none | 22.2 Mw | 19.7 Mva / 32% nameplate | 40.4 Mva / 71% nameplate | 50.0 Mva / 91% nameplate | N/A | 91% at E Rutland | 96% | |
| 5 | Rut-ColdRiv-Blissv-3.sav[3] | existing, with southernmost VT tie exporting to NY precont. | none | present peak summer | off | zero[2] | all on | none | Smithv tap - Cavd 46 kV line | $T_0$+ | 3.2 Mw | none | none | 21.6 Mw | 21.1 Mva / 34% nameplate | 47.9 Mva / 84% nameplate | 43.7 Mva / 79% nameplate | N/A | 87% at Smithville | 96% | |
| 6 | Rut-ColdRiv-Blissv-4.sav[3] | existing, with southernmost VT tie exporting to NY precont. | none | present peak summer | off | zero[2] | all on | none | N Rut 115/46 kV xformer | $T_0$+ | 11.2 Mw | | none | 20.1 Mw | 30.1 Mva / 49% nameplate | N/A (out of service) | 68.1 Mva / 124% nameplate | N/A | 90% at E Rutland | 95% | **slightly incorrect Cold River xformer Z** |
| 7 | Rut-ColdRiv-Blissv-4a.sav[3] | existing, with southernmost VT tie exporting to NY precont. | none | present peak summer[5] | off | zero[2] | all on | none | N Rut 115/46 kV xformer | $T_0$+ | 12.7 Mw | Hydeville-Blissville 117% | none | 19.7 Mw | 31.9 Mva / 52% nameplate | N/A (out of service) | 67.6 Mva / 123% nameplate | N/A | 88% at E Rutland | 95% | modest correction to Cold River xformer Z |
| 8 | Rut-ColdRiv-Blissv-4rgt.sav[3] | existing, with southernmost VT tie exporting to NY precont. | none | present peak summer[5] | **10 Mw** | zero[2] | all on | none | N Rut 115/46 kV xformer | SS | 10.7 Mw | Hydeville-Blissville 104% | none | 22.0 Mw | 29.5 Mva / 48% nameplate | N/A (out of service) | 60.5 Mva / 110% nameplate | N/A | 90% at E Rutland | 95% | |
| 9 | Rut-ColdRiv-Blissv-4aa.sav[3] | existing, with southernmost VT tie importing from NY precont. | none | present peak summer | off | zero[2] | all on | none | N Rut 115/46 kV xformer | $T_0$+ | 13.1 Mw | Hydeville-Blissville 118% | none | **-26.2 Mw** | 32.1 Mva / 52% nameplate | N/A (out of service) | 70.4 Mva / 128% nameplate | N/A | 89% at E Rutland | 94% | Middlebury 115/46 kV @ 105% of nameplate |
| 10 | Rut-ColdRiv-Blissv-5.sav[3] | existing, with southernmost VT tie exporting to NY precont. | none | present peak summer | off | zero[2] | all on | none | Cold Riv 115/46 kV xformer | $T_0$+ | 7.7 Mw | E Rut tap-S Rut 104%[11] | none | 20.3 Mw | 25.9 Mva / 42% nameplate | 77.3 Mva / 136% nameplate | N/A (out of service) | N/A | 90% at Wallingford | 96% | |
| 11 | Rut-ColdRiv-Blissv-5rgt.sav[3] | existing, with southernmost VT tie exporting to NY precont. | none | present peak summer | **10 Mw** | zero[2] | all on | none | Cold Riv 115/46 kV xformer | SS | 6.1 Mw | none | none | 22.4 Mw | 24.2 Mva / 39% nameplate | 69.4 Mva / 122% nameplate | N/A (out of service) | N/A | 92% at Wallingford | 96% | |
| 12 | Rut-ColdRiv-Blissv-6.sav[3] | existing, with southernmost VT tie exporting to NY precont. | none | present peak summer | off | zero[2] | all on | none | Blissville 115/46 kV xformer | $T_0$+ | -19.4 Mw | Castleton-W Rut 105% | none | 26.5 Mw | N/A (out of service) | 60.7 Mva / 107% nameplate | 50.3 Mva / 92% nameplate | N/A | 78% at Dorset | 78% | |
| 13 | Rut-ColdRiv-Blissv-6rgt.sav[3] | existing, with southernmost VT tie exporting to NY precont. | none | present peak summer | **10 Mw** | zero[2] | all on | none | Blissville 115/46 kV xformer | SS | -19.3 Mw | Castleton-W Rut 104% | none | 28.2 Mw | N/A (out of service) | 55.2 Mva / 97% nameplate | 46.1 Mva / 84% nameplate | N/A | 80% at Dorset | 80% | |
| 14 | Rut-ColdRiv-Blissv-7.sav[3] | existing, with southernmost VT tie exporting to NY precont. | none | present peak summer | off | zero[2] | all on | none | Blissville - Hydeville 46 kV line | $T_0$+ | -9.0 Mw | none | none | 24.8 Mw | 9.6 Mva / 16% nameplate | 54.4 Mva / 96% nameplate | 46.9 Mva / 85% nameplate | N/A | 89% at Carver's Falls | 97% | |
| 15 | Rut-ColdRiv-Blissv-8.sav[3] | existing, with southernmost VT tie exporting to NY precont. | none | present peak summer | off | zero[2] | all on | none | N Rut - W Rut 115 kV line | $T_0$+ | 7.4 Mw | none | none | 24.7 Mw | 25.7 Mva / 41% nameplate | 38.2 Mva / 67% nameplate | 41.2 Mva / 75% nameplate | N/A | 93% at Chester | 96% | |
| 16 | Rut-ColdRiv-Blissv-9.sav[3] | existing, with southernmost VT tie exporting to NY precont. | none | present peak summer | off | zero[2] | all on | none | W Rut -Blissville 115 kV line | $T_0$+ | -4.3 Mw | none | none | -13.5 Mw | 13.5 Mva / 22% nameplate | 51.6 Mva / 91% nameplate | 45.4 Mva / 83% nameplate | N/A | 92% at Dorset | 92% | |
| 17 | Rut-ColdRiv-Blissv-10.sav[3] | existing, with southernmost VT tie exporting to NY precont. | none | present peak summer | off | zero[2] | all on | none | Cold River - S Rut 46 kV line | $T_0$+ | 4.2 Mw | E Rut tap-S Rut 101%[11] | none | 21.2 Mw | 22.1 Mva / 36% nameplate | 54.1 Mva / 95% nameplate | 36.4 Mva / 66% nameplate | N/A | 92% at S Rutland | 96% | |
| 18 | Rut-ColdRiv-Blissv-11.sav[3] | existing, with southernmost VT tie exporting to NY precont. | none | present peak summer | off | zero[2] | all on | none | Coolidge - W Rut 345 kV line | $T_0$+ | 3.0 Mw | none | none | -68.8 Mw | 21.0 Mva / 34% nameplate | 37.5 Mva / 66% nameplate | 46.3 Mva / 84% nameplate | N/A | 90% at Wallingford | 91% | Ascutney 115/46 kV @ 105% of nameplate |
| 19 | Rut-ColdRiv-Blissv-11aa.sav[3] | existing, with southernmost VT tie importing from NY precont. | none | present peak summer | off | zero[2] | all on | none | Coolidge - W Rut 345 kV line | $T_0$+ | 4.7 Mw | none | none | **-102.0 Mw** | 22.8 Mva / 37% nameplate | 37.9 Mva / 66% nameplate | 45.6 Mva / 83% nameplate | N/A | 89% at S Rutland | 89% | Ascutney 115/46 kV @ 104% of nameplate |
| 20 | Rut-ColdRiv-Blissv-1a-81%-of-peak.sav[3] | existing, with southernmost VT tie exporting to NY precont. | 2nd 46 kV line between W Rut and N Rut/Cold Riv[9] | 81% of present peak sum[13] | off | zero[2] | all on | none | none | SS | 2.4 Mw | none | none | 21.0 Mw | 17.0 Mva / 27% nameplate | 40.2 Mva / 71% nameplate | 32.2 Mva / 59% nameplate | N/A | 95% at Chester | 98% | |
| 21 | Rut-ColdRiv-Blissv-1aa-81% of peak.sav[3] | existing, with southernmost VT tie importing from NY precont. | 2nd 46 kV line between W Rut and N Rut/Cold Riv[9] | 81% of present peak sum[13] | off | zero[2] | all on | none | none | SS | 4.7 Mw | none | none | **-25.0 Mw** | 19.5 Mva / 32% nameplate | 39.8 Mva / 70% nameplate | 31.6 Mva / 57% nameplate | N/A | 95% at Chester | 97% | |
| 22 | Rut-ColdRiv-Blissv-2-81%-of-peak.sav[3] | existing, with southernmost VT tie exporting to NY precont. | 2nd 46 kV line between W Rut and N Rut/Cold Riv[9] | 81% of present peak sum[13] | off | zero[2] | all on | none | E Rut tap - N Rut 46 kV line | SS | 1.5 Mw | none | none | 21.5 Mw | 16.1 Mva / 26% nameplate | 34.8 Mva / 61% nameplate | 37.5 Mva / 68% nameplate | N/A | 94% at E Rutland | 98% | |
| 23 | Rut-ColdRiv-Blissv-3-81%-of-peak.sav[3] | existing, with southernmost VT tie exporting to NY precont. | 2nd 46 kV line between W Rut and N Rut/Cold Riv[9] | 81% of present peak sum[13] | off | zero[2] | all on | none | Smithv tap - Cavd 46 kV line | SS | 2.6 Mw | none | none | 21.0 Mw | 17.1 Mva / 28% nameplate | 40.9 Mva / 72% nameplate | 31.7 Mva / 58% nameplate | N/A | 90% at Smithville | 97% | |
| 24 | Rut-ColdRiv-Blissv-4a-81%-of-peak.sav[3] | existing, with southernmost VT tie exporting to NY precont. | 2nd 46 kV line between W Rut and N Rut/Cold Riv[9] | 81% of present peak sum[13] | off | zero[2] | all on | none | N Rut 115/46 kV xformer | $T_0$+ | 10.1 Mw | none | none | 19.7 Mw | 25.1 Mva / 41% nameplate | N/A | 53.9 Mva / 98% nameplate | N/A | 92% at E Rutland | 97% | |
| 25 | Rut-ColdRiv-Blissv-4aa-81%-of-peak.sav[3] | existing, with southernmost VT tie importing from NY precont. | 2nd 46 kV line between W Rut and N Rut/Cold Riv[9] | 81% of present peak sum[13] | off | zero[2] | all on | none | N Rut 115/46 kV xformer | $T_0$+ | 12.0 Mw | Hydevl-Blissvl @ 100% | none | **-26.3 Mw** | 27.3 Mva / 44% nameplate | N/A | 53.2 Mva / 97% nameplate | N/A | 92% at E Rutland | 97% | |
| 26 | Rut-ColdRiv-Blissv-5-81%-of-peak.sav[3] | existing, with southernmost VT tie exporting to NY precont. | 2nd 46 kV line between W Rut and N Rut/Cold Riv[9] | 81% of present peak sum[13] | off | zero[2] | all on | none | Cold Riv 115/46 kV xformer | $T_0$+ | 5.8 Mw | none | none | 20.2 Mw | 20.5 Mva / 33% nameplate | 62.1 Mva / 109% nameplate | N/A | N/A | 95% at Wallingford | 98% | |
| 27 | Rut-ColdRiv-Blissv-5-81%-of-peak-rgt.sav[3] | existing, with southernmost VT tie exporting to NY precont. | 2nd 46 kV line between W Rut and N Rut/Cold Riv[9] | 81% of present peak sum[13] | **10 Mw** | zero[2] | all on | none | Cold Riv 115/46 kV xformer | SS | 4.3 Mw | none | none | 22.2 Mw | 19.0 Mva / 31% nameplate | 54.8 Mva / 96% nameplate | N/A | N/A | 95% at Chester | 98% | |
| 28 | Rut-ColdRiv-Blissv-6-81%-of-peak.sav[3] | existing, with southernmost VT tie exporting to NY precont. | 2nd 46 kV line between W Rut and N Rut/Cold Riv[9] | 81% of present peak sum[13] | off | zero[2] | all on | none | Blissville 115/46 kV xformer | $T_0$+ | -15.2 Mw | none | none | 25.0 Mw | N/A | 50.8 Mva / 89% nameplate | 37.1 Mva / 68% nameplate | N/A | 87% at Dorset | 87% | |
| 29 | Rut-ColdRiv-Blissv-7-81%-of-peak.sav[3] | existing, with southernmost VT tie exporting to NY precont. | 2nd 46 kV line between W Rut and N Rut/Cold Riv[9] | 81% of present peak sum[13] | off | zero[2] | all on | none | Blissville - Hydeville 46 kV line | SS | -7.2 Mw | none | none | 23.5 Mw | 8.3 Mva / 13% nameplate | 46.3 Mva / 81% nameplate | 34.9 Mva / 63% nameplate | N/A | 93% at Carvers Fls | 98% | |
| 30 | Rut-ColdRiv-Blissv-8-81%-of-peak.sav[3] | existing, with southernmost VT tie exporting to NY precont. | 2nd 46 kV line between W Rut and N Rut/Cold Riv[9] | 81% of present peak sum[13] | off | zero[2] | all on | none | N Rut - W Rut 115 kV line | $T_0$+ | 5.7 Mw | none | none | 23.4 Mw | 20.8 Mva / 34% nameplate | 35.6 Mva / 63% nameplate | 31.0 Mva / 56% nameplate | N/A | 95% at Chester | 98% | |
| 31 | Rut-ColdRiv-Blissv-9-81%-of-peak.sav[3] | existing, with southernmost VT tie exporting to NY precont. | 2nd 46 kV line between W Rut and N Rut/Cold Riv[9] | 81% of present peak sum[13] | off | zero[2] | all on | none | W Rut -Blissville 115 kV line | $T_0$+ | -4.2 Mw | none | none | -10.2 Mw | 10.4 Mva / 17% nameplate | 44.8 Mva / 79% nameplate | 34.1 Mva / 62% nameplate | N/A | 94% at Dorset | 94% | |
| 32 | Rut-ColdRiv-Blissv-10-81%-of-peak.sav[3] | existing, with southernmost VT tie exporting to NY precont. | 2nd 46 kV line between W Rut and N Rut/Cold Riv[9] | 81% of present peak sum[13] | off | zero[2] | all on | none | Cold River - S Rut 46 kV line | SS | 3.2 Mw | none | none | 20.8 Mw | 17.8 Mva / 29% nameplate | 44.9 Mva / 79% nameplate | 28.1 Mva / 51% nameplate | N/A | 95% at S Rutland | 98% | |
| 33 | Rut-ColdRiv-Blissv-11-81%-of-peak.sav[3] | existing, with southernmost VT tie exporting to NY precont. | 2nd 46 kV line between W Rut and N Rut/Cold Riv[9] | 81% of present peak sum[13] | off | zero[2] | all on | none | Coolidge - W Rut 345 kV line | $T_0$+ | 2.5 Mw | none | none | -64.0 Mw | 16.9 Mva / 27% nameplate | 31.3 Mva / 55% nameplate | 34.9 Mva / 63% nameplate | N/A | 93% at Wallingford | 94% | |
| 34 | Rut-ColdRiv-Blissv-11aa-81%-of-peak.sav[3] | existing, with southernmost VT tie importing from NY precont. | 2nd 46 kV line between W Rut and N Rut/Cold Riv[9] | 81% of present peak sum[13] | off | zero[2] | all on | none | Coolidge - W Rut 345 kV line | $T_0$+ | 4.3 Mw | none | none | **-97.6 Mw** | 19.0 Mva / 31% nameplate | 31.7 Mva / 56% nameplate | 34.1 Mva / 62% nameplate | N/A | 92% at S Rutland | 93% | |
| 35 | Rut-ColdRiv-Blissv-12-81%-of-peak.sav[3] | existing, with southernmost VT tie exporting to NY precont. | 2nd 46 kV line between W Rut and N Rut/Cold Riv[9] | 91% of present peak sum | off | zero[2] | all on | none | none | SS | 3.0 Mw | none | none | 21.1 Mw | 19.3 Mva / 31% nameplate | 45.3 Mva / 80% nameplate | 36.0 Mva / 65% nameplate | N/A | 93% at Chester | 97% | |
| 36 | Rut-ColdRiv-Blissv-12aa-81%-of-peak.sav[3] | existing, with southernmost VT tie importing from NY precont. | 2nd 46 kV line between W Rut and N Rut/Cold Riv[9] | 91% of present peak sum | off | zero[2] | all on | none | none | SS | 5.2 Mw | none | none | **-24.9 Mw** | 21.8 Mva / 35% nameplate | 44.9 Mva / 79% nameplate | 35.4 Mva / 64% nameplate | N/A | 93% at Chester | 96% | |
| 37 | Rut-ColdRiv-Blissv-13-81%-of-peak.sav[3] | existing, with southernmost VT tie exporting to NY precont. | 2nd 46 kV line between W Rut and N Rut/Cold Riv[9] | 91% of present peak sum | off | zero[2] | all on | none | E Rut tap - N Rut 46 kV line | SS | 2.0 Mw | none | none | 21.4 Mw | 18.3 Mva / 30% nameplate | 39.3 Mva / 69% nameplate | 42.4 Mva / 77% nameplate | N/A | 92% at E Rutland | 97% | |
| 38 | Rut-ColdRiv-Blissv-14-81%-of-peak.sav[3] | existing, with southernmost VT tie exporting to NY precont. | 2nd 46 kV line between W Rut and N Rut/Cold Riv[9] | 91% of present peak sum | off | zero[2] | all on | none | Smithv tap - Cavd 46 kV line | SS | 3.2 Mw | none | none | 21.0 Mw | 19.5 Mva / 32% nameplate | 46.0 Mva / 81% nameplate | 35.8 Mva / 65% nameplate | N/A | 89% at Smithville | 96% | |
| 39 | Rut-ColdRiv-Blissv-15-81%-of-peak.sav[3] | existing, with southernmost VT tie exporting to NY precont. | 2nd 46 kV line between W Rut and N Rut/Cold Riv[9] | 91% of present peak sum | off | zero[2] | all on | none | N Rut 115/46 kV xformer | $T_0$+ | 11.6 Mw | Hydevl-Blissvl @ 105% | none | 19.4 Mw | 28.9 Mva / 47% nameplate | N/A | 61.4 Mva / 112% nameplate | N/A | 90% at E Rutland | 96% | |
| 40 | Rut-ColdRiv-Blissv-15-81%-of-peak-rgt.sav[3] | existing, with southernmost VT tie exporting to NY precont. | 2nd 46 kV line between W Rut and N Rut/Cold Riv[9] | 91% of present peak sum | **10 Mw** | zero[2] | all on | none | N Rut 115/46 kV xformer | SS | 9.6 Mw | none | none | 21.6 Mw | 26.6 Mva / 43% nameplate | N/A | 54.6 Mva / 99% nameplate | N/A | 92% at E Rutland | 96% | |
| 41 | Rut-ColdRiv-Blissv-15aa-81%-of-peak.sav[3] | existing, with southernmost VT tie importing from NY precont. | 2nd 46 kV line between W Rut and N Rut/Cold Riv[9] | 91% of present peak sum | off | zero[2] | all on | none | N Rut 115/46 kV xformer | $T_0$+ | 13.4 Mw | Hydevl-Blissvl @ 115% | none | **-26.5 Mw** | 30.9 Mva / 50% nameplate | N/A | 60.8 Mva / 111% nameplate | N/A | 90% at E Rutland | 95% | |
| 42 | Rut-ColdRiv-Blissv-17-81%-of-peak.sav[3] | existing, with southernmost VT tie exporting to NY precont. | 2nd 46 kV line between W Rut and N Rut/Cold Riv[9] | 91% of present peak sum | off | zero[2] | all on | none | Cold Riv 115/46 kV xformer | $T_0$+ | 6.9 Mw | none | none | 19.9 Mw | 23.5 Mva / 38% nameplate | 70.5 Mva / 124% nameplate | N/A | N/A | 92% at Wallingford | 96% | |
| 43 | Rut-ColdRiv-Blissv-17-81%-of-peak-rgt.sav[3] | existing, with southernmost VT tie exporting to NY precont. | 2nd 46 kV line between W Rut and N Rut/Cold Riv[9] | 91% of present peak sum | **10 Mw** | zero[2] | all on | none | Cold Riv 115/46 kV xformer | SS | 5.3 Mw | none | none | 22.0 Mw | 21.9 Mva / 35% nameplate | 62.8 Mva / 110% nameplate | N/A | N/A | 93% at Chester | 97% | |
| 44 | Rut-ColdRiv-Blissv-18-81%-of-peak.sav[3] | existing, with southernmost VT tie exporting to NY precont. | 2nd 46 kV line between W Rut and N Rut/Cold Riv[9] | 91% of present peak sum | off | zero[2] | all on | none | Blissville 115/46 kV xformer | $T_0$+ | -17.5 Mw | none | none | 25.5 Mw | N/A | 58.1 Mva / 102% nameplate | 41.9 Mva / 76% nameplate | N/A | 82% at Dorset | 82% | |
| 45 | Rut-ColdRiv-Blissv-18-81%-of-peak-rgt.sav[3] | existing, with southernmost VT tie exporting to NY precont. | 2nd 46 kV line between W Rut and N Rut/Cold Riv[9] | 91% of present peak sum | **10 Mw** | zero[2] | all on | none | Blissville 115/46 kV xformer | SS | -17.4 Mw | none | none | 27.2 Mw | N/A | 52.4 Mva / 92% nameplate | 38.2 Mva / 70% nameplate | N/A | 84% at Dorset | 84% | |
| 46 | Rut-ColdRiv-Blissv-19-81%-of-peak.sav[3] | existing, with southernmost VT tie exporting to NY precont. | 2nd 46 kV line between W Rut and N Rut/Cold Riv[9] | 91% of present peak sum | off | zero[2] | all on | none | Blissville - Hydeville 46 kV line | SS | -8.2 Mw | none | none | 23.9 Mw | 9.0 Mva / 15% nameplate | 52.5 Mva / 92% nameplate | 39.2 Mva / 71% nameplate | N/A | 91% at Carvers Fls | 97% | |
| 47 | Rut-ColdRiv-Blissv-20-81%-of-peak.sav[3] | existing, with southernmost VT tie exporting to NY precont. | 2nd 46 kV line between W Rut and N Rut/Cold Riv[9] | 91% of present peak sum | off | zero[2] | all on | none | N Rut - W Rut 115 kV line | $T_0$+ | 6.9 Mw | none | none | 23.7 Mw | 23.7 Mva / 38% nameplate | 39.3 Mva / 69% nameplate | 34.5 Mva / 63% nameplate | N/A | 93% at Chester | 97% | |
| 48 | Rut-ColdRiv-Blissv-21-81%-of-peak.sav[3] | existing, with southernmost VT tie exporting to NY precont. | 2nd 46 kV line between W Rut and N Rut/Cold Riv[9] | 91% of present peak sum | off | zero[2] | all on | none | W Rut -Blissville 115 kV line | $T_0$+ | -3.9 Mw | none | none | -12.3 Mw | 12.4 Mva / 20% nameplate | 50.1 Mva / 88% nameplate | 38.0 Mva / 69% nameplate | N/A | 93% at Dorset | 93% | |
| 49 | Rut-ColdRiv-Blissv-22-81%-of-peak.sav[3] | existing, with southernmost VT tie exporting to NY precont. | 2nd 46 kV line between W Rut and N Rut/Cold Riv[9] | 91% of present peak sum | off | zero[2] | all on | none | Cold River - S Rut 46 kV line | SS | 3.9 Mw | none | none | 20.6 Mw | 20.3 Mva / 33% nameplate | 50.8 Mva / 89% nameplate | 31.1 Mva / 57% nameplate | N/A | XXX | 96% | |
| 50 | Rut-ColdRiv-Blissv-23-81%-of-peak.sav[3] | existing, with southernmost VT tie exporting to NY precont. | 2nd 46 kV line between W Rut and N Rut/Cold Riv[9] | 91% of present peak sum | off | zero[2] | all on | none | Coolidge - W Rut 345 kV line | $T_0$+ | 3.0 Mw | none | none | -67.7 Mw | 19.4 Mva / 31% nameplate | 36.2 Mva / 63% nameplate | 38.9 Mva / 71% nameplate | N/A | 91% at Wallingford | 92% | |
| 51 | Rut-ColdRiv-Blissv-23aa-81%-of-peak.sav[3] | existing, with southernmost VT tie importing from NY precont. | 2nd 46 kV line between W Rut and N Rut/Cold Riv[9] | 91% of present peak sum | off | zero[2] | all on | none | Coolidge - W Rut 345 kV line | $T_0$+ | 4.8 Mw | none | none | **-100.8 Mw** | 21.3 Mva / 34% nameplate | 36.5 Mva / 64% nameplate | 38.2 Mva / 69% nameplate | N/A | 90% at S Rutland | 91% | |

[1] Carvers @ 2.0 Mw, Glen @ 1.8 Mw, Patch @ 0.3 Mw, Cavendish @ 1.0 Mw.

**last updated 3/27/14**

[2] Includes Carvers, Glen, Patch, and Cavendish.

[3] Based on *peak-summer-2019-90_10-vt-case-from-hantz-we1235case.sav*

[4] 115/46 kV transformer models at North Rutland and Cold River include VELCO's recent tap changes from *97.5 P.U.* high side to *unity* high side taps (less boost).

[5] This case had a corrected xformer impedance model at Cold River (although the difference in most simulation parameters was very modest).

[6] This would require two new 46 kV breakers at W Rut ($200K total per JF), transfer-trip at Glenn and Patch ($50K total per JF), and about a mile of reconductoring to eliminate #2 CU on W Rut-W Rut tap 46 kV line, with some pole replacements ($350K total per RJ). The total cost of closing this line is therefore estimated to be $600K.

[8] Includes Poultney 46 kV 5.4 Mvar, N Rut 115 kV 24.75 Mvar, and Cold Riv 46 kV 5.4 Mvar

[9] Chester's voltage actually improves slightly under this contingency, indicating that the frequent low voltage at Chester is due to the burden of the Cold River to Cavendish loads and does not require capacitive compensation at Chester per se.

[10] Would require reconductoring the entire 6.7 mile Castleton-West Rutland 46 kV line.

[11] There is already a plan to reconductor this line.

[12] Would require reconductoring 3.1 miles of the Hydeville-Castleton 46 kV line.

[13] Required load-serving capability per equal slope criterion.

[14] The normally open VMPD B7 tie to West Rutland is **closed** and GMP **West Rutland to Florence** 46 kV is assumed to be **reconductored/rebuilt** as 477 MCM "T". This is thermally *required* to carry OMYA radially from WRut. Only these last 10 cases have VMPD load adjustments, as none of the others assume the closure of the B7 tie. In such cases (B7 closed) where the load is a tenth year forecast, the VMPD load is assumed to have grown at a rate of 1% per year.

[15] OMYA GTs are dispatched at 6.6 Mw