APPENDIX D

Steady State and Voltage Stability Analyses

1.0 Steady State Analysis

1.1 Category A and B Events Analysis

All three regional alternative option sets were tested under all Central East regions' Category B (N-1) contingencies as listed in Table 1 with generation dispatch scenario 3. (It should be noted that outages of load transformers at all substation were also investigated but are not listed in this Table.)

These three alternatives were also tested under the same Category B contingencies but with the critical generator out of service (Battle River unit 5), as well as both Primrose generators out of service (N-G-1) (Previous studies indicated the outage of Primrose generation also creates stress in that area.)

The load flow analysis revealed that there were neither voltage range violations nor thermal over loads for the category A (All elements in service) and B (N-1 and N-G-1) contingencies studied in the Central East region. The proposed alternatives thus met the Reliability Criteria. However, there were a total of three violations on customer owned facilities as listed below:

1. The customer owned line 7L105 (Mahihkan 837S to MahNo 909S) gets overloaded under summer peak and light load conditions in 2017). This customer has been informed about it.
2. The customer owned line 7L35 (Primrose tap to Primrose plant) will be overloaded under the following conditions: summer peak and light load conditions in 2017; loss of 7L87 line (Wolf Lake to Marguerite Lake) and Primrose's units in 2017 winter peak case.
3. The industrial load at Ethel Lake 717S will have to be curtailed if one of the dual 72/25 kV transformers (supplied via a single 144/72 kV tie transformer) goes out of service.
4. In all aforementioned circumstances the respective customer is responsible for mitigating the constraints

Table 1 Category B Contingency List

Category B Line and Tie Transformer Contingencies			
Faulted Element	**To**	**From**	**Tapped sub**
9L16	Cordel 755S	Tinchebray 972S	
9L953	Nilrem	Cordel 755S	
9L948	Paintearth Creek 863S	Hansman Lake 650S	
9L948	Hansman Lake 650S	Paintearth Creek 863S	
9L80	Battle River 757S	Cordel 755S	
9L79	Battle River 757S	Cordel 755S	
9L59	Cordel 755S	Tinchebray	
9L37	Whitefish Lake 825S	Marguerite Lake 826S	
9L36	Whitefish Lake 825S	Marguerite Lake 826S	
9L27	Cordel 755S	Paintearth Creek 25 kV	
9L20	Cordel 755S	Nevis 766S	
9Lnew	Hansman Lake 650S	Pemukan 932S	
954L	Metiskow 648S	Hansman Lake 650S	
953L	Nilrem	Hansman Lake 650S	
885L	Metiskow 648S	Hansman Lake 650S	
7newL	Wainwright 51S	Jarrow 252S	
7newL	Hardisty 377S	Nilrem	
7newL	Provost 545S	Hayter 277S	
7newL	Wainwright 51S	Edgerton 899S	
7L95	Mahkeses 889S	Leming Lake 715S	
7L92	Whitby Lake 819S	Vilna 777S	
7L92	Vegreville 709S	Vilna 777S	Watt Lake 956S (new Willingdon)
7L91	Marguerite Lake 826S	Leming Lake 715S	
7L89	Bonnyville 700S	La Corey 721S	
7L89	Marguerite Lake 826S	La Corey 721S	
7L87	Marguerite Lake 826S	Wolf Lake 822S	
7L86	Wolf Lake 822S	Foster Creek 877S	Tapped sub
7L83	Bourque 970S	Leming Lake 715S	
7L794	Whitby Lake 819S	Lac La Biche 157S	
7L77	Vegreville 709S	N. Holden 395S	
7L749	Lloydminster 716S	Edgerton 899S	Briker 880S

Table 1 Category B Contingency Listing (cont'd)

Category B Line and Tie Transformer Contingencies			
Faulted Element	**To**	**From**	**Tapped sub**
7L74	Wolf Lake 822S	Bourque 970S	Primrose 859S (two generators & plant)
7L70	Whitby Lake 819S	St. Paul 707S	
7L66	Leming Lake 715S	Ethel Lake 717S	
7L65	Vegreville 709S	Vermilion 710S	
7L53	Bonnyville 700S	Irish Creek 706S	Tapped sub
7L50	Battle River 757S	Buffalo Creek 526S	Jarrow 252S
7L42	Hill 751S	Lloydminster 716S	
7L28	Grande Centre 846S	Ethel Lake 717S	
7L24	Bonnyville 700S	Grande Centre 846S	Tapped sub
7L163	Marguerite Lake 826S	Bourque 970S	
7L160	Bourque 970S	Mahihkan 837S	
7L157	Bourque 970S	Mahihkan 837S	
7L146	Bonnyville 700S	Bourque 970S	
7L14	Vermilion 710S	Hill 751S	Kitscoty 705S
7L139	Bonnyville 700S	St. Paul 707S	
7L129	Vermilion 710S	Buffalo Creek 526S	Tapped sub
7L117	Vermilion 710S	Irish Creek 706S	
7L105	Mahihkan 837S	MahNo 909S	MahNo plant & 2 generators
7L701	Battle River 757S	Strome 223S	Heisler 764S
749L	Metiskow 648S	Killarney Lake 267S	
749L	Killarney Lake 267S	Edgerton 899S	
748L	Killarney Lake 267S	Hayter 277S	
715L	Hansman Lake 650S	Provost 545S	
704L	Wainwright 51S	Tucuman 478S	
704L	Hardisty 377S	Tucuman 478S	
	Nilrem	Tucuman 478S	
703L	Metiskow 648S	Hardisty 377S	several tapped subs
702L/7L702	Battle River 757S	Hardisty 377S	Sedgwick 137S
701L	Strome 223S	N Holden 395S	
6L08	Battle River 757S	Bigfoot 756S	
6L05	Battle River 757S	Bigknife Creek 843S	
6L02	Battle River 757S	Mannix Mine 765S	
61L	Wainwright 51S	Cochin	
174L	N Holden 395S	Bardo 197S	

Table 1 Category B Contingency Listing (cont'd)

Category B Line and Tie Transformer Contingencies			
Faulted Element	**To**	**From**	**Tapped sub**
Wainwright tie transformer	Wainwright 138kV	Wainwright 69 kV	
Vegreville tie transformer	Vegreville 144 kV	Vegreville 72 kV	
Nilrem tie transformer	Nilrem 240 kV	Nilrem 144 kV	
Nilrem tie transformer	Nilrem 240 kV	Nilrem 138 kV	
Metiskow tie transformer	Metiskow 240 kV	Metiskow 138 kV	
Hansman Lake tie transformer	Hansman Lake 240 kV	Hansman Lake 144 kV	
Hansman Lake tie transformer	Hansman Lake 240 kV	Hansman Lake 144 kV	
Marguerite Lake tie transformer	Marguerite Lake 240 kV	Marguerite Lake 144 kV	
Marguerite Lake tie transformer	Marguerite Lake 240 kV	Marguerite Lake 144 kV	
Heisler tie transformer	Heisler 144kV	Heisler 72kV	
Battle River tie transformer	Battle River 240 kV	Battle River 144 kV	
Battle River tie transformer	Battle River 144kV	Battle River 72 kV	
Battle River generator	Battle River 144kV	unit 3	
Battle River generator	Battle River 144kV	unit 4	
Battle River generator	Battle River 240 kV	unit 5	
Primrose generator	Primrose 144kV	G1 unit transformer	
Primrose generator	Primrose 144kV	G2 unit transformer	
MahNo generators	MahNo 144k V	G1 & G2 unit transformer	
Mahkeses generator	Mahkeses 138kV	G1 unit transformer	
Mahkeses generator	Mahkeses 144kV	G2 unit transformer	
Foster Creek generator	Foster Creek 144kV	G1 unit transformer	
Foster Creek generator	Foster Creek 144kV	G2 unit transformer	
Foster Creek generator	Foster Creek 144kV	G3 unit transformer	

Category A and B Events: Load Adequacy Power Flow Analysis for Alternatives 1, 2 and 3

There were no thermal overloads and voltage violations or system performance concerns for any regional Alternative under Category A or B contingencies. Thus the proposed regional alternatives met the requirements of AESO's Reliability Criteria.

This region is stressed the most when the critical generator is out of service (Battle River unit # 5). A set of sliders were chosen to illustrate system violations as discussed in Section 3 when the critical generator is out of service (see Figures referenced in Tables B-2012-1 to 3 and B-2017-1 to 3 Other sliders for Category B contingencies as listed in above Table 1 will be made available upon request.

Table B-2012-1 Summary of 2012 Summer Light Base Case Sliders and Power Flow Analysis for Alternative 1 (Battle River Unit 5 Out of Service)

Alternative 1 Figure No.	Alternative 2 Figure No.	Alternative 3 Figure No.	Contingency
2012SL-Alt 1-1.a 2012SL-Alt 1-1.b	2012SL-Alt 2-1.a 2012SL-Alt 2-1.b	2012SL-Alt 3-1.a 2012SL-Alt 3-1.b	Base Case - All Elements in Service
2012SL-Alt 1-2.a 2012SL-Alt 1-2.b	2012SL-Alt 2-2.a 2012SL-Alt 2-2.b		7L749 - Edgerton 899S to Lloydminster 716S -Briker 880S Tap
2012SL-Alt 1-3.a 2012SL-Alt 1-3.b	2012SL-Alt 2-3.a 2012SL-Alt 2-3.b	2012SL-Alt 3-2.a 2012SL-Alt 3-2.b	749L - Metiskow 648S to Killarney 267S*
2012SL-Alt 1-4.a 2012SL-Alt 1-4.b	2012SL-Alt 2-4.a 2012SL-Alt 2-4.b		715L Hansman Lake 650S to Provost 545S
2012SL-Alt 1-5.a 2012SL-Alt 1-5.b	2012SL-Alt 2-5.a 2012SL-Alt 2-5.b	2012SL-Alt 3-3.a 2012SL-Alt 3-3.b	748L - Killarney Lake 267S to Hayter 277S
2012SL-Alt 1-6.a 2012SL-Alt 1-6.b	2012SL-Alt 2-6.a 2012SL-Alt 2-6.b		749L - Edgerton 899S to Killarney Lake 267S

**Alternative 3 749L Contingency is from Metiskow to Edgerton with Killarney Lake and Hayter loads tapped off line*

Table B-2012-2 Summary of 2012 Summer Peak Base Case Sliders and Power Flow Analysis for Alternative 1 (Battle River Unit 5 Out Of Service)

Alternative 1 Figure No.	Alternative 2 Figure No.	Alternative 3 Figure No.	Contingency
2012SP-Alt 1-1.a 2012SP-Alt 1-1.b	2012SP-Alt 2-1.a 2012SP-Alt 2-1.b	2012SP-Alt 3-1.a 2012SP-Alt 3-1.b	Base Case - All Elements in Service
2012SP-Alt 1-2.a 2012SP-Alt 1-2.b	2012SP-Alt 2-2.a 2012SP-Alt 2-2.b	2012SP-Alt 3-2.a 2012SP-Alt 3-2.b	7L146 - Bonnyville 700S to Bourque 970S
2012SP-Alt 1-3.a 2012SP-Alt 1-3.b	2012SP-Alt 2-3.a 2012SP-Alt 2-3.b	2012SP-Alt 3-3.a 2012SP-Alt 3-3.b	7L87 - Marguerite Lake 826S to Wolf Lake 822S
2012SP-Alt 1-4.a 2012SP-Alt 1-4.b	2012SP-Alt 2-4.a 2012SP-Alt 2-4.b	2012SP-Alt 3-4.a 2012SP-Alt 3-4.b	7L66 - Leming Lake 715S to Ethel Lake 717S
2012SP-Alt 1-5.a 2012SP-Alt 1-5.b		2012SP-Alt 3-5.a 2012SP-Alt 3-5.b	7L53 - Bonnyville 700S to Irish Creek 706S
2012SP-Alt 1-6.a 2012SP-Alt 1-6.b	2012SP-Alt 2-5.a 2012SP-Alt 2-5.b	2012SP-Alt 3-6.a 2012SP-Alt 3-6.b	7L14 - Vermilion 710S to Hill 751S (Kitscoty 705S Tap)
2012SP-Alt 1-7.a 2012SP-Alt 1-7.b	2012SP-Alt 2-6.a 2012SP-Alt 2-6.b	2012SP-Alt 3-7.a 2012SP-Alt 3-7.b	7L89- Marguerite Lake 826S to Lacorey 721S
2012SP-Alt 1-8.a 2012SP-Alt 1-8.b	2012SP-Alt 2-7.a 2012SP-Alt 2-7.b	2012SP-Alt 3-8.a 2012SP-Alt 3-8.b	7L42 - Hill 751S to Lloydminster 716S
2012SP-Alt 1-9.a 2012SP-Alt 1-9.b	2012SP-Alt 2-8.a 2012SP-Alt 2-8.b		7L749 - Edgerton 899S to Lloydminster 716S (Briker 880S Tap)
2012SP-Alt 1-10.a 2012SP-Alt 1-10.b	2012SP-Alt 2-9.a 2012SP-Alt 2-9.b	2012SP-Alt 3-9.a 2012SP-Alt 3-9.b	7L50 - Battle River 757S to Buffalo Creek 526S (Jarrow 252S Tap)
2012SP-Alt 1-11.a 2012SP-Alt 1-11.b	2012SP-Alt 2-10.a 2012SP-Alt 2-10.b	2012SP-Alt 3-10.a 2012SP-Alt 3-10.b	7L701 - Battle River 757S to Strome 223S (Heisler 764S Tap)
2012SP-Alt 1-12.a 2012SP-Alt 1-12.b	2012SP-Alt 2-11.a 2012SP-Alt 2-11.b	2012SP-Alt 3-11.a 2012SP-Alt 3-11.b	749L - Metiskow 648S to Killarney 267S*
2012SP-Alt 1-13.a 2012SP-Alt 1-13.b	2012SP-Alt 2-12.a 2012SP-Alt 2-12.b		715L - Hansman Lake 650S to Provost 545S
2012SP-Alt 1-14.a 2012SP-Alt 1-14.b	2012SP-Alt 2-13.a 2012SP-Alt 2-13.b	2012SP-Alt 3-12.a 2012SP-Alt 3-12.b	9L20 - Cordel 755S to Nevis 766S
2012SP-Alt 1-15.a 2012SP-Alt 1-15.b	2012SP-Alt 2-14.a 2012SP-Alt 2-14.b	2012SP-Alt 3-13.a 2012SP-Alt 3-13.b	Battle River 144/72 kV Transformer 701T
2012SP-Alt 1-16.a 2012SP-Alt 1-16.b	2012SP-Alt 2-15.a 2012SP-Alt 2-15.b		749L - Edgerton 899S to Killarney Lake 267S
		2012SP-Alt 3-14.a 2012SP-Alt 3-14.b	Hansman Lake to Wind Collector Station
		2012SP-Alt 3-15.a 2012SP-Alt 3-15.b	749L - Edgerton 899S to Killarney Lake 267S

**Alternative 3 749L Contingency is from Metiskow to Edgerton with Killarney Lake and Hayter loads tapped off this line*

Table B-2012-3 Summary of 2012 Winter Peak Base Case Sliders and Power Flow Analysis for Alternative 1 (Battle River Unit 5 Out of Service)

Alternative 1 Figure No.	Alternative 2 Figure No.	Alternative 3 Figure No.	Description
2012WP-Alt 1-1.a 2012WP-Alt 1-1.b	2012WP-Alt 2-1.a 2012WP-Alt 2-1.b	2012WP-Alt 3-1.a 2012WP-Alt 3-1.b	Base Case - All Elements in Service
2012WP-Alt 1-2.a 2012WP-Alt 1-2.b	2012WP-Alt 2-2.a 2012WP-Alt 2-2.b	2012WP-Alt 3-2.a 2012WP-Alt 3-2.b	7L146 - Bonnyville 700S to Bourque 970S
2012WP-Alt 1-3.a 2012WP-Alt 1-3.b	2012WP-Alt 2-3.a 2012WP-Alt 2-3.b	2012WP-Alt 3-3.a 2012WP-Alt 3-3.b	7L87 -Marguerite Lake 826S to Wolf Lake 822S
2012WP-Alt 1-4.a 2012WP-Alt 1-4.b	2012WP-Alt 2-4.a 2012WP-Alt 2-4.b	2012WP-Alt 3-4.a 2012WP-Alt 3-4.b	7L66 - Leming Lake 715S to Ethel Lake 717S
2012WP-Alt 1-5.a 2012WP-Alt 1-5.b		2012WP-Alt 3-5.a 2012WP-Alt 3-5.b	7L53 - Bonnyville 700S to Irish Creek 706S
2012WP-Alt 1-6.a 2012WP-Alt 1-6.b	2012WP-Alt 2-5.a 2012WP-Alt 2-5.b	2012WP-Alt 3-6.a 2012WP-Alt 3-6.b	7L14 - Vermilion 710S to Hill 751S (Kitscoty 705S Tap)
2012WP-Alt 1-7.a 2012WP-Alt 1-7.b	2012WP-Alt 2-6.a 2012WP-Alt 2-6.b	2012WP-Alt 3-7.a 2012WP-Alt 3-7.b	7L89 - Marguerite Lake 826S to Lacorey 721S
2012WP-Alt 1-8.a 2012WP-Alt 1-8.b	2012WP-Alt 2-7.a 2012WP-Alt 2-7.b	2012WP-Alt 3-8.a 2012WP-Alt 3-8.b	7L42 - Hill 751S to Lloydminster 716S
2012WP-Alt 1-9.a 2012WP-Alt 1-9.b	2012WP-Alt 2-8.a 2012WP-Alt 2-8.b		7L749 - Edgerton 899S to Lloydminster 716S (Briker 880S Tap)
2012WP-Alt 1-10.a 2012WP-Alt 1-10.b	2012WP-Alt 2-9.a 2012WP-Alt 2-9.b	2012WP-Alt 3-9.a 2012WP-Alt 3-9.b	7L50 - Battle River 757S to Buffalo Creek 526S (Jarrow 252S Tap)
2012WP-Alt 1-11.a 2012WP-Alt 1-11.b	2012WP-Alt 2-10.a 2012WP-Alt 2-10.b	2012WP-Alt 3-10.a 2012WP-Alt 3-10.b	7L701 - Battle River 757S to Strome 223S (Heisler 764S Tap)
2012WP-Alt 1-12.a 2012WP-Alt 1-12.b	2012WP-Alt 2-11.a 2012WP-Alt 2-11.b	2012WP-Alt 3-11.a 2012WP-Alt 3-11.b	7L749 - Metiskow 648S to Killarney 267S
2012WP-Alt 1-13.a 2012WP-Alt 1-13.b	2012WP-Alt 2-12.a 2012WP-Alt 2-12.b	2012WP-Alt 3-12.a 2012WP-Alt 3-12.b	715L -Hansman Lake 650S to Provost 545S
2012WP-Alt 1-14.a 2012WP-Alt 1-14.b	2012WP-Alt 2-13.a 2012WP-Alt 2-13.b	2012WP-Alt 3-13.a 2012WP-Alt 3-13.b	9L20 - Cordel 755S to Nevis 766S
2012WP-Alt 1-15.a 2012WP-Alt 1-15.b	2012WP-Alt 2-14.a 2012WP-Alt 2-14.b		Battle River 144/72 kV Transformer 701T
2012WP-Alt 1-16.a 2012WP-Alt 1-16.b	2012WP-Alt 2-15.a 2012WP-Alt 2-15.b		749L -Edgerton 899S to Killarney Lake 267S
		2012WP-Alt 3-14.a 2012WP-Alt 3-14.b	Hansman Lake to Wind Collector Station
		2012WP-Alt 3-15.a 2012WP-Alt 3-15.b	749L - Edgerton 899S to Killarney Lake 267S

**Alternative 3 749L Contingency is from Metiskow to Edgerton with Killarney Lake and Hayter loads tapped off this line*

Table B-2017-1 Summary of 2017 Summer Light Base Case Sliders and Power Flow Analysis for Alternative 1 (Battle River Unit 5 Out of Service)

Alternative 1 Figure No.	Alternative 2 Figure No.	Alternative 3 Figure No.	Contingency
2017SL-Alt 1-1.a 2017SL-Alt 1-1.b	2017SL-Alt 2-1.a 2017SL-Alt 2-1.b	2017SL-Alt 3-1.a 2017SL-Alt 3-1.b	Base Case - All Elements in Service
2017SL-Alt 1-2.a 2017SL-Alt 1-2.b	2017SL-Alt 2-2.a 2017SL-Alt 2-2.b		7L749 - Edgerton 899S to Lloydminster 716S -Briker 880S Tap
2017SL-Alt 1-3.a 2017SL-Alt 1-3.b	2017SL-Alt 2-3.a 2017SL-Alt 2-3.b	2017SL-Alt 3-2.a 2017SL-Alt 3-2.b	749L - Metiskow 648S to Killarney 267S*
2017SL-Alt 1-4.a 2017SL-Alt 1-4.b	2017SL-Alt 2-4.a 2017SL-Alt 2-4.b		715L Hansman Lake 650S to Provost 545S
2017SL-Alt 1-5.a 2017SL-Alt 1-5.b	2017SL-Alt 2-5.a 2017SL-Alt 2-5.b	2017SL-Alt 3-3.a 2017SL-Alt 3-3.b	748L - Killarney Lake 267S to Hayter 277S
2017SL-Alt 1-6.a 2017SL-Alt 1-6.b	2017SL-Alt 2-6.a 2017SL-Alt 2-6.b		749L - Edgerton 899S to Killarney Lake 267S

**Alternative 3 749L Contingency is from Metiskow to Edgerton with Killarney Lake and Hayter loads tapped off this line*

Table B-2017-2 Summary of 2017 Summer Peak Base Case Sliders and Power Flow Analysis for Alternative 1 (Battle River Unit 5 Out of Service)

Alternative 1 Figure No.	Alternative 2 Figure No.	Alternative 3 Figure No.	Contingency
2017SP-Alt 1-1.a 2017SP-Alt 1-1.b	2017SP-Alt 2-1.a 2017SP-Alt 2-1.b	2017SP-Alt 3-1.a 2017SP-Alt 3-1.b	Base Case - All Elements in Service
2017SP-Alt 1-2.a 2017SP-Alt 1-2.b	2017SP-Alt 2-2.a 2017SP-Alt 2-2.b	2017SP-Alt 3-2.a 2017SP-Alt 3-2.b	7L146 - Bonnyville 700S to Bourque 970S
2017SP-Alt 1-3.a 2017SP-Alt 1-3.b	2017SP-Alt 2-3.a 2017SP-Alt 2-3.b	2017SP-Alt 3-3.a 2017SP-Alt 3-3.b	7L87 - Marguerite Lake 826S to Wolf Lake 822S
2017SP-Alt 1-4.a 2017SP-Alt 1-4.b	2017SP-Alt 2-4.a 2017SP-Alt 2-4.b	2017SP-Alt 3-4.a 2017SP-Alt 3-4.b	7L66 - Leming Lake 715S to Ethel Lake 717S
2017SP-Alt 1-5.a 2017SP-Alt 1-5.b		2017SP-Alt 3-5.a 2017SP-Alt 3-5.b	7L53 - Bonnyville 700S to Irish Creek 706S
2017SP-Alt 1-6.a 2017SP-Alt 1-6.b	2017SP-Alt 2-5.a 2017SP-Alt 2-5.b	2017SP-Alt 3-6.a 2017SP-Alt 3-6.b	7L14 - Vermilion 710S to Hill 751S (Kitscoty 705S Tap)
2017SP-Alt 1-7.a 2017SP-Alt 1-7.b	2017SP-Alt 2-6.a 2017SP-Alt 2-6.b	2017SP-Alt 3-7.a 2017SP-Alt 3-7.b	7L89- Marguerite Lake 826S to Lacorey 721S
2017SP-Alt 1-8.a 2017SP-Alt 1-8.b	2017SP-Alt 2-7.a 2017SP-Alt 2-7.b	2017SP-Alt 3-8.a 2017SP-Alt 3-8.b	7L42 - Hill 751S to Lloydminster 716S
2017SP-Alt 1-9.a 2017SP-Alt 1-9.b	2017SP-Alt 2-8.a 2017SP-Alt 2-8.b		7L749 - Edgerton 899S to Lloydminster 716S (Briker 880S Tap)
2017SP-Alt 1-10.a 2017SP-Alt 1-10.b	2017SP-Alt 2-9.a 2017SP-Alt 2-9.b	2017SP-Alt 3-9.a 2017SP-Alt 3-9.b	7L50 - Battle River 757S to Buffalo Creek 526S (Jarrow 252S Tap)
2017SP-Alt 1-11.a 2017SP-Alt 1-11.b	2017SP-Alt 2-10.a 2017SP-Alt 2-10.b	2017SP-Alt 3-10.a 2017SP-Alt 3-10.b	7L701 - Battle River 757S to Strome 223S (Heisler 764S Tap)
2017SP-Alt 1-12.a 2017SP-Alt 1-12.b	2017SP-Alt 2-11.a 2017SP-Alt 2-11.b	2017SP-Alt 3-11.a 2017SP-Alt 3-11.b	749L - Metiskow 648S to Killarney 267S*
2017SP-Alt 1-13.a 2017SP-Alt 1-13.b	2017SP-Alt 2-12.a 2017SP-Alt 2-12.b		715L - Hansman Lake 650S to Provost 545S
2017SP-Alt 1-14.a 2017SP-Alt 1-14.b	2017SP-Alt 2-13.a 2017SP-Alt 2-13.b	2017SP-Alt 3-12.a 2017SP-Alt 3-12.b	9L20 - Cordel 755S to Nevis 766S
2017SP-Alt 1-15.a 2017SP-Alt 1-15.b	2017SP-Alt 2-14.a 2017SP-Alt 2-14.b	2017SP-Alt 3-13.a 2017SP-Alt 3-13.b	Battle River 144/72 kV Transformer 701T
2017SP-Alt 1-16.a 2017SP-Alt 1-16.b	2017SP-Alt 2-15.a 2017SP-Alt 2-15.b		749L - Edgerton 899S to Killarney Lake 267S
	2017SP-Alt 2-16.a 2017SP-Alt 2-16.b		Vermilion 240/144 kV tie transformer
		2017SP-Alt 3-14.a 2017SP-Alt 3-14.b	Lloydminster to Wind Collector Station
		2017SP-Alt 3-15.a 2017SP-Alt 3-15.b	Hansman Lake to Wind Collector Station

**Alternative 3 749L Contingency is from Metiskow to Edgerton with Killarney Lake and Hayter loads tapped off this line*

Table B-2017-3 Summary of 2017 Winter Peak Base Case Sliders and Power Flow Analysis for Alternative 1 (Battle River Unit 5 Out of service)

Alternative 1 Figure No.	Alternative 2 Figure No.	Alternative 3 Figure No.	Contingency
2017WP-Alt 1-1.a 2017WP-Alt 1-1.b	2017WP-Alt 2-1.a 2017WP-Alt 2-1.b	2017WP-Alt 3-1.a 2017WP-Alt 3-1.b	Base Case - All Elements in Service
2017WP-Alt 1-2.a 2017WP-Alt 1-2.b	2017WP-Alt 2-2.a 2017WP-Alt 2-2.b	2017WP-Alt 3-2.a 2017WP-Alt 3-2.b	7L146 - Bonnyville 700S to Bourque 970S
2017WP-Alt 1-3.a 2017WP-Alt 1-3.b	2017WP-Alt 2-3.a 2017WP-Alt 2-3.b	2017WP-Alt 3-3.a 2017WP-Alt 3-3.b	7L87 - Marguerite Lake 826S to Wolf Lake 822S
2017WP-Alt 1-4.a 2017WP-Alt 1-4.b	2017WP-Alt 2-4.a 2017WP-Alt 2-4.b	2017WP-Alt 3-4.a 2017WP-Alt 3-4.b	7L66 - Leming Lake 715S to Ethel Lake 717S
2017WP-Alt 1-5.a 2017WP-Alt 1-5.b		2017WP-Alt 3-5.a 2017WP-Alt 3-5.b	7L53 - Bonnyville 700S to Irish Creek 706S
2017WP-Alt 1-6.a 2017WP-Alt 1-6.b	2017WP-Alt 2-5.a 2017WP-Alt 2-5.b	2017WP-Alt 3-6.a 2017WP-Alt 3-6.b	7L14 - Vermilion 710S to Hill 751S (Kitscoty 705S Tap)
2017WP-Alt 1-7.a 2017WP-Alt 1-7.b	2017WP-Alt 2-6.a 2017WP-Alt 2-6.b	2017WP-Alt 3-7.a 2017WP-Alt 3-7.b	7L89- Marguerite Lake 826S to Lacorey 721S
2017WP-Alt 1-8.a 2017WP-Alt 1-8.b	2017WP-Alt 2-7.a 2017WP-Alt 2-7.b	2017WP-Alt 3-8.a 2017WP-Alt 3-8.b	7L42 - Hill 751S to Lloydminster 716S
2017WP-Alt 1-9.a 2017WP-Alt 1-9.b	2017WP-Alt 2-8.a 2017WP-Alt 2-8.b		7L749 - Edgerton 899S to Lloydminster 716S (Briker 880S Tap)
2017WP-Alt 1-10.a 2017WP-Alt 1-10.b	2017WP-Alt 2-9.a 2017WP-Alt 2-9.b	2017WP-Alt 3-9.a 2017WP-Alt 3-9.b	7L50 - Battle River 757S to Buffalo Creek 526S (Jarrow 252S Tap)
2017WP-Alt 1-11.a 2017WP-Alt 1-11.b	2017WP-Alt 2-10.a 2017WP-Alt 2-10.b	2017WP-Alt 3-10.a 2017WP-Alt 3-10.b	7L701 - Battle River 757S to Strome 223S (Heisler 764S Tap)
2017WP-Alt 1-12.a 2017WP-Alt 1-12.b	2017WP-Alt 2-11.a 2017WP-Alt 2-11.b	2017WP-Alt 3-11.a 2017WP-Alt 3-11.b	749L - Metiskow 648S to Killarney 267S*
2017WP-Alt 1-13.a 2017WP-Alt 1-13.b	2017WP-Alt 2-12.a 2017WP-Alt 2-12.b		715L - Hansman Lake 650S to Provost 545S
2017WP-Alt 1-14.a 2017WP-Alt 1-14.b	2017WP-Alt 2-13.a 2017WP-Alt 2-13.b	2017WP-Alt 3-12.a 2017WP-Alt 3-12.b	9L20 - Cordel 755S to Nevis 766S
2017WP-Alt 1-15.a 2017WP-Alt 1-15.b	2017WP-Alt 2-14.a 2017WP-Alt 2-14.b	2017WP-Alt 3-13.a 2017WP-Alt 3-13.b	Battle River 144/72 kV Transformer 701T
2017WP-Alt 1-16.a 2017WP-Alt 1-16.b	2017WP-Alt 2-15.a 2017WP-Alt 2-15.b		749L - Edgerton 899S to Killarney Lake 267S
	2017WP-Alt 2-16.a 2017WP-Alt 2-16.b		Vermilion 240/144 kV tie transformer
		2017WP-Alt 3-14.a 2017WP-Alt 3-14.b	Lloydminster to Wind Collector Station
		2017WP-Alt 3-15.a 2017WP-Alt 3-15.b	Hansman Lake to Wind Collector Station

1.2 Category C & D Contingency Analysis

A number of category C and D contingency events were analyzed as listed in Table 2. The worst Category C and D contingencies were selected for further analysis to illustrate the performance of the system under these conditions. Based on the results of N-1-1 analysis, the worst C contingencies were those which resulted in either thermal over loads or voltage violations, significant voltage deviation or non convergence of solution due to exceeding maximum no. of iterations.

The load flow results were shown for those contingencies that resulted in significant thermal overloads, voltage violations or the most voltage deviations. These are summarized in the Table 3 at the end of this section. Other sliders will be made available upon request.

Table 2 Category C & D Contingency List

Faulted Element 1	To	From	Tapped Substation	Faulted Element 2	To	From	Tapped Substation
Category C3: N-1-1							
7L53	Bonnyville 700S	Irish Creek 706S	IPF Lindbergh	7L42	Hill 751S	Lloydminster 716S	
7L53	Bonnyville 700S	Irish Creek 706S	IPF Lindbergh	7L749	Lloydminster 716S	Edgerton 899S	Briker 880S
7L53	Bonnyville 700S	Irish Creek 706S	IPF Lindbergh	7L50	Battle River 757S	Buffalo Creek 526S	Jarrow 252S
7L53	Bonnyville 700S	Irish Creek 706S	IPF Lindbergh	7L14	Vermilion 710S	Kitscoty 705S	
7L53	Bonnyville 700S	Irish Creek 706S	IPF Lindbergh	7L14	Hill 751S	Kitscoty 705S	
7L50	Battle River 757S	Buffalo Creek 526S	Jarrow 252S	7L749	Lloydminster 716S	Edgerton 899S	Briker 880S
7L129	Vermilion 710S	Buffalo Creek 526S		7L749	Lloydminster 716S	Edgerton 899S	Briker 880S
703L	Metiskow 648S	Hardisty 377S	HRT Express, Hughenden, Sunken Lake	New	Hardisty 377S	Tucuman 478S	
703L	648S	Hardisty 377S	HRT Express, Hughenden, Sunken Lake	New	Nilrem	Hardisty 377S	
7L65	Vermilion 710S	Vegreville 709S		7L749	Lloydminster 716S	Edgerton 899S	Briker 880S
7L163	Marguerite Lake 826S	Bourque 970S		7L146	Bourque 970S	Bonnyville 700S	
7L87	Marguerite Lake 826S	Wolf Lake 822S		7L89	Marguerite Lake 826S	Lacorey 721S	
7L163	Marguerite Lake 826S	Bourque 970S		7L87	Marguerite Lake 826S	Wolf Lake 822S	
715L	Hansman Lake 650S	Provost 545S		749L	Metiskow 648S	Killarney Lake 267S	
7L89	Marguerite Lake 826S	La Corey 721S		7L66	Marguerite Lake 826S	Leming Lake 715S	

Table 2 Category C & D Contingency List (cont'd)

Faulted Element 1	To	From	Tapped Substation	Faulted Element 2	To	From	Tapped Substation
Category C5: N-2 Common Towers							
7L89	Marguerite Lake 826S	La Corey 721S		7L91	Marguerite Lake 826S	Leming Lake 715S	
7L66	Leming Lake 715S	Ethel Lake 717S		7L91	Marguerite Lake 826S	Leming Lake 715S	
9L27	Cordel 755S	Paintearth Creek 863S		9L953	Cordel 755S	Nilrem	
9L79	Battle River 757S	Cordel 755S		9L80	Battle River 757S	Cordel 755S	
9L36	Marguerite Lake 826S	Whitefish Lake 825S		9L37	Marguerite Lake 826S	Whitefish Lake 825S	-
New	Cordel 755S	Nilrem		New	Hansman Lake 650S	Nilrem	-

Faulted Element 1	To	From	Tapped Substation	Faulted Element 2	To	From	Tapped Substation
Category C7: Breaker Fail (only considered for non-radial buses with more than two transmission lines)							
7L83	Bourque	Leming Lake		7L157	Bourque	Mahihkan	
7L83	Bourque	Leming Lake		7L74	Bourque	Wolf Lake	Primrose plant (two Generators)
7L146	Bourque	Bonnyville		7L163	Bourque	Marguerite Lake	
7L146	Bourque	Bonnyville		7L160	Bourque	Mahihkan	
9L36	Marguerite Lake	Whitefish Lake		9L37	Marguerite Lake	Whitefish Lake	
7L89	Marguerite Lake	Bonnyville	La Corey	7L163	Marguerite Lake	Bourque	
7L91	Marguerite Lake	Leming Lake		7L163	Marguerite Lake	Bourque	
9L20	Cordel	Nevis		9L79	Cordel	Battle River	
9L27	Cordel	Paintearth		9L79	Cordel	Battle River	
9L27	Cordel	Paintearth		9L80	Cordel	Battle River	
9L59	Cordel	Halkirk		9L80	Cordel	Battle River	
9L59	Cordel	Halkirk		9L953	Cordel	Nilrem	
9L20	Cordel	Nevis		9L953	Cordel	Nilrem	

Table 2 Category C & D Contingency List (cont'd)

Substation Number	Substation Name	kV of Bus	Lines Taken Out of Service	Number of 240 kV Tie Transformers Taken out of service	Generators Lost
Category C7: Critical Area Bus Outages (only considered for substations with more than two transmission lines and radial bus configurations)					
715S	Leming Lake	144	7L83, 7L95, 7L91, 7L66	0	Both Mahkeses generators
700S	Bonnyville	144	7L24, 7L53, 7L89, 7L139		
710S	Vermilion	144	7L14, 7L65, 7L117, 7L129		
757S	Battle River	144	7L50, 7L701, 7L702		Battle River units 3 and 4
51S	Wainwright	138	New lines to Edgerton, Tucuman and Jarrow		
899S	Edgerton	138	7L749, 749L and new line to Wainwright		
648S	Metiskow	138	703L,749L, 885L	1	
650S	Hansman Lake	138	715L, 885L, 7L224	1	
650S	Hansman Lake	240	954L, 948L, 953L	1	
478S	Tucuman	138	New lines to Nilrem, Hardisty and Wainwright		
	Nilrem	138	New lines to Tucuman and Hardisty	2	
	Nilrem	240	New lines to Cordel and Hansman Lake	2	
	Hardisty	138	702L, 703L, lines to IPL Hardisty, Tucuman and Nilrem		
Category D: Loss of a Switching Station or Generation plant					
755S	Cordel	240	9L80, 9L79, 9L20, 9L59, 9L27, 9L953		
826S	Marguerite Lake	240, 144	9L36, 9L37, 7L87, 7L89, 7L91, 7L163	2	
	Battle River Generating Station				Battle River units 3, 4 and 5

The following Table 3 presents the results of system performance for all three alternatives for the Category C & D contingencies analyzed.

Where an SPS scheme is tested, the thermal overloads and voltage violations in the Table are with the SPS scheme in place.

NOTE: In the following table, marginal voltages indicate buses where the steady state voltage is barely above the extreme minimum steady state voltage. LV means low voltages below the extreme minimum steady state voltages as per the AESO transmission reliability criteria. The results presented below did not take into account any generation re dispatch or load adjustments to show the impact of the N-1-1 contingencies. These infractions would be alleviated through Operational measures.

Table 3 Category C & D Contingencies: Summary of Results for All Alternatives

Figure No.	Base Case	Faulted Lines	To	From	Overload Element	Percent Loading (%)	Other System Performance Concerns	SPS
Category C: N-1-1								
2012 summer light base case violations - none								
2012 summer peak base case violations								
2012SP-Alt 1 BR #5 ON-2.a 2012SP-Alt 1 BR #5 ON-2.b	2012sp	7L53	Bonnyville 700S	Irish Creek 706S	7L65	102.2	Marginal voltage at Irish Creek	N/A
		7L50	Battle River 757S	Buffalo Creek 526S				
None - same as Alt 1 - no additional slider	2012sp	7L53	Bonnyville 700S	Irish Creek 706S	7L65	102.2	Marginal voltage at Irish Creek	N/A
		7L50	Battle River 757S	Buffalo Creek 526S				
2012SP-Alt 2 BR #5 ON-4.a 2012SP-Alt 2 BR #5 ON-4.b	2012sp	715L	Hansman Lake 650S	Provost 545S	None		LV at Provost and Hayter	N/A
		749L	Metiskow 648S	Killarney Lake 267S				
2012SP-Alt 3 BR #5 ON-3.a 2012SP-Alt 3 BR #5 ON-3.b	2012sp	7L53	Bonnyville 700S	Irish Creek 706S	7L749	103.6	LV at Irish Creek, Vermilion, Kitscoty and Vermilion tap sub.	N/A
		7L50	Battle River 757S	Buffalo Creek 526S				

Table 3 Category C & D Contingencies: Summary of Results for All Alternatives (cont'd)

Figure No.	Base Case	Faulted Lines	To	From	Overload Element	Percent Loading (%)	Other System Performance Concerns	SPS
Category C: N-1-1								
2012 winter peak base case violations								
2012WP-Alt 1 BR #5 ON-2.a 2012WP-Alt 1 BR #5 ON-2.b	2012wp	7L53	Bonnyville 700S	Irish Creek 706S	7L65	105.4	LV at Irish Creek, Vermilion and Vermilion tapped sub.	Curtail about 20 MW of load in and around Vermilion area.
		7L50	Battle River 757S	Buffalo Creek 526S				
No SPS: 2012SP-Alt 1 BR #5 ON-4.a 2012SP-Alt 1 BR #5 ON-4.b With SPS: 2012SP-Alt 1 BR #5 ON-5.a 2012SP-Alt 1 BR #5 ON-5.b	2012wp	7L749	Lloydminster 716S	Edgerton 899S	None		None	Curtail about 15 MW of load in and around Vermilion area. Requires an SPS (otherwise regional voltage collapse with 0 PV margin)
		7L50	Battle River 757S	Buffalo Creek 526S				
2012WP-Alt 2 BR #5 ON-2.a 2012WP-Alt 2 BR #5 ON-2.b	2012wp	7L53	Bonnyville 700S	Irish Creek 706S	7L65	105.7	LV at Irish Creek, Vermilion, and Vermilion tapped sub	Curtail about 20 MW of load in and around Vermilion area.
		7L50	Battle River 757S	Buffalo Creek 526S				
No SPS: 2012WP-Alt 2 BR #5 ON-3.a 2012WP-Alt 2 BR #5 ON-3.b	2012wp	7L749	Lloydminster 716S	Edgerton 899S	None		None	Curtail about 15 MW of load in and around Vermilion area. Requires an SPS (otherwise regional voltage collapse with 0 PV margin)
		7L50	Battle River 757S	Buffalo Creek 526S				
2012WP-Alt 3 BR #5 ON-2.a 2012WP-Alt 3 BR #5 ON-2.b	2012wp	7L53	Bonnyville 700S	Irish Creek 706S	7L65	122.2	Wide spread voltage collapse from Lloydminster through to Willingdon and Irish Creek.	Curtail about 20 MW of load in and around Vermilion area.
		7L50	Battle River 757S	Buffalo Creek 526S				
With SPS: 2012WP-Alt 3 BR #5 ON-7.a 2012WP-Alt 3 BR #5 ON-7.b	2012wp	7L749	Lloydminster 716S	Edgerton 899S	None		None	Curtail about 15 MW of load in and around Vermilion area. Requires an SPS (otherwise regional voltage collapse with 0 PV margin)
		7L50	Battle River 757S	Buffalo Creek 526S				

Table 3 Category C & D Contingencies: Summary of Results for All Alternatives (cont'd)

Figure No.	Base Case	Faulted Lines	To	From	Overload Element	Percent Loading (%)	Other System Performance Concerns	SPS
Category C: N-1-1								
2017 summer light base case violations - none								
2017 summer peak base case violations								
2017SP-Alt 1 BR #5 ON-2.a 2017SP-Alt 1 BR #5 ON-2.b	2017sp	7L53	Bonnyville 700S	Irish Creek 706S	None		LV at Irish Creek, Vermilion and Vermilion tapped sub	Curtail about 34 MW of load in and around Vermilion area.
		7L50	Battle River 757S	Buffalo Creek 526S				
No SPS: 2017SP-Alt 1 BR #5 ON-4.a 2017SP-Alt 1 BR #5 ON-4.b With SPS: 2017SP-Alt 1 BR #5 ON-5.a 2017SP-Alt 1 BR #5 ON-5.b	2017sp	7L749	Lloydminster 716S	Edgerton 899S	None		None	Curtail about 22 MW of load in and around Vermilion area. Requires an SPS (otherwise regional voltage collapse with 0 PV margin)
		7L50	Battle River 757S	Buffalo Creek 526S				
2017 winter peak base case violations								
2017WP-Alt 1 BR #5 ON-2.a 2017WP-Alt 1 BR #5 ON-2.b	2017wp	7L53	Bonnyville 700S	Irish Creek 706S	None		LV at Irish Creek, Vermilion, Vermilion tapped sub, Buffalo Creek and Kitscoty	Curtail about 34 MW of load in and around Vermilion area.
		7L50	Battle River 757S	Buffalo Creek 526S				
No SPS: 2017WP-Alt 1 BR #5 ON-4.a 2017WP-Alt 1 BR #5 ON-4.b With SPS: 2017WP-Alt 1 BR #5 ON-5.a 2017WP-Alt 1 BR #5 ON-5.b	2017wp	7L749	Lloydminster 716S	Edgerton 899S	None		None	Curtail about 22 MW of load in and around Vermilion area. Requires an SPS (otherwise regional voltage collapse with 0 PV margin)
		7L50	Battle River 757S	Buffalo Creek 526S				

Table 3 Category C & D Contingencies: Summary of Results for All Alternatives (cont'd)

Figure No.	Base Case	Faulted Elements	To	From	Overloaded Element	Percent Loading (%)	Other System Performance Concerns	SPS
Category C: N-2 Common Towers								
2012 summer base cases								
2012SP-Alt 1 BR #5 ON-7.a 2012SP-Alt 1 BR #5 ON-7.b	2012sp	9L27	Cordel 755S	Paintearth Creek 863S	7L702/702L	113/ 123.8	None	N/A
		9L953	Cordel 755S	Nilrem				
	2012sp	9L27	Cordel 755S	Paintearth Creek 863S	7L50	124.1	None	N/A
		9L953	Cordel 755S	Nilrem				
2012SP-Alt 2 BR #5 ON-5.a 2012SP-Alt 2 BR #5 ON-5.b	2012sp	9L27	Cordel 755S	Paintearth Creek 863S	702L	105.5	None	N/A
		9L953	Cordel 755S	Nilrem				
	2012sp	9L27	Cordel 755S	Paintearth Creek 863S	7L50	138/ 137 (252S to tap)	None	N/A
		9L953	Cordel 755S	Nilrem				
2012 winter base cases								
2012WP-Alt 1 BR #5 ON-7.a 2012WP-Alt 1 BR #5 ON-7.b	2012wp	9L27	Cordel 755S	Paintearth Creek 863S	7L50	106	None	N/A
		9L953	Cordel 755S	Nilrem				
2012WP-Alt 2 BR #5 ON-5.a 2012WP-Alt 2 BR #5 ON-5.b	2012wp	9L27	Cordel 755S	Paintearth Creek 863S	7L50	108.5/143 (252S to tap)	None	N/A
		9L953	Cordel 755S	Nilrem				
2012WP-Alt 3 BR #5 ON-13.a 2012WP-Alt 3 BR #5 ON-13.b	2012sp	9L953	Cordel 755S	Nilrem	703L	103.5 (377S to tap)	None	N/A
		953L	Hansman Lake 650S	Nilrem				
2017 summer base cases								
2017SP-Alt 1 BR #5 ON-7.a 2017SP-Alt 1 BR #5 ON-7.b	2017sp	9L27	Cordel 755S	Paintearth Creek 863S	7L702/702L	128.4 / 141.2	None	N/A
		9L953	Cordel 755S	Nilrem				
2017SP-Alt 2 BR #5 ON-5.a 2017SP-Alt 2 BR #5 ON-5.b	2017sp	9L27	Cordel 755S	Paintearth Creek 863S	7L702/702L	115.6/131	None	N/A
		9L953	Cordel 755S	Nilrem				
2017SP-Alt 3 BR #5 ON-7.a 2017SP-Alt 3 BR #5 ON-7.b	2017sp	9L27	Cordel 755S	Paintearth Creek 863S	7L702/702L	143.8/ 166.5	None	N/A
		9L953	Cordel 755S	Nilrem				
	2017sp	9L27	Cordel 755S	Paintearth Creek 863S	7L14	103.4	None	N/A
		9L953	Cordel 755S	Nilrem				
no slider	2017sp	9L79	Battle River 757S	Cordel 755S	702L	100.8	None	N/A
		9L80	Battle River 757S	Cordel 755S				
2017 winter base cases								
2017WP-Alt 3 BR #5 ON-7.a 2017WP-Alt 3 BR #5 ON-7.b	2017wp	9L27	Cordel 755S	Paintearth Creek 863S	7L702/702L	115/108	None	N/A
		9L953	Cordel 755S	Nilrem				

Table 3 Category C & D Contingencies: Summary of Results for All Alternatives (cont'd)

Figure No.	Base Case	Bus or Substation Outage	Overloaded Element	Percent Loading (%)	Other System Performance Concerns	SPS
Category C: Substation Bus Outages						
2012 summer base cases						
2012SP-Alt 1 BR #5 ON-6.a 2012SP-Alt 1 BR #5 ON-6.b	2012sp	Hansman Lake 650S - 240 kV bus	*703L	112.1 (377S to tap)	None	N/A
2012SP-Alt 2 BR #5 ON-9.a 2012SP-Alt 2 BR #5 ON-9.b	2012sp	Hansman Lake 650S - 240 kV bus	*703L	116.7 (377S to tap)	None	N/A
2012SP-Alt 2 BR #5 ON-11.a 2012SP-Alt 2 BR #5 ON-11.b	2012sp	Nilrem 240kV bus	7L50	102.8	None	N/A
2012 winter base cases						
2012WP-Alt 1 BR #5 ON-11.a 2012WP-Alt 1 BR #5 ON-11.b	2012wp	Hansman Lake 650S - 240 kV bus	*703L	110 (377S to tap)	None	N/A
2012WP-Alt 2 BR #5 ON-9.a 2012WP-Alt 2 BR #5 ON-9.b	2012wp	Hansman Lake 650S - 240 kV bus	*703L	115.6 (377S to tap)	None	N/A
2012WP-Alt 3 BR #5 ON-12.a 2012WP-Alt 3 BR #5 ON-12.b	2012wp	Hansman Lake 650S - 240 kV bus	*703L	None	None	N/A
2017 summer base cases						
NO SLIDER	2017sl	Nilrem 240kV bus	*703L	112.5 (377S to tap)	None	N/A
2017SP-Alt 1 BR #5 ON-13.a 2017SP-Alt 1 BR #5 ON-13.b	2017sp	Nilrem 240kV bus	702L	104	None	N/A
2017SP-Alt 3 BR #5 ON-14.a 2017SP-Alt 3 BR #5 ON-14.b	2017sp	Nilrem 240kV bus	7L702/ 702L	105/ 117	None	N/A
2017SP-Alt 1 BR #5 ON-11.a 2017SP-Alt 1 BR #5 ON-11.b	2017sp	Hansman Lake 650S - 240 kV bus	*703L	157(377S to tap)	None	N/A
2017SP-Alt 2 BR #5 ON-9.a 2017SP-Alt 2 BR #5 ON-9.b	2017sp	Hansman Lake 650S - 240 kV bus	*703L	148.8 (377S to tap)	None	N/A
2017SP-Alt 3 BR #5 ON-12.a 2017SP-Alt 3 BR #5 ON-12.b	2017sp	Hansman Lake 650S - 240 kV bus	*703L	176 (377S to tap)	None	N/A
2017 winter base cases						
2017WP-Alt 1 BR #5 ON-11.a 2017WP-Alt 1 BR #5 ON-11.b	2017wp	Hansman Lake 650S - 240 kV bus	*703L	168.9 (377S to tap)	None	N/A
2017WP-Alt 2 BR #5 ON-9.a 2017WP-Alt 2 BR #5 ON-9.b	2017wp	Hansman Lake 650S - 240 kV bus	*703L	161 (377S to tap)	None	N/A
2017WP-Alt 3 BR #5 ON-12.a 2017WP-Alt 3 BR #5 ON-12.b	2017wp	Hansman Lake 650S - 240 kV bus	*703L	191 (377S to tap)	None	N/A
2017WP-Alt 2 BR #5 ON-11.a 2017WP-Alt 2 BR #5 ON-11.b	2017wp	Nilrem 240kV bus	*703L	100 (377S to tap)	None	N/A
2017WP-Alt 3 BR #5 ON-14.a 2017WP-Alt 3 BR #5 ON-14.b	2017wp	Nilrem 240kV bus	*703L	132 (377S to tap)	None	N/A

* NOTE: Only the worst overloaded segment of 703L is shown in this table.

Table 3 Category C & D Contingencies: Summary of Results for All Alternatives (cont'd)

Figure No.	Base Case	Bus or Substation Outage	Overloaded Element	Percent Loading (%)	Other System Performance Concerns	SPS
Category C: Loss of Switching Station or Generation Plant						
2012 summer base cases						
2012SP-Alt 1 BR #5 ON-14.a 2012SP-Alt 1 BR #5 ON-14.b	2012sp	Cordel 240kV switching station	7L702	101.8	None	N/A
	2012sp	Cordel 240kV switching station	702L	114.3	None	N/A
	2012sp	Cordel 240kV switching station	7L50	108	None	N/A
2012SP-Alt 1 BR #5 ON-16.a 2012SP-Alt 1 BR #5 ON-16.b	2012sp	Battle River Generation Plant	174L	107.7	None	N/A
2012WP-Alt 1 BR #5 ON-16.a 2012WP-Alt 1 BR #5 ON-16.b	2012sp	Battle River Generation Plant	174L	107.7	None	N/A
2012SP-Alt 2 BR #5 ON-12.a 2012SP-Alt 2 BR #5 ON-12.b	2012sp	Cordel 240kV switching station	7L702	101.8	None	N/A
	2012sp	Cordel 240kV switching station	702L	114.3	None	N/A
	2012sp	Cordel 240kV switching station	7L50	118/147.5 (252S to tap)	None	N/A
2012 winter base cases						
2012WP-Alt 1 BR #5 ON-14.a 2012WP-Alt 1 BR #5 ON-14.b	2012wp	Cordel 240kV switching station	7L50	108 (252S to tap)	None	N/A
2012WP-Alt 2 BR #5 ON-12.a 2012WP-Alt 2 BR #5 ON-12.b	2012wp	Cordel 240kV switching station	7L50	130 (252S to tap)	None	N/A
2012WP-Alt 3 BR #5 ON-16.a 2012WP-Alt 3 BR #5 ON-16.b	2012wp	Cordel 240kV switching station	7L702	104	None	N/A
2017 summer base cases						
2017SP-Alt 1 BR #5 ON-14.a 2017SP-Alt 1 BR #5 ON-14.b	2017sp	Cordel 240kV switching station	7L702	105.6	None	N/A
	2017sp	Cordel 240kV switching station	702L	118.4	None	N/A
2017SP-Alt 2 BR #5 ON-12.a 2017SP-Alt 2 BR #5 ON-12.b	2017sp	Cordel 240kV switching station	702L	107	None	N/A
2017SP-Alt 3 BR #5 ON-15.a 2017SP-Alt 3 BR #5 ON-15.b	2017sp	Cordel 240kV switching station	7L14	103	None	N/A
	2017sp	Cordel 240kV switching station	7L702/702L	129.2/148.2	None	N/A
2017 winter base cases - no violations for these contingencies						

Table C-2012 List of Category C & D Sliders for 2012 Base Cases (Battle River Unit 5 ON)

Sliders for 2012 Summer and Winter Peak load conditions					
Alternative 1 Figure No.	**Alternative 2 Figure No.**	**Alternative 3 Figure No.**	**Faulted Elements**	**To**	**From**
			Category C: N-1-1		
2012SP-Alt 1 BR #5 ON-1.a 2012SP-Alt 1 BR #5 ON-1.b 2012WP-Alt 1 BR #5 ON-1.a 2012WP-Alt 1 BR #5 ON-1.b	2012SP-Alt 2 BR #5 ON-1.a 2012SP-Alt 2 BR #5 ON-1.b 2012WP-Alt 2 BR #5 ON-1.a 2012WP-Alt 2 BR #5 ON-1.b	2012SP-Alt 3 BR #5 ON-1.a 2012SP-Alt 3 BR #5 ON-1.b 2012WP-Alt 3 BR #5 ON-1.a 2012WP-Alt 3 BR #5 ON-1.b	Base Case		
		2012SP-Alt 3 BR #5 ON-2.a 2012SP-Alt 3 BR #5 ON-2.b 2012WP-Alt 3 BR #5 ON-2.a 2012WP-Alt 3 BR #5 ON-2.b	7L53	Bonnyville 700S	Irish Creek 706S
			7L42	Hill 751S	Lloydminster 716S
2012SP-Alt 1 BR #5 ON-2.a 2012SP-Alt 1 BR #5 ON-2.b 2012WP-Alt 1 BR #5 ON-2.a 2012WP-Alt 1 BR #5 ON-2.b		2012SP-Alt 3 BR #5 ON-3.a 2012SP-Alt 3 BR #5 ON-3.b 2012WP-Alt 3 BR #5 ON-3.a 2012WP-Alt 3 BR #5 ON-3.b	7L53	Bonnyville 700S	Irish Creek 706S
			7L50	Battle River 757S	Buffalo Creek 526S
		2012SP-Alt 3 BR #5 ON-4.a 2012SP-Alt 3 BR #5 ON-4.b 2012WP-Alt 3 BR #5 ON-4.a 2012WP-Alt 3 BR #5 ON-4.b	7L53	Bonnyville 700S	Irish Creek 706S
			7L14	Vermilion 710S	Kitscoty 705S
2012SP-Alt 1 BR #5 ON-3.a 2012SP-Alt 1 BR #5 ON-3.b 2012WP-Alt 1 BR #5 ON-3.a 2012WP-Alt 1 BR #5 ON-3.b	2012SP-Alt 2 BR #5 ON-2.a 2012SP-Alt 2 BR #5 ON-2.b 2012WP-Alt 2 BR #5 ON-2.a 2012WP-Alt 2 BR #5 ON-2.b	2012SP-Alt 3 BR #5 ON-5.a 2012SP-Alt 3 BR #5 ON-5.b 2012WP-Alt 3 BR #5 ON-5.a 2012WP-Alt 3 BR #5 ON-5.b	7L53	Bonnyville 700S	Irish Creek 706S
			7L14	Hill 751S	Kitscoty 705S
2012SP-Alt 1 BR #5 ON-4.a 2012SP-Alt 1 BR #5 ON-4.b 2012WP-Alt 1 BR #5 ON-4.a 2012WP-Alt 1 BR #5 ON-4.b	2012SP-Alt 2 BR #5 ON-3.a 2012SP-Alt 2 BR #5 ON-3.b 2012WP-Alt 2 BR #5 ON-3.a 2012WP-Alt 2 BR #5 ON-3.b	2012SP-Alt 3 BR #5 ON-6.a 2012SP-Alt 3 BR #5 ON-6.b 2012WP-Alt 3 BR #5 ON-6.a 2012WP-Alt 3 BR #5 ON-6.b	7L50	Battle River 757S	Buffalo Creek 526S
			7L749	Lloydminster 716S	Edgerton 899S
2012SP-Alt 1 BR #5 ON-5.a 2012SP-Alt 1 BR #5 ON-5.b 2012WP-Alt 1 BR #5 ON-5.a 2012WP-Alt 1 BR #5 ON-5.b		2012SP-Alt 3 BR #5 ON-7.a 2012SP-Alt 3 BR #5 ON-7.b 2012WP-Alt 3 BR #5 ON-7.a 2012WP-Alt 3 BR #5 ON-7.b	7L50	Battle River 757S	Buffalo Creek 526S
			7L749	Lloydminster 716S	Edgerton 899S
2012SP-Alt 1 BR #5 ON-6.a 2012SP-Alt 1 BR #5 ON-6.b 2012WP-Alt 1 BR #5 ON-6.a 2012WP-Alt 1 BR #5 ON-6.b	2012SP-Alt 2 BR #5 ON-4.a 2012SP-Alt 2 BR #5 ON-4.b 2012WP-Alt 2 BR #5 ON-4.a 2012WP-Alt 2 BR #5 ON-4.b		715L	Hansman Lake 650S	Provost 545S
			749L	Metiskow 648S	Killarney Lake 267S
	SPS Trip of load				
2012 Summer and Winter Sliders					
Alternative 1 Figure No.	**Alternative 2 Figure No.**	**Alternative 3 Figure No.**	**Faulted Elements**	**To**	**From**
			Category C: N-2 Common Towers		
2012SP-Alt 1 BR #5 ON-7.a 2012SP-Alt 1 BR #5 ON-7.b 2012WP-Alt 1 BR #5 ON-7.a 2012WP-Alt 1 BR #5 ON-7.b	2012SP-Alt 2 BR #5 ON-5.a 2012SP-Alt 2 BR #5 ON-5.b 2012WP-Alt 2 BR #5 ON-5.a 2012WP-Alt 2 BR #5 ON-5.b	2012SP-Alt 3 BR #5 ON-8.a 2012SP-Alt 3 BR #5 ON-8.b 2012WP-Alt 3 BR #5 ON-8.a 2012WP-Alt 3 BR #5 ON-8.b	9L27	Cordel 755S	Paintearth Creek 863S
			9L953	Cordel 755S	Nilrem

Table C-2012 List of Category C & D Sliders for 2012 Base Cases (Battle River Unit 5 ON) – cont'd

Sliders for 2012 Summer and Winter Peak load conditions					
Alternative 1 Figure No.	**Alternative Figure 2 No.**	**Alternative Figure 3 No.**	**Substation Number**	**Substation Name**	**kV of Bus**
			Category C: Critical Area Bus Outages (only considered for substations with more than two transmission lines and radial bus configurations)		
2012SP-Alt 1 BR #5 ON-8.a 2012SP-Alt 1 BR #5 ON-8.b 2012WP-Alt 1 BR #5 ON-8.a 2012WP-Alt 1 BR #5 ON-8.b	2012SP-Alt 2 BR #5 ON-6.a 2012SP-Alt 2 BR #5 ON-6.b 2012WP-Alt 2 BR #5 ON-6.a 2012WP-Alt 2 BR #5 ON-6.b	2012SP-Alt 3 BR #5 ON-9.a 2012SP-Alt 3 BR #5 ON-9.b 2012WP-Alt 3 BR #5 ON-9.a 2012WP-Alt 3 BR #5 ON-9.b	700S	Bonnyville	144
2012SP-Alt 1 BR #5 ON-9.a 2012SP-Alt 1 BR #5 ON-9.b 2012WP-Alt 1 BR #5 ON-9.a 2012WP-Alt 1 BR #5 ON-9.b	2012SP-Alt 2 BR #5 ON-7.a 2012SP-Alt 2 BR #5 ON-7.b 2012WP-Alt 2 BR #5 ON-7.a 2012WP-Alt 2 BR #5 ON-7.b	2012SP-Alt 3 BR #5 ON-10.a 2012SP-Alt 3 BR #5 ON-10.b 2012WP-Alt 3 BR #5 ON-10.a 2012WP-Alt 3 BR #5 ON-10.b	757S	Battle River	144
		2012SP-Alt 3 BR #5 ON-11.a 2012SP-Alt 3 BR #5 ON-11.b 2012WP-Alt 3 BR #5 ON-11.a 2012WP-Alt 3 BR #5 ON-11.b	648S	Metiskow	138
2012SP-Alt 1 BR #5 ON-10.a 2012SP-Alt 1 BR #5 ON-10.b 2012WP-Alt 1 BR #5 ON-10.a 2012WP-Alt 1 BR #5 ON-10.b	2012SP-Alt 2 BR #5 ON-8.a 2012SP-Alt 2 BR #5 ON-8.b 2012WP-Alt 2 BR #5 ON-8.a 2012WP-Alt 2 BR #5 ON-8.b	2012SP-Alt 3 BR #5 ON-12.a 2012SP-Alt 3 BR #5 ON-12.b 2012WP-Alt 3 BR #5 ON-12.a 2012WP-Alt 3 BR #5 ON-12.b	650S	Hansman Lake	138
2012SP-Alt 1 BR #5 ON-11.a 2012SP-Alt 1 BR #5 ON-11.b 2012WP-Alt 1 BR #5 ON-11.a 2012WP-Alt 1 BR #5 ON-11.b	2012SP-Alt 2 BR #5 ON-9.a 2012SP-Alt 2 BR #5 ON-9.b 2012WP-Alt 2 BR #5 ON-9.a 2012WP-Alt 2 BR #5 ON-9.b	2012SP-Alt 3 BR #5 ON-13.a 2012SP-Alt 3 BR #5 ON-13.b 2012WP-Alt 3 BR #5 ON-13.a 2012WP-Alt 3 BR #5 ON-13.b	650S	Hansman Lake	240
2012SP-Alt 1 BR #5 ON-12.a 2012SP-Alt 1 BR #5 ON-12.b 2012WP-Alt 1 BR #5 ON-12.a 2012WP-Alt 1 BR #5 ON-12.b	2012SP-Alt 2 BR #5 ON-10.a 2012SP-Alt 2 BR #5 ON-10.b 2012WP-Alt 2 BR #5 ON-10.a 2012WP-Alt 2 BR #5 ON-10.b	2012SP-Alt 3 BR #5 ON-14.a 2012SP-Alt 3 BR #5 ON-14.b 2012WP-Alt 3 BR #5 ON-14.a 2012WP-Alt 3 BR #5 ON-14.b	478S	Tucuman	138
2012SP-Alt 1 BR #5 ON-13.a 2012SP-Alt 1 BR #5 ON-13.b 2012WP-Alt 1 BR #5 ON-13.a 2012WP-Alt 1 BR #5 ON-13.b	2012SP-Alt 2 BR #5 ON-11.a 2012SP-Alt 2 BR #5 ON-11.b 2012WP-Alt 2 BR #5 ON-11.a 2012WP-Alt 2 BR #5 ON-11.b	2012SP-Alt 3 BR #5 ON-15.a 2012SP-Alt 3 BR #5 ON-15.b 2012WP-Alt 3 BR #5 ON-15.a 2012WP-Alt 3 BR #5 ON-15.b		Nilrem	240
			Category D: Loss of a Switching Station or generation plant		
2012SP-Alt 1 BR #5 ON-14.a 2012SP-Alt 1 BR #5 ON-14.b 2012WP-Alt 1 BR #5 ON-14.a 2012WP-Alt 1 BR #5 ON-14.b	2012SP-Alt 2 BR #5 ON-12.a 2012SP-Alt 2 BR #5 ON-12.b 2012WP-Alt 2 BR #5 ON-12.a 2012WP-Alt 2 BR #5 ON-12.b	2012SP-Alt 3 BR #5 ON-16.a 2012SP-Alt 3 BR #5 ON-16.b 2012WP-Alt 3 BR #5 ON-16.a 2012WP-Alt 3 BR #5 ON-16.b	755S	Cordel	240
2012SP-Alt 1 BR #5 ON-15.a 2012SP-Alt 1 BR #5 ON-15.b 2012WP-Alt 1 BR #5 ON-15.a 2012WP-Alt 1 BR #5 ON-15.b	2012SP-Alt 2 BR #5 ON-13.a 2012SP-Alt 2 BR #5 ON-13.b 2012WP-Alt 2 BR #5 ON-13.a 2012WP-Alt 2 BR #5 ON-13.b	2012SP-Alt 3 BR #5 ON-17.a 2012SP-Alt 3 BR #5 ON-17.b 2012WP-Alt 3 BR #5 ON-17.a 2012WP-Alt 3 BR #5 ON-17.b	826S	Marguerite Lake	240, 144
2012SP-Alt 1 BR #5 ON-16.a 2012SP-Alt 1 BR #5 ON-16.b 2012WP-Alt 1 BR #5 ON-16.a 2012WP-Alt 1 BR #5 ON-16.b	2012SP-Alt 2 BR #5 ON-14.a 2012SP-Alt 2 BR #5 ON-14.b 2012WP-Alt 2 BR #5 ON-14.a 2012WP-Alt 2 BR #5 ON-14.b	2012SP-Alt 3 BR #5 ON-18.a 2012SP-Alt 3 BR #5 ON-18.b 2012WP-Alt 3 BR #5 ON-18.a 2012WP-Alt 3 BR #5 ON-18.b		Battle River Generating Station	

Table C-2017 List of Category C & D Sliders for 2017 Base Cases (Battle River Unit 5 ON)

Sliders for 2017 Summer and Winter peak load conditions					
Alternative 1 Figure No.	**Alternative 2 Figure No.**	**Alternative 3 Figure No.**	**Faulted Elements**	**To**	**From**
			Category C: N-1-1		
2017SP-Alt 1 BR #5 ON-1.a 2017SP-Alt 1 BR #5 ON-1.b 2017WP-Alt 1 BR #5 ON-1.a 2017WP-Alt 1 BR #5 ON-1.b	2017SP-Alt 2 BR #5 ON-1.a 2017SP-Alt 2 BR #5 ON-1.b 2017WP-Alt 2 BR #5 ON-1.a 2017WP-Alt 2 BR #5 ON-1.b	2017SP-Alt 3 BR #5 ON-1.a 2017SP-Alt 3 BR #5 ON-1.b 2017WP-Alt 3 BR #5 ON-1.a 2017WP-Alt 3 BR #5 ON-1.b	Base Case		
		2017SP-Alt 3 BR #5 ON-2.a 2017SP-Alt 3 BR #5 ON-2.b 2017WP-Alt 3 BR #5 ON-2.a 2017WP-Alt 3 BR #5 ON-2.b	7L53	Bonnyville 700S	Irish Creek 706S
			7L42	Hill 751S	Lloydminster 716S
2017SP-Alt 1 BR #5 ON-2.a 2017SP-Alt 1 BR #5 ON-2.b 2017WP-Alt 1 BR #5 ON-2.a 2017WP-Alt 1 BR #5 ON-2.b		2017SP-Alt 3 BR #5 ON-3.a 2017SP-Alt 3 BR #5 ON-3.b 2017WP-Alt 3 BR #5 ON-3.a 2017WP-Alt 3 BR #5 ON-3.b	7L53	Bonnyville 700S	Irish Creek 706S
			7L50	Battle River 757S	Buffalo Creek 526S
		2017SP-Alt 3 BR #5 ON-4.a 2017SP-Alt 3 BR #5 ON-4.b 2017WP-Alt 3 BR #5 ON-4.a 2017WP-Alt 3 BR #5 ON-4.b	7L53	Bonnyville 700S	Irish Creek 706S
			7L14	Vermilion 710S	Kitscoty 705S
2017SP-Alt 1 BR #5 ON-3.a 2017SP-Alt 1 BR #5 ON-3.b 2017WP-Alt 1 BR #5 ON-3.a 2017WP-Alt 1 BR #5 ON-3.b	2017SP-Alt 2 BR #5 ON-2.a 2017SP-Alt 2 BR #5 ON-2.b 2017WP-Alt 2 BR #5 ON-2.a 2017WP-Alt 2 BR #5 ON-2.b	2017SP-Alt 3 BR #5 ON-5.a 2017SP-Alt 3 BR #5 ON-5.b 2017WP-Alt 3 BR #5 ON-5.a 2017WP-Alt 3 BR #5 ON-5.b	7L53	Bonnyville 700S	Irish Creek 706S
			7L14	Hill 751S	Kitscoty 705S
2017SP-Alt 1 BR #5 ON-4.a 2017SP-Alt 1 BR #5 ON-4.b 2017WP-Alt 1 BR #5 ON-4.a 2017WP-Alt 1 BR #5 ON-4.b	2017SP-Alt 2 BR #5 ON-3.a 2017SP-Alt 2 BR #5 ON-3.b 2017WP-Alt 2 BR #5 ON-3.a 2017WP-Alt 2 BR #5 ON-3.b	2017SP-Alt 3 BR #5 ON-6.a 2017SP-Alt 3 BR #5 ON-6.b 2017WP-Alt 3 BR #5 ON-6.a 2017WP-Alt 3 BR #5 ON-6.b	7L50	Battle River 757S	Buffalo Creek 526S
			7L749	Lloydminster 716S	Edgerton 899S
2017SP-Alt 1 BR #5 ON-5.a 2017SP-Alt 1 BR #5 ON-5.b 2017WP-Alt 1 BR #5 ON-5.a 2017WP-Alt 1 BR #5 ON-5.b			7L50	Battle River 757S	Buffalo Creek 526S
			7L749	Lloydminster 716S	Edgerton 899S
2017SP-Alt 1 BR #5 ON-6.a 2017SP-Alt 1 BR #5 ON-6.b 2017WP-Alt 1 BR #5 ON-6.a 2017WP-Alt 1 BR #5 ON-6.b	2017SP-Alt 2 BR #5 ON-4.a 2017SP-Alt 2 BR #5 ON-4.b 2017WP-Alt 2 BR #5 ON-4.a 2017WP-Alt 2 BR #5 ON-4.b		715L	Hansman Lake 650S	Provost 545S
			749L	Metiskow 648S	Killarney Lake 267S
	SPS Trip of load				

Sliders for 2017 Summer and Winter peak load conditions					
Alternative 1 Figure No.	**Alternative 2 Figure No.**	**Alternative 3 Figure No.**	**Faulted Elements**	**To**	**From**
			Category C: N-2 Common Towers		
2017SP-Alt 1 BR #5 ON-7.a 2017SP-Alt 1 BR #5 ON-7.b 2017WP-Alt 1 BR #5 ON-7.a 2017WP-Alt 1 BR #5 ON-7.b	2017SP-Alt 2 BR #5 ON-5.a 2017SP-Alt 2 BR #5 ON-5.b 2017WP-Alt 2 BR #5 ON-5.a 2017WP-Alt 2 BR #5 ON-5.b	2017SP-Alt 3 BR #5 ON-7.a 2017SP-Alt 3 BR #5 ON-7.b 2017WP-Alt 3 BR #5 ON-7.a 2017WP-Alt 3 BR #5 ON-7.b	9L27	Cordel 755S	Paintearth Creek 863S
			9L953	Cordel 755S	Nilrem

Table C-2017 List of Category C & D Sliders for 2017 Base Cases (Battle River Unit 5 ON) – cont'd

Sliders for 2017 Summer and Winter Load conditions					
Alternative 1 Figure No.	**Alternative Figure 2 No.**	**Alternative Figure 3 No.**	**Substation Number**	**Substation Name**	**kV of Bus**
			Category C: Critical Area Bus Outages (only considered for substations with more than two transmission lines and radial bus configurations)		
2017SP-Alt 1 BR #5 ON-8.a 2017SP-Alt 1 BR #5 ON-8.b 2017WP-Alt 1 BR #5 ON-8.a 2017WP-Alt 1 BR #5 ON-8.b	2017SP-Alt 2 BR #5 ON-6.a 2017SP-Alt 2 BR #5 ON-6.b 2017WP-Alt 2 BR #5 ON-6.a 2017WP-Alt 2 BR #5 ON-6.b	2017SP-Alt 3 BR #5 ON-8.a 2017SP-Alt 3 BR #5 ON-8.b 2017WP-Alt 3 BR #5 ON-8.a 2017WP-Alt 3 BR #5 ON-8.b	700S	Bonnyville	144
2017SP-Alt 1 BR #5 ON-9.a 2017SP-Alt 1 BR #5 ON-9.b 2017WP-Alt 1 BR #5 ON-9.a 2017WP-Alt 1 BR #5 ON-9.b	2017SP-Alt 2 BR #5 ON-7.a 2017SP-Alt 2 BR #5 ON-7.b 2017WP-Alt 2 BR #5 ON-7.a 2017WP-Alt 2 BR #5 ON-7.b	2017SP-Alt 3 BR #5 ON-9.a 2017SP-Alt 3 BR #5 ON-9.b 2017WP-Alt 3 BR #5 ON-9.a 2017WP-Alt 3 BR #5 ON-9.b	757S	Battle River	144
		2017SP-Alt 3 BR #5 ON-10.a 2017SP-Alt 3 BR #5 ON-10.b 2017WP-Alt 3 BR #5 ON-10.a 2017WP-Alt 3 BR #5 ON-10.b	648S	Metiskow	138
2017SP-Alt 1 BR #5 ON-10.a 2017SP-Alt 1 BR #5 ON-10.b 2017WP-Alt 1 BR #5 ON-10.a 2017WP-Alt 1 BR #5 ON-10.b	2017SP-Alt 2 BR #5 ON-8.a 2017SP-Alt 2 BR #5 ON-8.b 2017WP-Alt 2 BR #5 ON-8.a 2017WP-Alt 2 BR #5 ON-8.b	2017SP-Alt 3 BR #5 ON-11.a 2017SP-Alt 3 BR #5 ON-11.b 2017WP-Alt 3 BR #5 ON-11.a 2017WP-Alt 3 BR #5 ON-11.b	650S	Hansman Lake	138
2017SP-Alt 1 BR #5 ON-11.a 2017SP-Alt 1 BR #5 ON-11.b 2017WP-Alt 1 BR #5 ON-11.a 2017WP-Alt 1 BR #5 ON-11.b	2017SP-Alt 2 BR #5 ON-9.a 2017SP-Alt 2 BR #5 ON-9.b 2017WP-Alt 2 BR #5 ON-9.a 2017WP-Alt 2 BR #5 ON-9.b	2017SP-Alt 3 BR #5 ON-12.a 2017SP-Alt 3 BR #5 ON-12.b 2017WP-Alt 3 BR #5 ON-12.a 2017WP-Alt 3 BR #5 ON-12.b	650S	Hansman Lake	240
2017SP-Alt 1 BR #5 ON-12.a 2017SP-Alt 1 BR #5 ON-12.b 2017WP-Alt 1 BR #5 ON-12.a 2017WP-Alt 1 BR #5 ON-12.b	2017SP-Alt 2 BR #5 ON-10.a 2017SP-Alt 2 BR #5 ON-10.b 2017WP-Alt 2 BR #5 ON-10.a 2017WP-Alt 2 BR #5 ON-10.b	2017SP-Alt 3 BR #5 ON-13.a 2017SP-Alt 3 BR #5 ON-13.b 2017WP-Alt 3 BR #5 ON-13.a 2017WP-Alt 3 BR #5 ON-13.b	478S	Tucuman	138
2017SP-Alt 1 BR #5 ON-13.a 2017SP-Alt 1 BR #5 ON-13.b 2017WP-Alt 1 BR #5 ON-13.a 2017WP-Alt 1 BR #5 ON-13.b	2017SP-Alt 2 BR #5 ON-11.a 2017SP-Alt 2 BR #5 ON-11.b 2017WP-Alt 2 BR #5 ON-11.a 2017WP-Alt 2 BR #5 ON-11.b	2017SP-Alt 3 BR #5 ON-14.a 2017SP-Alt 3 BR #5 ON-14.b 2017WP-Alt 3 BR #5 ON-14.a 2017WP-Alt 3 BR #5 ON-14.b		Nilrem	240
			Category D: Loss of a Switching Station or generation plant		
2017SP-Alt 1 BR #5 ON-14.a 2017SP-Alt 1 BR #5 ON-14.b 2017WP-Alt 1 BR #5 ON-14.a 2017WP-Alt 1 BR #5 ON-14.b	2017SP-Alt 2 BR #5 ON-12.a 2017SP-Alt 2 BR #5 ON-12.b 2017WP-Alt 2 BR #5 ON-12.a 2017WP-Alt 2 BR #5 ON-12.b	2017SP-Alt 3 BR #5 ON-15.a 2017SP-Alt 3 BR #5 ON-15.b 2017WP-Alt 3 BR #5 ON-15.a 2017WP-Alt 3 BR #5 ON-15.b	755S	Cordel	240
2017SP-Alt 1 BR #5 ON-15.a 2017SP-Alt 1 BR #5 ON-15.b 2017WP-Alt 1 BR #5 ON-15.a 2017WP-Alt 1 BR #5 ON-15.b	2017SP-Alt 2 BR #5 ON-13.a 2017SP-Alt 2 BR #5 ON-13.b 2017WP-Alt 2 BR #5 ON-13.a 2017WP-Alt 2 BR #5 ON-13.b	2017SP-Alt 3 BR #5 ON-16.a 2017SP-Alt 3 BR #5 ON-16.b 2017WP-Alt 3 BR #5 ON-16.a 2017WP-Alt 3 BR #5 ON-16.b	826S	Marguerite Lake	240, 144
2017SP-Alt 1 BR #5 ON-16.a 2017SP-Alt 1 BR #5 ON-16.b 2017WP-Alt 1 BR #5 ON-16.a 2017WP-Alt 1 BR #5 ON-16.b	2017SP-Alt 2 BR #5 ON-14.a 2017SP-Alt 2 BR #5 ON-14.b 2017WP-Alt 2 BR #5 ON-14.a 2017WP-Alt 2 BR #5 ON-14.b	2017SP-Alt 3 BR #5 ON-17.a 2017SP-Alt 3 BR #5 ON-17.b 2017WP-Alt 3 BR #5 ON-17.a 2017WP-Alt 3 BR #5 ON-17.b		Battle River Generating Station	

2.0 Voltage Stability Criteria Analysis

Prior to proceeding with voltage stability analysis, the regional source and load (sink) areas must be defined. As mentioned in Section 6 of the need identification document, generation support from outside the Central East region comes mainly from Red Deer (area 35), Sheerness (area 43) and Wabamun (area 40) areas. These were used as the source subsystems throughout this analysis.

The load area for this analysis was the entire regional load which includes all the buses in the Lloydminster (area 13), Cold Lake (area 28), Wainwright (area 32), Alliance (area 36), Provost (area 37) and Vegreville (area 56) areas.

In the 2012 winter peak load case, the base load used was 1142 MW while in the 2017 winter peak load case, the base load used was 1307.3 MW. The incremental transfers under Category B contingencies (105% of base load) for 2012 and 2017 are 57.1 MW and 65.4 MW respectively. Similarly the incremental transfer for Category C contingencies (102.5% of base load) are 28.6 MW and 32.7 MW respectively and are applied in the PV and QV analysis

2.1 Power Voltage (P-V) Margin

The three proposed alternatives met the WECC voltage stability criteria for all Category B contingencies listed in Table 1.

A summary of the P-V analysis for the worst Category C & D contingencies is presented in the following Tables.

The worst category C contingency was found to be the loss of 7L50 (Battle River to Buffalo Creek) combined with loss of 7L749 (Edgerton to Lloydminster). Under such an event, the Vermilion area would experience voltage collapse unless a special protection scheme for load curtailment is strategically located in that area. This type of Category C event met the AESO Voltage Stability by curtailing load after the occurrence of first contingency. In real time Operations, this is not feasible and hence an automatic Special Protection Scheme (SPS) with back-up UVLS scheme needs to be devised to ensure the security of supplying the regional load.

Table PV-2012 Summary of 2012 PV Margin (MW)

(As per criteria, minimum incremental transfer required is 102.5% or >28.6 MW with BR5 On and >0 with BR5 OFF)

		2012wp					
Category C & D Event		Alternative 1		Alternative 2		Alternative 3	
Line 1	Line 2	BR5 ON	BR5 OFF	BR5 ON	BR5 OFF	BR5 ON	BR5 OFF
Base Case		280	280	280	280	280	280
7L53	7L42	280	256.25	280	280	216.88	182.5
7L53	7L749	191.25	162.5	225.63	191.25	116.88	96.25
7L53	7L50	115.63	90	101.25	78.13	32.5	15.63
7L50	**7L749**	83.75	80.63	83.13	80	84.38	81.25
7L129	7L749	243.75	238.13	243.13	236.88	245.63	241.25
7L65	7L749	254.38	226.88	280	254.38	196.25	178.13
715L	749L	86.88	60	45	21.25		
9L36	9L37	279.38	263.13	279.38	262.5	272.5	257.5
9L953	953L	280	280	280	280	280	241.25
Bonnyville 144kV Bus		280	280	280	280	280	277.5
Battle River 144kV Bus		280	280	280	266.25	280	227.5
Marguerite Substation		246.25	229.38	245.63	228.75	238.75	223.75

Yellow highlight is worst area contingency and PV margin indicated is with SPS
Blue Font = Contingency has same PV margin as base case.

Table PV-2017 Summary of 2017 PV Margin (MW)

(As per criteria, minimum incremental transfer required is 102.5% or >32.7 MW with BR5 On and >0 with BR5 OFF)

		2017wp					
Category C & D Event		Alternative 1		Alternative 2		Alternative 3	
Line 1	Line 2	BR5 ON	BR5 OFF	BR5 ON	BR5 OFF	BR5 ON	BR5 OFF
Base Case		320	320	320	320	320	320
7L53	7L42	320	270.63	320	320	138.13	87.5
7L53	7L749	217.5	169.38	320	320	320	320
7L53	7L50	73.75	55	320	320	320	320
7L50	**7L749**	34.38	36.25	320	320	320	320
7L129	7L749	237.5	234.38	320	320	320	320
7L65	7L749	288.75	250.63	320	320	320	320
715L	749L	81.25	39.38	103.13	89.38	320	320
9L27	9L953	320	320	320	320	289.38	319.38
9L36	9L37	161.88	150	209.38	198.13	184.38	175.63
9L953	953L	188.75	145.63	269.38	253.13	125.63	98.75
Edgerton 138 kV bus		320	315	320	320	320	320
Hansman Lake 240 kV Bus		242.5	145	301.88	169.38	168.13	71.88
Nilrem 240 kV Bus		191.25	147.5	225.63	181.88	126.88	100.63
Marguerite Substation		135.63	124.38	185.63	174.38	158.75	150.63

Yellow highlight is worst area contingency and PV margin indicated is with SPS
Blue Font = Contingency has same PV margin as base case.

Figure PV-2012-1 Worst Category C & D Contingencies – all generators on

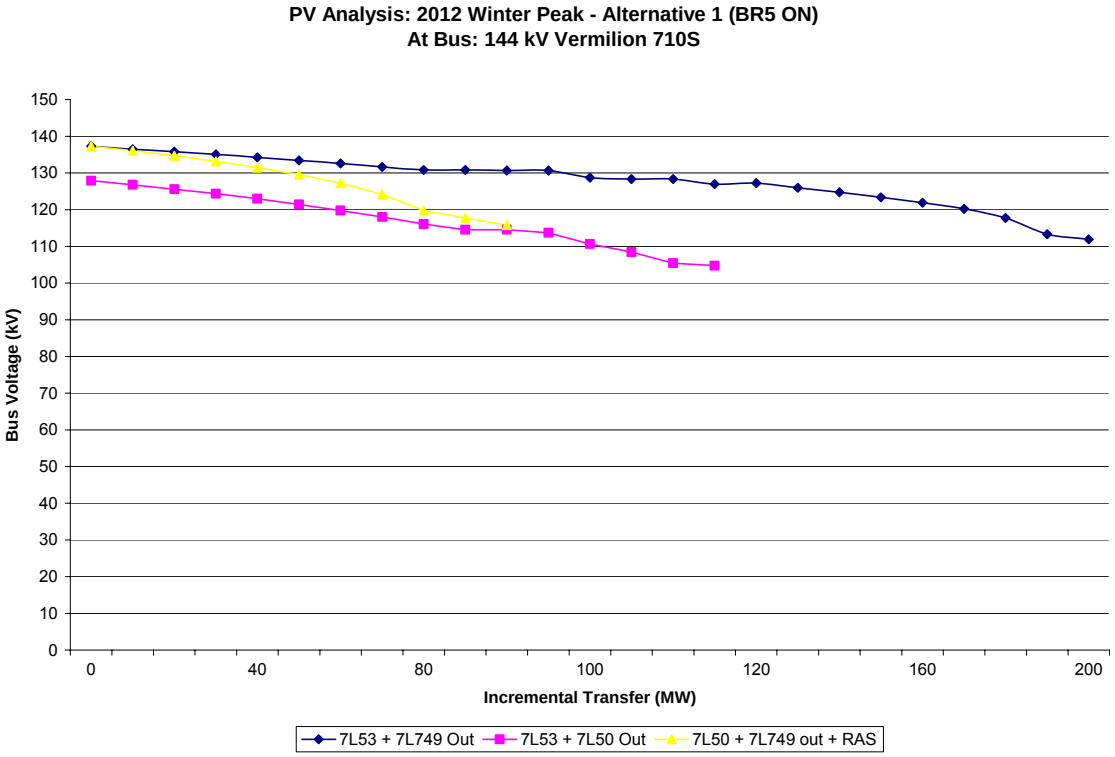


Figure PV-2012-2 Worst Category C & D Contingencies –critical generator OFF

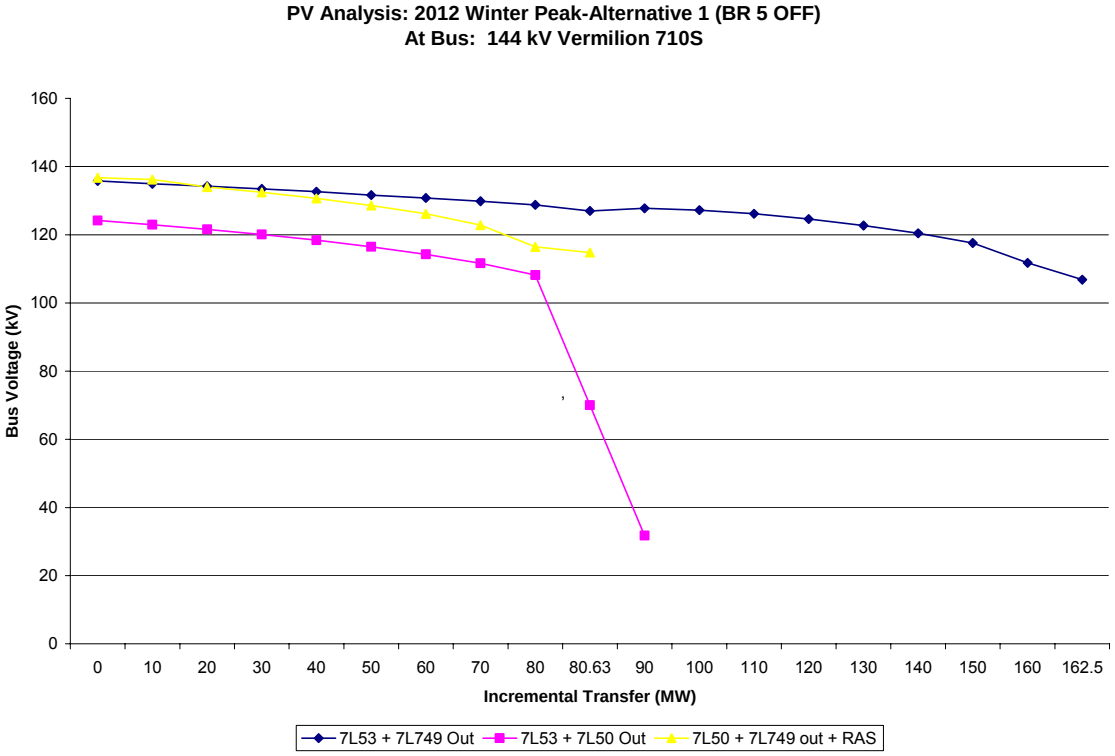


Figure PV-2017-1 Worst Category C & D Contingencies –all generators on

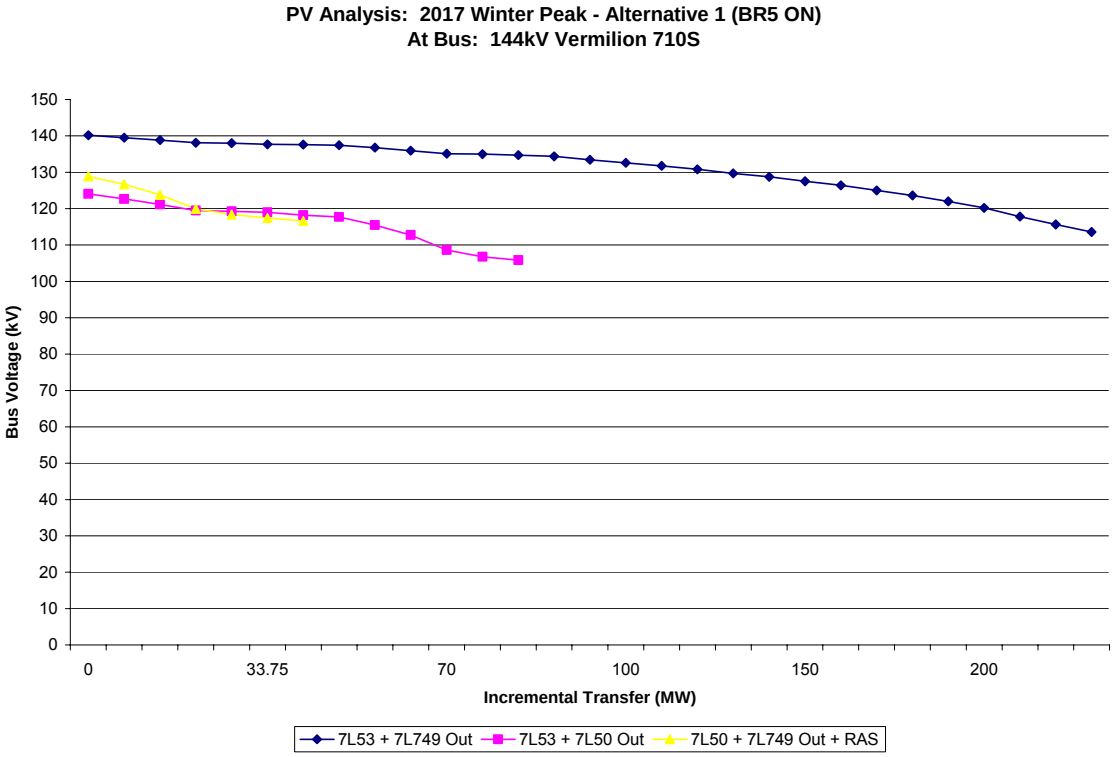
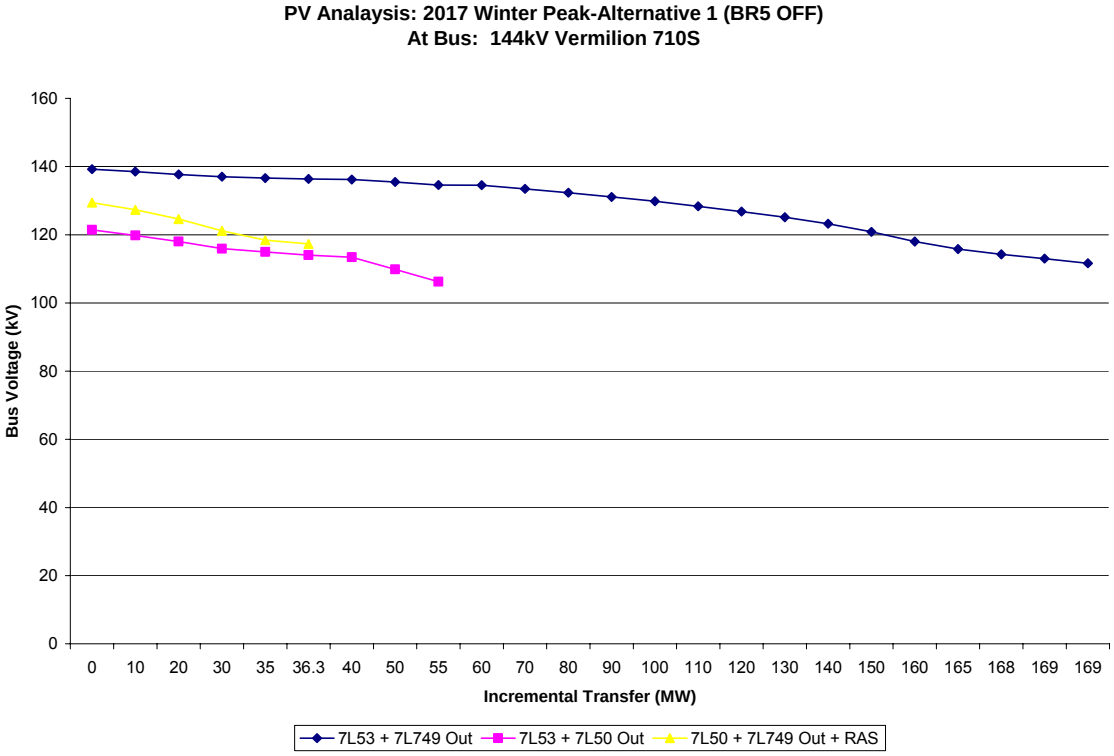


Figure PV-2017-2 Worst Category C & D Contingencies –critical generator OFF



2.2 Reactive Power (Q-V) Margin

2.2.1 Category B Contingencies

Low voltages were observed in the Vermilion area under several Category B N-1 and N-G-1 contingencies and Var support is required to improve the voltage profile.

The worst voltage violations occur on three substation buses: Vermilion 144kV, Irish Creek 144 kV and the Vermilion tapped substation 144kV bus. Since Vermilion is strongly connected to other sources and also a load centre, a properly sized capacitor bank at this location will help boost local the voltage profile. Hence the Vermilion substation was chosen for installing a capacitor bank.

The following Q-V curves show Var requirements at the three substation 144kV buses for the worst Category B contingencies with and without the critical generator, Battle River unit 5, in service.

Figure QV-2012-B1 Worst Category B Contingencies for Voltage Violations (all generation ON)

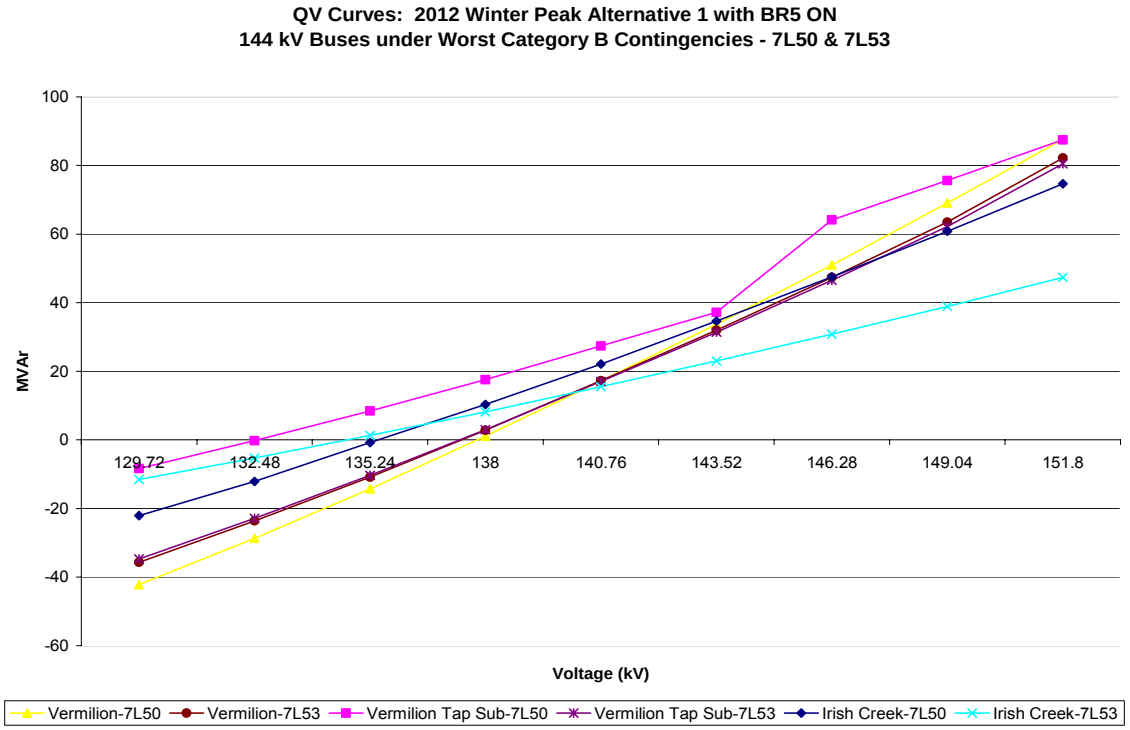


Figure QV-2012-B2 Worst Category B Contingencies for Voltage Violations–BR #5 OFF

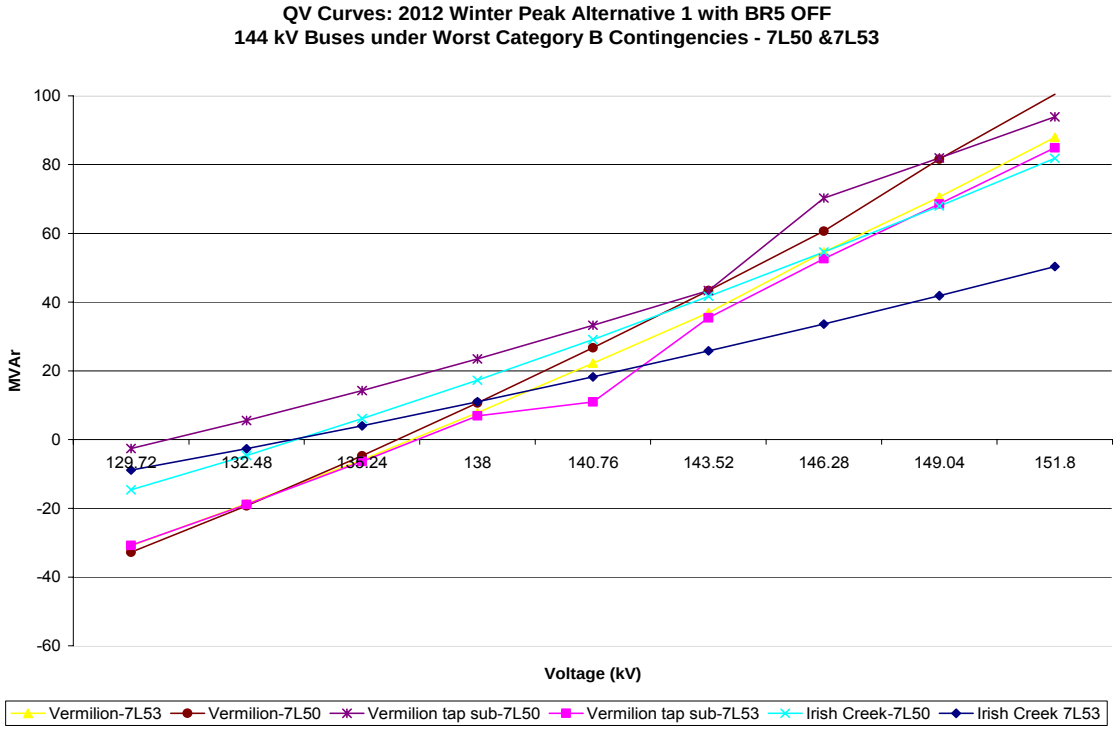


Figure QV-2017-B1 Worst Category B Contingencies for Voltage Violations (all generation ON)

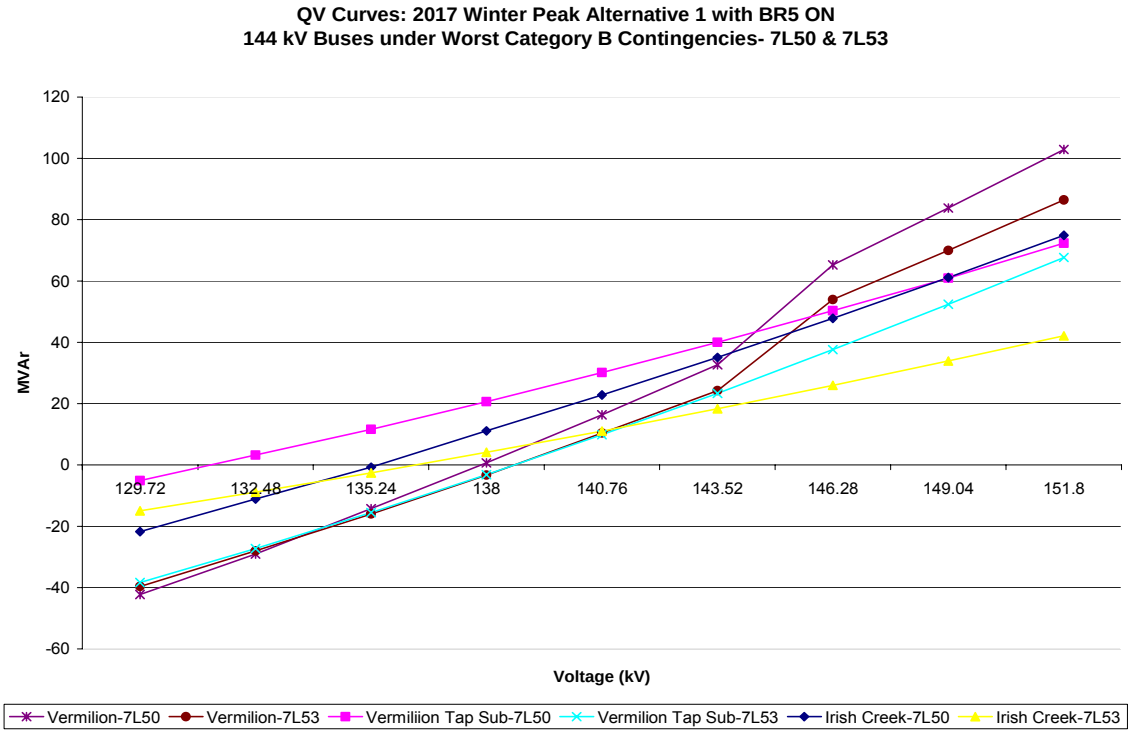
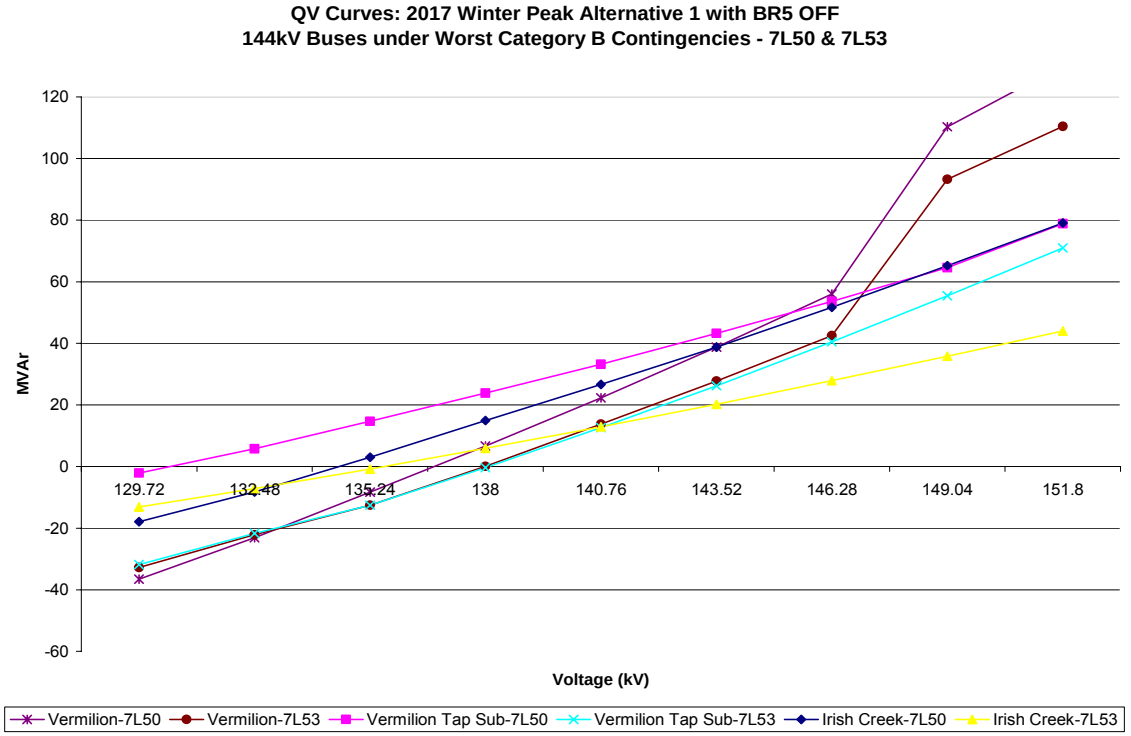


Figure QV-2017-B2 Worst Category B Contingencies for Voltage Violations-BR #5 OFF



Engineering judgment coupled with the above results concluded that a 25 MVAr capacitor bank would be sufficient to maintain the 144kV voltages above the extreme minimum during the worst contingencies. It was also determined that the worst category B contingency for further testing was with the 7L50 contingency with Battle River unit #5 out of service.

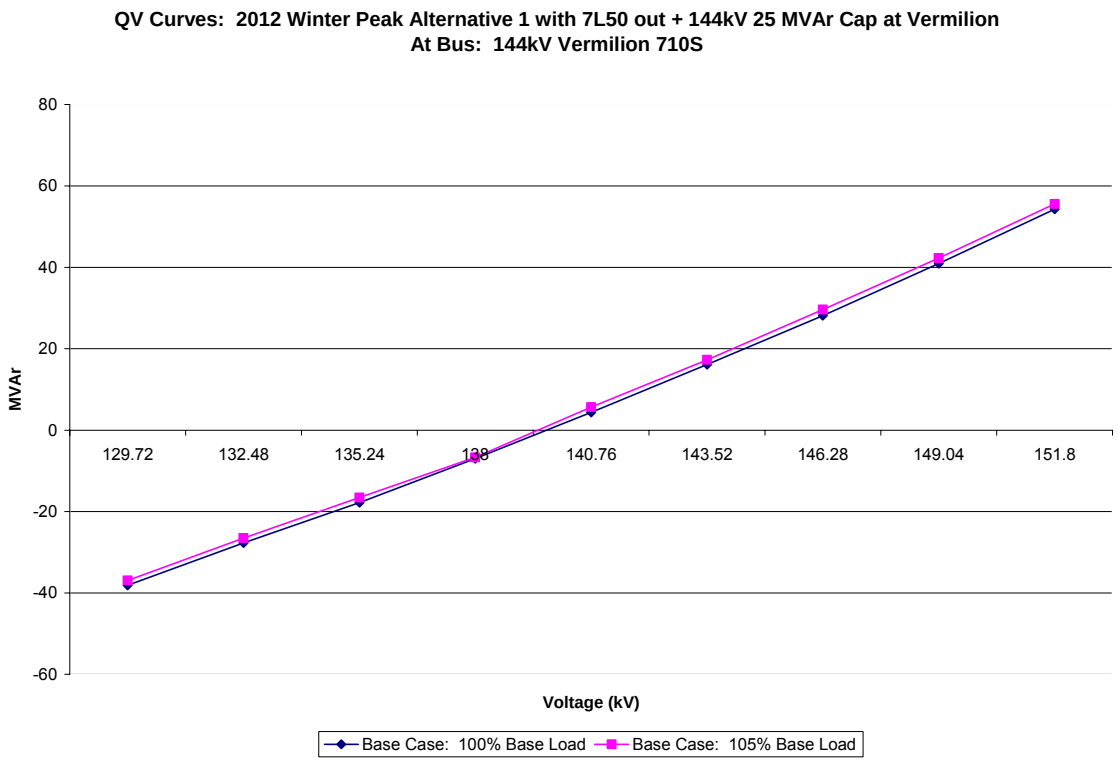
The Q-V analysis was repeated with a 25 MVAr capacitor bank at Vermilion to ensure that the preferred Alternative 1 has sufficient reactive power reserve.

All the Q-V curves show that under the worst Category B contingency conditions, the system has adequate voltage stability margin and also confirms the adequacy of the proposed reactive power support at all affected area buses.

Table QV Worst Category B Contingency: Summary of Q-V Analysis Results

				Performance Level A	**Performance Level C**	**Level C within 50% Level A**
Figure	**Base Case**	**Worst Case Scenario**	**144kV Bus**	**Maximum Reactive Margin (100 % of base load) (MVAr)**	**Maximum Reactive Margin 105% of base load) (MVAr)**	**Met WECC voltage stability criteria**
2012-QV-1	2012wp	Base Case with 7L50 out	Vermilion	-38.13	-36.91	Yes
		7L50 + BR5 off	Vermilion	-29.86	-28.29	Yes
2012-QV-2		Base Case with 7L50 out	Vermilion Tapped Substation	-24.88	-23.9	Yes
		7L50 + BR5 off	Vermilion Tapped Substation	-19.12	-17.74	Yes
2012-QV-3		Base Case with 7L50 out	Irish Creek	-35.13	-33.95	Yes
		7L50 + BR5 off	Irish Creek	-28.37	-26.75	Yes
2017-QV-1	2017wp	Base Case with 7L50 out	Vermilion	-33.79	-33.03	Yes
		7L50 + BR5 off	Vermilion	-30.66	-28.38	Yes
2017-QV-2		Base Case with 7L50 out	Vermilion Tapped Substation	-21.74	-21.13	Yes
		7L50 + BR5 off	Vermilion Tapped Substation	-18.7	-16.94	Yes
2017-QV-3		Base Case with 7L50 out	Irish Creek	-35.75	-34.88	Yes
		7L50 + BR5 off	Irish Creek	-31.89	-29.77	Yes

Figure 2012-QV-1 Load Adequacy with 7L50 Battle River to Buffalo Creek out



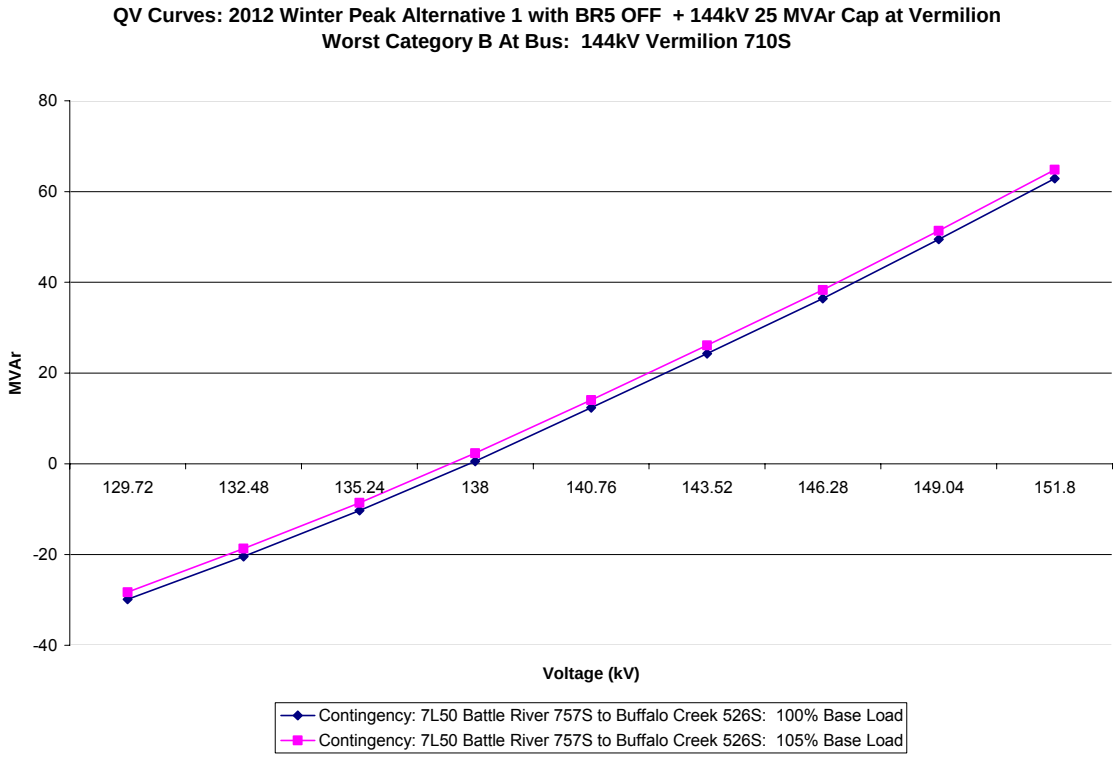
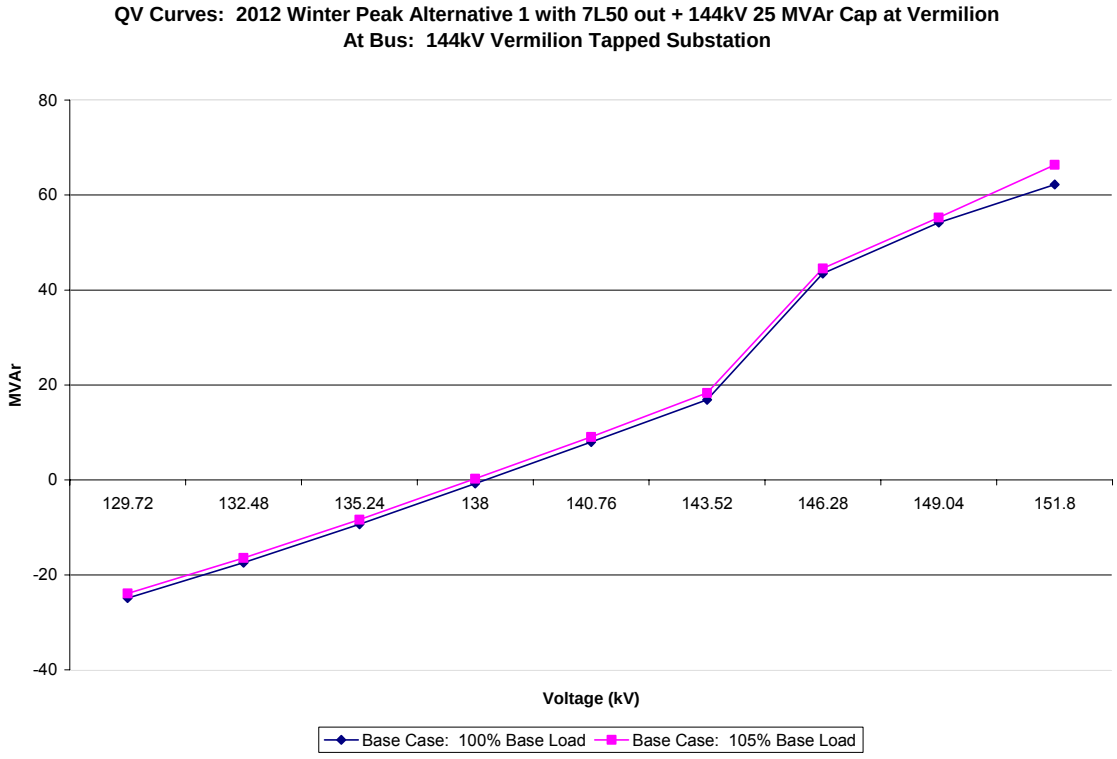


Figure 2012-QV-2 Load Adequacy with 7L50 Battle River to Buffalo Creek out



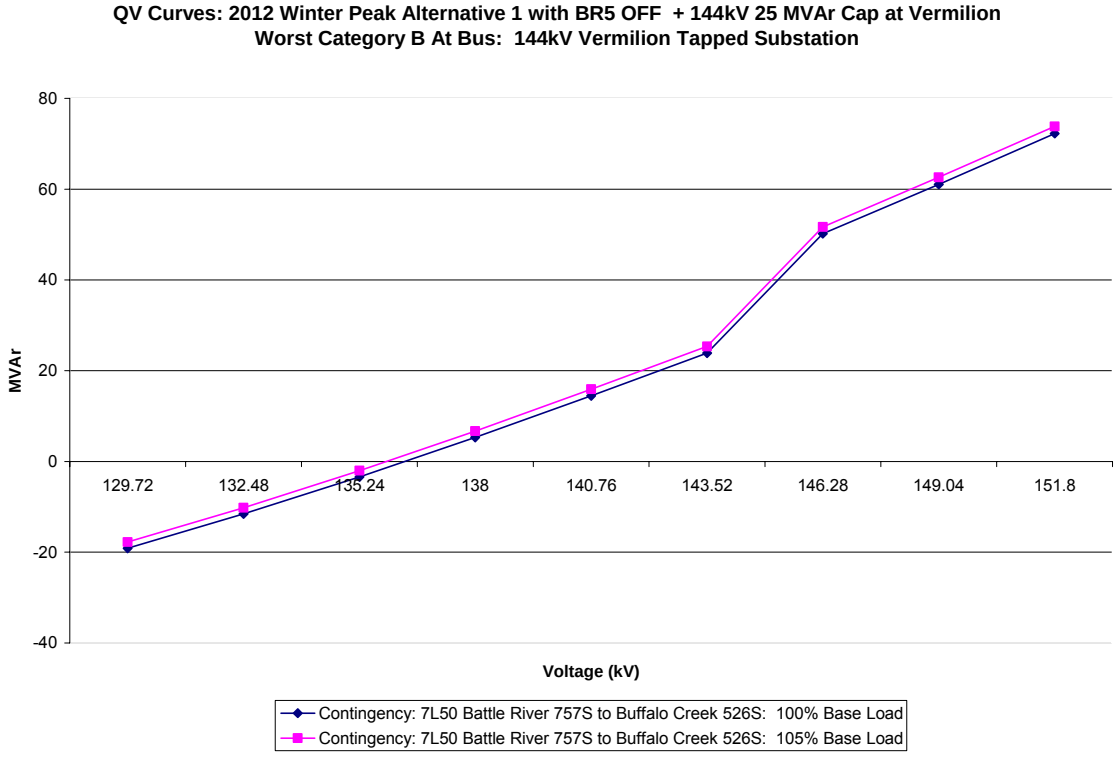
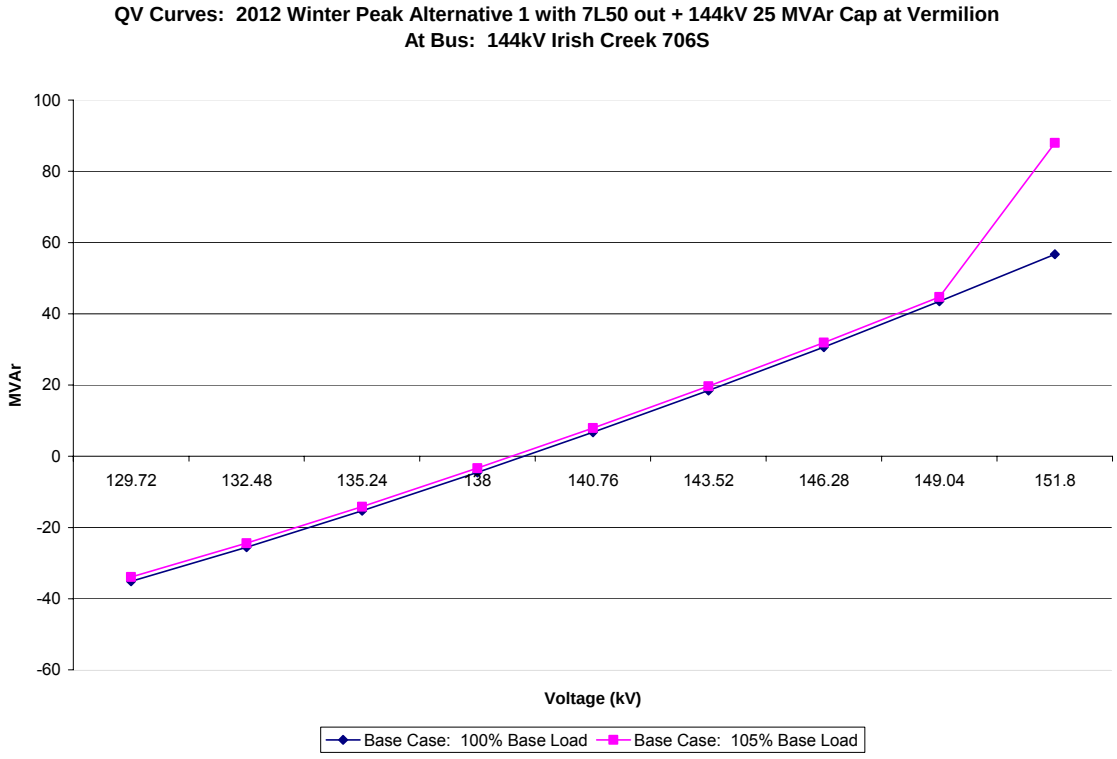


Figure 2012-QV-3 Load Adequacy with 7L50 Battle River to Buffalo Creek out



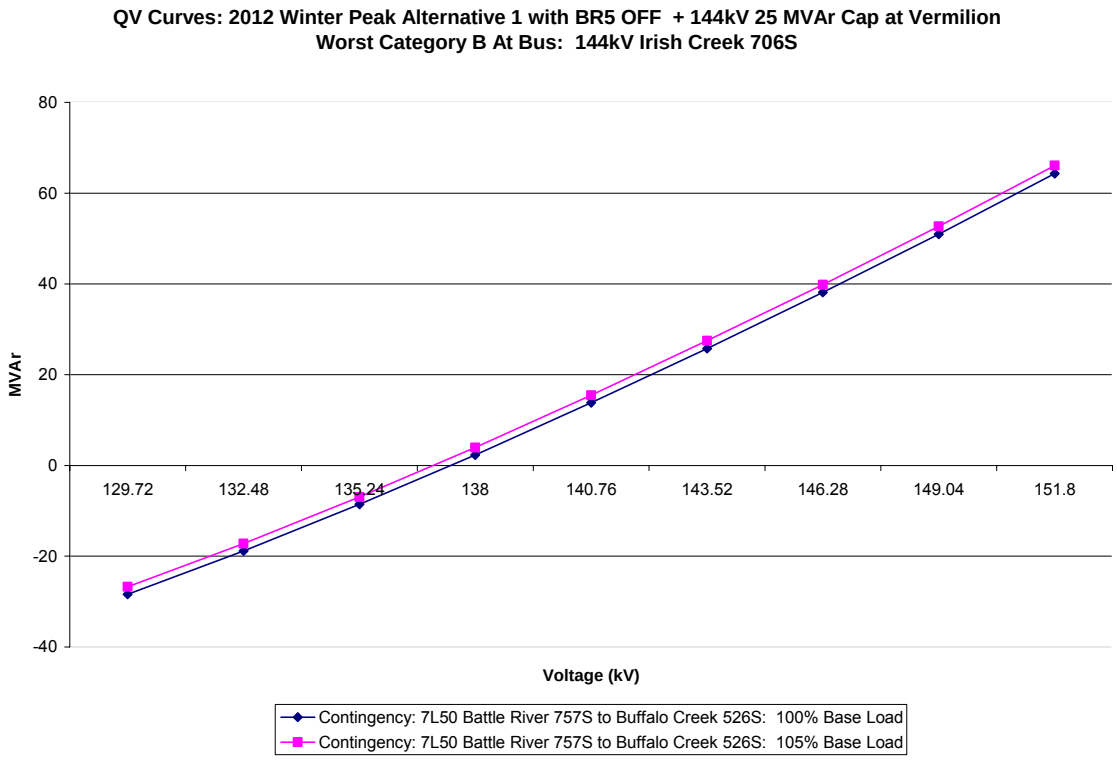
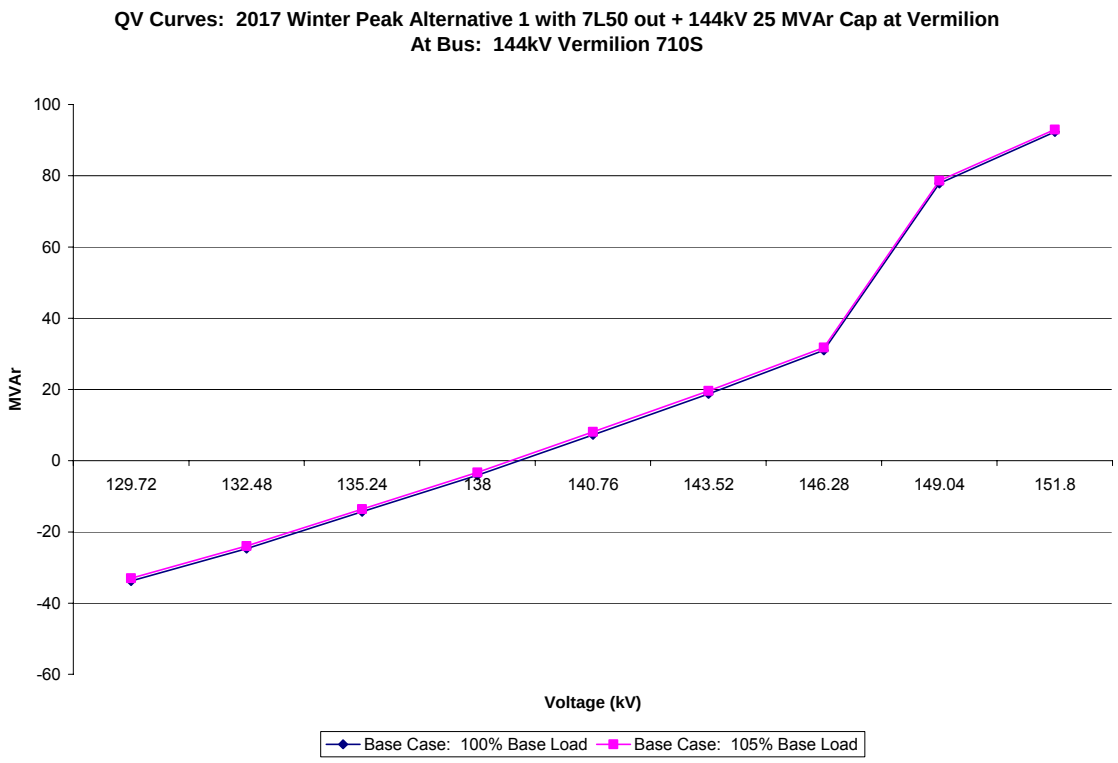


Figure 2017-QV-1 Load Adequacy with 7L50 Battle River to Buffalo Creek out



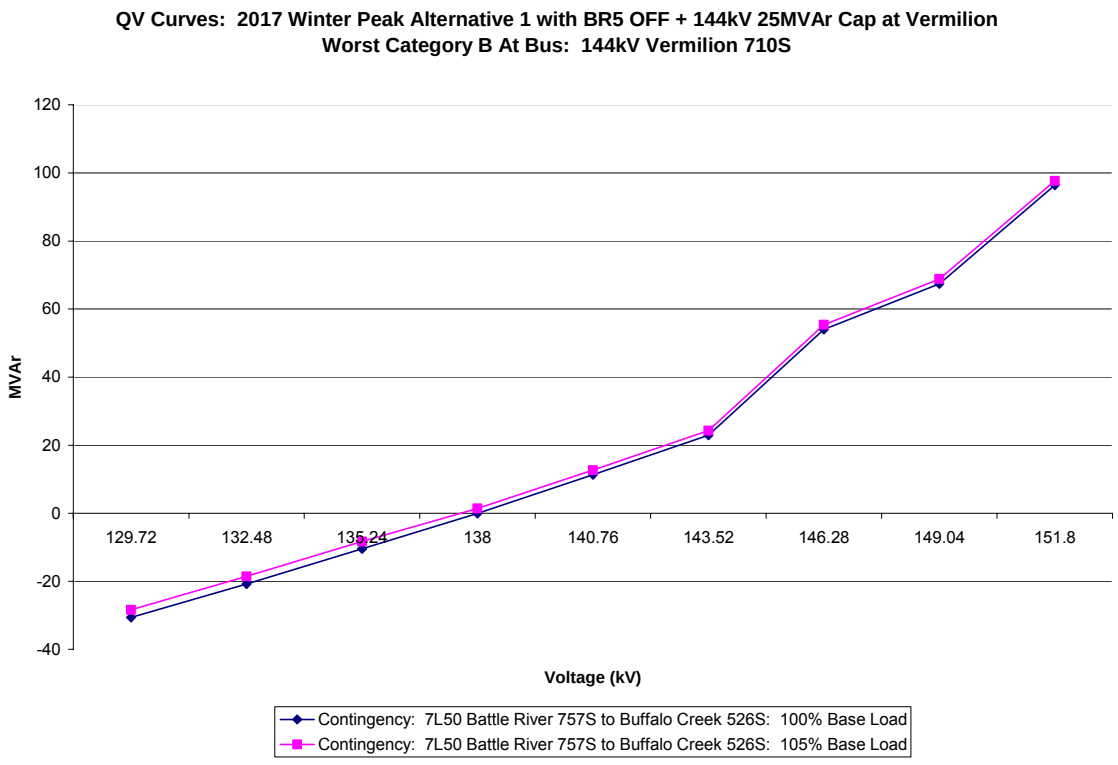
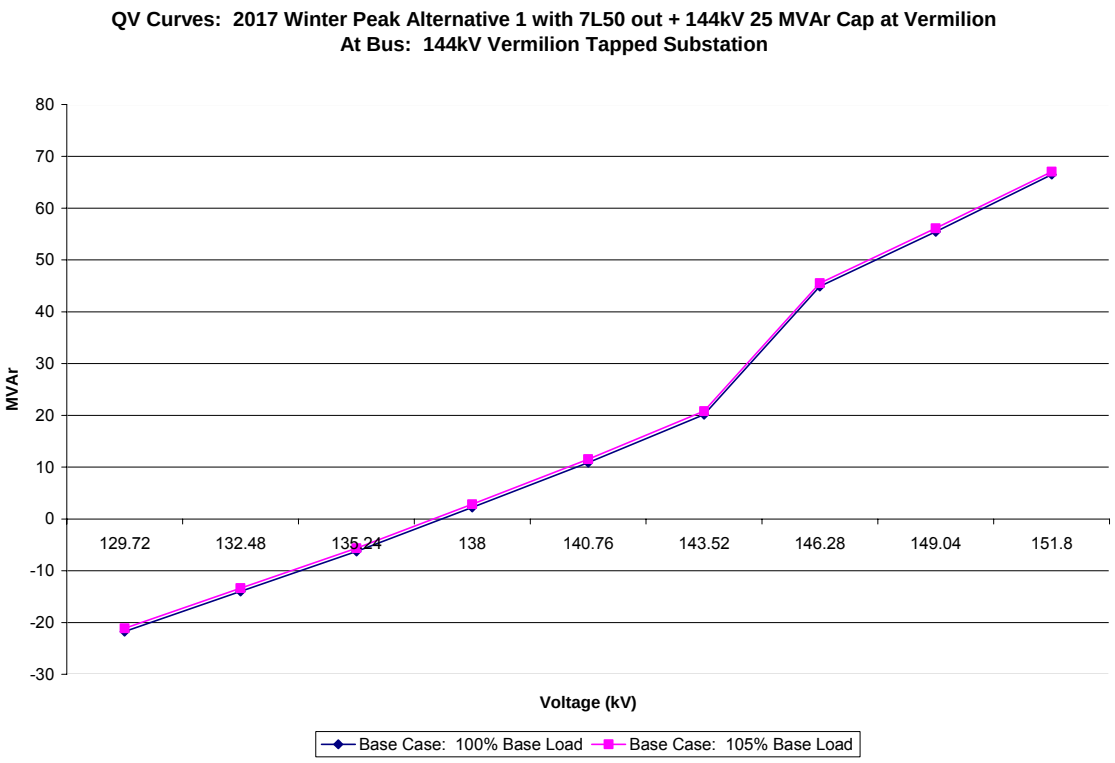


Figure 2017-QV-2 Load Adequacy with 7L50 Battle River to Buffalo Creek out



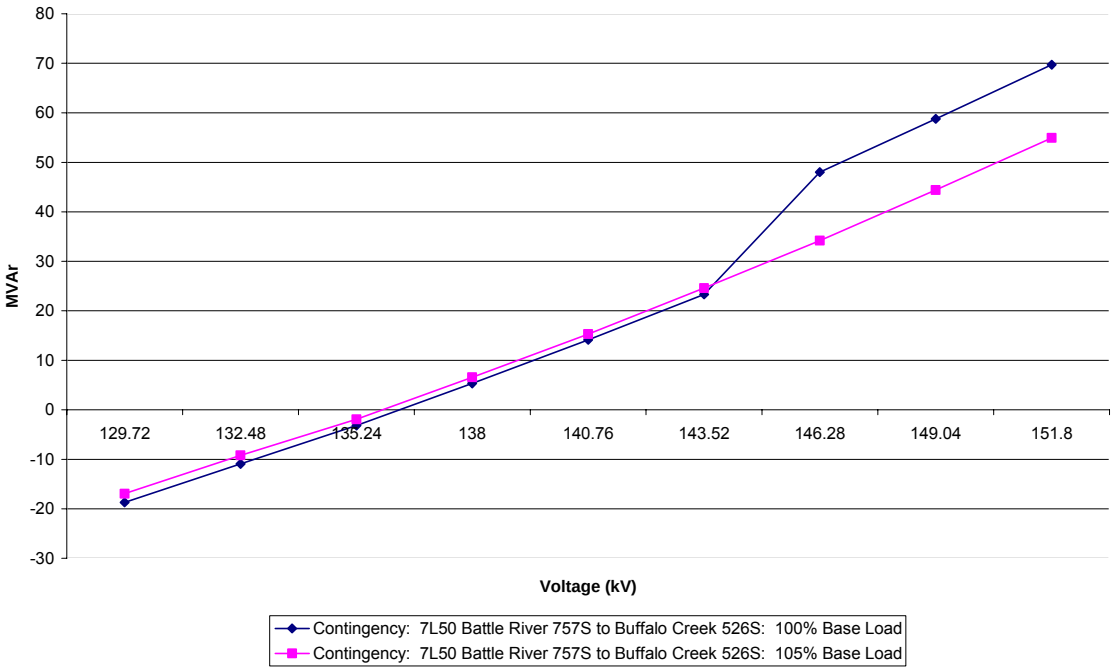
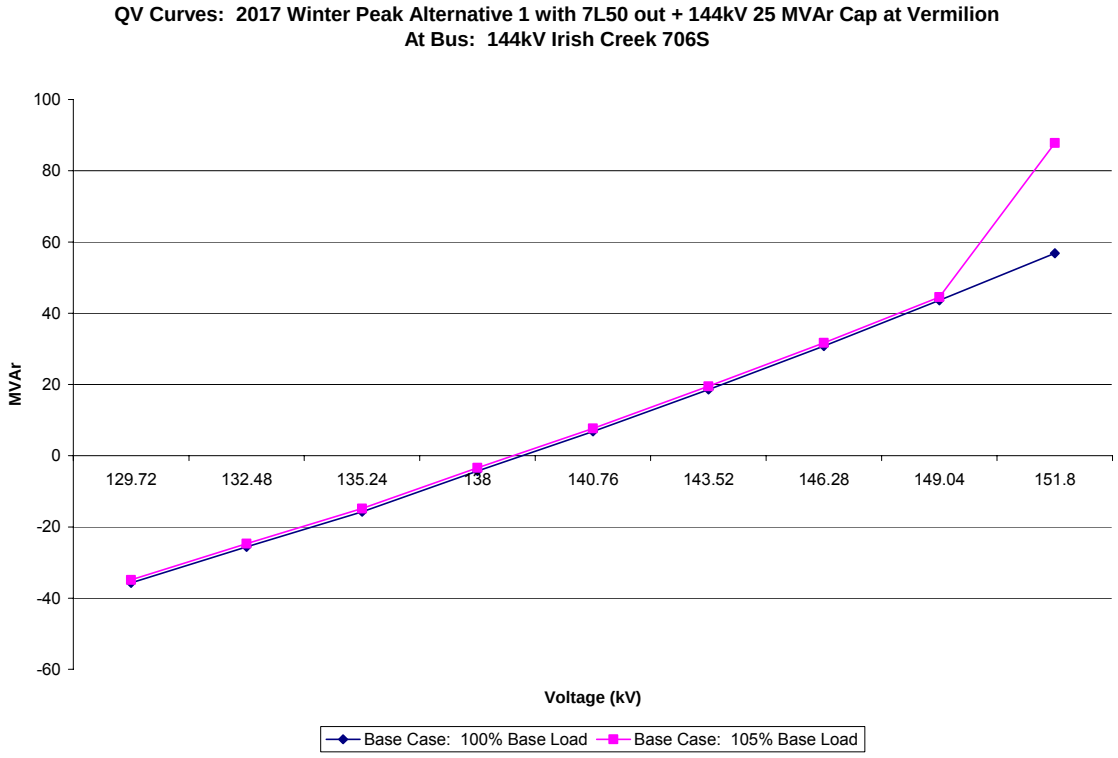
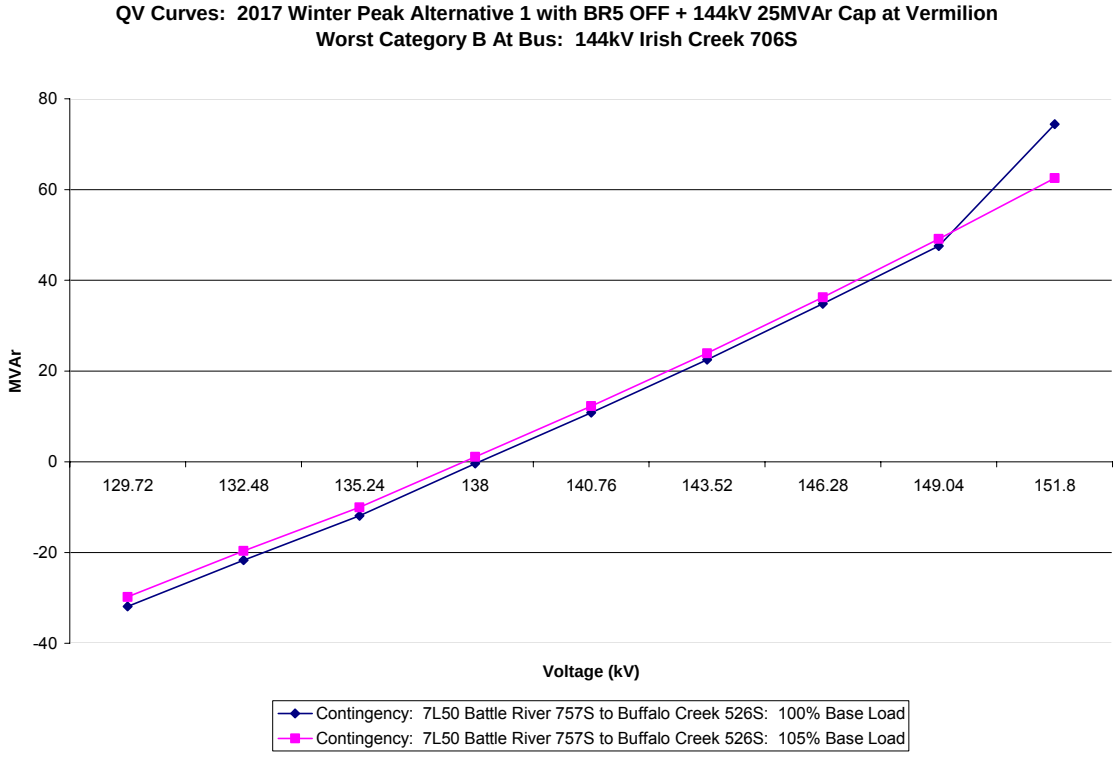


Figure 2017-QV-3 Load Adequacy with 7L50 Battle River to Buffalo Creek out





2.2.1 Category C Contingencies: Q-V Margin

For Alternative 1 and as identified under the steady state analysis in section 1.2 as well as in the P-V analysis under section 2.1 of this Appendix, two Category C contingencies cause voltage concerns. These include:

- Loss of 7L50 and 7L749 (SPS to curtail a minimum of 15 MW load in area)
- Loss of 7L50 and 7L53

Of these, only the first event causes regional voltage concerns without an SPS scheme in place. The second event has localized voltage issues which need to be managed. It is left to Operational group to determine the under voltage load shedding (UVLS) requirements for the second contingency.

The following figure is shown for the worst Category C N-1-1 event which is the combined loss of 7L50 from Battle River to Buffalo Creek with the loss of 7L749 from Edgerton to Lloydminster. In order to maintain adequate margin over 20 MW of load should be curtailed by 2017. See Table QV-C for stability margin details.

Figure QV-2012-C Category C event : 7L50 and 7L749 outage at Vermilion 710S 144kV bus

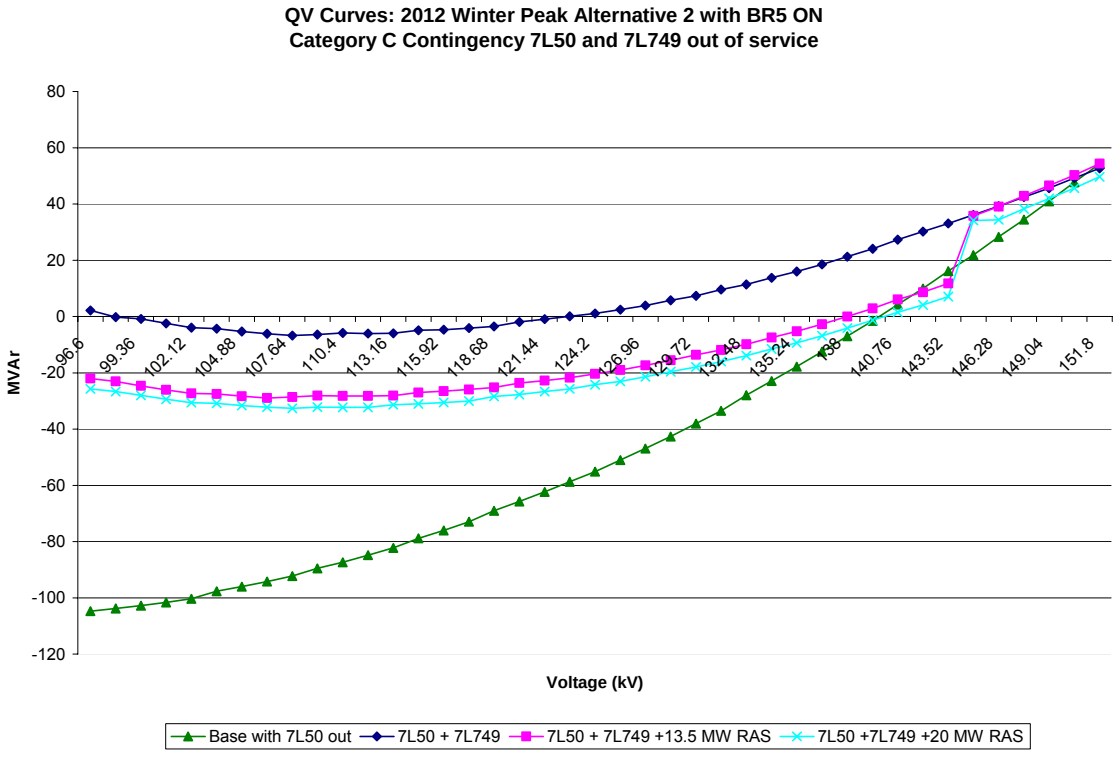


Table QV-C Worst N-1-1 Contingencies: Load Curtailment to maintain MVAr Margin

		Performance Level A		Performance Level C		Level C within 50% Level A
Base Case	**Most VAr Deficient Bus**	**Worst Case Scenario**	**Maximum Reactive Margin (100 % of base load) (MVAr)**	**Combination of two elements**	**Maximum Reactive Margin (100 % of base load) (MVAr)**	**Met WECC voltage stability criteria**
2012wp	Vermilion Tapped Substation	Base Case with 7L50 out	-24.88	7L50 + 7L749 out	8.8	No
				7L50 + 7L749 + 15 MW SPS	-14.23	Yes
	Irish Creek	Base Case with 7L50 out	-35.13	7L50 + 7L53	3.9	No
				7L50 + 7L53 + 15 MW SPS	-6.28	No
				7L50 + 7L53 + 20 MW SPS	-18.55	Yes
2017wp	Vermilion Tapped Substation	Base Case with 7L50 out	-21.74	7L50 + 7L749 + 15 MW SPS	-0.79	No
				7L50 + 7L749 + 22 MW SPS	-13.25	Yes
	Irish Creek	Base Case with 7L50 out	-35.75	7L50 + 7L53 + 20 MW SPS	-15.98	No
				7L50 + 7L53 + 34 MW SPS	-19.43	Yes

Contingencies

Category A, B, C & D

Contingency Matrix Cont List

Count= 406 x 2 = 812

Contingency Number	Category	Description	2012 Alt 1 WP	2012 Alt 1 SP	2012 Alt 1 SL	2017 Alt 1 WP	2017 Alt 1 SP	2017 Alt 1 SL	2012 Alt 2 WP	2012 Alt 2 SP	2012 Alt 2 SL	2017 Alt 2 WP	2017 Alt 2 SP	2017 Alt 2 SL	2012 Alt 3 WP	2012 Alt 3 SP	2012 Alt 3 SL	2017 Alt 3 WP	2017 Alt 3 SP	2017 Alt 3 SL	2012 Alt 1 WP BR #5 ON	2012 Alt 1 SP BR #5 ON	2017 Alt 1 WP BR #5 ON	2017 Alt 1 SP BR #5 ON	2012 Alt 2 WP BR #5 ON	2012 Alt 2 SP BR #5 ON	2017 Alt 2 WP BR #5 ON	2017 Alt 2 SP BR #5 ON	2012 Alt 3 WP BR #5 ON	2012 Alt 3 SP BR #5 ON	2017 Alt 3 WP BR #5 ON	2017 Alt 3 SP BR #5 ON
D1-00	A	Base Case	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
D1-01	B	Bonnyville 700S to Bourque 970S (7L146)	X	X		X	X		X	X		X	X		X	X		X	X													
D1-02	B	Marguerite Lake 826S to Wolf Lake 822S (7L87)	X	X		X	X		X	X		X	X		X	X		X	X													
D1-03	B	Leming Lake 715S to Ethel Lake 717S (7L66)	X	X		X	X		X	X		X	X		X	X		X	X													
D1-04	B	Bonnyville 700S to Irish Creek 706S (7L53)	X	X		X	X								X	X		X	X													
D1-05	B	Vermilion 710S to Hill 751S (7L14) Kitscoty 705S Tap	X	X		X	X		X	X		X	X		X	X		X	X													
D1-06	B	Marguerite Lake 826S to LaCorey 721S (7L89)	X	X		X	X		X	X		X	X		X	X		X	X													
D1-07	B	Hill 751S to Loydminster 716S (7L42)	X	X		X	X		X	X		X	X		X	X		X	X													
D1-08	B	Edgerton 899S to Lloydminster 716S (7L749) Briker 880S Tap	X	X	X	X	X	X	X	X	X	X	X	X																		
D1-09	B	Battle River 757S to Buffalo Creek 526S (7L50) Jarrow 252S Tap	X	X		X	X		X	X		X	X		X	X		X	X													
D1-10	B	Battle River 757S to Strome 223S (7L701) Heisler 764S Tap	X	X		X	X		X	X		X	X		X	X		X	X													
D1-11	B	Metiskow 648S to Killarney 267S (7L749)	X	X	X	X	X	X	X	X	X	X	X	X																		
D1-11b	B	Metiskow 648S to Edgerton 899S Killarney TP (7L749)													X	X	X	X	X	X												
D1-12	B	Hansman Lake 650S to Provost 545S (715L)	X	X	X	X	X	X	X	X	X	X	X	X																		
D1-13	B	Killarney Lake 267S to Hayter 277S (748L)			X			X			X			X			X			X												
D1-14	B	Cordel 755S to Nevis 766S (9L20)	X	X		X	X		X	X		X	X		X	X		X	X													
D1-15	B	Battle River 144/72 kV Transformer 701T	X	X		X	X		X	X		X	X		X	X		X	X													
D1-16	B	Edgerton 899S to Killarney Lake 267S (749L)	X	X	X	X	X	X	X	X	X	X	X	X																		
D1-17	B	Vermilion 240/144 kV Transformer										X	X																			
D1-18	B	Loydminster to Wind Farm													X	X		X	X													
D1-19	B	Hansman Lake 650S to Wind Farm													X	X		X	X													

Contingency Matrix Cont List

Count= 406 x 2 = 812

Contingency Number	Category	Description	2012 Alt 1 WP	2012 Alt 1 SP	2012 Alt 1 SL	2017 Alt 1 WP	2017 Alt 1 SP	2017 Alt 1 SL	2012 Alt 2 WP	2012 Alt 2 SP	2012 Alt 2 SL	2017 Alt 2 WP	2017 Alt 2 SP	2017 Alt 2 SL	2012 Alt 3 WP	2012 Alt 3 SP	2012 Alt 3 SL	2017 Alt 3 WP	2017 Alt 3 SP	2017 Alt 3 SL	2012 Alt 1 WP BR #5 ON	2012 Alt 1 SP BR #5 ON	2017 Alt 1 WP BR #5 ON	2017 Alt 1 SP BR #5 ON	2012 Alt 2 WP BR #5 ON	2012 Alt 2 SP BR #5 ON	2017 Alt 2 WP BR #5 ON	2017 Alt 2 SP BR #5 ON	2012 Alt 3 WP BR #5 ON	2012 Alt 3 SP BR #5 ON	2017 Alt 3 WP BR #5 ON	2017 Alt 3 SP BR #5 ON
D1-20	C	Bonnyville 700S to Irish Creek 706S (7L53) and Hill 751S to Loydminster 716S (7L42)																											X	X	X	X
D1-21	C	Bonnyville 700S to Irish Creek 706S (7L53) and Battle River 757S to Buffalo Creek 526S (7L50) Jarrow 252S Tap																			X	X	X	X					X	X	X	X
D1-22	C	Bonnyville 700S to Irish Creek 706S (7L53) and Vermilion 710S to Kitscoty 705S Tap																											X	X	X	X
D1-23	C	Bonnyville 700S to Irish Creek 706S (7L53) and Hill 751S (7L14) to Kitscoty 705S Tap																			X	X	X	X	X	X	X	X	X	X	X	X
D1-24	C	Battle River 757S to Buffalo Creek 526S (7L50) Jarrow 252S Tap and Edgerton 899S to Lloydminster 716S (7L749) Briker 880S Tap																			X	X	X	X	X	X	X	X	X	X	X	X
D1-24b	C	Battle River 757S to Buffalo Creek 526S (7L50) Jarrow 252S Tap and Edgerton 899S to Lloydminster 716S (7L749) Briker 880S Tap																			X	X	X	X					X	X		
D1-25	C	Hansman Lake 650S to Provost 545S (715L) and Metiskow 648S to Killarney 267S (7L749)																			X	X	X	X	X	X	X	X				
D1-26	D	Cordel 755S to Paintearth Creek 863S (9L27) and Cordel 755S to Nilrem (9LNew)																			X	X	X	X	X	X	X	X	X	X	X	X
D1-27	D	Bonnyville 700S (7L24) (7L53) (7L89) (7L139)																			X	X	X	X	X	X	X	X	X	X	X	X
D1-28	D	Battle River 757S																			X	X	X	X	X	X	X	X	X	X	X	X
D1-29	C	Metiskow (648S) 138 kV (70L3) (749L) (885L) (Killarney Tap)																											X	X	X	X
D1-30	D	Hansman Lake (650S) 138 kV																			X	X	X	X	X	X	X	X	X	X	X	X
D1-31	D	Hansman Lake (650S) 240 kV																			X	X	X	X	X	X	X	X	X	X	X	X
D1-32	D	Tucuman (478S) 138 kV																			X	X	X	X	X	X	X	X	X	X	X	X
D1-33	D	Nilrem 240 kV																			X	X	X	X	X	X	X	X	X	X	X	X
D1-34	D	Cordel 240 kV																			X	X	X	X	X	X	X	X	X	X	X	X
D1-35	D	Marguerite Lake (826S)																			X	X	X	X	X	X	X	X	X	X	X	X
D1-36	D	Battle River Generating Station 3-4-5																			X	X	X	X	X	X	X	X	X	X	X	X

2012 Power Flow Plots

Alternatives 1, 2 & 3
Battle River Unit # 5 OFF

Case Summary Page	2012 Alt 1 WP	
Contingency Number	**Fig #**	**Description**
D1-00	2012WP-Alt 1-1.a	Base Case
D1-00	2012WP-Alt 1-1.b	Base Case
D1-01	2012WP-Alt 1-2.a	Bonnyville 700S to Bourque 970S (7L146)
D1-01	2012WP-Alt 1-2.b	Bonnyville 700S to Bourque 970S (7L146)
D1-02	2012WP-Alt 1-3.a	Marguerite Lake 826S to Wolf Lake 822S (7L87)
D1-02	2012WP-Alt 1-3.b	Marguerite Lake 826S to Wolf Lake 822S (7L87)
D1-03	2012WP-Alt 1-4.a	Leming Lake 715S to Ethel Lake 717S (7L66)
D1-03	2012WP-Alt 1-4.b	Leming Lake 715S to Ethel Lake 717S (7L66)
D1-04	2012WP-Alt 1-5.a	Bonnyville 700S to Irish Creek 706S (7L53)
D1-04	2012WP-Alt 1-5.b	Bonnyville 700S to Irish Creek 706S (7L53)
D1-05	2012WP-Alt 1-6.a	Vermilion 710S to Hill 751S (7L14) Kitscoty 705S Tap
D1-05	2012WP-Alt 1-6.b	Vermilion 710S to Hill 751S (7L14) Kitscoty 705S Tap
D1-06	2012WP-Alt 1-7.a	Marguerite Lake 826S to LaCorey 721S (7L89)
D1-06	2012WP-Alt 1-7.b	Marguerite Lake 826S to LaCorey 721S (7L89)
D1-07	2012WP-Alt 1-8.a	Hill 751S to Loydminster 716S (7L42)
D1-07	2012WP-Alt 1-8.b	Hill 751S to Loydminster 716S (7L42)
D1-08	2012WP-Alt 1-9.a	Edgerton 899S to Lloydminster 716S (7L749) Briker 880S Tap
D1-08	2012WP-Alt 1-9.b	Edgerton 899S to Lloydminster 716S (7L749) Briker 880S Tap
D1-09	2012WP-Alt 1-10.a	Battle River 757S to Buffalo Creek 526S (7L50) Jarrow 252S Tap
D1-09	2012WP-Alt 1-10.b	Battle River 757S to Buffalo Creek 526S (7L50) Jarrow 252S Tap
D1-10	2012WP-Alt 1-11.a	Battle River 757S to Strome 223S (7L701) Heisler 764S Tap
D1-10	2012WP-Alt 1-11.b	Battle River 757S to Strome 223S (7L701) Heisler 764S Tap
D1-11	2012WP-Alt 1-12.a	Metiskow 648S to Killarney 267S (7L749)
D1-11	2012WP-Alt 1-12.b	Metiskow 648S to Killarney 267S (7L749)
D1-12	2012WP-Alt 1-13.a	Hansman Lake 650S to Provost 545S (715L)
D1-12	2012WP-Alt 1-13.b	Hansman Lake 650S to Provost 545S (715L)
D1-14	2012WP-Alt 1-14.a	Cordel 755S to Nevis 766S (9L20)
D1-14	2012WP-Alt 1-14.b	Cordel 755S to Nevis 766S (9L20)
D1-15	2012WP-Alt 1-15.a	Battle River 144/72 kV Transformer 701T
D1-15	2012WP-Alt 1-15.b	Battle River 144/72 kV Transformer 701T
D1-16	2012WP-Alt 1-16.a	Edgerton 899S to Killarney Lake 267S (749L)
D1-16	2012WP-Alt 1-16.b	Edgerton 899S to Killarney Lake 267S (749L)

Case Summary Page	2012 Alt 1 SP	
Contingency Number	**Fig #**	**Description**
D1-00	2012SP-Alt 1-1.a	Base Case
D1-00	2012SP-Alt 1-1.b	Base Case
D1-01	2012SP-Alt 1-2.a	Bonnyville 700S to Bourque 970S (7L146)
D1-01	2012SP-Alt 1-2.b	Bonnyville 700S to Bourque 970S (7L146)
D1-02	2012SP-Alt 1-3.a	Marguerite Lake 826S to Wolf Lake 822S (7L87)
D1-02	2012SP-Alt 1-3.b	Marguerite Lake 826S to Wolf Lake 822S (7L87)
D1-03	2012SP-Alt 1-4.a	Leming Lake 715S to Ethel Lake 717S (7L66)
D1-03	2012SP-Alt 1-4.b	Leming Lake 715S to Ethel Lake 717S (7L66)
D1-04	2012SP-Alt 1-5.a	Bonnyville 700S to Irish Creek 706S (7L53)
D1-04	2012SP-Alt 1-5.b	Bonnyville 700S to Irish Creek 706S (7L53)
D1-05	2012SP-Alt 1-6.a	Vermilion 710S to Hill 751S (7L14) Kitscoty 705S Tap
D1-05	2012SP-Alt 1-6.b	Vermilion 710S to Hill 751S (7L14) Kitscoty 705S Tap
D1-06	2012SP-Alt 1-7.a	Marguerite Lake 826S to LaCorey 721S (7L89)
D1-06	2012SP-Alt 1-7.b	Marguerite Lake 826S to LaCorey 721S (7L89)
D1-07	2012SP-Alt 1-8.a	Hill 751S to Loydminster 716S (7L42)
D1-07	2012SP-Alt 1-8.b	Hill 751S to Loydminster 716S (7L42)
D1-08	2012SP-Alt 1-9.a	Edgerton 899S to Lloydminster 716S (7L749) Briker 880S Tap
D1-08	2012SP-Alt 1-9.b	Edgerton 899S to Lloydminster 716S (7L749) Briker 880S Tap
D1-09	2012SP-Alt 1-10.a	Battle River 757S to Buffalo Creek 526S (7L50) Jarrow 252S Tap
D1-09	2012SP-Alt 1-10.b	Battle River 757S to Buffalo Creek 526S (7L50) Jarrow 252S Tap
D1-10	2012SP-Alt 1-11.a	Battle River 757S to Strome 223S (7L701) Heisler 764S Tap
D1-10	2012SP-Alt 1-11.b	Battle River 757S to Strome 223S (7L701) Heisler 764S Tap
D1-11	2012SP-Alt 1-12.a	Metiskow 648S to Killarney 267S (7L749)
D1-11	2012SP-Alt 1-12.b	Metiskow 648S to Killarney 267S (7L749)
D1-12	2012SP-Alt 1-13.a	Hansman Lake 650S to Provost 545S (715L)
D1-12	2012SP-Alt 1-13.b	Hansman Lake 650S to Provost 545S (715L)
D1-14	2012SP-Alt 1-14.a	Cordel 755S to Nevis 766S (9L20)
D1-14	2012SP-Alt 1-14.b	Cordel 755S to Nevis 766S (9L20)
D1-15	2012SP-Alt 1-15.a	Battle River 144/72 kV Transformer 701T
D1-15	2012SP-Alt 1-15.b	Battle River 144/72 kV Transformer 701T
D1-16	2012SP-Alt 1-16.a	Edgerton 899S to Killarney Lake 267S (749L)
D1-16	2012SP-Alt 1-16.b	Edgerton 899S to Killarney Lake 267S (749L)

Case Summary Page 2012 Alt 1 SL		
Contingency Number	**Fig #**	**Description**
D1-00	2012SL-Alt 1-1.a	Base Case
D1-00	2012SL-Alt 1-1.b	Base Case
D1-08	2012SL-Alt 1-2.a	Edgerton 899S to Lloydminster 716S (7L749) Briker 880S Tap
D1-08	2012SL-Alt 1-2.b	Edgerton 899S to Lloydminster 716S (7L749) Briker 880S Tap
D1-11	2012SL-Alt 1-3.a	Metiskow 648S to Killarney 267S (7L749)
D1-11	2012SL-Alt 1-3.b	Metiskow 648S to Killarney 267S (7L749)
D1-12	2012SL-Alt 1-4.a	Hansman Lake 650S to Provost 545S (715L)
D1-12	2012SL-Alt 1-4.b	Hansman Lake 650S to Provost 545S (715L)
D1-13	2012SL-Alt 1-5.a	Killarney Lake 267S to Hayter 277S (748L)
D1-13	2012SL-Alt 1-5.b	Killarney Lake 267S to Hayter 277S (748L)
D1-16	2012SL-Alt 1-6.a	Edgerton 899S to Killarney Lake 267S (749L)
D1-16	2012SL-Alt 1-6.b	Edgerton 899S to Killarney Lake 267S (749L)

Case Summary Page	2012 Alt 2 WP	
Contingency Number	**Fig #**	**Description**
D1-00	2012WP-Alt 2-1.a	Base Case
D1-00	2012WP-Alt 2-1.b	Base Case
D1-01	2012WP-Alt 2-2.a	Bonnyville 700S to Bourque 970S (7L146)
D1-01	2012WP-Alt 2-2.b	Bonnyville 700S to Bourque 970S (7L146)
D1-02	2012WP-Alt 2-3.a	Marguerite Lake 826S to Wolf Lake 822S (7L87)
D1-02	2012WP-Alt 2-3.b	Marguerite Lake 826S to Wolf Lake 822S (7L87)
D1-03	2012WP-Alt 2-4.a	Leming Lake 715S to Ethel Lake 717S (7L66)
D1-03	2012WP-Alt 2-4.b	Leming Lake 715S to Ethel Lake 717S (7L66)
D1-05	2012WP-Alt 2-5.a	Vermilion 710S to Hill 751S (7L14) Kitscoty 705S Tap
D1-05	2012WP-Alt 2-5.b	Vermilion 710S to Hill 751S (7L14) Kitscoty 705S Tap
D1-06	2012WP-Alt 2-6.a	Marguerite Lake 826S to LaCorey 721S (7L89)
D1-06	2012WP-Alt 2-6.b	Marguerite Lake 826S to LaCorey 721S (7L89)
D1-07	2012WP-Alt 2-7.a	Hill 751S to Loydminster 716S (7L42)
D1-07	2012WP-Alt 2-7.b	Hill 751S to Loydminster 716S (7L42)
D1-08	2012WP-Alt 2-8.a	Edgerton 899S to Lloydminster 716S (7L749) Briker 880S Tap
D1-08	2012WP-Alt 2-8.b	Edgerton 899S to Lloydminster 716S (7L749) Briker 880S Tap
D1-09	2012WP-Alt 2-9.a	Battle River 757S to Buffalo Creek 526S (7L50) Jarrow 252S Tap
D1-09	2012WP-Alt 2-9.b	Battle River 757S to Buffalo Creek 526S (7L50) Jarrow 252S Tap
D1-10	2012WP-Alt 2-10.a	Battle River 757S to Strome 223S (7L701) Heisler 764S Tap
D1-10	2012WP-Alt 2-10.b	Battle River 757S to Strome 223S (7L701) Heisler 764S Tap
D1-11	2012WP-Alt 2-11.a	Metiskow 648S to Killarney 267S (7L749)
D1-11	2012WP-Alt 2-11.b	Metiskow 648S to Killarney 267S (7L749)
D1-12	2012WP-Alt 2-12.a	Hansman Lake 650S to Provost 545S (715L)
D1-12	2012WP-Alt 2-12.b	Hansman Lake 650S to Provost 545S (715L)
D1-14	2012WP-Alt 2-13.a	Cordel 755S to Nevis 766S (9L20)
D1-14	2012WP-Alt 2-13.b	Cordel 755S to Nevis 766S (9L20)
D1-15	2012WP-Alt 2-14.a	Battle River 144/72 kV Transformer 701T
D1-15	2012WP-Alt 2-14.b	Battle River 144/72 kV Transformer 701T
D1-16	2012WP-Alt 2-15.a	Edgerton 899S to Killarney Lake 267S (749L)
D1-16	2012WP-Alt 2-15.b	Edgerton 899S to Killarney Lake 267S (749L)

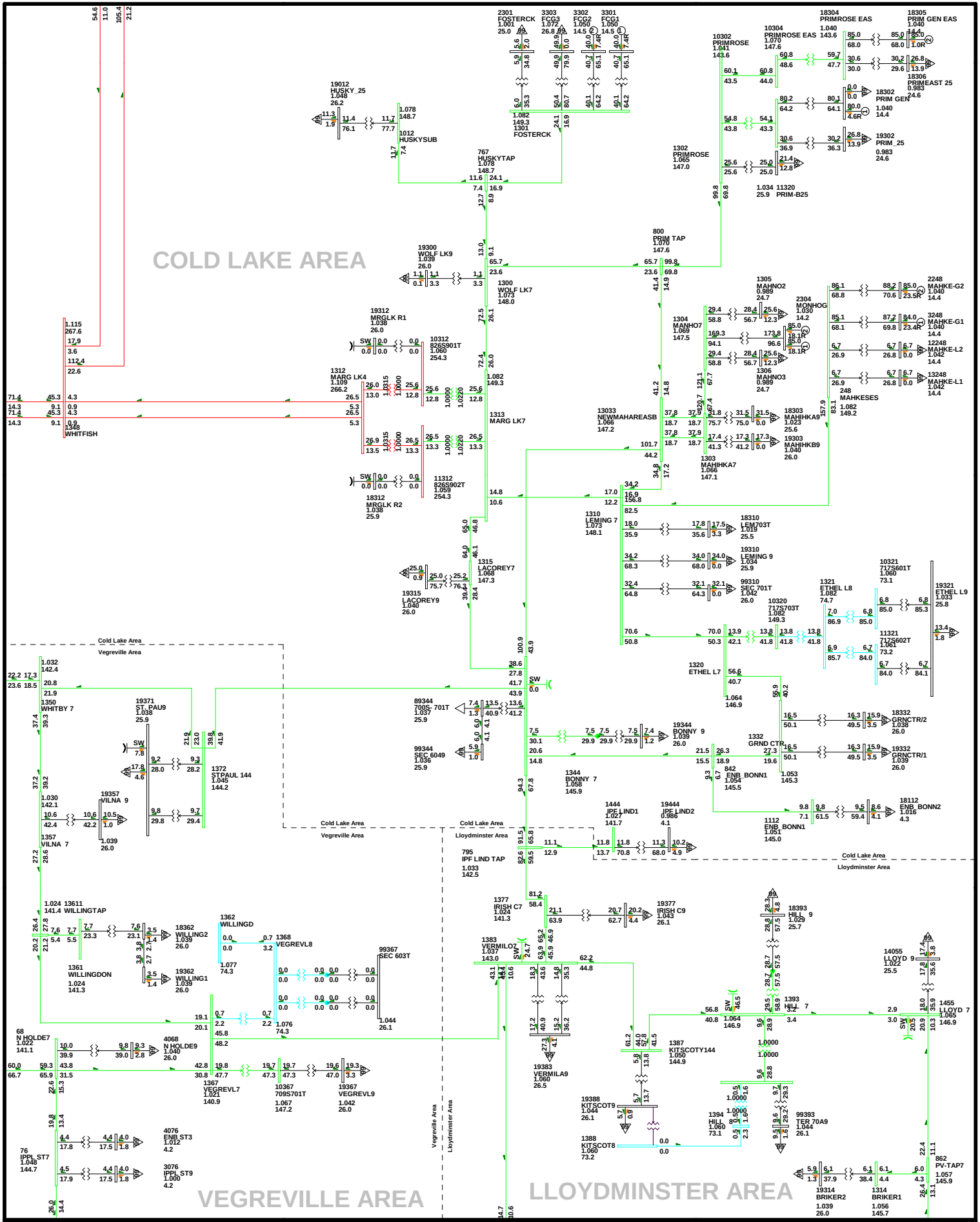
Case Summary Page	2012 Alt 2 SP	
Contingency Number	**Fig #**	**Description**
D1-00	2012SP-Alt 2-1.a	Base Case
D1-00	2012SP-Alt 2-1.b	Base Case
D1-01	2012SP-Alt 2-2.a	Bonnyville 700S to Bourque 970S (7L146)
D1-01	2012SP-Alt 2-2.b	Bonnyville 700S to Bourque 970S (7L146)
D1-02	2012SP-Alt 2-3.a	Marguerite Lake 826S to Wolf Lake 822S (7L87)
D1-02	2012SP-Alt 2-3.b	Marguerite Lake 826S to Wolf Lake 822S (7L87)
D1-03	2012SP-Alt 2-4.a	Leming Lake 715S to Ethel Lake 717S (7L66)
D1-03	2012SP-Alt 2-4.b	Leming Lake 715S to Ethel Lake 717S (7L66)
D1-05	2012SP-Alt 2-5.a	Vermilion 710S to Hill 751S (7L14) Kitscoty 705S Tap
D1-05	2012SP-Alt 2-5.b	Vermilion 710S to Hill 751S (7L14) Kitscoty 705S Tap
D1-06	2012SP-Alt 2-6.a	Marguerite Lake 826S to LaCorey 721S (7L89)
D1-06	2012SP-Alt 2-6.b	Marguerite Lake 826S to LaCorey 721S (7L89)
D1-07	2012SP-Alt 2-7.a	Hill 751S to Loydminster 716S (7L42)
D1-07	2012SP-Alt 2-7.b	Hill 751S to Loydminster 716S (7L42)
D1-08	2012SP-Alt 2-8.a	Edgerton 899S to Lloydminster 716S (7L749) Briker 880S Tap
D1-08	2012SP-Alt 2-8.b	Edgerton 899S to Lloydminster 716S (7L749) Briker 880S Tap
D1-09	2012SP-Alt 2-9.a	Battle River 757S to Buffalo Creek 526S (7L50) Jarrow 252S Tap
D1-09	2012SP-Alt 2-9.b	Battle River 757S to Buffalo Creek 526S (7L50) Jarrow 252S Tap
D1-10	2012SP-Alt 2-10.a	Battle River 757S to Strome 223S (7L701) Heisler 764S Tap
D1-10	2012SP-Alt 2-10.b	Battle River 757S to Strome 223S (7L701) Heisler 764S Tap
D1-11	2012SP-Alt 2-11.a	Metiskow 648S to Killarney 267S (7L749)
D1-11	2012SP-Alt 2-11.b	Metiskow 648S to Killarney 267S (7L749)
D1-12	2012SP-Alt 2-12.a	Hansman Lake 650S to Provost 545S (715L)
D1-12	2012SP-Alt 2-12.b	Hansman Lake 650S to Provost 545S (715L)
D1-14	2012SP-Alt 2-13.a	Cordel 755S to Nevis 766S (9L20)
D1-14	2012SP-Alt 2-13.b	Cordel 755S to Nevis 766S (9L20)
D1-15	2012SP-Alt 2-14.a	Battle River 144/72 kV Transformer 701T
D1-15	2012SP-Alt 2-14.b	Battle River 144/72 kV Transformer 701T
D1-16	2012SP-Alt 2-15.a	Edgerton 899S to Killarney Lake 267S (749L)
D1-16	2012SP-Alt 2-15.b	Edgerton 899S to Killarney Lake 267S (749L)

Case Summary Page 2012 Alt 2 SL		
Contingency Number	**Fig #**	**Description**
D1-00	2012SL-Alt 2-1.a	Base Case
D1-00	2012SL-Alt 2-1.b	Base Case
D1-08	2012SL-Alt 2-2.a	Edgerton 899S to Lloydminster 716S (7L749) Briker 880S Tap
D1-08	2012SL-Alt 2-2.b	Edgerton 899S to Lloydminster 716S (7L749) Briker 880S Tap
D1-11	2012SL-Alt 2-3.a	Metiskow 648S to Killarney 267S (7L749)
D1-11	2012SL-Alt 2-3.b	Metiskow 648S to Killarney 267S (7L749)
D1-12	2012SL-Alt 2-4.a	Hansman Lake 650S to Provost 545S (715L)
D1-12	2012SL-Alt 2-4.b	Hansman Lake 650S to Provost 545S (715L)
D1-13	2012SL-Alt 2-5.a	Killarney Lake 267S to Hayter 277S (748L)
D1-13	2012SL-Alt 2-5.b	Killarney Lake 267S to Hayter 277S (748L)
D1-16	2012SL-Alt 2-6.a	Edgerton 899S to Killarney Lake 267S (749L)
D1-16	2012SL-Alt 2-6.b	Edgerton 899S to Killarney Lake 267S (749L)

Case Summary Page	2012 Alt 3 WP	
Contingency Number	**Fig #**	**Description**
D1-00	2012WP-Alt 3-1.a	Base Case
D1-00	2012WP-Alt 3-1.b	Base Case
D1-01	2012WP-Alt 3-2.a	Bonnyville 700S to Bourque 970S (7L146)
D1-01	2012WP-Alt 3-2.b	Bonnyville 700S to Bourque 970S (7L146)
D1-02	2012WP-Alt 3-3.a	Marguerite Lake 826S to Wolf Lake 822S (7L87)
D1-02	2012WP-Alt 3-3.b	Marguerite Lake 826S to Wolf Lake 822S (7L87)
D1-03	2012WP-Alt 3-4.a	Leming Lake 715S to Ethel Lake 717S (7L66)
D1-03	2012WP-Alt 3-4.b	Leming Lake 715S to Ethel Lake 717S (7L66)
D1-04	2012WP-Alt 3-5.a	Bonnyville 700S to Irish Creek 706S (7L53)
D1-04	2012WP-Alt 3-5.b	Bonnyville 700S to Irish Creek 706S (7L53)
D1-05	2012WP-Alt 3-6.a	Vermilion 710S to Hill 751S (7L14) Kitscoty 705S Tap
D1-05	2012WP-Alt 3-6.b	Vermilion 710S to Hill 751S (7L14) Kitscoty 705S Tap
D1-06	2012WP-Alt 3-7.a	Marguerite Lake 826S to LaCorey 721S (7L89)
D1-06	2012WP-Alt 3-7.b	Marguerite Lake 826S to LaCorey 721S (7L89)
D1-07	2012WP-Alt 3-8.a	Hill 751S to Loydminster 716S (7L42)
D1-07	2012WP-Alt 3-8.b	Hill 751S to Loydminster 716S (7L42)
D1-09	2012WP-Alt 3-9.a	Battle River 757S to Buffalo Creek 526S (7L50) Jarrow 252S Tap
D1-09	2012WP-Alt 3-9.b	Battle River 757S to Buffalo Creek 526S (7L50) Jarrow 252S Tap
D1-10	2012WP-Alt 3-10.a	Battle River 757S to Strome 223S (7L701) Heisler 764S Tap
D1-10	2012WP-Alt 3-10.b	Battle River 757S to Strome 223S (7L701) Heisler 764S Tap
D1-11b	2012WP-Alt 3-11.a	Metiskow 648S to Edgerton 899S Killarney TP (7L749)
D1-11b	2012WP-Alt 3-11.b	Metiskow 648S to Edgerton 899S Killarney TP (7L749)
D1-14	2012WP-Alt 3-12.a	Cordel 755S to Nevis 766S (9L20)
D1-14	2012WP-Alt 3-12.b	Cordel 755S to Nevis 766S (9L20)
D1-15	2012WP-Alt 3-13.a	Battle River 144/72 kV Transformer 701T
D1-15	2012WP-Alt 3-13.b	Battle River 144/72 kV Transformer 701T
D1-18	2012WP-Alt 3-14.a	Loydminster to Wind Farm
D1-18	2012WP-Alt 3-14.b	Loydminster to Wind Farm
D1-19	2012WP-Alt 3-15.a	Hansman Lake 650S to Wind Farm
D1-19	2012WP-Alt 3-15.b	Hansman Lake 650S to Wind Farm

Case Summary Page	2012 Alt 3 SP	
Contingency Number	**Fig #**	**Description**
D1-00	2012SP-Alt 3-1.a	Base Case
D1-00	2012SP-Alt 3-1.b	Base Case
D1-01	2012SP-Alt 3-2.a	Bonnyville 700S to Bourque 970S (7L146)
D1-01	2012SP-Alt 3-2.b	Bonnyville 700S to Bourque 970S (7L146)
D1-02	2012SP-Alt 3-3.a	Marguerite Lake 826S to Wolf Lake 822S (7L87)
D1-02	2012SP-Alt 3-3.b	Marguerite Lake 826S to Wolf Lake 822S (7L87)
D1-03	2012SP-Alt 3-4.a	Leming Lake 715S to Ethel Lake 717S (7L66)
D1-03	2012SP-Alt 3-4.b	Leming Lake 715S to Ethel Lake 717S (7L66)
D1-04	2012SP-Alt 3-5.a	Bonnyville 700S to Irish Creek 706S (7L53)
D1-04	2012SP-Alt 3-5.b	Bonnyville 700S to Irish Creek 706S (7L53)
D1-05	2012SP-Alt 3-6.a	Vermilion 710S to Hill 751S (7L14) Kitscoty 705S Tap
D1-05	2012SP-Alt 3-6.b	Vermilion 710S to Hill 751S (7L14) Kitscoty 705S Tap
D1-06	2012SP-Alt 3-7.a	Marguerite Lake 826S to LaCorey 721S (7L89)
D1-06	2012SP-Alt 3-7.b	Marguerite Lake 826S to LaCorey 721S (7L89)
D1-07	2012SP-Alt 3-8.a	Hill 751S to Loydminster 716S (7L42)
D1-07	2012SP-Alt 3-8.b	Hill 751S to Loydminster 716S (7L42)
D1-09	2012SP-Alt 3-9.a	Battle River 757S to Buffalo Creek 526S (7L50) Jarrow 252S Tap
D1-09	2012SP-Alt 3-9.b	Battle River 757S to Buffalo Creek 526S (7L50) Jarrow 252S Tap
D1-10	2012SP-Alt 3-10.a	Battle River 757S to Strome 223S (7L701) Heisler 764S Tap
D1-10	2012SP-Alt 3-10.b	Battle River 757S to Strome 223S (7L701) Heisler 764S Tap
D1-11b	2012SP-Alt 3-11.a	Metiskow 648S to Edgerton 899S Killarney TP (7L749)
D1-11b	2012SP-Alt 3-11.b	Metiskow 648S to Edgerton 899S Killarney TP (7L749)
D1-14	2012SP-Alt 3-12.a	Cordel 755S to Nevis 766S (9L20)
D1-14	2012SP-Alt 3-12.b	Cordel 755S to Nevis 766S (9L20)
D1-15	2012SP-Alt 3-13.a	Battle River 144/72 kV Transformer 701T
D1-15	2012SP-Alt 3-13.b	Battle River 144/72 kV Transformer 701T
D1-18	2012SP-Alt 3-14.a	Loydminster to Wind Farm
D1-18	2012SP-Alt 3-14.b	Loydminster to Wind Farm
D1-19	2012SP-Alt 3-15.a	Hansman Lake 650S to Wind Farm
D1-19	2012SP-Alt 3-15.b	Hansman Lake 650S to Wind Farm

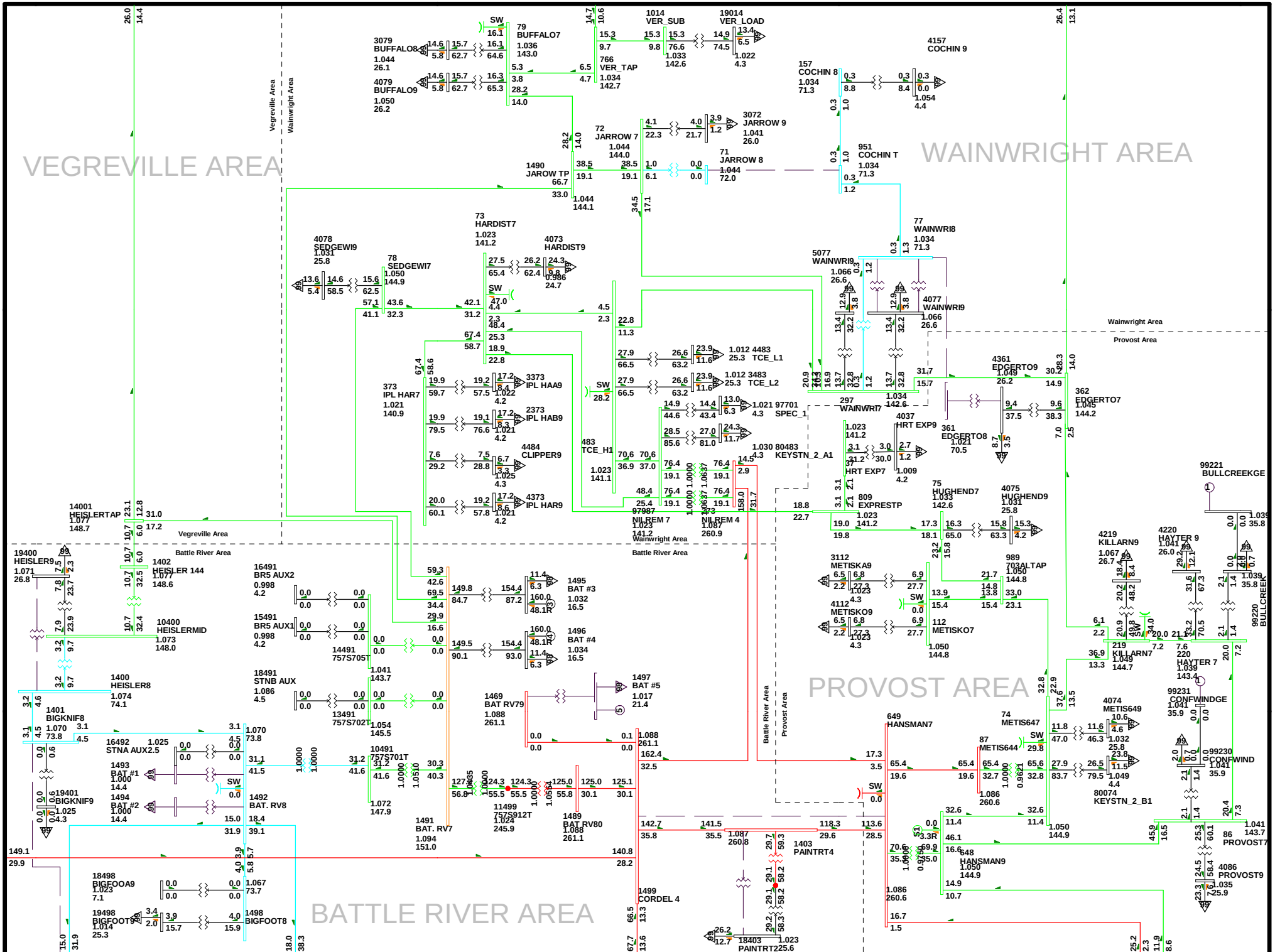
Case Summary Page 2012 Alt 3 SL		
Contingency Number	**Fig #**	**Description**
D1-00	2012SL-Alt 3-1.a	Base Case
D1-00	2012SL-Alt 3-1.b	Base Case
D1-11b	2012SL-Alt 3-2.a	Metiskow 648S to Edgerton 899S Killarney TP (7L749)
D1-11b	2012SL-Alt 3-2.b	Metiskow 648S to Edgerton 899S Killarney TP (7L749)
D1-13	2012SL-Alt 3-3.a	Killarney Lake 267S to Hayter 277S (748L)
D1-13	2012SL-Alt 3-3.b	Killarney Lake 267S to Hayter 277S (748L)



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
FRI, APR 30 2010 12:50
D1-00

2012WP-Alt 1-1.a

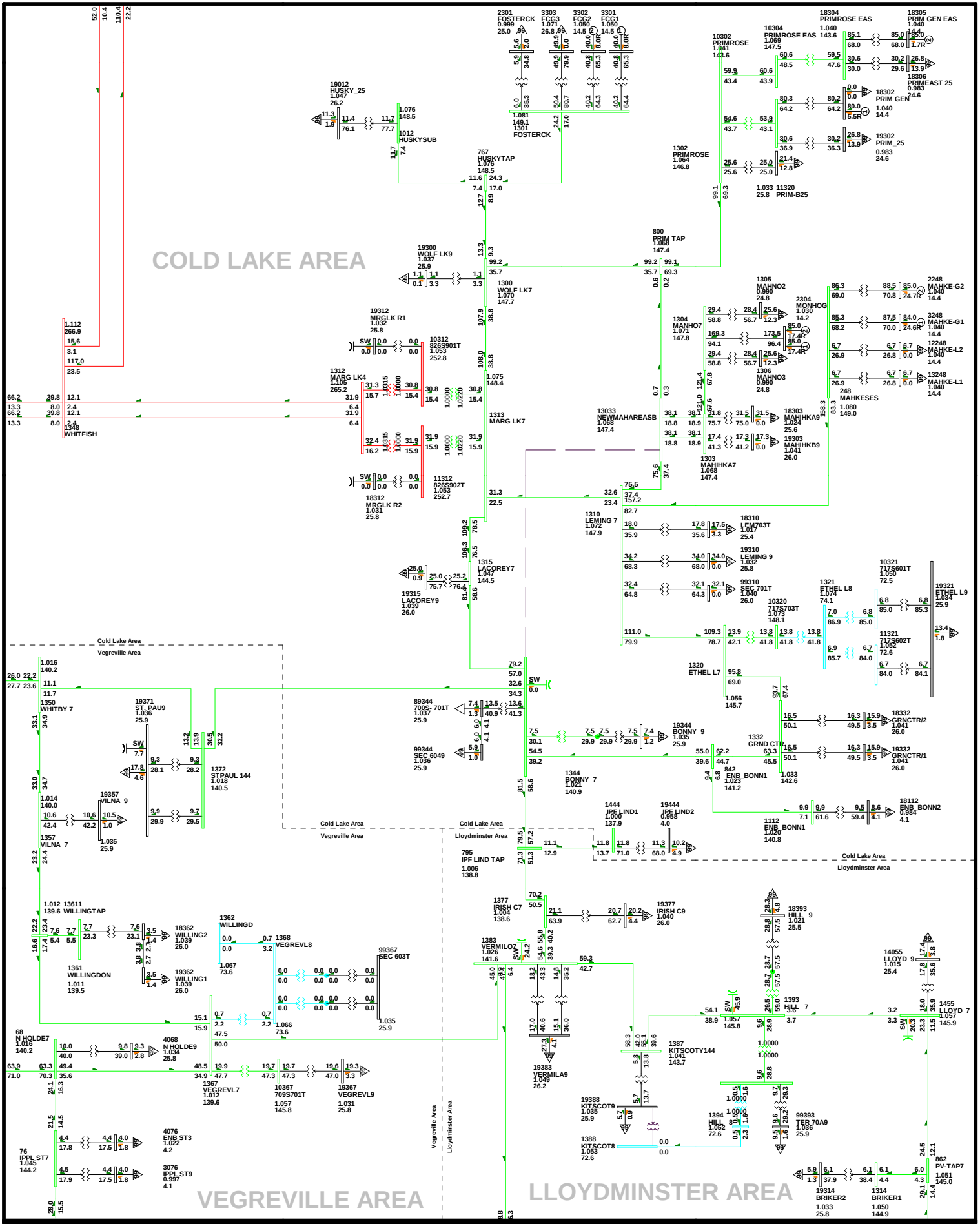
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
FRI, APR 30 2010 12:50
D1-00

2012WP-Alt 1-1.b

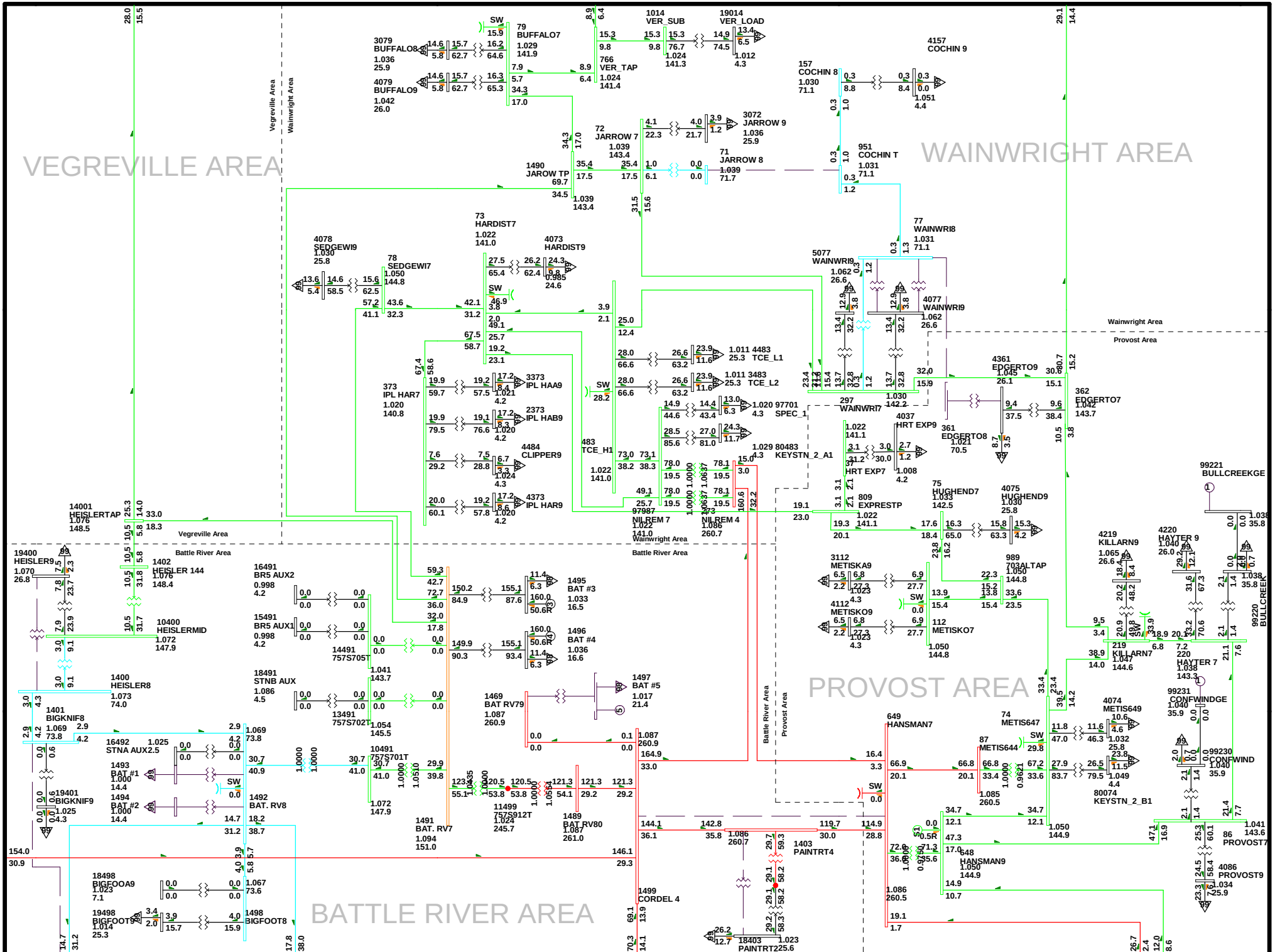
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV 0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000

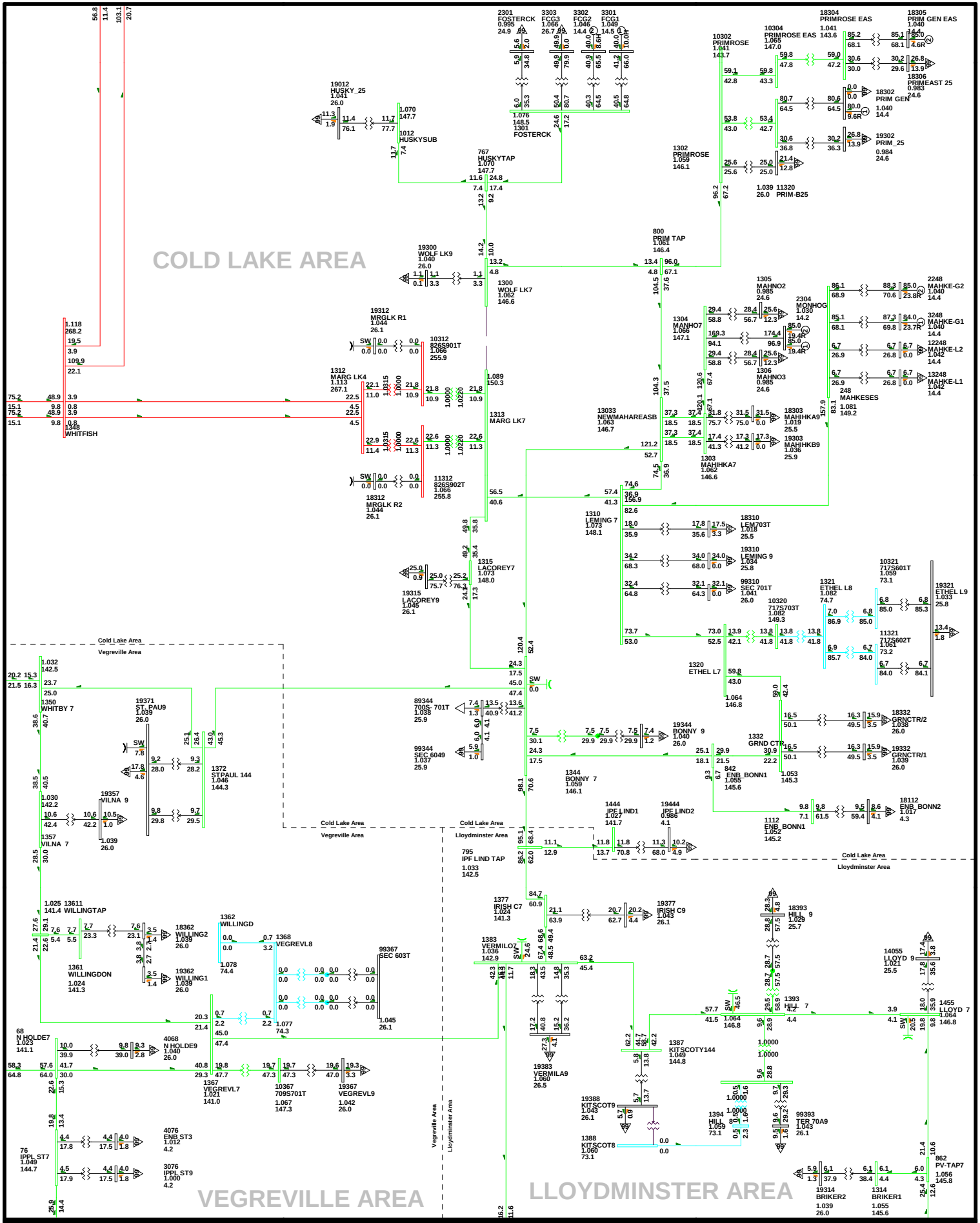


CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
FRI, APR 30 2010 12:50
D1-01

2012WP-Alt 1-2.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

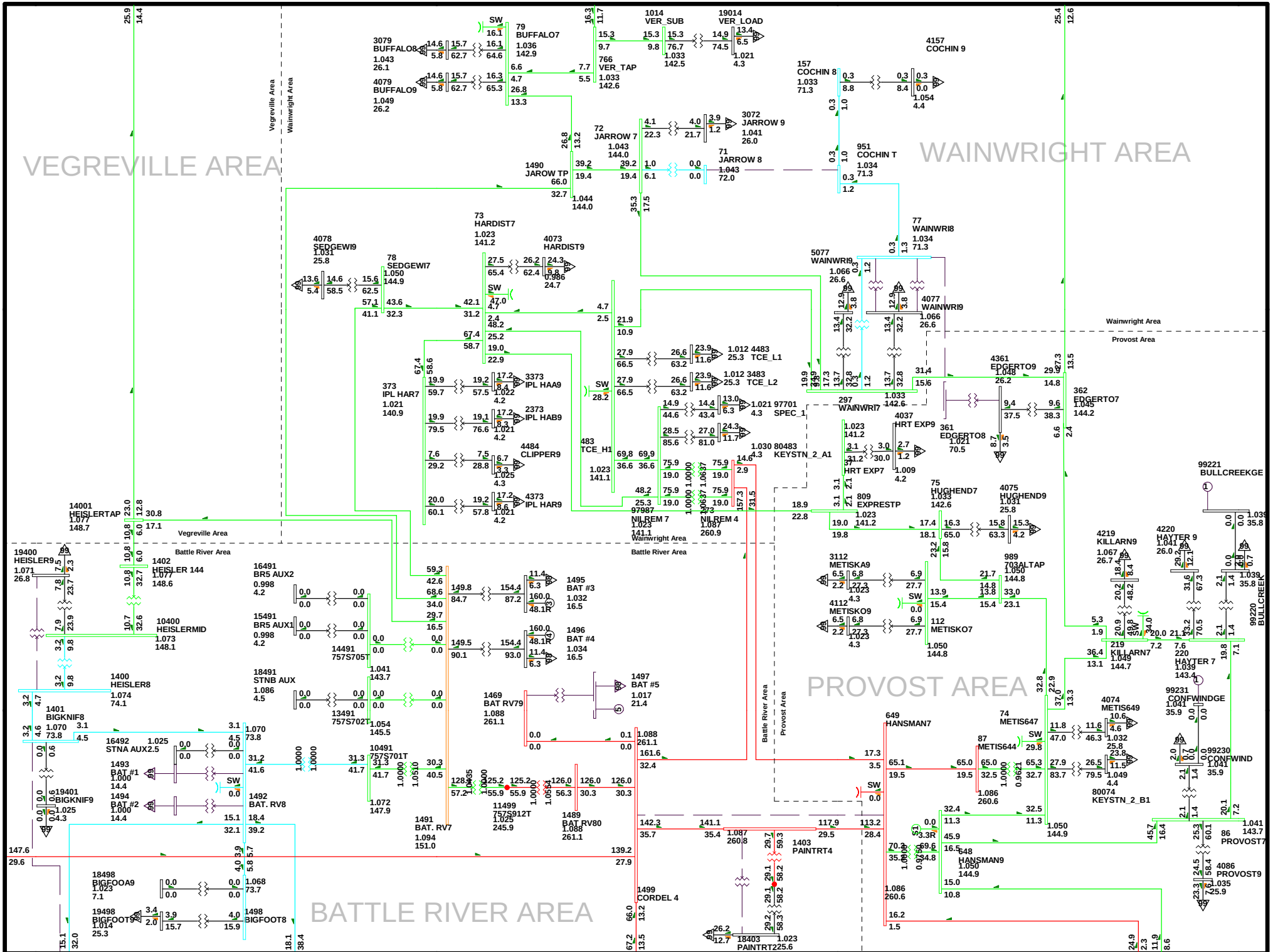

VEGREVILLE AREA
WAINWRIGHT AREA
PROVOST AREA
BATTLE RIVER AREA
Vegreville Area
Wainwright Area
Battle River Area
Provost Area
79 BUFFALO7 1.029 141.9
3079 BUFFALO8 1.036 25.9
4079 BUFFALO9 1.042 26.0
766 VER_TAP 1.024 141.4
1014 VER_SUB
19014 VER_LOAD
4157 COCHIN 9
157 COCHIN 8 1.030 71.1
951 COCHIN T 1.031 71.1
1051 4.4
72 JARROW 7 1.039 143.4
3072 JARROW 9 1.036 25.9
71 JARROW 8 1.039 71.7
1490 JAROW TP 69.7 1.039 143.4
77 WAINWRI8 1.031 71.1
5077 WAINWRI9 1.062 26.6
4077 WAINWRI9 1.062 26.6
297 WAINWRI7 1.030 142.2
4078 SEDGEWI9 1.030 25.8
78 SEDGEWI7 1.050 144.8
73 HARDIST7 1.022 141.0
4073 HARDIST9 0.985 24.6
373 IPL HAR7 1.020 140.8
3373 IPL HAA9 1.021 4.2
2373 IPL HAB9 1.020 4.2
4484 CLIPPER9 1.024 4.3
4373 IPL HAR9 1.020 4.2
483 TCE_H1 1.022 141.0
1.011 4483 25.3 TCE_L1
1.011 3483 25.3 TCE_L2
1.020 97701 4.3 SPEC_1
1.029 80483 4.3 KEYSTN_2_A1
97987 NII REM 7 1.022 141.0
NII REM 4 1.086 260.7
4037 HRT EXP9 1.022 141.1
HRT EXP7 1.008 4.2
361 EDGERTO8 1.021 70.5
4361 EDGERTO9 1.045 26.1
362 EDGERTO7 1.042 143.7
809 EXPRESTP 1.022 141.1
75 HUGHEND7 1.033 142.5
4075 HUGHEND9 1.030 25.8
14001 HEISLERTAP 1.076 148.5
19400 HEISLER9 1.070 26.8
1402 HEISLER 144 1.076 148.4
10400 HEISLERMID 1.072 147.9
1400 HEISLER8 1.073 74.0
1401 BIGKNIF8 1.069 73.8
19401 BIGKNIF9 1.025 4.3
16491 BR5 AUX2 0.998 4.2
15491 BR5 AUX1 0.998 4.2
14491 757S705T 1.041 143.7
18491 STNB AUX 1.086 4.5
13491 757S702T 1.054 145.5
16492 STNA AUX2.5 1.025 4.3
10491 757S701T 30.7 41.0 1.072 147.9
1493 BAT #1 1.000 14.4
1494 BAT #2 1.000 14.4
1492 BAT. RV8 18.2 38.7
1491 BAT. RV7 1.094 151.0
11499 757S912T 1.024 245.7
1469 BAT RV79 1.087 260.9
1495 BAT #3 1.033 16.5
1496 BAT #4 1.036 16.6
1497 BAT #5 1.017 21.4
1489 BAT RV80 1.087 261.0
1499 CORDEL 4 1.086 260.7
18403 PAINTRT2 5.6 1.023
1403 PAINTRT4 1.086 260.5
649 HANSMAN7 1.085 260.5
648 HANSMAN9 1.050 144.9
74 METIS647 1.050 144.9
87 METIS644 1.085 260.5
4074 METIS649 1.032 25.8
80074 KEYSTN_2_B1 1.049 4.4
3112 METISKA9 1.023 4.3
4112 METISKO9 1.023 4.3
112 METISKO7 1.050 144.8
989 703ALTAP 1.050 144.8
99221 BULLCREEKGE 1.038 35.8
99220 BULLCREEK 1.038 35.8
4219 KILLARN9 1.065 26.6
219 KILLARN7 1.047 144.6
4220 HAYTER 9 1.040 26.0
220 HAYTER 7 1.038 143.3
99231 CONFWINDGE 1.040 35.9
99230 CONFWIND 1.040 35.9
4086 PROVOST9 1.034 25.9
86 PROVOST7 1.041 143.6
18498 BIGFOOA9 1.023 7.1
19498 BIGFOOT9 1.014 25.3
1498 BIGFOOT8 1.067 73.6
CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
FRI, APR 30 2010 12:50
D1-01
2012WP-Alt 1-2.b
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV 0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
FRI, APR 30 2010 12:50
D1-02

2012WP-Alt 1-3.a

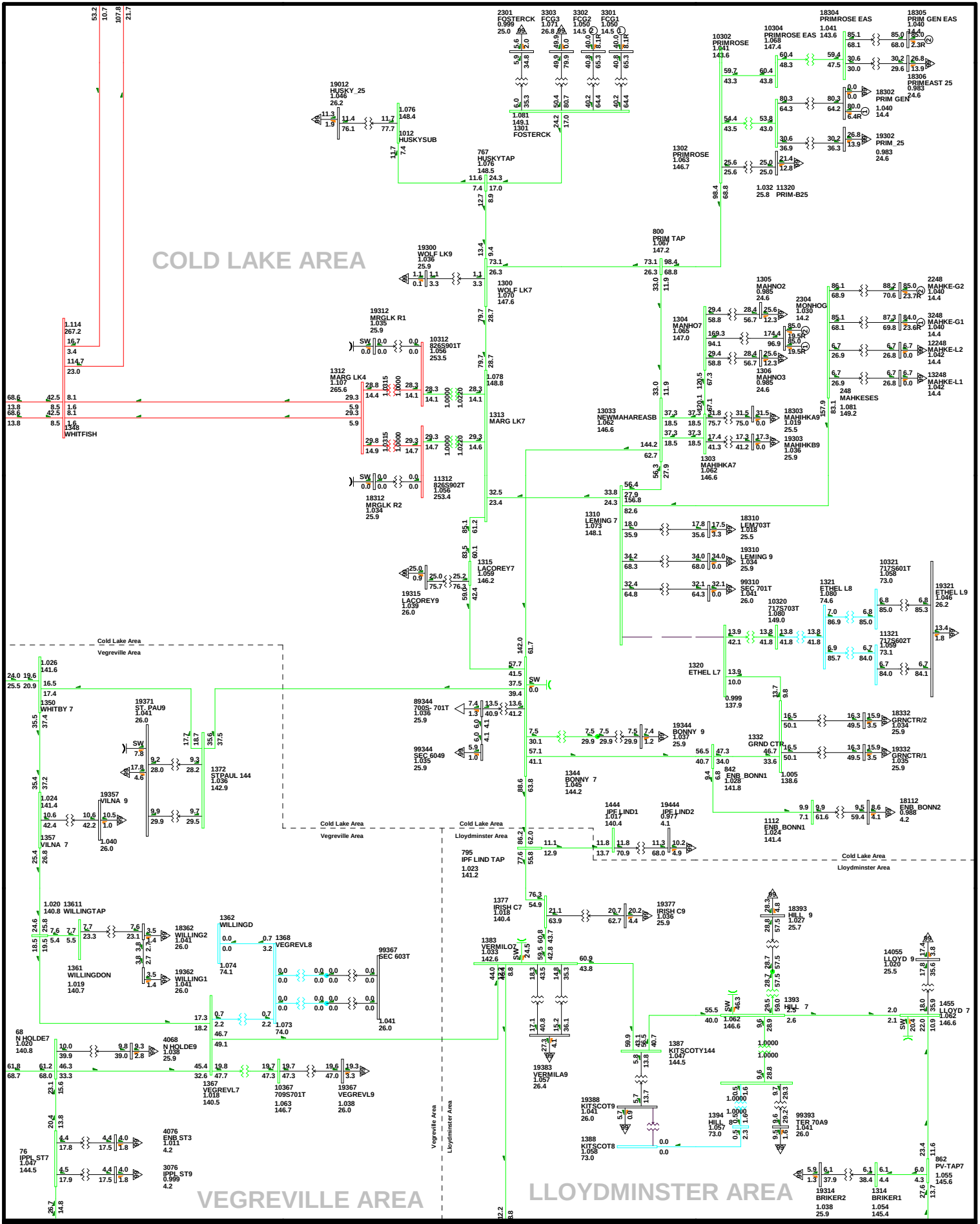
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
FRI, APR 30 2010 12:50
D1-02

2012WP-Alt 1-3.b

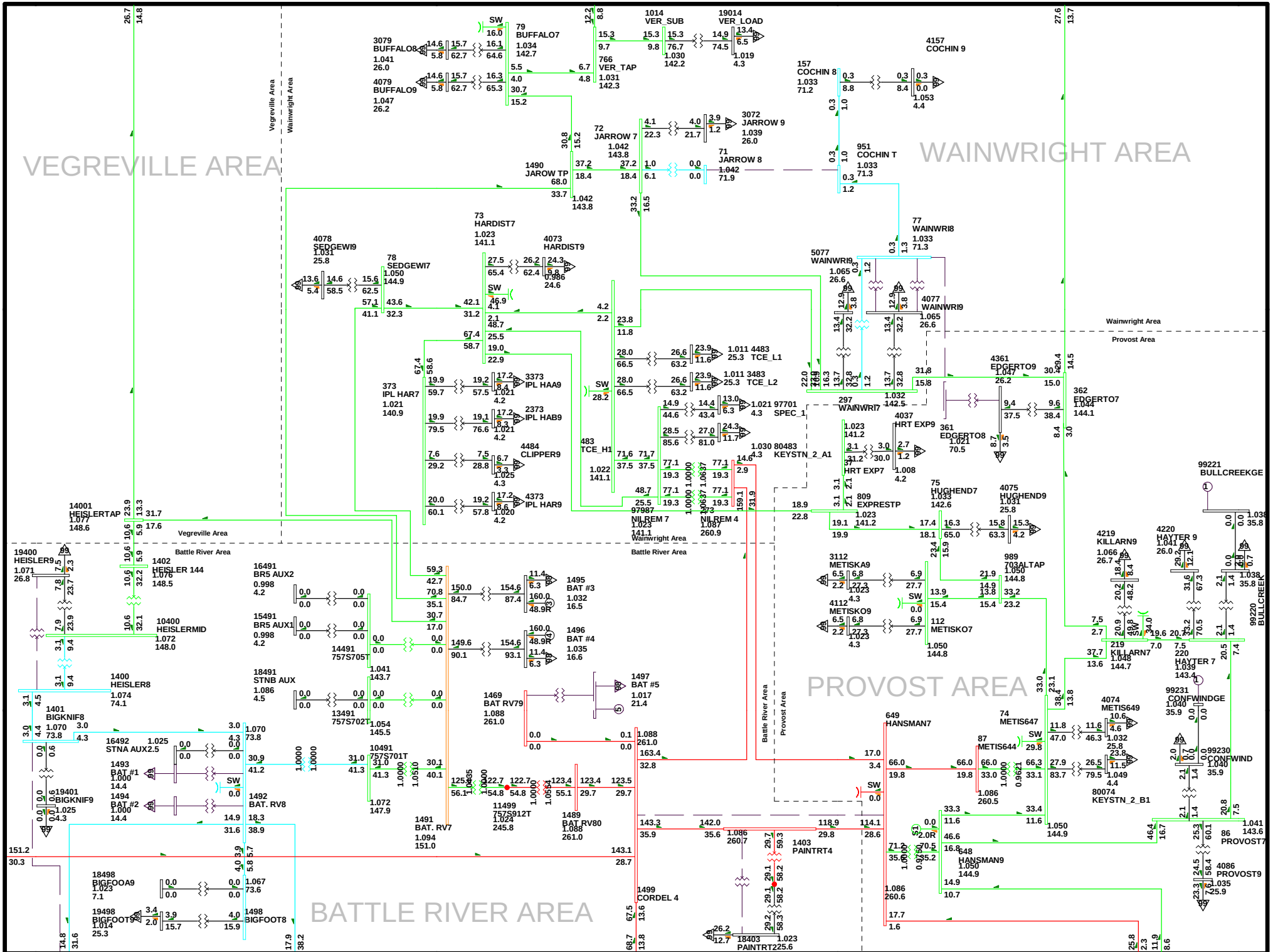
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV 0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
FRI, APR 30 2010 12:50
D1-03

2012WP-Alt 1-4.a

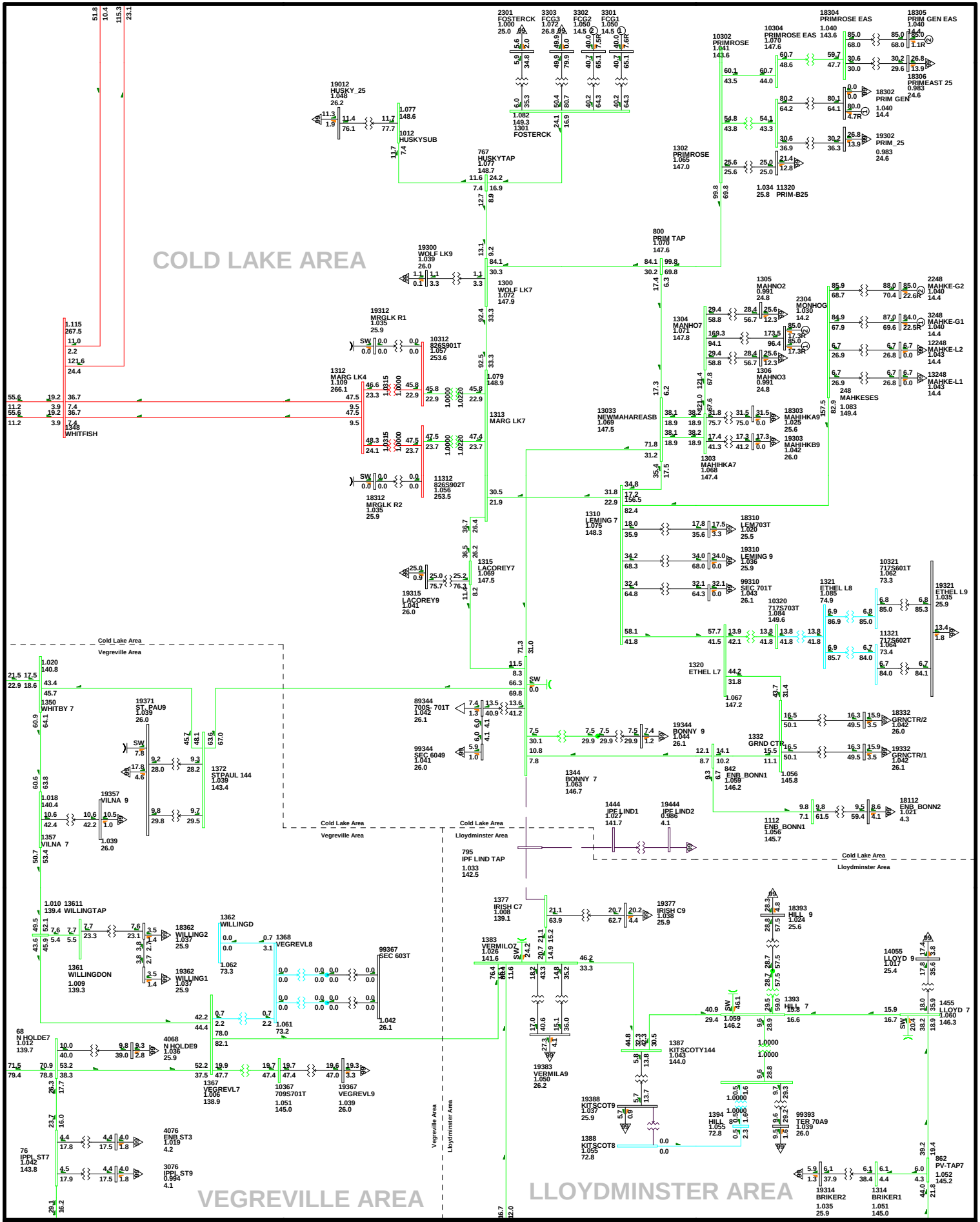
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
FRI, APR 30 2010 12:50
D1-03

2012WP-Alt 1-4.b

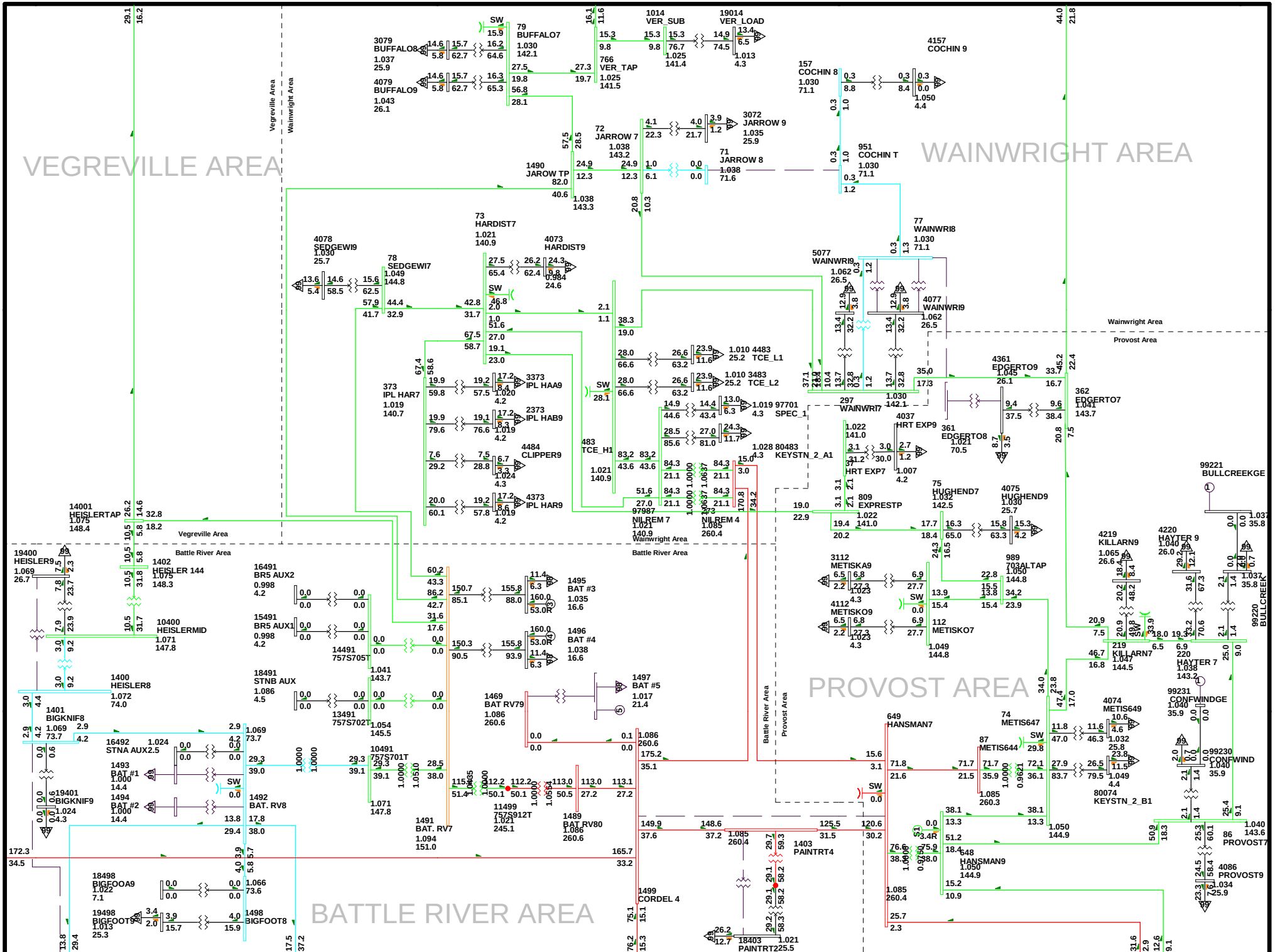
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV 0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000

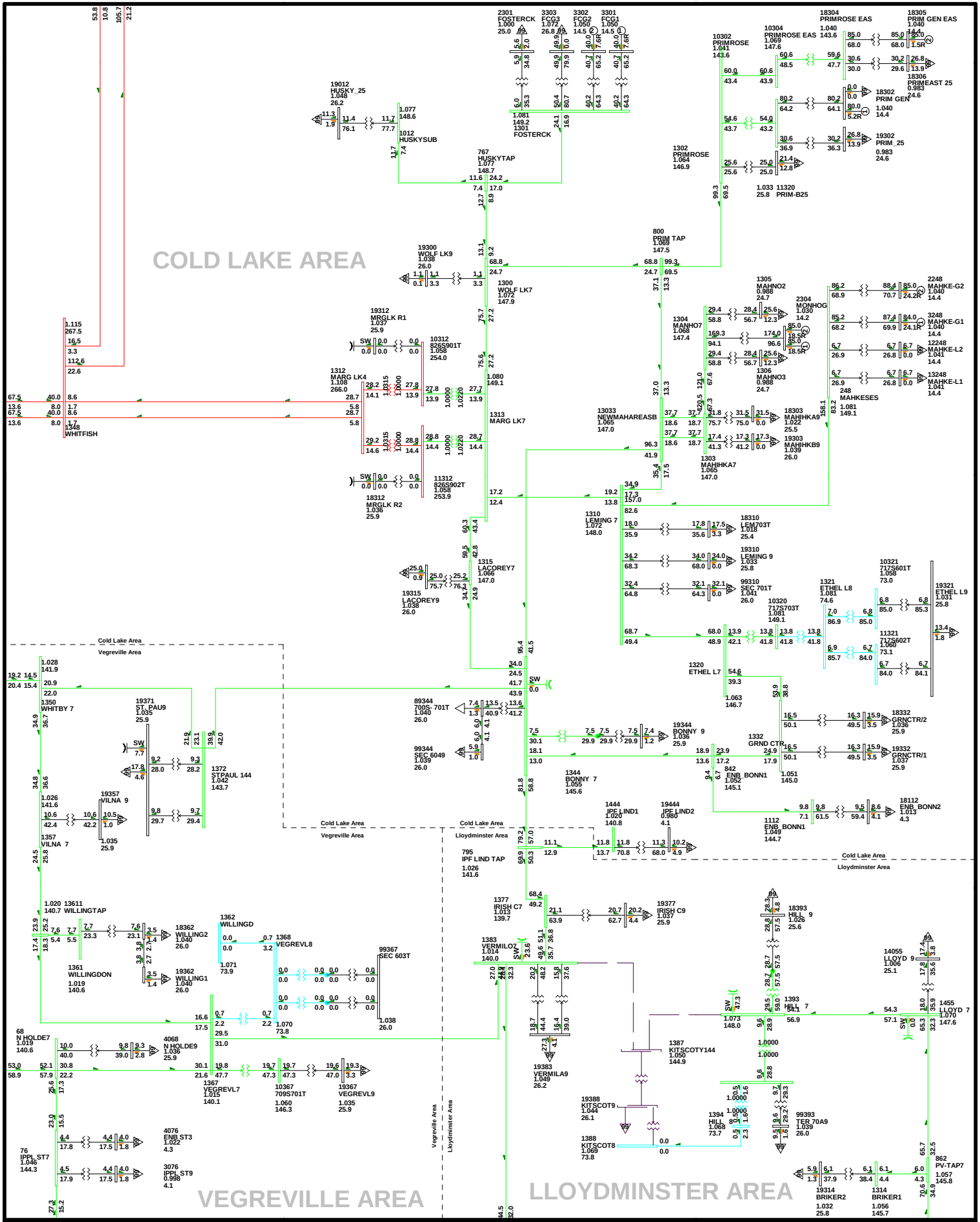


CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
FRI, APR 30 2010 12:50
D1-04

2012WP-Alt 1-5.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

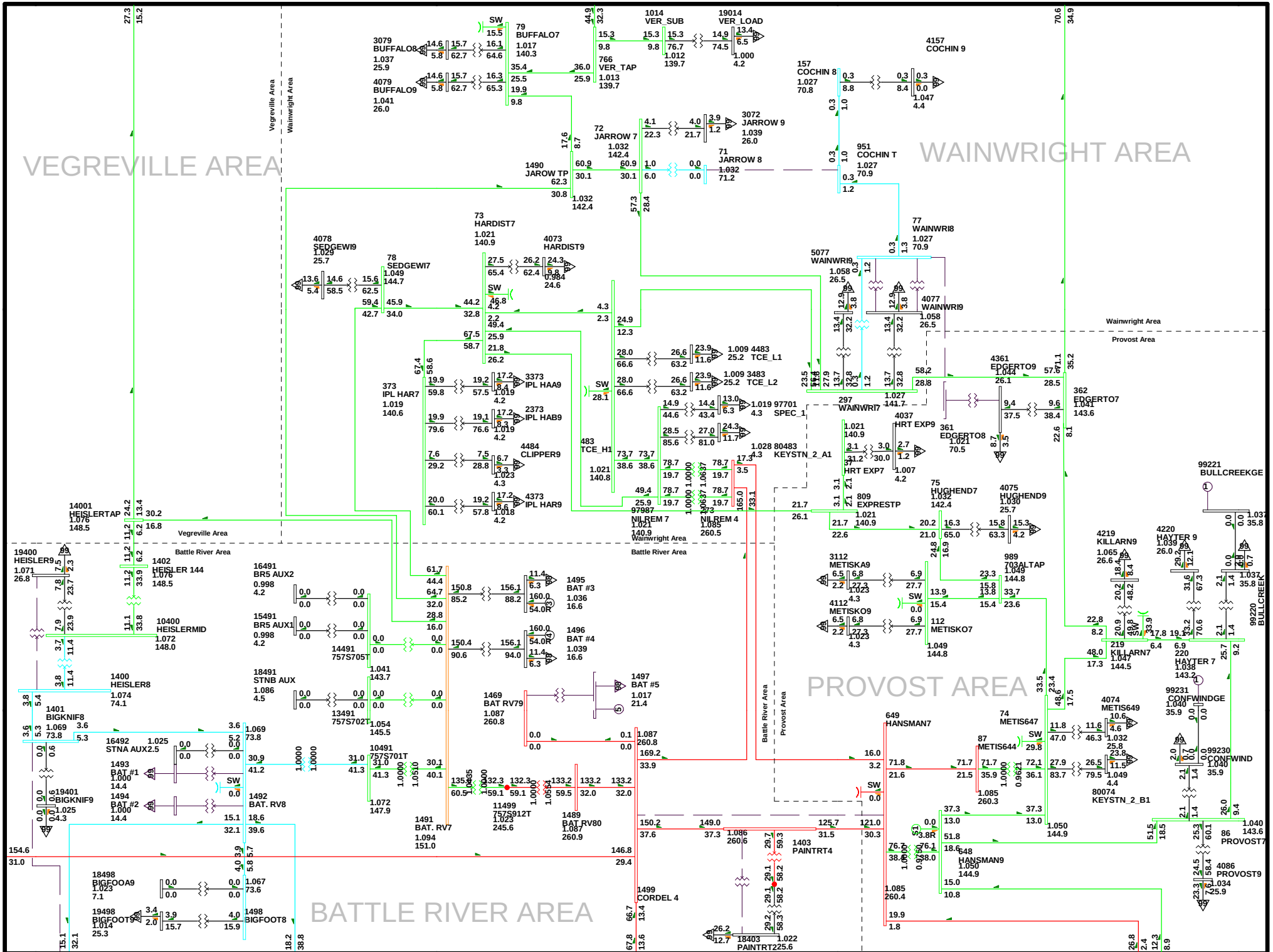

VEGREVILLE AREA
WAINWRIGHT AREA
PROVOST AREA
BATTLE RIVER AREA
Vegreville Area
Wainwright Area
Battle River Area
Provost Area
79 BUFFALO7 1.030 142.1
3079 BUFFALO8 1.037 25.9
4079 BUFFALO9 1.043 26.1
766 VER_TAP 1.025 141.5
1014 VER_SUB 76.7 1.025 141.4
19014 VER_LOAD 74.5 1.013 4.3
4157 COCHIN 9
157 COCHIN 8 1.030 71.1
951 COCHIN T 1.030 71.1
1.050 4.4
72 JAROW 7 1.038 143.2
3072 JAROW 9 1.035 25.9
71 JAROW 8 1.038 71.6
1490 JAROW TP 82.0 1.038 143.3
73 HARDIST7 1.021 140.9
4073 HARDIST9 0.984 24.6
4078 SEDGEWI9 1.030 25.7
78 SEDGEWI7 1.049 144.8
77 WAINWRI8 1.030 71.1
5077 WAINWRI9 1.062 26.5
4077 WAINWRI9 1.062 26.5
373 IPL HAR7 1.019 140.7
3373 IPL HAA9 1.020 4.2
2373 IPL HAB9 1.019 4.2
4484 CLIPPER9 1.024 4.3
4373 IPL HAR9 1.019 4.2
1.010 4483 25.2 TCE_L1
1.010 3483 25.2 TCE_L2
483 TCE_H1 1.021 140.9
1.019 97701 4.3 SPEC_1
1.028 80483 4.3 KEYSTN_2_A1
297 WAINWRI7 1.030 142.1
4037 HRT EXP9 1.022 141.0
HRT EXP7 1.007 4.2
361 EDGERTO8 1.021 70.5
4361 EDGERTO9 1.045 26.1
362 EDGERTO7 1.041 143.7
809 EXPRESTP 1.022 141.0
75 HUGHEND7 1.032 142.5
4075 HUGHEND9 1.030 25.7
97987 NIL REM 7 1.021 140.9
273 NIL REM 4 1.085 260.4
14001 HEISLERTAP 1.075 148.4
1402 HEISLER 144 1.075 148.3
10400 HEISLERMID 1.071 147.8
19400 HEISLER9 1.069 26.7
1400 HEISLER8 1.072 74.0
1401 BIGKNIF8 1.069 73.7
19401 BIGKNIF9 1.024 4.3
16491 BR5 AUX2 0.998 4.2
15491 BR5 AUX1 0.998 4.2
14491 757S705T 1.041 143.7
18491 STNB AUX 1.086 4.5
13491 757S702T 1.054 145.5
16492 STNA AUX2.5 1.024 4.3
10491 757S701T 1.071 147.8
1493 BAT #1 1.000 14.4
1494 BAT #2 1.000 14.4
1492 BAT. RV8 17.8
1495 BAT #3 1.035 16.6
1496 BAT #4 1.038 16.6
1497 BAT #5 1.017 21.4
1469 BAT RV79 1.086 260.6
1491 BAT. RV7 1.094 151.0
11499 757S912T 1.021 245.1
1489 BAT RV80 1.086 260.6
1499 CORDEL 4
18403 PAINTRT2 1.021 25.5
1403 PAINTRT4
649 HANSMAN7
648 HANSMAN9 1.050 144.9
74 METIS647
87 METIS644 1.085 260.3
4074 METIS649 1.032 25.8
80074 KEYSTN_2_B1 1.049 4.4
3112 METISKA9 1.023 4.3
4112 METISKO9 1.023 4.3
112 METISKO7 1.049 144.8
989 703ALTAP 1.050 144.8
18498 BIGFOOA9 1.022 7.1
19498 BIGFOOT9 1.013 25.3
1498 BIGFOOT8
99221 BULLCREEKGE
99220 BULLCREE
4219 KILLARN9 1.065 26.6
219 KILLARN7 1.047 144.5
4220 HAYTER 9 1.040 26.0
220 HAYTER 7 1.038 143.2
99231 CONFWINDGE 1.040 35.9
99230 CONFWIND 1.040 35.9
86 PROVOST7 1.040 143.6
4086 PROVOST9 1.034 25.9
CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
FRI, APR 30 2010 12:50
D1-04
2012WP-Alt 1-5.b
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV 0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000

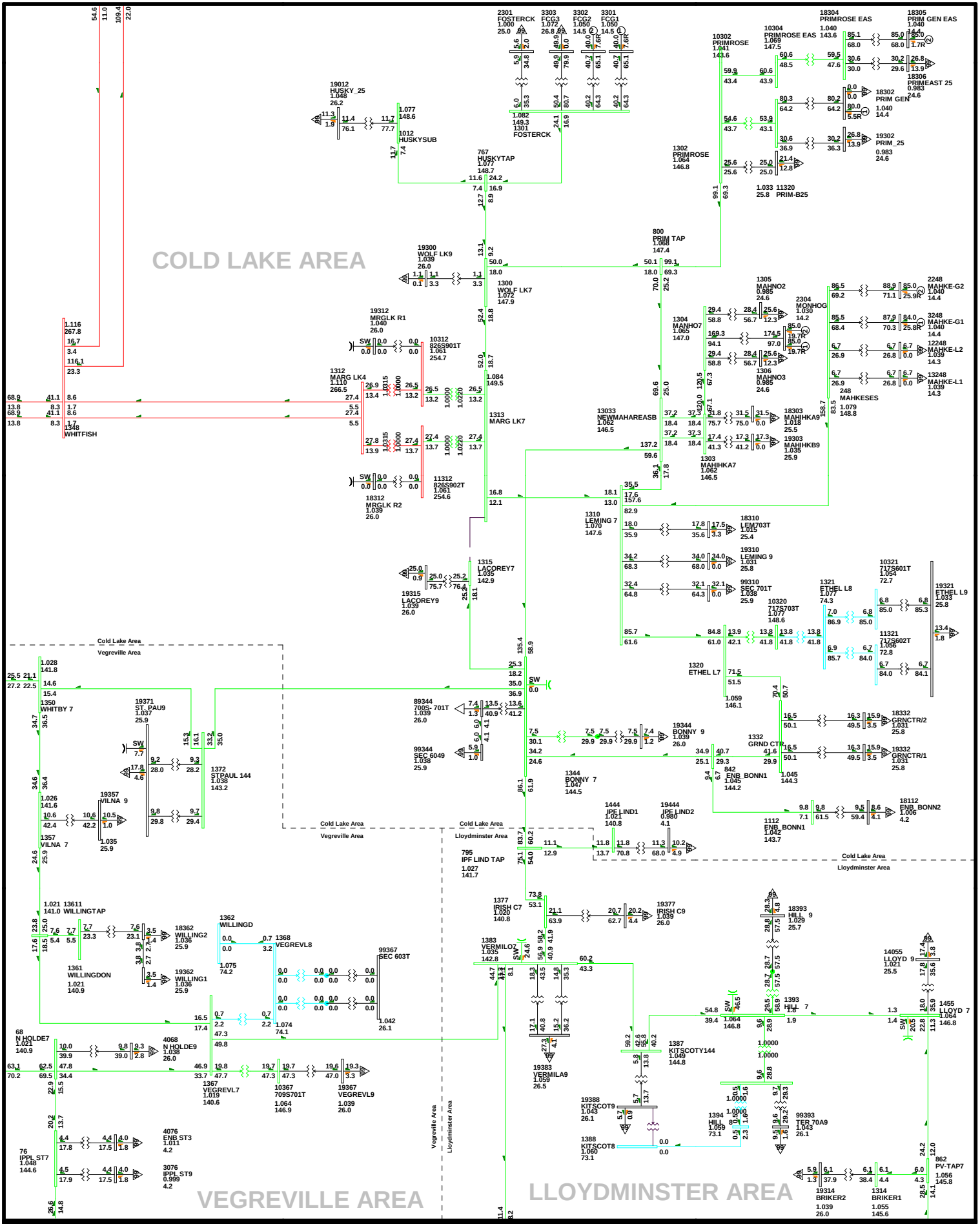


CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
FRI, APR 30 2010 12:51
D1-05

2012WP-Alt 1-6.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

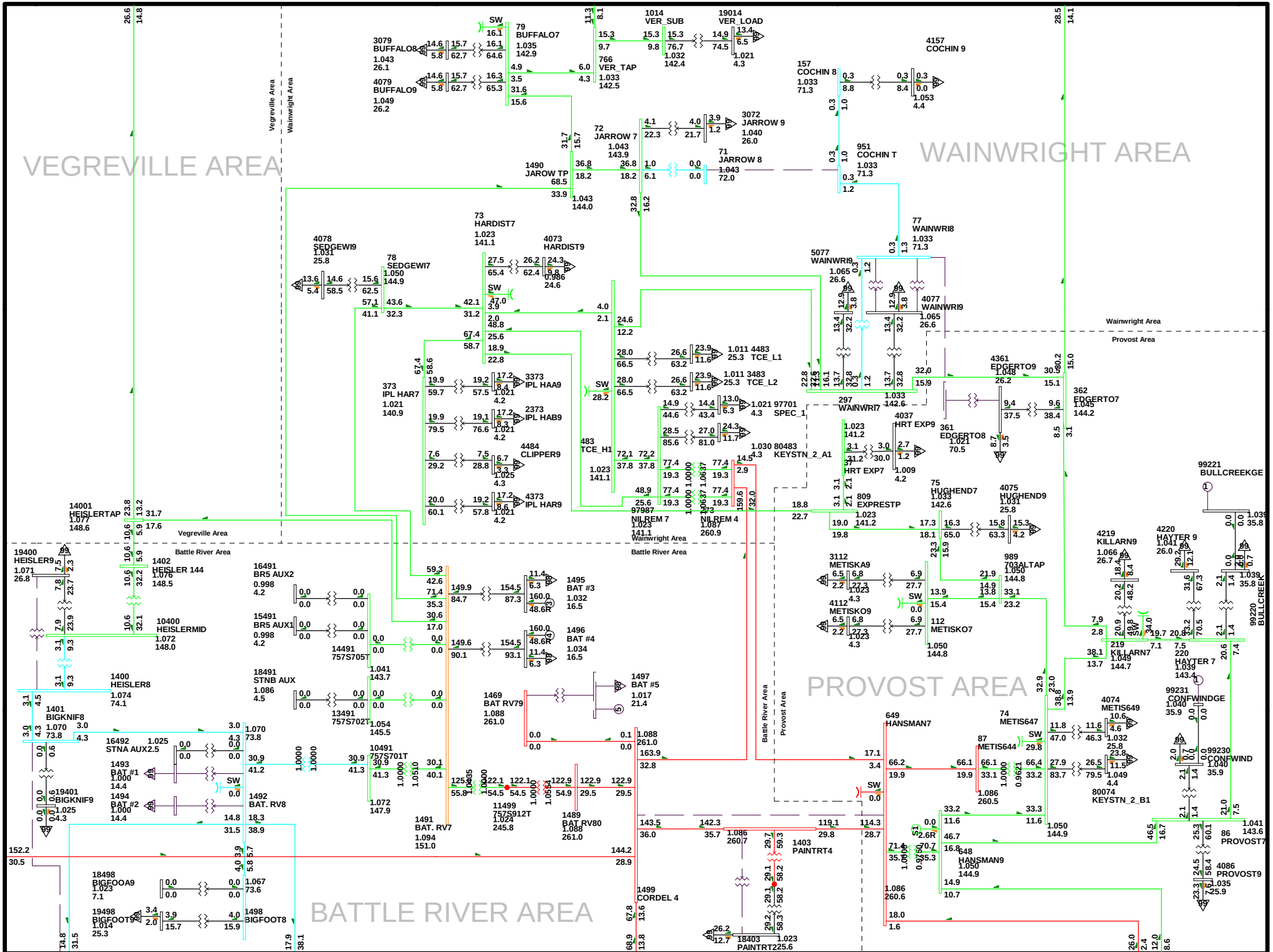

VEGREVILLE AREA
WAINWRIGHT AREA
PROVOST AREA
BATTLE RIVER AREA
Vegreville Area
Wainwright Area
Battle River Area
Provost Area
79 BUFFALO7 1.017 140.3
3079 BUFFALO8 1.037 25.9
4079 BUFFALO9 1.041 26.0
766 VER_TAP 1.013 139.7
1014 VER_SUB
19014 VER_LOAD
4157 COCHIN 9
157 COCHIN 8 1.027 70.8
951 COCHIN T 1.027 70.9
1047 4.4
3072 JARROW 9 1.039 26.0
72 JAROW 7 1.032 142.4
71 JARROW 8 1.032 71.2
1490 JAROW TP 62.3 1.032 142.4
77 WAINWRI8 1.027 70.9
5077 WAINWRI9 1.058 26.5
4077 WAINWRI9 1.058 26.5
297 WAINWRI7 1.027 141.7
4078 SEDGEWI9 1.029 25.7
78 SEDGEWI7 1.049 144.7
73 HARDIST7 1.021 140.9
4073 HARDIST9 0.984 24.6
373 IPL HAR7 1.019 140.6
3373 IPL HAA9 1.019 4.2
2373 IPL HAB9 1.019 4.2
4373 IPL HAR9 1.018 4.2
4484 CLIPPER9 1.023 4.3
483 TCE_H1 1.021 140.8
1009 4483 25.2 TCE_L1
1009 3483 25.2 TCE_L2
1019 97701 SPEC_1 4.3
1028 80483 KEYSTN_2_A1 4.3
97987 NIL REM 7 1.021 140.9
273 NIL REM 4 1.085 260.5
4037 HRT EXP9 1.021 140.9
HRT EXP7 1.007 4.2
361 EDGERTO8 1.021 70.5
4361 EDGERTO9 1.044 26.1
362 EDGERTO7 1.041 143.6
809 EXPRESTP 1.021 140.9
75 HUGHEND7 1.032 142.4
4075 HUGHEND9 1.030 25.7
14001 HEISLERTAP 1.076 148.5
1402 HEISLER 144 1.076 148.5
19400 HEISLER9 1.071 26.8
10400 HEISLERMID 1.072 148.0
1400 HEISLER8 1.074 74.1
1401 BIGKNIF8 1.069 73.8
19401 BIGKNIF9 1.025 4.3
16491 BR5 AUX2 0.998 4.2
15491 BR5 AUX1 0.998 4.2
14491 757S705T 1.041 143.7
18491 STNB AUX 1.086 4.5
13491 757S702T 1.054 145.5
16492 STNA AUX2.5 1.025
10491 757S701T 1.072 147.9
1493 BAT #1 1.000 14.4
1494 BAT #2 1.000 14.4
1492 BAT. RV8 18.6 39.6
1491 BAT. RV7 1.094 151.0
11499 757S912T 1.023 245.6
1469 BAT RV79 1.087 260.8
1495 BAT #3 1.036 16.6
1496 BAT #4 1.039 16.6
1497 BAT #5 1.017 21.4
1489 BAT RV80 1.087 260.9
1499 CORDEL 4
18403 PAINTRT2 1.022 25.6
1403 PAINTRT4
649 HANSMAN7
648 HANSMAN9 1.050 144.9
74 METIS647
87 METIS644
4074 METIS649 1.032 25.8
80074 KEYSTN_2_B1 1.049 4.4
3112 METISKA9 1.023 4.3
4112 METISKO9 1.023 4.3
112 METISKO7 1.049 144.8
989 703ALTAP 1.049 144.8
18498 BIGFOOA9 1.023 7.1
19498 BIGFOOT9 1.014 25.3
1498 BIGFOOT8 15.9
99221 BULLCREEKGE
99220 BULLCREE
4219 KILLARN9 1.065 26.6
219 KILLARN7 1.047 144.5
4220 HAYTER 9 1.039 26.0
220 HAYTER 7 1.038 143.2
99231 CONFWINDGE 1.040 35.9
99230 CONFWIND 1.040 35.9
4086 PROVOST9 1.034 25.9
86 PROVOST7 1.040 143.6
CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
FRI, APR 30 2010 12:51
D1-05
2012WP-Alt 1-6.b
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV 0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
FRI, APR 30 2010 12:51
D1-06

2012WP-Alt 1-7.a

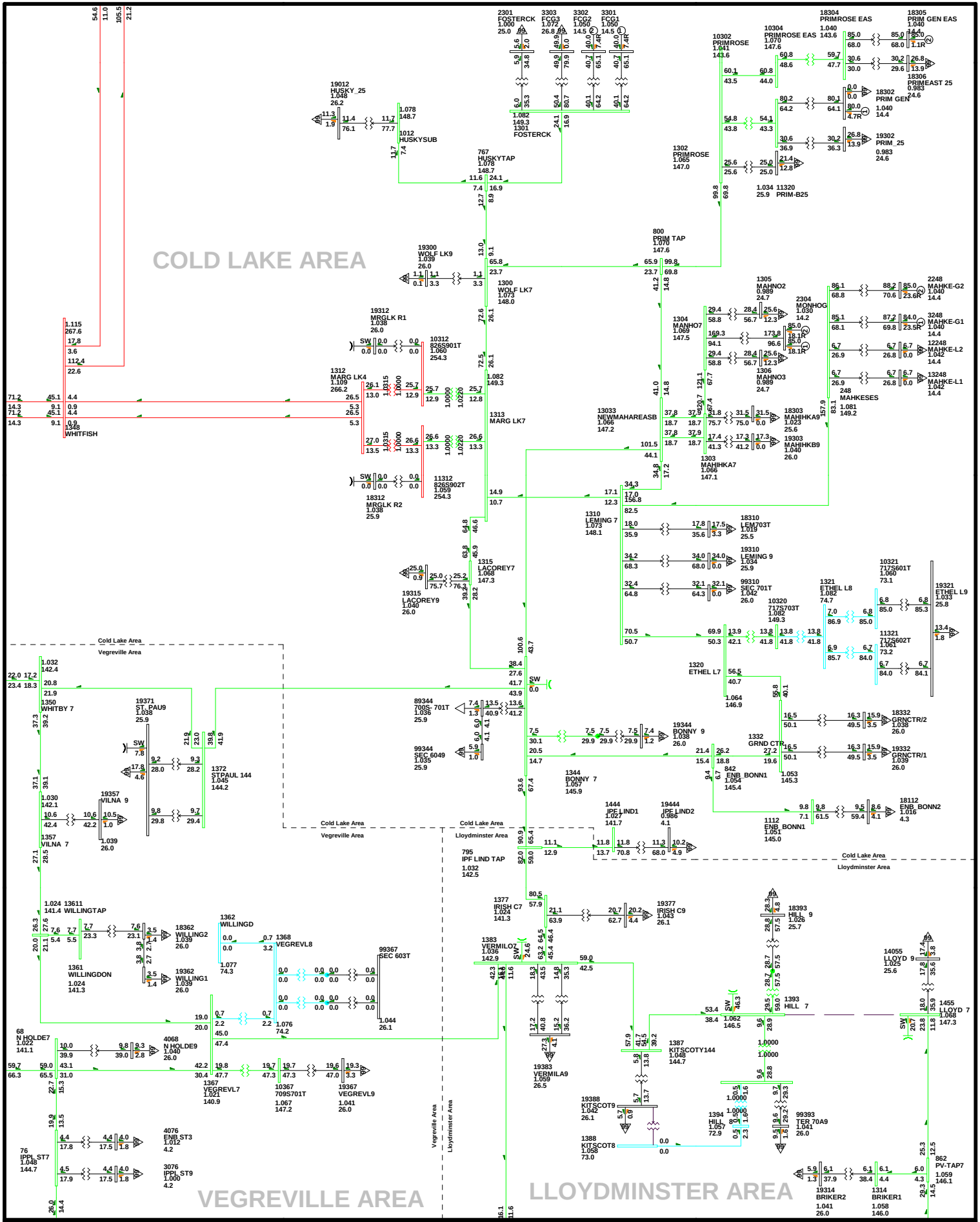
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
FRI, APR 30 2010 12:51
D1-06

2012WP-Alt 1-7.b

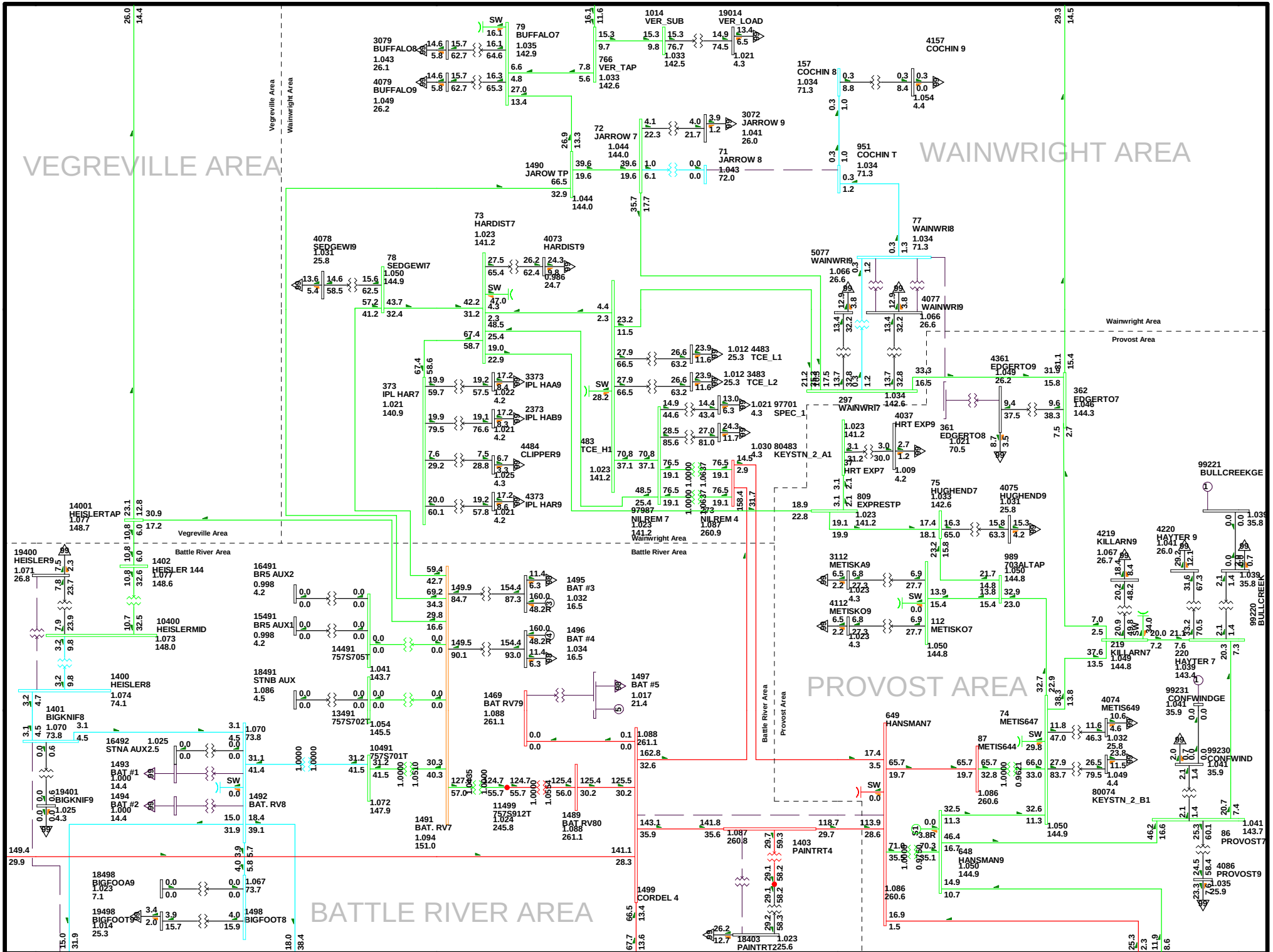
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV 0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
FRI, APR 30 2010 12:51
D1-07

2012WP-Alt 1-8.a

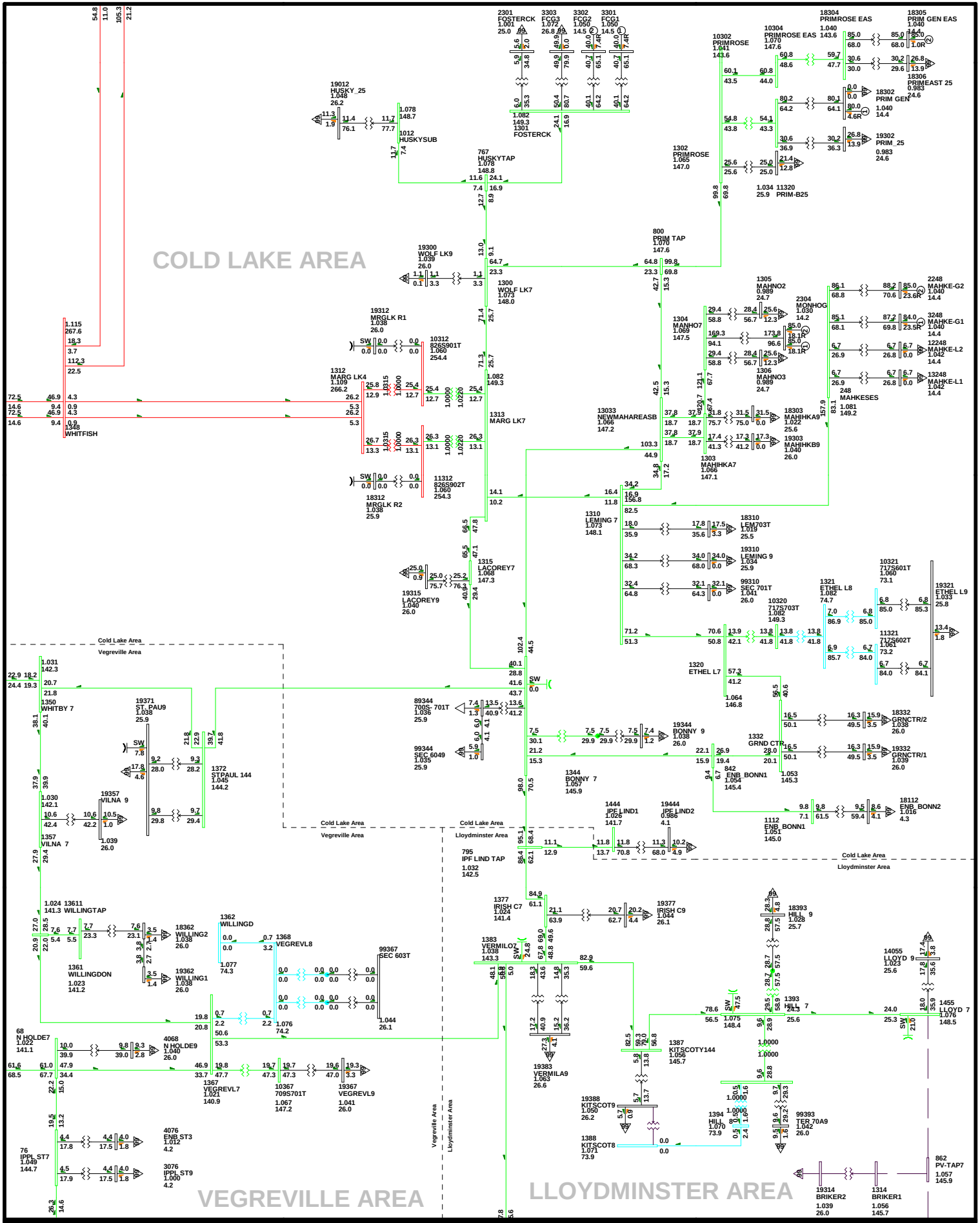
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
FRI, APR 30 2010 12:51
D1-07

2012WP-Alt 1-8.b

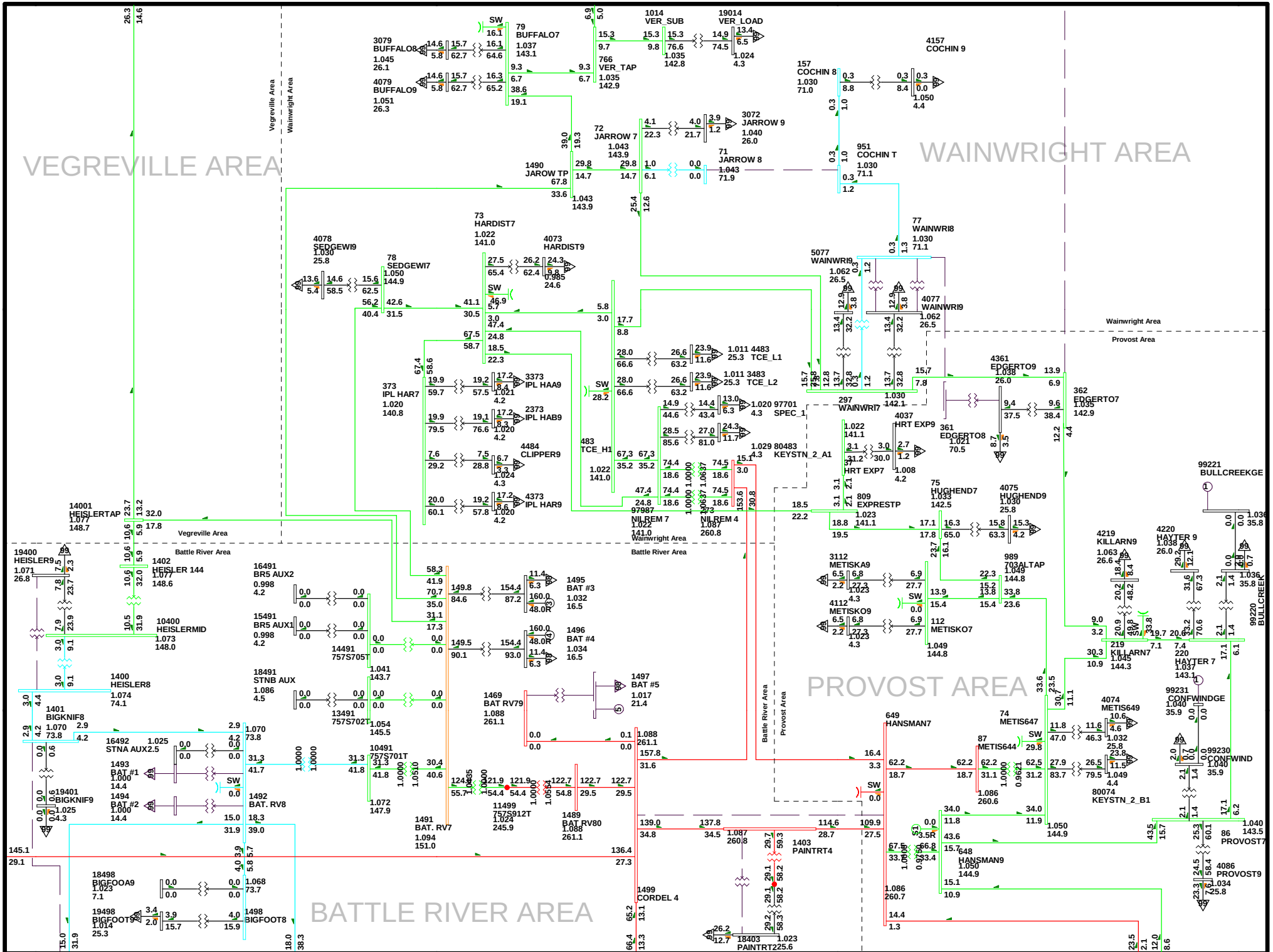
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV 0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000

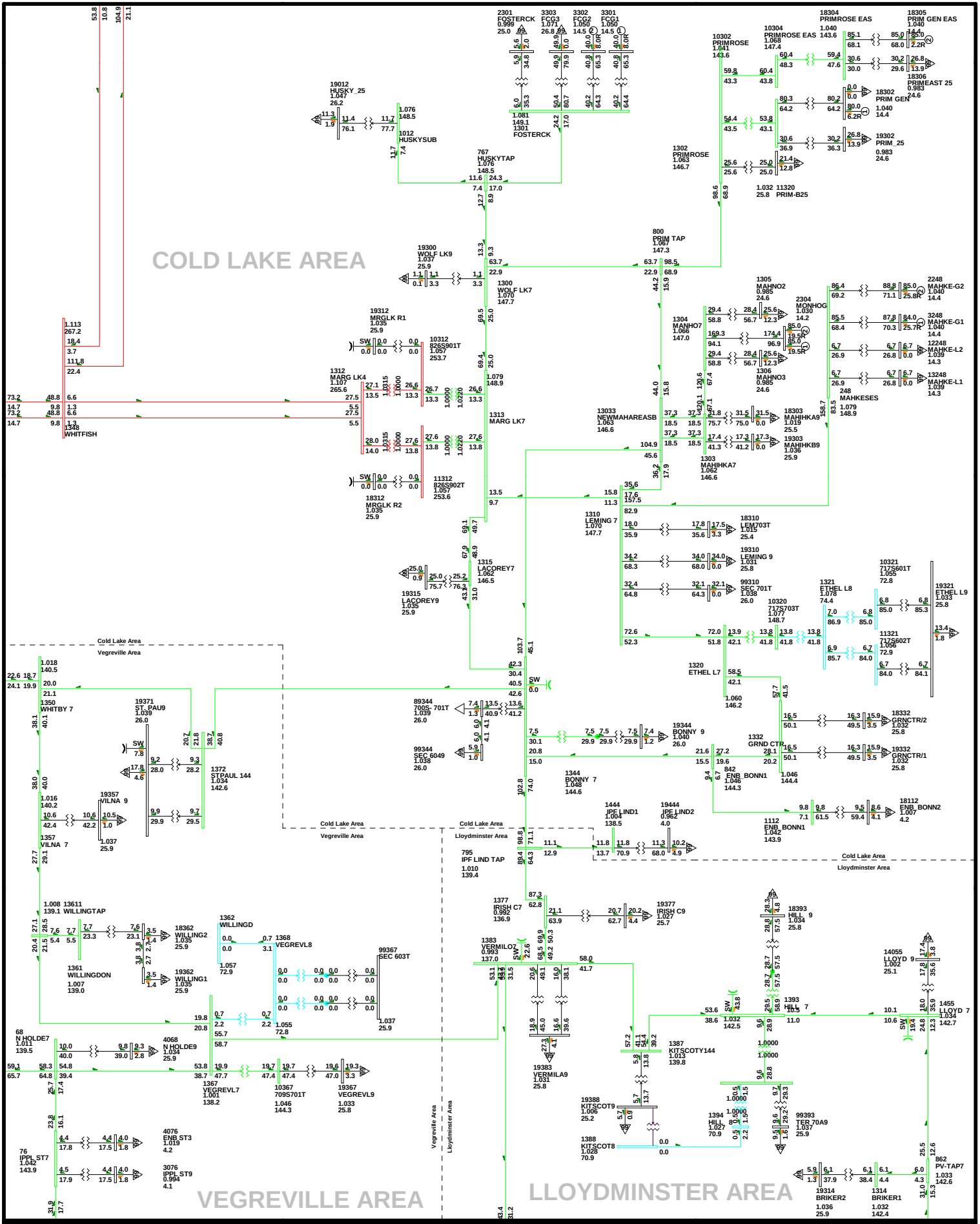


CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
FRI, APR 30 2010 12:51
D1-08

2012WP-Alt 1-9.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

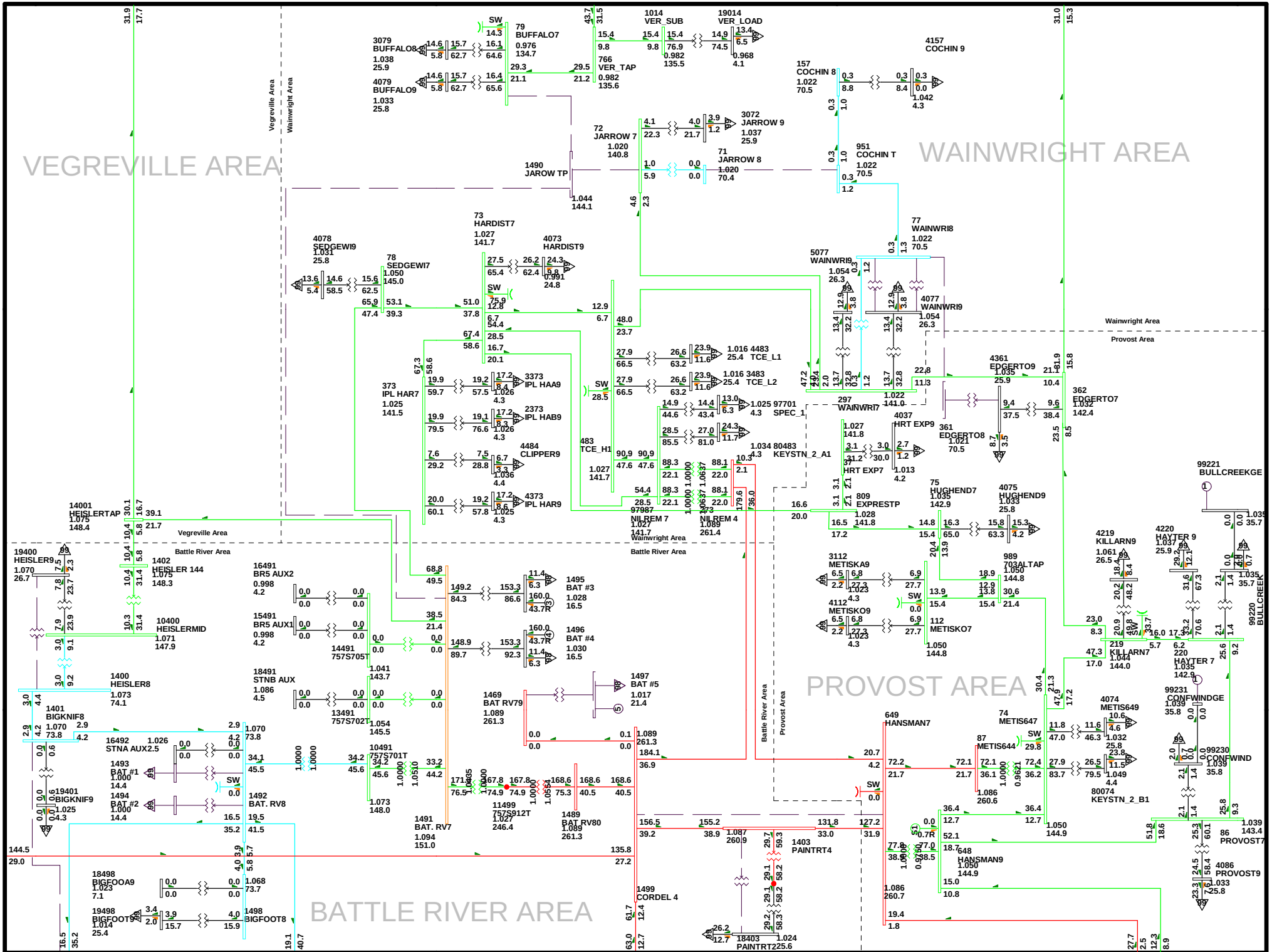

VEGREVILLE AREA
WAINWRIGHT AREA
PROVOST AREA
BATTLE RIVER AREA
Vegreville Area
Wainwright Area
Battle River Area
Provost Area
79 BUFFALO7 1.037 143.1
3079 BUFFALO8 1.045 26.1
4079 BUFFALO9 1.051 26.3
766 VER_TAP 1.035 142.9
1014 VER_SUB
19014 VER_LOAD
4157 COCHIN 9
157 COCHIN 8 1.030 71.0
951 COCHIN T 1.030 71.1
1050 4.4
72 JAROW 7 1.043 143.9
3072 JAROW 9 1.040 26.0
71 JAROW 8 1.043 71.9
1490 JAROW TP 67.8
1043 143.9
73 HARDIST7 1.022 141.0
4073 HARDIST9
4078 SEDGEWI9 1.030 25.8
78 SEDGEWI7 1.050 144.9
77 WAINWRI8 1.030 71.1
5077 WAINWRI9 1.062 26.5
4077 WAINWRI9 1.062 26.5
4361 EDGERTO9 1.038 26.0
362 EDGERTO7 1.035 142.9
361 EDGERTO8 1.021 70.5
4037 HRT EXP9
HRT EXP7 1.008 4.2
297 WAINWRI7 1.030 142.1
1.011 4483 25.3 TCE_L1
1.011 3483 25.3 TCE_L2
1.020 97701 4.3 SPEC_1
1.029 80483 4.3 KEYSTN_2_A1
483 TCE_H1 1.022 141.0
373 IPL HAR7 1.020 140.8
3373 IPL HAA9 1.021 4.2
2373 IPL HAB9 1.020 4.2
4484 CLIPPER9 1.024 4.3
4373 IPL HAR9 1.020 4.2
97987 NIL REM 7 1.022 141.0
97273 NIL REM 4 1.087 260.8
809 EXPRESTP 1.023 141.1
75 HUGHEND7 1.033 142.5
4075 HUGHEND9 1.030 25.8
3112 METISKA9 1.023 4.3
4112 METISKO9 1.023 4.3
112 METISKO7 1.049 144.8
989 703ALTAP 1.049 144.8
99221 BULLCREEKGE 1.036 35.8
99220 BULLCREEK 1.036 35.8
4219 KILLARN9 1.063 26.6
219 KILLARN7 1.045 144.3
4220 HAYTER 9 1.038 26.0
220 HAYTER 7 1.037 143.1
99231 CONFWINDGE 1.040 35.9
99230 CONFWIND 1.040 35.9
4074 METIS649 1.032 25.8
80074 KEYSTN_2_B1 1.049 4.4
74 METIS647
87 METIS644 1.086 260.6
649 HANSMAN7
648 HANSMAN9 1.050 144.9
1403 PAINTRT4
18403 PAINTRT2 1.023 25.6
4086 PROVOST9 1.034 25.8
86 PROVOST7 1.040 143.5
14001 HEISLERTAP 1.077 148.7
1402 HEISLER 144 1.077 148.6
10400 HEISLERMID 1.073 148.0
19400 HEISLER9 1.071 26.8
1400 HEISLER8 1.074 74.1
1401 BIGKNIF8 1.070 73.8
19401 BIGKNIF9 1.025 4.3
16491 BR5 AUX2 0.998 4.2
15491 BR5 AUX1 0.998 4.2
14491 757S705T 1.041 143.7
18491 STNB AUX 1.086 4.5
13491 757S702T 1.054 145.5
16492 STNA AUX2.5 1.025 4.3
10491 757S701T 1.072 147.9
1493 BAT #1 1.000 14.4
1494 BAT #2 1.000 14.4
1492 BAT. RV8 1.094 151.0
1491 BAT. RV7 1.094 151.0
1469 BAT RV79 1.088 261.1
1495 BAT #3 1.032 16.5
1496 BAT #4 1.034 16.5
1497 BAT #5 1.017 21.4
11499 757S912T 1.024 245.9
1489 BAT RV80 1.088 261.1
1499 CORDEL 4 1.087 260.8
18498 BIGFOOA9 1.023 7.1
19498 BIGFOOT9 1.014 25.3
1498 BIGFOOT8 1.068 73.7
CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
FRI, APR 30 2010 12:51
D1-08
2012WP-Alt 1-9.b
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV 0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
FRI, APR 30 2010 12:51
D1-09

2012WP-Alt 1-10.a

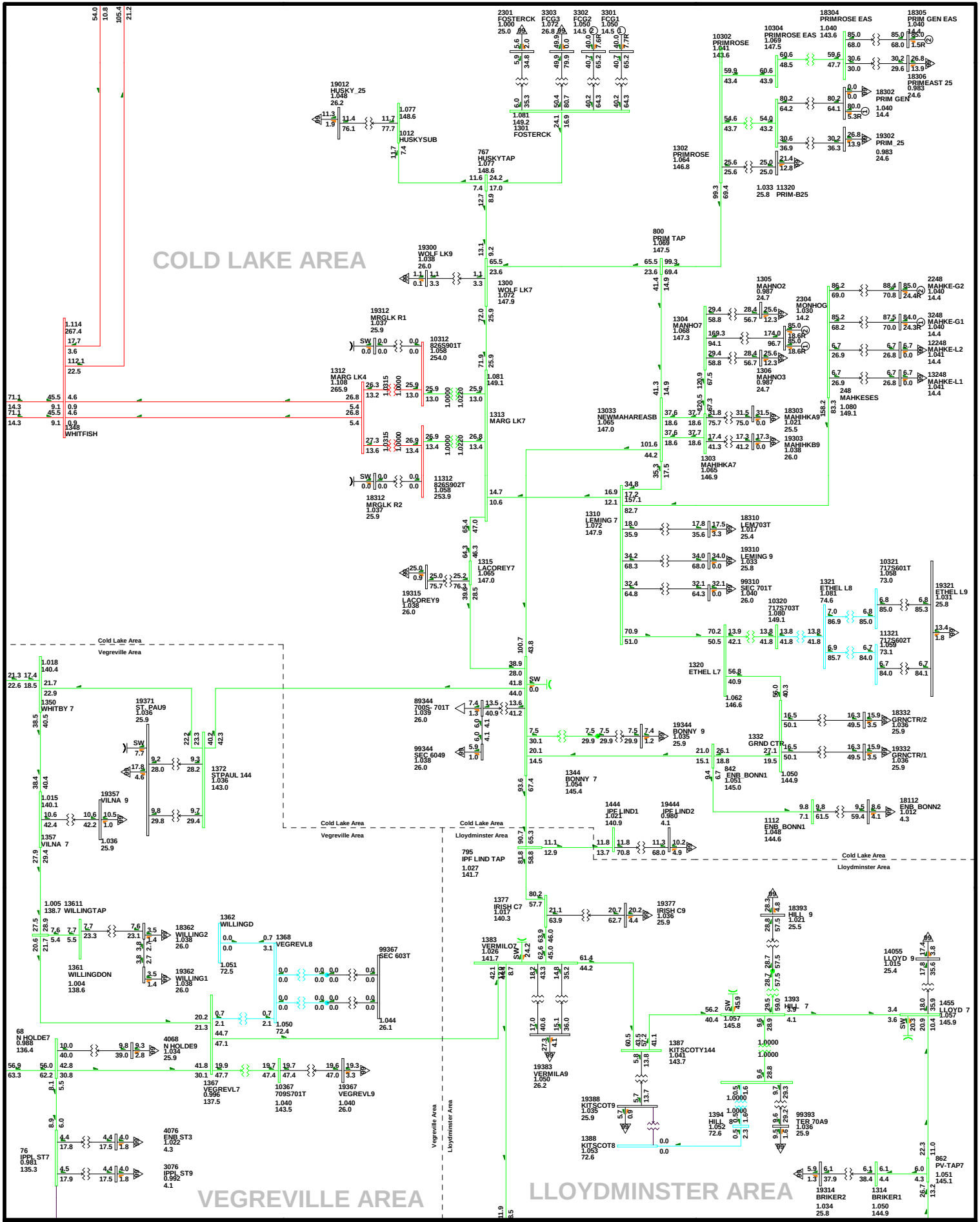
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
FRI, APR 30 2010 12:51
D1-09

2012WP-Alt 1-10.b

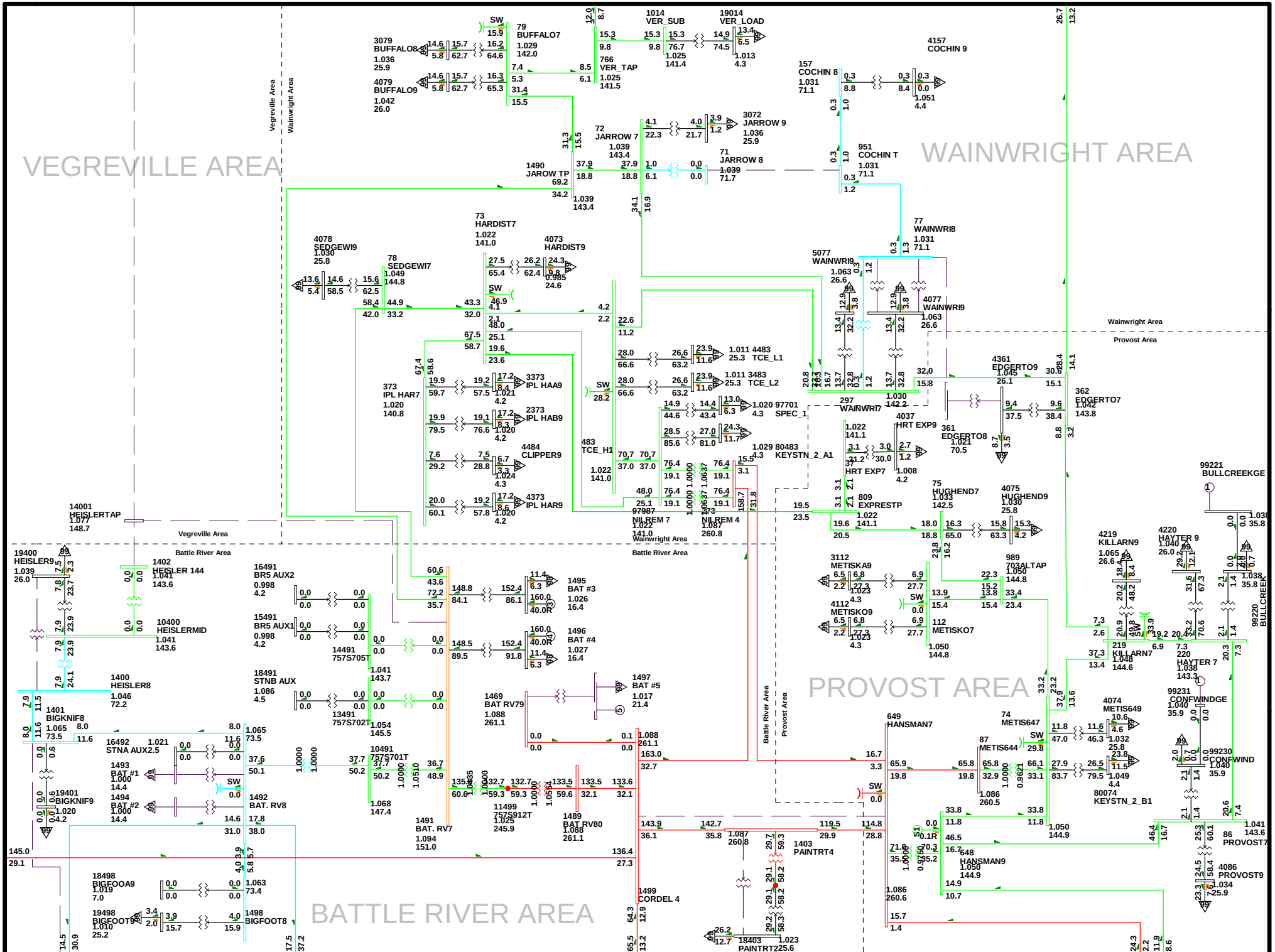
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV 0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
FRI, APR 30 2010 12:51
D1-10

2012WP-Alt 1-11.a

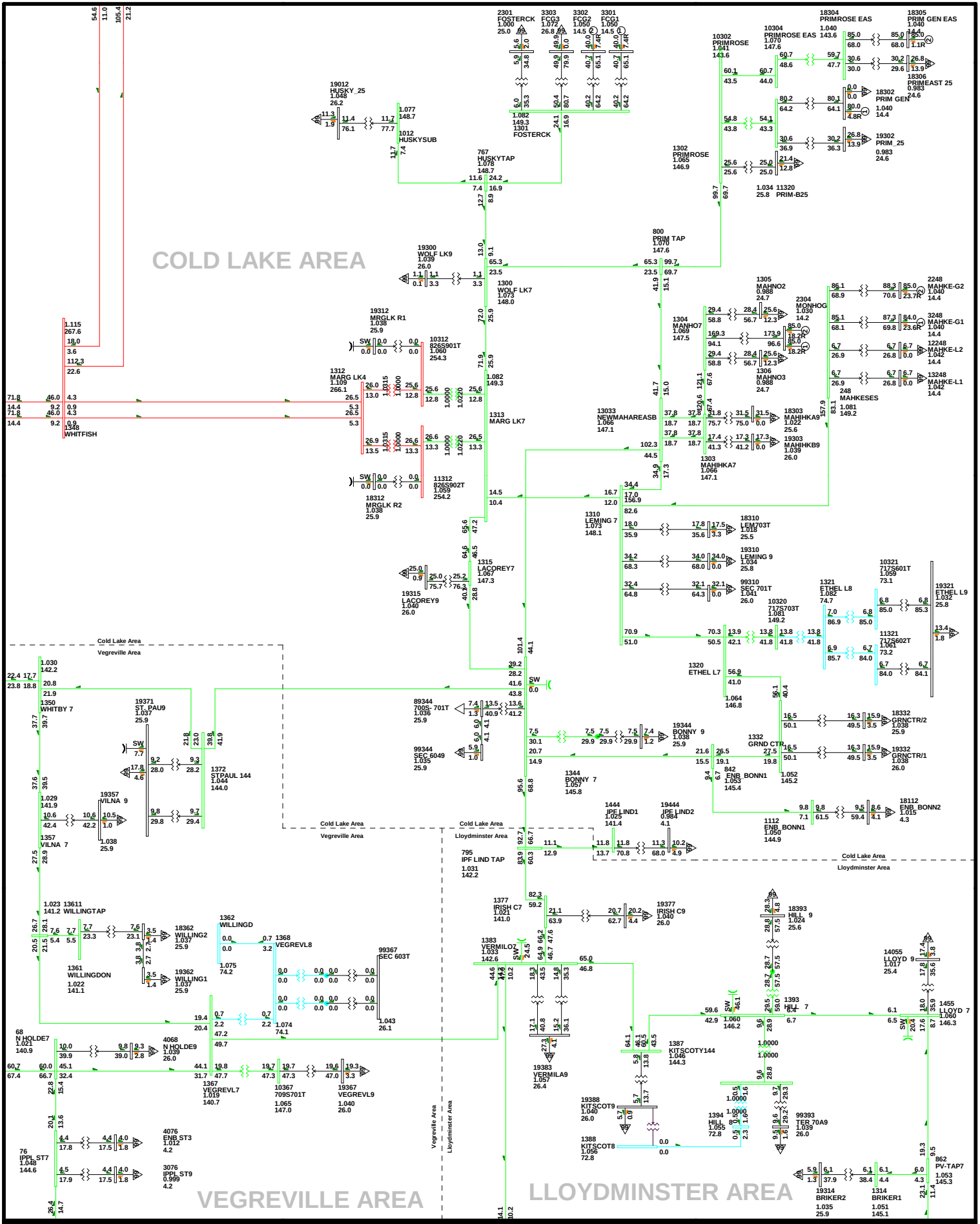
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
FRI, APR 30 2010 12:51
D1-10

2012WP-Alt 1-11.b

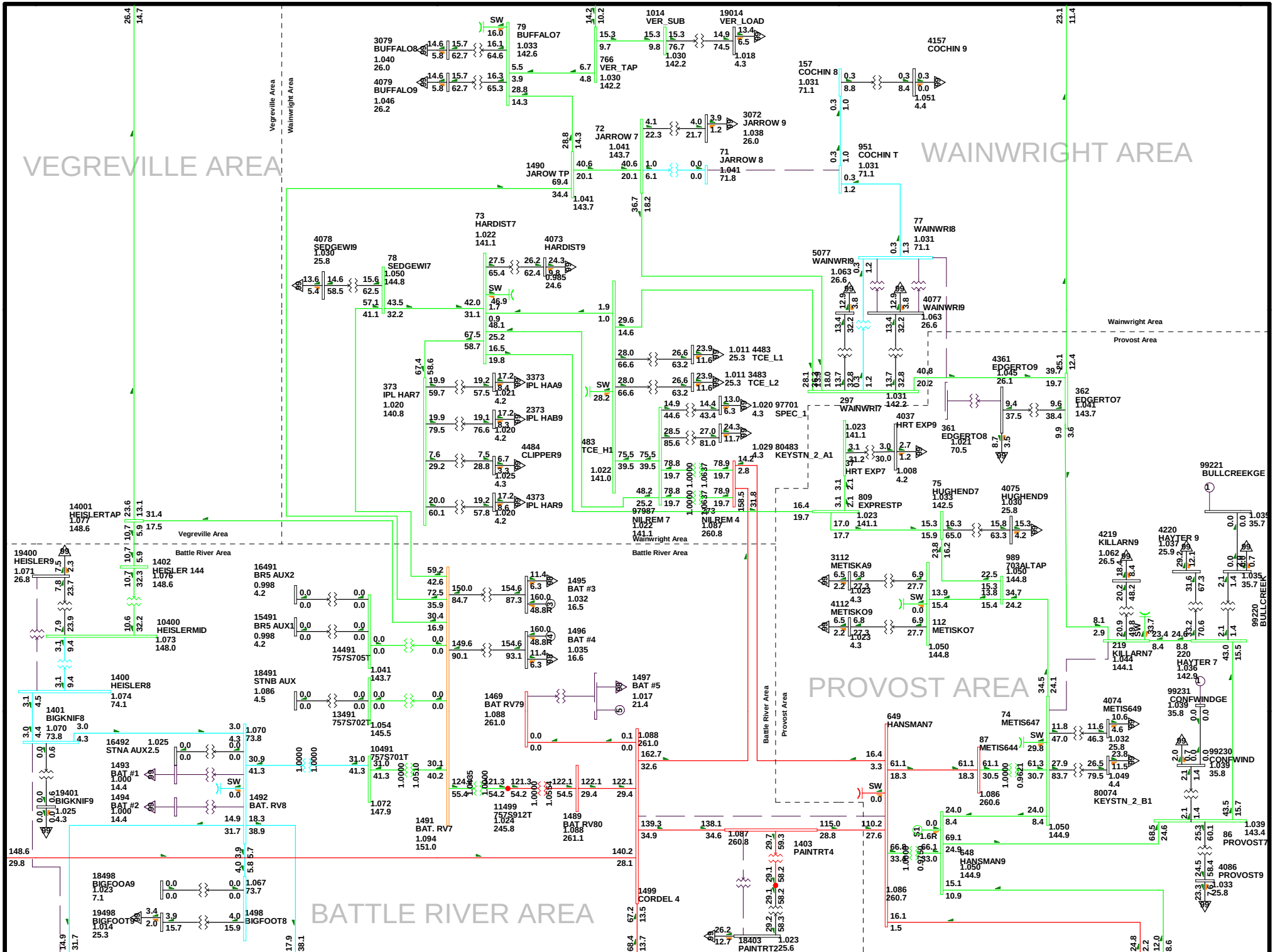
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV 0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
FRI, APR 30 2010 12:51
D1-11

2012WP-Alt 1-12.a

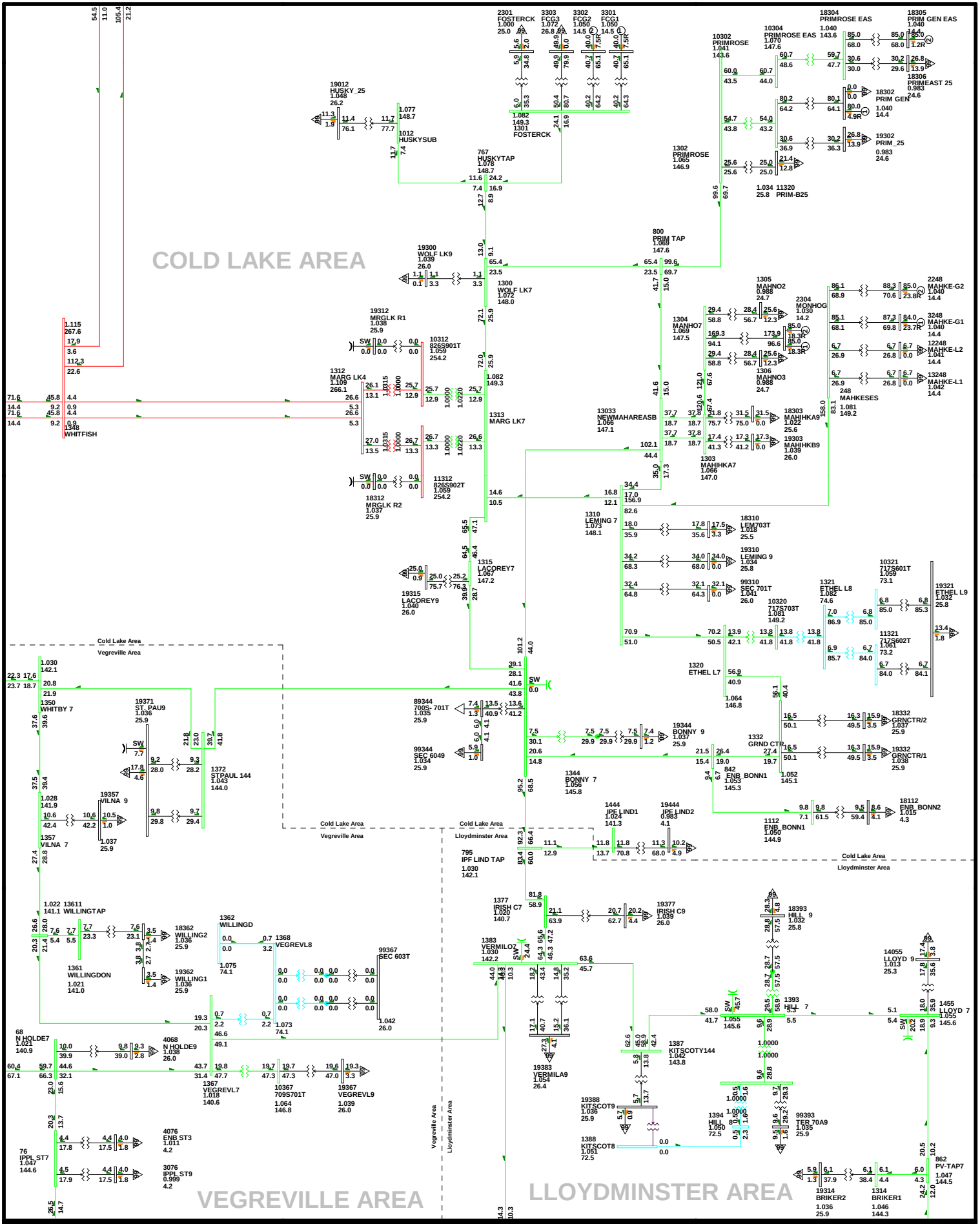
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
FRI, APR 30 2010 12:51
D1-11

2012WP-Alt 1-12.b

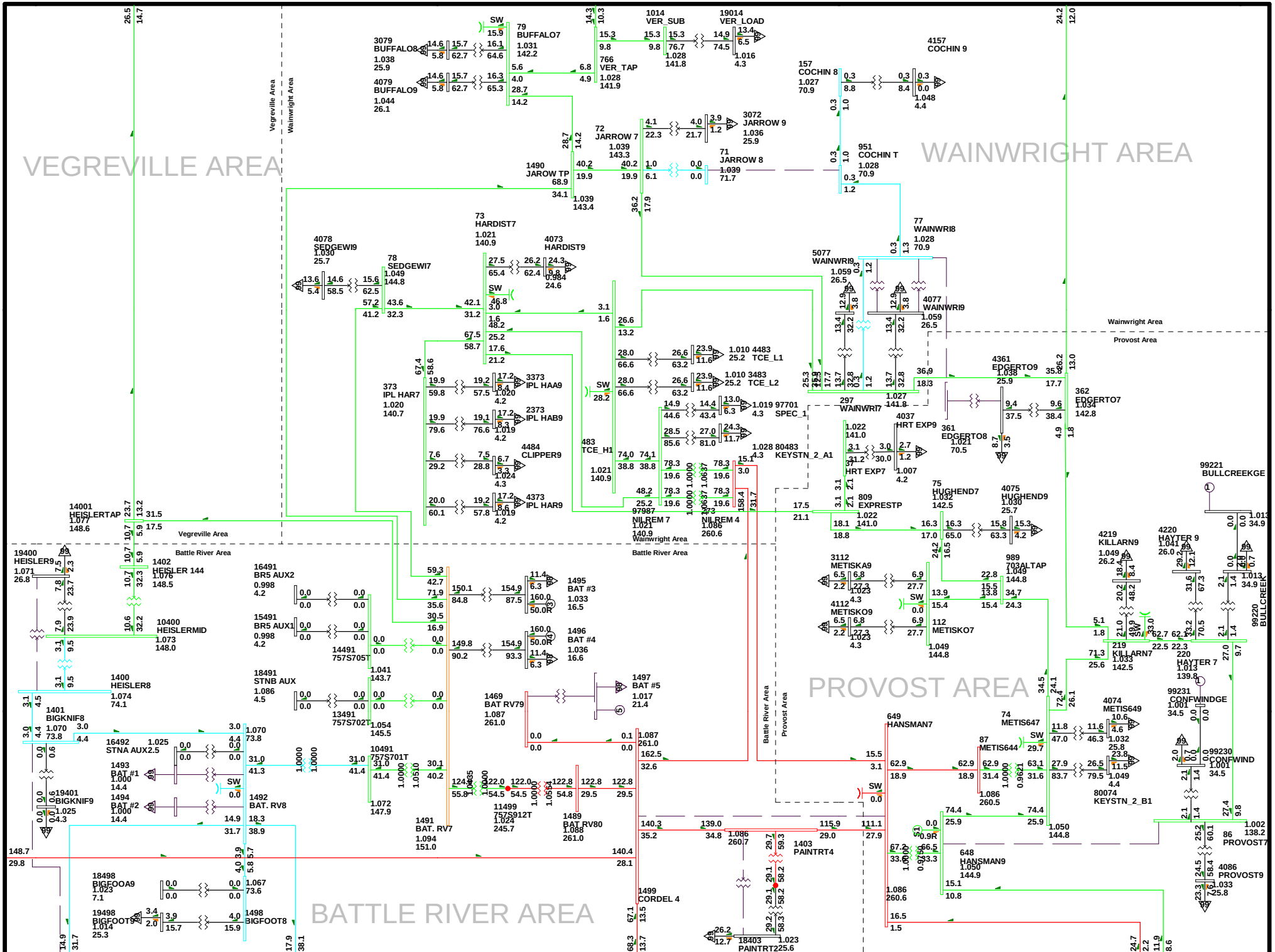
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV 0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
FRI, APR 30 2010 12:51
D1-12

2012WP-Alt 1-13.a

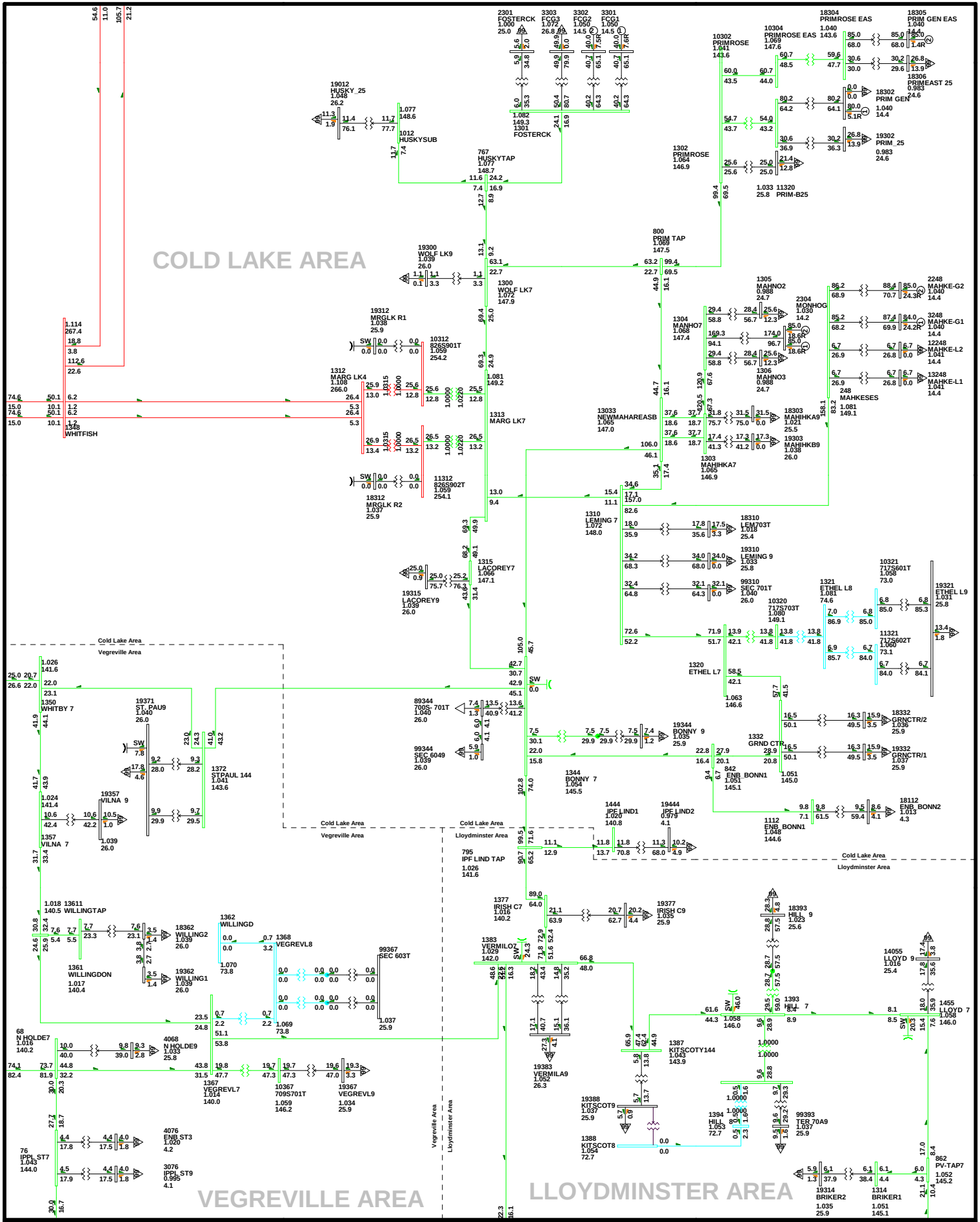
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
FRI, APR 30 2010 12:51
D1-12

2012WP-Alt 1-13.b

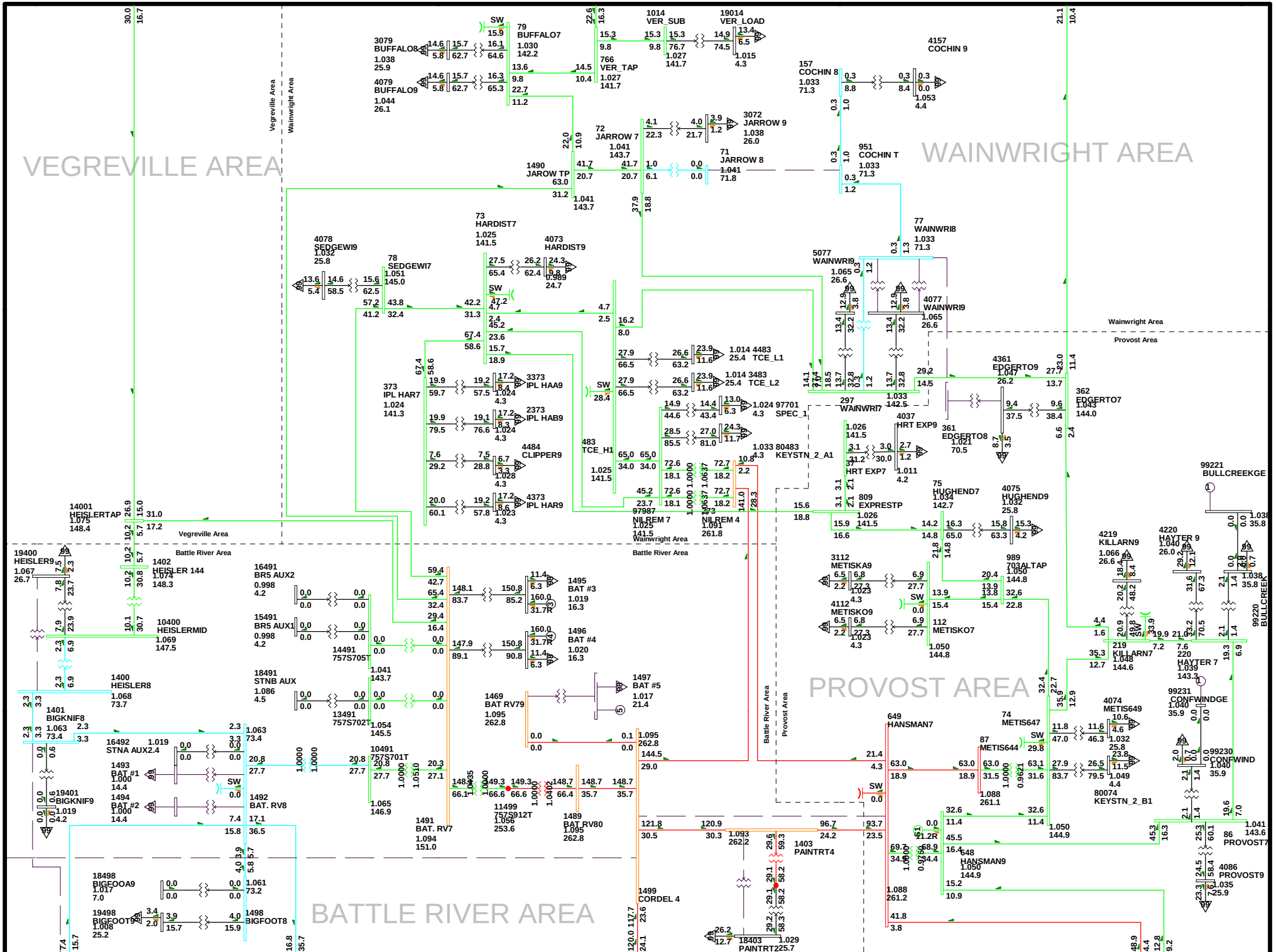
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV 0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
FRI, APR 30 2010 12:52
D1-14

2012WP-Alt 1-14.a

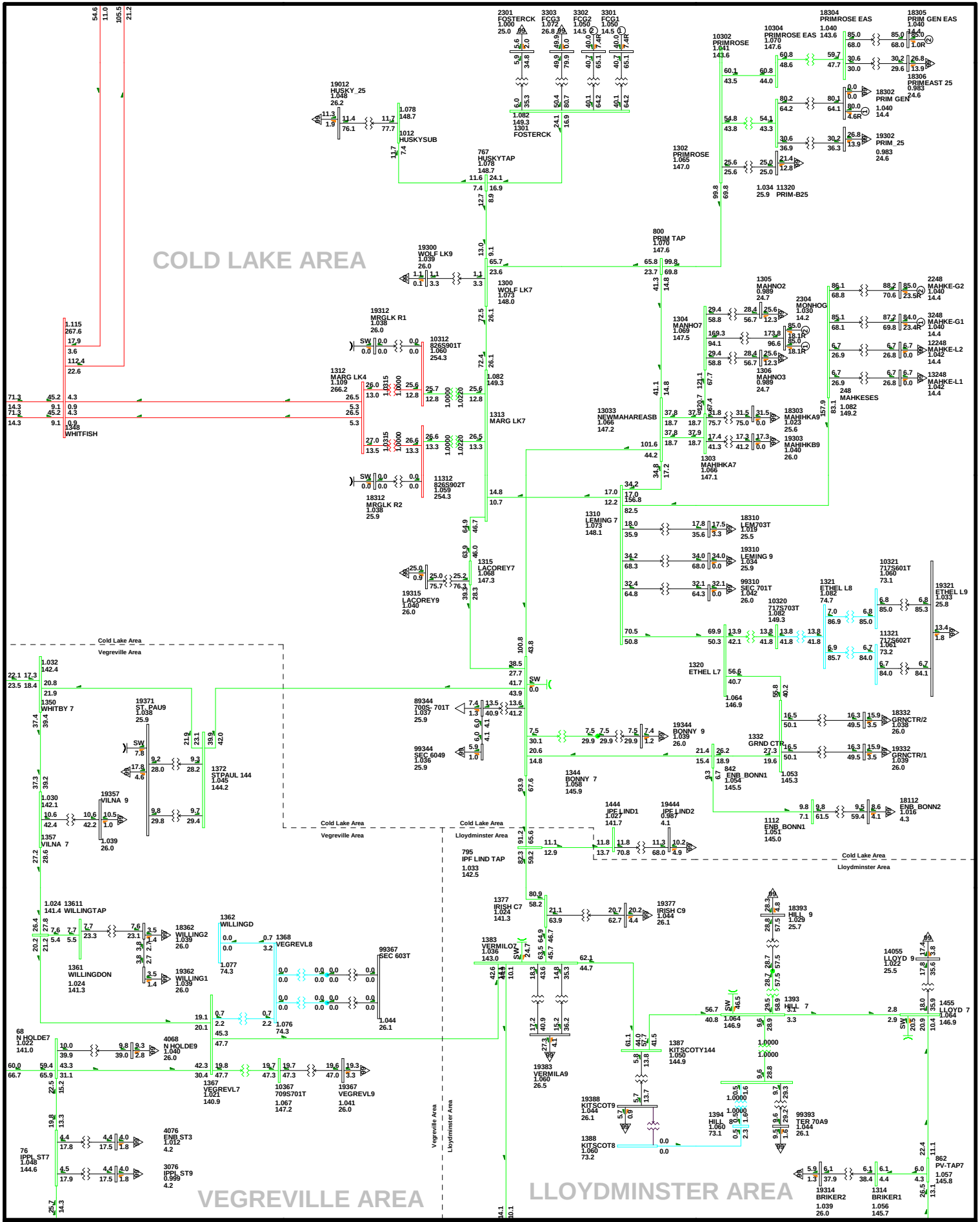
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
FRI, APR 30 2010 12:52
D1-14

2012WP-Alt 1-14.b

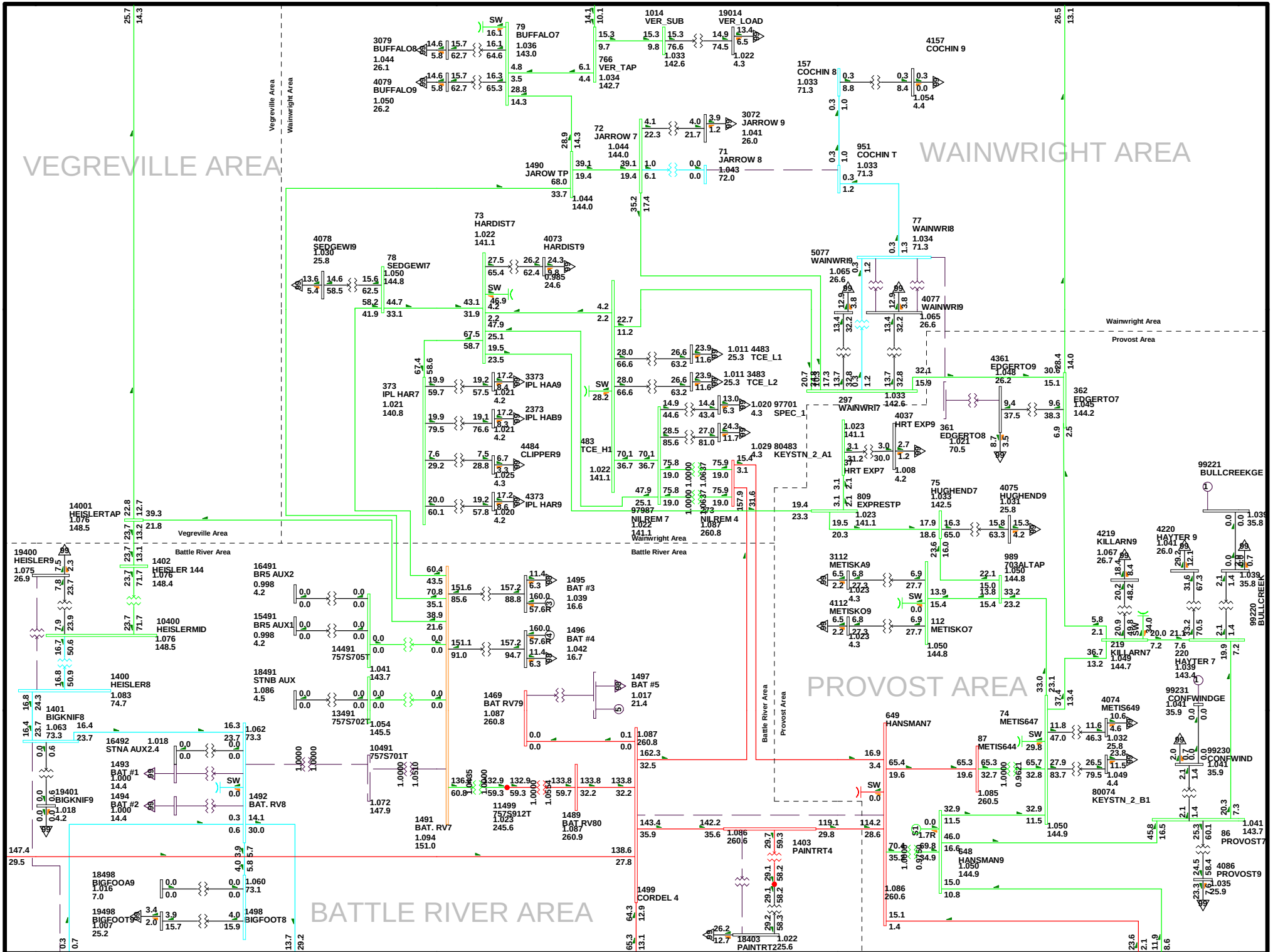
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV 0.920UV
kV: >0.000<=35.000<=69.000<=138.000<=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
FRI, APR 30 2010 12:52
D1-15

2012WP-Alt 1-15.a

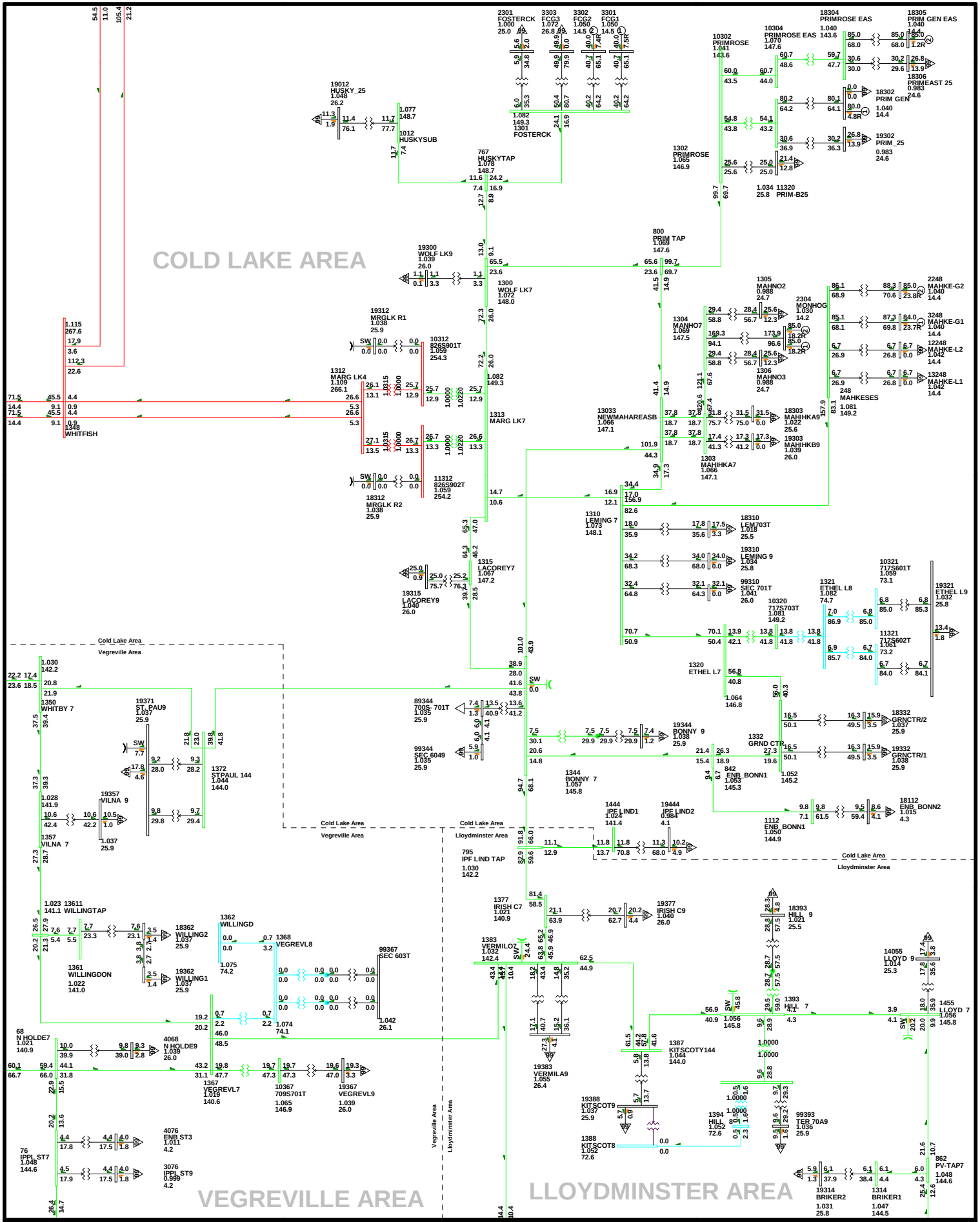
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
FRI, APR 30 2010 12:52
D1-15

2012WP-Alt 1-15.b

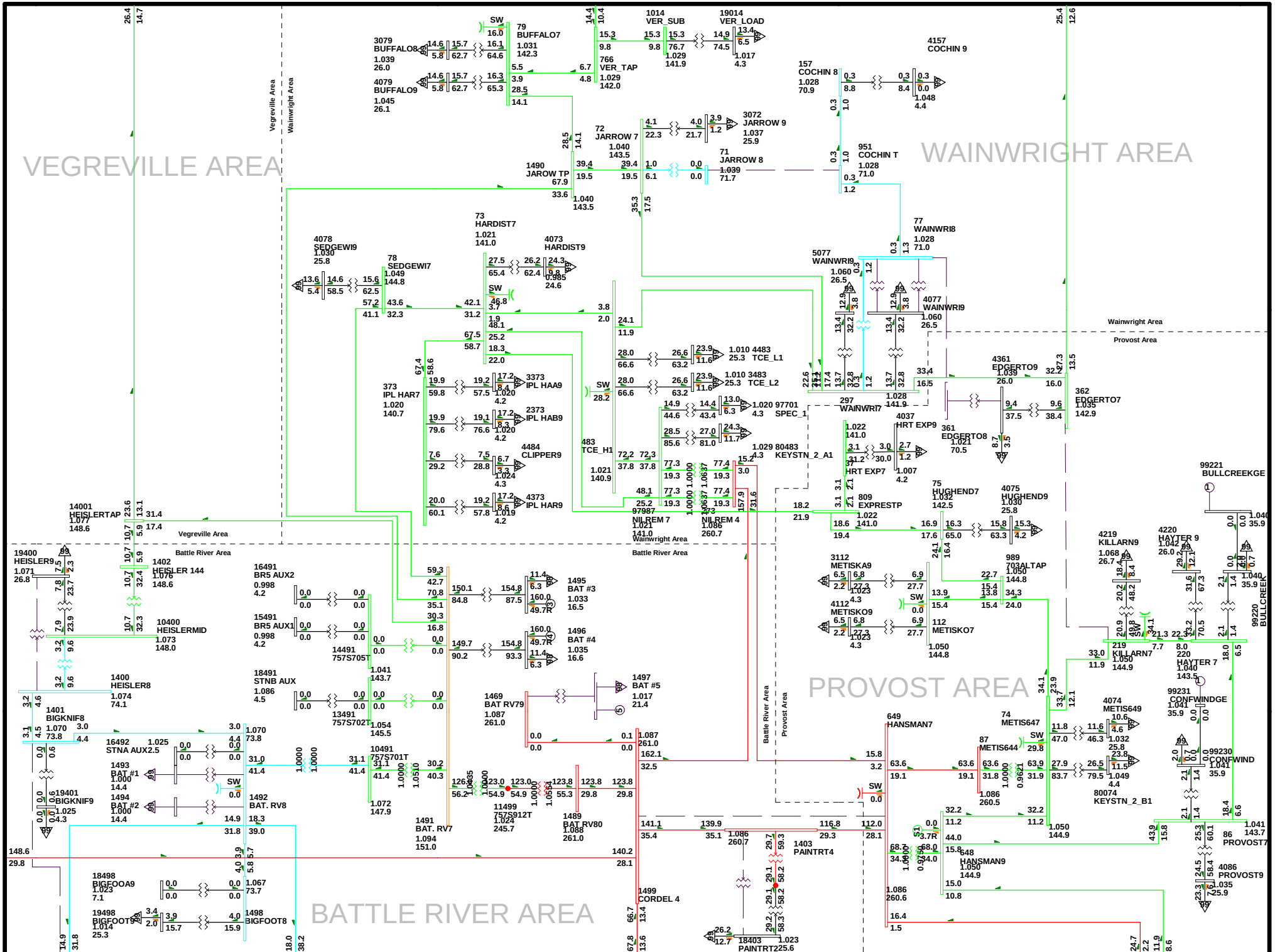
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV 0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000

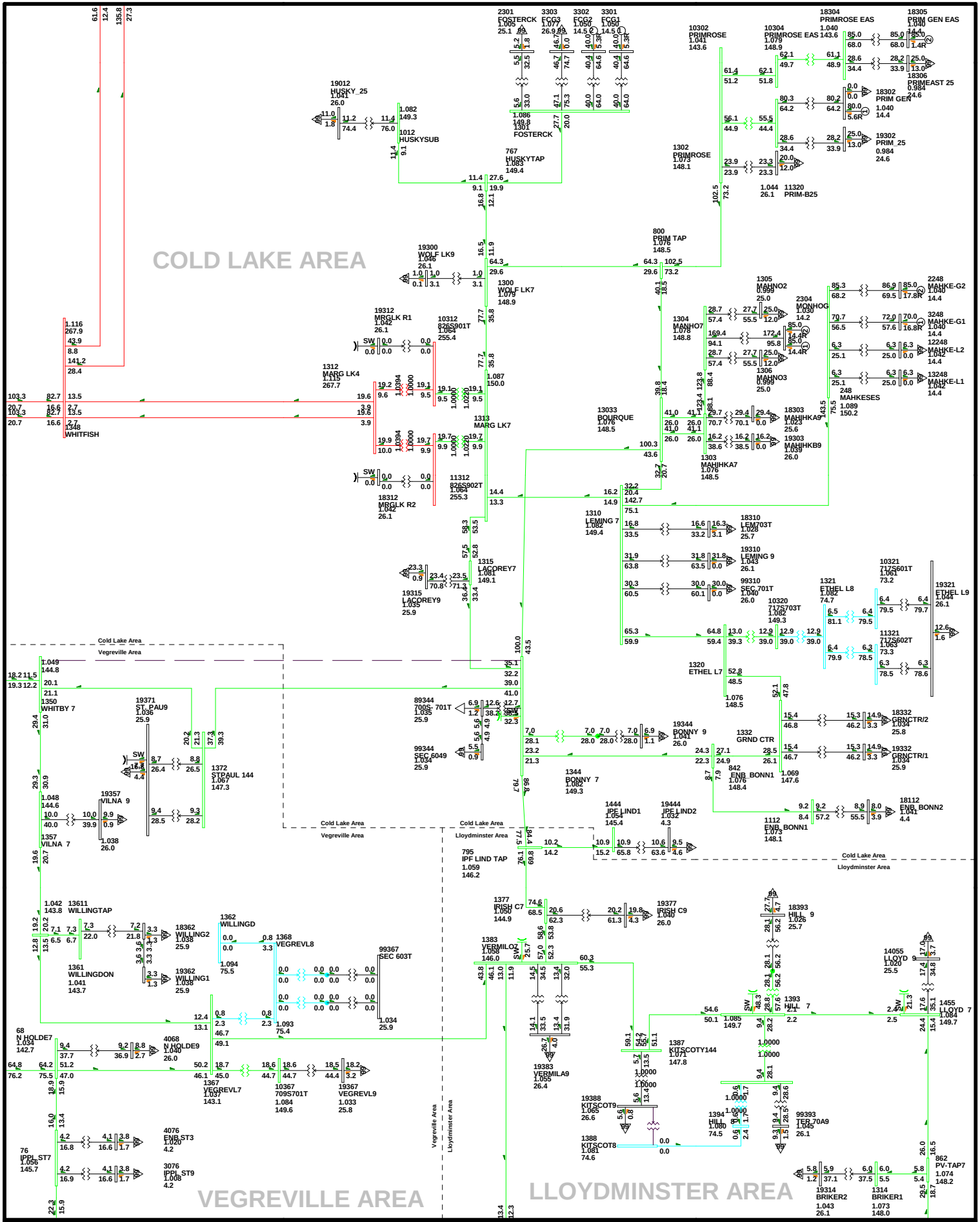


CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
FRI, APR 30 2010 12:52
D1-16

2012WP-Alt 1-16.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

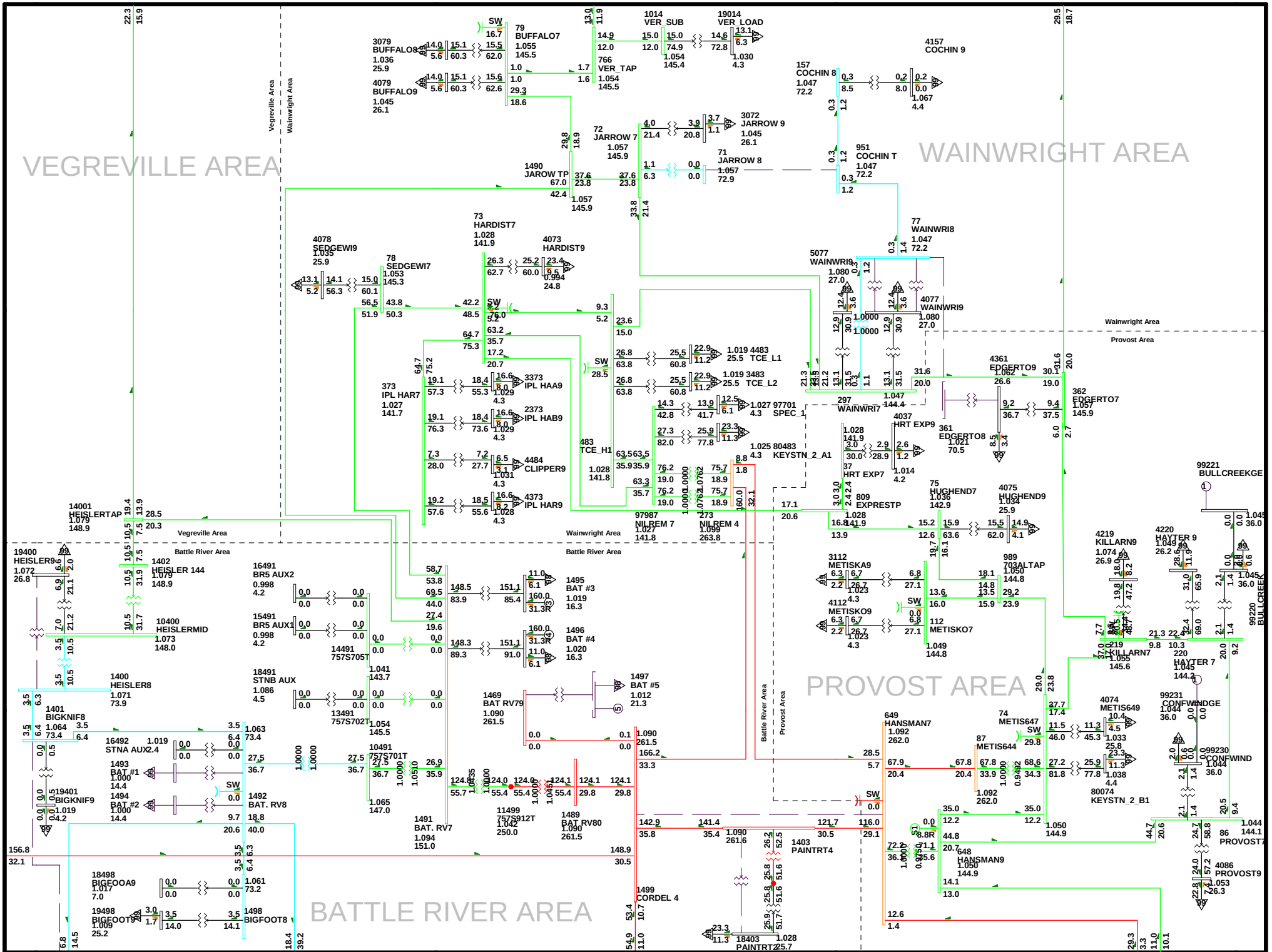

VEGREVILLE AREA
WAINWRIGHT AREA
PROVOST AREA
BATTLE RIVER AREA
Vegreville Area
Wainwright Area
Battle River Area
Provost Area
79 BUFFALO7 1.031 142.3
3079 BUFFALO8 1.039 26.0
4079 BUFFALO9 1.045 26.1
766 VER_TAP 1.029 142.0
1014 VER_SUB
19014 VER_LOAD
4157 COCHIN 9
157 COCHIN 8 1.028 70.9
951 COCHIN T 1.028 71.0
1048 4.4
72 JARROW 7 1.040 143.5
3072 JARROW 9 1.037 25.9
71 JARROW 8 1.039 71.7
1490 JAROW TP 67.9 1.040 143.5
73 HARDIST7 1.021 141.0
4073 HARDIST9
4078 SEDGEWI9 1.030 25.8
78 SEDGEWI7 1.049 144.8
77 WAINWRI8 1.028 71.0
5077 WAINWRI9 1.060 26.5
4077 WAINWRI9 1.060 26.5
373 IPL HAR7 1.020 140.7
3373 IPL HAA9 1.020 4.2
2373 IPL HAB9 1.020 4.2
4484 CLIPPER9 1.024 4.3
4373 IPL HAR9 1.019 4.2
1010 4483 25.3 TCE_L1
1010 3483 25.3 TCE_L2
483 TCE_H1 1.021 140.9
1020 97701 SPEC_1 4.3
1029 80483 KEYSTN_2_A1 4.3
297 WAINWRI7 1.028 141.9
4037 HRT EXP9
HRT EXP7 1.007 4.2
4361 EDGERTO9 1.039 26.0
362 EDGERTO7 1.035 142.9
361 EDGERTO8 1.021 70.5
809 EXPRESTP 1.022 141.0
75 HUGHEND7 1.032 142.5
4075 HUGHEND9 1.030 25.8
97987 NIL REM 7 1.021 141.0
NIL REM 4 1.086 260.7
14001 HEISLERTAP 1.077 148.6
1402 HEISLER 144 1.076 148.6
10400 HEISLERMID 1.073 148.0
19400 HEISLER9 1.071 26.8
1400 HEISLER8 1.074 74.1
1401 BIGKNIF8 1.070 73.8
19401 BIGKNIF9 1.025 4.3
16491 BR5 AUX2 0.998 4.2
15491 BR5 AUX1 0.998 4.2
14491 757S705T 1.041 143.7
18491 STNB AUX 1.086 4.5
13491 757S702T 1.054 145.5
16492 STNA AUX2.5 1.025
1493 BAT #1 1.000 14.4
1494 BAT #2 1.000 14.4
1492 BAT. RV8 18.3 39.0
10491 757S701T 31.1 41.4 1.072 147.9
1491 BAT. RV7 1.094 151.0
1495 BAT #3 1.033 16.5
1496 BAT #4 1.035 16.6
1497 BAT #5 1.017 21.4
1469 BAT RV79 1.087 261.0
11499 757S912T 1.024 245.7
1489 BAT RV80 1.088 261.0
1499 CORDEL 4
18403 PAINTRT2 1.023 25.6
1403 PAINTRT4
649 HANSMAN7
648 HANSMAN9 1.050 144.9
74 METIS647
87 METIS644
4074 METIS649 1.032 25.8
80074 KEYSTN_2_B1 1.049 4.4
3112 METISKA9
4112 METISKO9
112 METISKO7 1.050 144.8
989 703ALTAP 1.050 144.8
4219 KILLARN9 1.068 26.7
219 KILLARN7 1.050 144.9
4220 HAYTER 9 1.042 26.0
220 HAYTER 7 1.040 143.5
99221 BULLCREEKGE
99220 BULLCREEK
99231 CONFWINDGE 1.041 35.9
99230 CONFWIND 1.041 35.9
86 PROVOST7 1.041 143.7
4086 PROVOST9 1.035 25.9
18498 BIGFOOA9 1.023 7.1
19498 BIGFOOT9 1.014 25.3
1498 BIGFOOT8 15.9
SW 16.0
SW 46.8
SW 28.2
SW 0.0
SW 34.1
SW 29.8
3.7R
0.985
CONFIGURATION
CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
FRI, APR 30 2010 12:52
D1-16
2012WP-Alt 1-16.b
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV 0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000

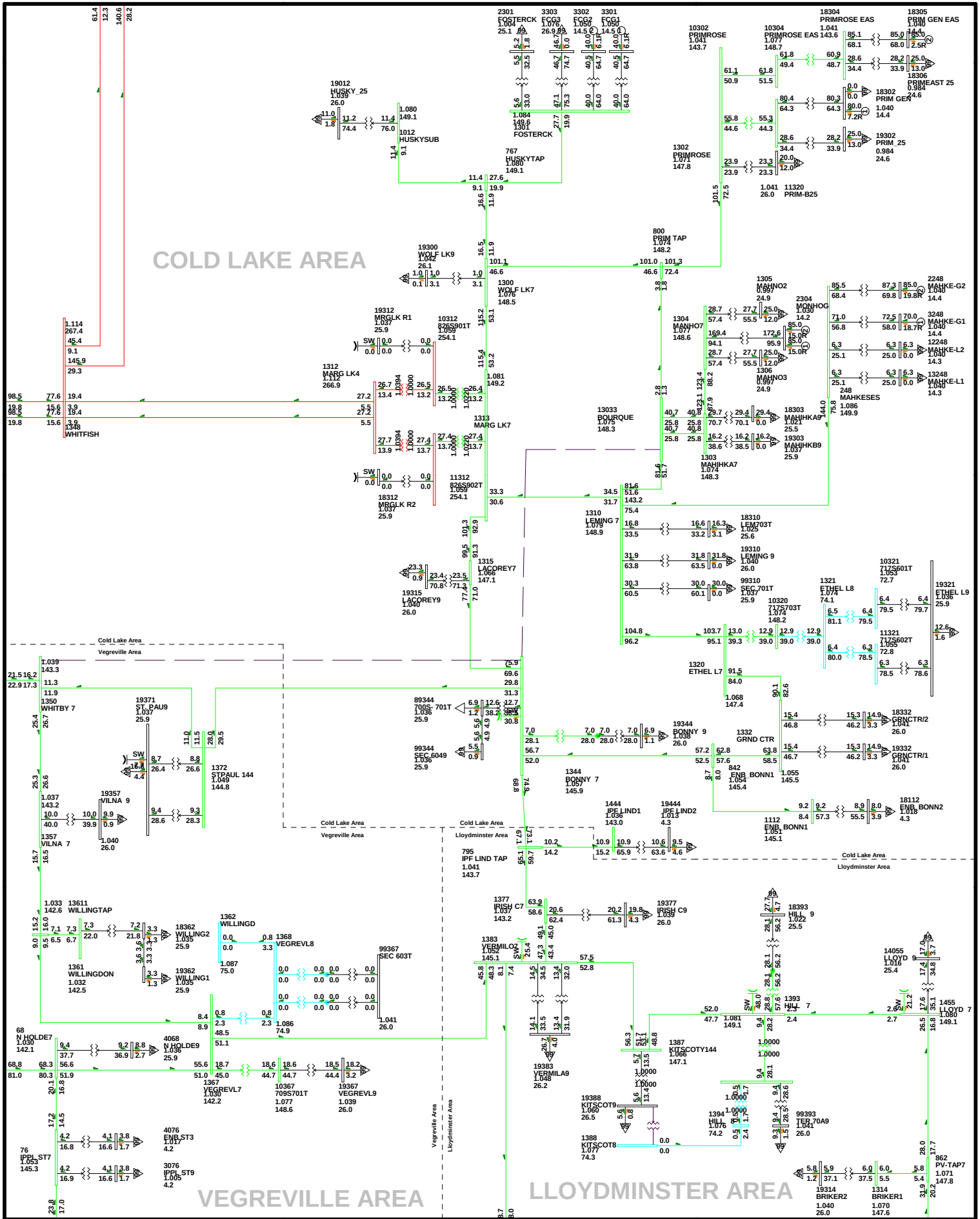


CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 30 2010 16:42
D1-00

2012SP-Alt 1-1.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

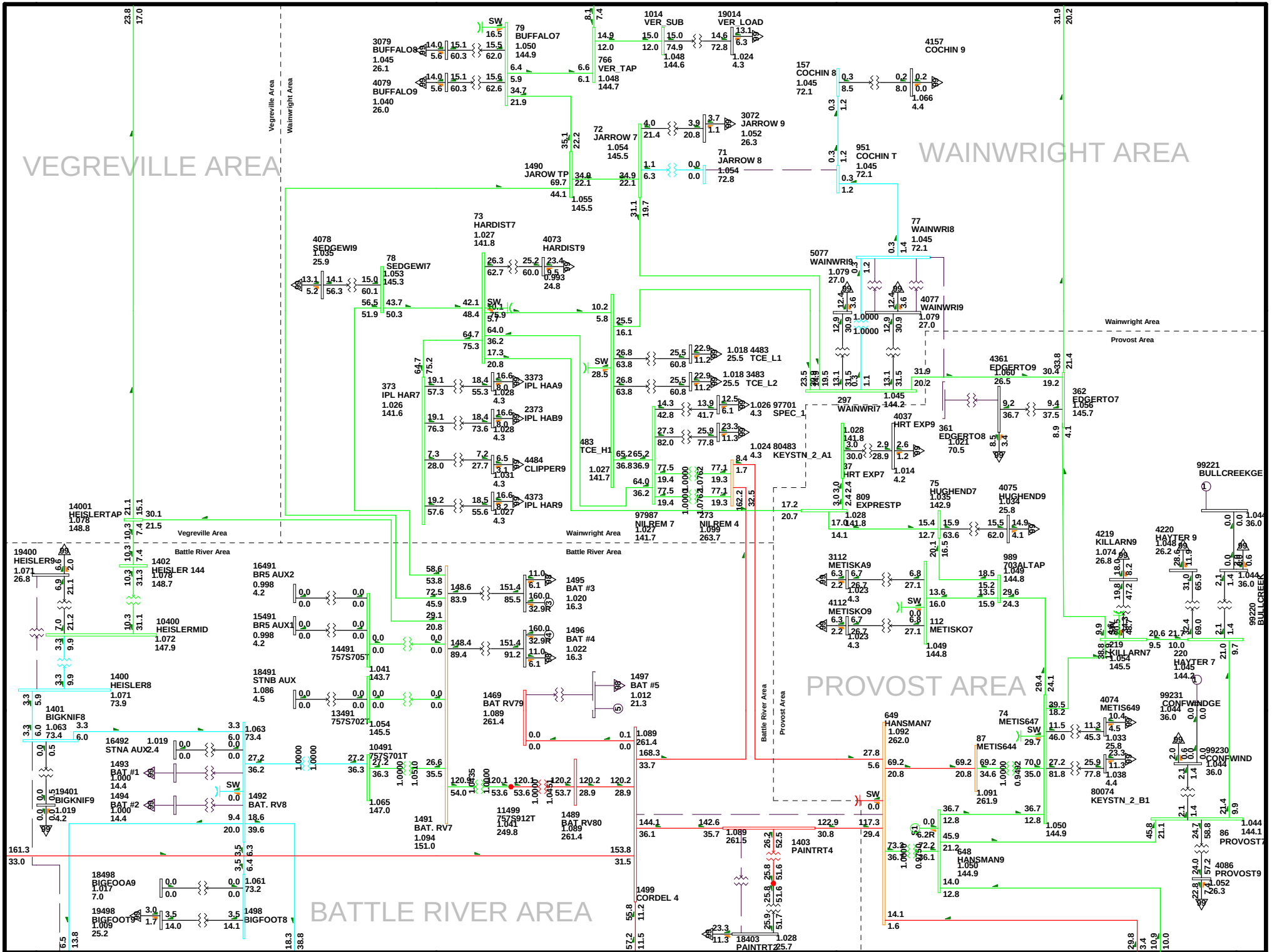

VEGREVILLE AREA
WAINWRIGHT AREA
PROVOST AREA
BATTLE RIVER AREA
Vegreville Area
Wainwright Area
Battle River Area
Provost Area
79 BUFFALO7 1.055 145.5
3079 BUFFALO8 1.036 25.9
4079 BUFFALO9 1.045 26.1
766 VER_TAP 1.054 145.5
1014 VER_SUB 74.9 1.054 145.4
19014 VER_LOAD 72.8 1.030 4.3
157 COCHIN 8 1.047 72.2
4157 COCHIN 9
951 COCHIN T 1.047 72.2
72 JARROW 7 1.057 145.9
3072 JARROW 9 1.045 26.1
71 JARROW 8 1.057 72.9
1490 JAROW TP 67.0 42.4 1.057 145.9
77 WAINWRI8 1.047 72.2
5077 WAINWRI9 1.080 27.0
4077 WAINWRI9 1.080 27.0
297 WAINWRI7 1.047 144.4
4078 SEDGEWI9 1.035 25.9
78 SEDGEWI7 1.053 145.3
73 HARDIST7 1.028 141.9
4073 HARDIST9 0.994 24.8
373 IPL HAR7 1.027 141.7
3373 IPL HAA9 1.029 4.3
2373 IPL HAB9 1.029 4.3
4484 CLIPPER9 1.031 4.3
4373 IPL HAR9 1.028 4.3
483 TCE_H1 1.028 141.8
1.019 4483 25.5 TCE_L1
1.019 3483 25.5 TCE_L2
1.027 97701 4.3 SPEC_1
1.025 80483 4.3 KEYSTN_2_A1
97987 NILREM 7 1.027 141.8
273 NILREM 4 1.099 263.8
4037 HRT EXP9
37 HRT EXP7 1.014 4.2
361 EDGERTO8 1.021 70.5
4361 EDGERTO9 1.062 26.6
362 EDGERTO7 1.057 145.9
809 EXPRESTP 1.028 141.9
75 HUGHEND7 1.036 142.9
4075 HUGHEND9 1.034 25.9
989 703ALTAP 1.050 144.8
3112 METISKA9
4112 METISKO9
112 METISKO7 1.049 144.8
99221 BULLCREEKGE
99220 BULLCREEK
4219 KILLARN9 1.074 26.9
219 KILLARN7 1.055 145.6
4220 HAYTER 9 1.049 26.2
220 HAYTER 7 1.045 144.2
99231 CONFWNDGE 1.044 36.0
99230 CONFWIND 1.044 36.0
4074 METIS649
74 METIS647
87 METIS644
649 HANSMAN7 1.092 262.0
648 HANSMAN9 1.050 144.9
80074 KEYSTN_2_B1
1.050 144.9
14001 HEISLERTAP 1.079 148.9
19400 HEISLER9 1.072 26.8
1402 HEISLER 144 1.079 148.9
10400 HEISLERMID 1.073 148.0
1400 HEISLER8 1.071 73.9
1401 BIGKNIF8 1.064 73.4
19401 BIGKNIF9 1.019 4.2
16492 STNA AUX 2.4 1.019
1493 BAT #1 1.000 14.4
1494 BAT #2 1.000 14.4
1492 BAT. RV8 18.8 40.0
18498 BIGEOOA9 1.017 7.0
19498 BIGFOOT9 1.009 25.2
1498 BIGFOOT8 1.061 73.2
16491 BR5 AUX2 0.998 4.2
15491 BR5 AUX1 0.998 4.2
18491 STNB AUX 1.086 4.5
14491 757S705T 1.041 143.7
13491 757S702T 1.054 145.5
10491 757S701T 27.5 36.7 1.065 147.0
1495 BAT #3 1.019 16.3
1496 BAT #4 1.020 16.3
1497 BAT #5 1.012 21.3
1469 BAT RV79 1.090 261.5
1491 BAT. RV7 1.094 151.0
11499 757S912T 1.042 250.0
1489 BAT RV80 1.090 261.5
1499 CORDEL 4
1403 PAINTRT4
18403 PAINTRT2 1.028 25.7
1090 261.6
1090 261.5 166.2 33.3
1.090 262.0
1.092 262.0
1.038 4.4
1.033 25.8
1.045 144.2
1.044 144.1 86 PROVOST7
4086 PROVOST9 1.053 26.3
CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 30 2010 16:42
D1-00
2012SP-Alt 1-1.b
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

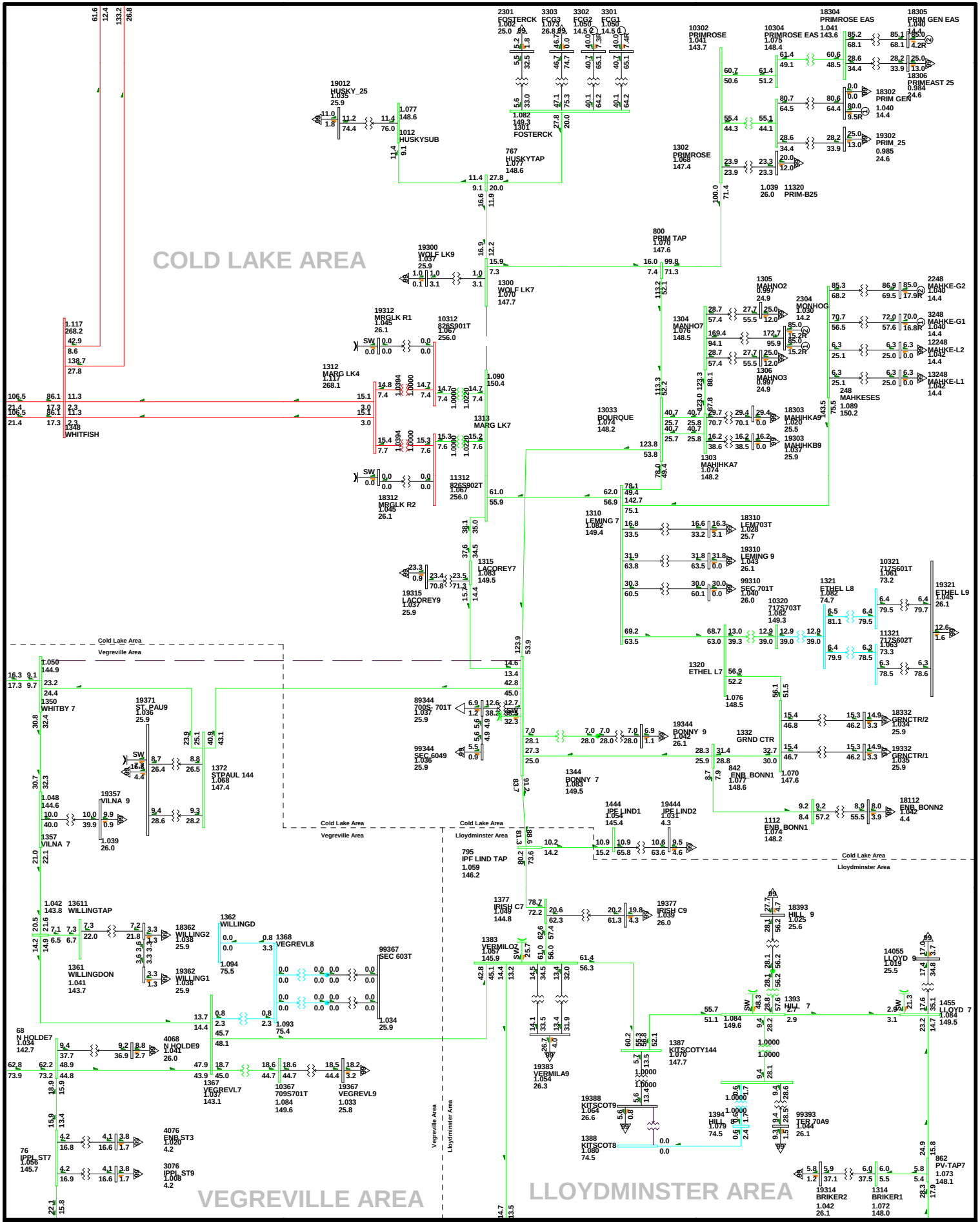


CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 30 2010 16:42
D1-01

2012SP-Alt 1-2.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

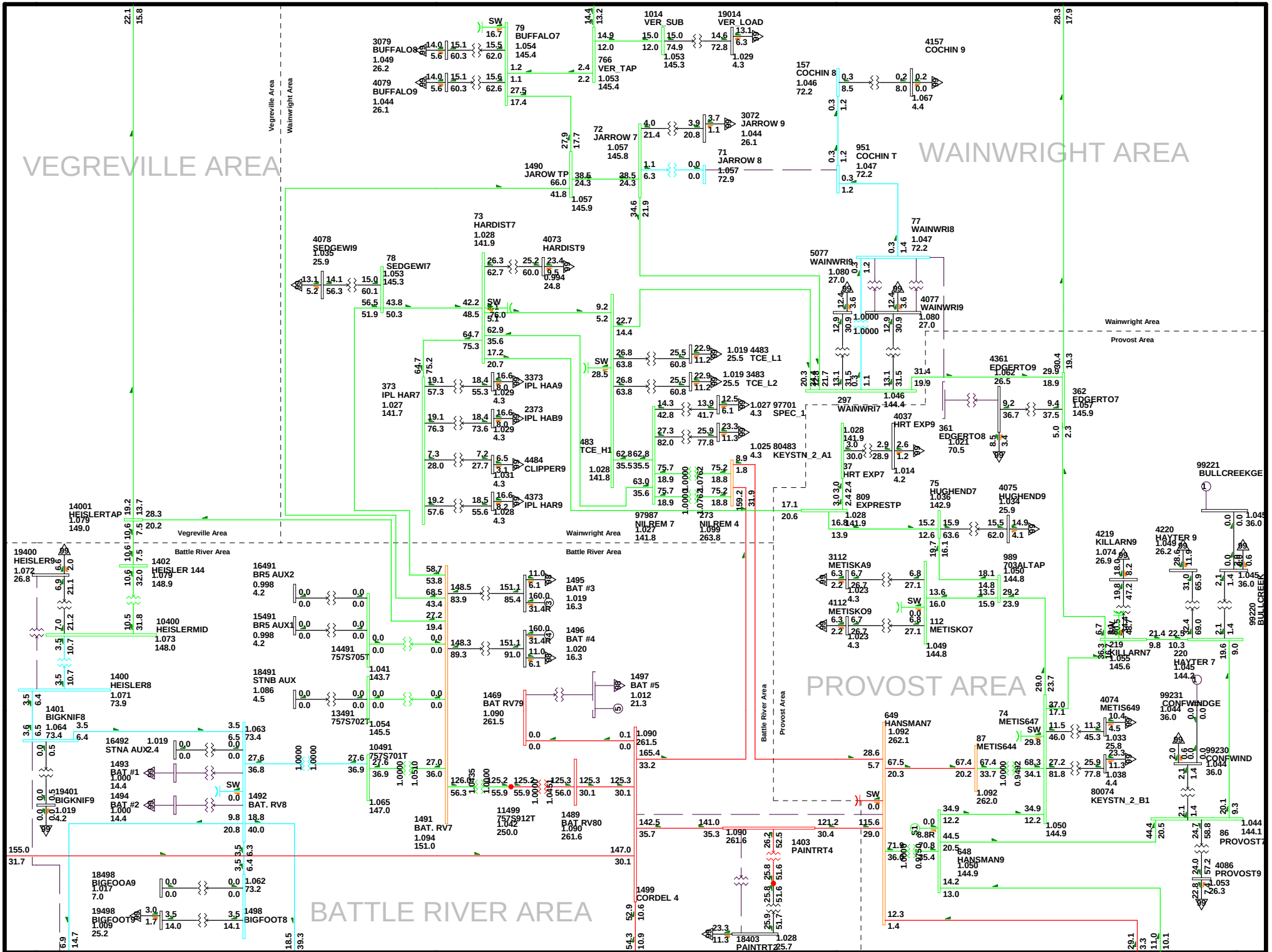

VEGREVILLE AREA
WAINWRIGHT AREA
PROVOST AREA
BATTLE RIVER AREA
Vegreville Area
Wainwright Area
Battle River Area
Provost Area
79 BUFFALO7 1.050 144.9
3079 BUFFALO8 1.045 26.1
4079 BUFFALO9 1.040 26.0
766 VER_TAP 1.048 144.7
1014 VER_SUB 1.048 144.6
19014 VER_LOAD 1.024 4.3
157 COCHIN 8 1.045 72.1
4157 COCHIN 9
951 COCHIN T 1.045 72.1
1.066 4.4
72 JARROW 7 1.054 145.5
3072 JARROW 9 1.052 26.3
71 JARROW 8 1.054 72.8
1490 JAROW TP 69.7 44.1 1.055 145.5
73 HARDIST7 1.027 141.8
4073 HARDIST9
4078 SEDGEWI9 1.035 25.9
78 SEDGEWI7 1.053 145.3
77 WAINWRI8 1.045 72.1
5077 WAINWRI9 1.079 27.0
4077 WAINWRI9 1.079 27.0
297 WAINWRI7 1.045 144.2
4361 EDGERTO9 1.060 26.5
362 EDGERTO7 1.056 145.7
361 EDGERTO8 1.021 70.5
4037 HRT EXP9
37 HRT EXP7 1.014 4.2
373 IPL HAR7 1.026 141.6
3373 IPL HAA9
2373 IPL HAB9
4484 CLIPPER9 1.031 4.3
4373 IPL HAR9 1.027 4.3
483 TCE_H1 1.027 141.7
1.018 4483 25.5 TCE_L1
1.018 3483 25.5 TCE_L2
1.026 97701 4.3 SPEC_1
1.024 80483 4.3 KEYSTN_2_A1
97987 NILREM 7 1.027 141.7
273 NILREM 4 1.099 263.7
809 EXPRESTP 1.028 141.8
75 HUGHEND7 1.035 142.9
4075 HUGHEND9 1.034 25.8
989 703ALTAP 1.049 144.8
3112 METISKA9 1.023 4.3
4112 METISKO9 1.023 4.3
112 METISKO7 1.049 144.8
14001 HEISLERTAP 1.078 148.8
19400 HEISLER9 1.071 26.8
1402 HEISLER 144 1.076 148.7
10400 HEISLERMID 1.072 147.9
1400 HEISLER8 1.071 73.9
1401 BIGKNIF8 1.063 73.4
19401 BIGKNIF9 1.019 4.2
16491 BR5 AUX2 0.998 4.2
15491 BR5 AUX1 0.998 4.2
16492 STNA AUX 1.019 2.4
18491 STNB AUX 1.086 4.5
14491 757S705T 1.041 143.7
13491 757S702T 1.054 145.5
10491 757S701T 1.065 147.0
1495 BAT #3 1.020 16.3
1496 BAT #4 1.022 16.3
1497 BAT #5 1.012 21.3
1469 BAT RV79 1.089 261.4
1493 BAT #1 1.000 14.4
1494 BAT #2 1.000 14.4
1492 BAT. RV8 18.6 39.6
1491 BAT. RV7 1.094 151.0
11499 757S912T 1.041 249.8
1489 BAT RV80 1.089 261.4
1499 CORDEL 4
18403 PAINTRT2 1.028 25.7
1403 PAINTRT4
649 HANSMAN7 1.092 262.0
648 HANSMAN9 1.050 144.9
74 METIS647
87 METIS644 1.091 261.9
4074 METIS649 1.033 25.8
80074 KEYSTN_2_B1 1.038 4.4
4219 KILLARN9 1.074 26.8
219 KILLARN7 1.054 145.5
4220 HAYTER 9 1.048 26.2
220 HAYTER 7 1.045 144.2
99221 BULLCREEKGE
99220 BULLCREEK
99231 CONFWNDGE 1.044 36.0
99230 CONFWIND 1.044 36.0
4086 PROVOST9 1.052 26.3
86 PROVOST7 1.044 144.1
18498 BIGEOOA9 1.017 7.0
19498 BIGFOOT9 1.009 25.2
1498 BIGFOOT8 1.061 73.2
CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 30 2010 16:42
D1-01
2012SP-Alt 1-2.b
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 30 2010 16:42
D1-02

2012SP-Alt 1-3.a

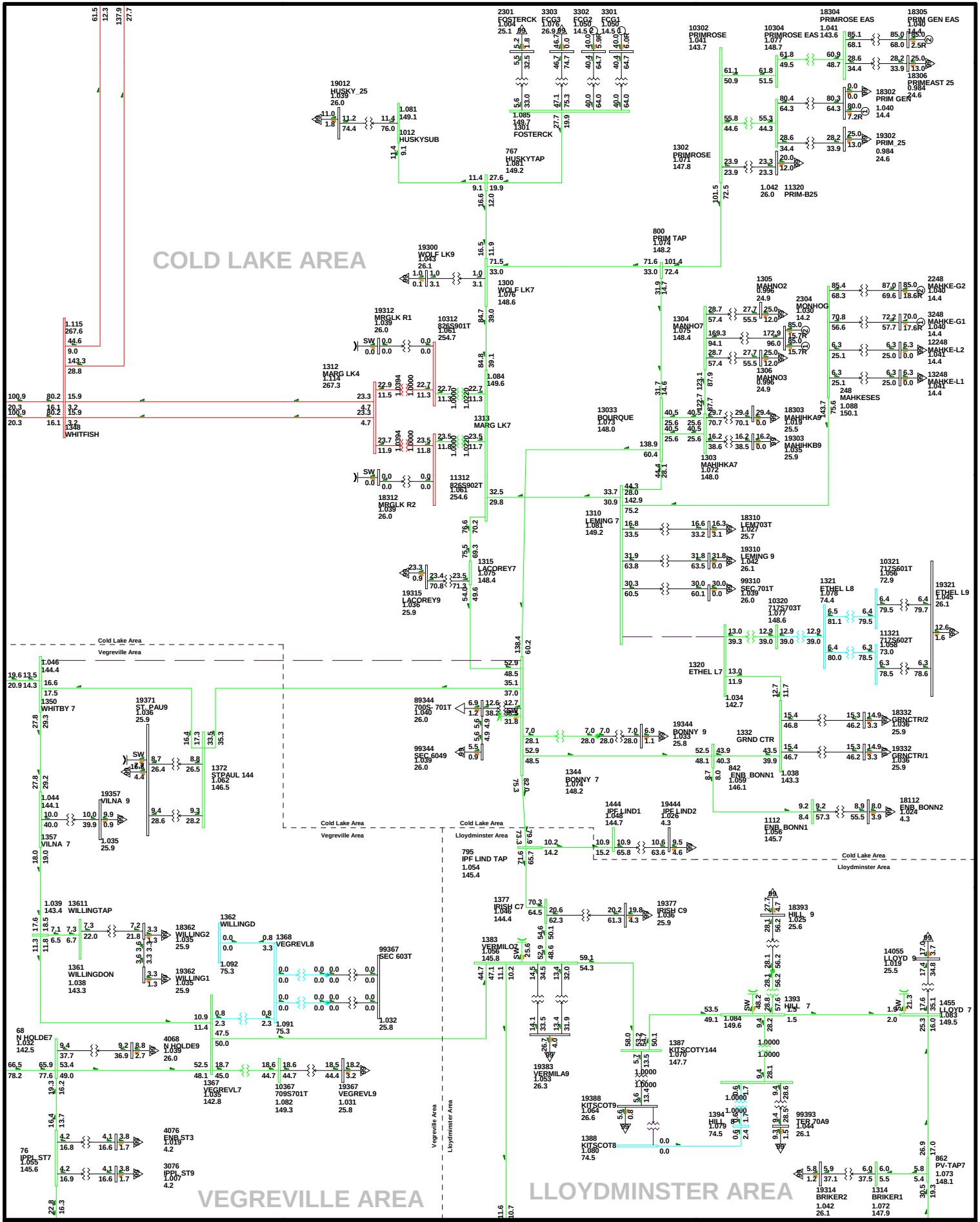
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 30 2010 16:43
D1-02

2012SP-Alt 1-3.b

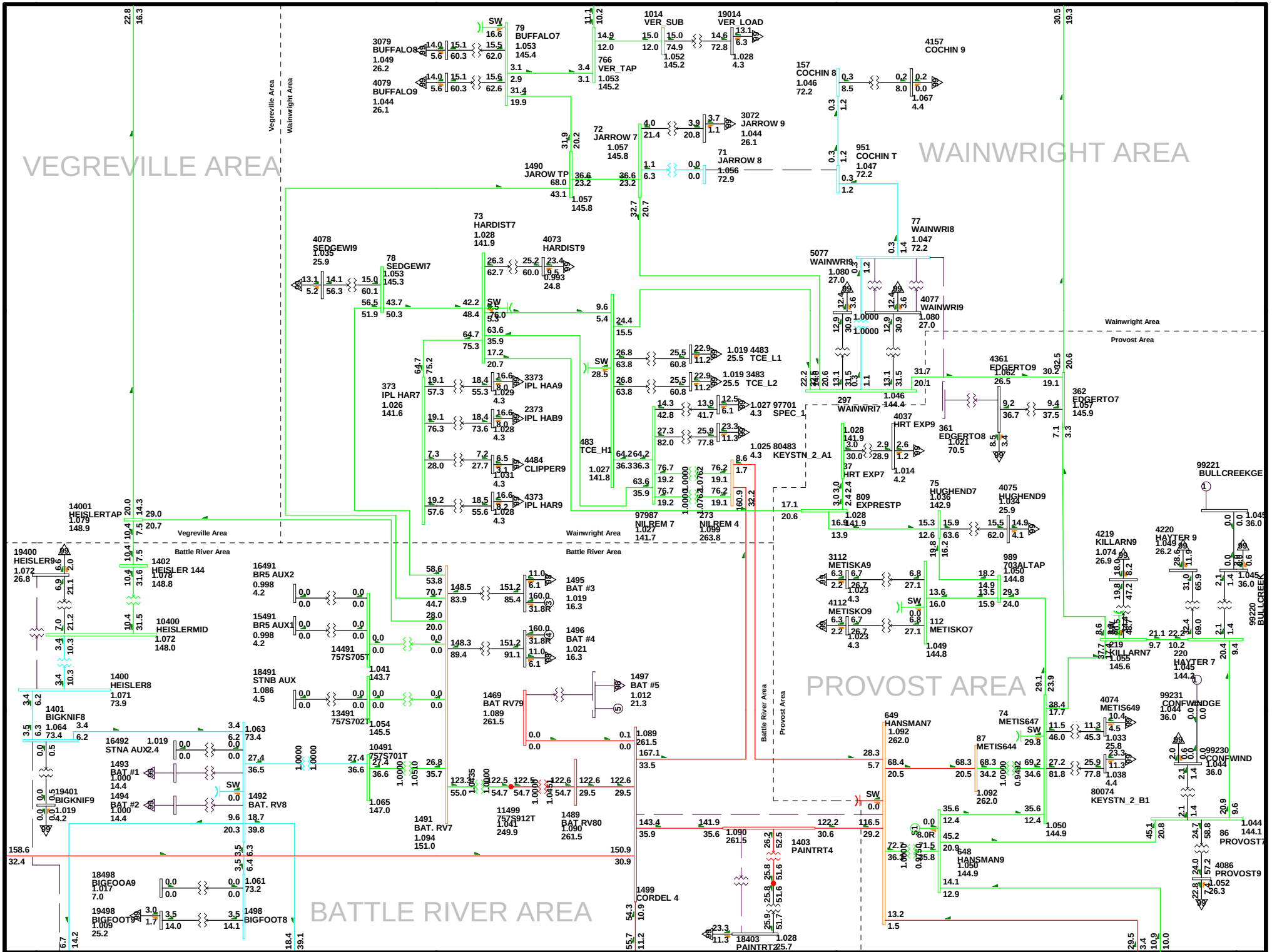
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

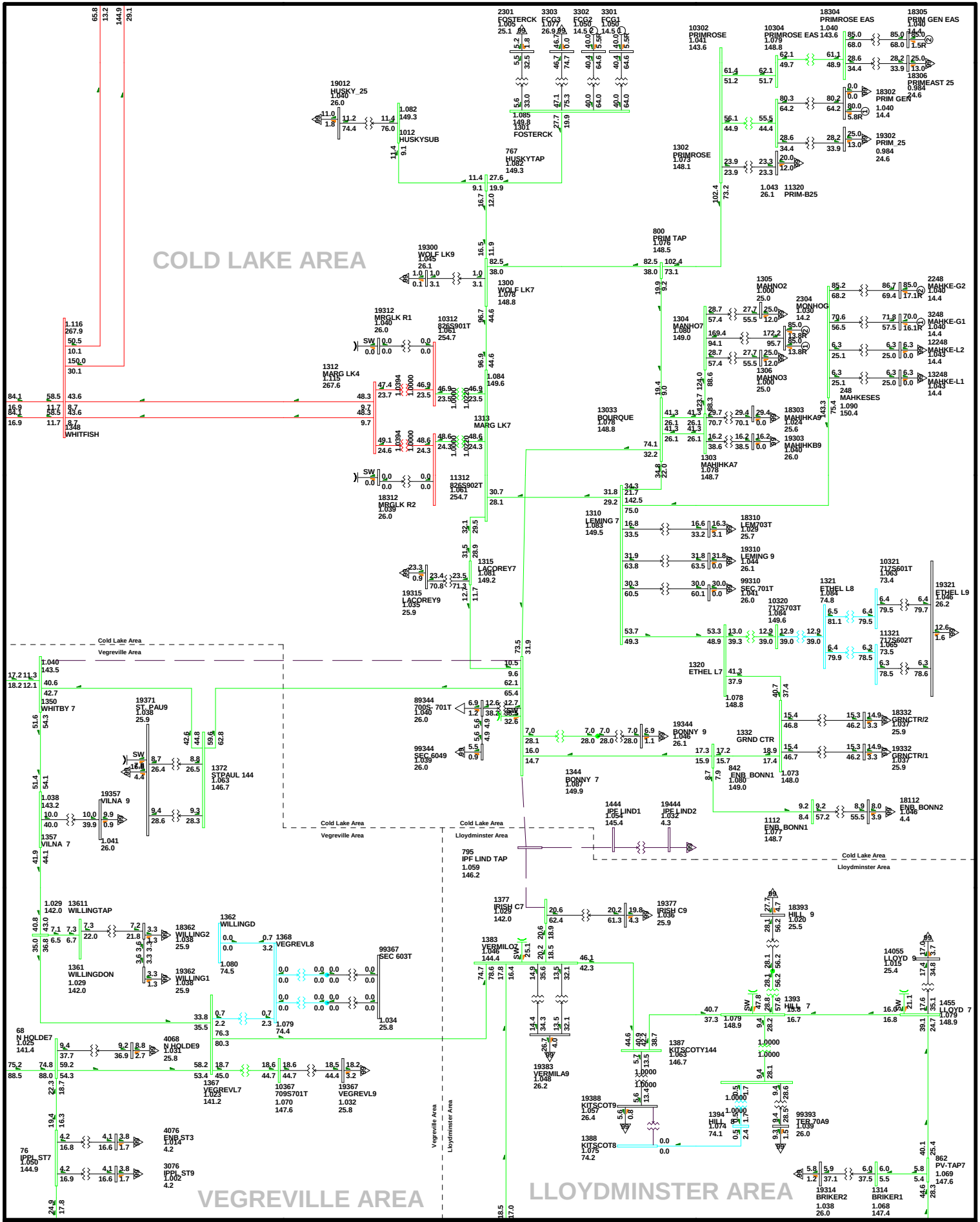


CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 30 2010 16:43
D1-03

2012SP-Alt 1-4.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

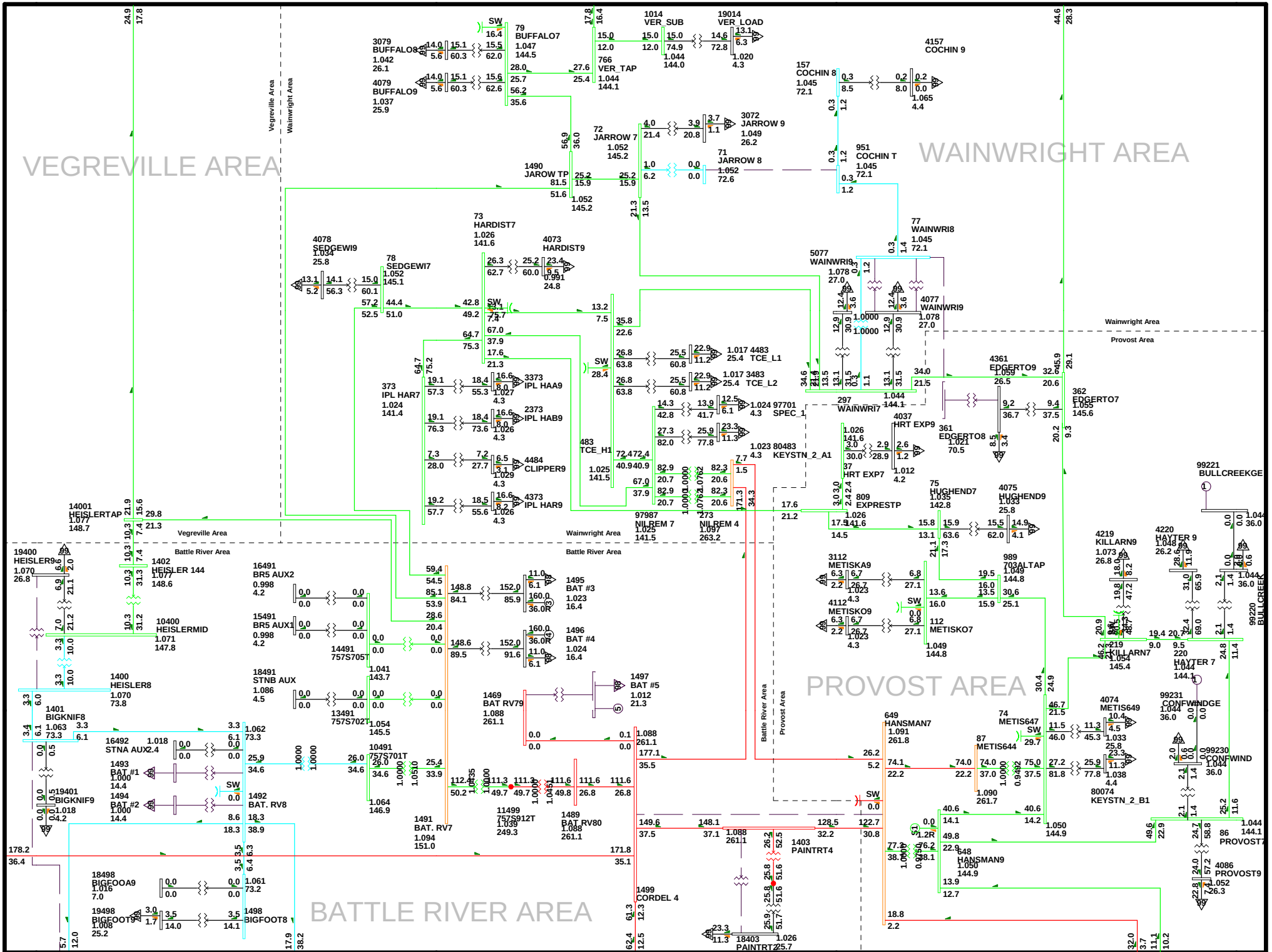

VEGREVILLE AREA
WAINWRIGHT AREA
PROVOST AREA
BATTLE RIVER AREA
Vegreville Area
Wainwright Area
Battle River Area
Provost Area
79 BUFFALO7 1.053 145.4
3079 BUFFALO8 1.049 26.2
4079 BUFFALO9 1.044 26.1
766 VER_TAP 1.053 145.2
1014 VER_SUB
19014 VER_LOAD
4157 COCHIN 9
157 COCHIN 8 1.046 72.2
951 COCHIN T 1.047 72.2
1067 4.4
72 JAROW 7 1.057 145.8
3072 JARROW 9 1.044 26.1
71 JAROW 8 1.056 72.9
1490 JAROW TP 68.0 43.1 1.057 145.8
77 WAINWRI8 1.047 72.2
5077 WAINWRI9 1.080 27.0
4077 WAINWRI9 1.080 27.0
297 WAINWRI7
4078 SEDGEWI9 1.035 25.9
78 SEDGEWI7 1.053 145.3
73 HARDIST7 1.028 141.9
4073 HARDIST9 0.993 24.8
373 IPL HAR7 1.026 141.6
3373 IPL HAA9 1.029 4.3
2373 IPL HAB9 1.028 4.3
4484 CLIPPER9 1.031 4.3
4373 IPL HAR9 1.028 4.3
1019 4483 TCE_L1 25.5
1019 3483 TCE_L2 25.5
483 TCE_H1 1.027 141.8
1027 97701 SPEC_1 4.3
1025 80483 KEYSTN_2_A1 4.3
4037 HRT EXP9
37 HRT EXP7 1.014 4.2
4361 EDGERTO9 1.062 26.5
362 EDGERTO7 1.057 145.9
361 EDGERTO8 1.021 70.5
809 EXPRESTP 1.028 141.9
75 HUGHEND7 1.036 142.9
4075 HUGHEND9 1.034 25.9
97987 NILREM 7 1.027 141.7
273 NILREM 4 1.099 263.8
14001 HEISLERTAP 1.079 148.9
1402 HEISLER 144 1.076 148.8
19400 HEISLER9 1.072 26.8
10400 HEISLERMID 1.072 148.0
1400 HEISLER8 1.071 73.9
1401 BIGKNIF8 1.064 73.4
19401 BIGKNIF9 1.019 4.2
16491 BR5 AUX2 0.998 4.2
15491 BR5 AUX1 0.998 4.2
14491 757S705T 1.041 143.7
18491 STNB AUX 1.086 4.5
13491 757S702T 1.054 145.5
16492 STNA AUX 1.019 2.4
10491 757S701T 1.065 147.0
1493 BAT #1 1.000 14.4
1494 BAT #2 1.000 14.4
1492 BAT. RV8 18.7 39.8
1491 BAT. RV7 1.094 151.0
1495 BAT #3 1.019 16.3
1496 BAT #4 1.021 16.3
1497 BAT #5 1.012 21.3
1469 BAT RV79 1.089 261.5
11499 757S912T 1.041 249.9
1489 BAT_RV80 1.090 261.5
1499 CORDEL 4
18498 BIGEOOA9 1.017 7.0
19498 BIGFOOT9 1.009 25.2
1498 BIGFOOT8 1.009 14.1
18403 PAINTRT2 1.028 25.7
1403 PAINTRT4 1.090 30.6
649 HANSMAN7 1.092 262.0
74 METIS647
87 METIS644 1.092 262.0
4074 METIS649 1.033 25.8
80074 KEYSTN_2_B1 4.4
648 HANSMAN9 1.050 144.9
3112 METISKA9 1.023 4.3
4112 METISKO9 1.023 4.3
112 METISKO7 1.049 144.8
989 703ALTAP 1.050 144.8
1050 144.9
4219 KILLARN9 1.074 26.9
219 KILLARN7 1.055 145.6
4220 HAYTER 9 1.049 26.2
220 HAYTER 7 1.045 144.2
99221 BULLCREEKGE
99220 BULLCREEK
99231 CONFWNDGE 1.044 36.0
99230 CONFWIND 1.044 36.0
4086 PROVOST9 1.052 26.3
86 PROVOST7 1.044 144.1
CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 30 2010 16:43
D1-03
2012SP-Alt 1-4.b
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 30 2010 16:43
D1-04

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

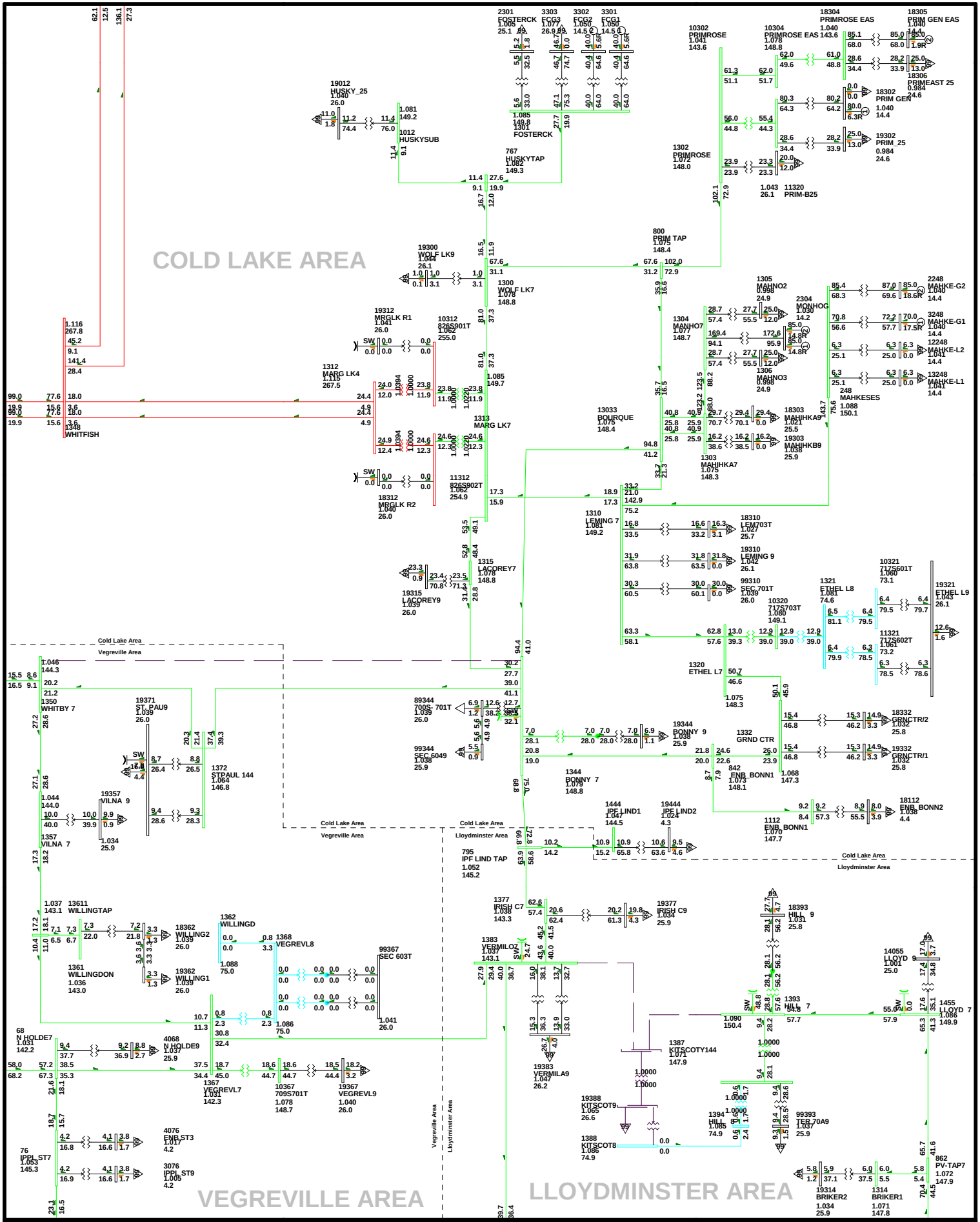
2012SP-Alt 1-5.a



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 30 2010 16:43
D1-04

2012SP-Alt 1-5.b

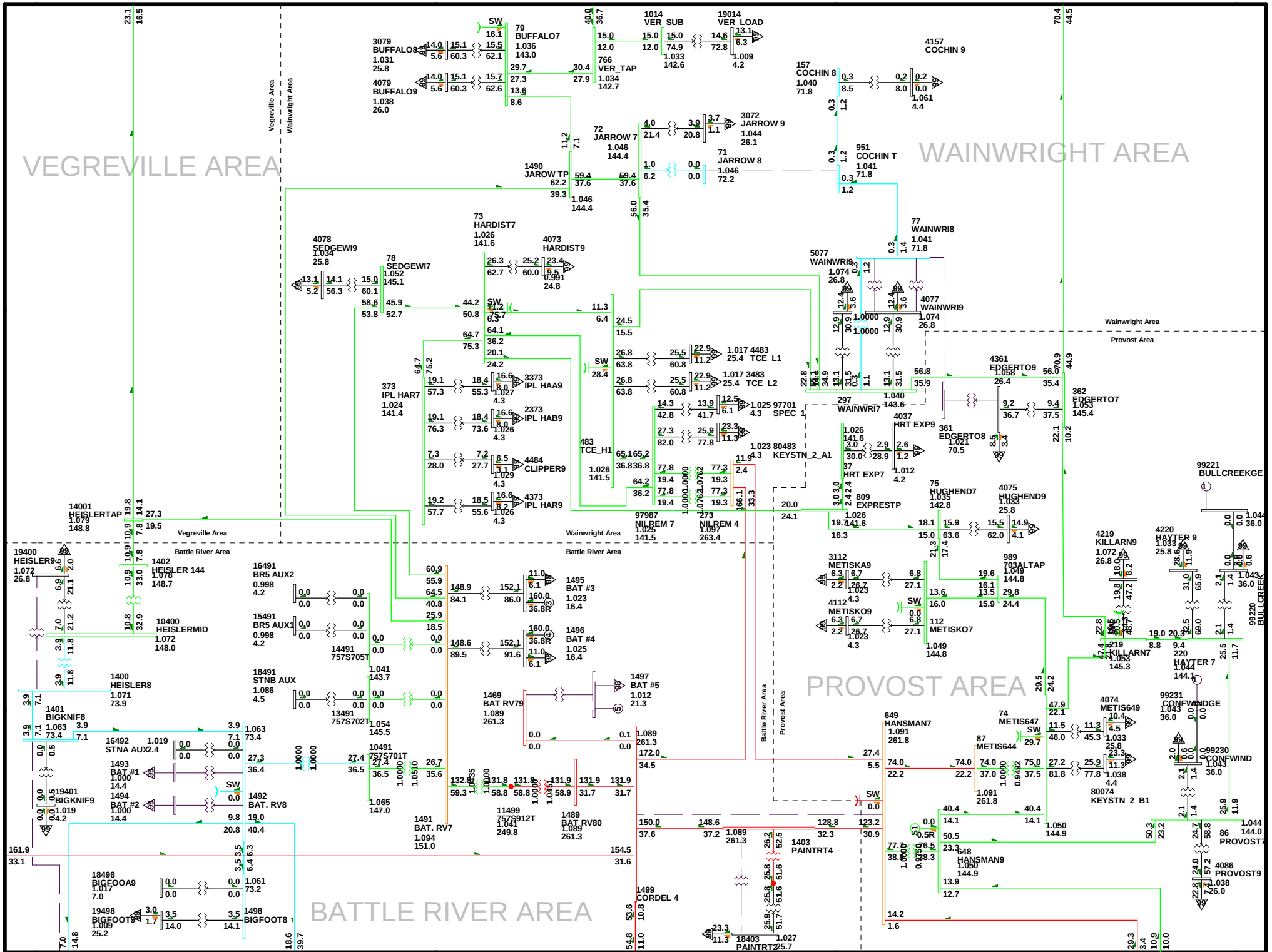
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 30 2010 16:43
D1-05

2012SP-Alt 1-6.a

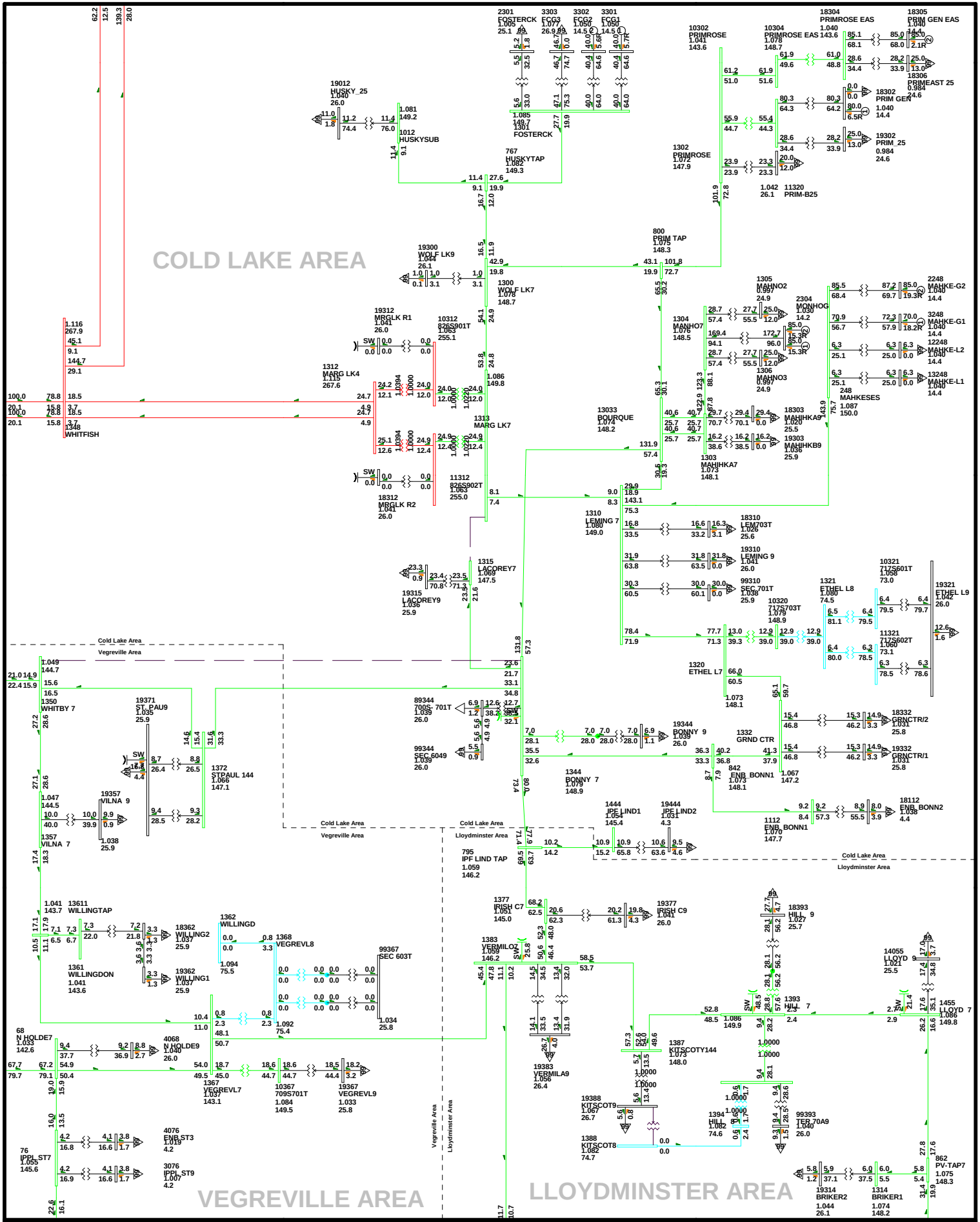
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 30 2010 16:43
D1-05

2012SP-Alt 1-6.b

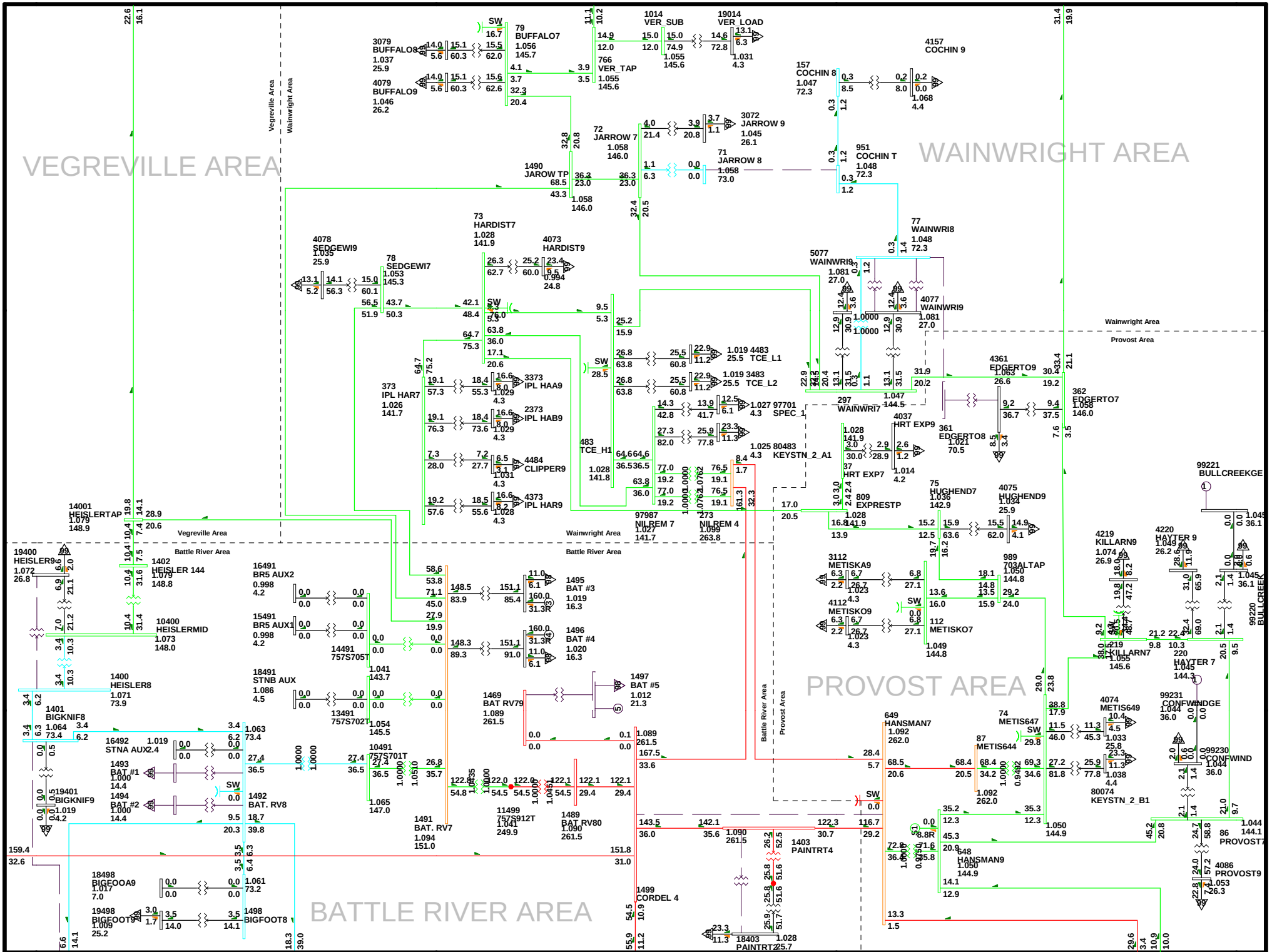
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 30 2010 16:43
D1-06

2012SP-Alt 1-7.a

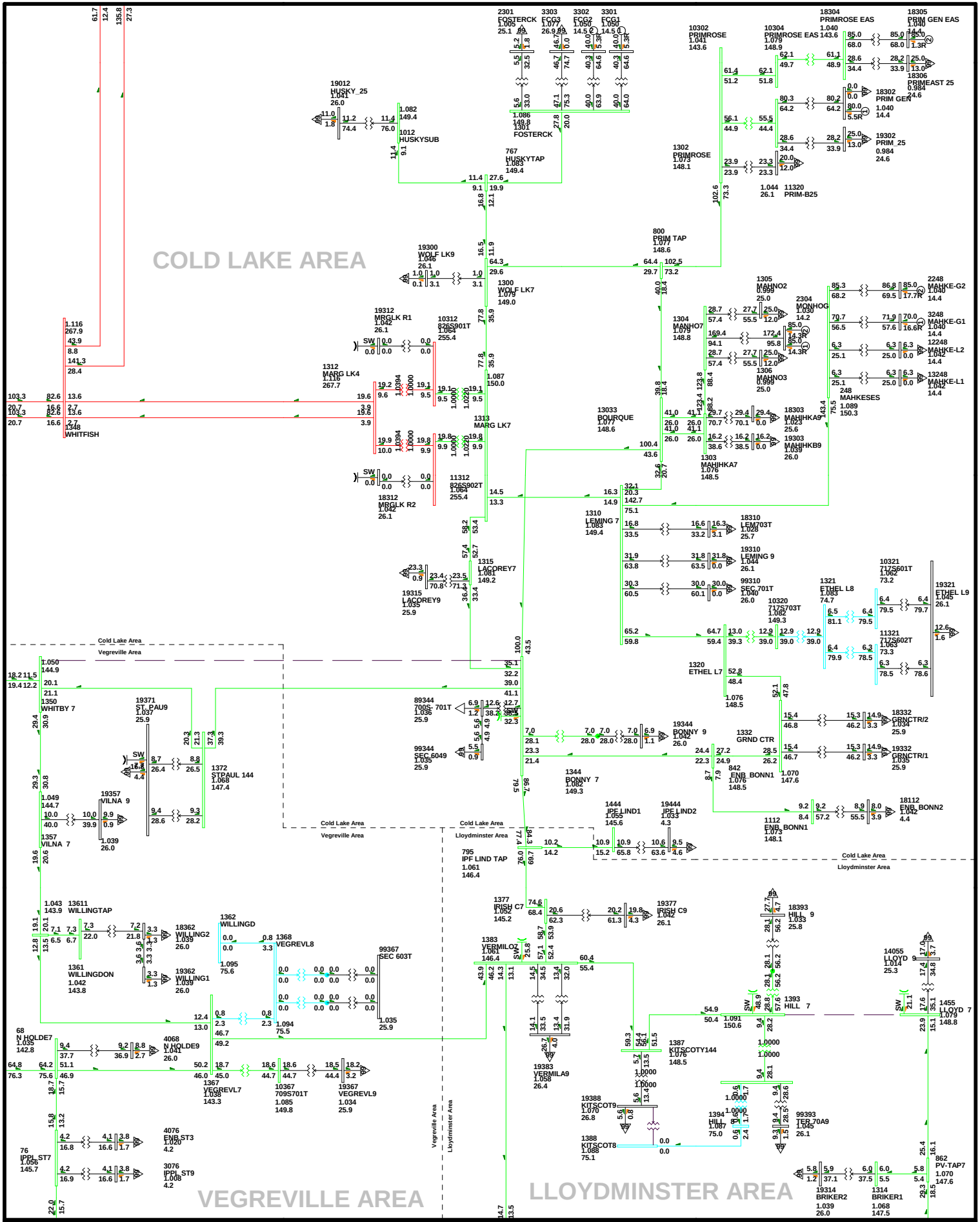
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 30 2010 16:43
D1-06

2012SP-Alt 1-7.b

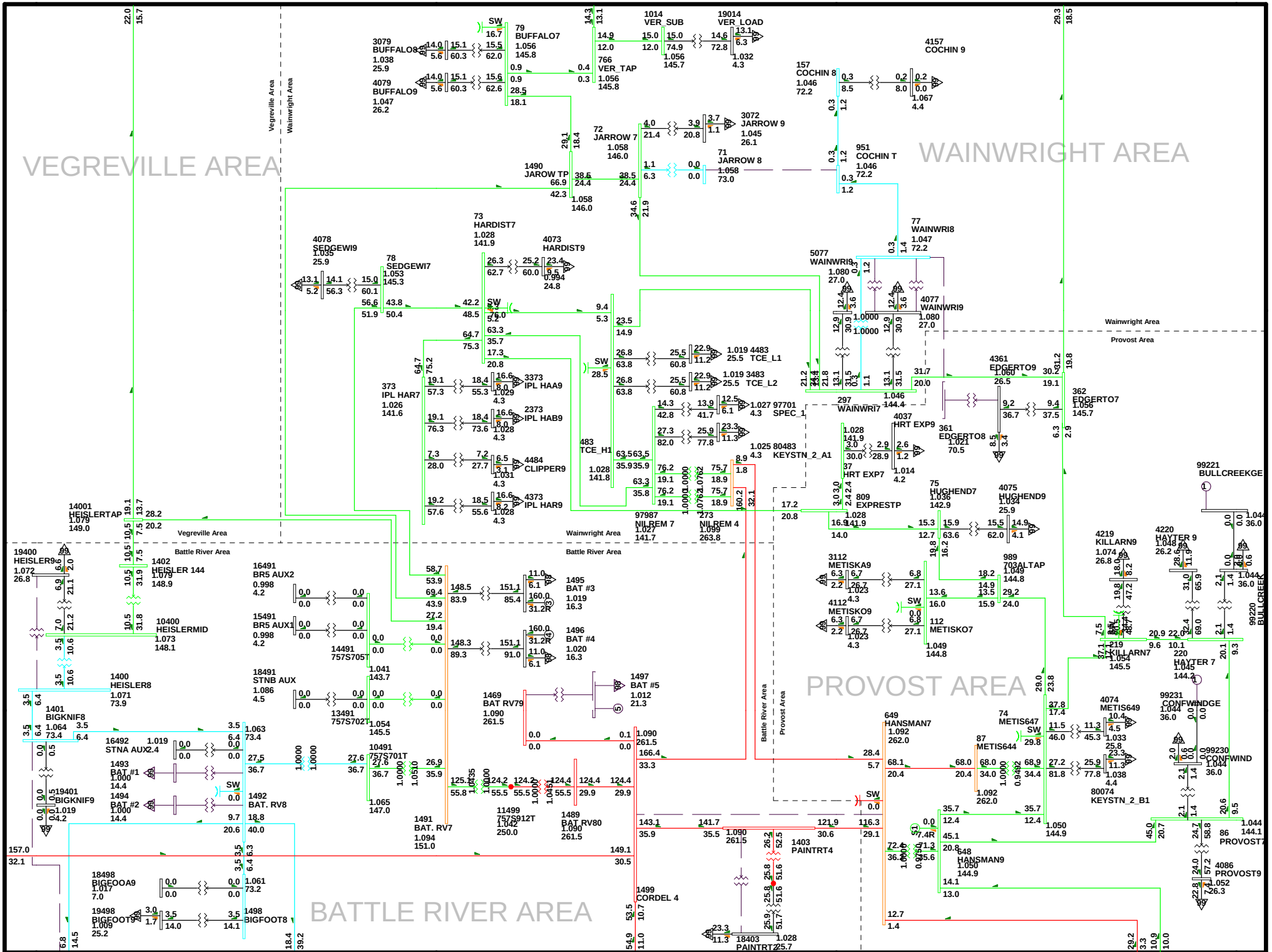
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 30 2010 16:43
D1-07

2012SP-Alt 1-8.a

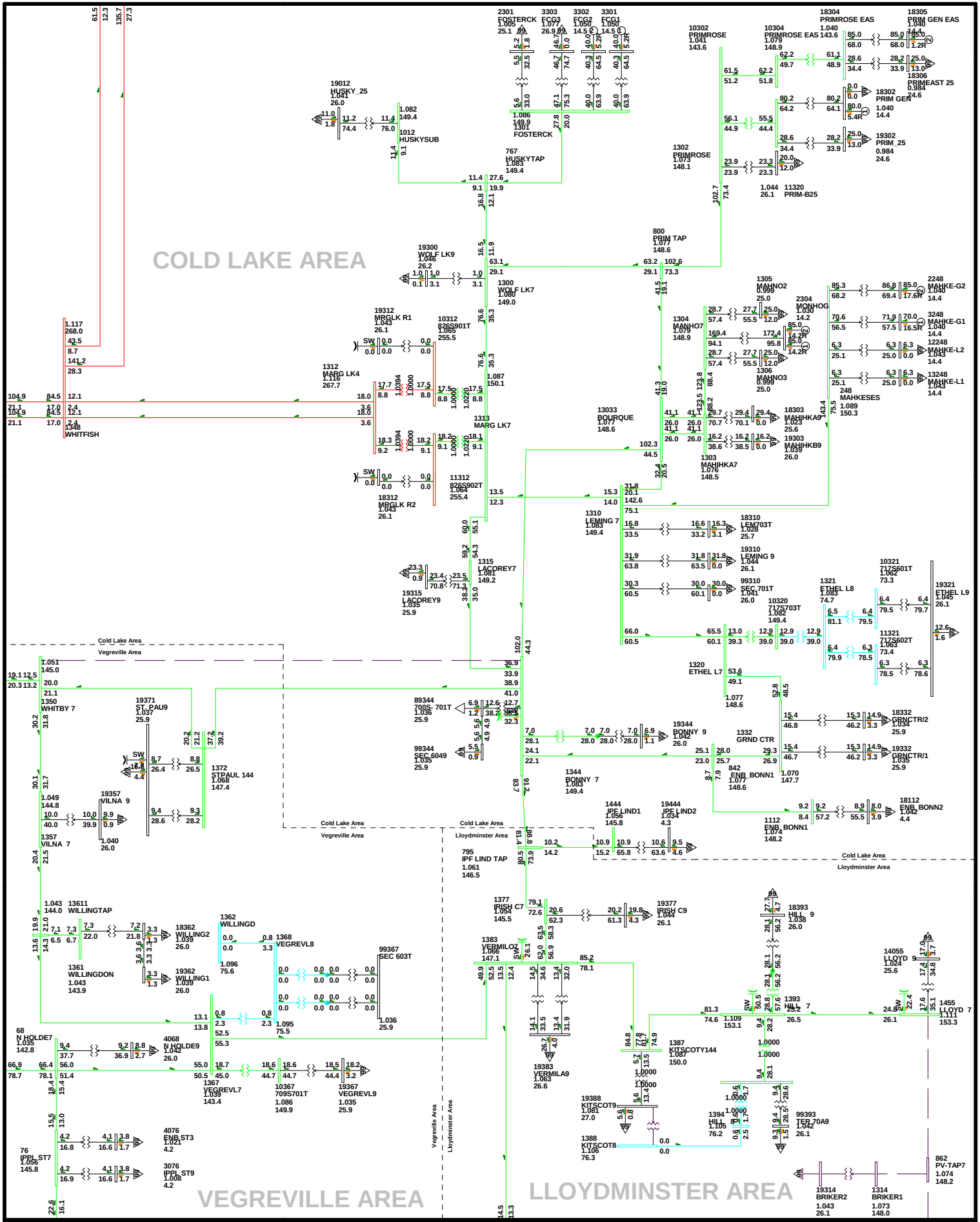
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 30 2010 16:43
D1-07

2012SP-Alt 1-8.b

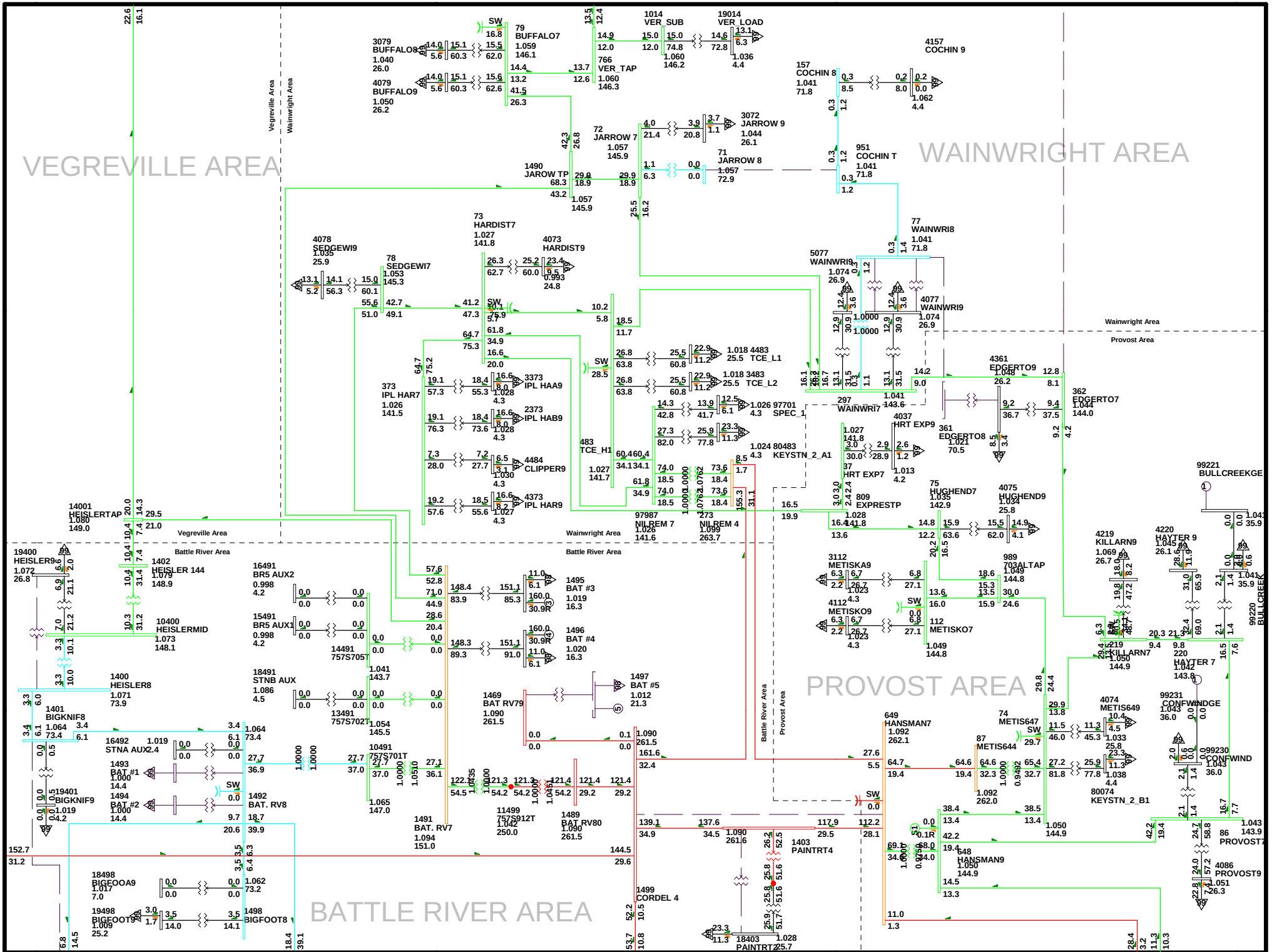
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 30 2010 16:43
D1-08

2012SP-Alt 1-9.a

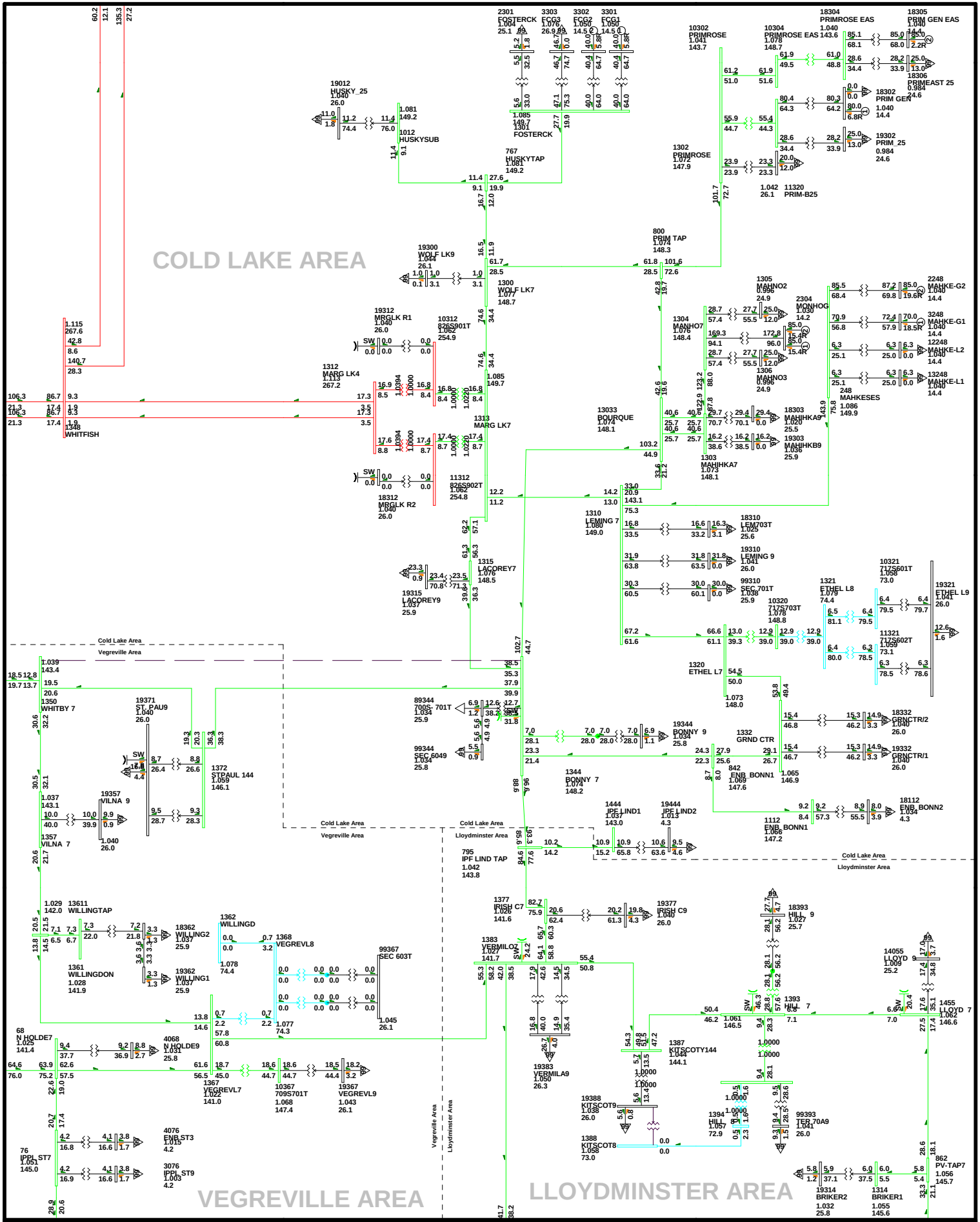
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 30 2010 16:43
D1-08

2012SP-Alt 1-9.b

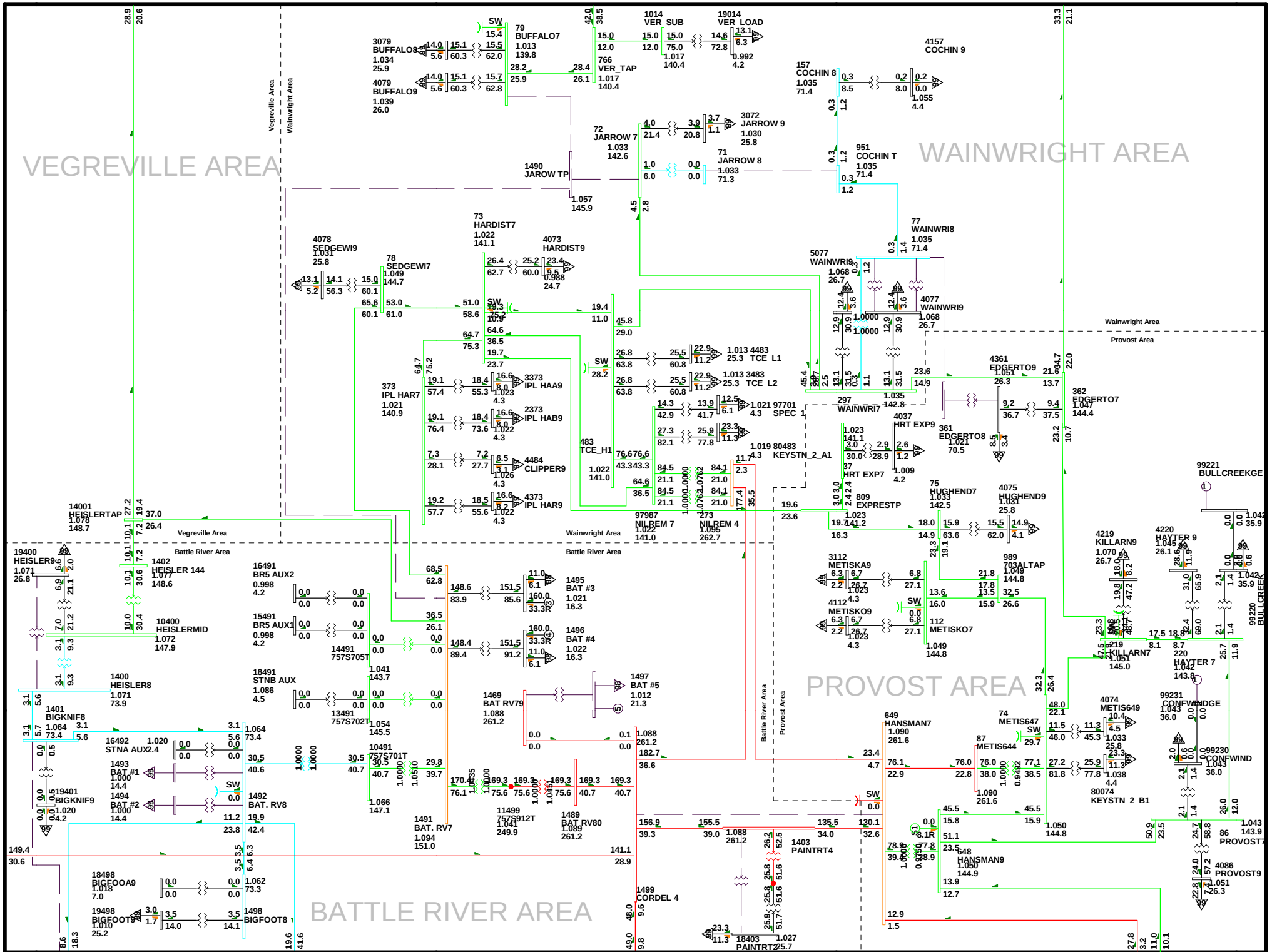
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 30 2010 16:43
D1-09

2012SP-Alt 1-10.a

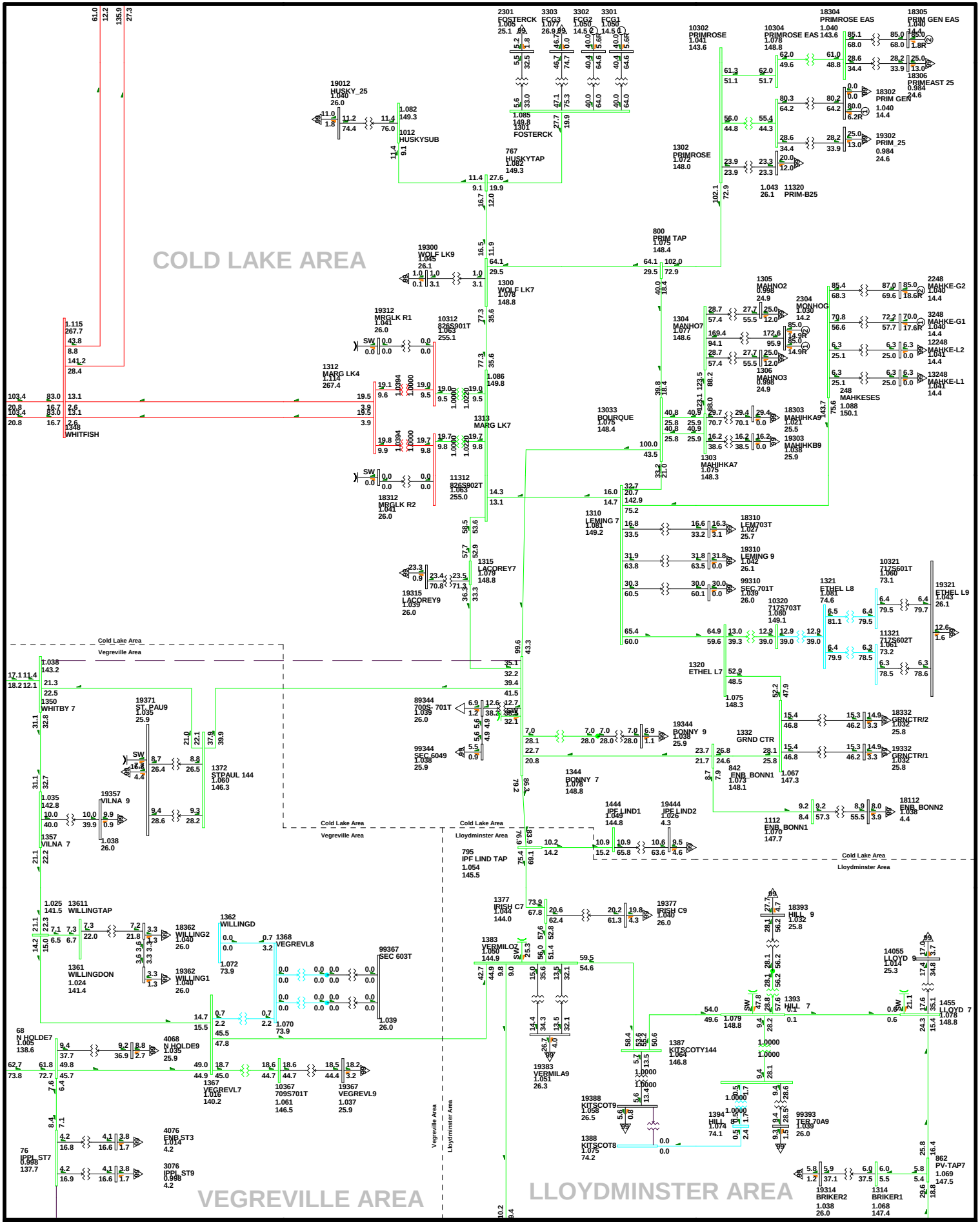
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 30 2010 16:43
D1-09

2012SP-Alt 1-10.b

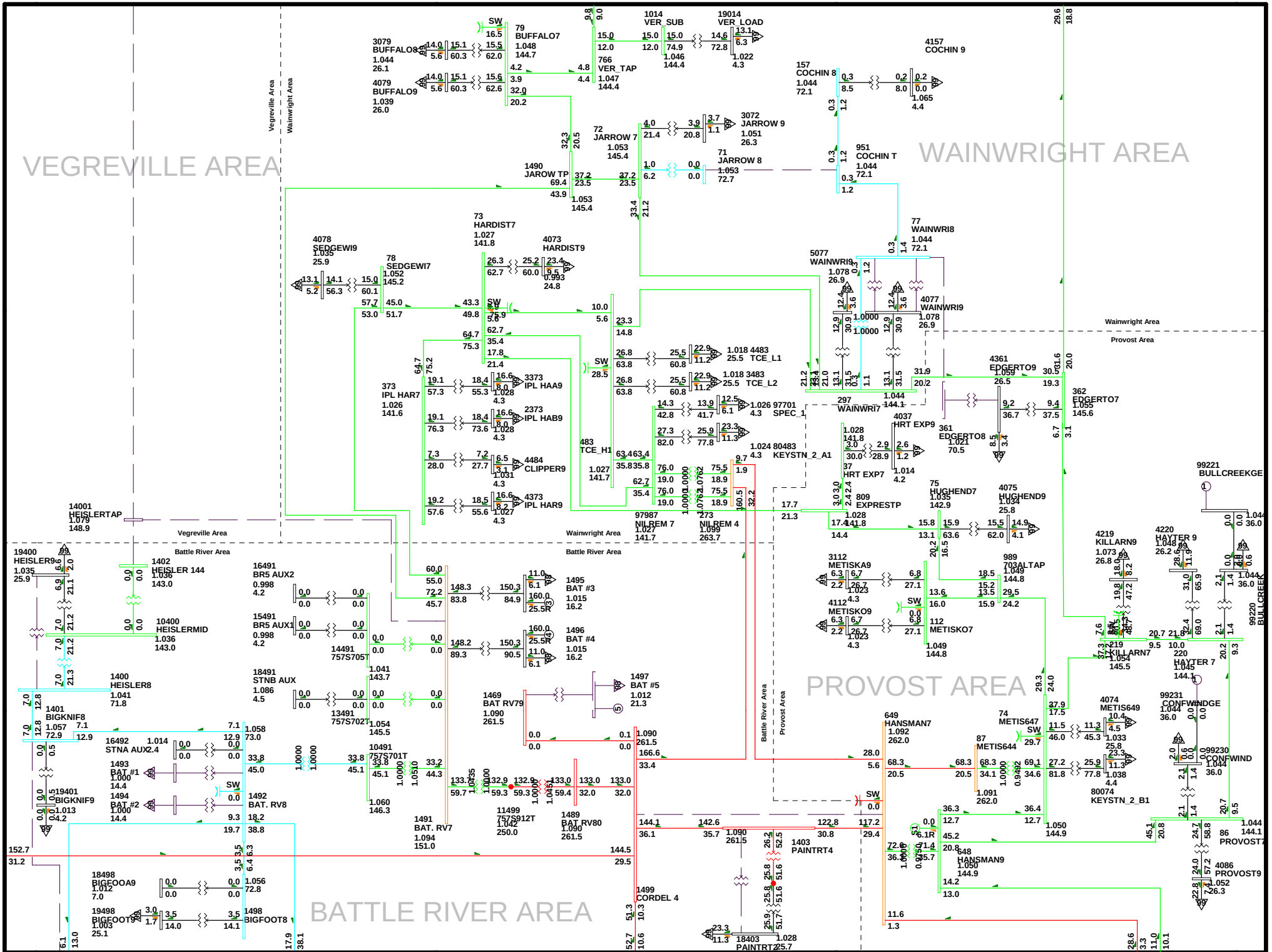
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 30 2010 16:43
D1-10

2012SP-Alt 1-11.a

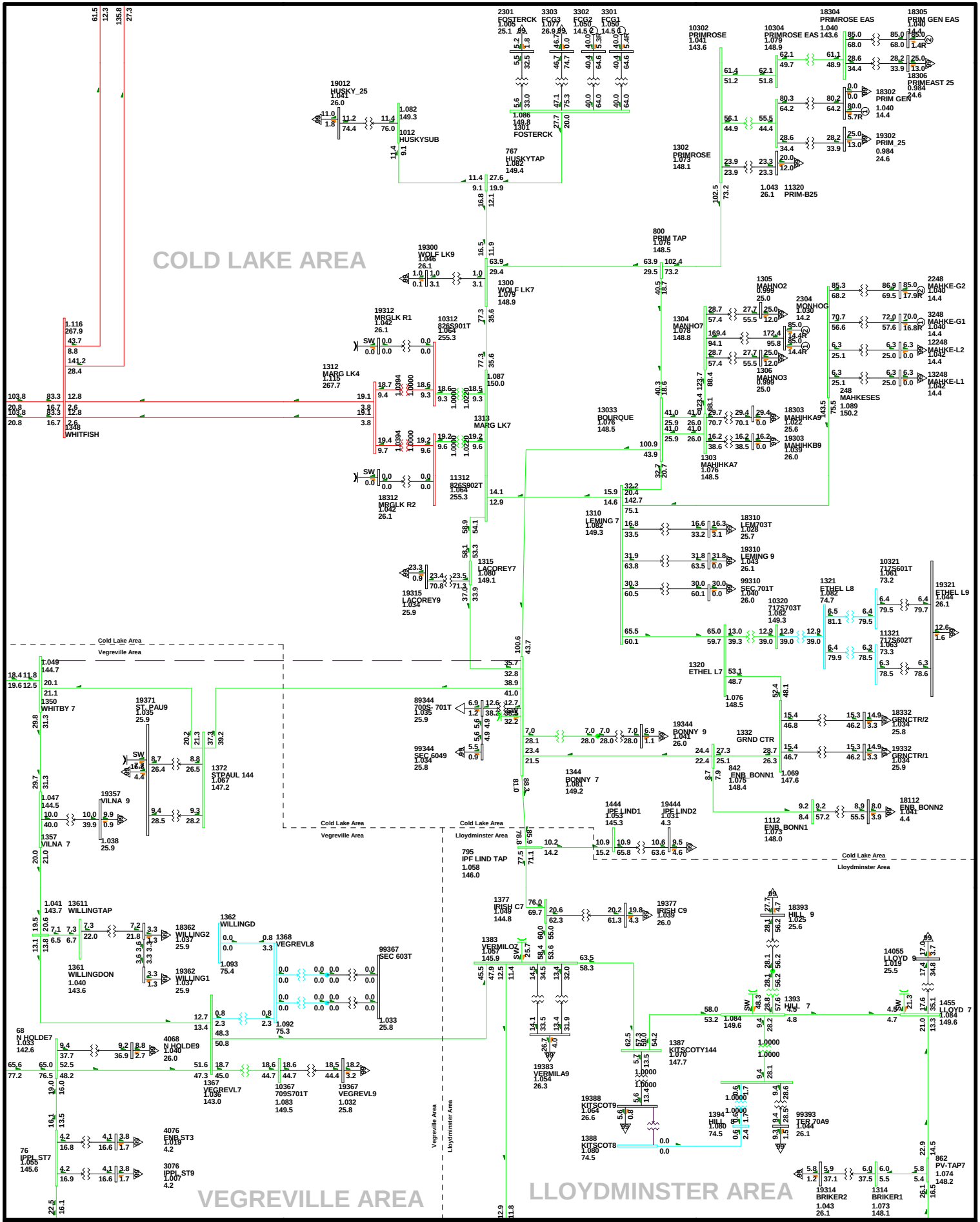
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 30 2010 16:44
D1-10

2012SP-Alt 1-11.b

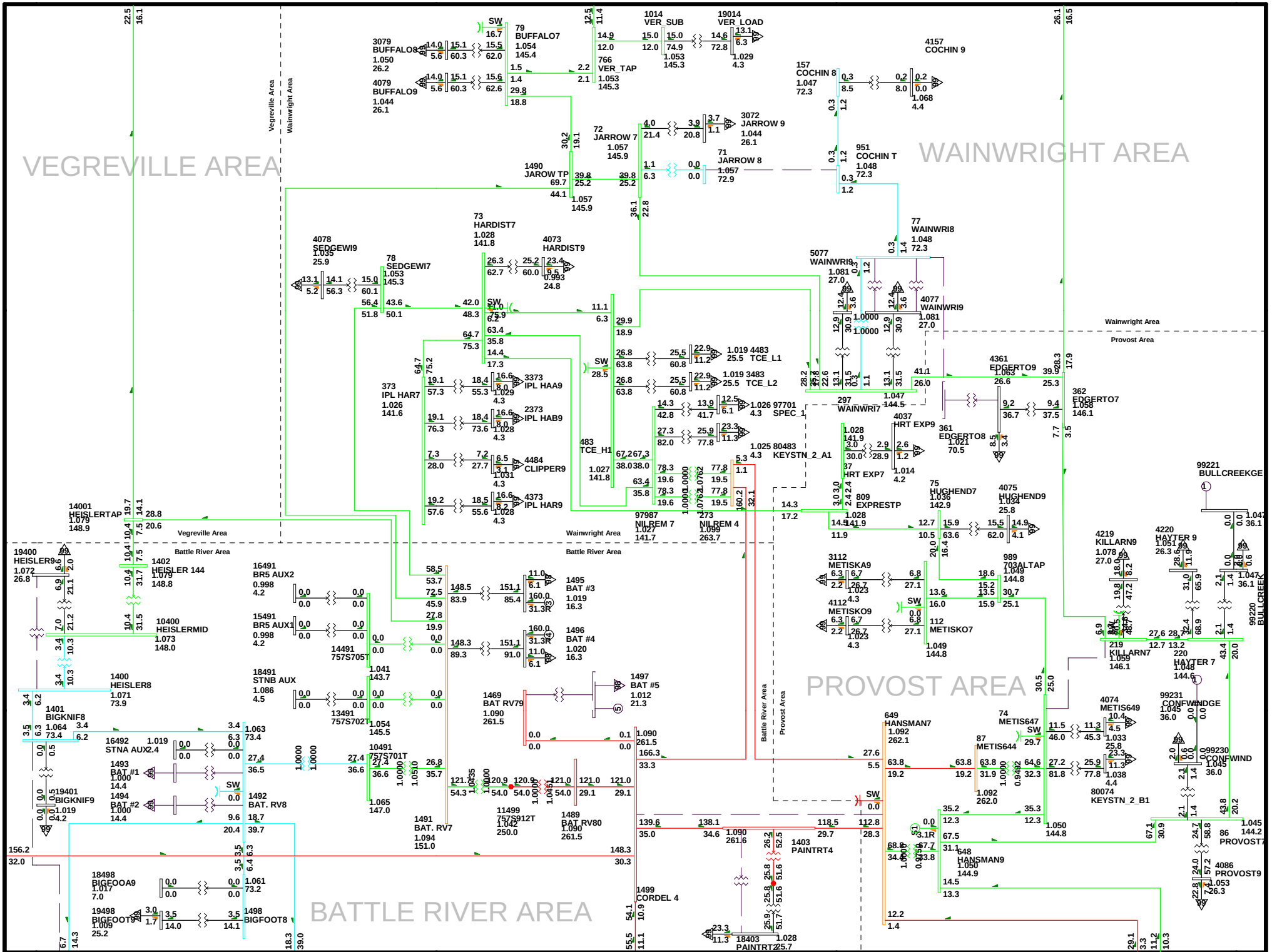
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 30 2010 16:44
D1-11

2012SP-Alt 1-12.a

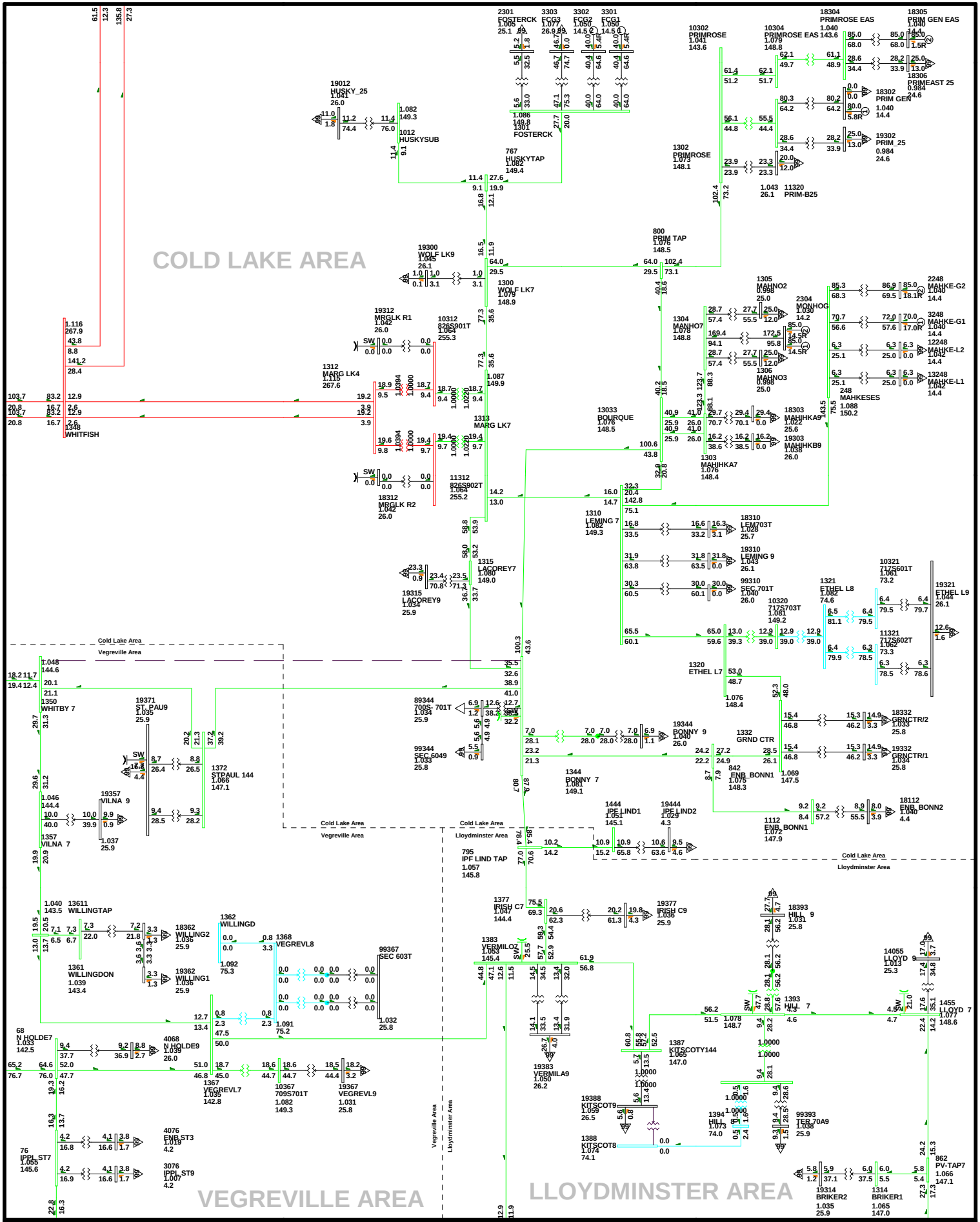
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 30 2010 16:44
D1-11

2012SP-Alt 1-12.b

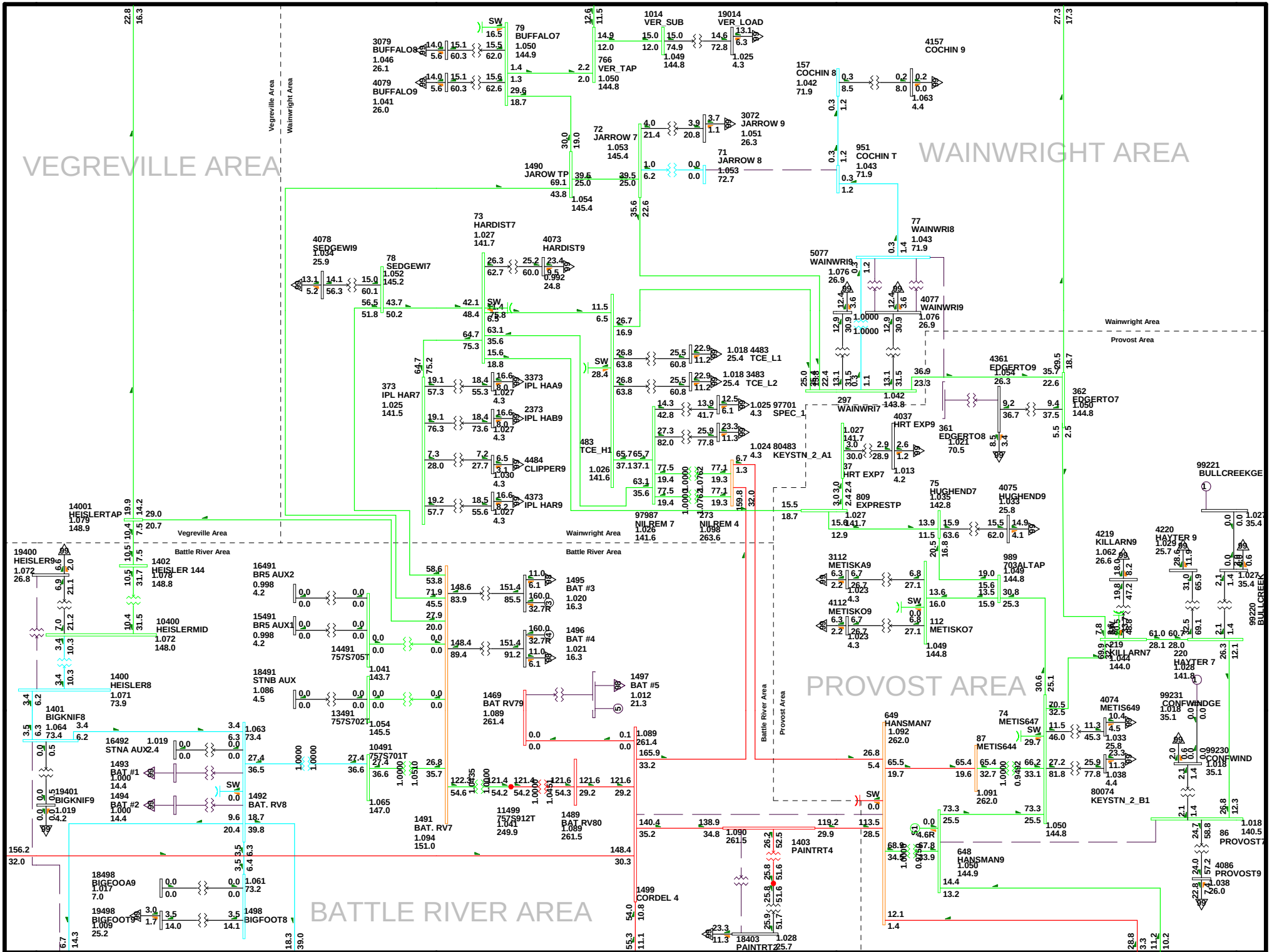
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 30 2010 16:44
D1-12

2012SP-Alt 1-13.a

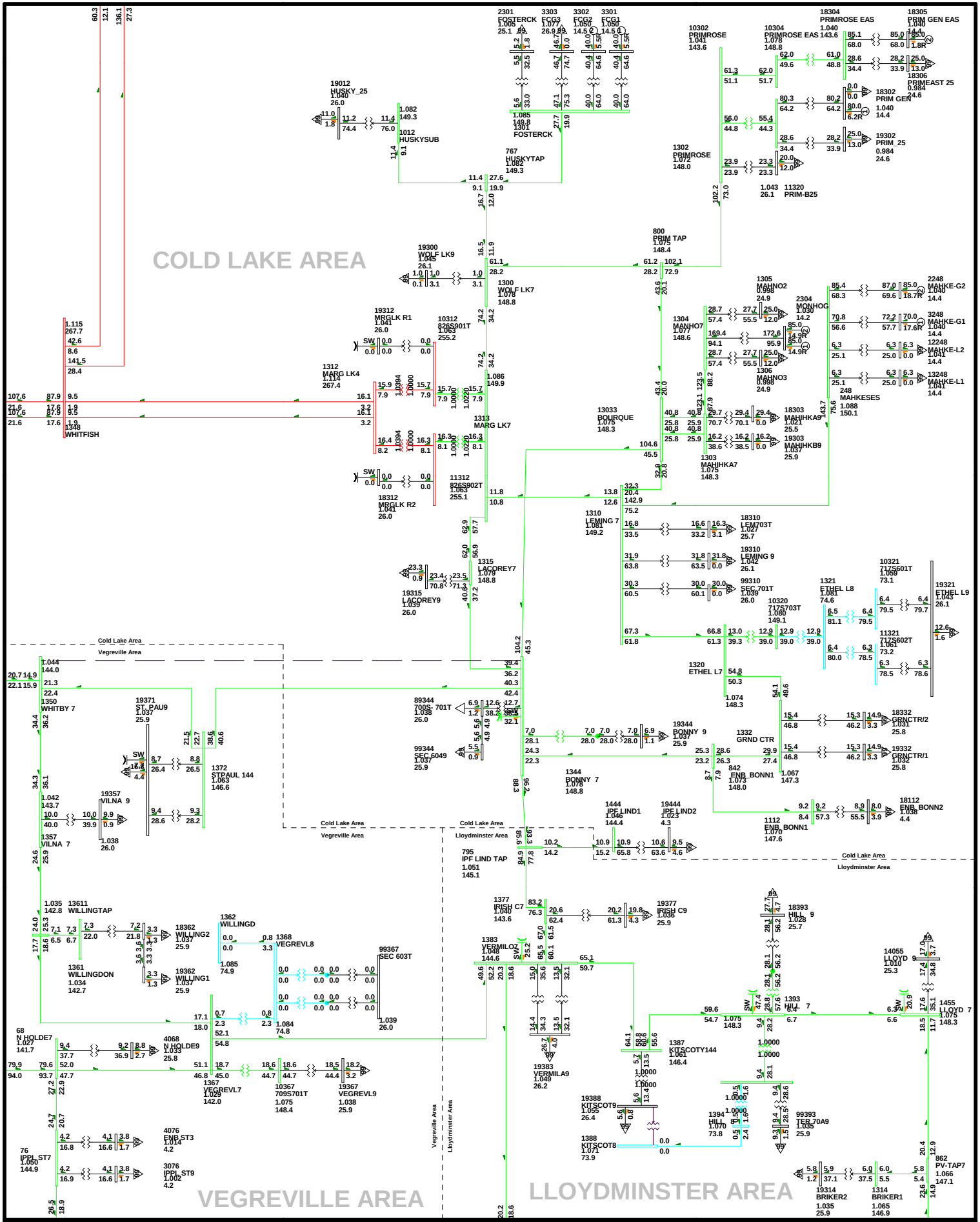
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 30 2010 16:44
D1-12

2012SP-Alt 1-13.b

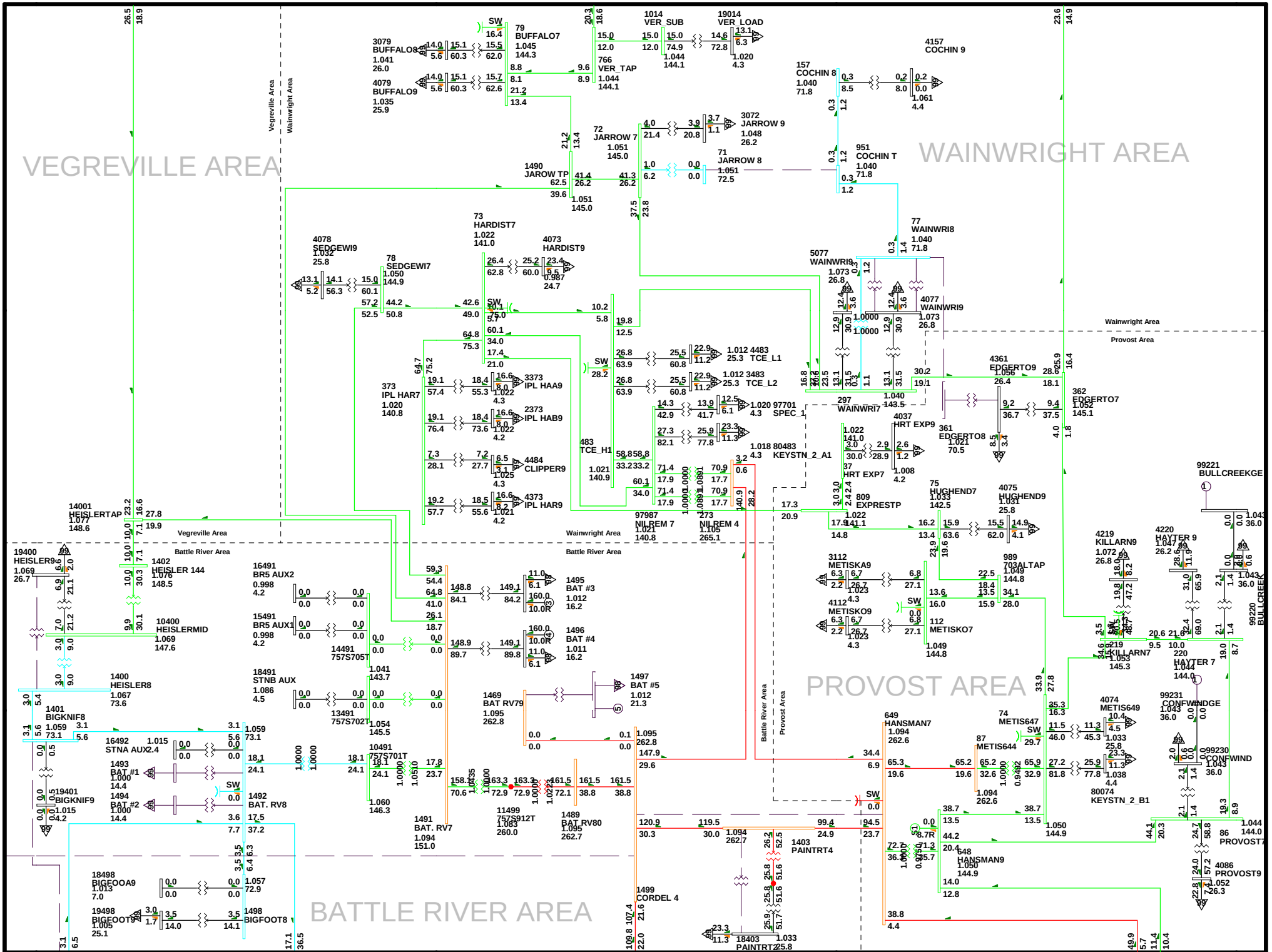
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 30 2010 16:44
D1-14

2012SP-Alt 1-14.a

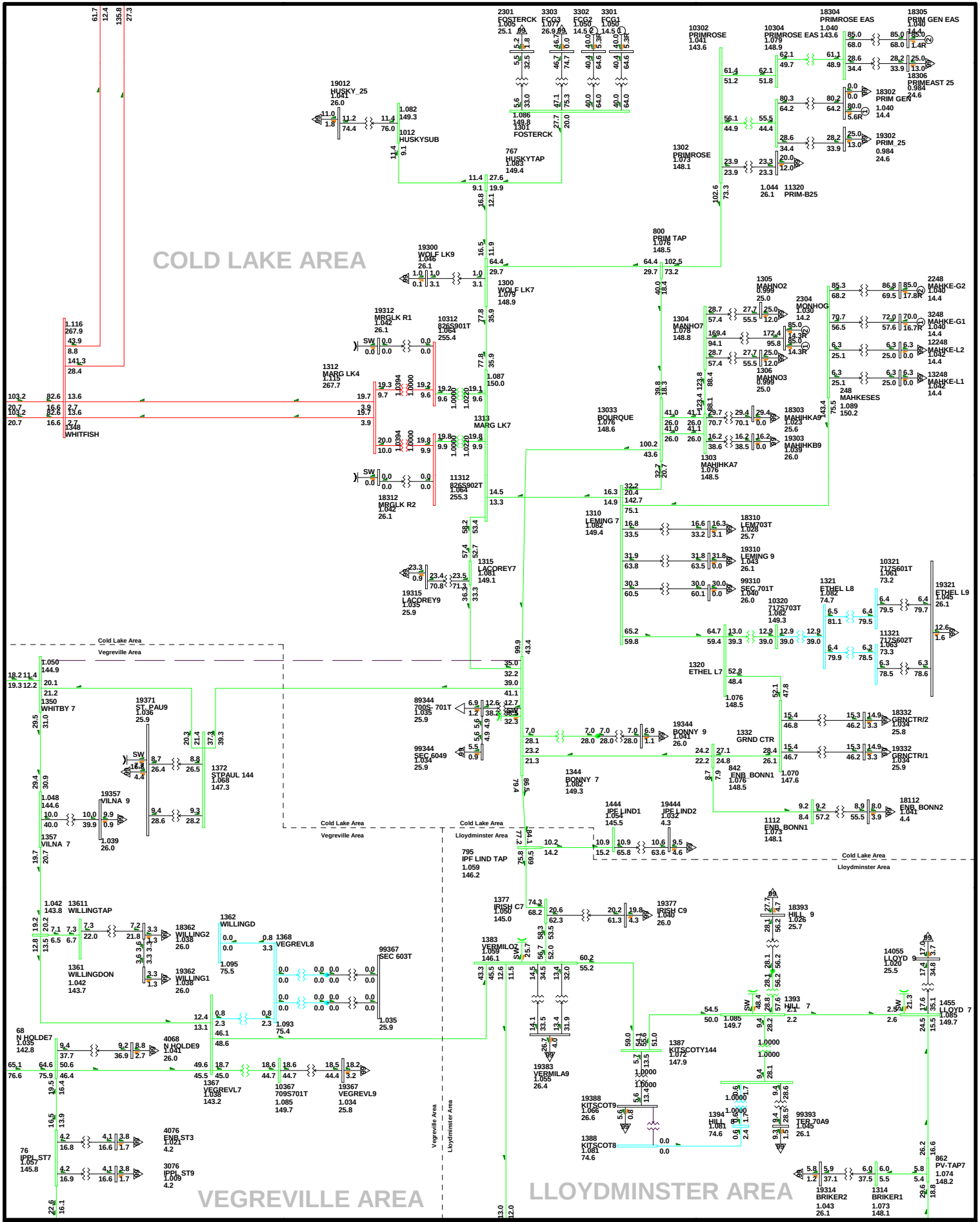
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 30 2010 16:44
D1-14

2012SP-Alt 1-14.b

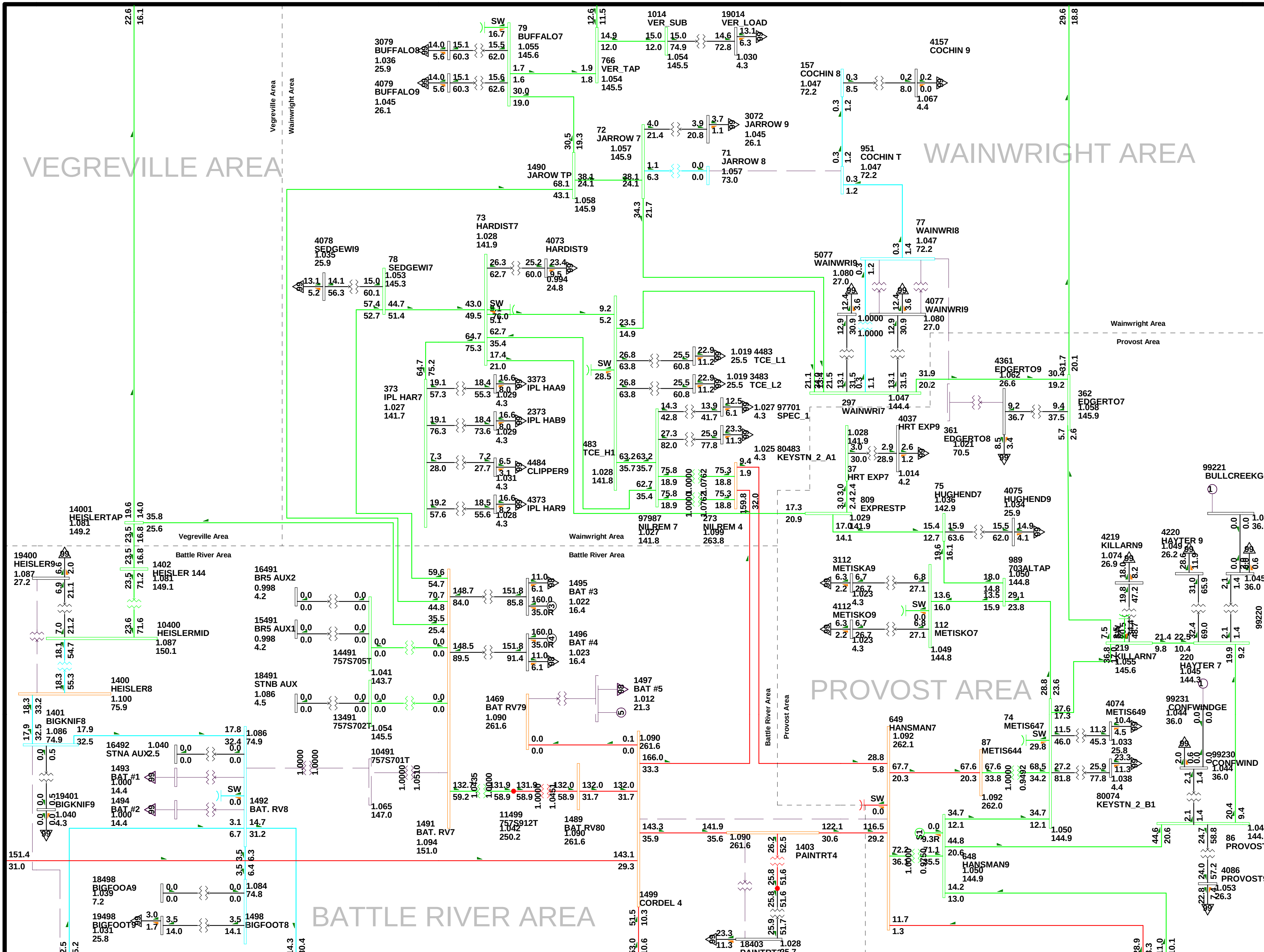
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 30 2010 16:44
D1-15

2012SP-Alt 1-15.a

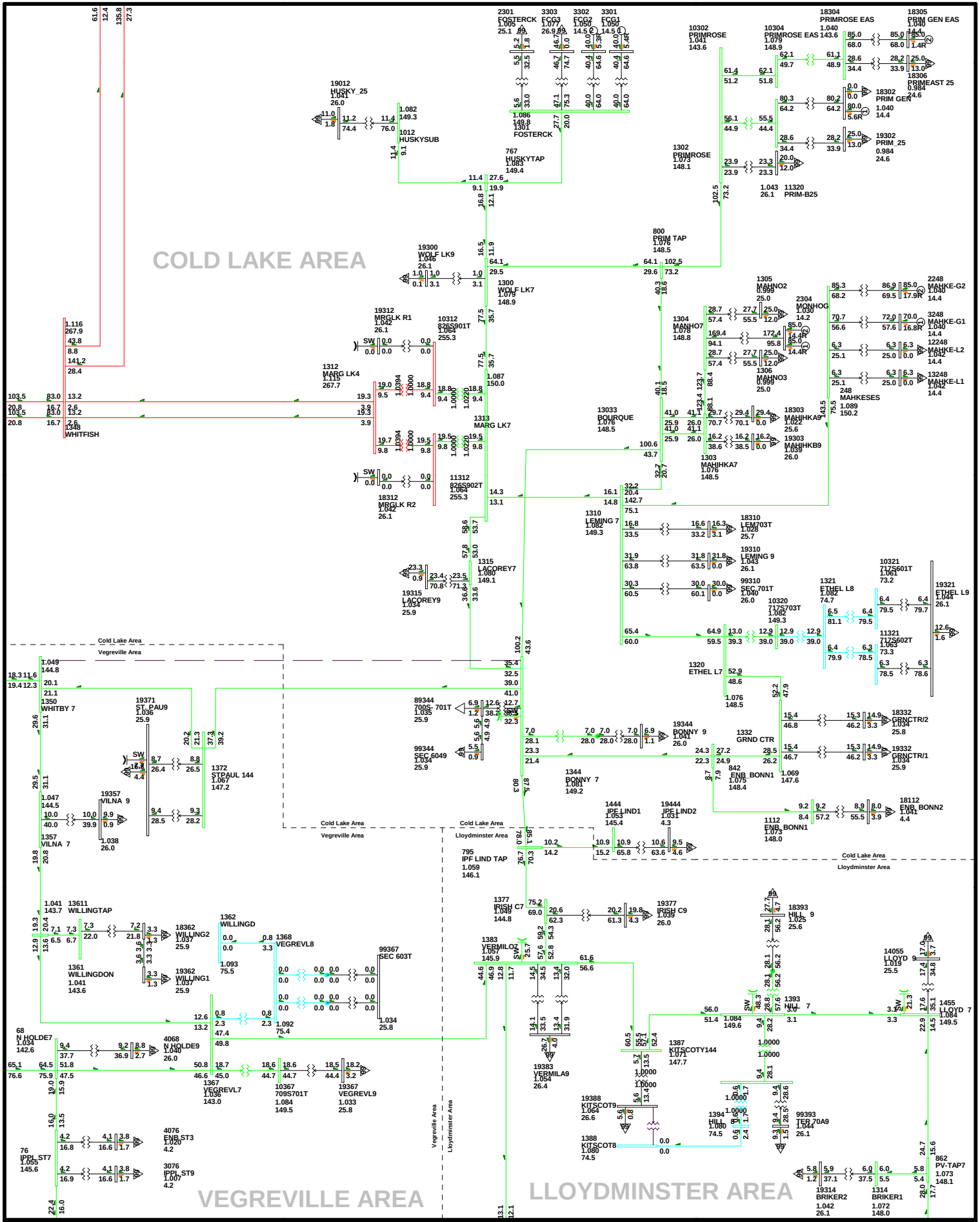
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 30 2010 16:44
D1-15

2012SP-Alt 1-15.b

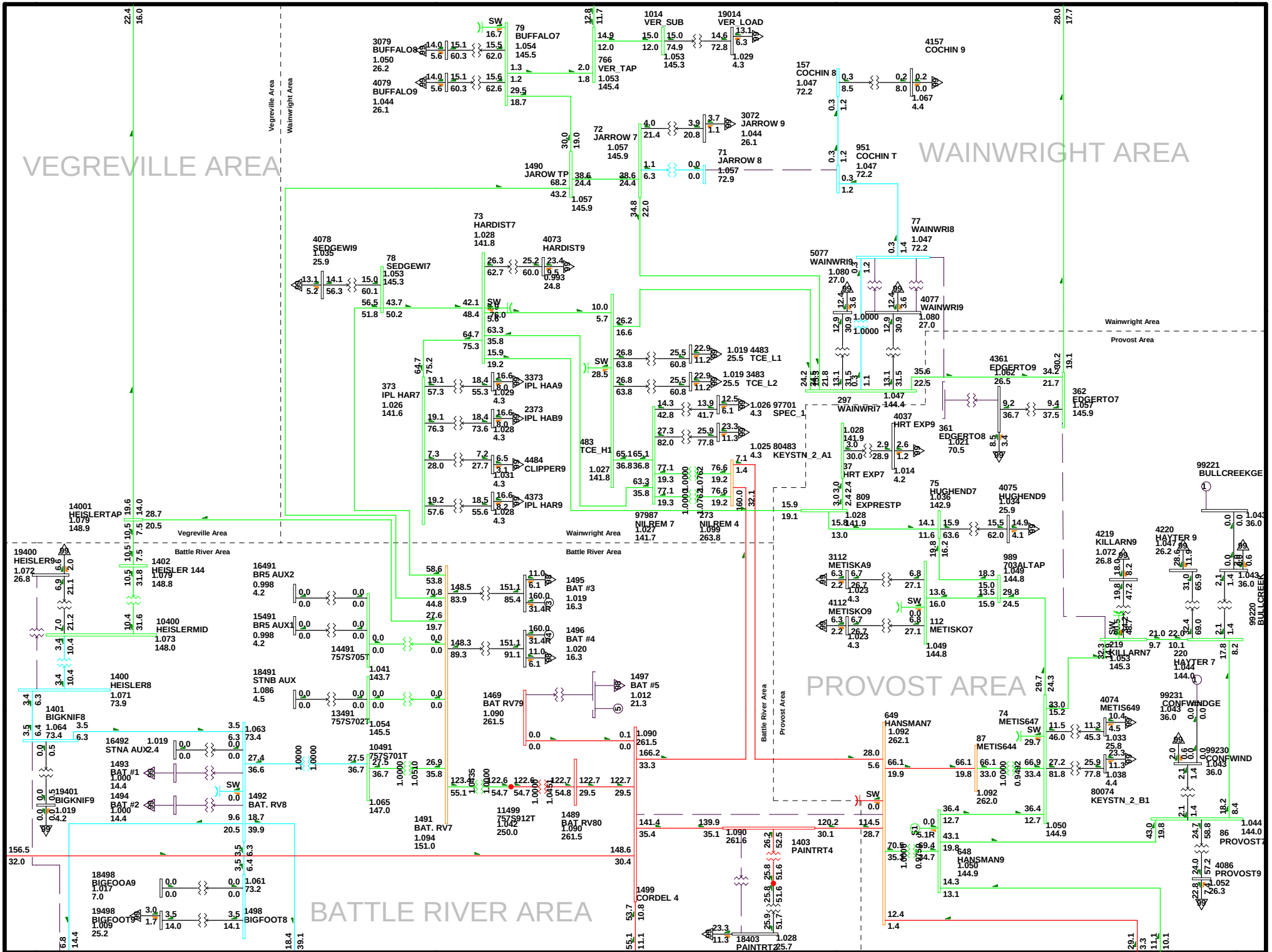
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 30 2010 16:44
D1-16

2012SP-Alt 1-16.a

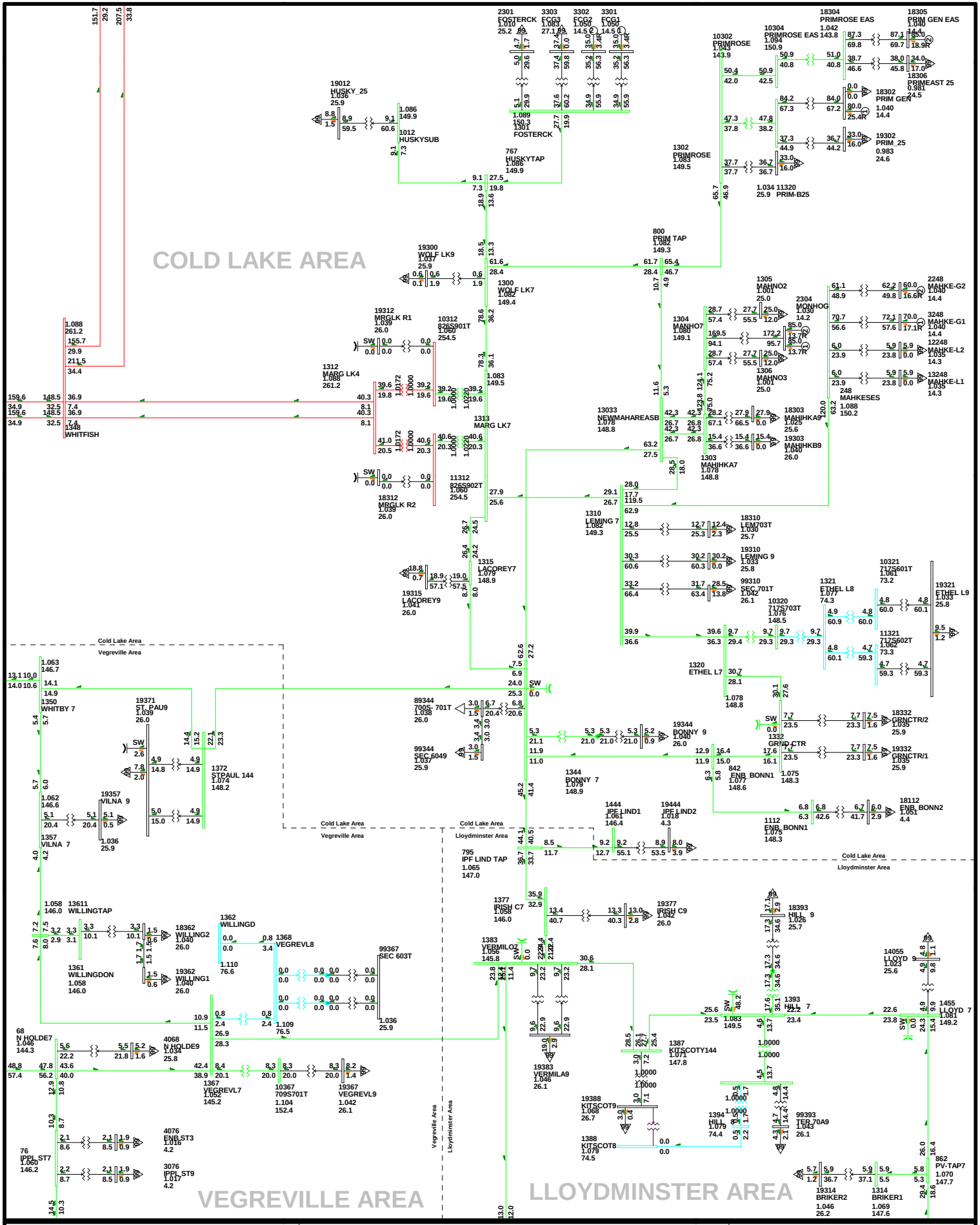
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 30 2010 16:44
D1-16

2012SP-Alt 1-16.b

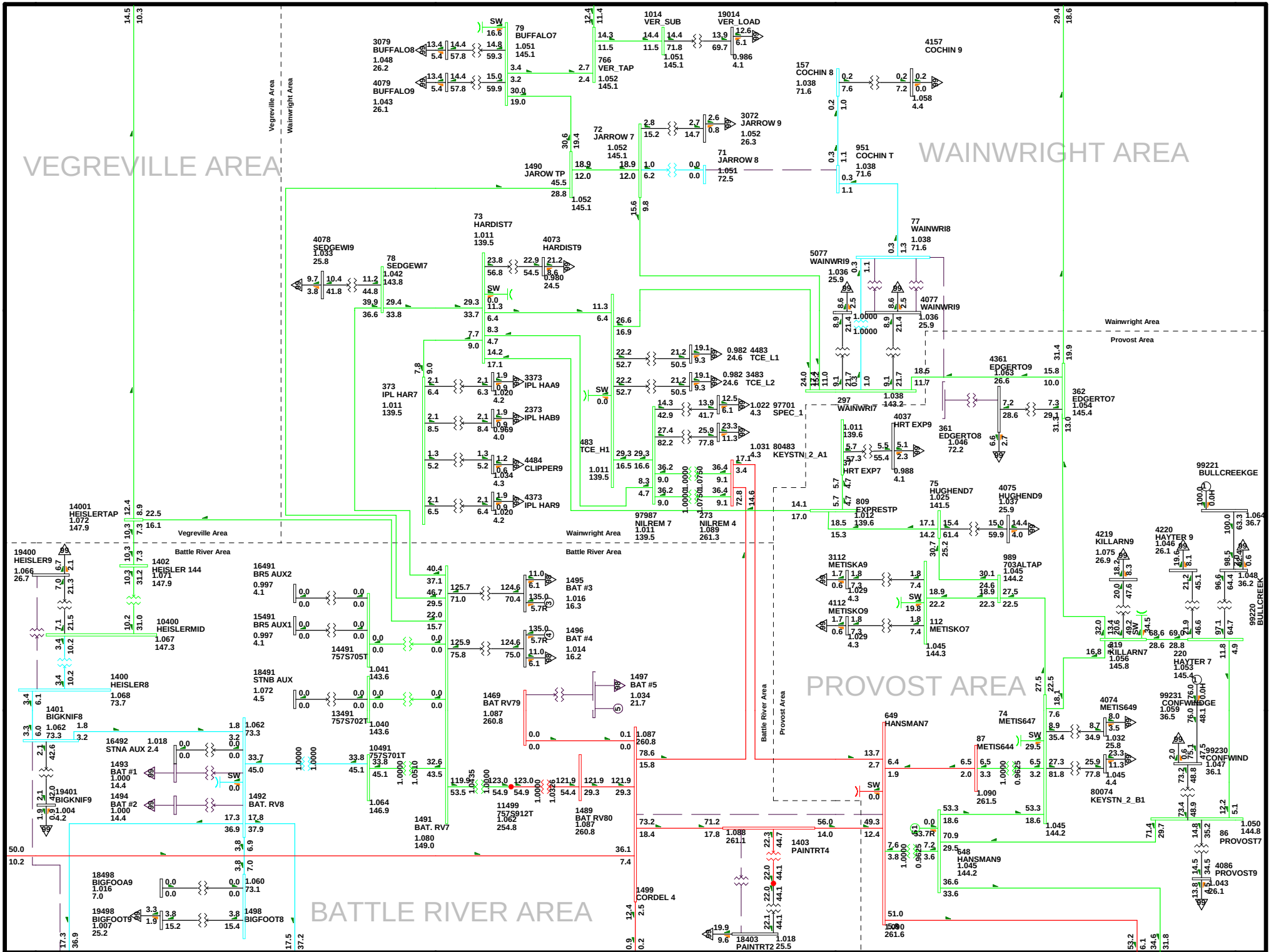
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

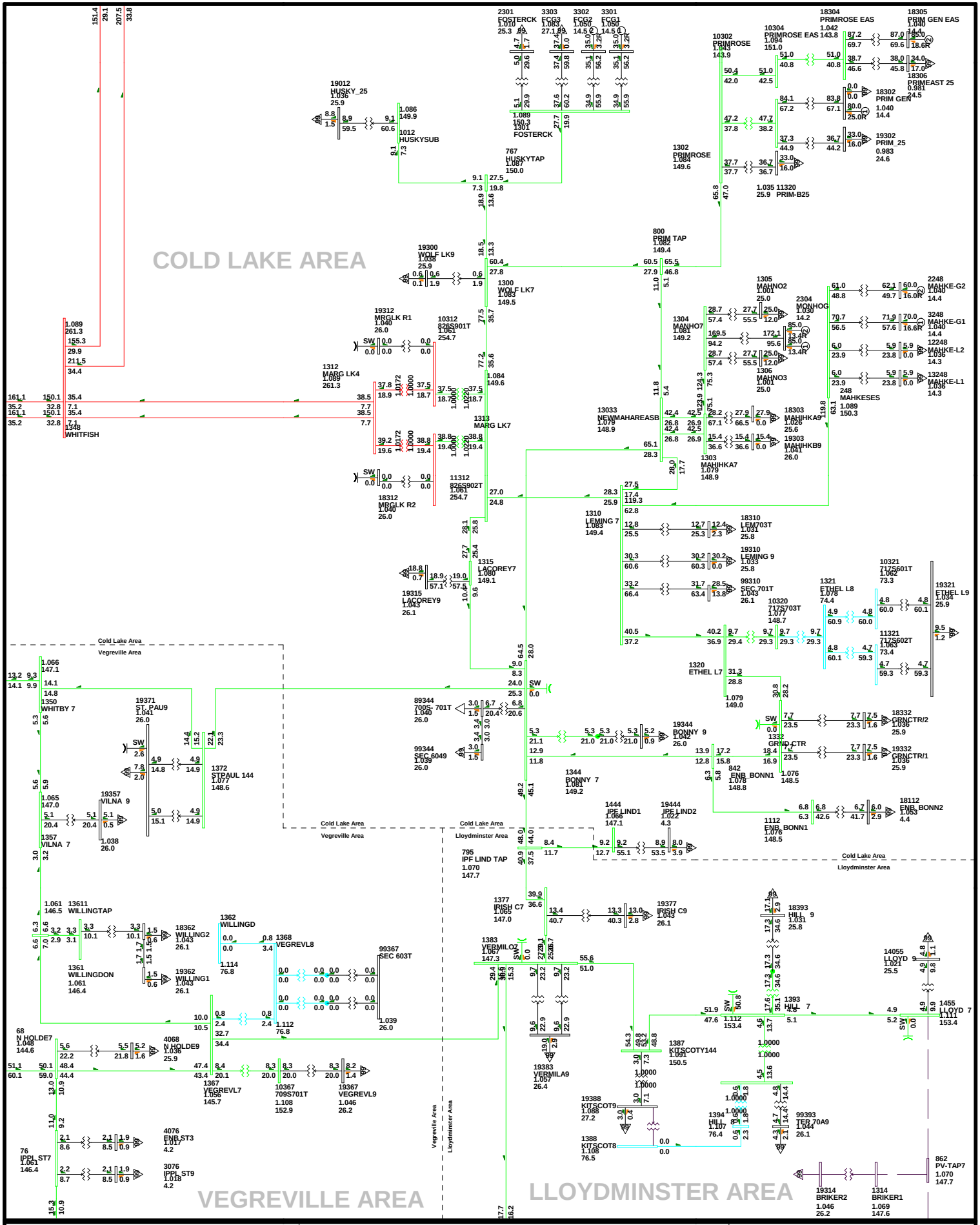


CENTRAL AREA STUDY
2012 SUMMER LIGHT BASE CASE REVISION 7.2.1
FRI, APR 30 2010 12:56
D1-00

2012SL-Alt 1-1.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

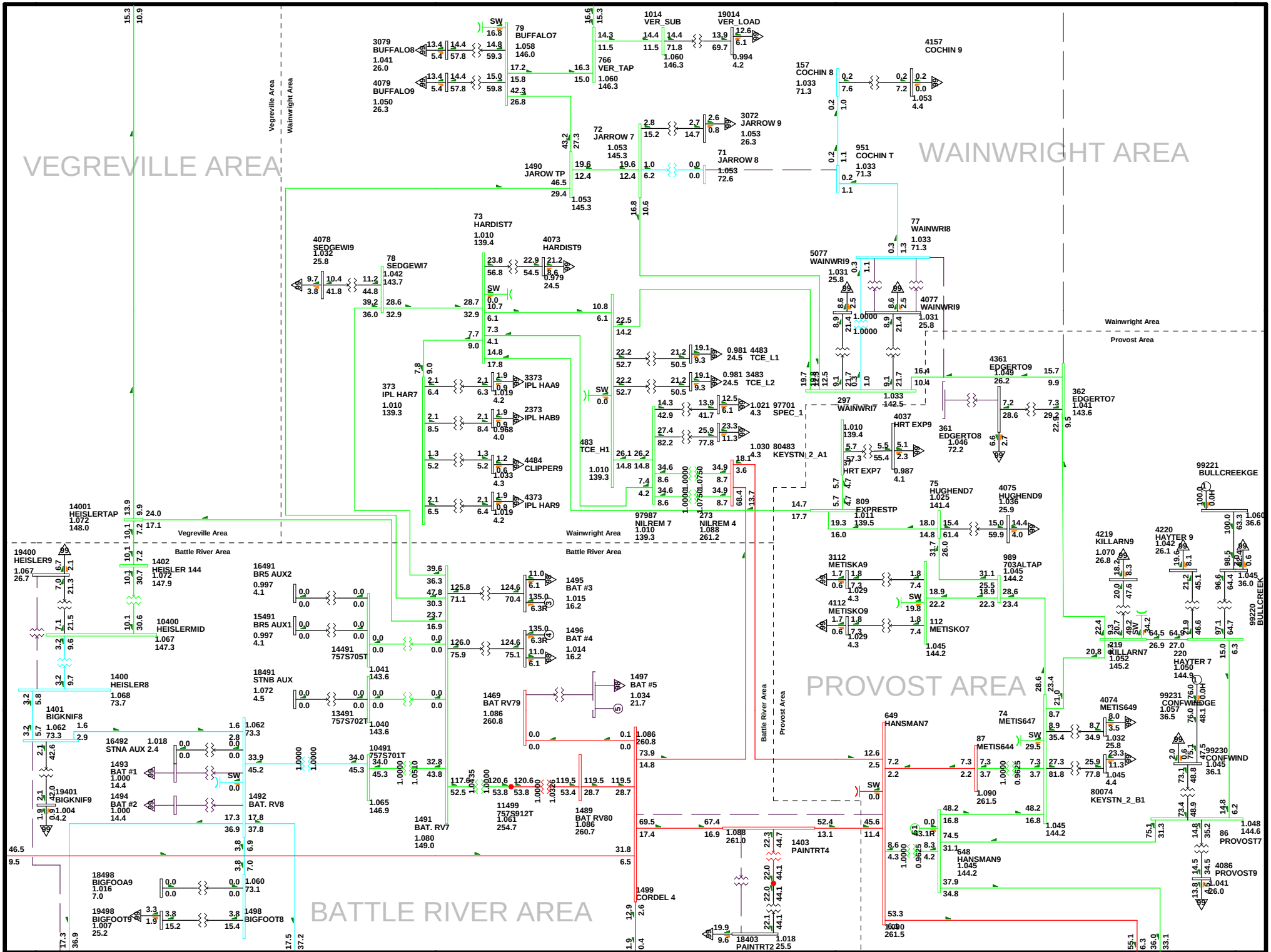

VEGREVILLE AREA
WAINWRIGHT AREA
PROVOST AREA
BATTLE RIVER AREA
Vegreville Area
Wainwright Area
Battle River Area
Provost Area
79 BUFFALO7
3079 BUFFALO8
4079 BUFFALO9
766 VER_TAP
1014 VER_SUB
19014 VER_LOAD
4157 COCHIN 9
157 COCHIN 8
951 COCHIN T
72 JARROW 7
3072 JARROW 9
71 JARROW 8
1490 JAROW TP
73 HARDIST7
4073 HARDIST9
4078 SEDGEWI9
78 SEDGEWI7
77 WAINWRI8
5077 WAINWRI9
4077 WAINWRI9
4361 EDGERTO9
362 EDGERTO7
361 EDGERTO8
297 WAINWRI7
4037 HRT EXP9
HRT EXP7
373 IPL HAR7
3373 IPL HAA9
2373 IPL HAB9
4484 CLIPPER9
4373 IPL HAR9
483 TCE_H1
4483 TCE_L1
3483 TCE_L2
97701 SPEC_1
80483 KEYSTN_2_A1
809 EXPRESTP
75 HUGHEND7
4075 HUGHEND9
14001 HEISLERTAP
1402 HEISLER 144
10400 HEISLERMID
19400 HEISLER9
1400 HEISLER8
1401 BIGKNIF8
19401 BIGKNIF9
16491 BR5 AUX2
15491 BR5 AUX1
14491 757S705T
18491 STNB AUX
13491 757S702T
16492 STNA AUX 2.4
10491 757S701T
1493 BAT #1
1494 BAT #2
1492 BAT. RV8
1491 BAT. RV7
11499 757S912T
1495 BAT #3
1496 BAT #4
1497 BAT #5
1469 BAT RV79
1489 BAT RV80
1403 PAINTRT4
18403 PAINTRT2
1499 CORDEL 4
18498 BIGFOOA9
19498 BIGFOOT9
1498 BIGFOOT8
97987 NILREM 7
273 NILREM 4
3112 METISKA9
4112 METISKO9
112 METISKO7
989 703ALTAP
74 METIS647
87 METIS644
4074 METIS649
80074 KEYSTN_2_B1
649 HANSMAN7
648 HANSMAN9
99221 BULLCREEKGE
99220 BULLCREEK
4219 KILLARN9
219 KILLARN7
4220 HAYTER 9
220 HAYTER 7
99231 CONFWIDGE
99230 CONFWIND
86 PROVOST7
4086 PROVOST9
CENTRAL AREA STUDY
2012 SUMMER LIGHT BASE CASE REVISION 7.2.1
FRI, APR 30 2010 12:56
D1-00
2012SL-Alt 1-1.b
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER LIGHT BASE CASE REVISION 7.2.1
FRI, APR 30 2010 12:56
D1-08

2012SL-Alt 1-2.a

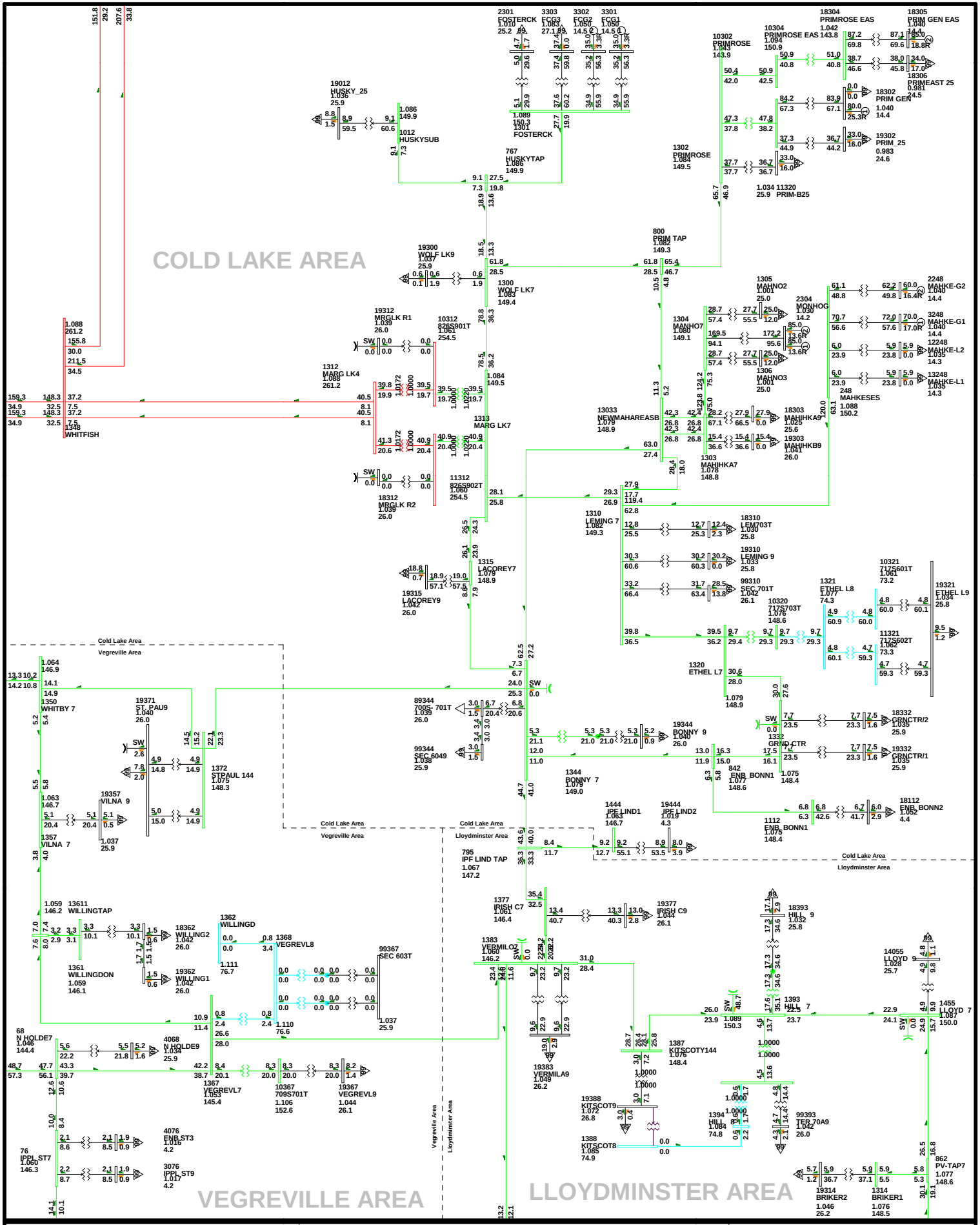
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER LIGHT BASE CASE REVISION 7.2.1
FRI, APR 30 2010 12:56
D1-08

2012SL-Alt 1-2.b

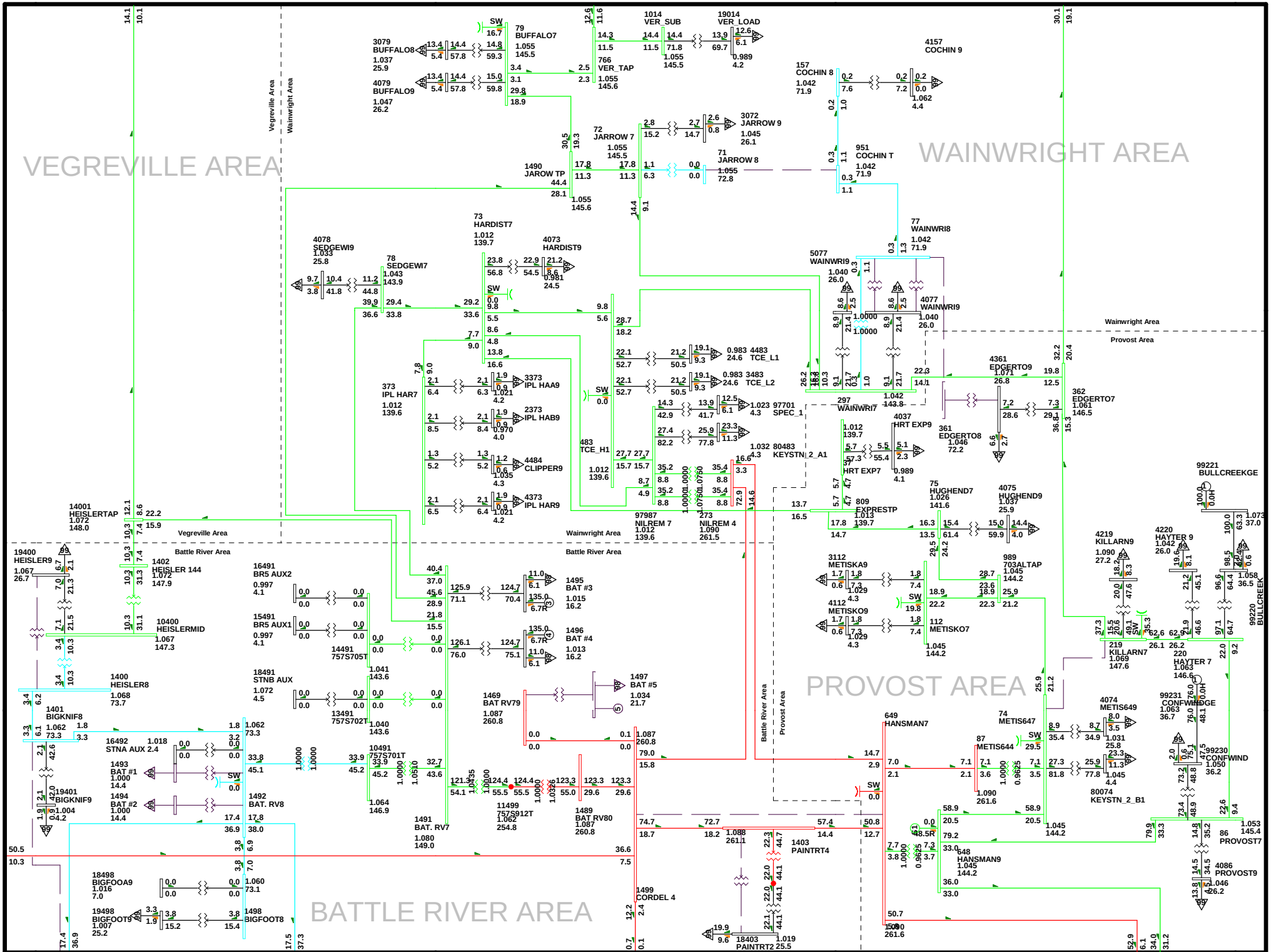
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER LIGHT BASE CASE REVISION 7.2.1
FRI, APR 30 2010 12:56
D1-11

2012SL-Alt 1-3.a

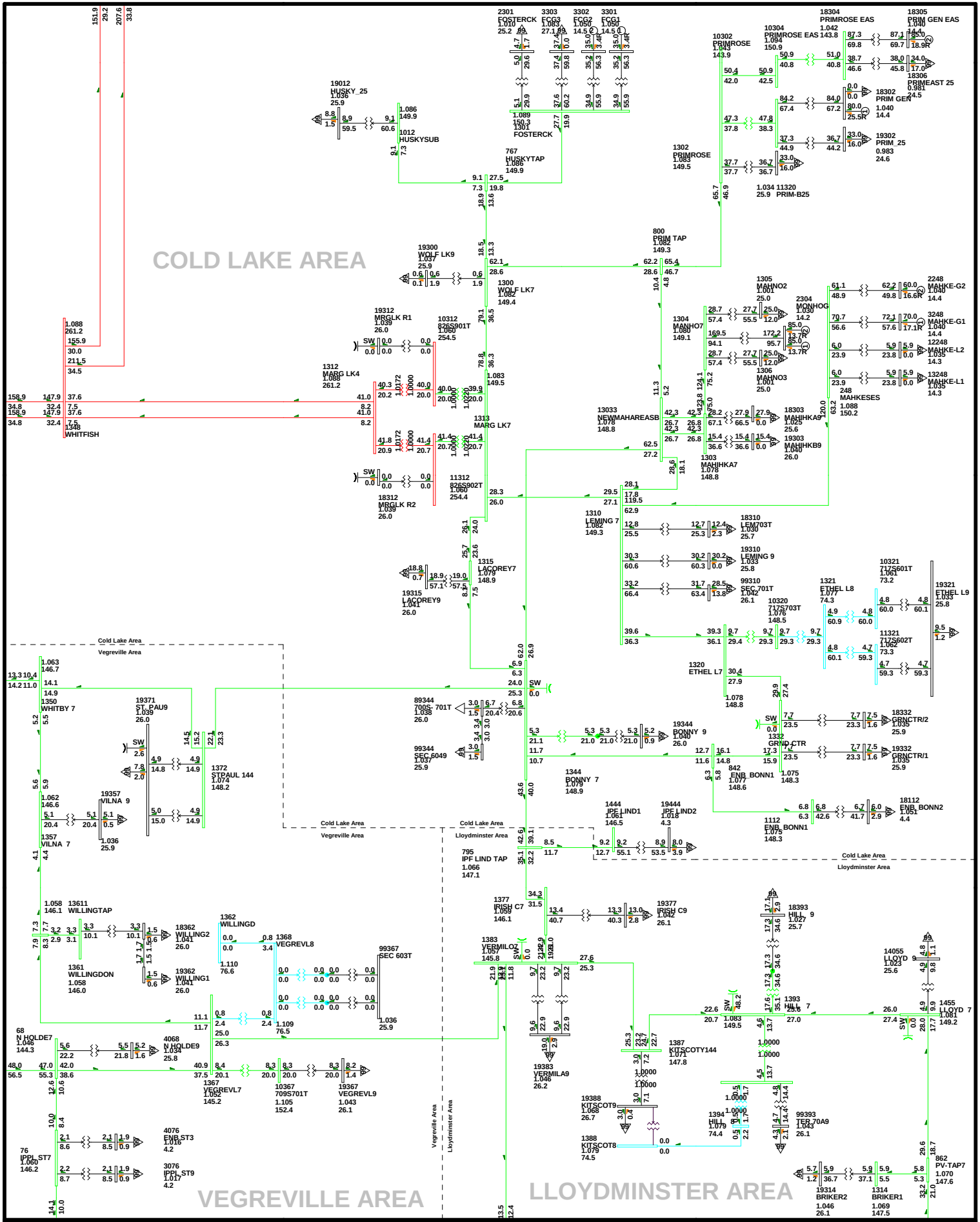
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER LIGHT BASE CASE REVISION 7.2.1
FRI, APR 30 2010 12:56
D1-11

2012SL-Alt 1-3.b

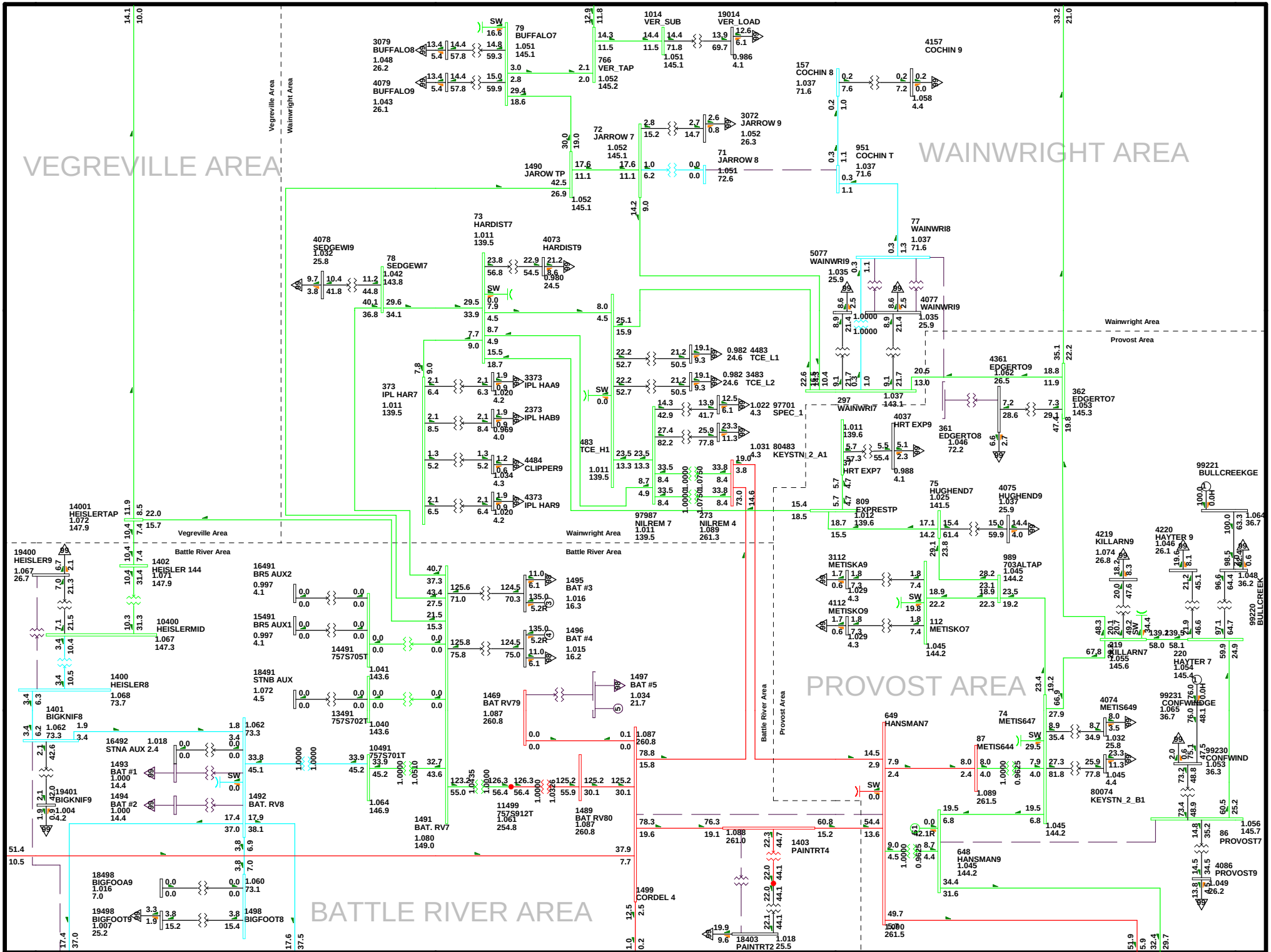
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER LIGHT BASE CASE REVISION 7.2.1
FRI, APR 30 2010 12:56
D1-12

2012SL-Alt 1-4.a

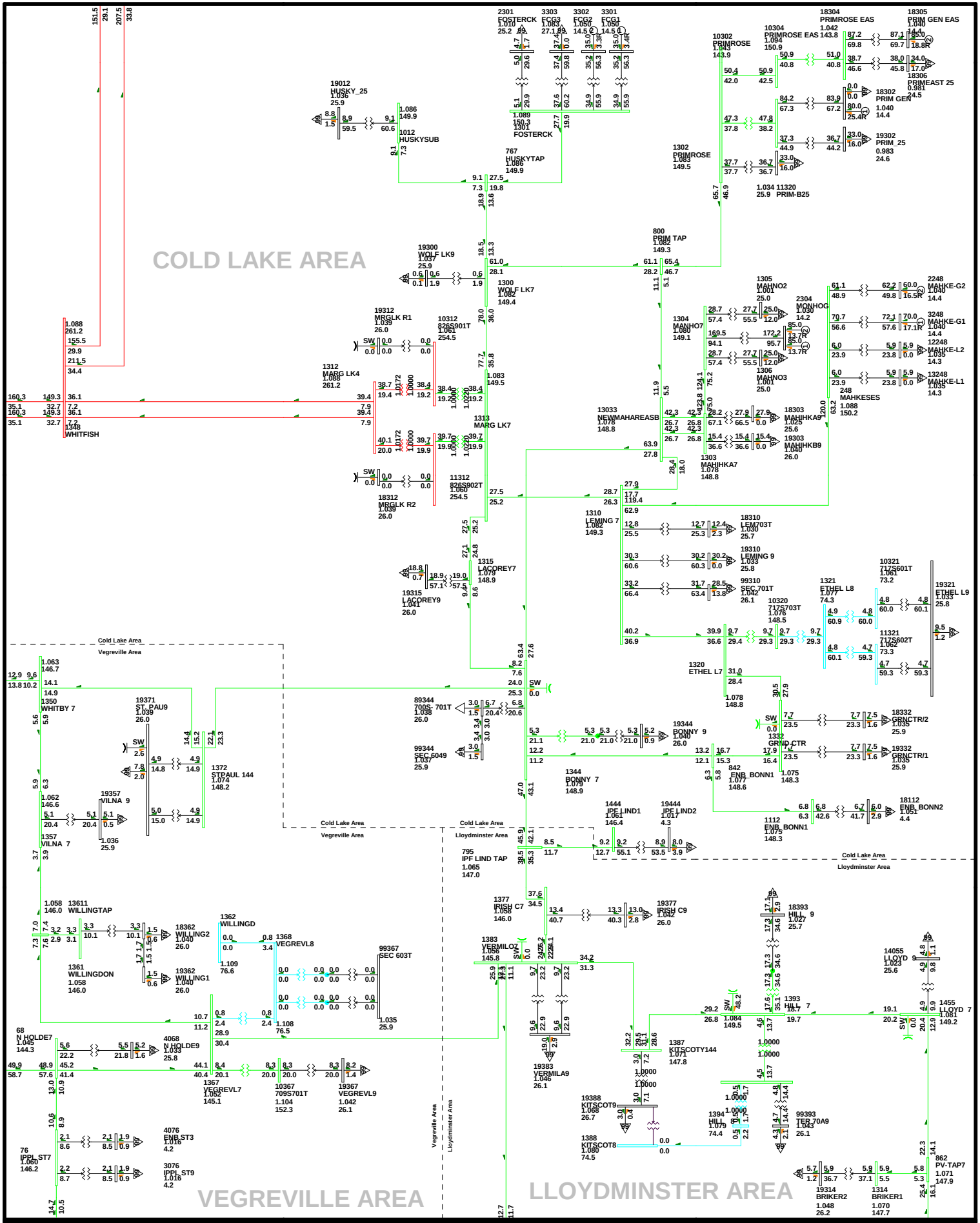
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER LIGHT BASE CASE REVISION 7.2.1
FRI, APR 30 2010 12:56
D1-12

2012SL-Alt 1-4.b

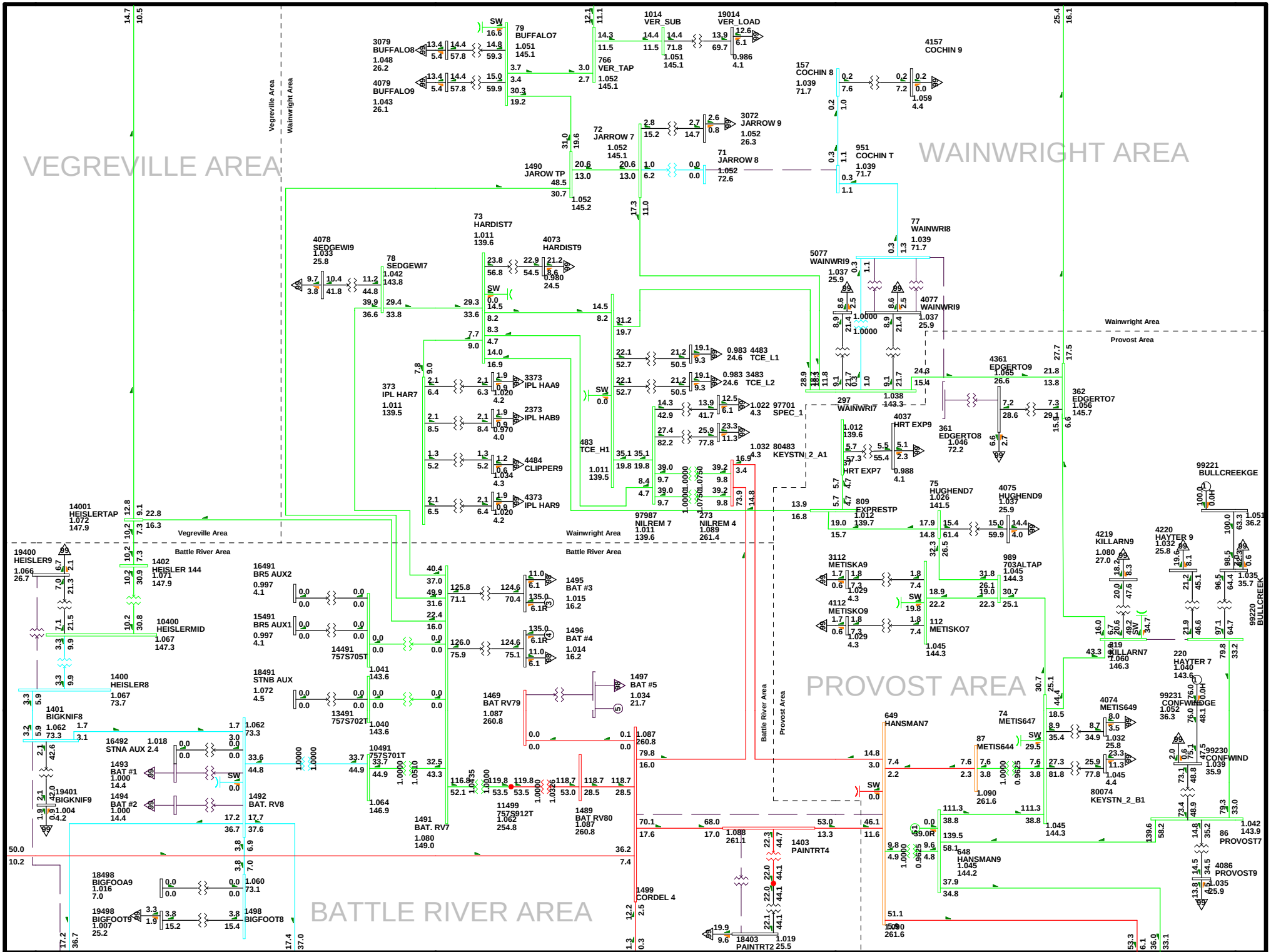
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER LIGHT BASE CASE REVISION 7.2.1
FRI, APR 30 2010 12:57
D1-13

2012SL-Alt 1-5.a

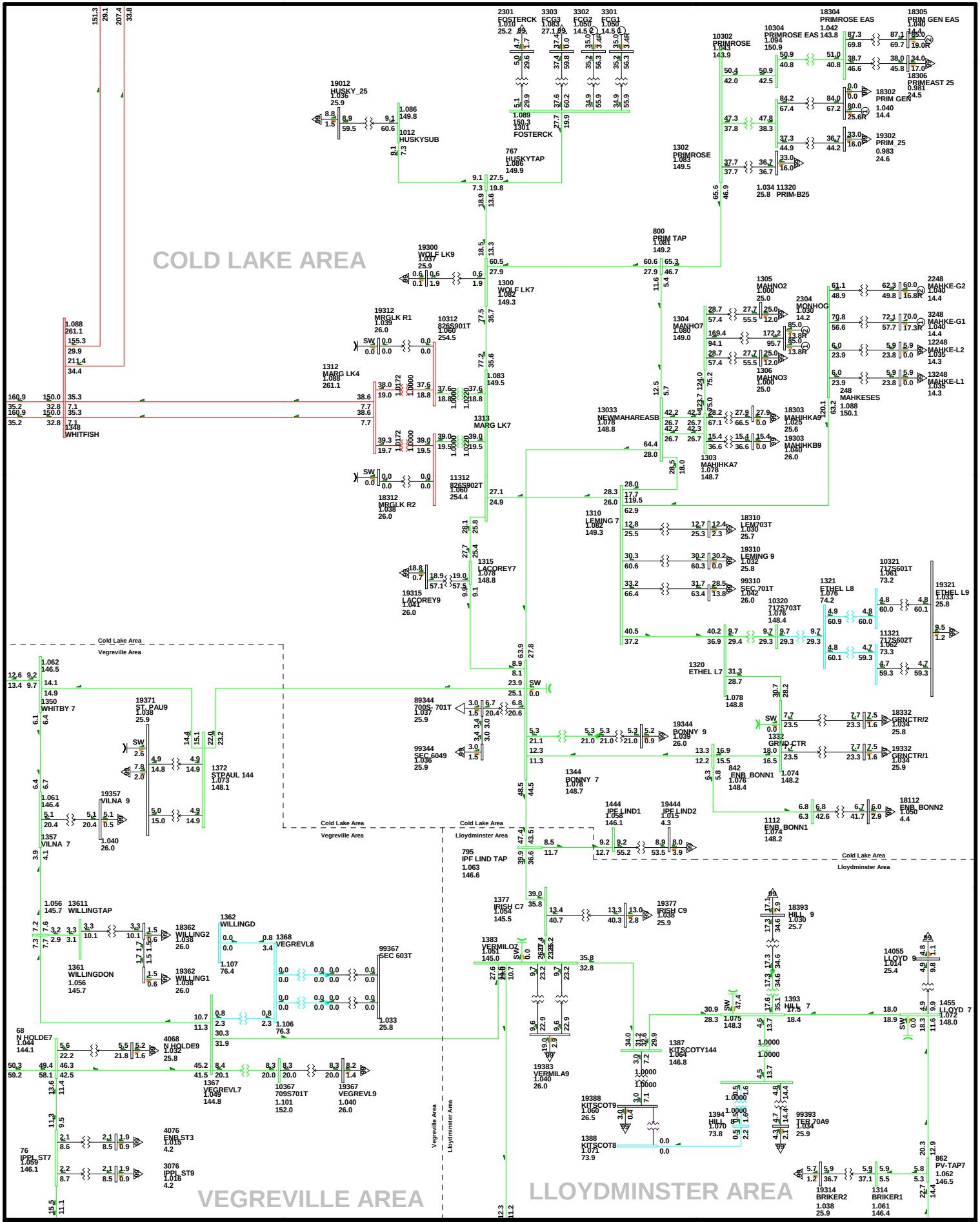
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER LIGHT BASE CASE REVISION 7.2.1
FRI, APR 30 2010 12:57
D1-13

2012SL-Alt 1-5.b

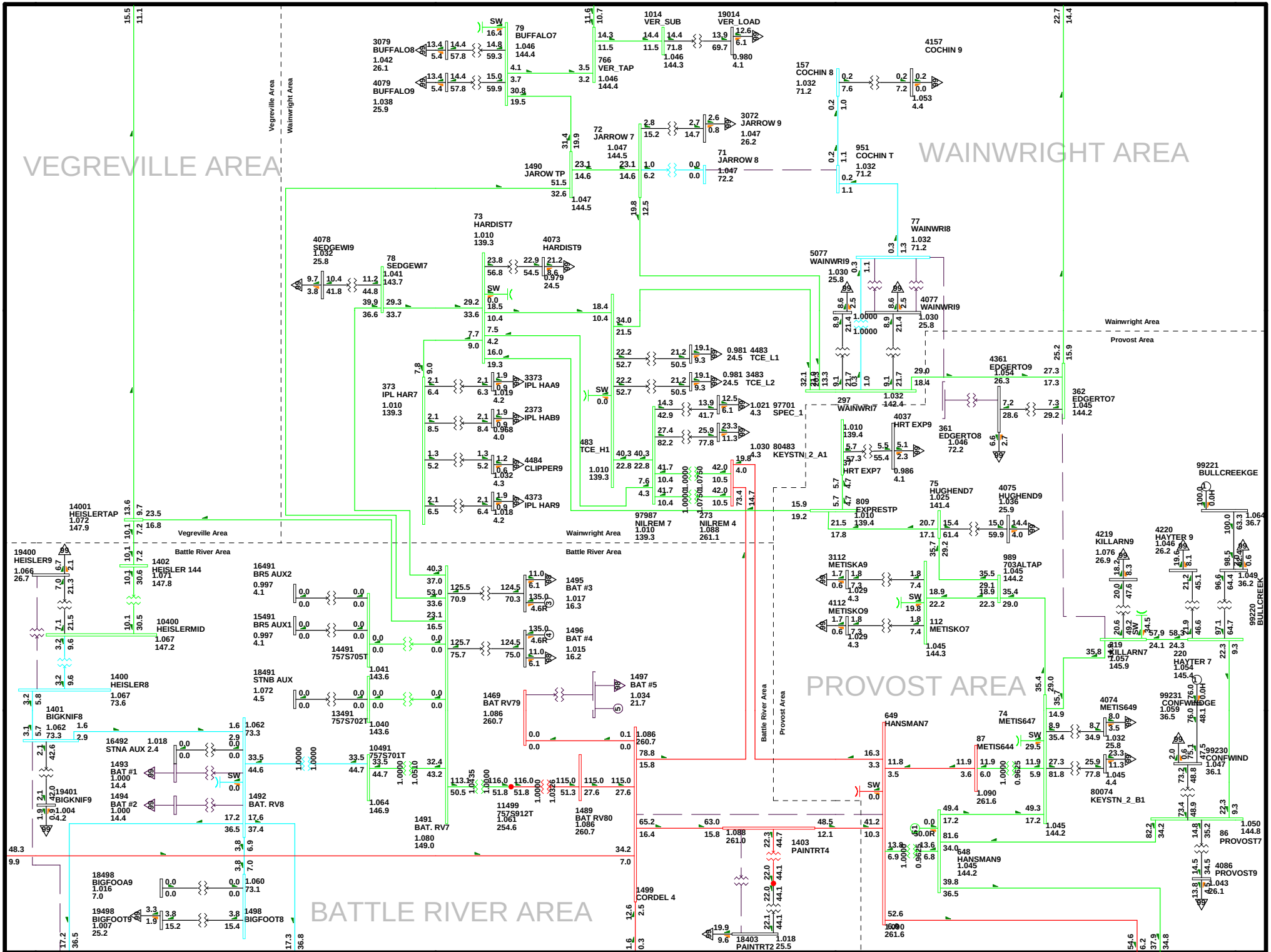
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER LIGHT BASE CASE REVISION 7.2.1
FRI, APR 30 2010 12:57
D1-16

2012-SL-Alt 1-6.a

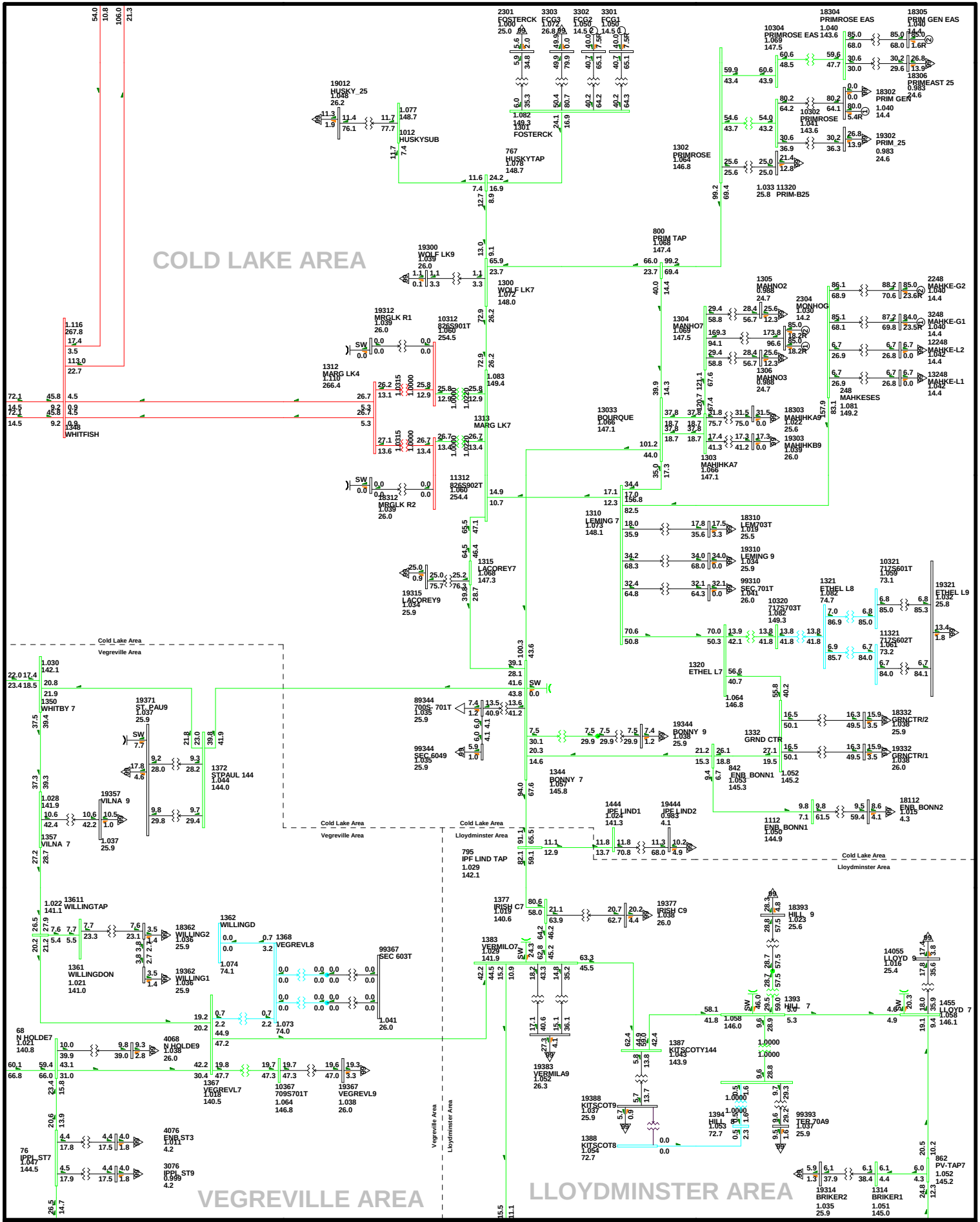
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER LIGHT BASE CASE REVISION 7.2.1
FRI, APR 30 2010 12:57
D1-16

2012SL-Alt 1-6.b

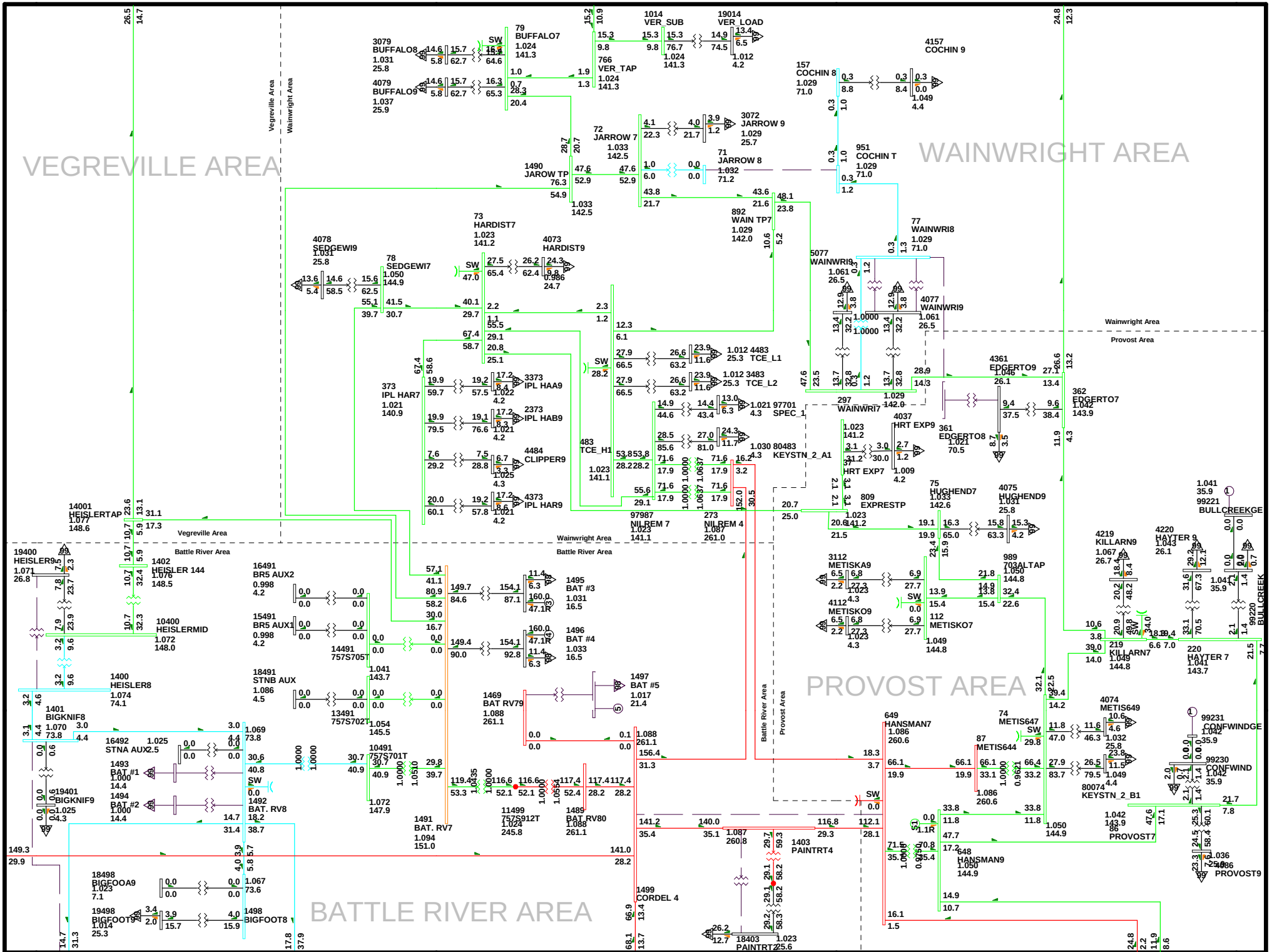
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
THU, APR 08 2010 15:03
D1-00

2012WP-Alt 2-1.a

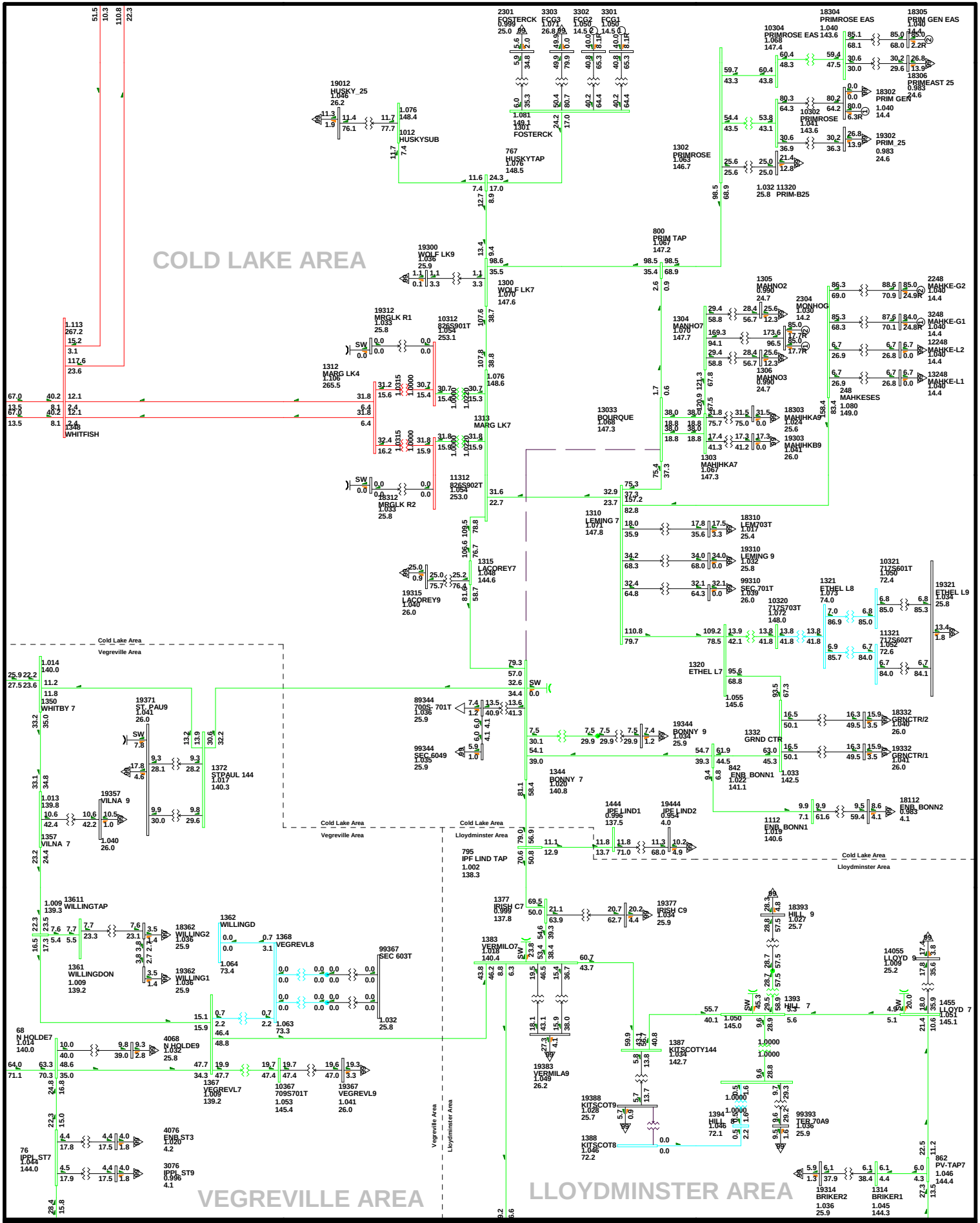
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
THU, APR 08 2010 15:03
D1-00

2012WP-Alt 2-1.b

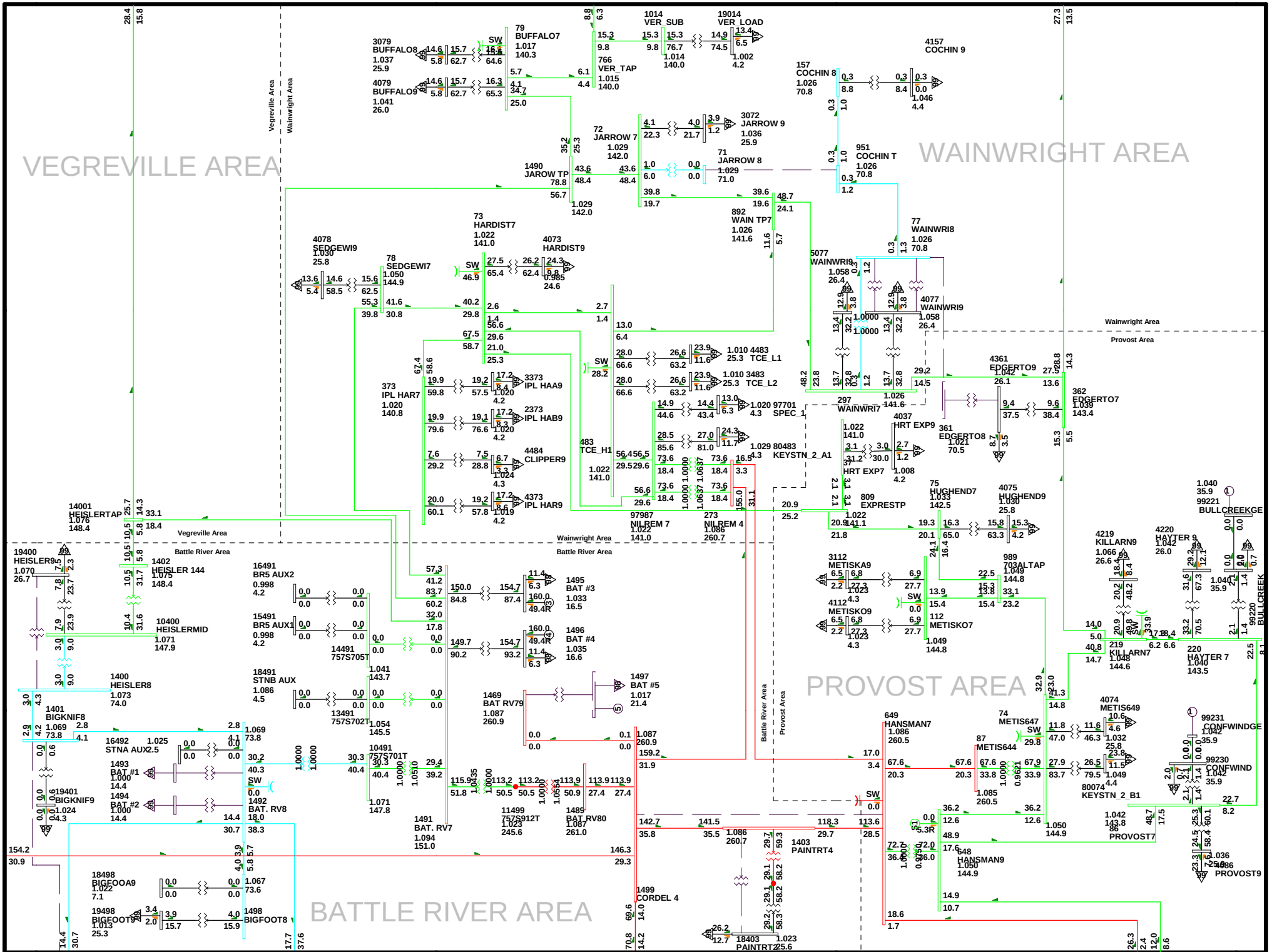
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
THU, APR 08 2010 15:03
D1-01

2012WP-Alt 2-2.a

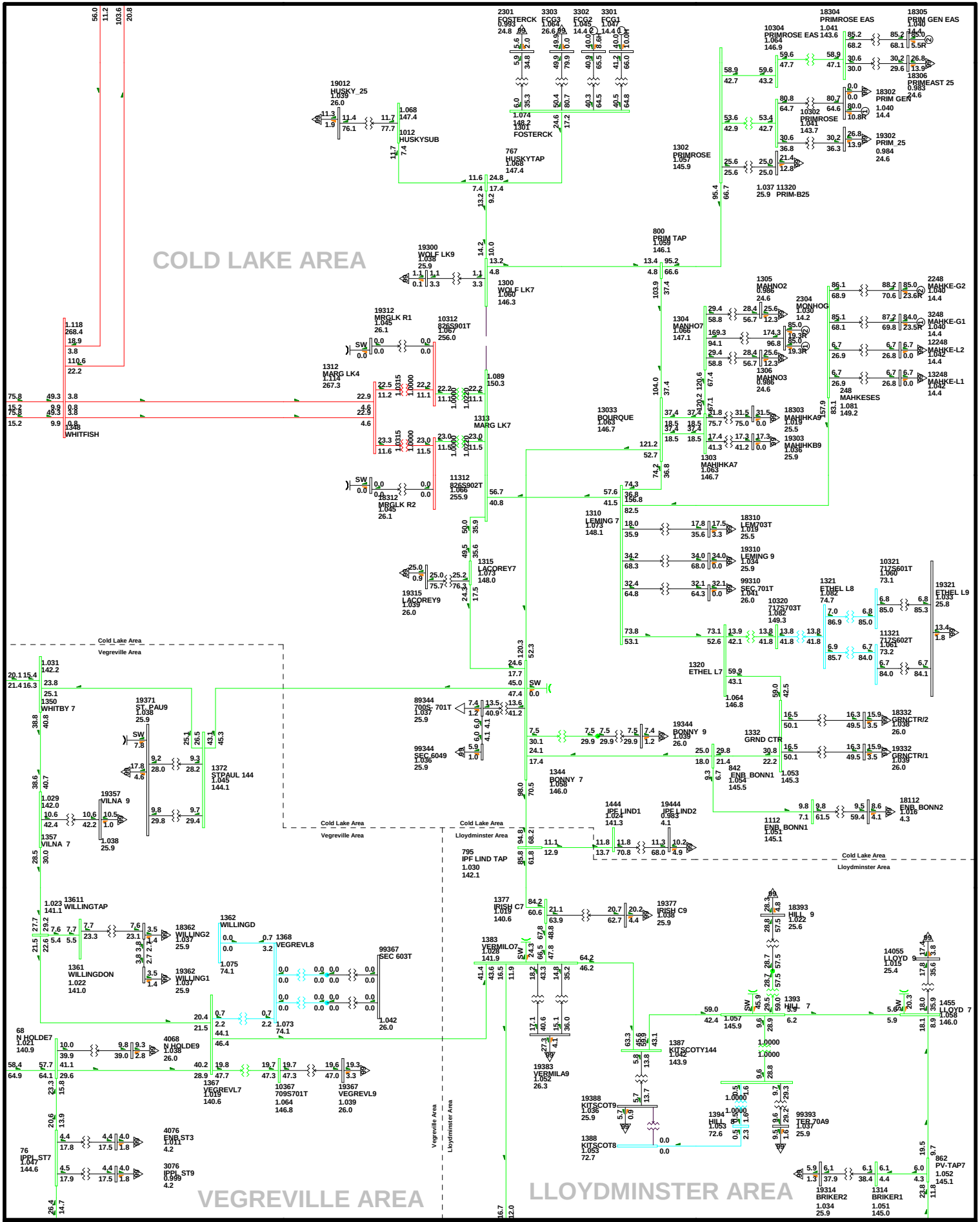
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
THU, APR 08 2010 15:03
D1-01

2012WP-Alt 2-2.b

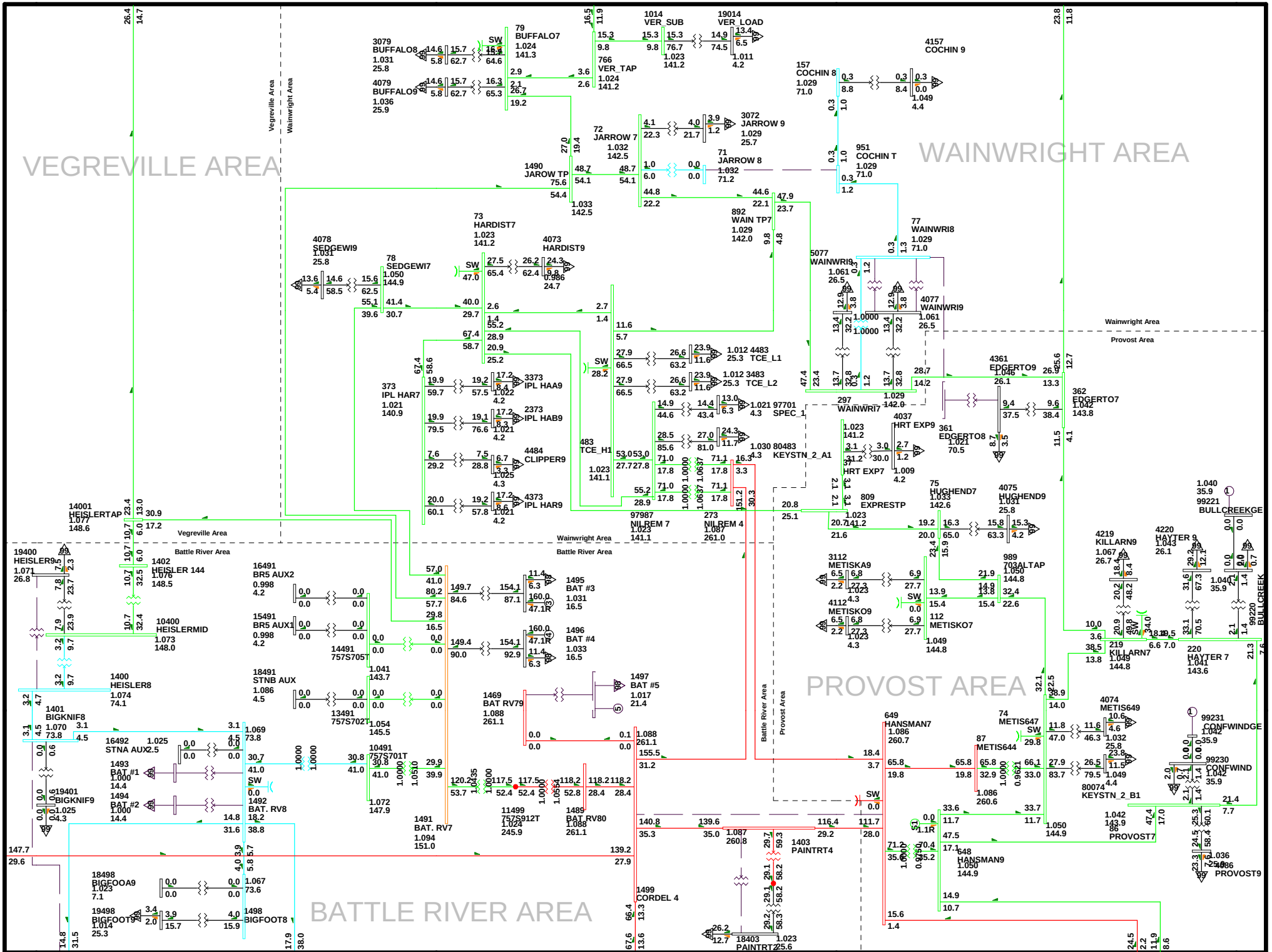
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
THU, APR 08 2010 15:03
D1-02

2012WP-Alt 2-3.a

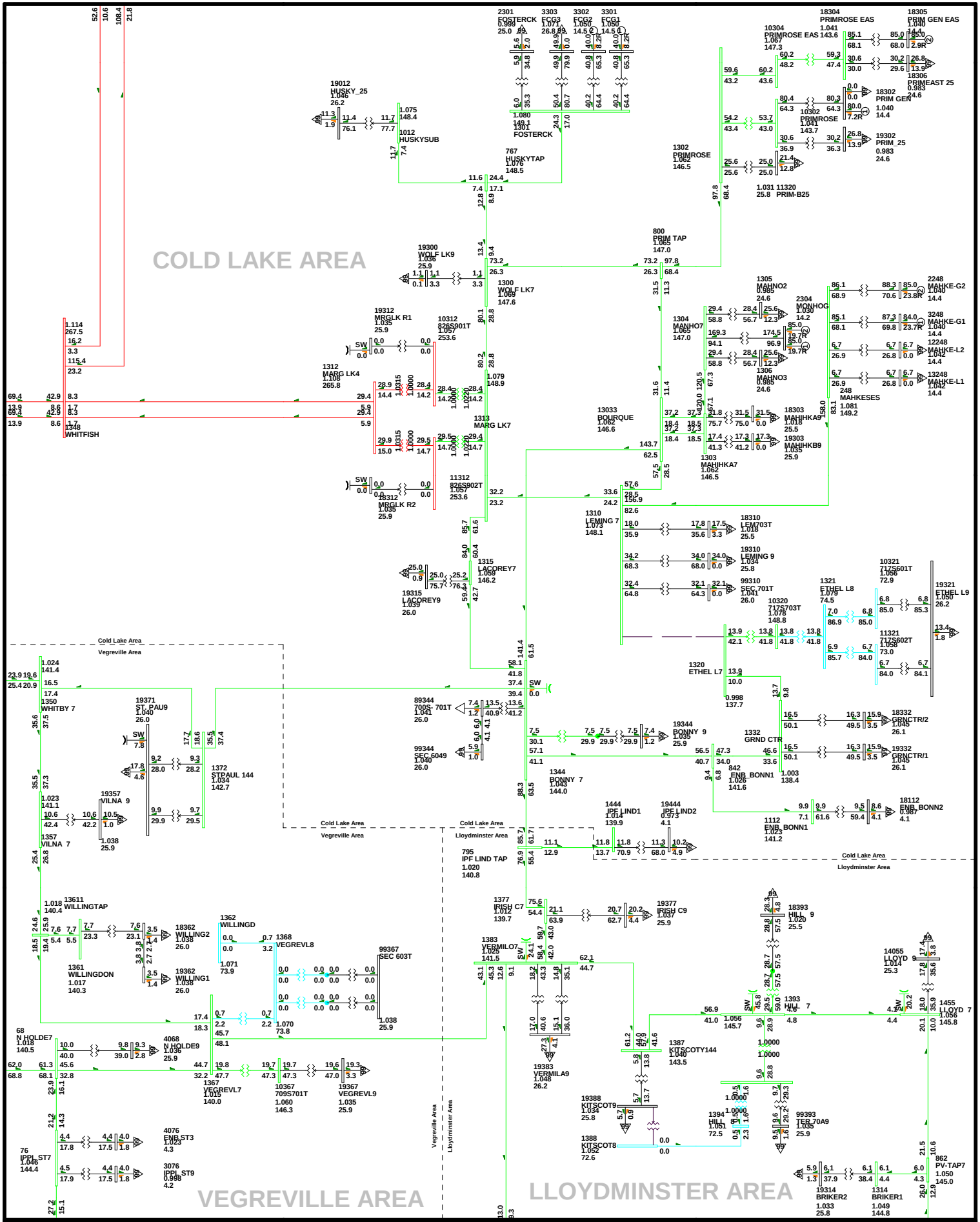
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
THU, APR 08 2010 15:03
D1-02

2012WP-Alt 2-3.b

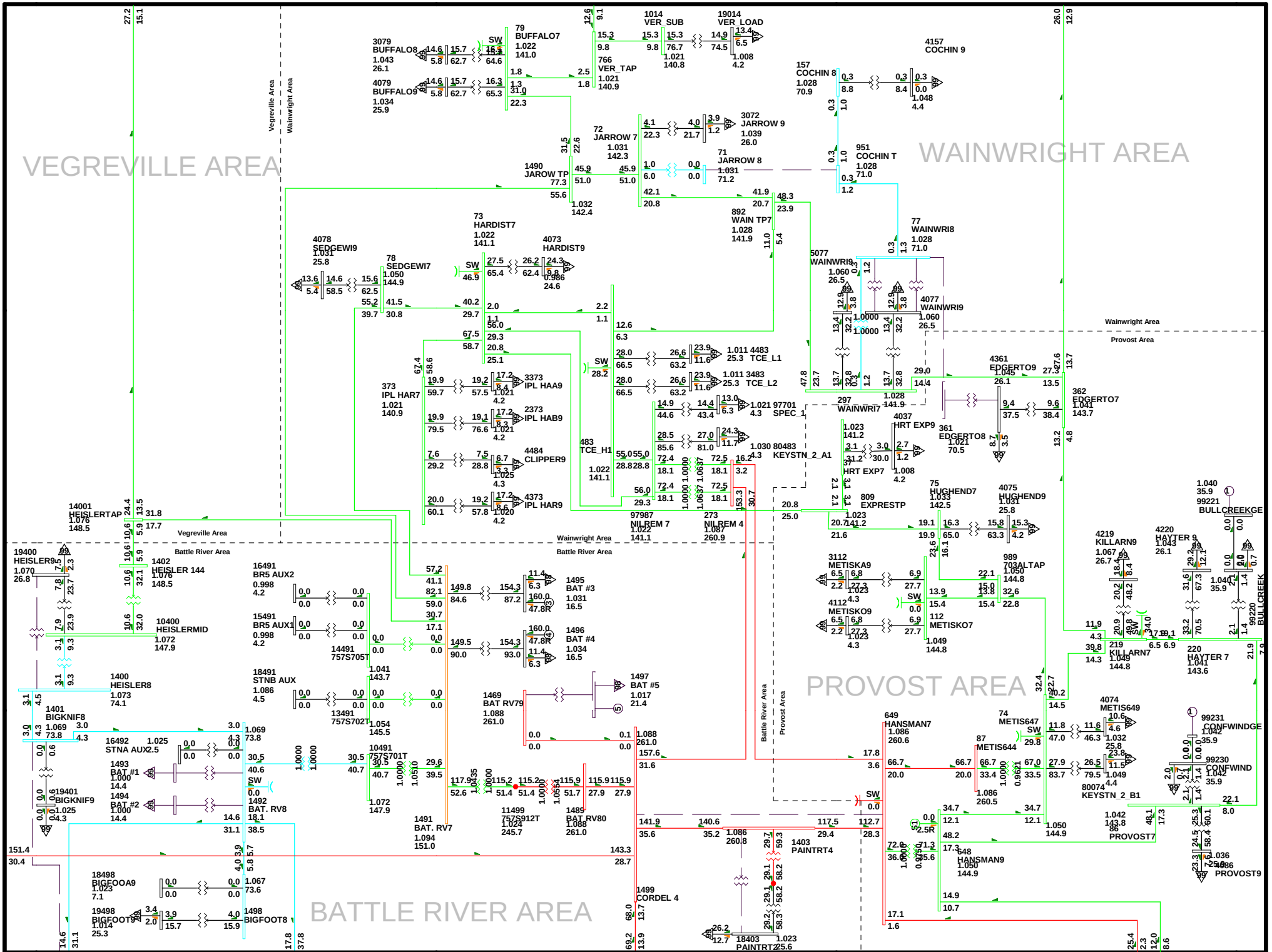
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
THU, APR 08 2010 15:03
D1-03

2012WP-Alt 2-4.a

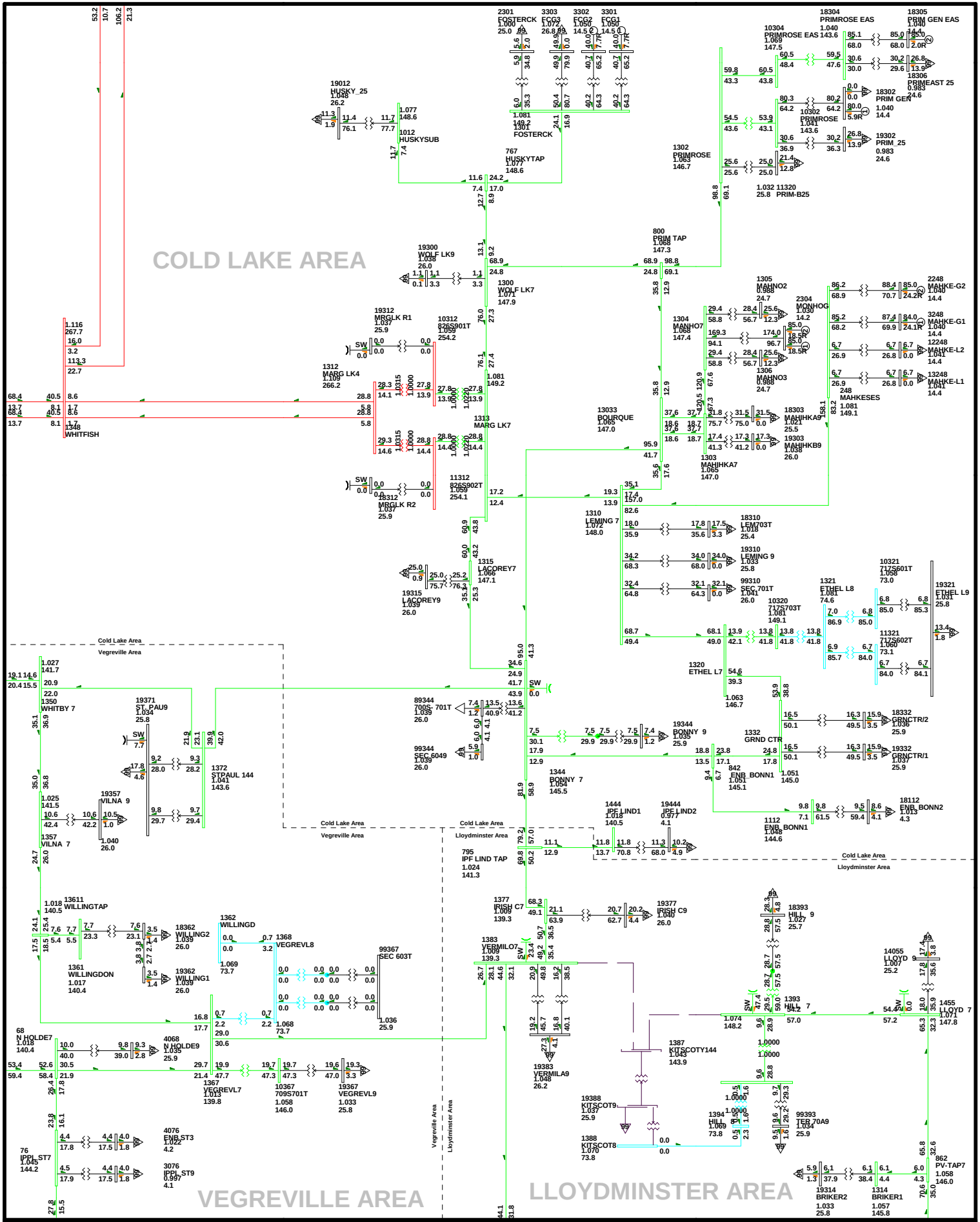
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
THU, APR 08 2010 15:03
D1-03

2012WP-Alt 2-4.b

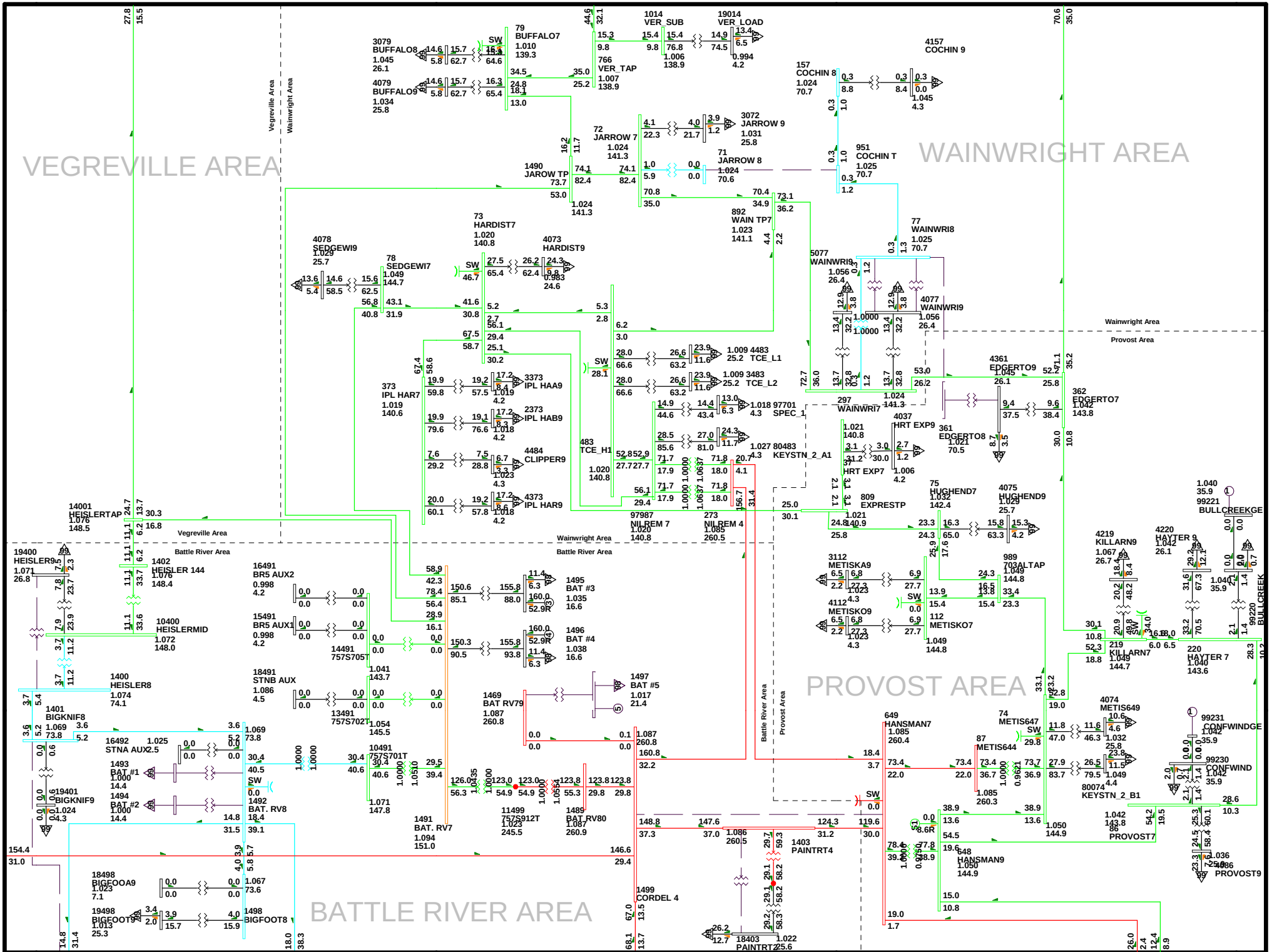
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000

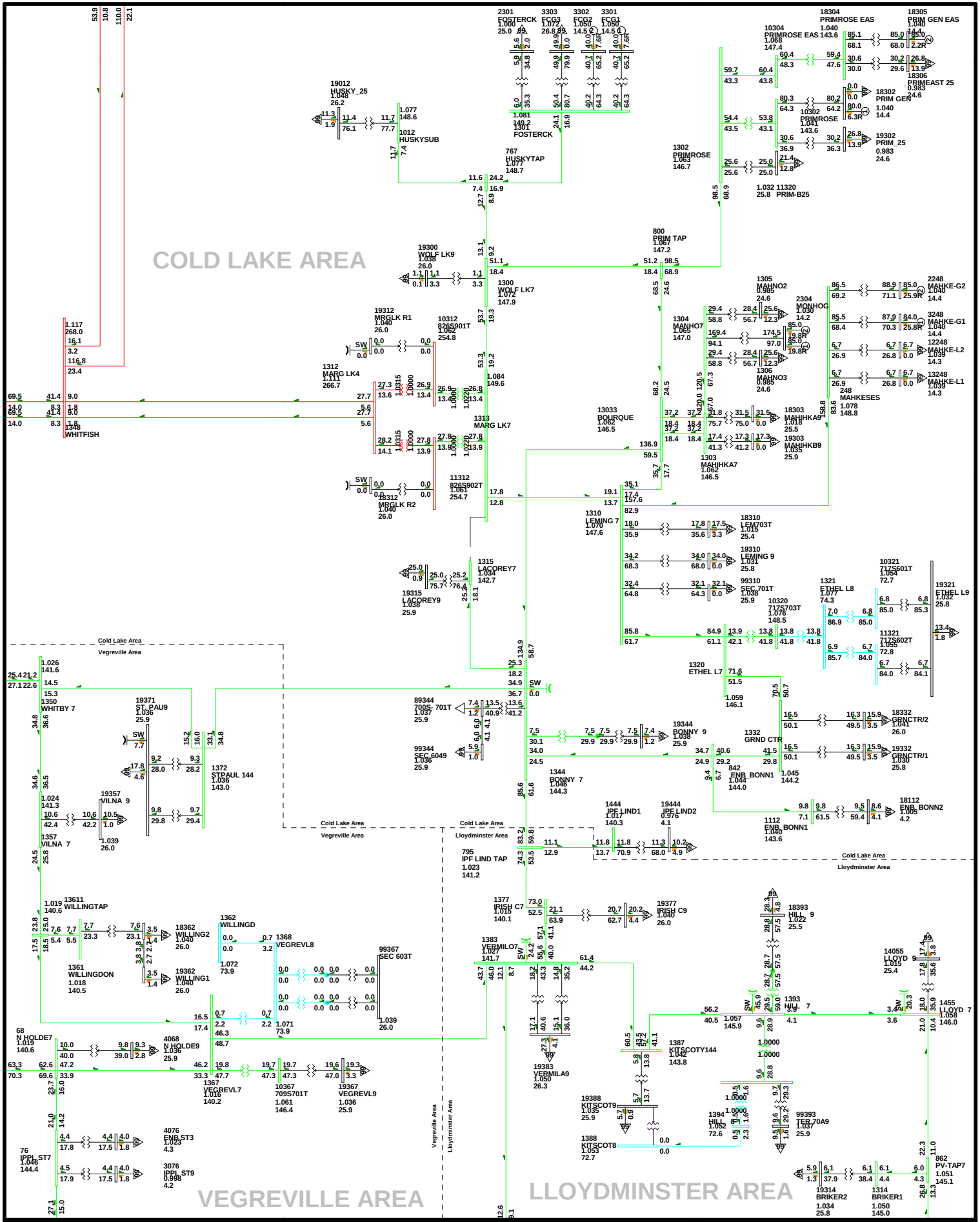


CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
THU, APR 08 2010 15:03
D1-05

2012WP-Alt 2-5.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

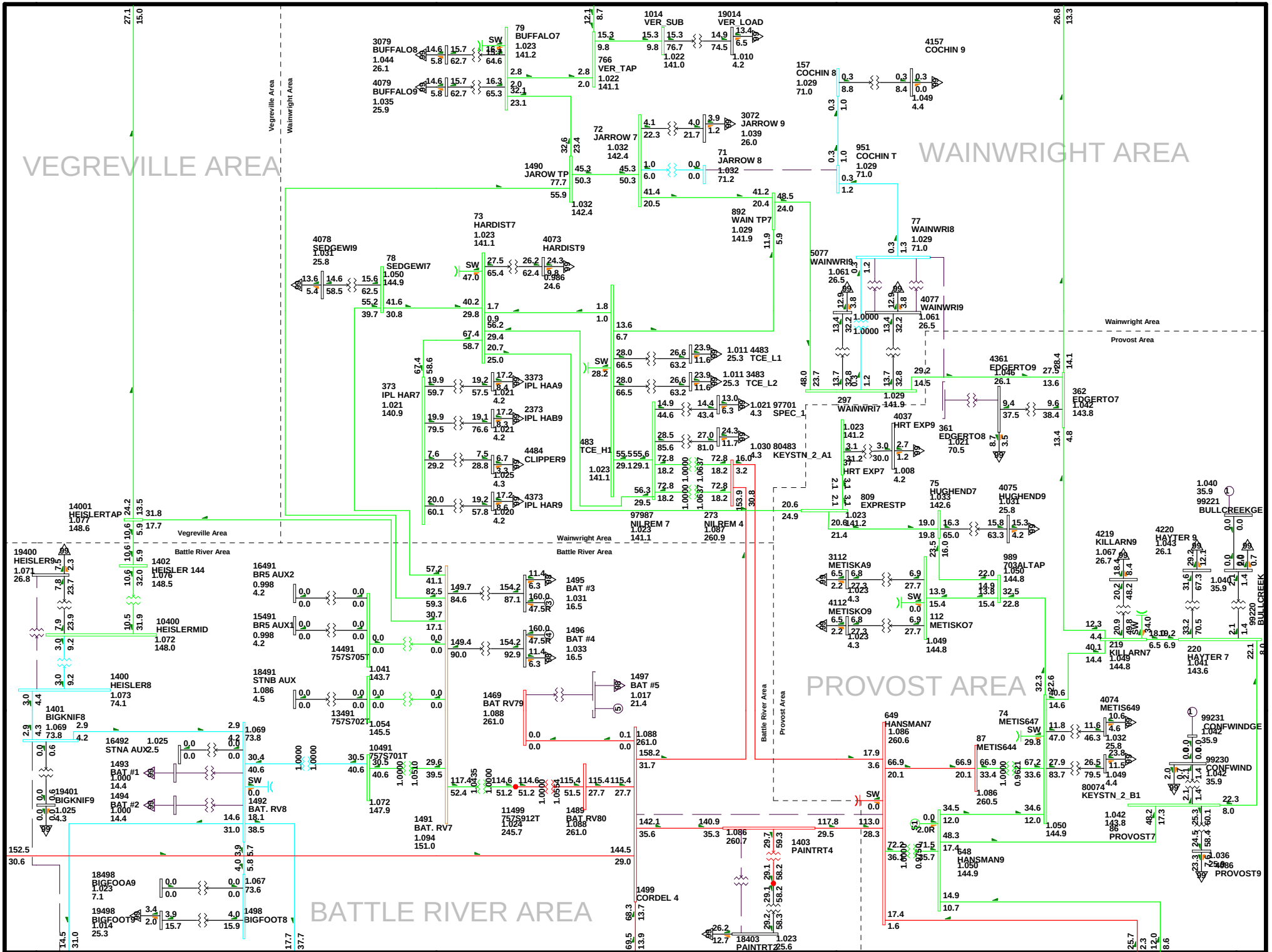

VEGREVILLE AREA
WAINWRIGHT AREA
PROVOST AREA
BATTLE RIVER AREA
Vegreville Area
Wainwright Area
Battle River Area
Provost Area
3079 BUFFALO8 1.045 26.1
4079 BUFFALO9 1.034 25.8
79 BUFFALO7 1.010 139.3
766 VER_TAP 1.007 138.9
1014 VER_SUB 1.006 138.9
19014 VER_LOAD 0.994 4.2
4157 COCHIN 9
157 COCHIN 8 1.024 70.7
951 COCHIN T 1.025 70.7
1045 4.3
3072 JAROW 9 1.031 25.8
72 JARROW 7 1.024 141.3
71 JARROW 8 1.024 70.6
1490 JAROW TP 73.7 53.0
1.024 141.3
892 WAIN TP7 1.023 141.1
77 WAINWRI8 1.025 70.7
5077 WAINWRI9 1.056 26.4
4077 WAINWRI9 1.056 26.4
297 WAINWRI7 1.024 141.3
4078 SEDGEWI9 1.029 25.7
78 SEDGEWI7 1.049 144.7
73 HARDIST7 1.020 140.8
4073 HARDIST9 0.983 24.6
373 IPL HAR7 1.019 140.6
3373 IPL HAA9 1.019 4.2
2373 IPL HAB9 1.018 4.2
4484 CLIPPER9 1.023 4.3
4373 IPL HAR9 1.018 4.2
1.009 4483 25.2 TCE_L1
1.009 3483 25.2 TCE_L2
483 TCE_H1 1.020 140.8
1.018 97701 4.3 SPEC_1
1.027 80483 4.3 KEYSTN_2_A1
4037 HRT EXP9 1.021 140.8
HRT EXP7 1.021 70.5
1.006 4.2
4361 EDGERTO9 1.045 26.1
4362 EDGERTO7 1.042 143.8
361 EDGERTO8 1.021 70.5
809 EXPRESTP 1.021 140.9
75 HUGHEND7 1.032 142.4
4075 HUGHEND9 1.029 25.7
97987 NILREM 7 1.020 140.8
273 NILREM 4 1.085 260.5
14001 HEISLERTAP 1.076 148.5
1402 HEISLER 144 1.076 148.4
10400 HEISLERMID 1.072 148.0
19400 HEISLER9 1.071 26.8
1400 HEISLER8 1.074 74.1
1401 BIGKNIF8 1.069 73.8
19401 BIGKNIF9 1.024 4.3
16491 BR5 AUX2 0.998 4.2
15491 BR5 AUX1 0.998 4.2
14491 757S705T 1.041 143.7
18491 STNB AUX 1.086 4.5
13491 757S702T 1.054 145.5
10491 757S701T 1.071 147.8
16492 STNA AUX2 1.025 2.5
1493 BAT #1 1.000 14.4
1494 BAT #2 1.000 14.4
1492 BAT. RV8 18.4
1491 BAT. RV7 1.094 151.0
1495 BAT #3 1.035 16.6
1496 BAT #4 1.038 16.6
1497 BAT #5 1.017 21.4
1469 BAT RV79 1.087 260.8
11499 757S912T 1.023 245.5
1489 BAT RV80 1.087 260.9
1499 CORDEL 4 1.087 260.8
18403 PAINTRT2 1.022 25.6
1403 PAINTRT4 1.086 260.5
649 HANSMAN7 1.085 260.4
648 HANSMAN9 1.050 144.9
74 METIS647 1.049 144.8
87 METIS644 1.085 260.3
4074 METIS649 1.032 25.8
80074 KEYSTN_2_B1 1.042 143.8
PROVOST7 1.050 144.9
PROVOST9 1.036 25.9
3112 METISKA9 1.023 4.3
4112 METISKO9 1.023 4.3
112 METISKO7 1.049 144.8
989 703ALTAP 1.049 144.8
4219 KILLARN9 1.067 26.7
219 KILLARN7 1.049 144.7
4220 HAYTER 9 1.042 26.1
220 HAYTER 7 1.040 143.6
1.040 35.9 99221 BULLCREEKGE
99220 BULLCREEK
99231 CONFWINDGE 1.042 35.9
99230 CONFWIND 1.042 35.9
18498 BIGFOOA9 1.023 7.1
19498 BIGFOOT9 1.013 25.3
1498 BIGFOOT8 1.067 73.6
CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
THU, APR 08 2010 15:03
D1-05
2012WP-Alt 2-5.b
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
THU, APR 08 2010 15:03
D1-06

2012WP-Alt 2-6.a

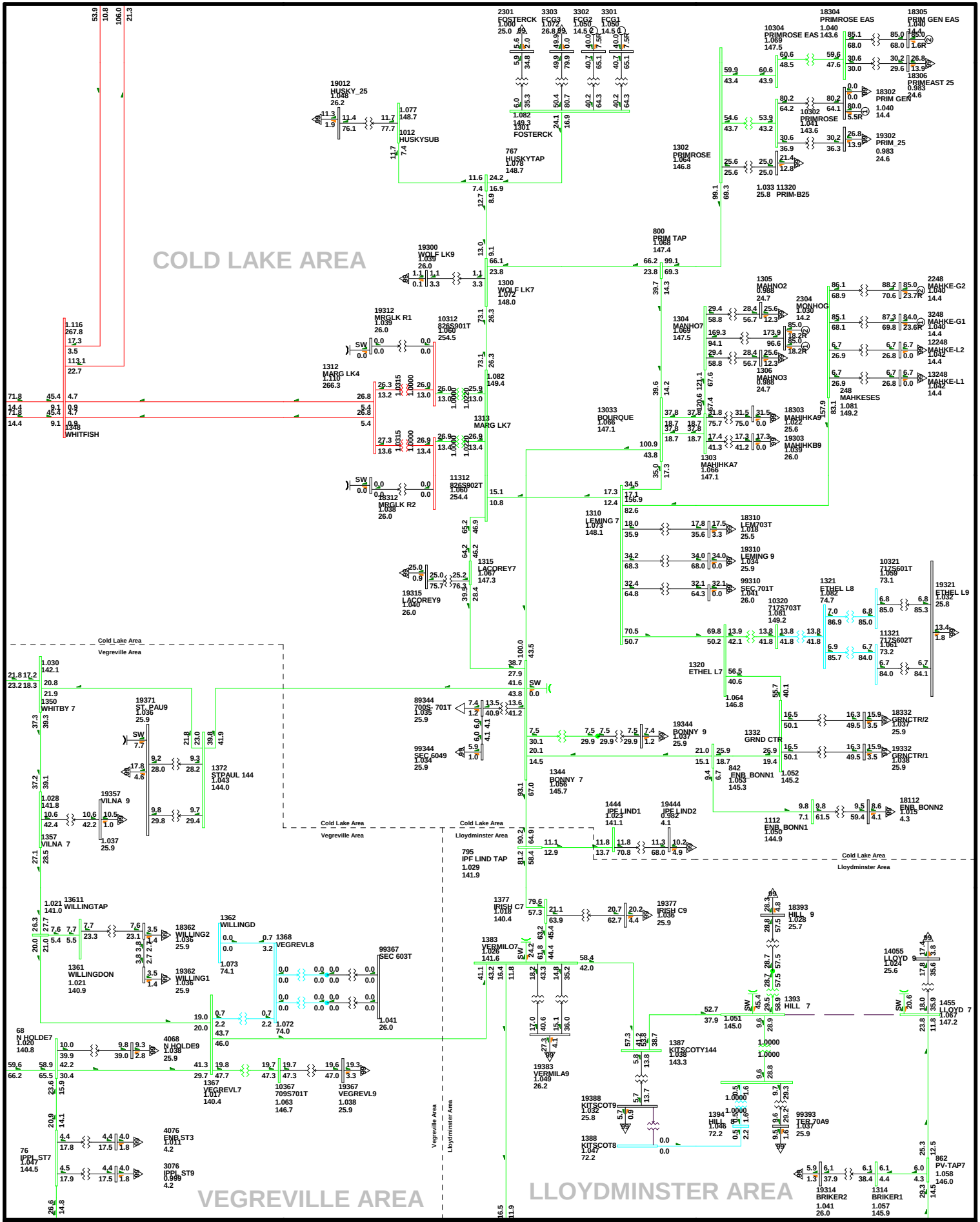
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
THU, APR 08 2010 15:03
D1-06

2012WP-Alt 2-6.b

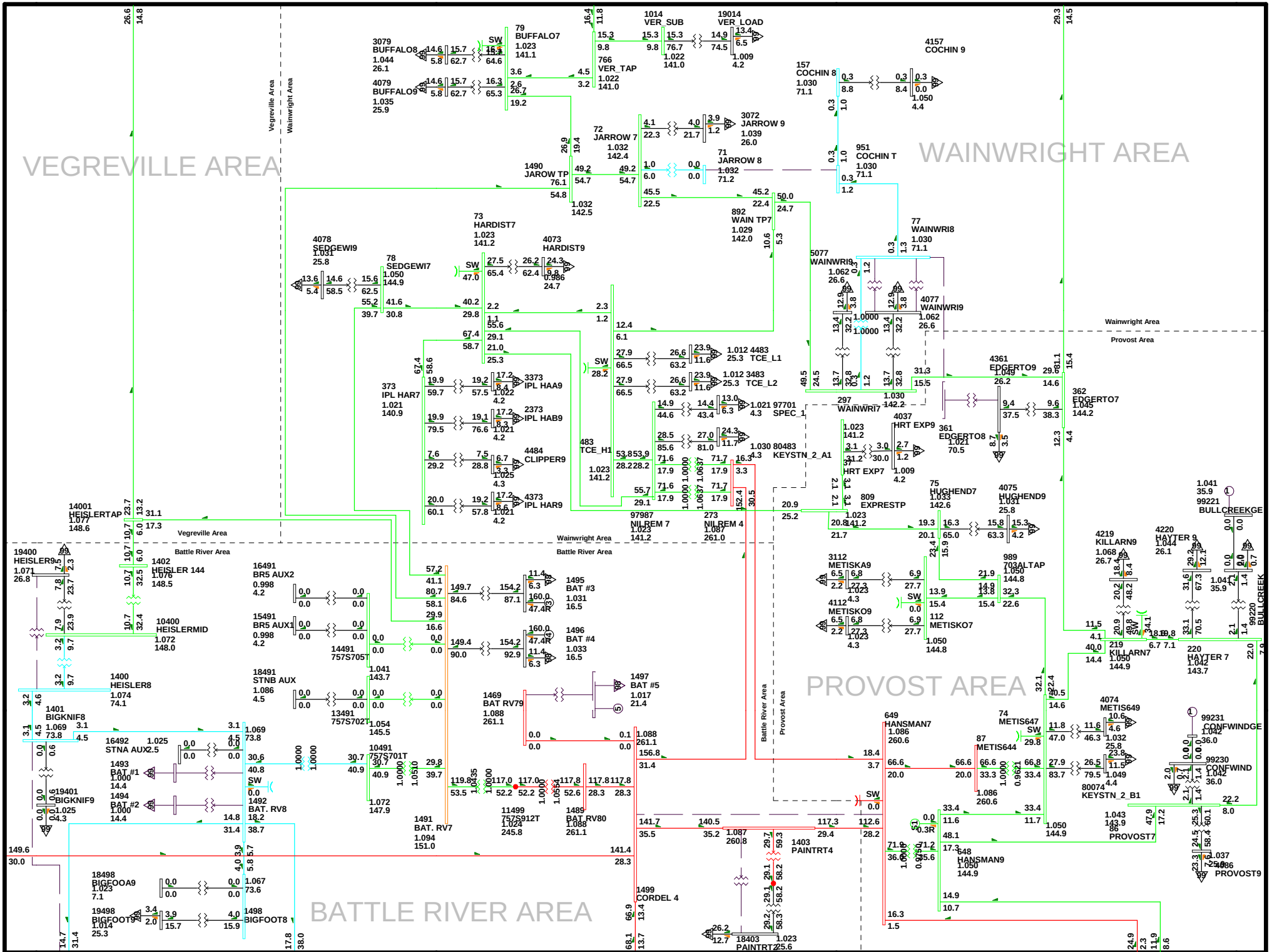
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
THU, APR 08 2010 15:03
D1-07

2012WP-Alt 2-7.a

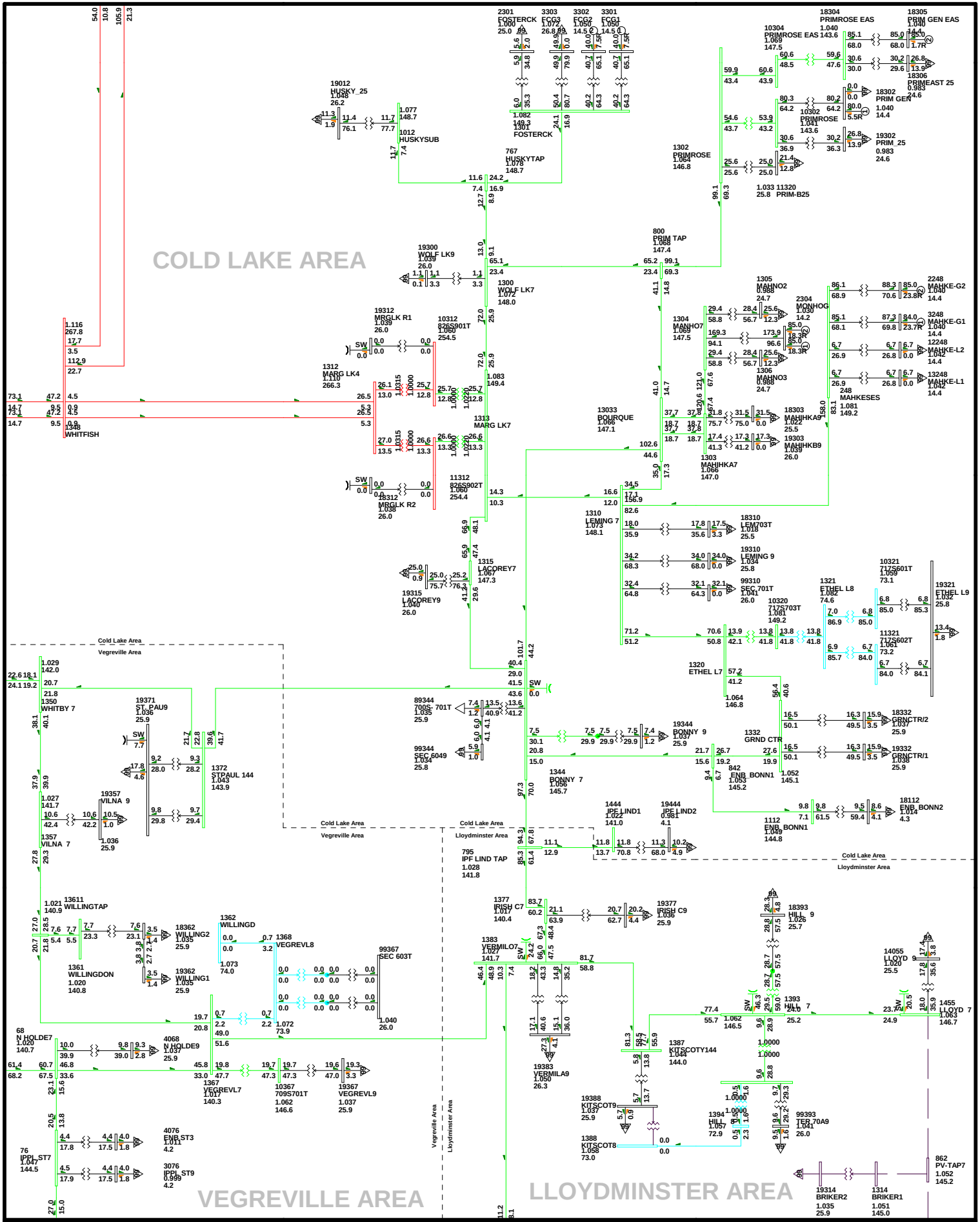
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
THU, APR 08 2010 15:03
D1-07

2012WP-Alt 2-7.b

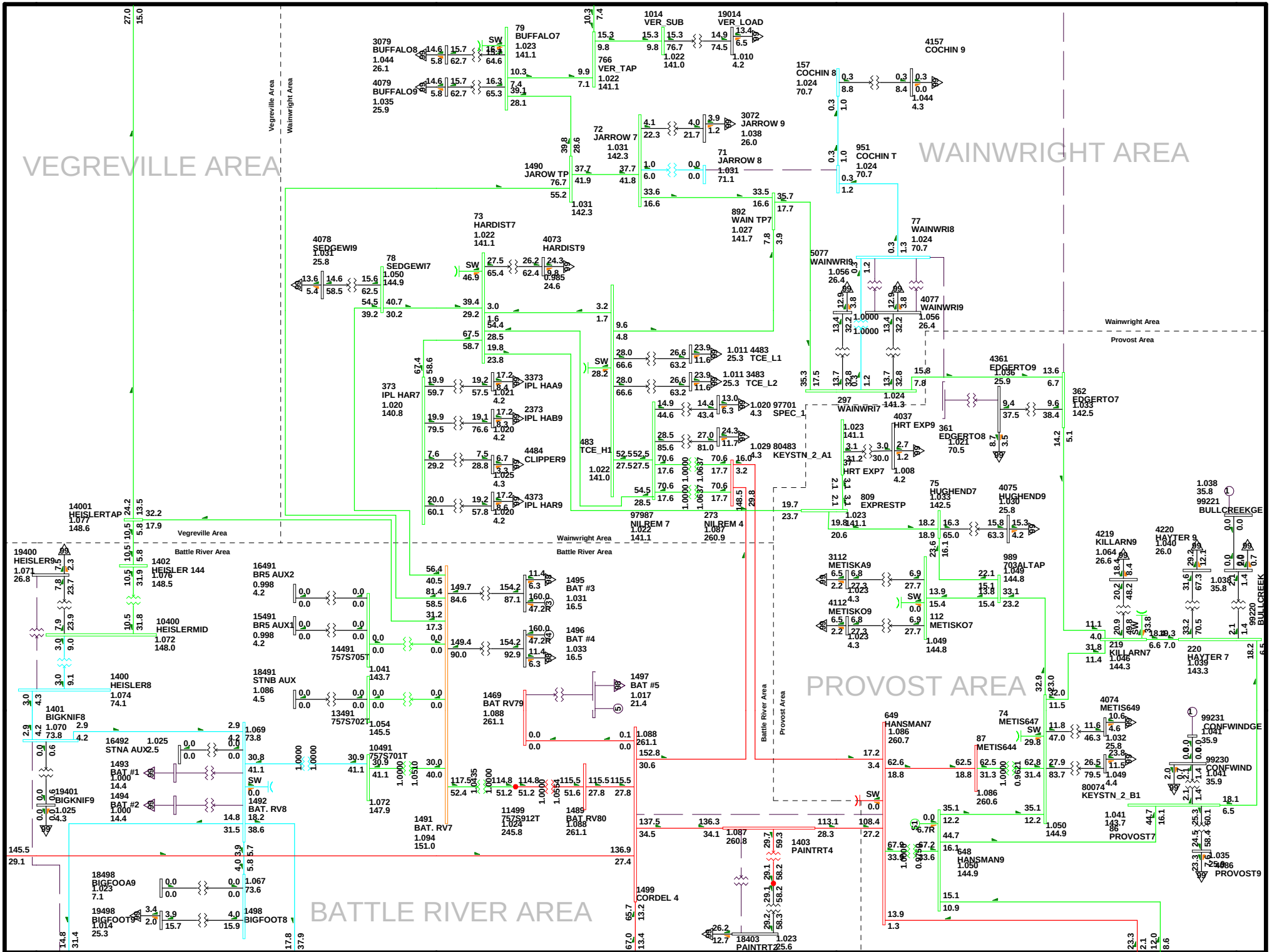
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
THU, APR 08 2010 15:03
D1-08

2012WP-Alt 2-8.a

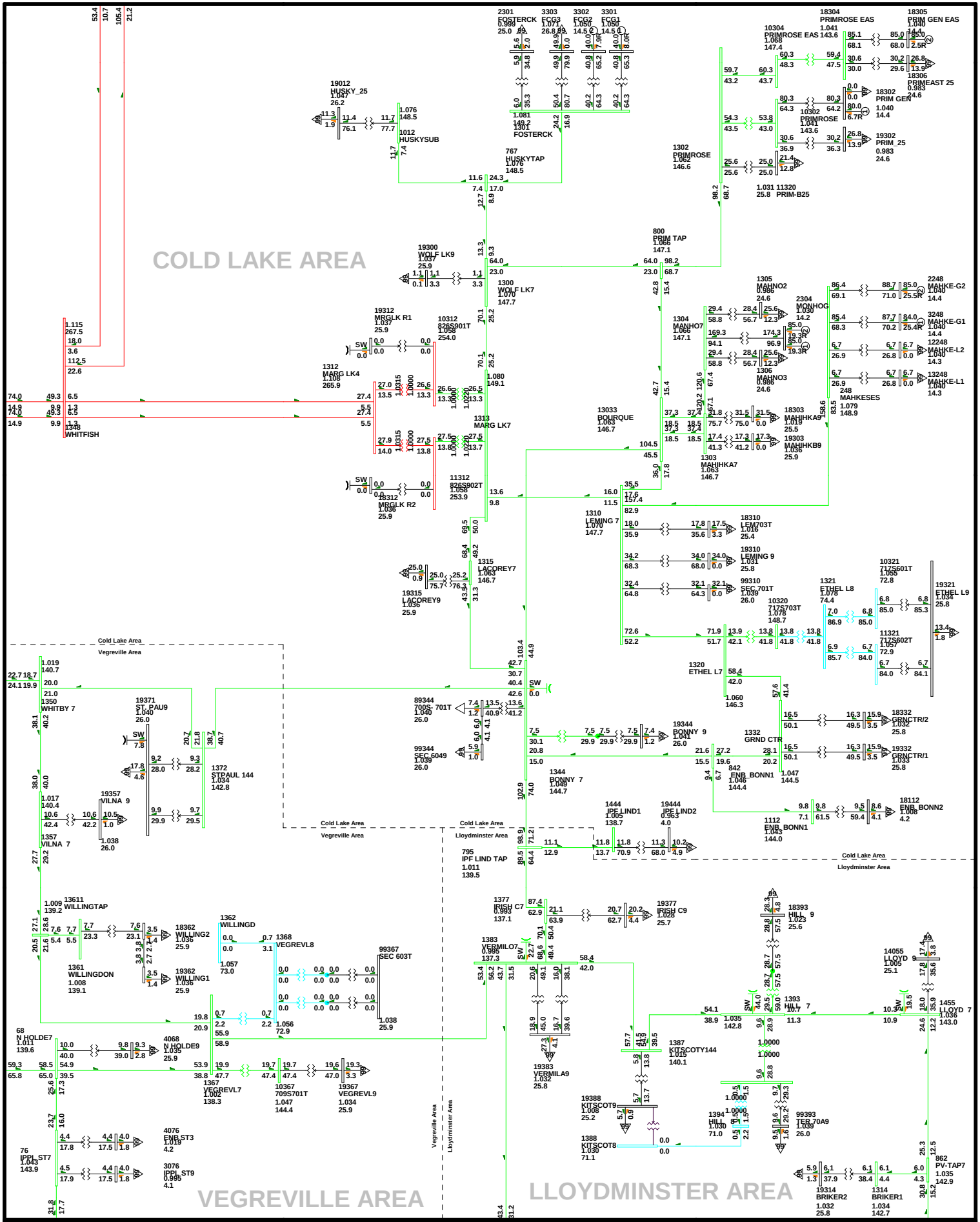
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
THU, APR 08 2010 15:03
D1-08

2012WP-Alt 2-8.b

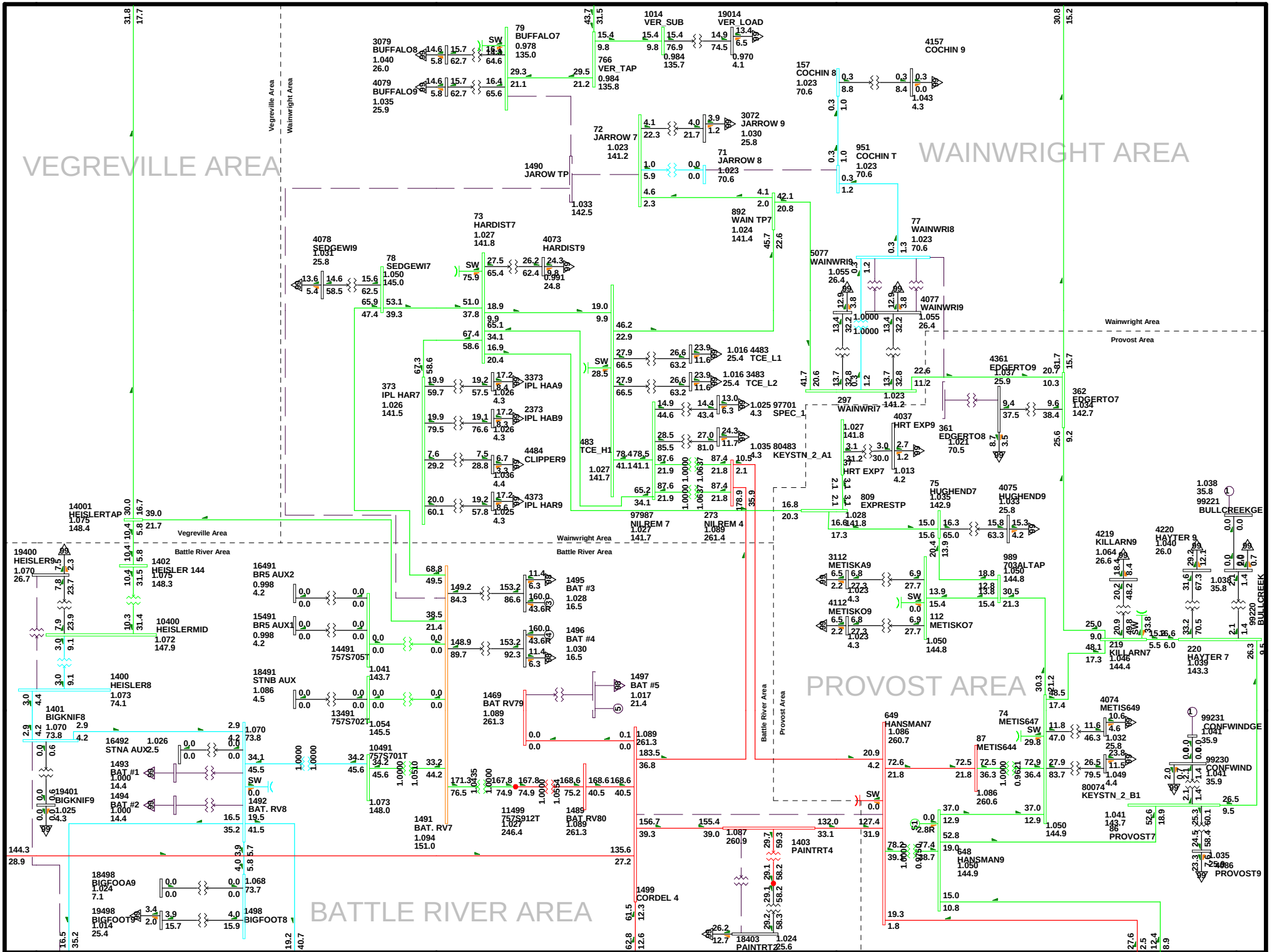
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000

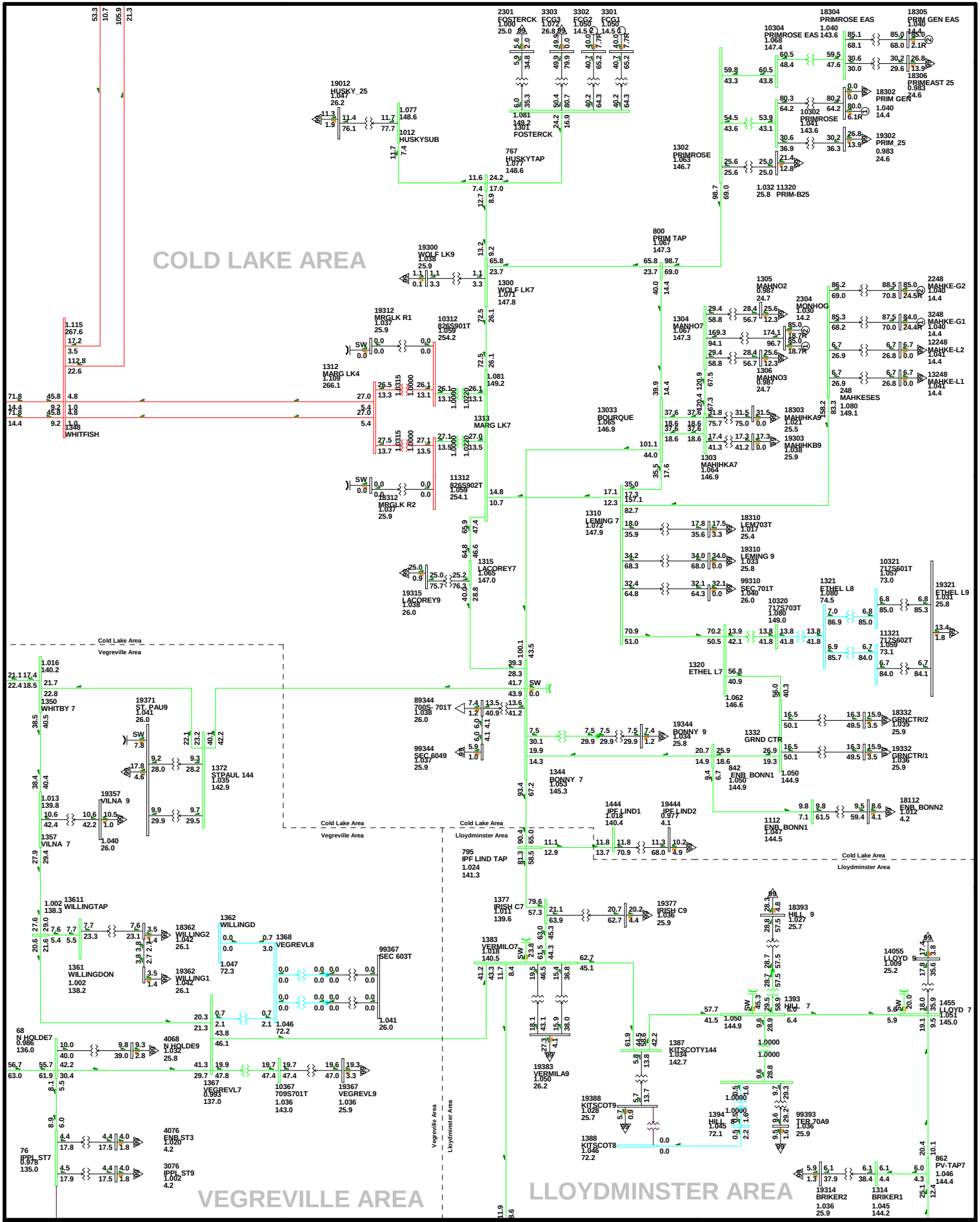


CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
THU, APR 08 2010 15:04
D1-09

2012WP-Alt 2-9.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

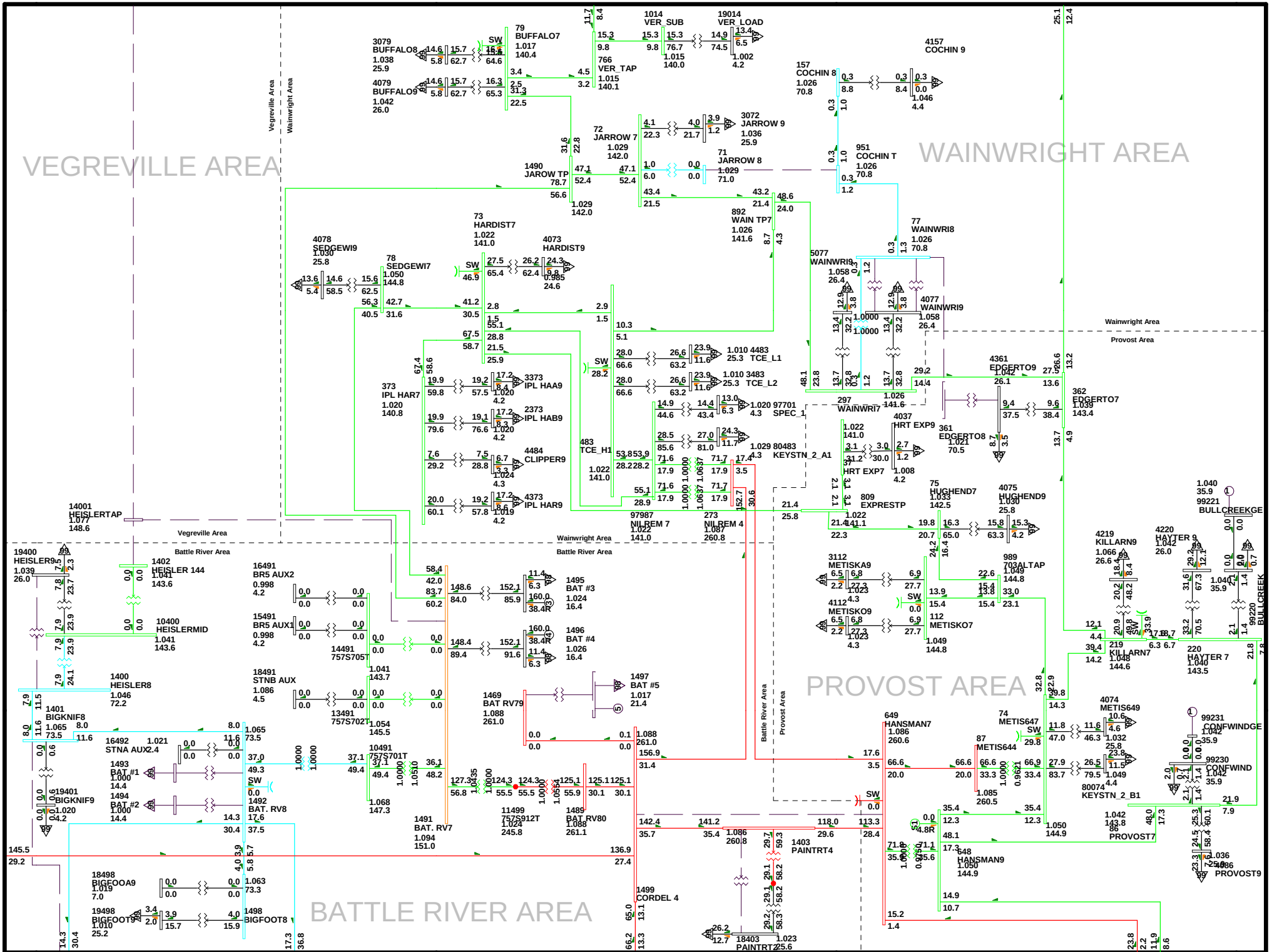

VEGREVILLE AREA
WAINWRIGHT AREA
PROVOST AREA
BATTLE RIVER AREA
Vegreville Area
Wainwright Area
Battle River Area
Provost Area
79 BUFFALO7 0.978 135.0
3079 BUFFALO8 1.040 26.0
4079 BUFFALO9 1.035 25.9
1014 VER_SUB
19014 VER_LOAD
766 VER_TAP 0.984 135.8
4157 COCHIN 9
157 COCHIN 8 1.023 70.6
951 COCHIN T 1.023 70.6
1043 4.3
72 JARROW 7 1.023 141.2
3072 JARROW 9 1.030 25.8
71 JARROW 8 1.023 70.6
1490 JAROW TP 1.033 142.5
892 WAIN TP7 1.024 141.4
77 WAINWRI8 1.023 70.6
5077 WAINWRI9 1.055 26.4
4077 WAINWRI9 1.055 26.4
4078 SEDGEWI9 1.031 25.8
78 SEDGEWI7 1.050 145.0
73 HARDIST7 1.027 141.8
4073 HARDIST9 0.991 24.8
1.016 4483 25.4 TCE_L1
1.016 3483 25.4 TCE_L2
373 IPL HAR7 1.026 141.5
3373 IPL HAA9 1.026 4.3
2373 IPL HAB9 1.026 4.3
4484 CLIPPER9 1.036 4.4
4373 IPL HAR9 1.025 4.3
483 TCE_H1 1.027 141.7
1.025 97701 SPEC_1 4.3
1.035 80483 KEYSTN_2_A1 4.3
297 WAINWRI7 1.027 141.8
4037 HRT EXP9 1.021 70.5
HRT EXP7 1.013 4.2
361 EDGERTO8 1.021 70.5
4361 EDGERTO9 1.037 25.9
362 EDGERTO7 1.034 142.7
809 EXPRESTP 1.028 141.8
75 HUGHEND7 1.035 142.9
4075 HUGHEND9 1.033 25.8
14001 HEISLERTAP 1.075 148.4
1402 HEISLER 144 1.075 148.3
10400 HEISLERMID 1.072 147.9
19400 HEISLER9 1.070 26.7
1400 HEISLER8 1.073 74.1
1401 BIGKNIF8 1.070 73.8
19401 BIGKNIF9 1.025 4.3
16492 STNA AUX 1.026 2.5
1493 BAT #1 1.000 14.4
1494 BAT #2 1.000 14.4
1492 BAT. RV8 19.5
16491 BR5 AUX2 0.998 4.2
15491 BR5 AUX1 0.998 4.2
14491 757S705T 1.041 143.7
18491 STNB AUX 1.086 4.5
13491 757S702T 1.054 145.5
10491 757S701T 1.073 148.0
1491 BAT. RV7 1.094 151.0
1495 BAT #3 1.028 16.5
1496 BAT #4 1.030 16.5
1497 BAT #5 1.017 21.4
1469 BAT RV79 1.089 261.3
11499 757S912T 1.027 246.4
1489 BAT RV80 1.089 261.3
1499 CORDEL 4 1.089 261.3
1403 PAINTRT4 1.087 260.9
18403 PAINTRT2 1.024 25.6
18498 BIGFOOA9 1.024 7.1
19498 BIGFOOT9 1.014 25.4
1498 BIGFOOT8 1.068 73.7
97987 NILREM 7 1.027 141.7
273 NILREM 4 1.089 261.4
3112 METISKA9 1.023 4.3
4112 METISKO9 1.023 4.3
112 METISKO7 1.050 144.8
989 703ALTAP 1.050 144.8
87 METIS644 1.086 260.6
74 METIS647 1.032 25.8
649 HANSMAN7 1.086 260.7
648 HANSMAN9 1.050 144.9
4074 METIS649 1.041 143.7
80074 KEYSTN_2_B1 1.049 4.4
PROVOST7 1.050 144.9
4219 KILLARN9 1.064 26.6
219 KILLARN7 1.046 144.4
4220 HAYTER 9 1.040 26.0
220 HAYTER 7 1.039 143.3
1.038 35.8 99221 BULLCREEKGE
99220 BULLCREEK
99231 CONFWINDGE 1.041 35.9
99230 CONFWIND 1.041 35.9
1.035 1.036 PROVOST9
CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
THU, APR 08 2010 15:04
D1-09
2012WP-Alt 2-9.b
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
THU, APR 08 2010 15:04
D1-10

2012WP-Alt 2-10.a

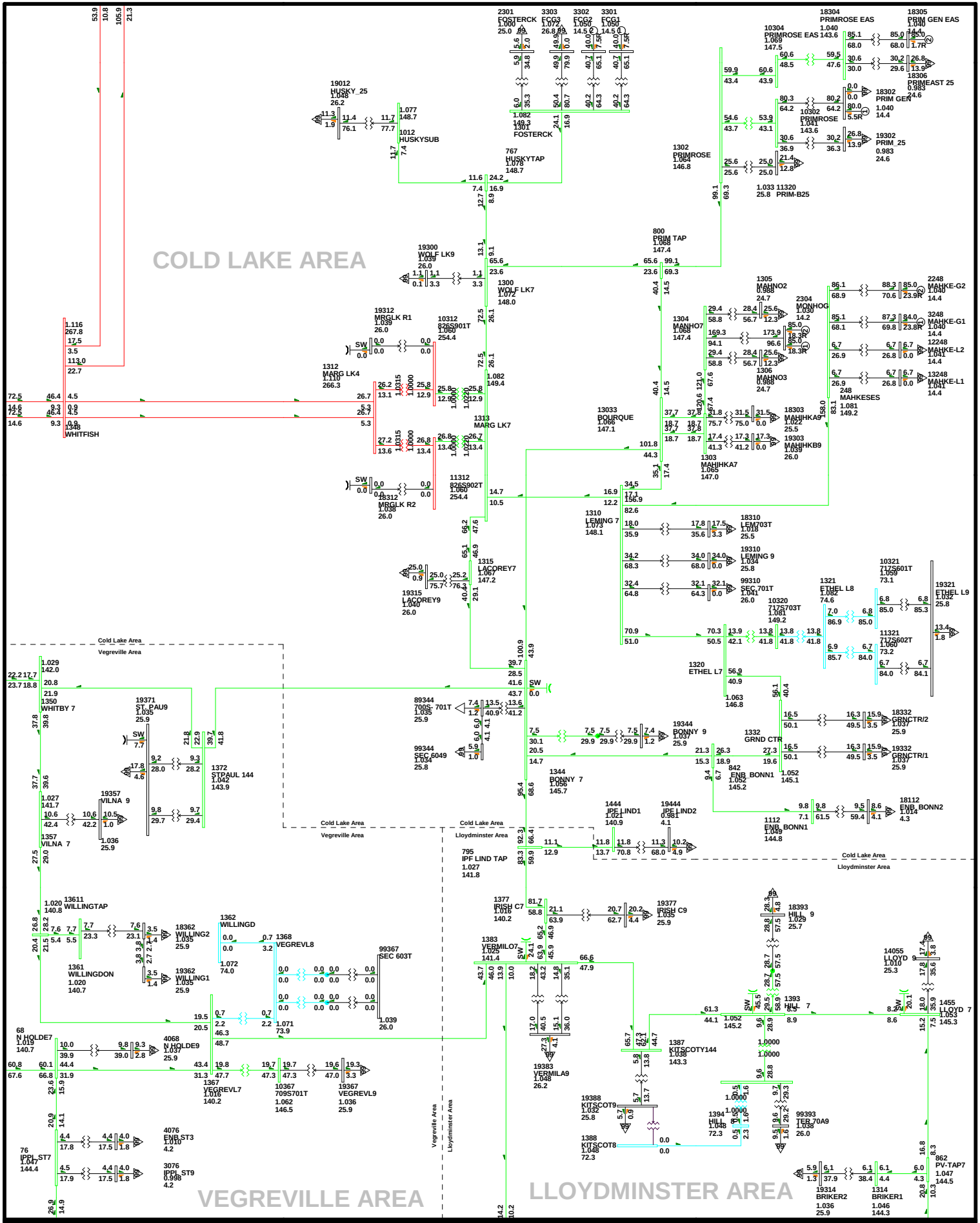
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
THU, APR 08 2010 15:04
D1-10

2012WP-Alt 2-10.b

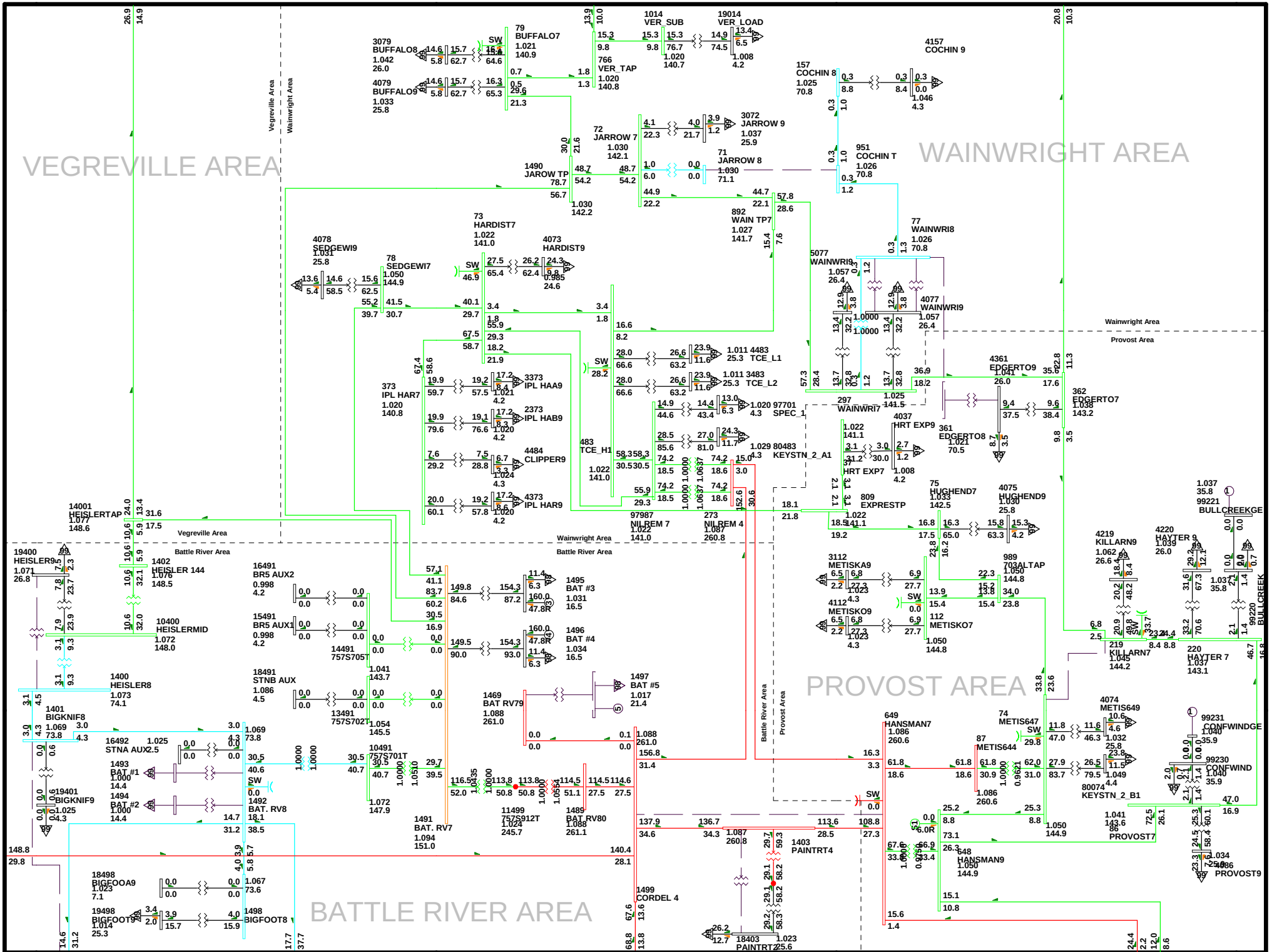
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
THU, APR 08 2010 15:04
D1-11

2012WP-Alt 2-11.a

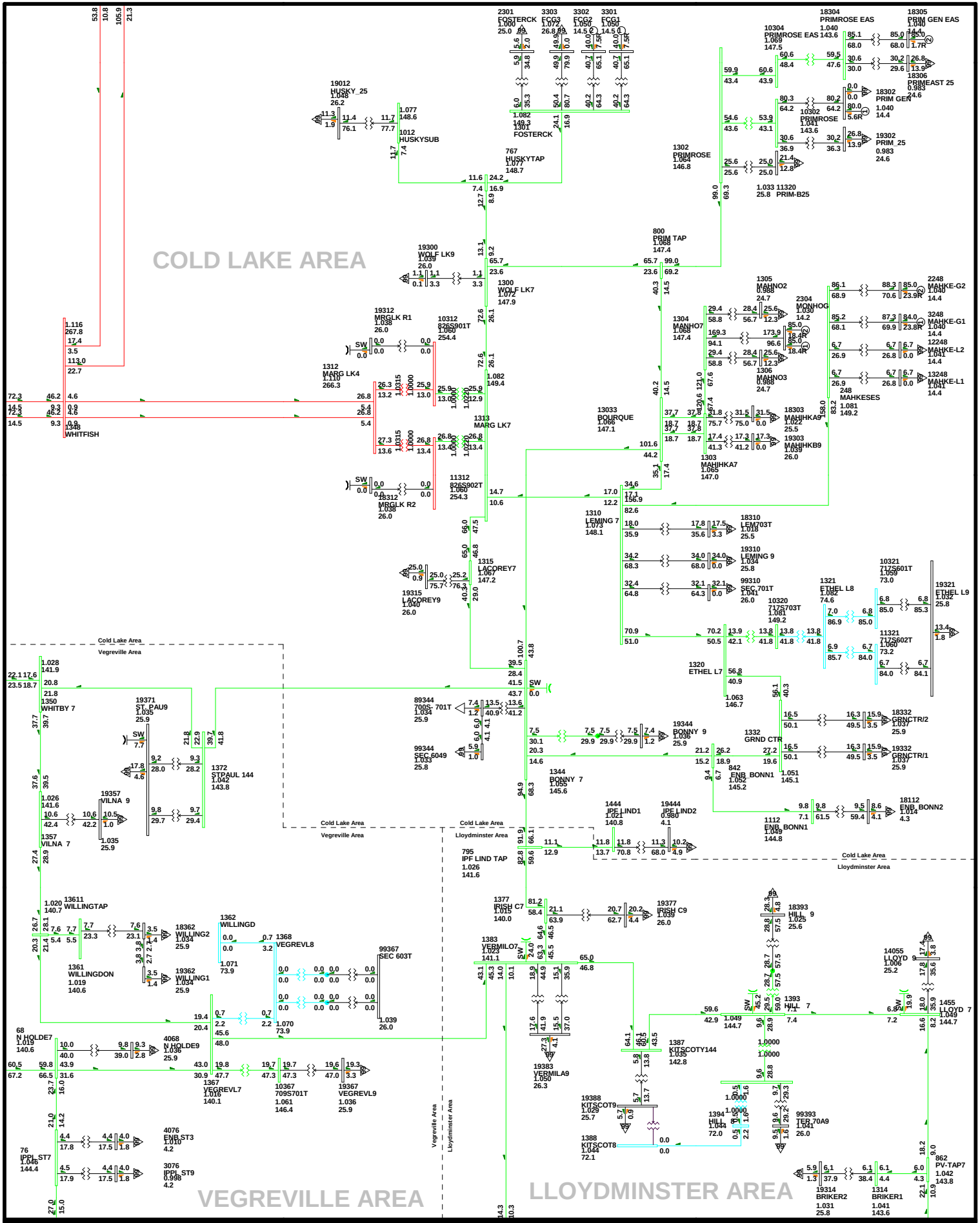
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
THU, APR 08 2010 15:04
D1-11

2012WP-Alt 2-11.b

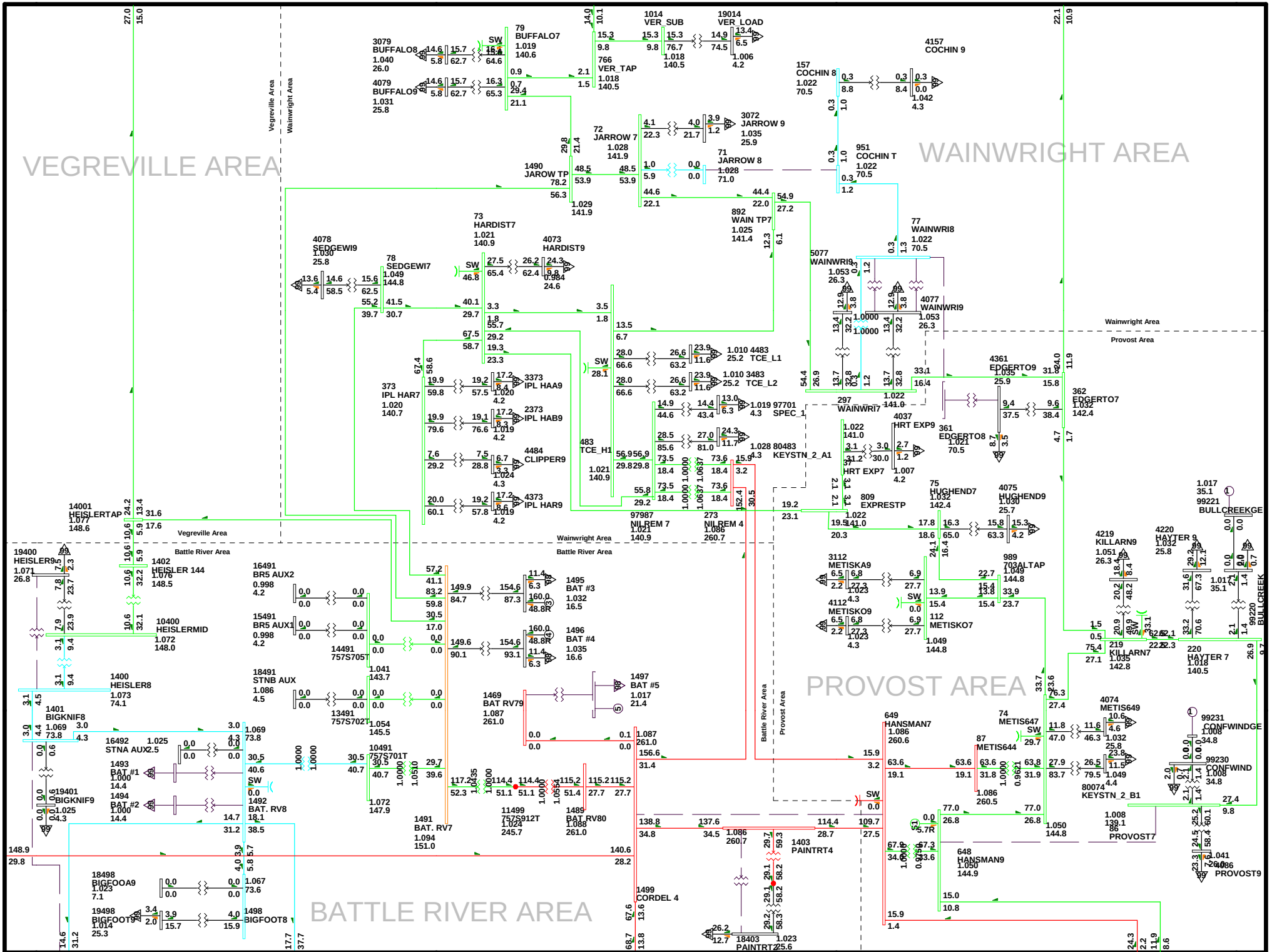
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000

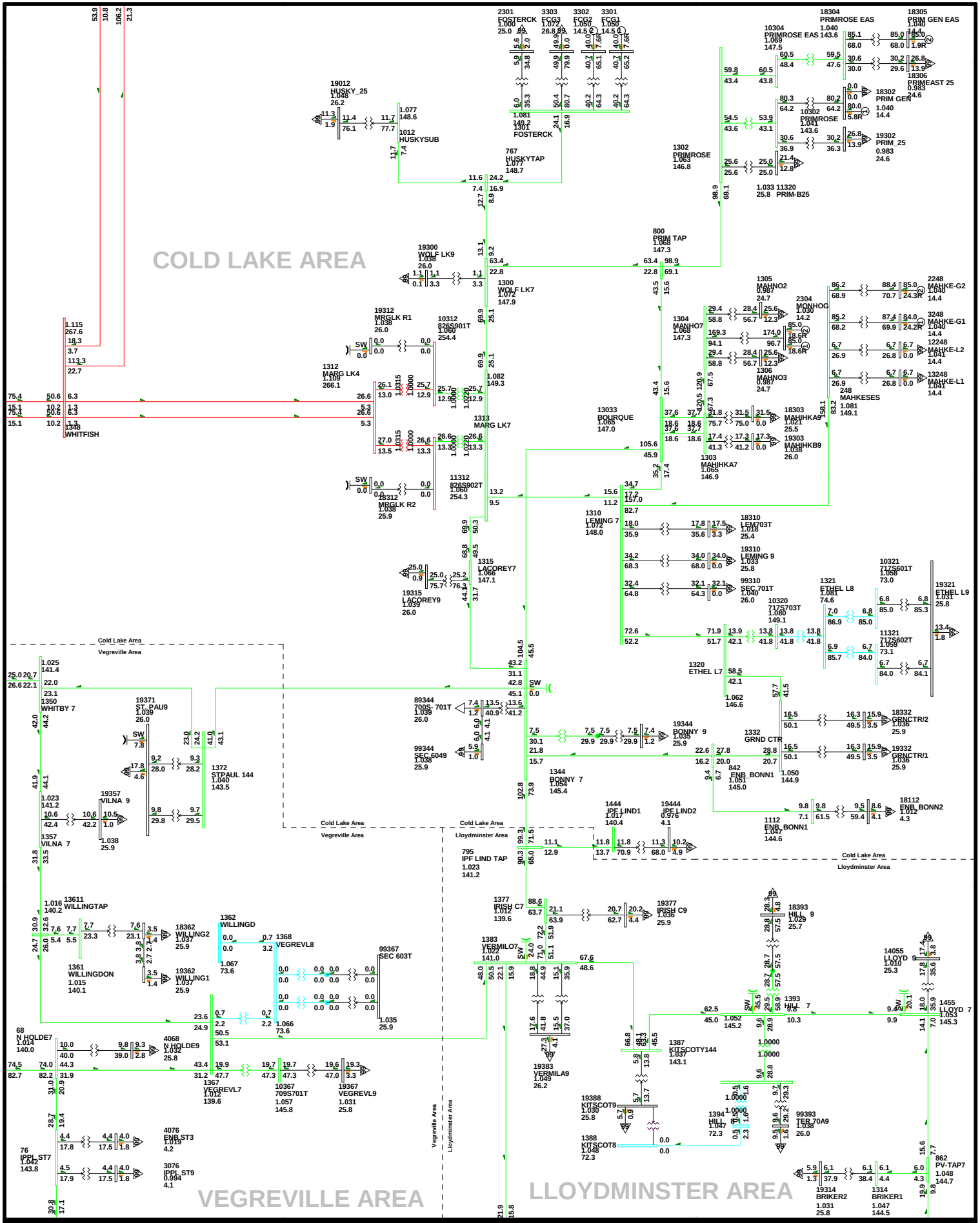


CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
THU, APR 08 2010 15:04
D1-12

2012WP-Alt 2-12.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

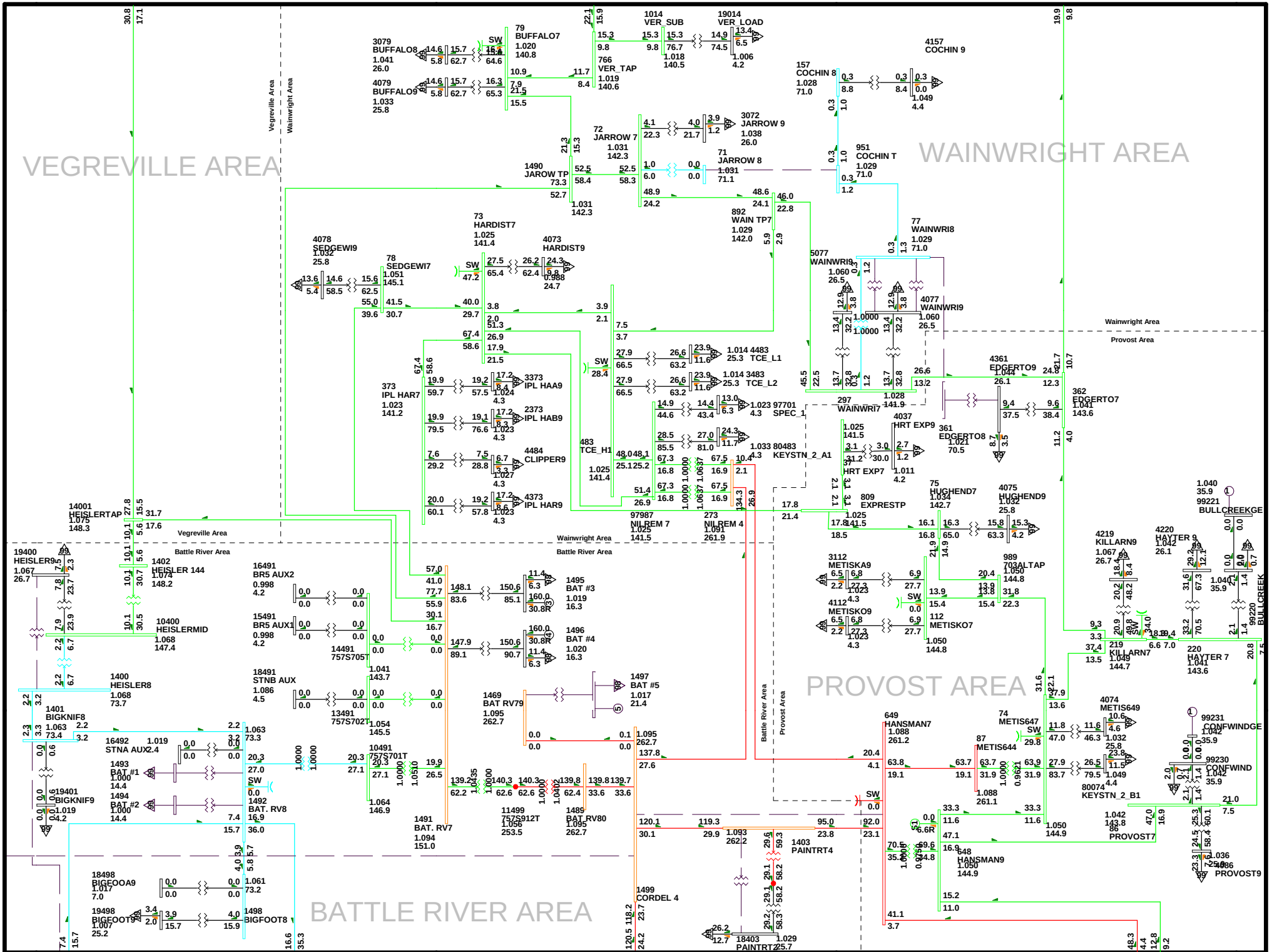

VEGREVILLE AREA
WAINWRIGHT AREA
PROVOST AREA
BATTLE RIVER AREA
Vegreville Area
Wainwright Area
Battle River Area
Provost Area
14001 HEISLERTAP 1.077 148.6
1402 HEISLER 144 1.076 148.5
10400 HEISLERMID 1.072 148.0
19400 HEISLER9 1.071 26.8
1400 HEISLER8 1.073 74.1
1401 BIGKNIF8 1.069 73.8
19401 BIGKNIF9 1.025
1493 BAT #1 1.000 14.4
1494 BAT #2 1.000 14.4
1492 BAT. RV8 18.1
1491 BAT. RV7 1.094 151.0
16492 STNA AUX 1.025 2.5
18498 BIGFOOA9 1.023 7.1
19498 BIGFOOT9 1.014 25.3
1498 BIGFOOT8 1.067 73.6
16491 BR5 AUX2 0.998 4.2
15491 BR5 AUX1 0.998 4.2
18491 STNB AUX 1.086 4.5
14491 757S705T 1.041 143.7
13491 757S702T 1.054 145.5
10491 757S701T 1.072 147.9
11499 757S912T 1.024 245.7
1495 BAT #3 1.032 16.5
1496 BAT #4 1.035 16.6
1497 BAT #5 1.017 21.4
1469 BAT RV79 1.087 261.0
1489 BAT RV80 1.088 261.0
1499 CORDEL 4
1403 PAINTRT4
18403 PAINTRT 1.023 25.6
3079 BUFFALO8 1.040 26.0
4079 BUFFALO9 1.031 25.8
79 BUFFALO7 1.019 140.6
766 VER_TAP 1.018 140.5
1014 VER_SUB 1.018 140.5
19014 VER_LOAD 1.006 4.2
1490 JAROW TP 78.2 56.3
72 JAROW 7 1.028 141.9
3072 JARROW 9 1.035 25.9
71 JARROW 8 1.028 71.0
1029 141.9
892 WAIN TP7 1.025 141.4
4078 SEDGEWI9 1.030 25.8
78 SEDGEWI7 1.049 144.8
73 HARDIST7 1.021 140.9
4073 HARDIST9 1.034 24.6
373 IPL HAR7 1.020 140.7
3373 IPL HAA9 1.020 4.2
2373 IPL HAB9 1.019 4.2
4373 IPL HAR9 1.019 4.2
4484 CLIPPER9 1.024 4.3
483 TCE_H1 1.021 140.9
1010 4483 25.2 TCE_L1
1010 3483 25.2 TCE_L2
1019 97701 SPEC_1 4.3
1028 80483 KEYSTN_2_A1 4.3
97987 NILREM 7 1.021 140.9
273 NILREM 4 1.086 260.7
4157 COCHIN 9
157 COCHIN 8 1.022 70.5
951 COCHIN T 1.022 70.5
1042 4.3
77 WAINWRI8 1.022 70.5
5077 WAINWRI9 1.053 26.3
4077 WAINWRI9 1.053 26.3
297 WAINWRI7 1.022 141.0
4037 HRT EXP9 1.022 141.0
HRT EXP7 1.007 4.2
361 EDGERTO8 1.021 70.5
4361 EDGERTO9 1.035 25.9
362 EDGERTO7 1.032 142.4
809 EXPRESTP 1.022 141.0
75 HUGHEND7 1.032 142.4
4075 HUGHEND9 1.030 25.7
989 703ALTAP 1.049 144.8
3112 METISKA9 1.023 4.3
4112 METISKO9 1.023 4.3
112 METISKO7 1.049 144.8
649 HANSMAN7 1.086 260.6
74 METIS647 1.032 25.8
87 METIS644 1.086 260.5
4074 METIS649 1.032 25.8
80074 KEYSTN_2_B1 1.049 4.4
648 HANSMAN9 1.050 144.9
1050 144.8
PROVOST7 1.008 139.1
PROVOST9 1.041 1.086
4219 KILLARN9 1.051 26.3
219 KILLARN7 1.035 142.8
4220 HAYTER 9 1.032 25.8
220 HAYTER 7 1.018 140.5
1017 35.1 99221 BULLCREEKGE
1017 35.1 99220 BULLCREEK
99231 CONFWINDGE 1.008 34.8
99230 CONFWIND 1.008 34.8
1086 PROVOST9
CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
THU, APR 08 2010 15:04
D1-12
2012WP-Alt 2-12.b
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
THU, APR 08 2010 15:04
D1-14

2012WP-Alt 2-13.a

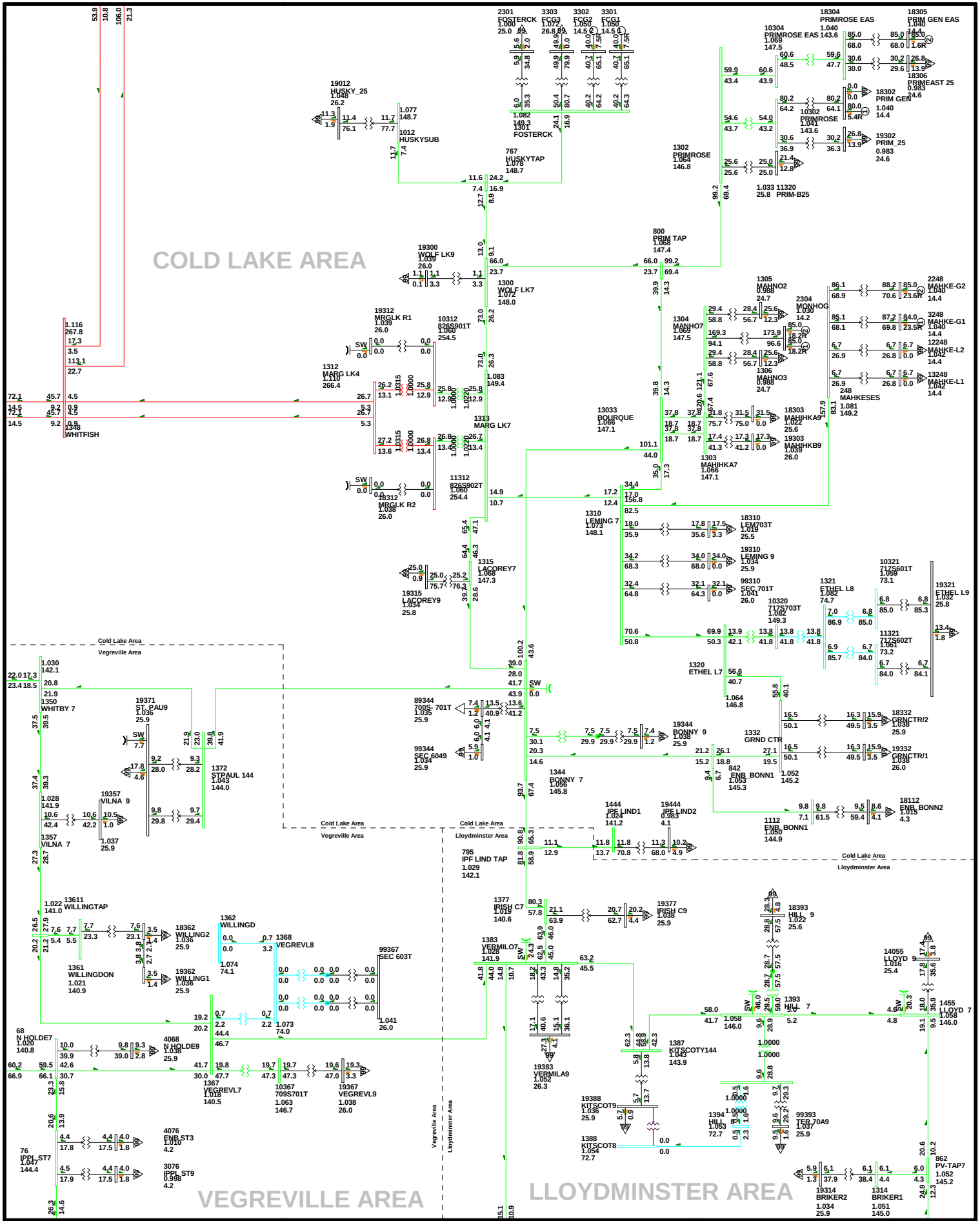
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
THU, APR 08 2010 15:04
D1-14

2012WP-Alt 2-13.b

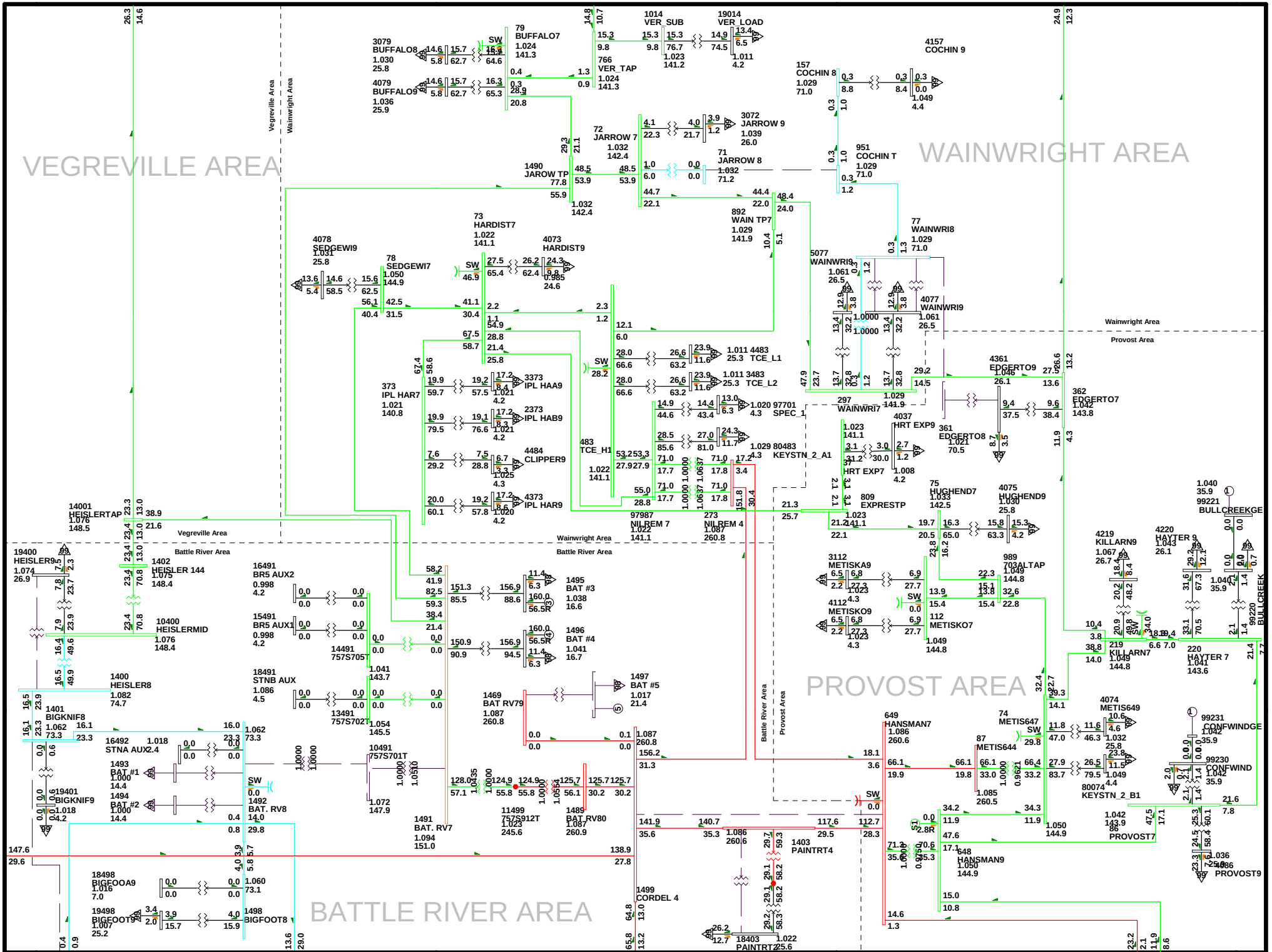
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
THU, APR 08 2010 15:04
D1-15

2012WP-Alt 2-14.a

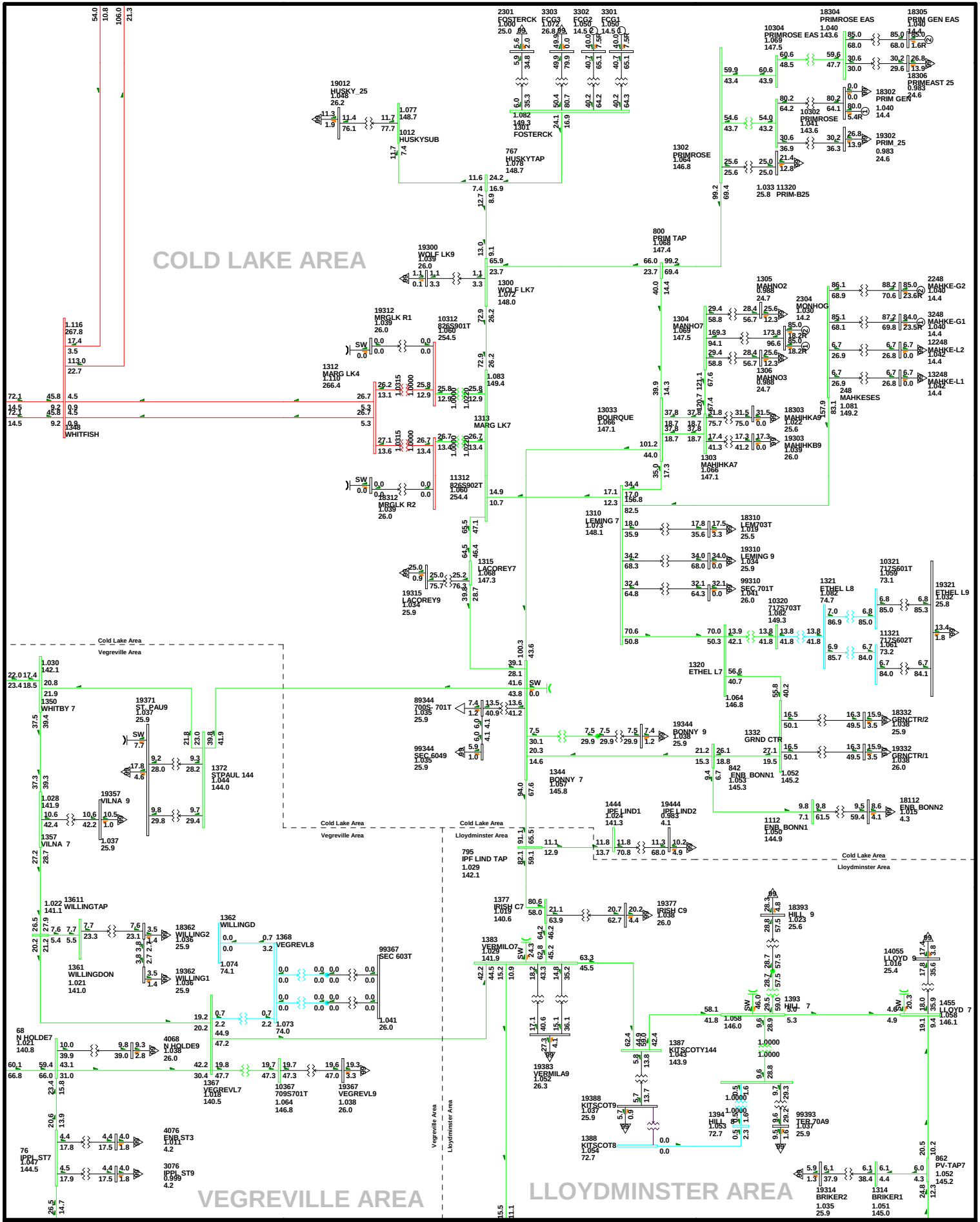
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
THU, APR 08 2010 15:04
D1-15

2012WP-Alt 2-14.b

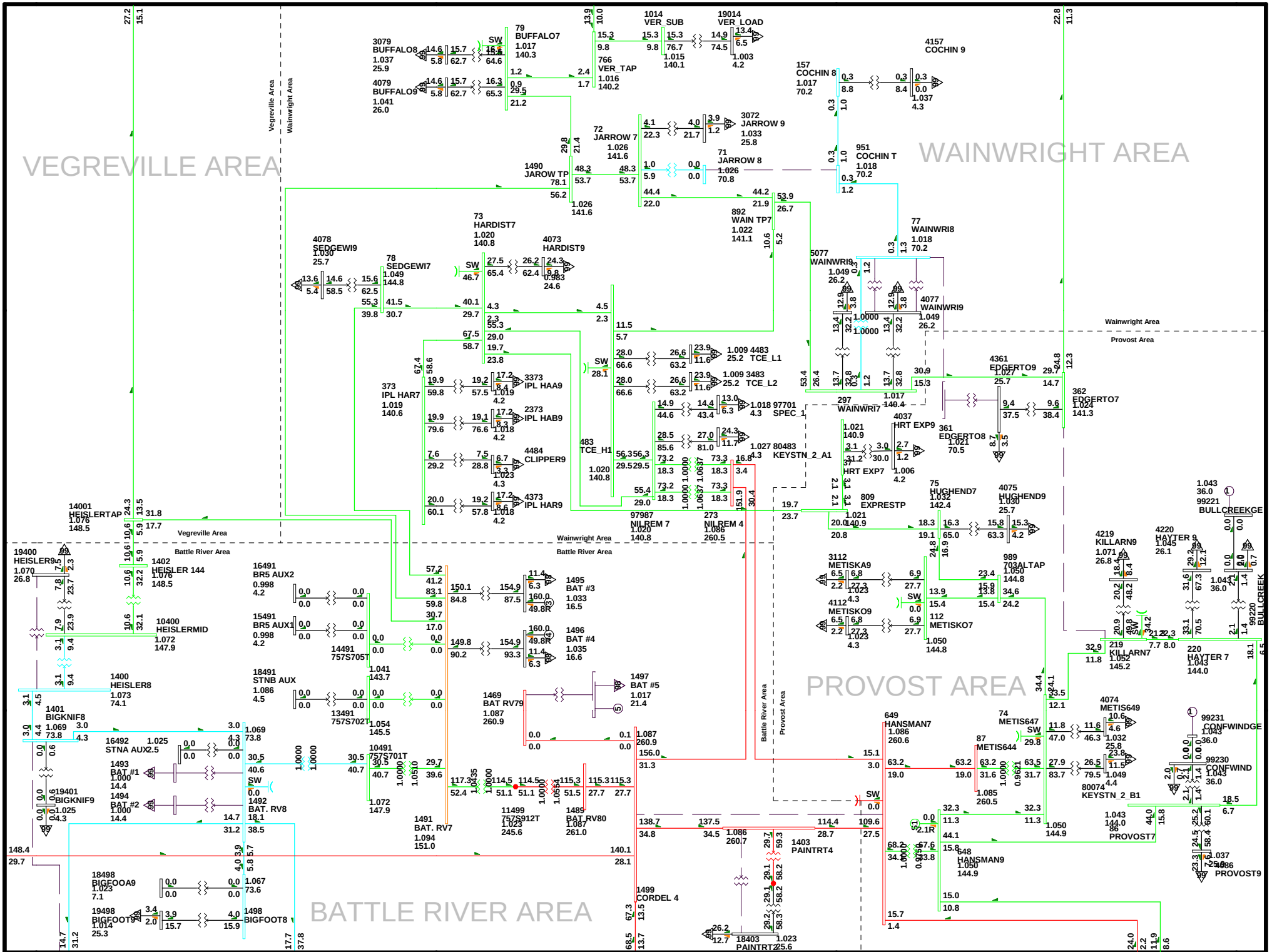
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
THU, APR 08 2010 15:04
D1-16

2012WP-Alt 2-15.a

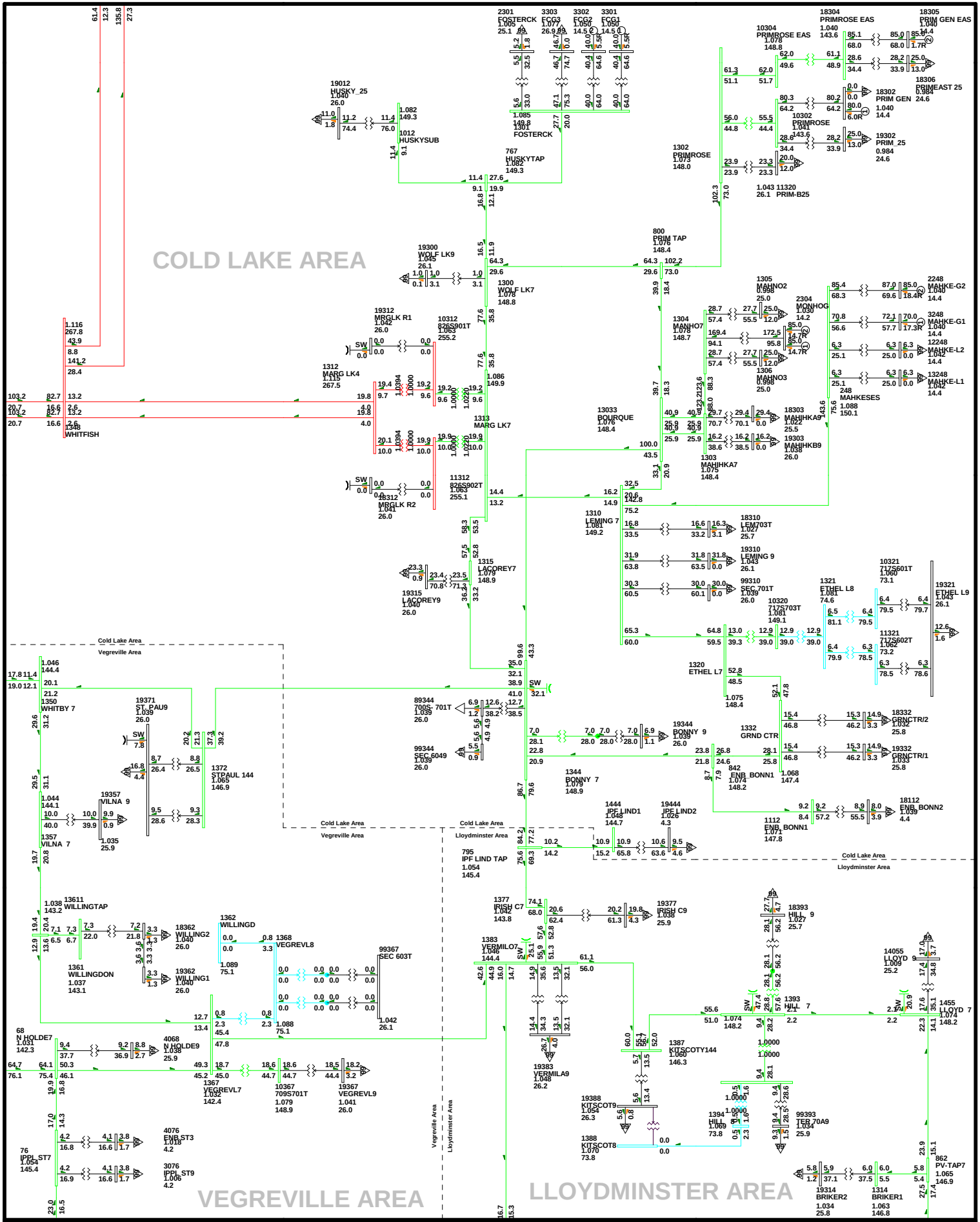
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
THU, APR 08 2010 16:08
D1-16

2012WP-Alt 2-15.b

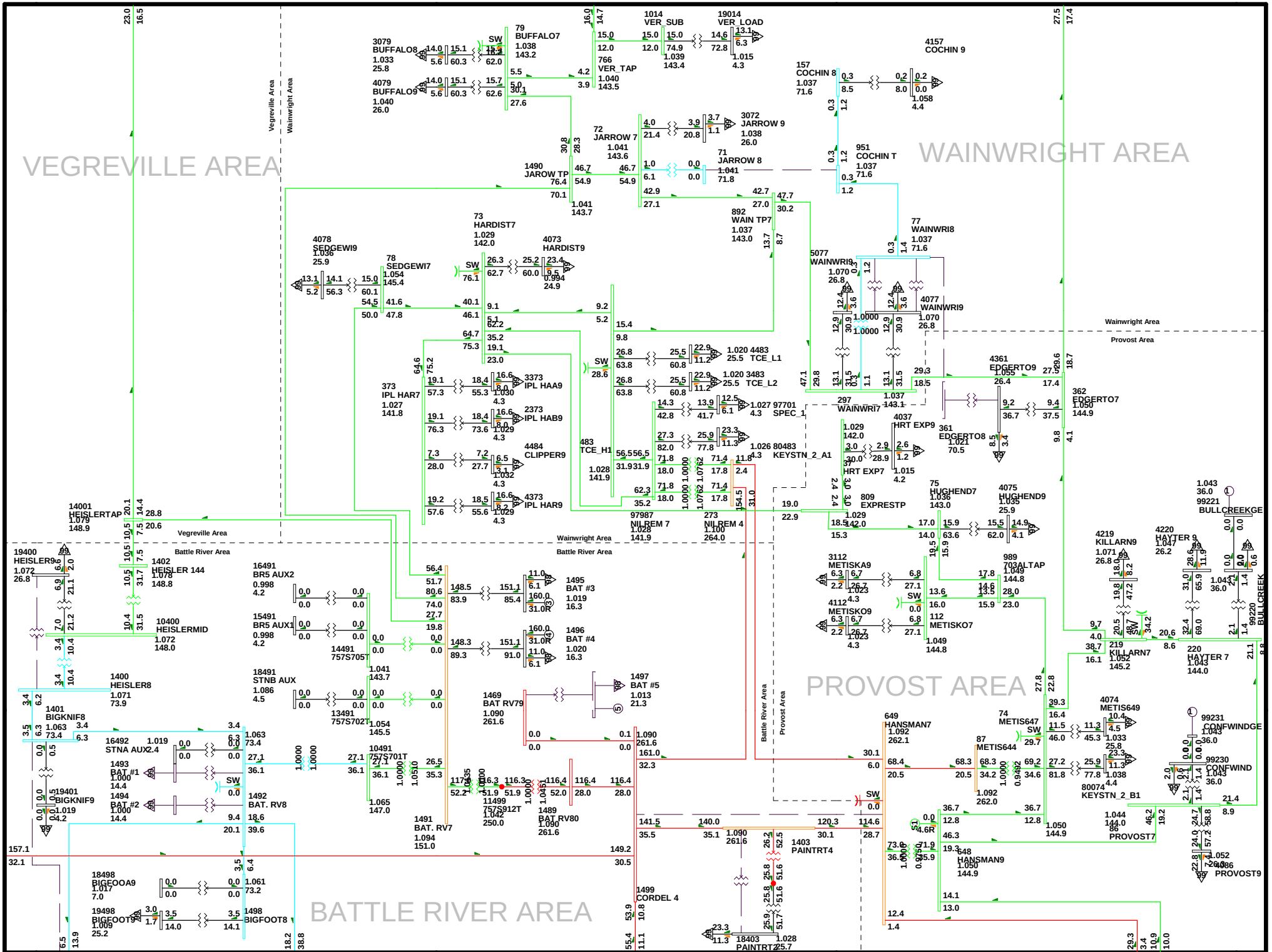
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000

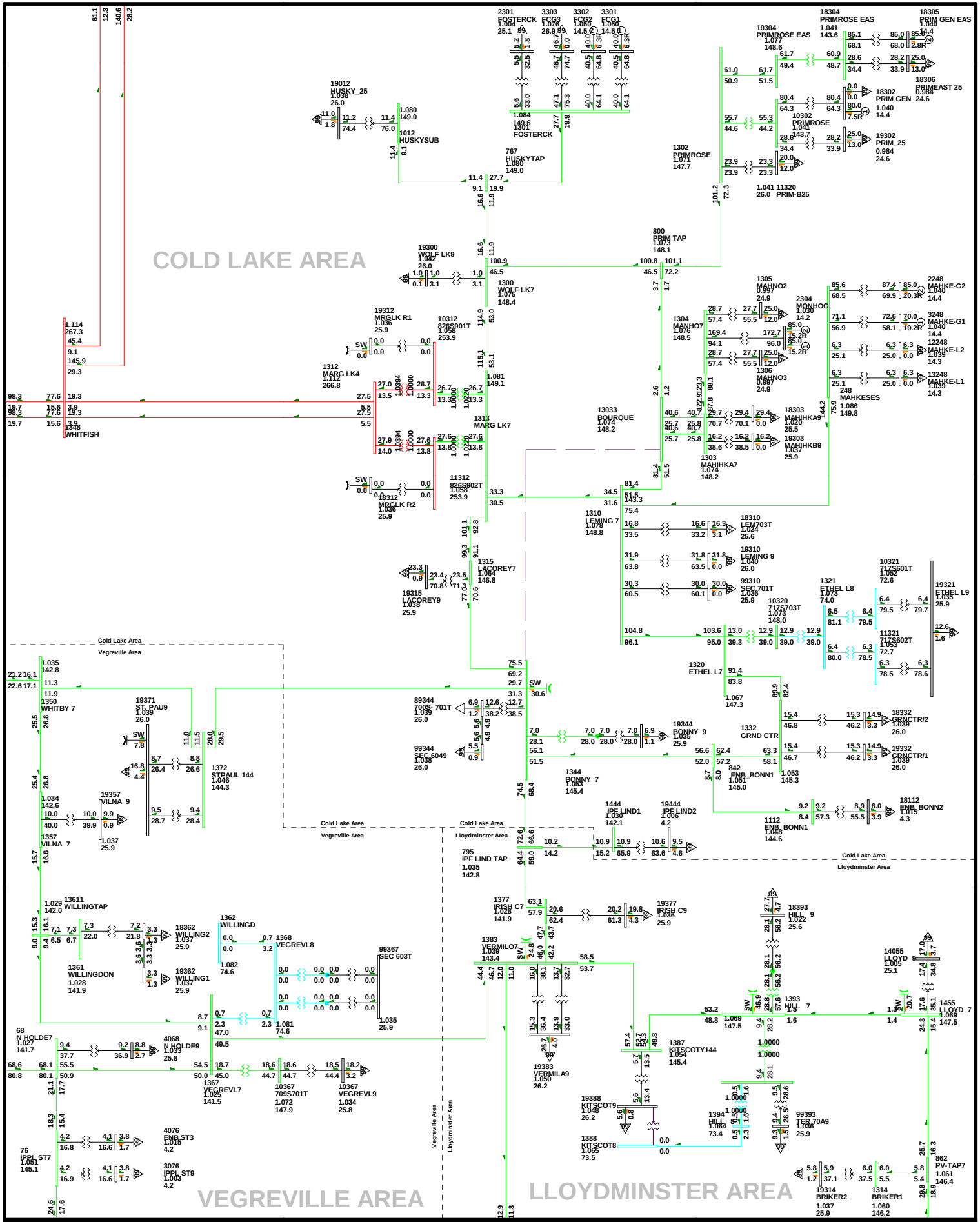


CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
THU, APR 08 2010 15:16
D1-00

2012SP-Alt 2-1.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

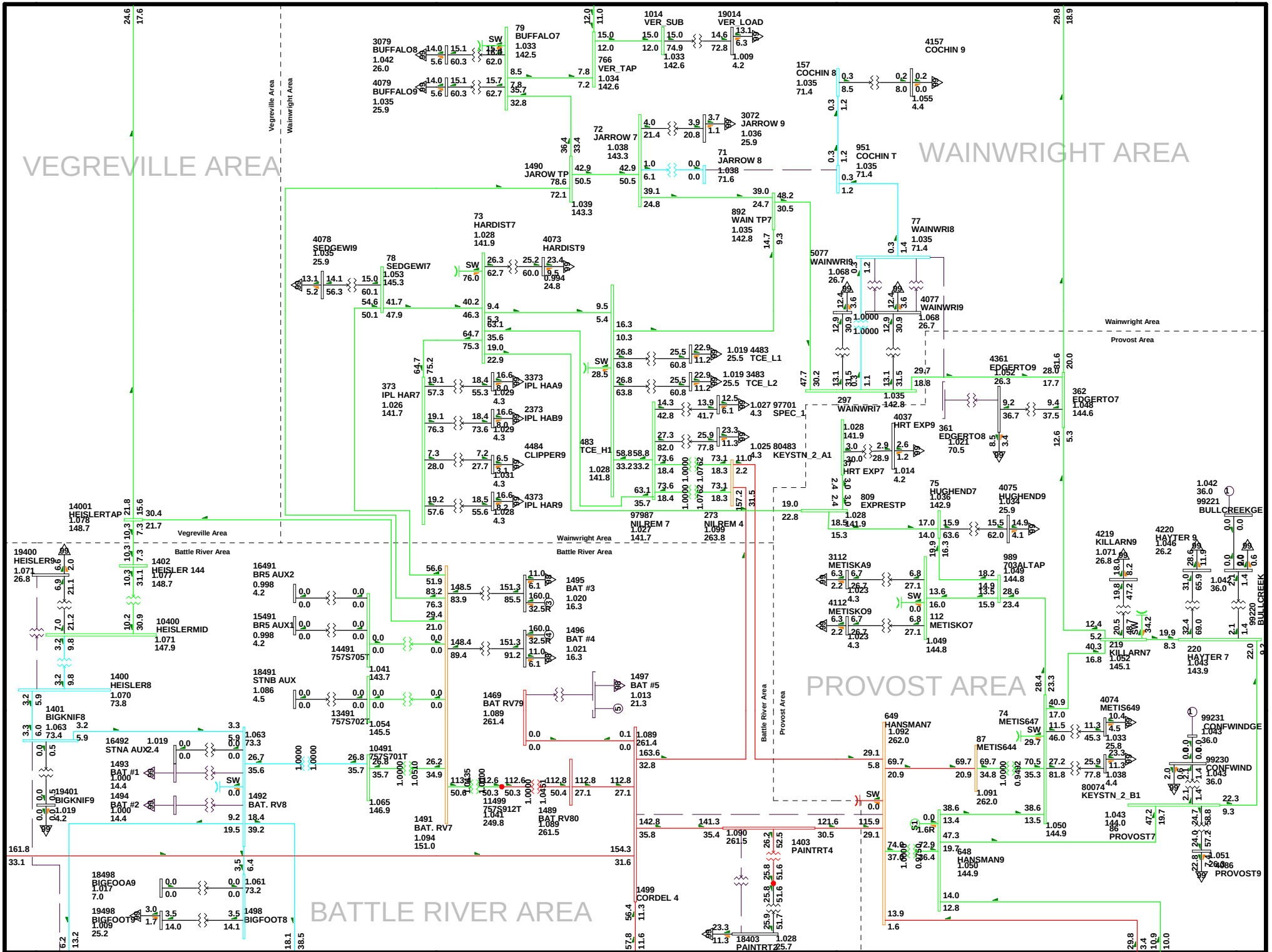

VEGREVILLE AREA
WAINWRIGHT AREA
PROVOST AREA
BATTLE RIVER AREA
Vegreville Area
Wainwright Area
Battle River Area
Provost Area
3079 BUFFALO8 1.033 25.8
4079 BUFFALO9 1.040 26.0
79 BUFFALO7 1.038 143.2
766 VER_TAP 1.040 143.5
1014 VER_SUB 1.039 143.4
19014 VER_LOAD 1.015 4.3
4157 COCHIN 9
157 COCHIN 8 1.037 71.6
1.058 4.4
951 COCHIN T 1.037 71.6
72 JAROW 7 1.041 143.6
3072 JAROW 9 1.038 26.0
71 JAROW 8 1.041 71.8
1490 JAROW TP 76.4 70.1 1.041 143.7
892 WAIN TP7 1.037 143.0
77 WAINWRI8 1.037 71.6
5077 WAINWRI9 1.070 26.8
4077 WAINWRI9 1.070 26.8
297 WAINWRI7 1.037 143.1
4078 SEDGEWI9 1.036 25.9
78 SEDGEWI7 1.054 145.4
73 HARDIST7 1.029 142.0
4073 HARDIST9 0.994 24.9
373 IPL HAR7 1.027 141.8
3373 IPL HAA9 1.030 4.3
2373 IPL HAB9 1.029 4.3
4484 CLIPPER9 1.032 4.3
4373 IPL HAR9 1.029 4.3
483 TCE_H1 1.028 141.9
1.020 4483 25.5 TCE_L1
1.020 3483 25.5 TCE_L2
1.027 97701 4.3 SPEC_1
1.026 80483 4.3 KEYSTN_2_A1
97987 NIL REM 7 1.028 141.9
273 NIL REM 4 1.100 264.0
4037 HRT EXP9 1.029 142.0
HRT EXP7 1.015 4.2
809 EXPRESTP 1.029 142.0
4361 EDGERTO9 1.055 26.4
362 EDGERTO7 1.050 144.9
361 EDGERTO8 1.021 70.5
75 HUGHEND7 1.036 143.0
4075 HUGHEND9 1.035 25.9
14001 HEISLERTAP 1.079 148.9
19400 HEISLER9 1.072 26.8
1402 HEISLER 144 1.076 148.8
10400 HEISLERMID 1.072 148.0
1400 HEISLER8 1.071 73.9
1401 BIGKNIF8 1.063 73.4
19401 BIGKNIF9 1.019 4.2
16491 BR5 AUX2 0.998 4.2
15491 BR5 AUX1 0.998 4.2
14491 757S705T 1.041 143.7
18491 STNB AUX 1.086 4.5
13491 757S702T 1.054 145.5
16492 STNA AUX 1.019 2.4
10491 757S701T 1.042 250.0
1493 BAT #1 1.000 14.4
1494 BAT #2 1.000 14.4
1492 BAT. RV8 18.6 39.6
1491 BAT. RV7 1.094 151.0
1495 BAT #3 1.019 16.3
1496 BAT #4 1.020 16.3
1497 BAT #5 1.013 21.3
1469 BAT RV79 1.090 261.6
11499 757S912T 1.042 250.0
1489 BAT RV80 1.090 261.6
1499 CORDEL 4 1.090 261.6
1403 PAINTRT4 1.090 261.6
18403 PAINTRT2 1.028 25.7
649 HANSMAN7 1.092 262.1
74 METIS647 1.033 25.8
87 METIS644 1.092 262.0
80074 KEYSTN_2_B1 1.044 144.0
648 HANSMAN9 1.050 144.9
3112 METISKA9 1.023 4.3
4112 METISKO9 1.023 4.3
112 METISKO7 1.049 144.8
989 703ALTAP 1.049 144.8
4074 METIS649 1.033 25.8
PROVOST7 1.050 144.9
PROVOST9 1.052 144.6
4219 KILLARN9 1.071 26.8
219 KILLARN7 1.052 145.2
4220 HAYTER 9 1.047 26.2
220 HAYTER 7 1.043 144.0
99221 BULLCREEKGE 1.043 36.0
99220 BULLCREEK 1.043 36.0
99231 CONFWINDGE 1.043 36.0
99230 CONFWIND 1.043 36.0
18498 BIGEOOA9 1.017 7.0
19498 BIGFOOT9 1.009 25.2
1498 BIGFOOT8 1.061 73.2
CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
THU, APR 08 2010 15:16
D1-00
2012SP-Alt 2-1.b
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATE A
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
THU, APR 08 2010 15:16
D1-01

2012SP-Alt 2-2.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

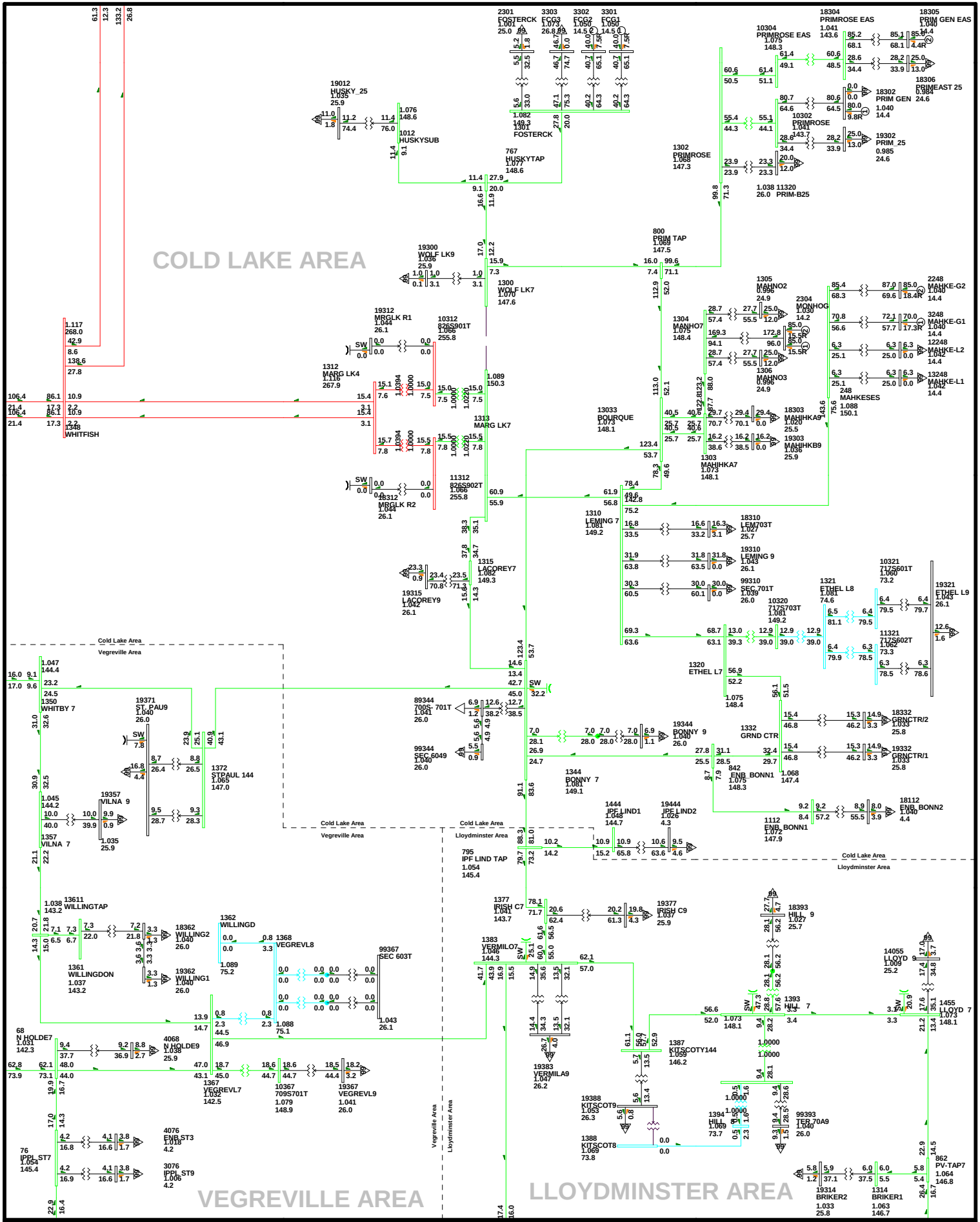


CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
THU, APR 08 2010 15:16
D1-01

2012SP-Alt 2-2.b

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar

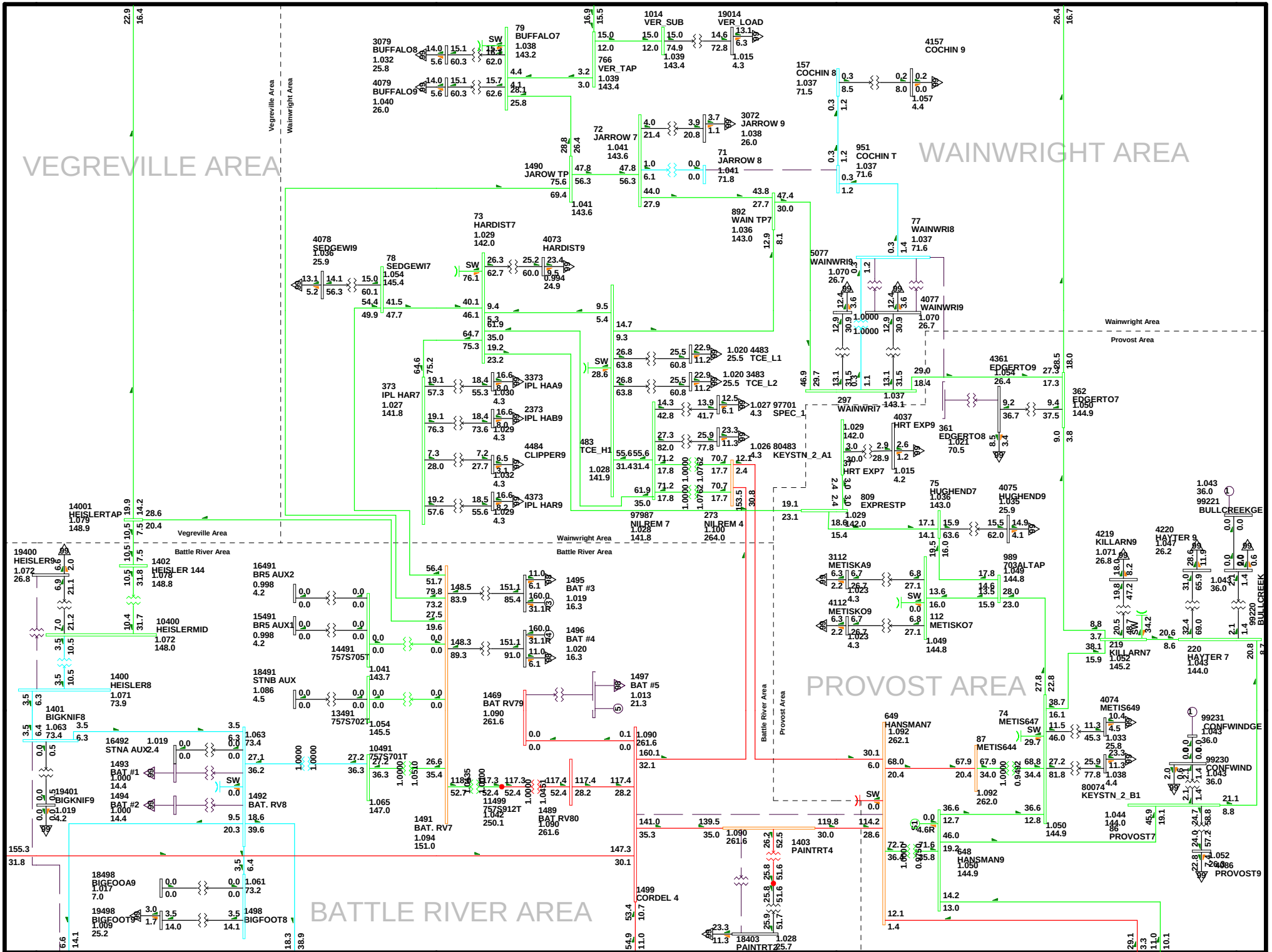
100.0%RATE A
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
THU, APR 08 2010 15:16
D1-02

2012SP-Alt 2-3.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

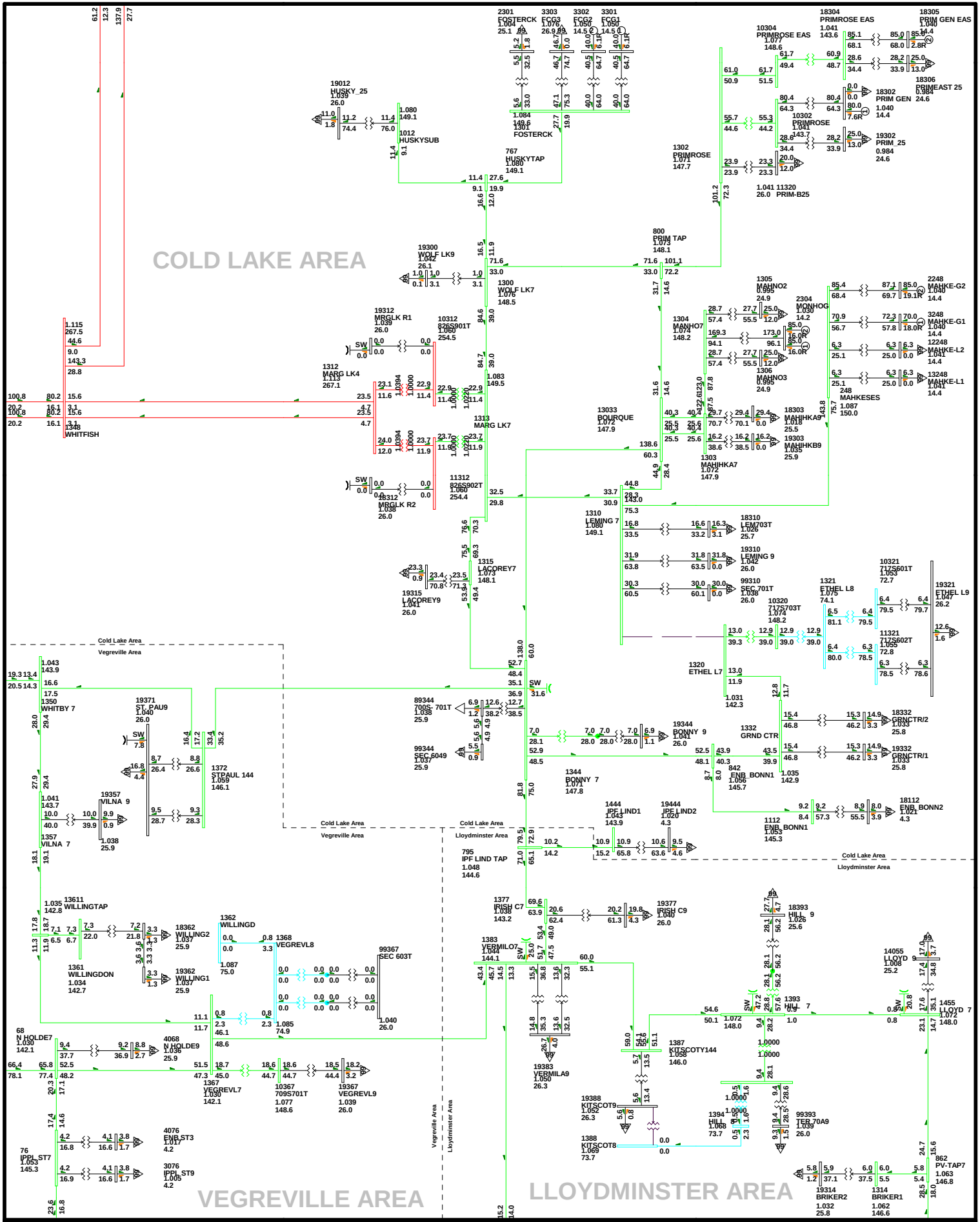


CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
THU, APR 08 2010 15:16
D1-02

2012SP-Alt 2-3.b

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar

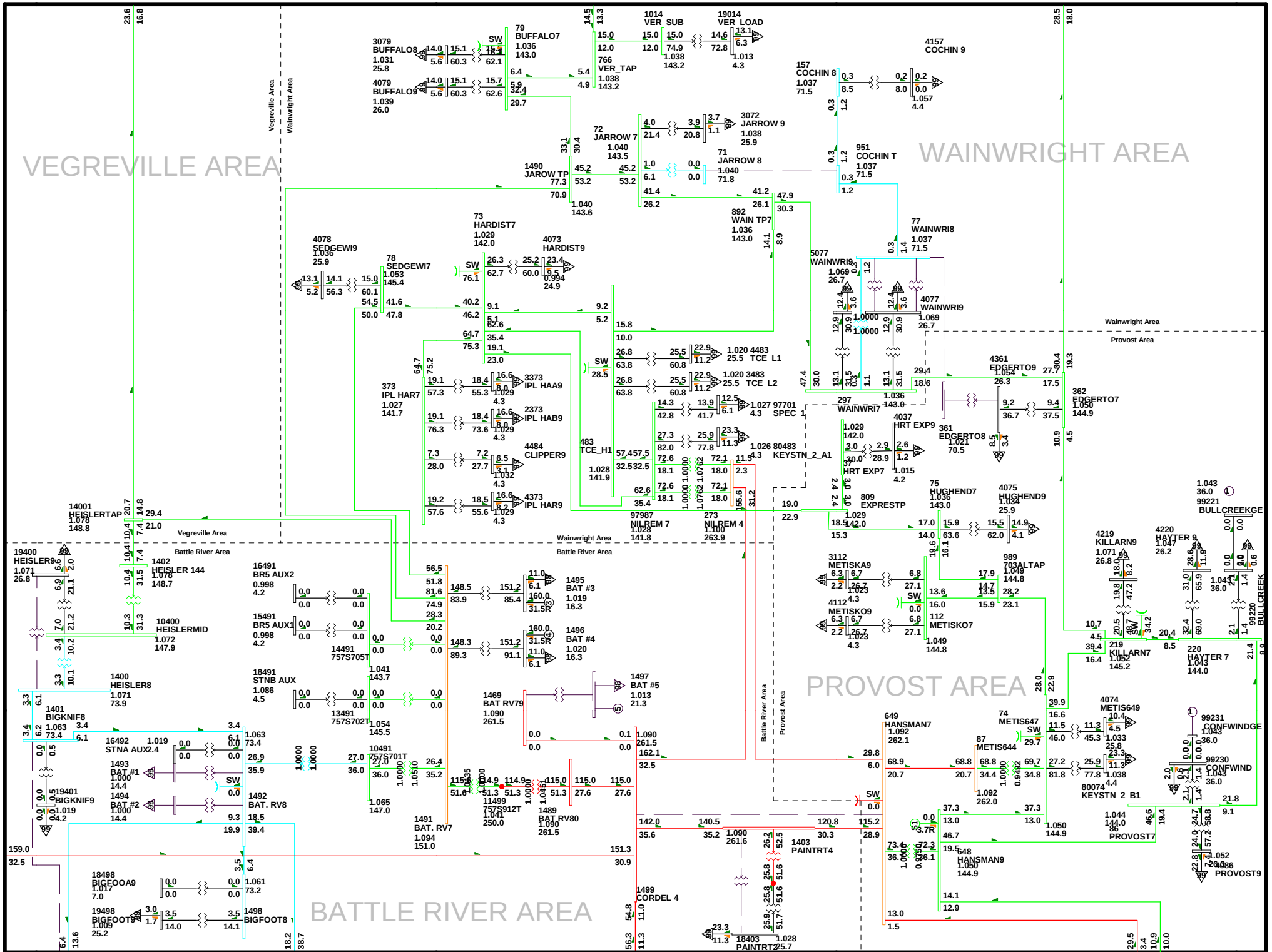
100.0%RATE A
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
THU, APR 08 2010 15:16
D1-03

2012SP-Alt 2-4.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

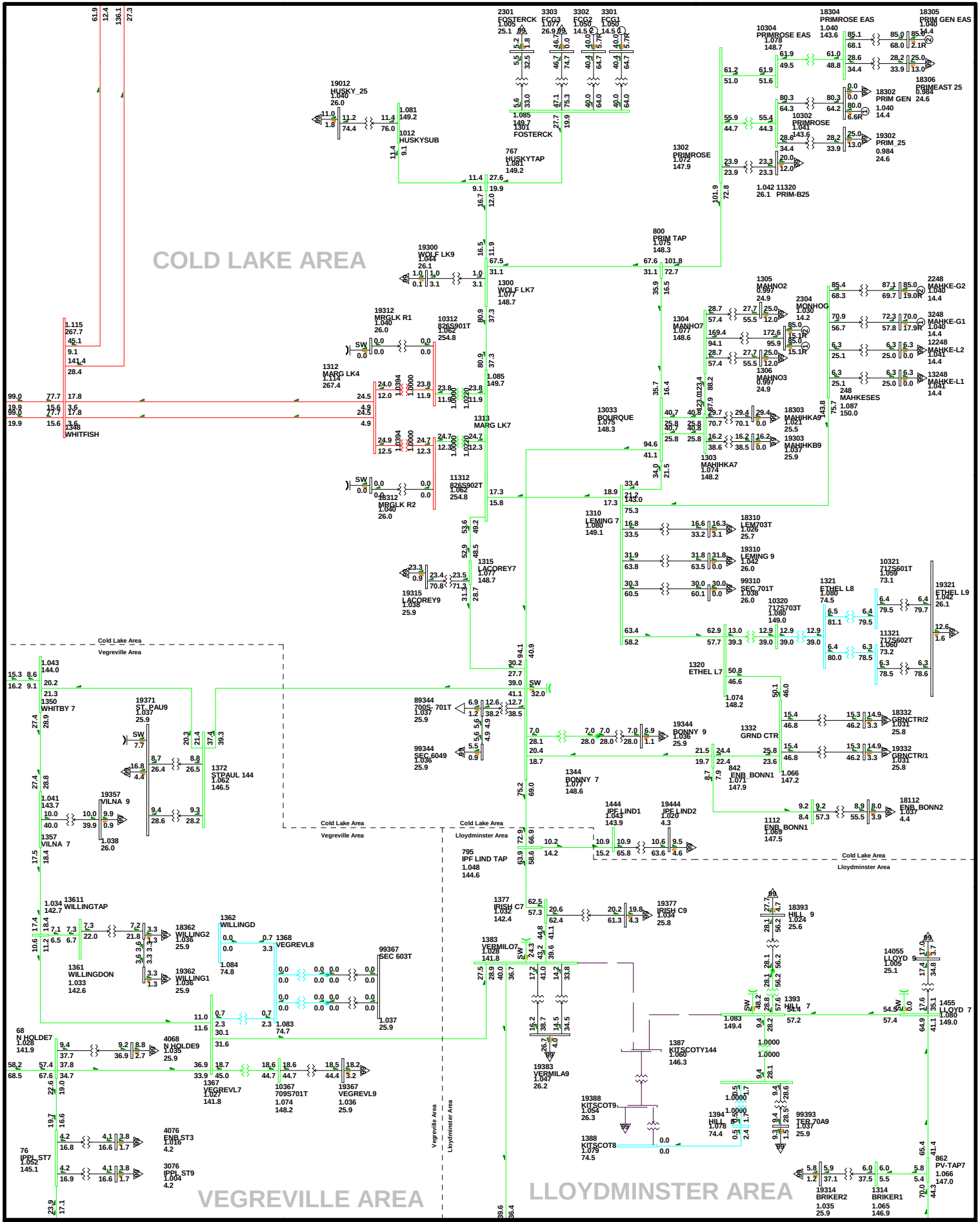


CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
THU, APR 08 2010 15:16
D1-03

2012SP-Alt 2-4.b

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar

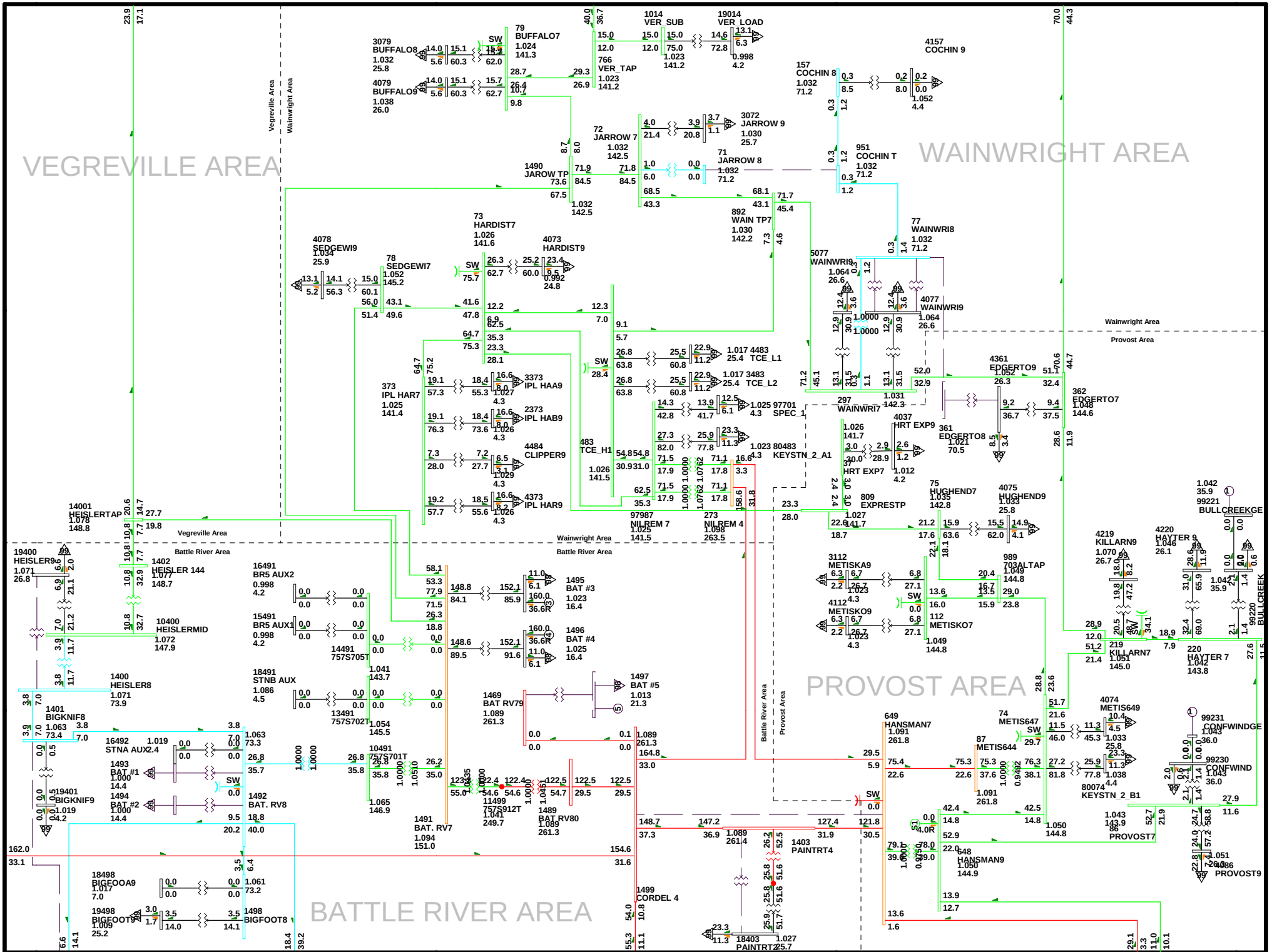
100.0%RATE A
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

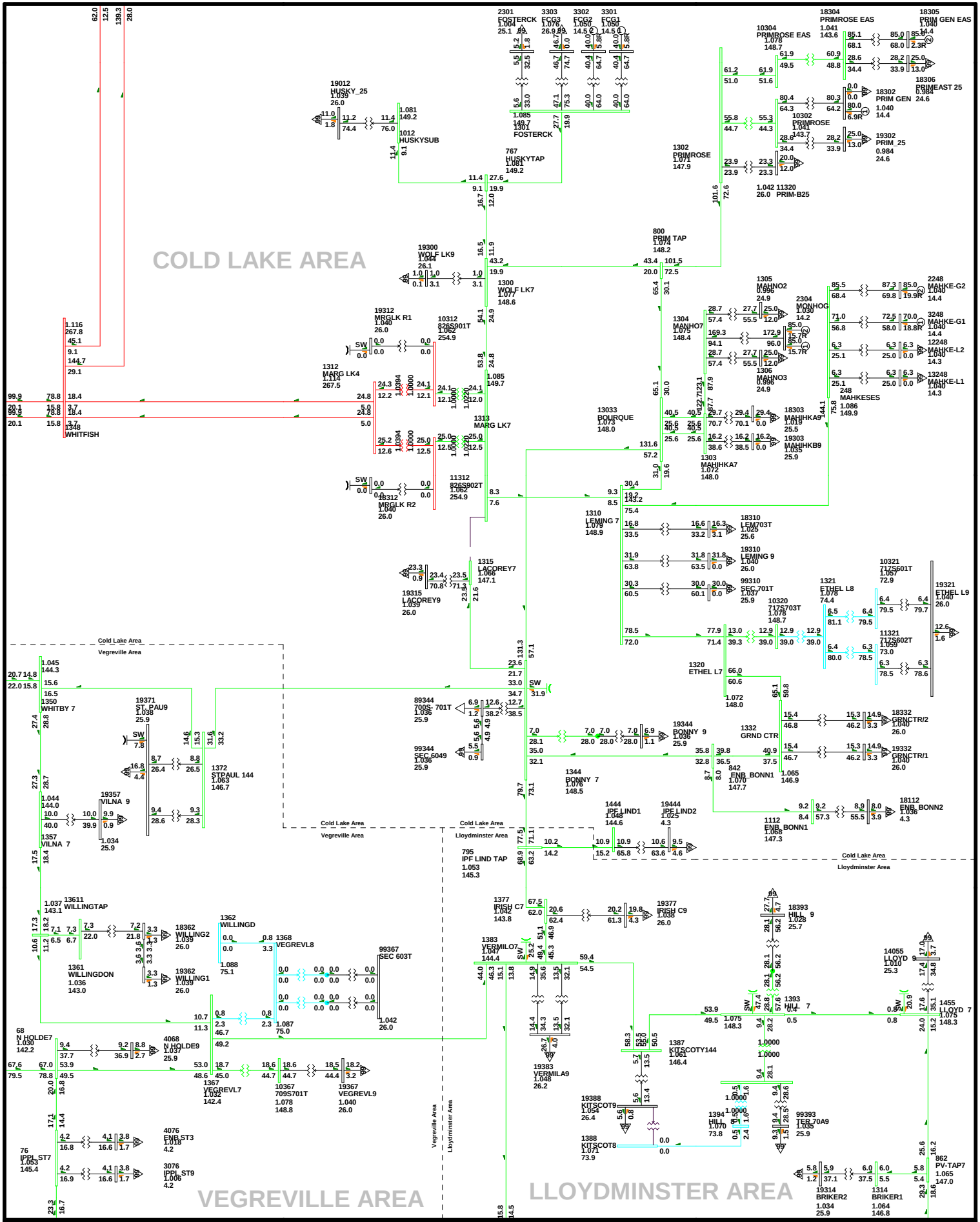


CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
THU, APR 08 2010 15:16
D1-05

2012SP-Alt 2-5.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

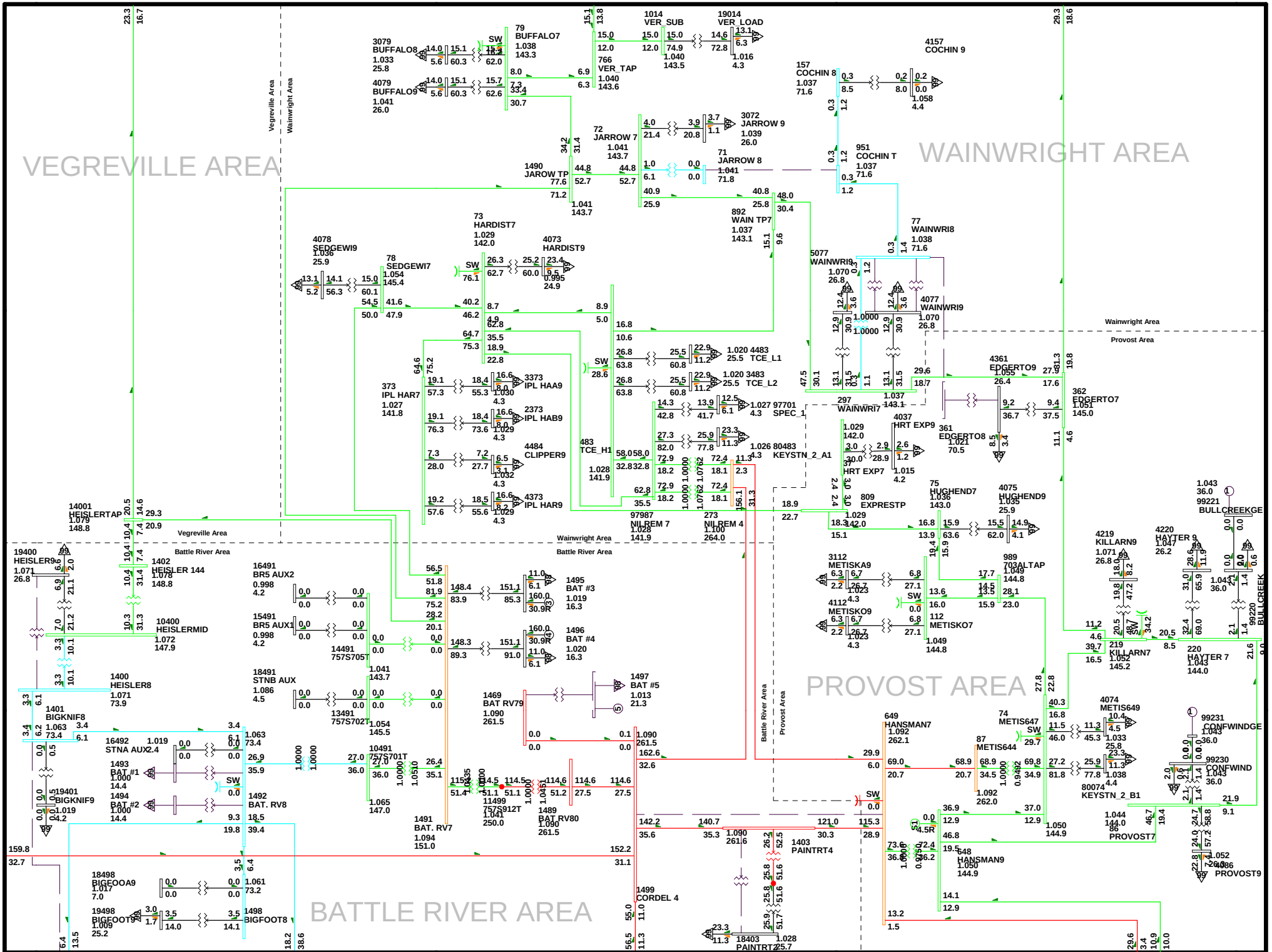

VEGREVILLE AREA
WAINWRIGHT AREA
PROVOST AREA
BATTLE RIVER AREA
Vegreville Area
Wainwright Area
Battle River Area
Provost Area
3079 BUFFALO8 1.032 25.8
4079 BUFFALO9 1.038 26.0
79 BUFFALO7 1.024 141.3
766 VER_TAP 1.023 141.2
1014 VER_SUB
19014 VER_LOAD
4157 COCHIN 9
157 COCHIN 8 1.032 71.2
951 COCHIN T 1.032 71.2
1.052 4.4
72 JARROW 7 1.032 142.5
3072 JARROW 9 1.030 25.7
71 JARROW 8 1.032 71.2
1490 JAROW TP 73.6 67.5 1.032 142.5
892 WAIN TP7 1.030 142.2
77 WAINWRI8 1.032 71.2
5077 WAINWRI9 1.064 26.6
4077 WAINWRI9 1.064 26.6
297 WAINWRI7 1.031 142.3
4078 SEDGEWI9 1.034 25.9
78 SEDGEWI7 1.052 145.2
73 HARDIST7 1.026 141.6
4073 HARDIST9 0.992 24.8
1.017 4483 25.4 TCE_L1
1.017 3483 25.4 TCE_L2
373 IPL HAR7 1.025 141.4
3373 IPL HAA9
2373 IPL HAB9
4484 CLIPPER9
4373 IPL HAR9
483 TCE_H1 1.026 141.5
1.025 97701 4.3 SPEC_1
1.023 80483 4.3 KEYSTN_2_A1
97987 NILREM 7 1.025 141.5
273 NILREM 4 1.098 263.5
4361 EDGERTO9 1.052 26.3
362 EDGERTO7 1.048 144.6
361 EDGERTO8 1.021 70.5
4037 HRT EXP9
HRT EXP7 1.012 4.2
809 EXPRESTP 1.027 141.7
75 HUGHEND7 1.035 142.8
4075 HUGHEND9 1.033 25.8
14001 HEISLERTAP 1.078 148.8
19400 HEISLER9 1.071 26.8
1402 HEISLER 144 1.077 148.7
10400 HEISLERMID 1.072 147.9
1400 HEISLER8 1.071 73.9
1401 BIGKNIF8 1.063 73.4
19401 BIGKNIF9 1.019 4.2
16491 BR5 AUX2 0.998 4.2
15491 BR5 AUX1 0.998 4.2
18491 STNB AUX 1.086 4.5
16492 STNA AUX 2.4
14491 757S705T 1.041 143.7
13491 757S702T 1.054 145.5
10491 757S701T 1.065 146.9
1493 BAT #1 1.000 14.4
1494 BAT #2 1.000 14.4
1492 BAT. RV8 18.8 40.0
1495 BAT #3 1.023 16.4
1496 BAT #4 1.025 16.4
1497 BAT #5 1.013 21.3
1469 BAT RV79 1.089 261.3
1491 BAT. RV7 1.094 151.0
11499 757S912T 1.041 249.7
1489 BAT.RV80 1.089 261.3
1499 CORDEL 4
1403 PAINTRT4
18403 PAINTRT2 1.027 25.7
18498 BIGEOOA9 1.017 7.0
19498 BIGFOOT9 1.009 25.2
1498 BIGFOOT8 1.061 73.2
649 HANSMAN7 1.091 261.8
74 METIS647
87 METIS644 1.091 261.8
648 HANSMAN9 1.050 144.9
3112 METISKA9
4112 METISKO9
112 METISKO7 1.049 144.8
989 703ALTAP 1.049 144.8
4074 METIS649 1.043 143.9
80074 KEYSTN_2_B1
PROVOST7
PROVOST9
4219 KILLARN9 1.070 26.7
219 KILLARN7 1.051 145.0
4220 HAYTER 9 1.046 26.1
220 HAYTER 7 1.042 143.8
1.042 35.9 99221 BULLCREEKGE
99220 BULLCREEK
99231 CONFWINDGE 1.043 36.0
99230 CONFWIND 1.043 36.0
1.051 144.6
CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
THU, APR 08 2010 15:16
D1-05
2012SP-Alt 2-5.b
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATE A
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
THU, APR 08 2010 15:16
D1-06

2012SP-Alt 2-6.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

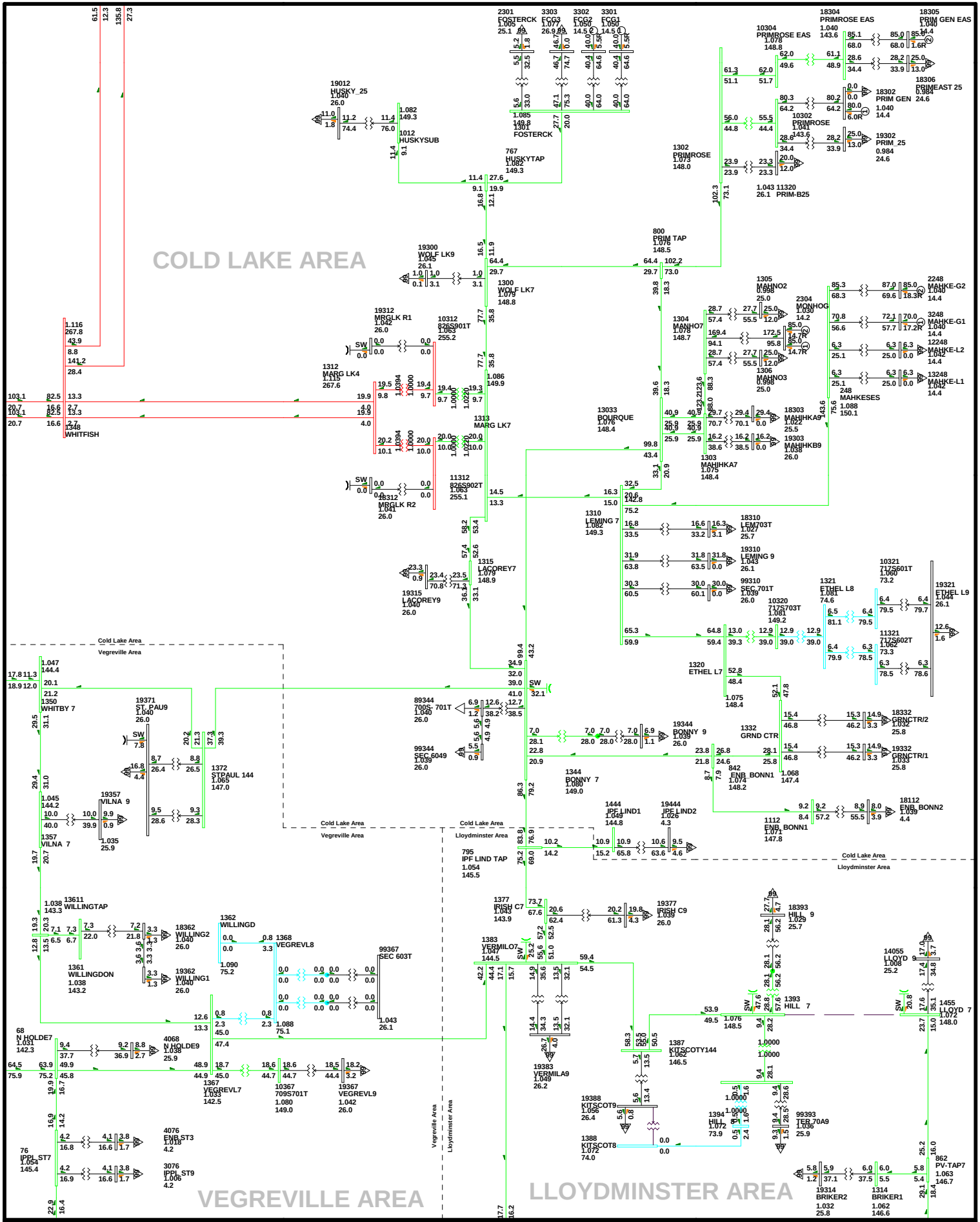


CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
THU, APR 08 2010 15:16
D1-06

2012SP-Alt 2-6.b

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar

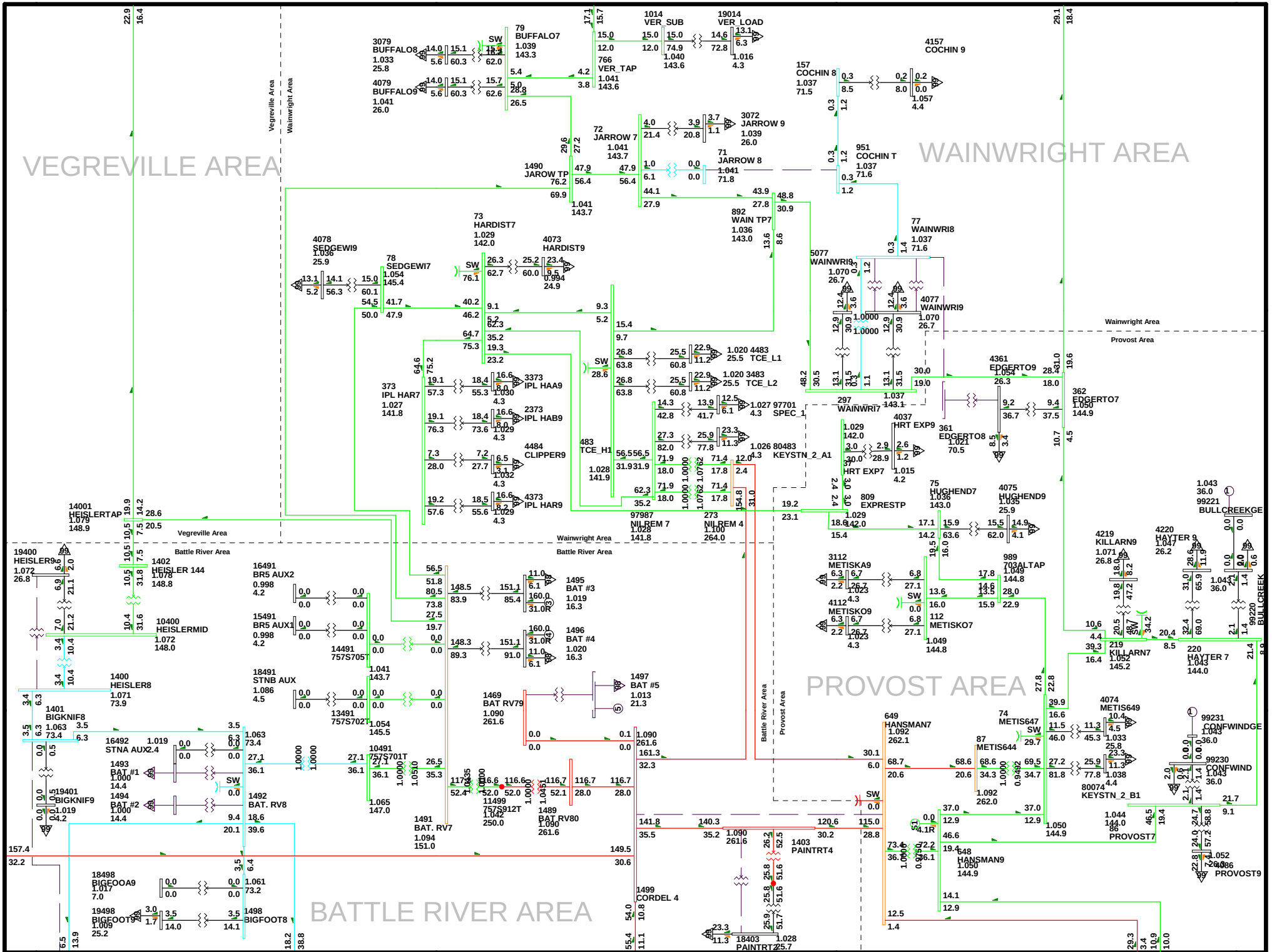
100.0%RATE A
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
THU, APR 08 2010 15:16
D1-07

2012SP-Alt 2-7.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

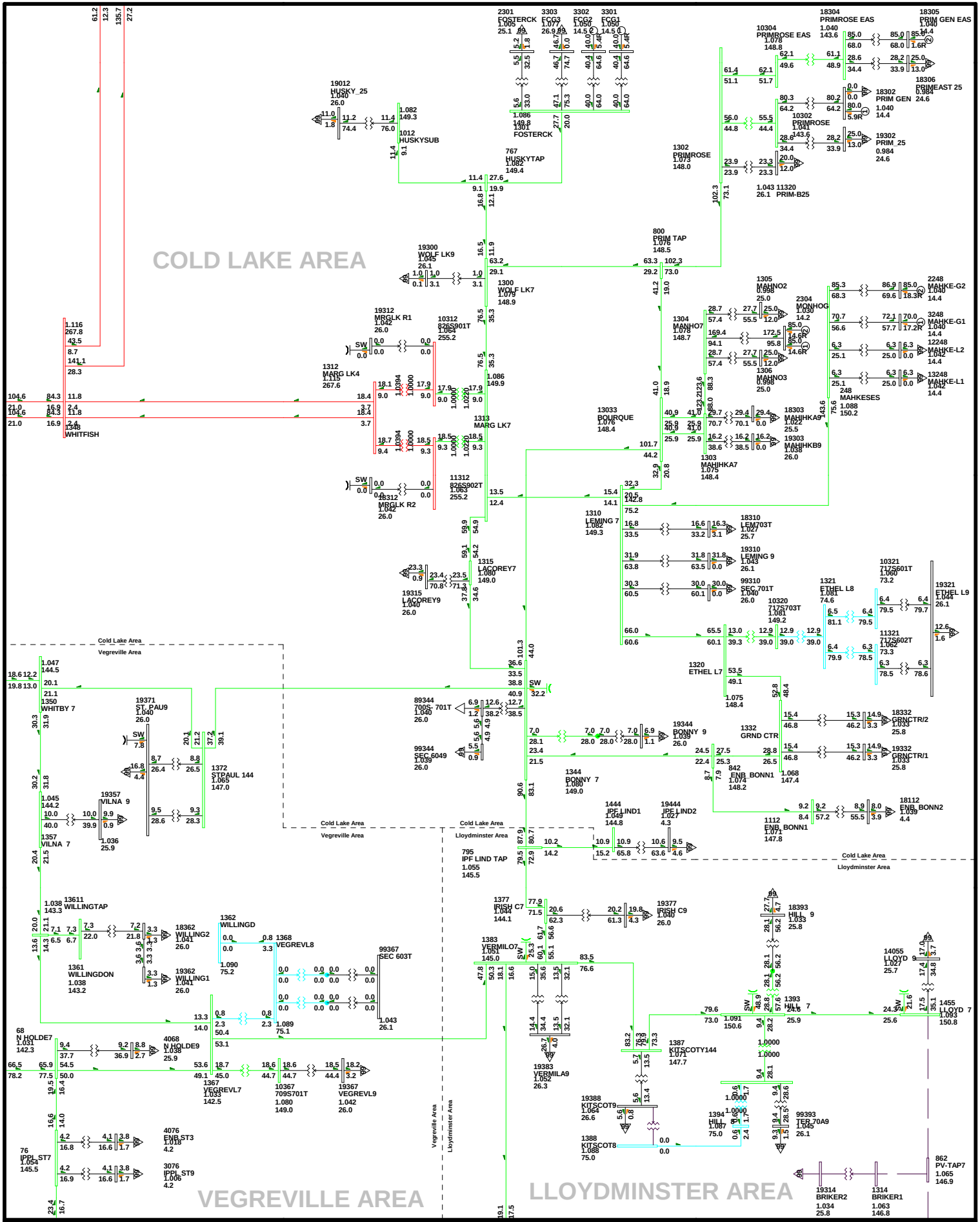


CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
THU, APR 08 2010 15:16
D1-07

2012SP-Alt 2-7.b

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar

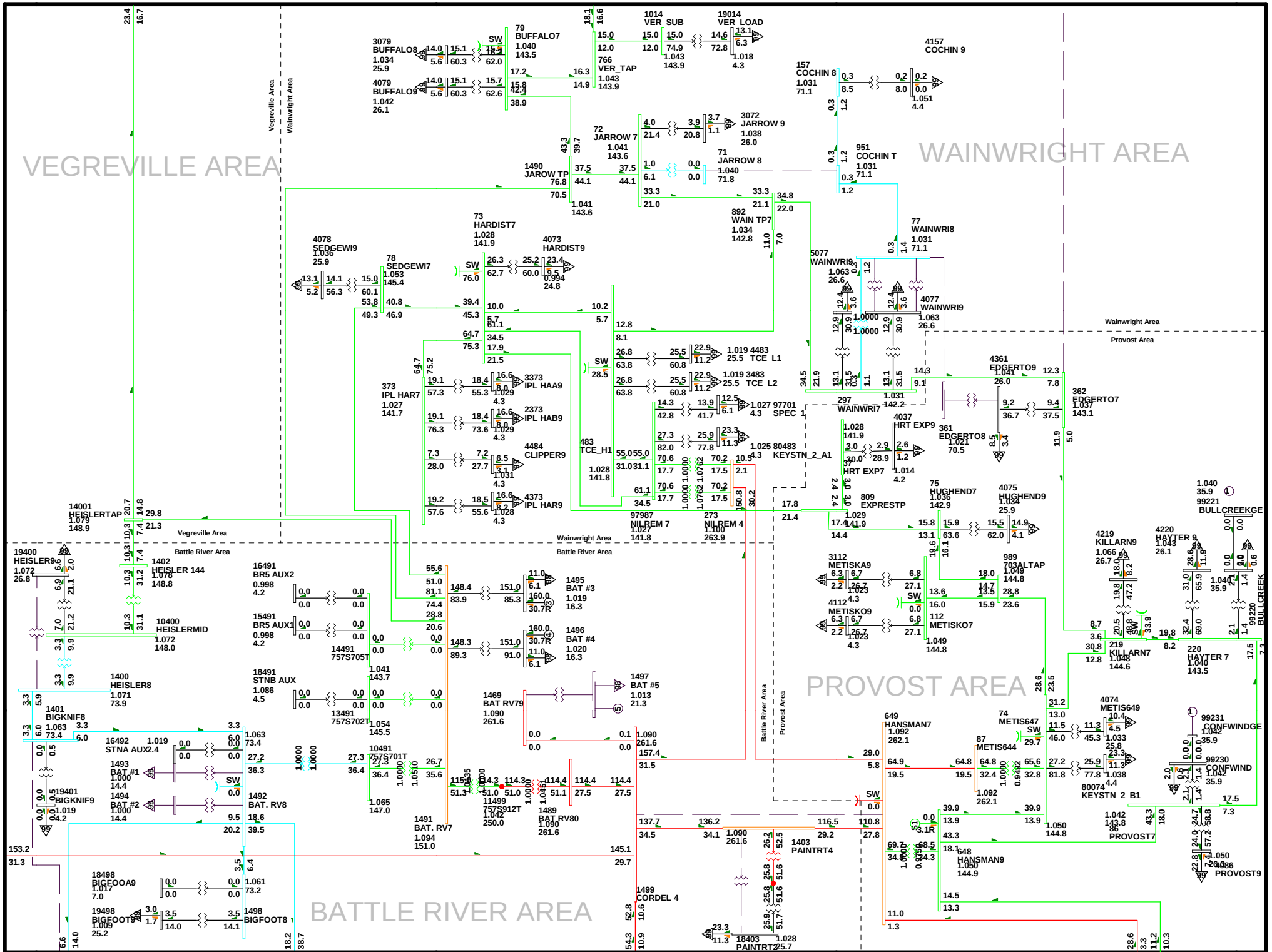
100.0%RATE A
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
THU, APR 08 2010 15:16
D1-08

2012SP-Alt 2-8.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

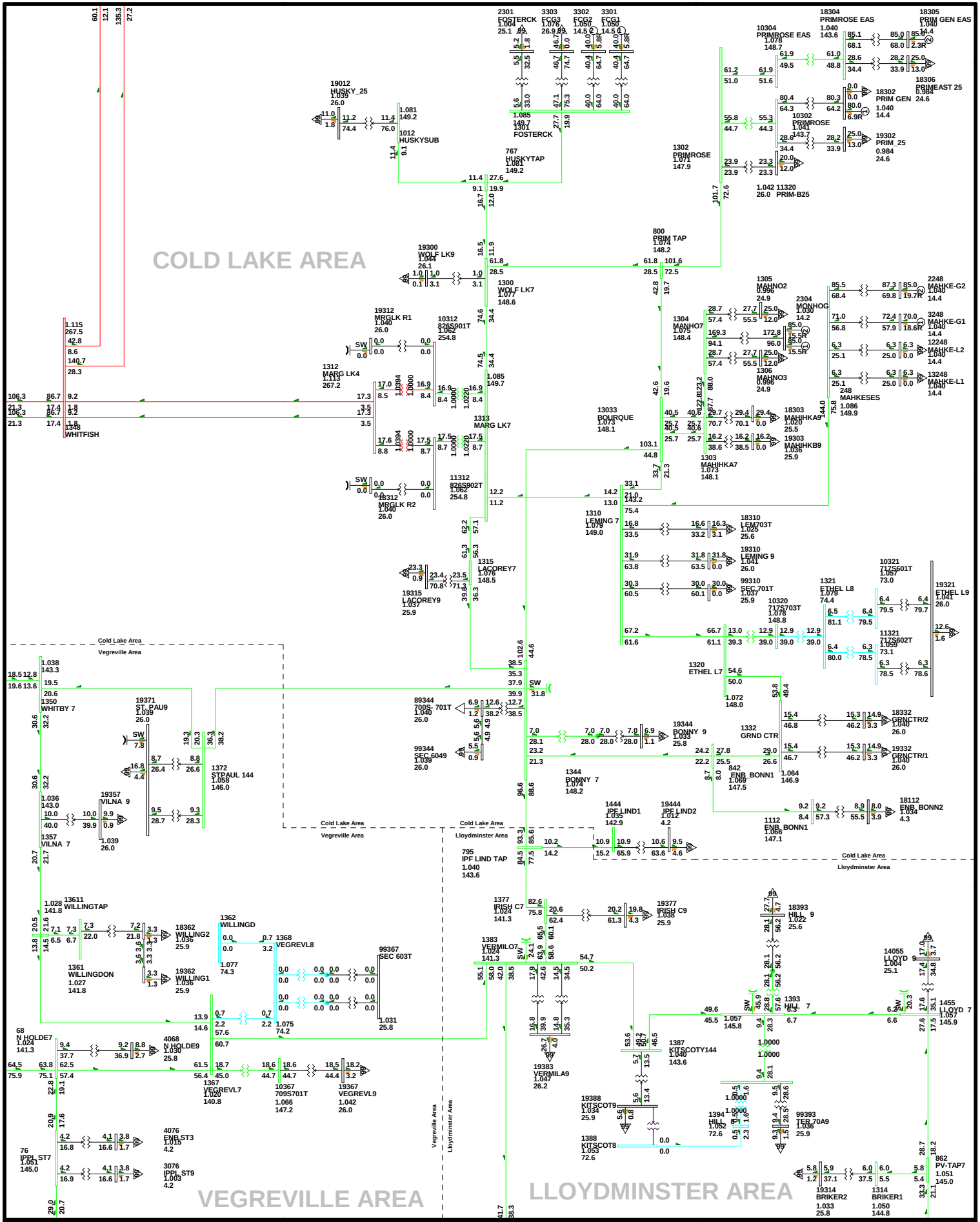


CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
THU, APR 08 2010 15:17
D1-08

2012SP-Alt 2-8.b

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar

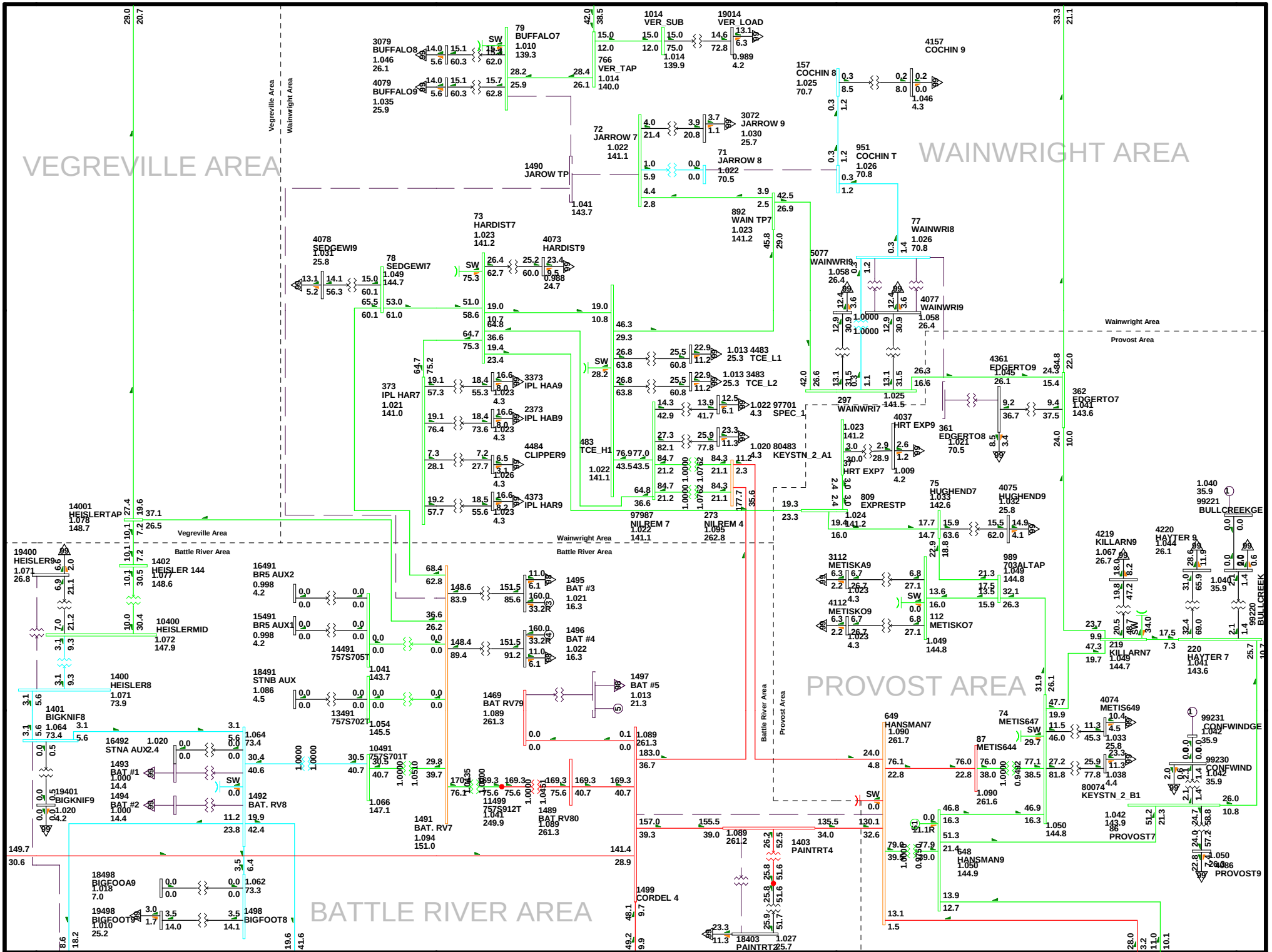
100.0%RATE A
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
THU, APR 08 2010 15:17
D1-09

2012SP-Alt 2-9.a

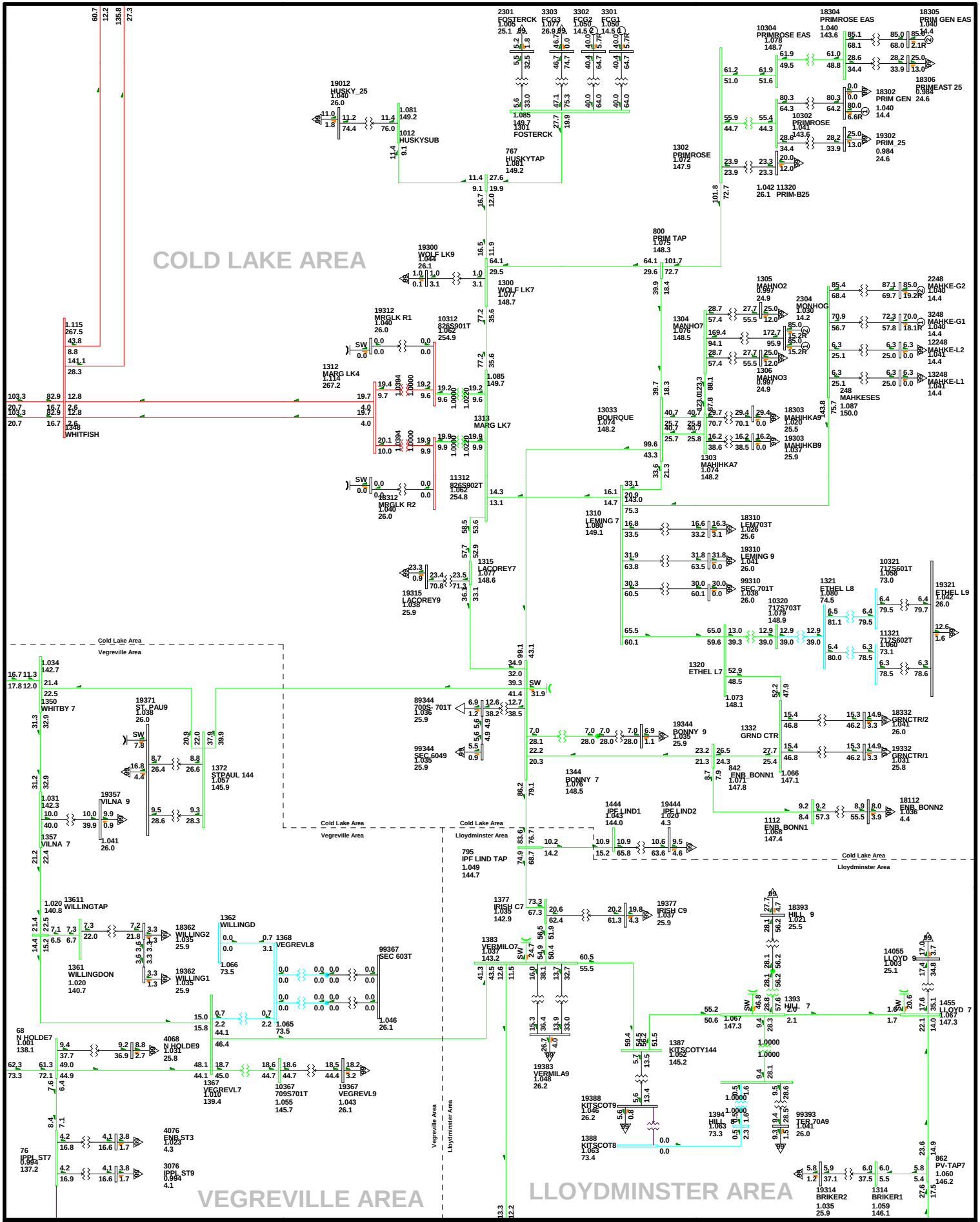
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
THU, APR 08 2010 15:17
D1-09

2012SP-Alt 2-9.b

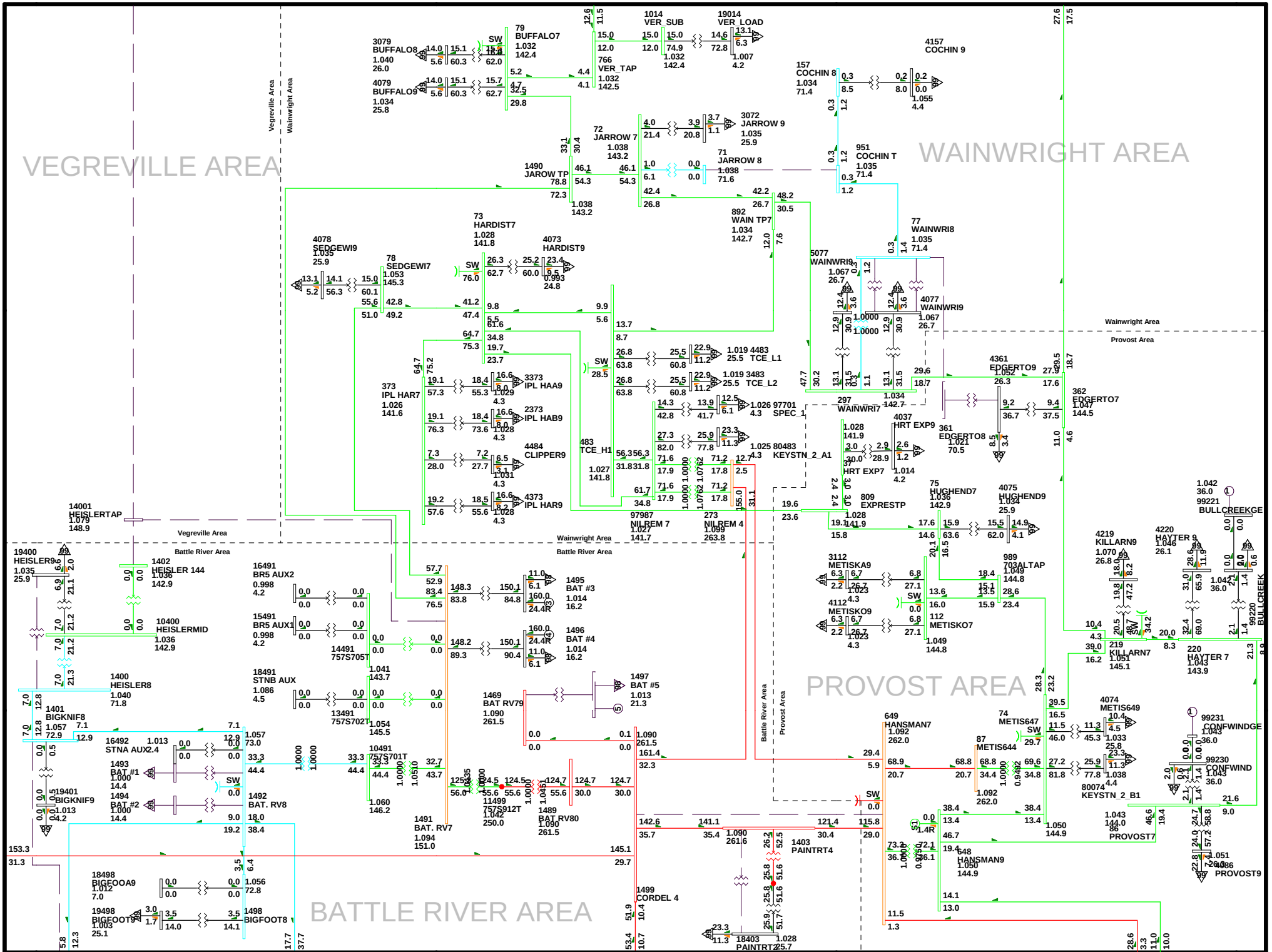
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATE A

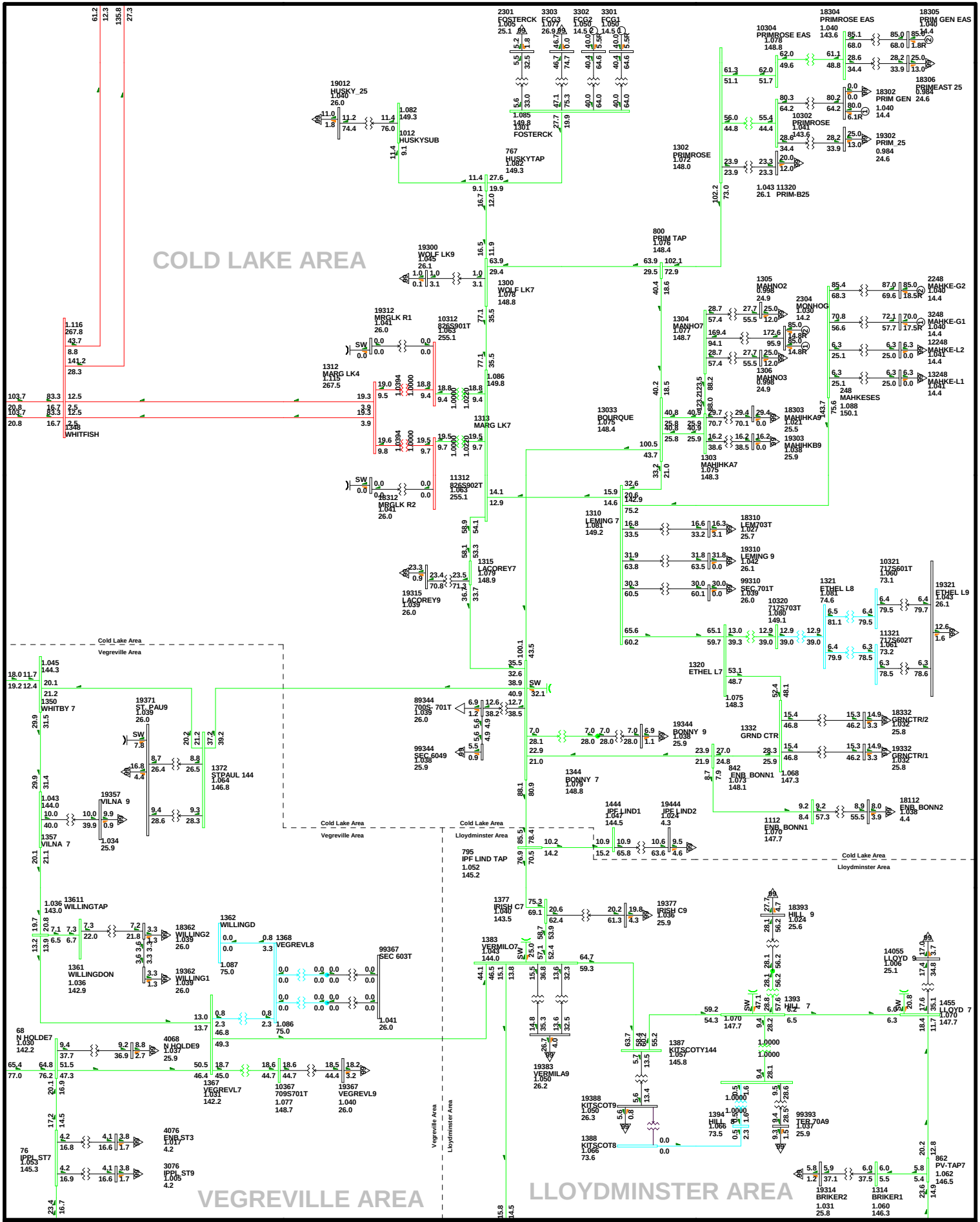


CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
THU, APR 08 2010 15:17
D1-10

2012SP-Alt 2-10.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

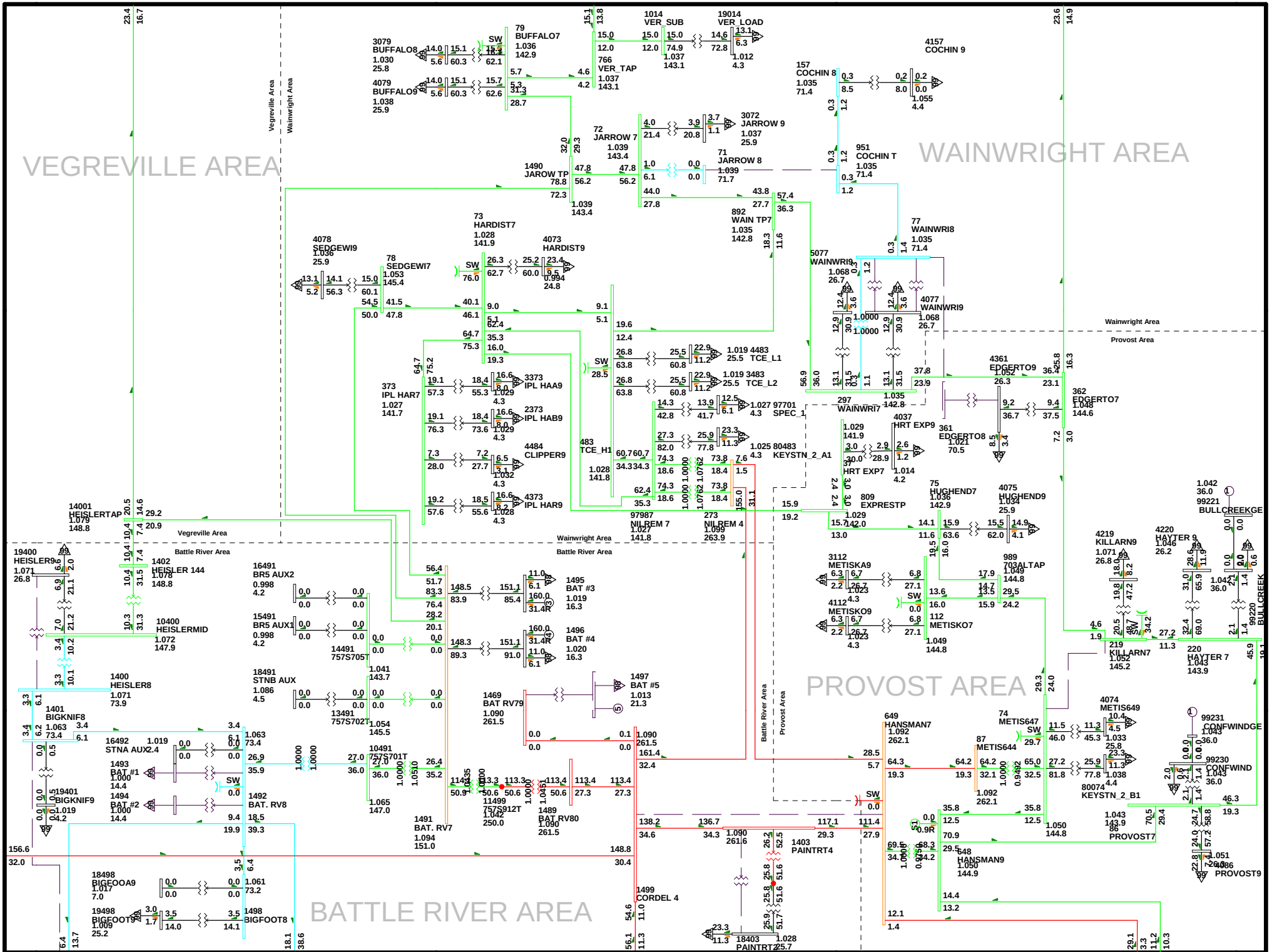

VEGREVILLE AREA
WAINWRIGHT AREA
PROVOST AREA
BATTLE RIVER AREA
Vegreville Area
Wainwright Area
Battle River Area
Provost Area
3079 BUFFALO8 1.040 26.0
4079 BUFFALO9 1.034 25.8
79 BUFFALO7 1.032 142.4
766 VER_TAP 1.032 142.5
1014 VER_SUB
19014 VER_LOAD
4157 COCHIN 9
157 COCHIN 8 1.034 71.4
951 COCHIN T 1.035 71.4
1.055 4.4
72 JARROW 7 1.038 143.2
3072 JARROW 9 1.035 25.9
71 JARROW 8 1.038 71.6
1490 JAROW TP 78.8 72.3
1.038 143.2
892 WAIN TP7 1.034 142.7
77 WAINWRI8 1.035 71.4
5077 WAINWRI9 1.067 26.7
4077 WAINWRI9 1.067 26.7
297 WAINWRI7 1.034 142.7
4078 SEDGEWI9 1.035 25.9
78 SEDGEWI7 1.053 145.3
73 HARDIST7 1.028 141.8
4073 HARDIST9 0.993 24.8
373 IPL HAR7 1.026 141.6
3373 IPL HAA9 1.029 4.3
2373 IPL HAB9 1.028 4.3
4484 CLIPPER9 1.031 4.3
4373 IPL HAR9 1.028 4.3
483 TCE_H1 1.027 141.8
1.019 4483 25.5 TCE_L1
1.019 3483 25.5 TCE_L2
1.026 97701 4.3 SPEC_1
1.025 80483 4.3 KEYSTN_2_A1
97987 NILREM 7 1.027 141.7
273 NILREM 4 1.099 263.8
4037 HRT EXP9 1.028 141.9
HRT EXP7 1.014 4.2
809 EXPRESTP 1.028 141.9
4361 EDGERTO9 1.052 26.3
362 EDGERTO7 1.047 144.5
361 EDGERTO8 1.021 70.5
75 HUGHEND7 1.036 142.9
4075 HUGHEND9 1.034 25.9
14001 HEISLERTAP 1.079 148.9
19400 HEISLER9 1.035 25.9
1402 HEISLER 144 1.036 142.9
10400 HEISLERMID 1.036 142.9
1400 HEISLER8 1.040 71.8
1401 BIGKNIF8 1.057 72.9
19401 BIGKNIF9 1.013 4.2
16492 STNA AUX 1.013 2.4
1493 BAT #1 1.000 14.4
1494 BAT #2 1.000 14.4
1492 BAT. RV8 1.057 73.0
16491 BR5 AUX2 0.998 4.2
15491 BR5 AUX1 0.998 4.2
14491 757S705T 1.041 143.7
18491 STNB AUX 1.086 4.5
13491 757S702T 1.054 145.5
10491 757S701T 1.060 146.2
1495 BAT #3 1.014 16.2
1496 BAT #4 1.014 16.2
1497 BAT #5 1.013 21.3
1469 BAT RV79 1.090 261.5
1491 BAT. RV7 1.094 151.0
11499 757S912T 1.042 250.0
1489 BAT RV80 1.090 261.5
1499 CORDEL 4 1.090 261.6
1403 PAINTRT4 1.090 262.6
18403 PAINTRT3 1.028 25.7
18498 BIGEOOA9 1.012 7.0
19498 BIGFOOT9 1.003 25.1
1498 BIGFOOT8 1.056 72.8
649 HANSMAN7 1.092 262.0
74 METIS647 1.049 144.8
87 METIS644 1.092 262.0
4074 METIS649 1.033 25.8
80074 KEYSTN_2_B1 1.038 4.4
648 HANSMAN9 1.050 144.9
1.043 144.0 86 PROVOST7
1.051 144.0 86 PROVOST9
3112 METISKA9 1.023 4.3
4112 METISKO9 1.023 4.3
112 METISKO7 1.049 144.8
989 703ALTAP 1.049 144.8
4219 KILLARN9 1.070 26.8
219 KILLARN7 1.051 145.1
4220 HAYTER 9 1.046 26.1
220 HAYTER 7 1.043 143.9
1.042 36.0 99221 BULLCREEKGE
99220 BULLCREEK
99231 CONFWINDGE 1.043 36.0
99230 CONFWIND 1.043 36.0
CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
THU, APR 08 2010 15:17
D1-10
2012SP-Alt 2-10.b
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATE A
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

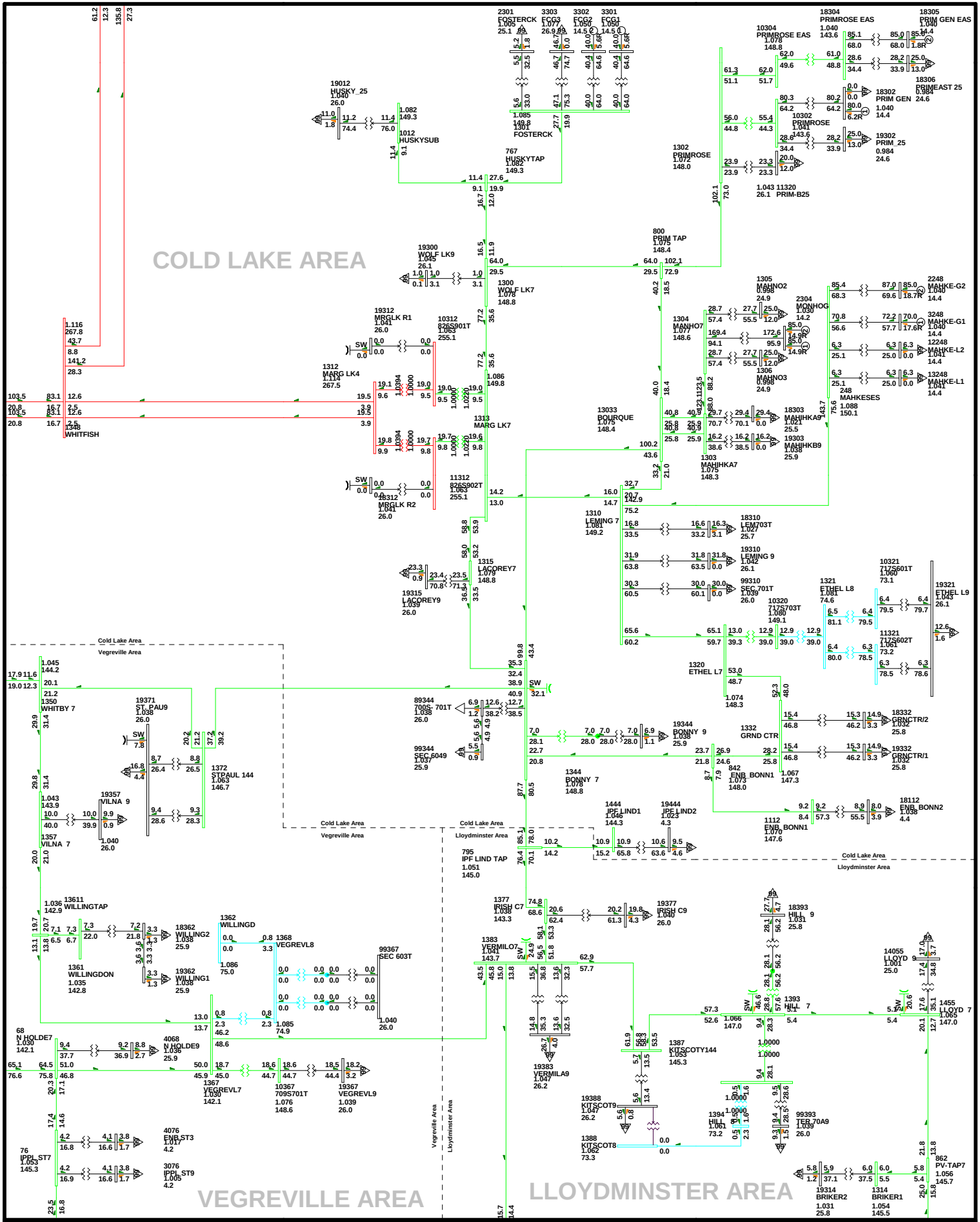


CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
THU, APR 08 2010 15:17
D1-11

2012SP-Alt 2-11.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

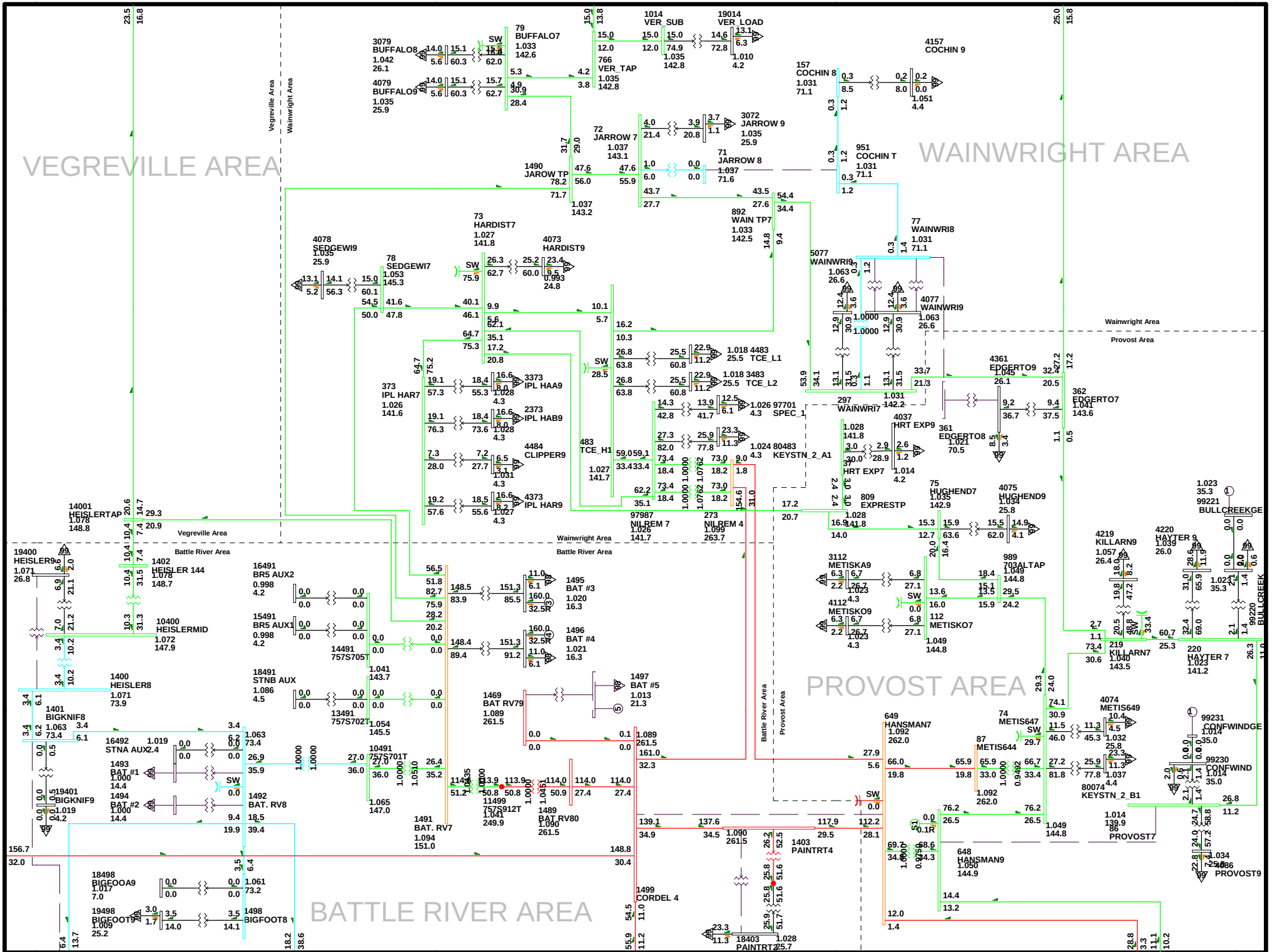

VEGREVILLE AREA
WAINWRIGHT AREA
PROVOST AREA
BATTLE RIVER AREA
Vegreville Area
Wainwright Area
Battle River Area
Provost Area
3079 BUFFALO8 1.030 25.8
4079 BUFFALO9 1.038 25.9
79 BUFFALO7 1.036 142.9
766 VER_TAP 1.037 143.1
1014 VER_SUB 74.9 1.037 143.1
19014 VER_LOAD 72.8 1.012 4.3
4157 COCHIN 9
157 COCHIN 8 1.035 71.4
951 COCHIN T 1.035 71.4
1.055 4.4
72 JAROW 7 1.039 143.4
3072 JAROW 9 1.037 25.9
71 JAROW 8 1.039 71.7
1490 JAROW TP 78.8 72.3
1.039 143.4
892 WAIN TP7 1.035 142.8
77 WAINWRI8 1.035 71.4
5077 WAINWRI9 1.068 26.7
4077 WAINWRI9 1.068 26.7
297 WAINWRI7 1.035 142.8
4078 SEDGEWI9 1.036 25.9
78 SEDGEWI7 1.053 145.4
73 HARDIST7 1.028 141.9
4073 HARDIST9 0.994 24.8
373 IPL HAR7 1.027 141.7
3373 IPL HAA9 1.029 4.3
2373 IPL HAB9 1.029 4.3
4484 CLIPPER9 1.032 4.3
4373 IPL HAR9 1.028 4.3
1.019 4483 25.5 TCE_L1
1.019 3483 25.5 TCE_L2
483 TCE_H1 1.028 141.8
1.027 97701 4.3 SPEC_1
1.025 80483 4.3 KEYSTN_2_A1
97987 NILREM 7 1.027 141.8
273 NILREM 4 1.099 263.9
809 EXPRESTP 1.029 142.0
4037 HRT EXP9 1.029 141.9
HRT EXP7 1.014 4.2
361 EDGERTO8 1.021 70.5
4361 EDGERTO9 1.052 26.3
362 EDGERTO7 1.048 144.6
75 HUGHEND7 1.036 142.9
4075 HUGHEND9 1.034 25.9
14001 HEISLERTAP 1.079 148.8
1402 HEISLER 144 1.076 148.8
10400 HEISLERMID 1.072 147.9
19400 HEISLER9 1.071 26.8
1400 HEISLER8 1.071 73.9
1401 BIGKNIF8 1.063 73.4
19401 BIGKNIF9 1.019 4.2
16491 BR5 AUX2 0.998 4.2
15491 BR5 AUX1 0.998 4.2
18491 STNB AUX 1.086 4.5
16492 STNA AUX 2.4 1.019
14491 757S705T 1.041 143.7
13491 757S702T 1.054 145.5
10491 757S701T 1.065 147.0
1493 BAT #1 1.000 14.4
1494 BAT #2 1.000 14.4
1492 BAT. RV8 18.5 39.3
1491 BAT. RV7 1.094 151.0
1495 BAT #3 1.019 16.3
1496 BAT #4 1.020 16.3
1497 BAT #5 1.013 21.3
1469 BAT RV79 1.090 261.5
11499 757S912T 1.042 250.0
1489 BAT RV80 1.090 261.5
1499 CORDEL 4
1403 PAINTRT4
18403 PAINTRT2 1.028 25.7
18498 BIGEOOA9 1.017 7.0
19498 BIGFOOT9 1.009 25.2
1498 BIGFOOT8 14.1
649 HANSMAN7 1.092 262.1
648 HANSMAN9 1.050 144.9
74 METIS647
87 METIS644 1.092 262.1
4074 METIS649 1.033 25.8
80074 KEYSTN_2_B1 1.043 143.9
PROVOST7 1.050 144.8
PROVOST9 1.051 144.6
3112 METISKA9 1.023 4.3
4112 METISKO9 1.023 4.3
112 METISKO7 1.049 144.8
989 703ALTAP 1.049 144.8
4219 KILLARN9 1.071 26.8
219 KILLARN7 1.052 145.2
4220 HAYTER 9 1.046 26.2
220 HAYTER 7 1.043 143.9
99221 BULLCREEKGE 1.042 36.0
99220 BULLCREEK 1.042 36.0
99231 CONFWINDGE 1.043 36.0
99230 CONFWIND 1.043 36.0
CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
THU, APR 08 2010 15:17
D1-11
2012SP-Alt 2-11.b
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATE A
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
THU, APR 08 2010 15:17
D1-12

2012SP-Alt 2-12.a

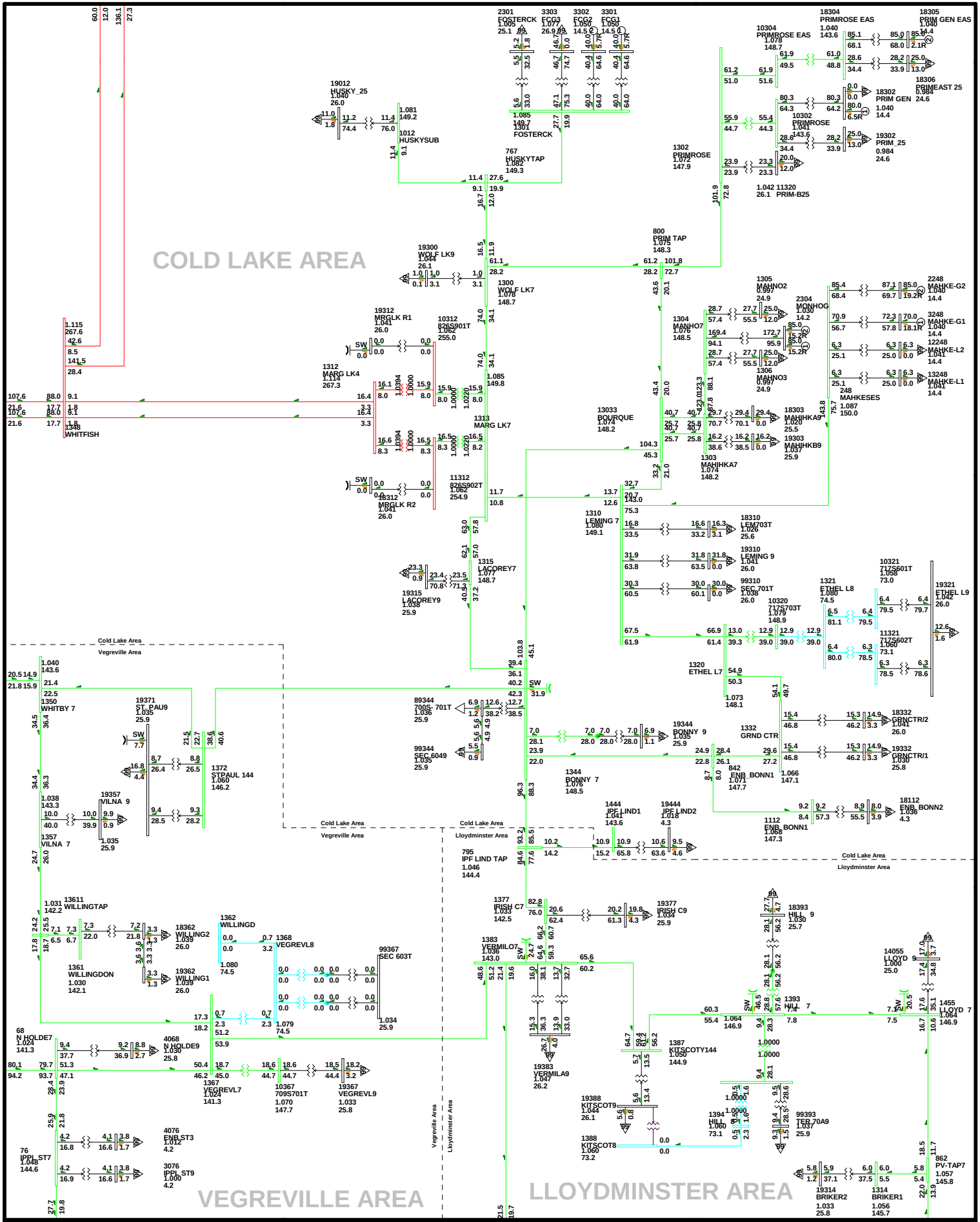
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
THU, APR 08 2010 15:17
D1-12

2012SP-Alt 2-12.b

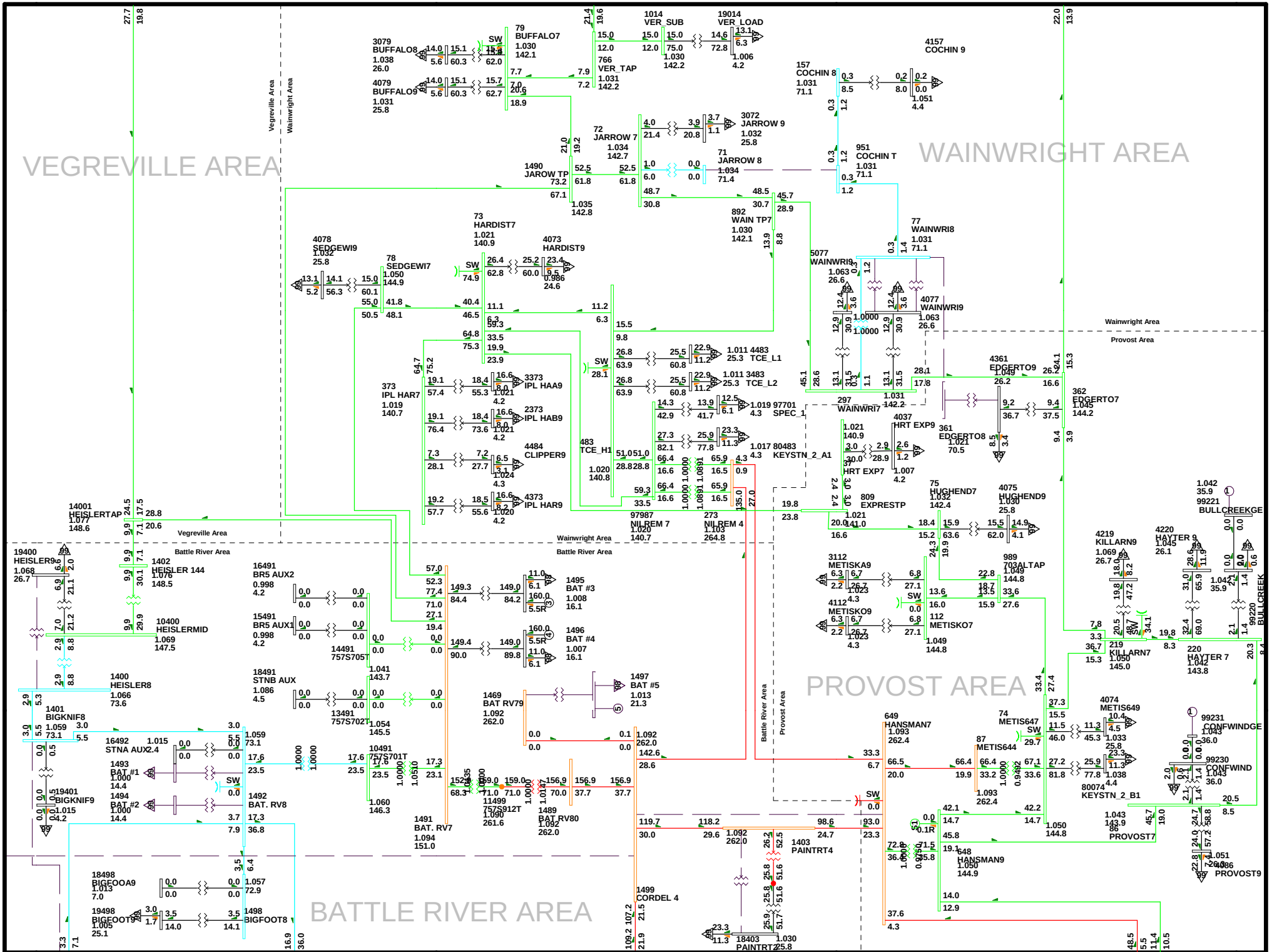
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATE A
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
THU, APR 08 2010 15:17
D1-14

2012SP-Alt 2-13.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

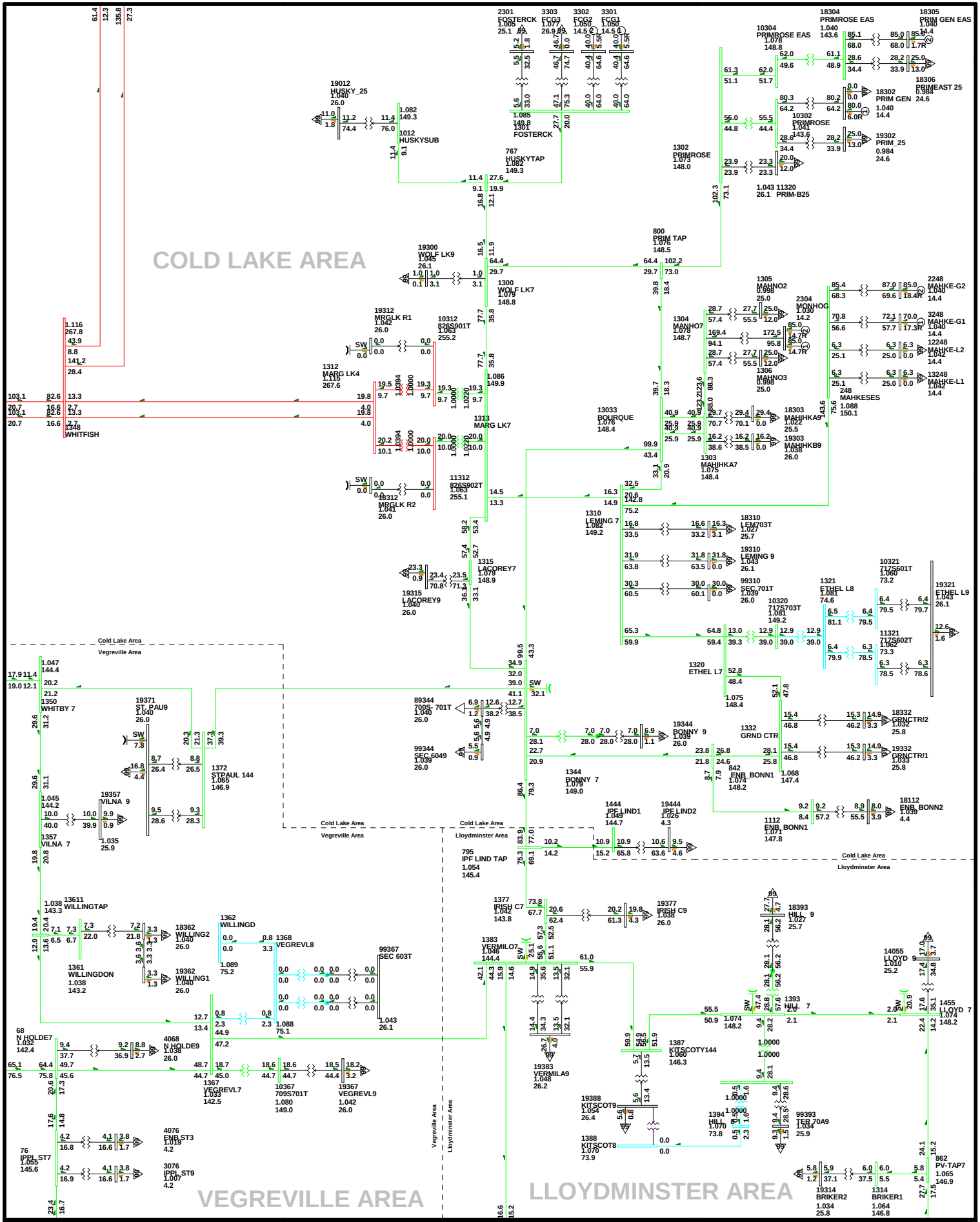


CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
THU, APR 08 2010 15:17
D1-14

2012SP-Alt 2-13.b

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar

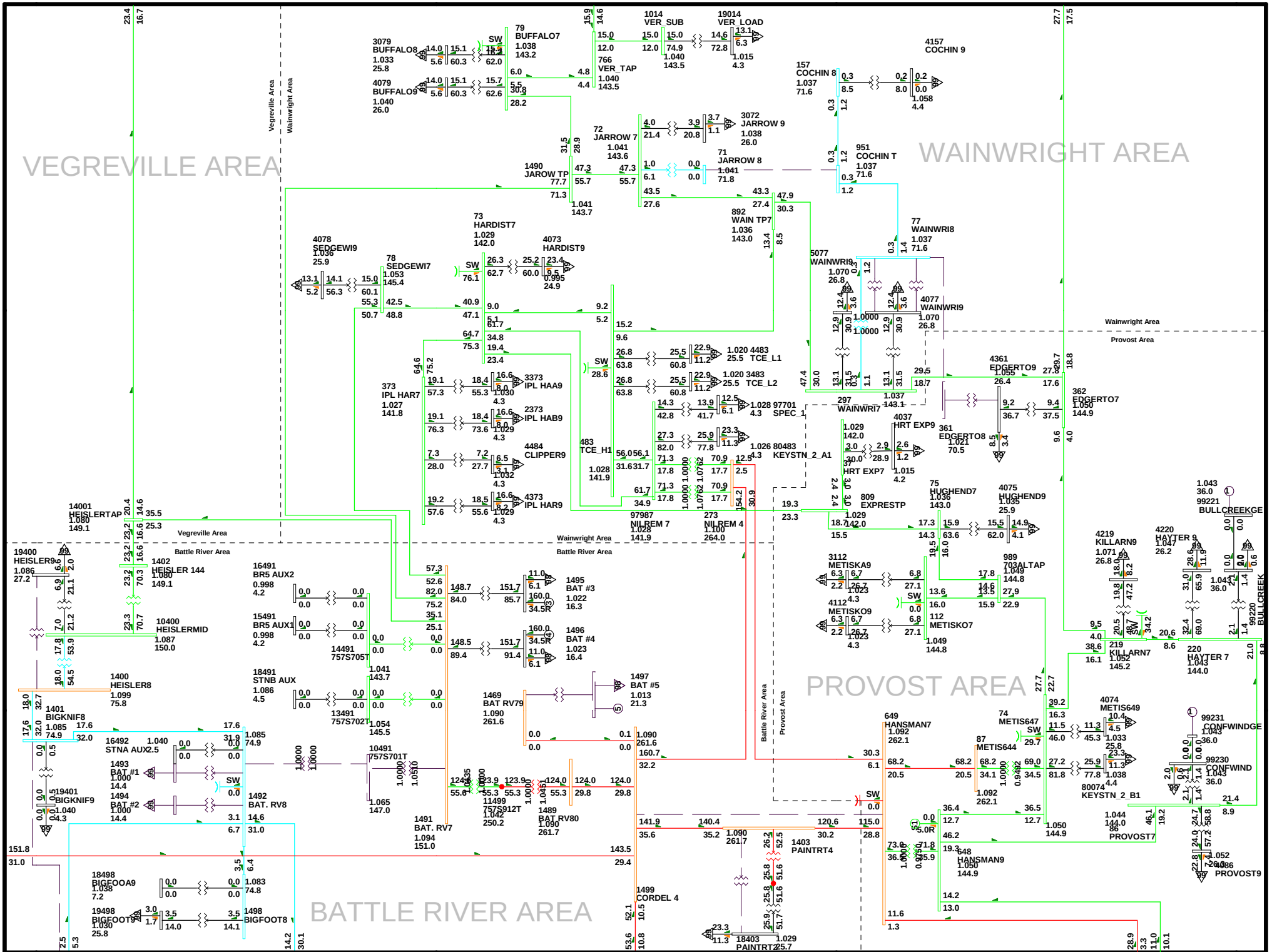
100.0%RATE A
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
THU, APR 08 2010 15:17
D1-15

2012SP-Alt 2-14.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

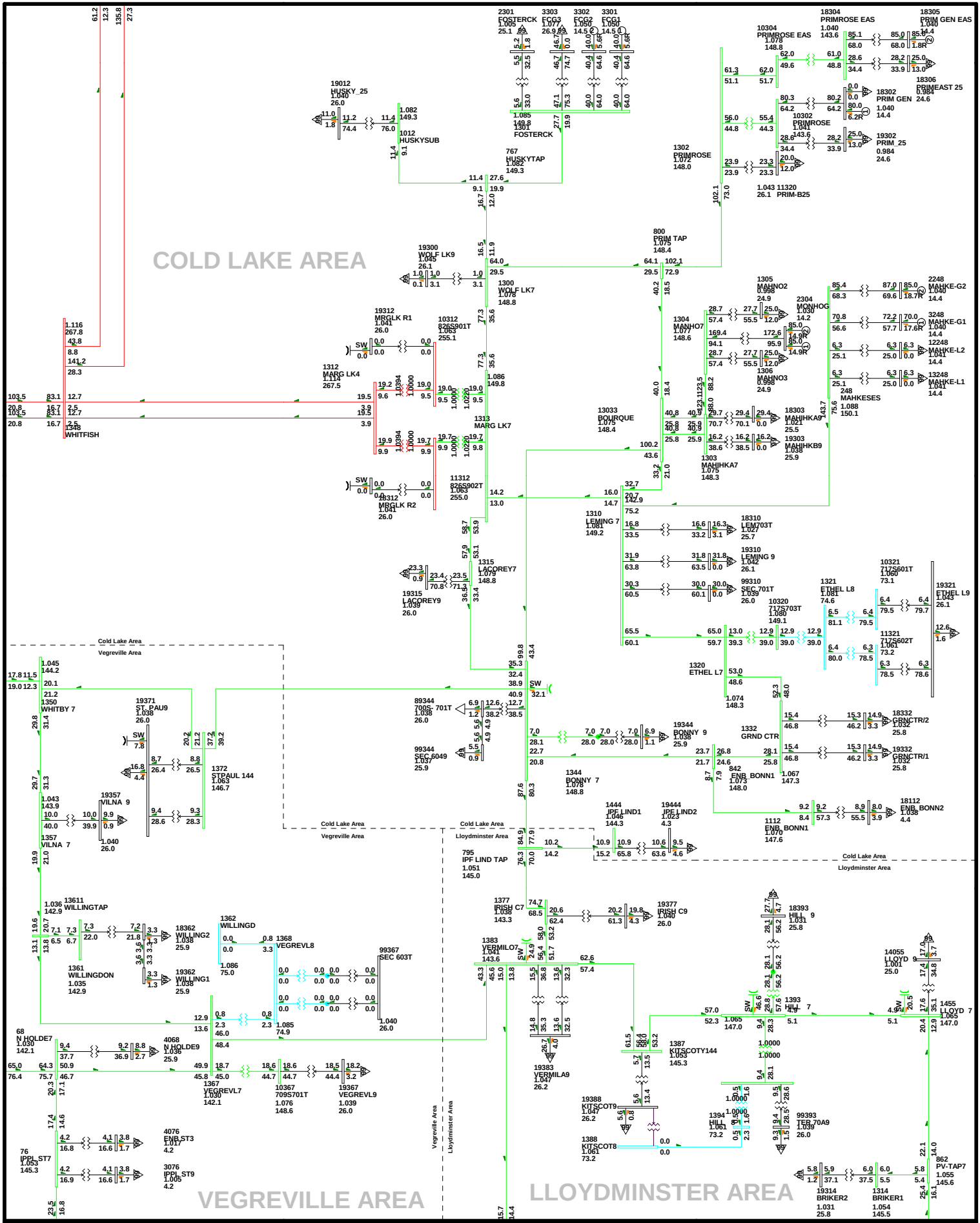


CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
THU, APR 08 2010 15:17
D1-15

2012SP-Alt 2-14.b

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar

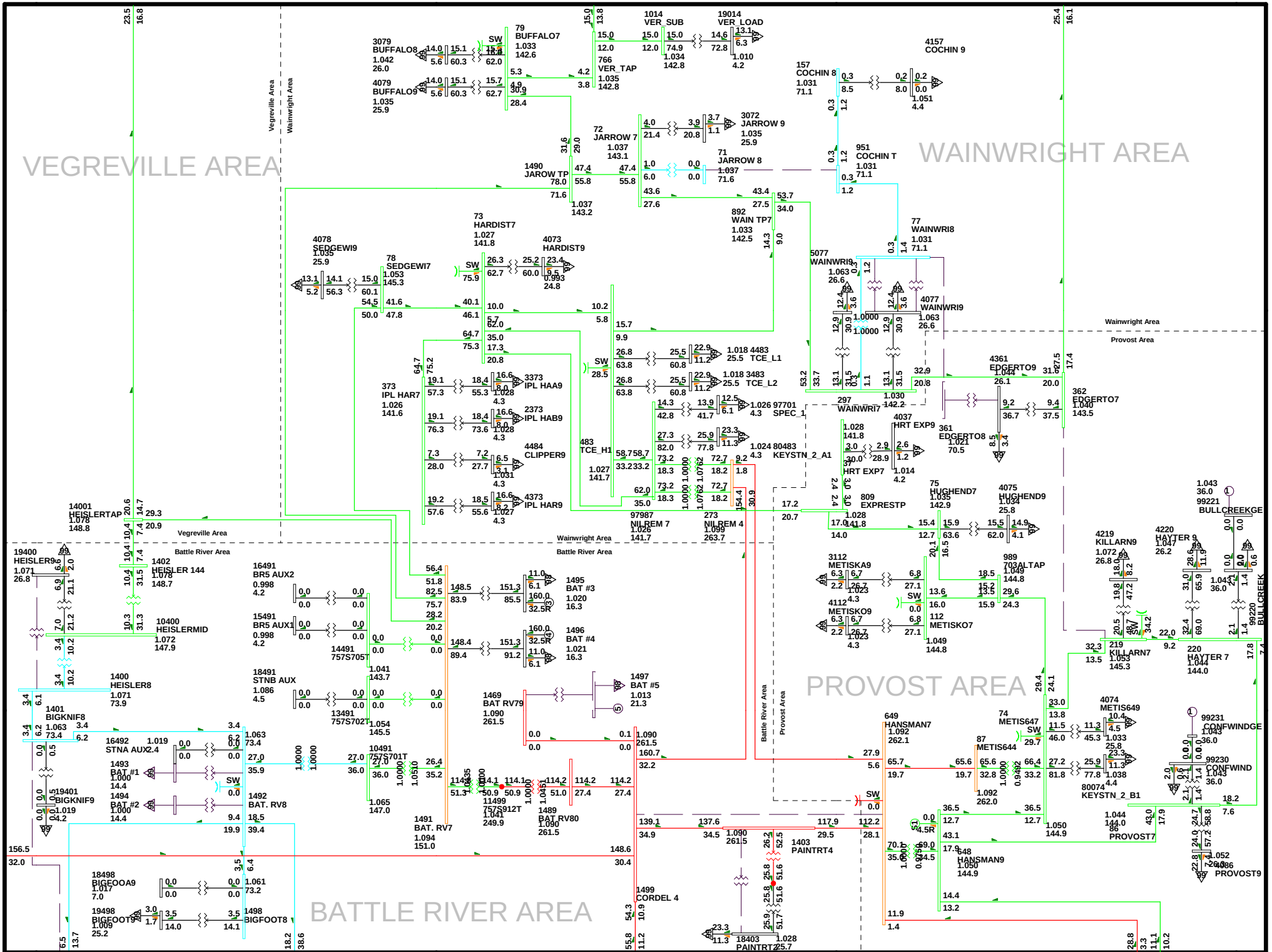
100.0%RATE A
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

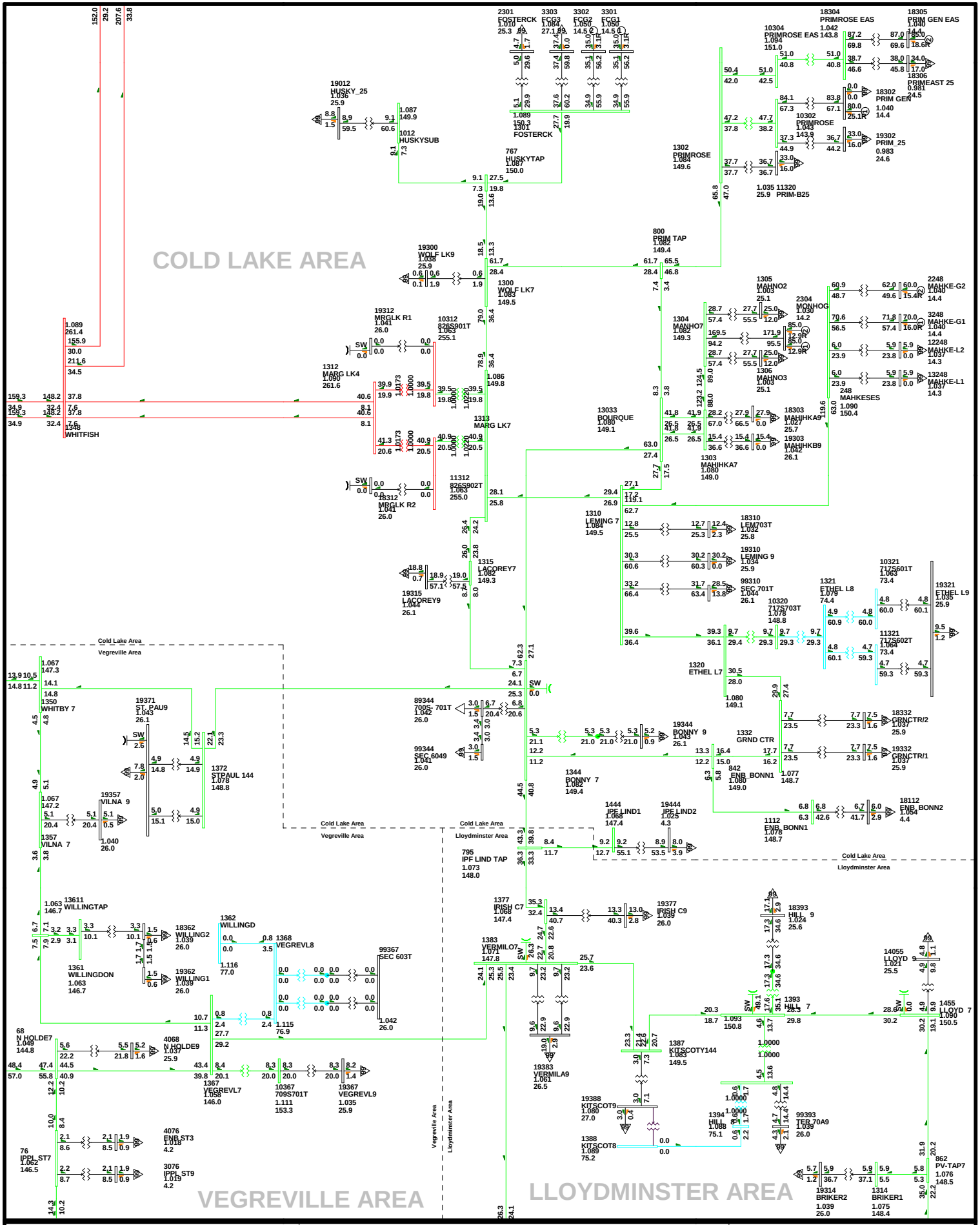


CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
THU, APR 08 2010 16:14
D1-16

2012SP-Alt 2-15.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

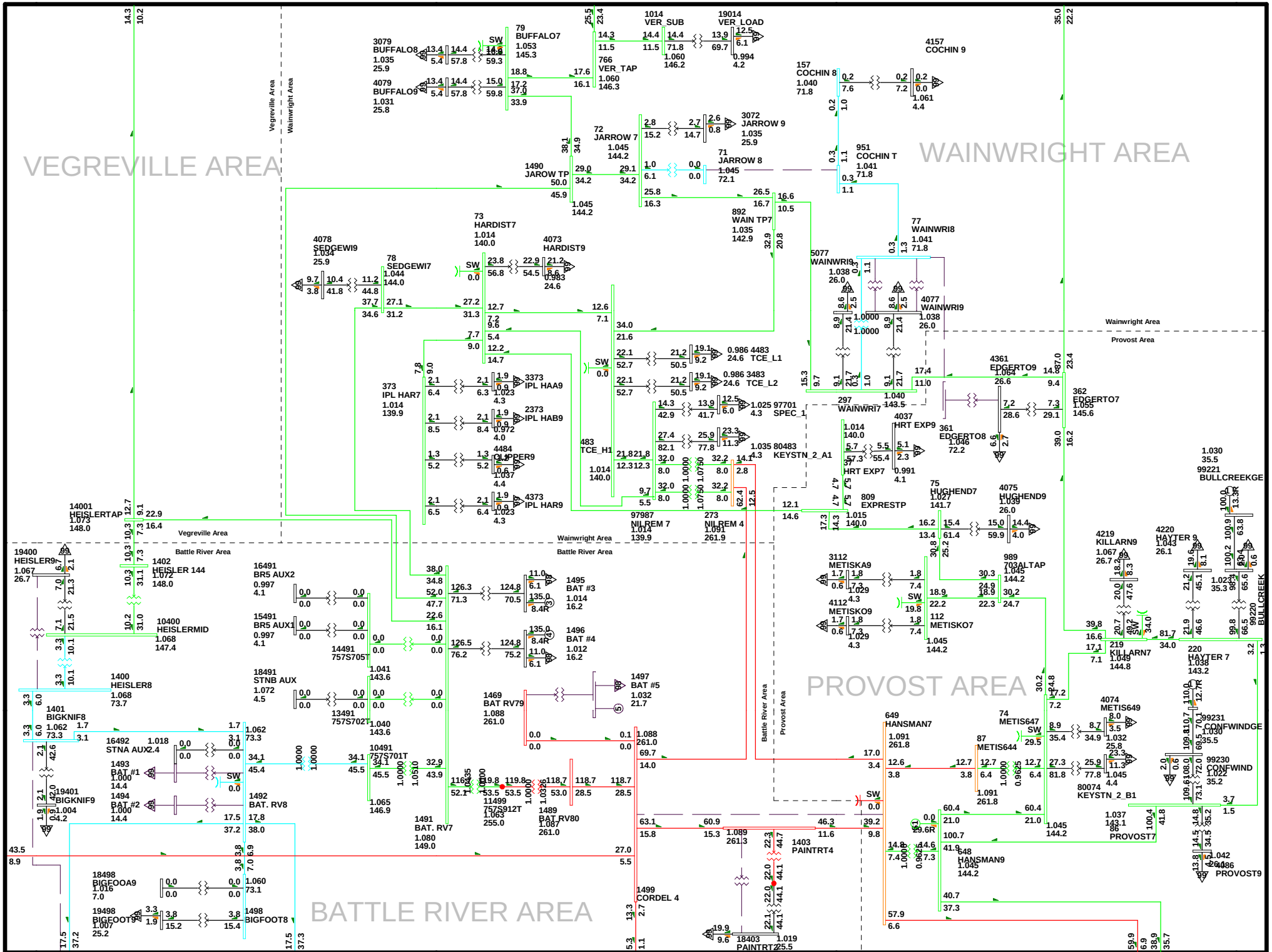

VEGREVILLE AREA
WAINWRIGHT AREA
PROVOST AREA
BATTLE RIVER AREA
Vegreville Area
Wainwright Area
Battle River Area
Provost Area
3079 BUFFALO8 1.042 26.0
4079 BUFFALO9 1.035 25.9
79 BUFFALO7 1.033 142.6
766 VER_TAP 1.035 142.8
1014 VER_SUB
19014 VER_LOAD
4157 COCHIN 9
157 COCHIN 8 1.031 71.1
951 COCHIN T 1.031 71.1
1051 4.4
3072 JAROW 9 1.035 25.9
72 JAROW 7 1.037 143.1
71 JAROW 8 1.037 71.6
1490 JAROW TP 78.0 71.6 1.037 143.2
892 WAIN TP7 1.033 142.5
77 WAINWRI8 1.031 71.1
5077 WAINWRI9 1.063 26.6
4077 WAINWRI9 1.063 26.6
297 WAINWRI7 1.030 142.2
4078 SEDGEWI9 1.035 25.9
78 SEDGEWI7 1.053 145.3
73 HARDIST7 1.027 141.8
4073 HARDIST9 0.993 24.8
4361 EDGERTO9 1.044 26.1
362 EDGERTO7 1.040 143.5
361 EDGERTO8 1.021 70.5
4037 HRT EXP9
HRT EXP7 1.014 4.2
1.018 4483 25.5 TCE_L1
1.018 3483 25.5 TCE_L2
373 IPL HAR7 1.026 141.6
3373 IPL HAA9 1.028 4.3
2373 IPL HAB9 1.028 4.3
4484 CLIPPER9 1.031 4.3
4373 IPL HAR9 1.027 4.3
483 TCE_H1 1.027 141.7
1.024 80483 KEYSTN_2_A1 4.3
1.026 97701 SPEC_1 4.3
97987 NIL REM 7 1.026 141.7
273 NIL REM 4 1.099 263.7
809 EXPRESTP 1.028 141.8
75 HUGHEND7 1.035 142.9
4075 HUGHEND9 1.034 25.8
989 703ALTAP 1.049 144.8
3112 METISKA9
4112 METISKO9
112 METISKO7 1.049 144.8
14001 HEISLERTAP 1.078 148.8
1402 HEISLER 144 1.076 148.7
10400 HEISLERMID 1.072 147.9
19400 HEISLER9 1.071 26.8
1400 HEISLER8 1.071 73.9
1401 BIGKNIF8 1.063 73.4
19401 BIGKNIF9 1.019 4.2
16491 BR5 AUX2 0.998 4.2
15491 BR5 AUX1 0.998 4.2
18491 STNB AUX 1.086 4.5
16492 STNA AUX 1.019 2.4
14491 757S705T 1.041 143.7
13491 757S702T 1.054 145.5
10491 757S701T 1.065 147.0
1495 BAT #3 1.020 16.3
1496 BAT #4 1.021 16.3
1497 BAT #5 1.013 21.3
1469 BAT RV79 1.090 261.5
1493 BAT #1 1.000 14.4
1494 BAT #2 1.000 14.4
1492 BAT. RV8 18.5 39.4
1491 BAT. RV7 1.094 151.0
11499 757S912T 1.041 249.9
1489 BAT RV80 1.090 261.5
1499 CORDEL 4
1403 PAINTRT4
18403 PAINTRT2 1.028 25.7
649 HANSMAN7 1.092 262.1
74 METIS647
87 METIS644 1.092 262.0
4074 METIS649
80074 KEYSTN_2_B1
648 HANSMAN9 1.050 144.9
1.044 144.0 86 PROVOST7
1.052 144.0 86 PROVOST9
4219 KILLARN9 1.072 26.8
219 KILLARN7 1.053 145.3
4220 HAYTER 9 1.047 26.2
220 HAYTER 7 1.044 144.0
99221 BULLCREEKGE
99220 BULLCREEK
99231 CONFWINDGE 1.043 36.0
99230 CONFWIND 1.043 36.0
18498 BIGEOOA9 1.017 7.0
19498 BIGFOOT9 1.009 25.2
1498 BIGFOOT8 1.061 73.2
CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
THU, APR 08 2010 16:14
D1-16
2012SP-Alt 2-15.b
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATE A
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER LIGHT BASE CASE REVISION 7.2.1
THU, APR 08 2010 15:24
D1-00

2012SL-Alt 2-1.a

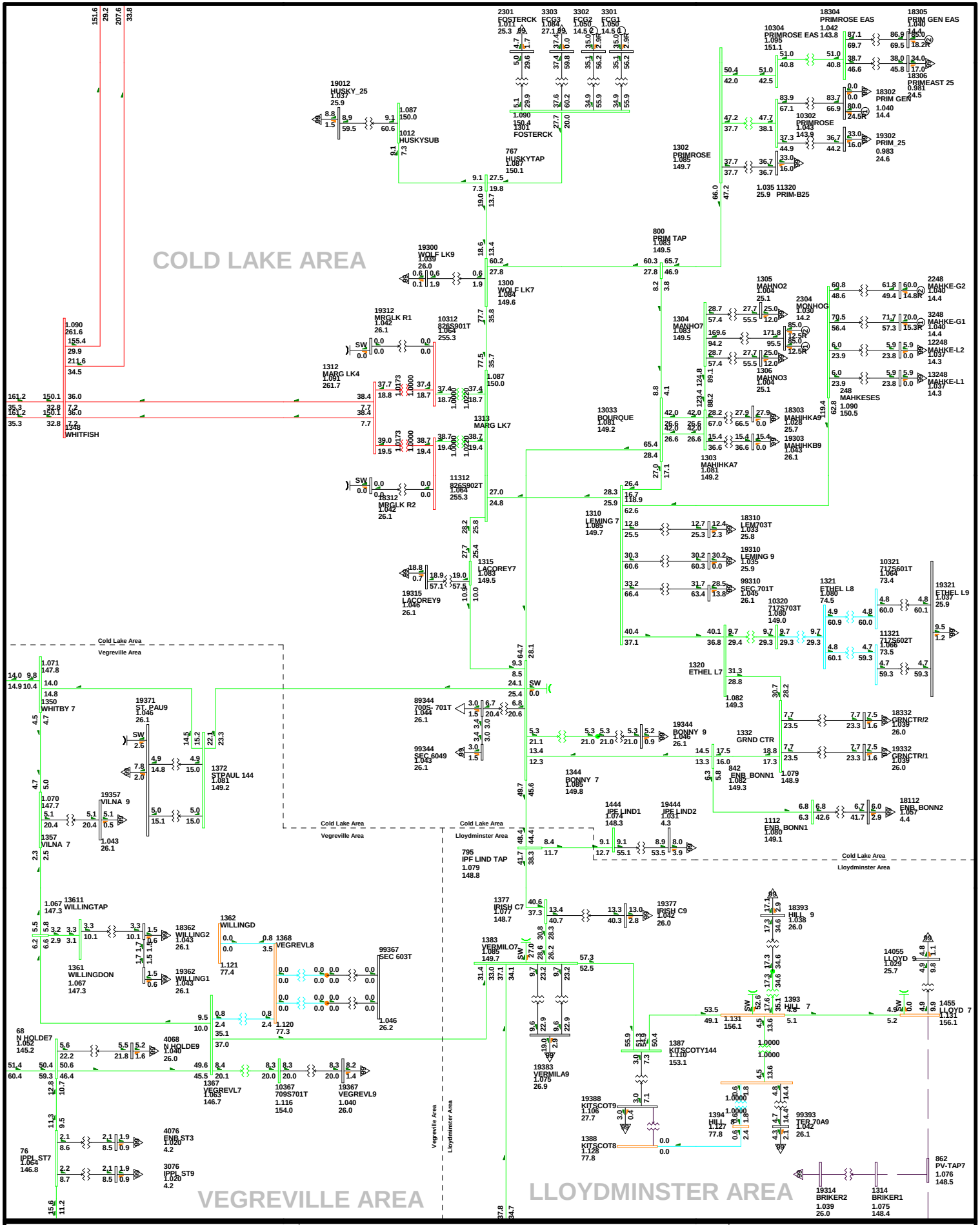
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER LIGHT BASE CASE REVISION 7.2.1
THU, APR 08 2010 15:24
D1-00

2012SL-Alt 2-1.b

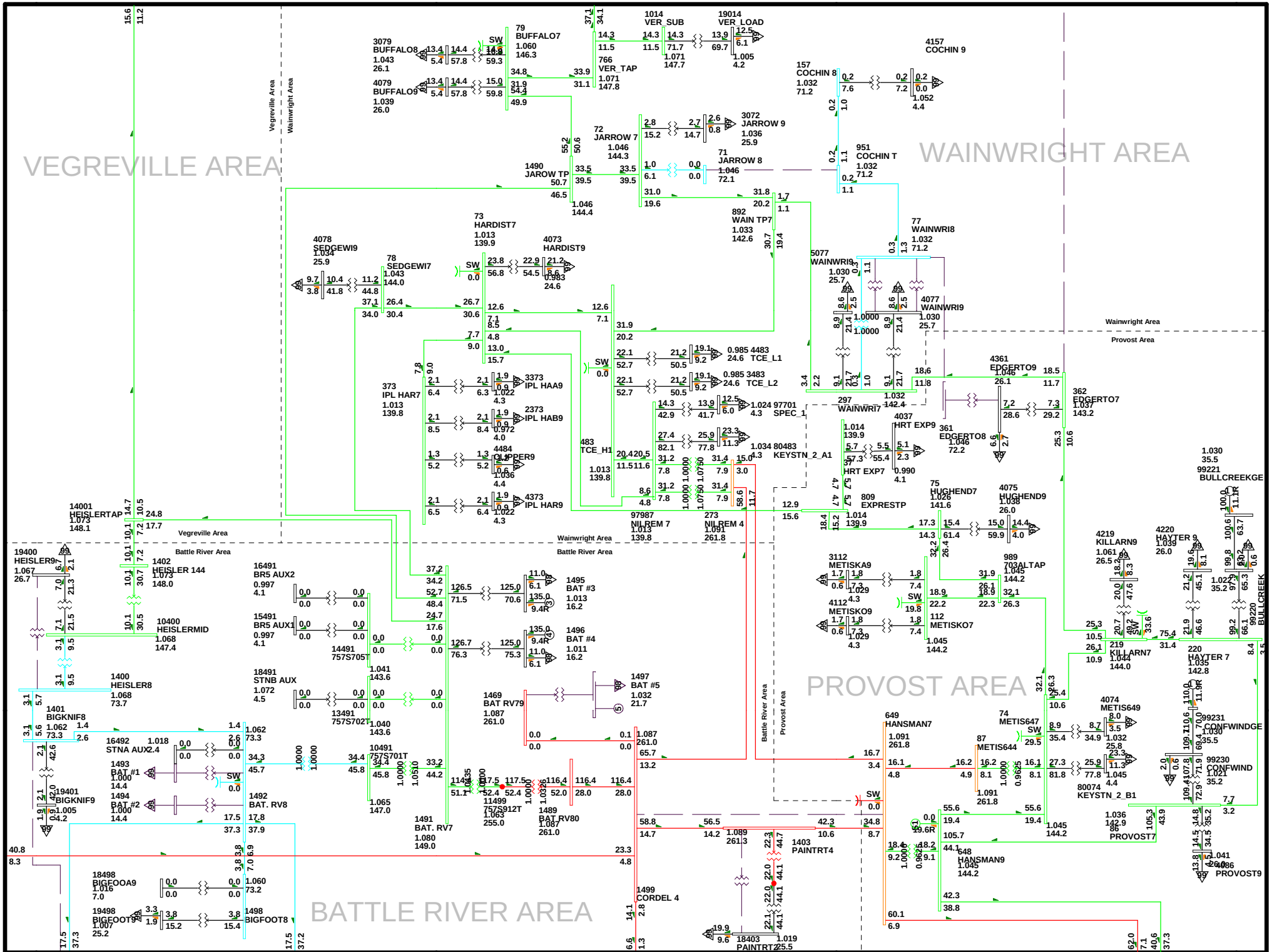
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER LIGHT BASE CASE REVISION 7.2.1
THU, APR 08 2010 15:24
D1-08

2012SL-Alt 2-2.a

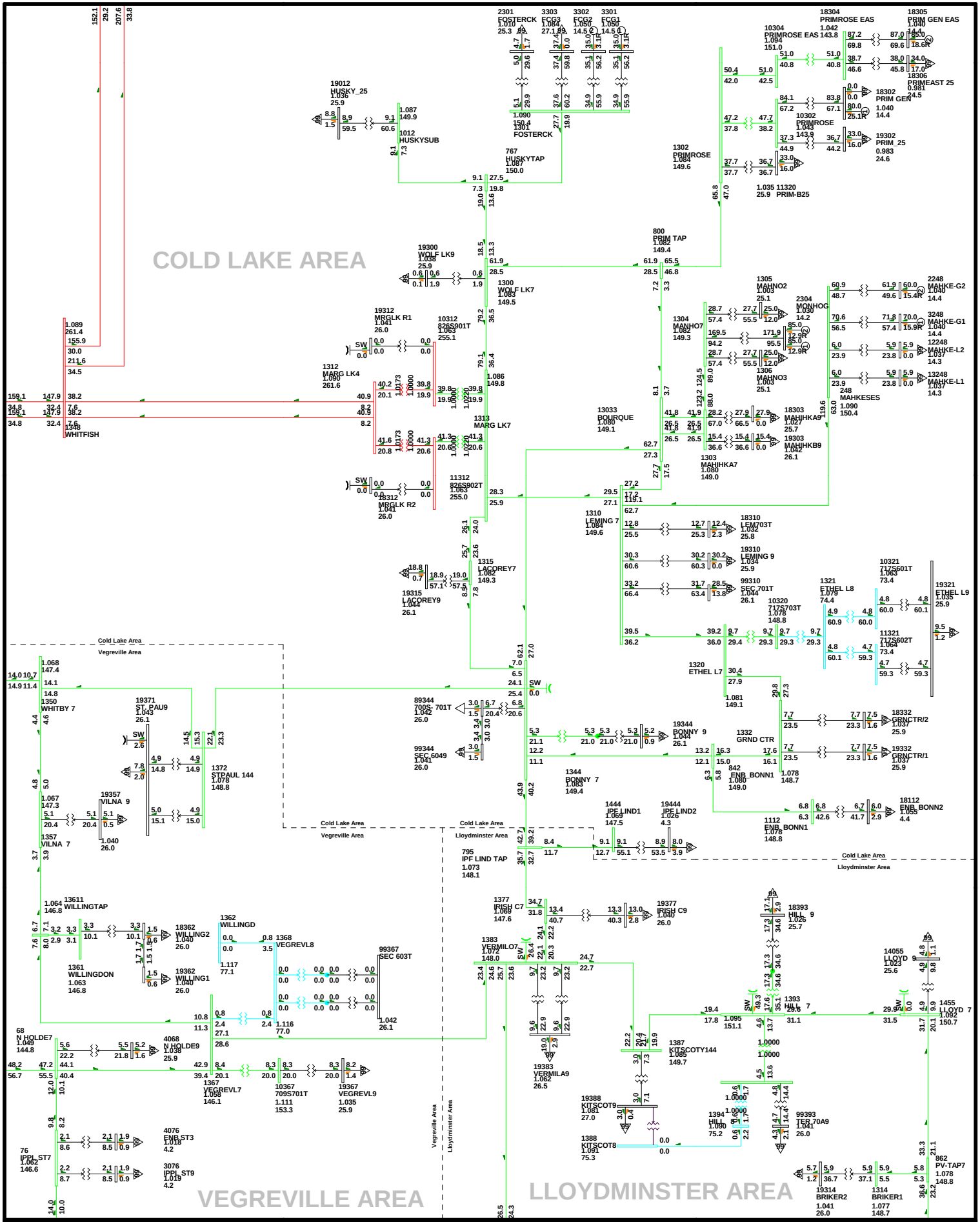
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER LIGHT BASE CASE REVISION 7.2.1
THU, APR 08 2010 15:24
D1-08

2012SL-Alt 2-2.b

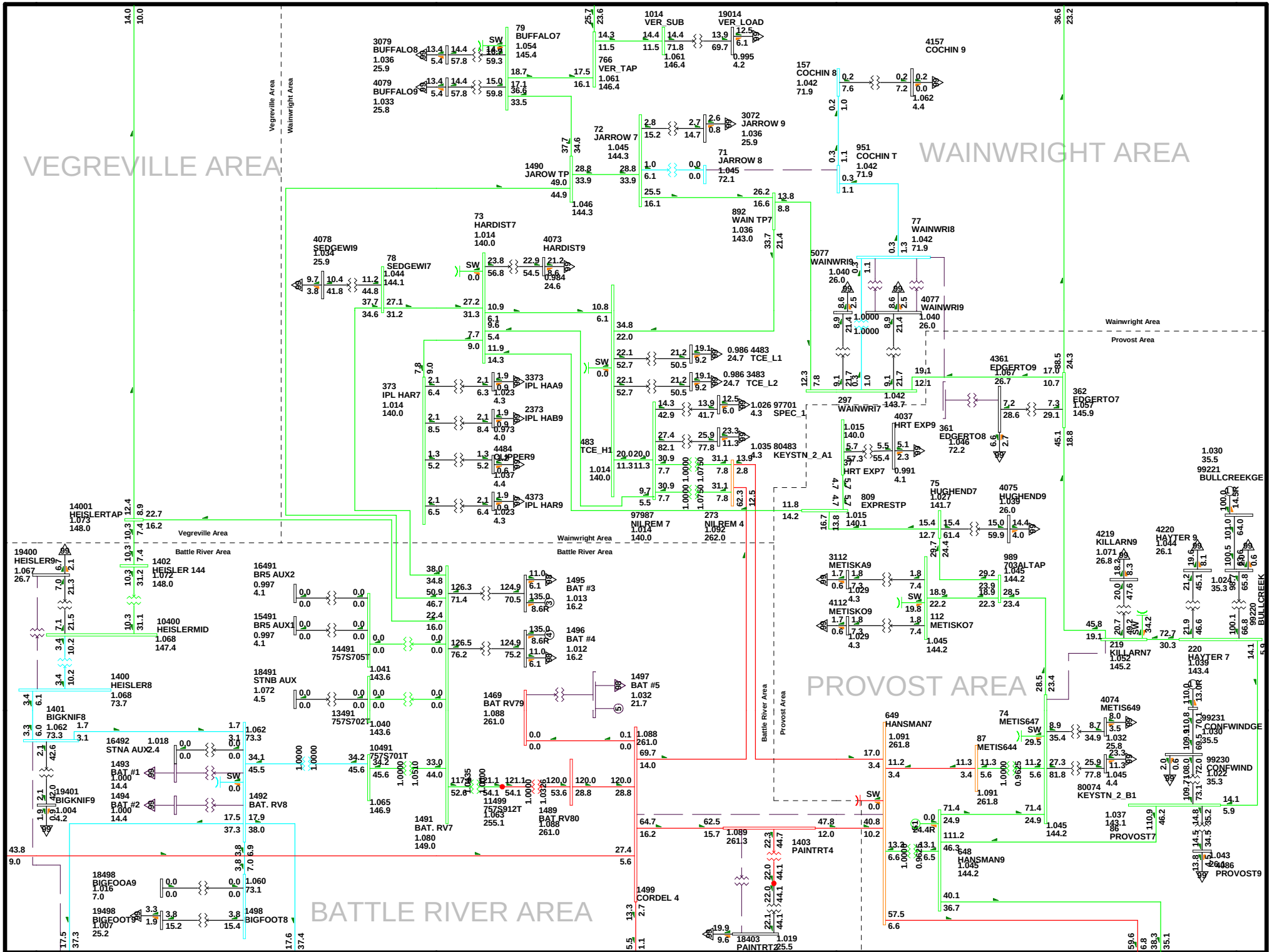
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER LIGHT BASE CASE REVISION 7.2.1
THU, APR 08 2010 15:24
D1-11

2012SL-Alt 2-3.a

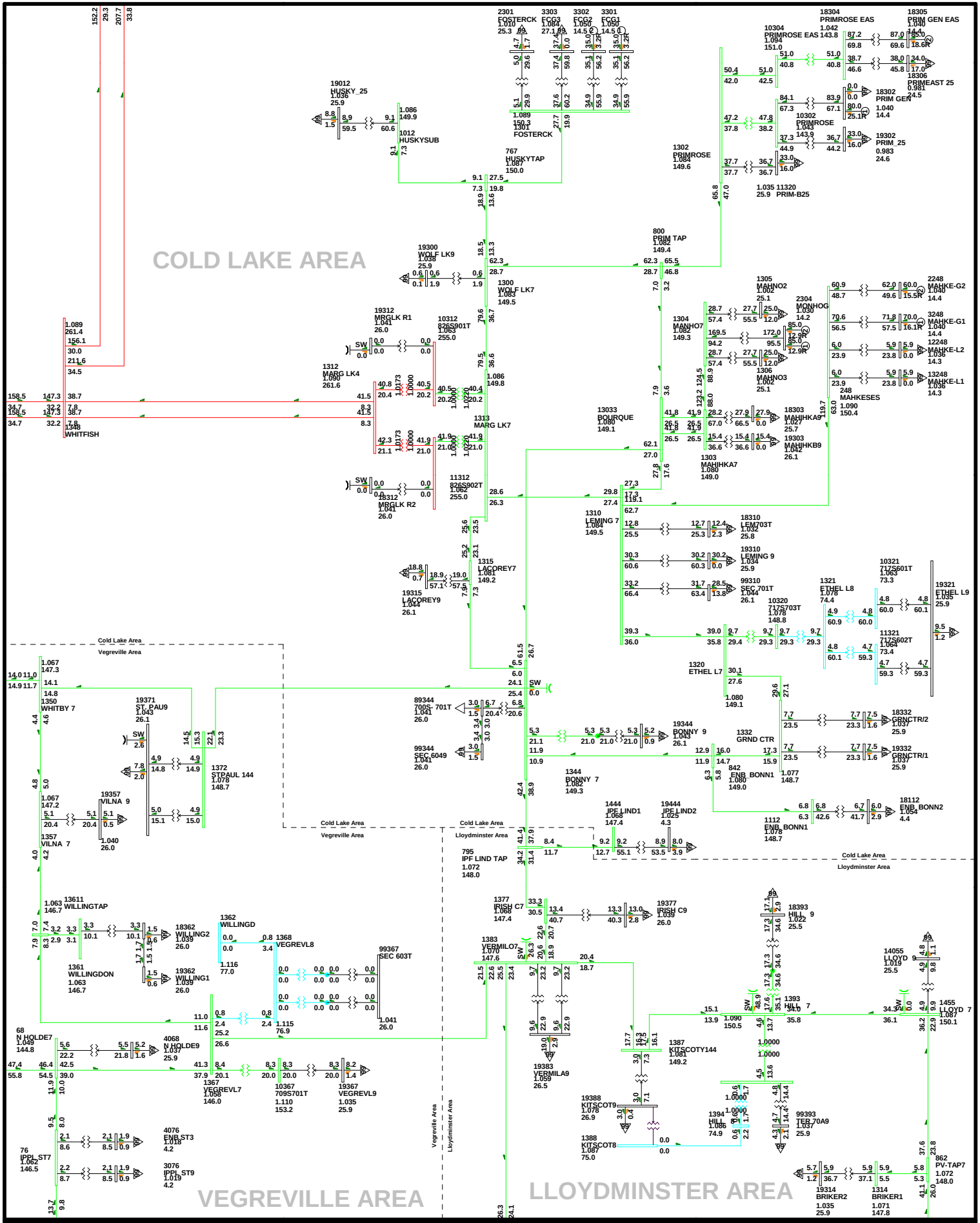
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER LIGHT BASE CASE REVISION 7.2.1
THU, APR 08 2010 15:24
D1-11

2012SL-Alt 2-3.b

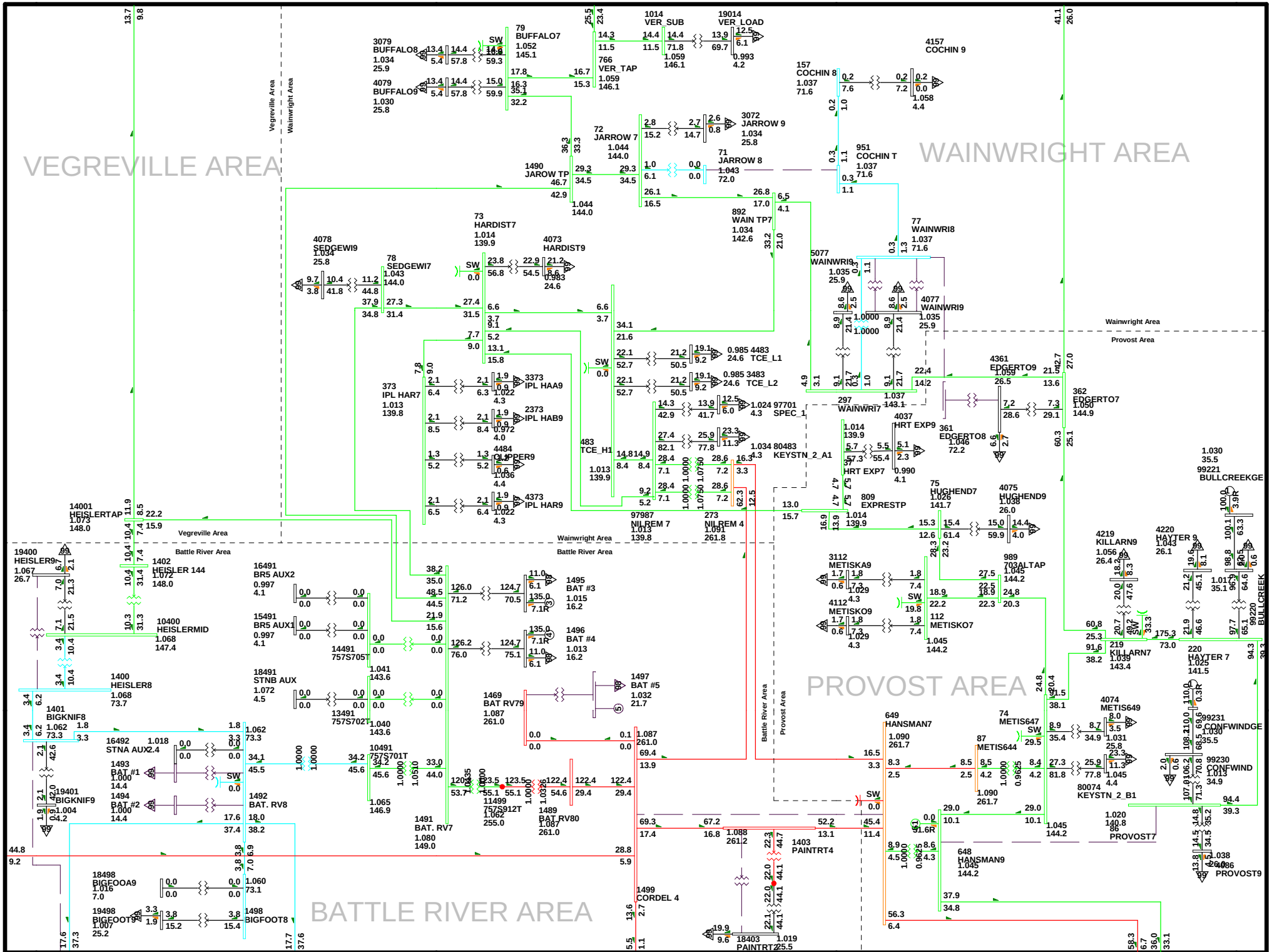
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

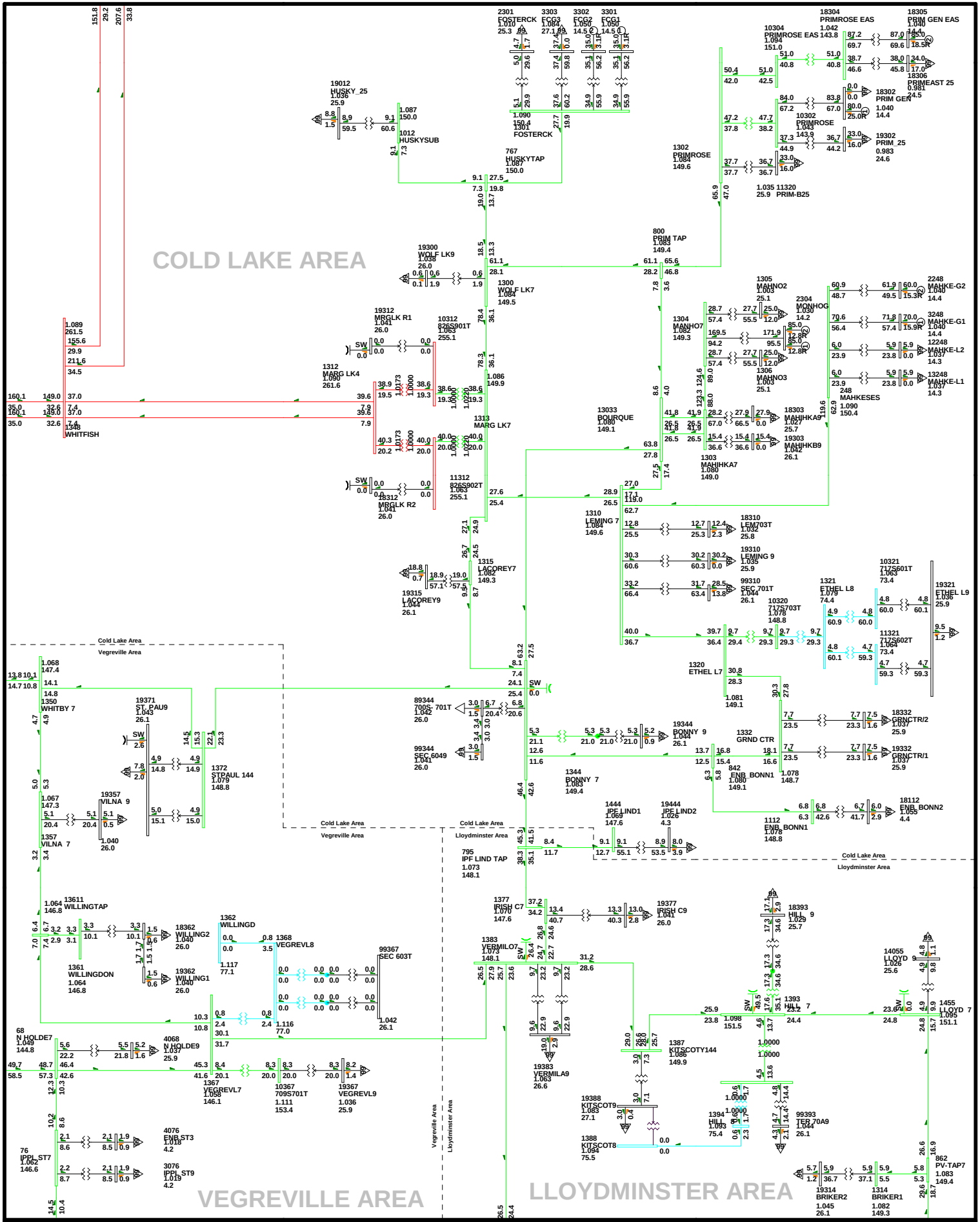


CENTRAL AREA STUDY
2012 SUMMER LIGHT BASE CASE REVISION 7.2.1
THU, APR 08 2010 15:24
D1-12

2012SL-Alt 2-4.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

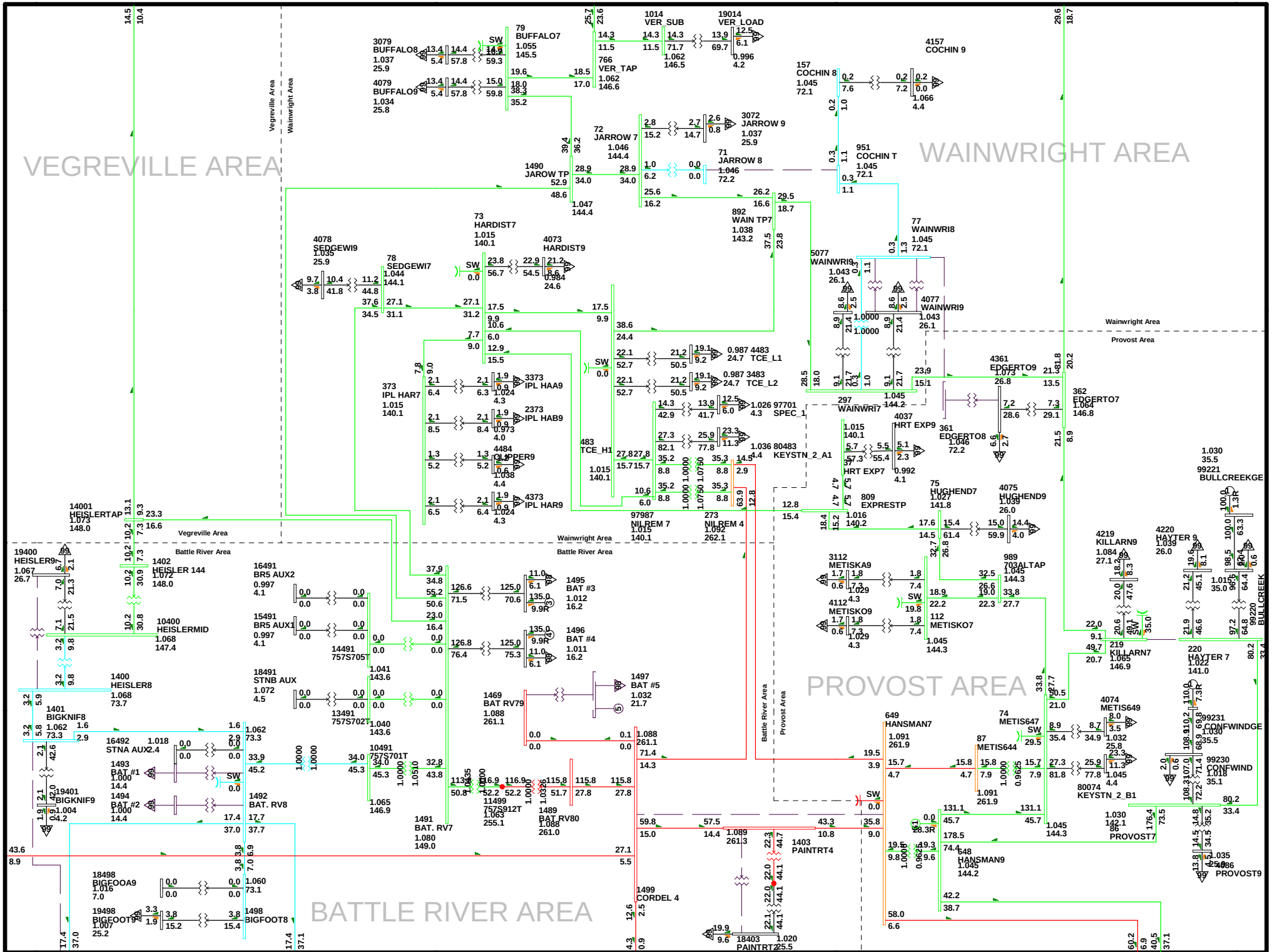

VEGREVILLE AREA
WAINWRIGHT AREA
PROVOST AREA
BATTLE RIVER AREA
Vegreville Area
Wainwright Area
Battle River Area
Provost Area
3079 BUFFALO8 1.034 25.9
4079 BUFFALO9 1.030 25.8
79 BUFFALO7 1.052 145.1
1014 VER_SUB
19014 VER_LOAD
766 VER_TAP 1.059 146.1
4157 COCHIN 9
157 COCHIN 8 1.037 71.6
1.058 4.4
951 COCHIN T 1.037 71.6
72 JARROW 7 1.044 144.0
3072 JARROW 9 1.034 25.8
71 JARROW 8 1.043 72.0
1490 JAROW TP 46.7 42.9
1.044 144.0
892 WAIN TP7 1.034 142.6
77 WAINWRI8 1.037 71.6
5077 WAINWRI9 1.035 25.9
4077 WAINWRI9 1.035 25.9
73 HARDIST7 1.014 139.9
4073 HARDIST9 0.983 24.6
4078 SEDGEWI9 1.034 25.8
78 SEDGEWI7 1.043 144.0
373 IPL HAR7 1.013 139.8
3373 IPL HAA9 1.022 4.3
2373 IPL HAB9 0.972 4.0
4484 OLIPPER9 1.036 4.4
4373 IPL HAR9 1.022 4.3
483 TCE_H1 1.013 139.9
0.985 4483 24.6 TCE_L1
0.985 3483 24.6 TCE_L2
297 WAINWRI7 1.037 143.1
1.024 97701 4.3 SPEC_1
1.034 80483 4.3 KEYSTN_2_A1
4037 HRT EXP9 1.014 139.9
HRT EXP7 0.990 4.1
809 EXPRESTP 1.014 139.9
97987 NIL REM 7 1.013 139.8
273 NIL REM 4 1.091 261.8
4361 EDGERTO9 1.059 26.5
361 EDGERTO8 1.046 72.2
362 EDGERTO7 1.050 144.9
75 HUGHEND7 1.026 141.7
4075 HUGHEND9 1.038 26.0
14001 HEISLERTAP 1.073 148.0
1402 HEISLER 144 1.072 148.0
10400 HEISLERMID 1.068 147.4
19400 HEISLER9 1.067 26.7
1400 HEISLER8 1.068 73.7
1401 BIGKNIF8 1.062 73.3
19401 BIGKNIF9 1.004 64.2
16491 BR5 AUX2 0.997 4.1
15491 BR5 AUX1 0.997 4.1
18491 STNB AUX 1.072 4.5
16492 STNA AUX 2.4
14491 757S705T
13491 757S702T
10491 757S701T
11499 757S912T
1495 BAT #3 1.015 16.2
1496 BAT #4 1.013 16.2
1497 BAT #5 1.032 21.7
1469 BAT RV79 1.087 261.0
1493 BAT #1 1.000 14.4
1494 BAT #2 1.000 14.4
1492 BAT. RV8 1.062 73.3
1491 BAT. RV7 1.080 149.0
1489 BAT RV80 1.087 261.0
1403 PAINTRT4 1.088 261.2
18403 PAINTRT2 1.019 25.5
1499 CORDEL 4 1.087 261.0
18498 BIGFOOA9 1.016 7.0
19498 BIGFOOT9 1.007 25.2
1498 BIGFOOT8 1.060 73.1
649 HANSMAN7 1.090 261.7
648 HANSMAN9 1.045 144.2
74 METIS647
87 METIS644 1.090 261.7
4074 METIS649 1.031 25.8
80074 KEYSTN_2_B1
3112 METISKA9 1.029 4.3
4112 METISKO9 1.029 4.3
112 METISKO7 1.045 144.2
989 703ALTAP 1.045 144.2
4219 KILLARN9 1.056 26.4
219 KILLARN7 1.039 143.4
4220 HAYTER 9 1.043 26.1
220 HAYTER 7 1.025 141.5
99221 BULLCREEKGE
99231 CONFWINDGE 1.030 35.5
99230 CONFWIND 1.013 34.9
99220 BULLCREEK
1020 140.8 86 PROVOST7
1038 26.6 86 PROVOST9
CENTRAL AREA STUDY
2012 SUMMER LIGHT BASE CASE REVISION 7.2.1
THU, APR 08 2010 15:24
D1-12
2012SL-Alt 2-4.b
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

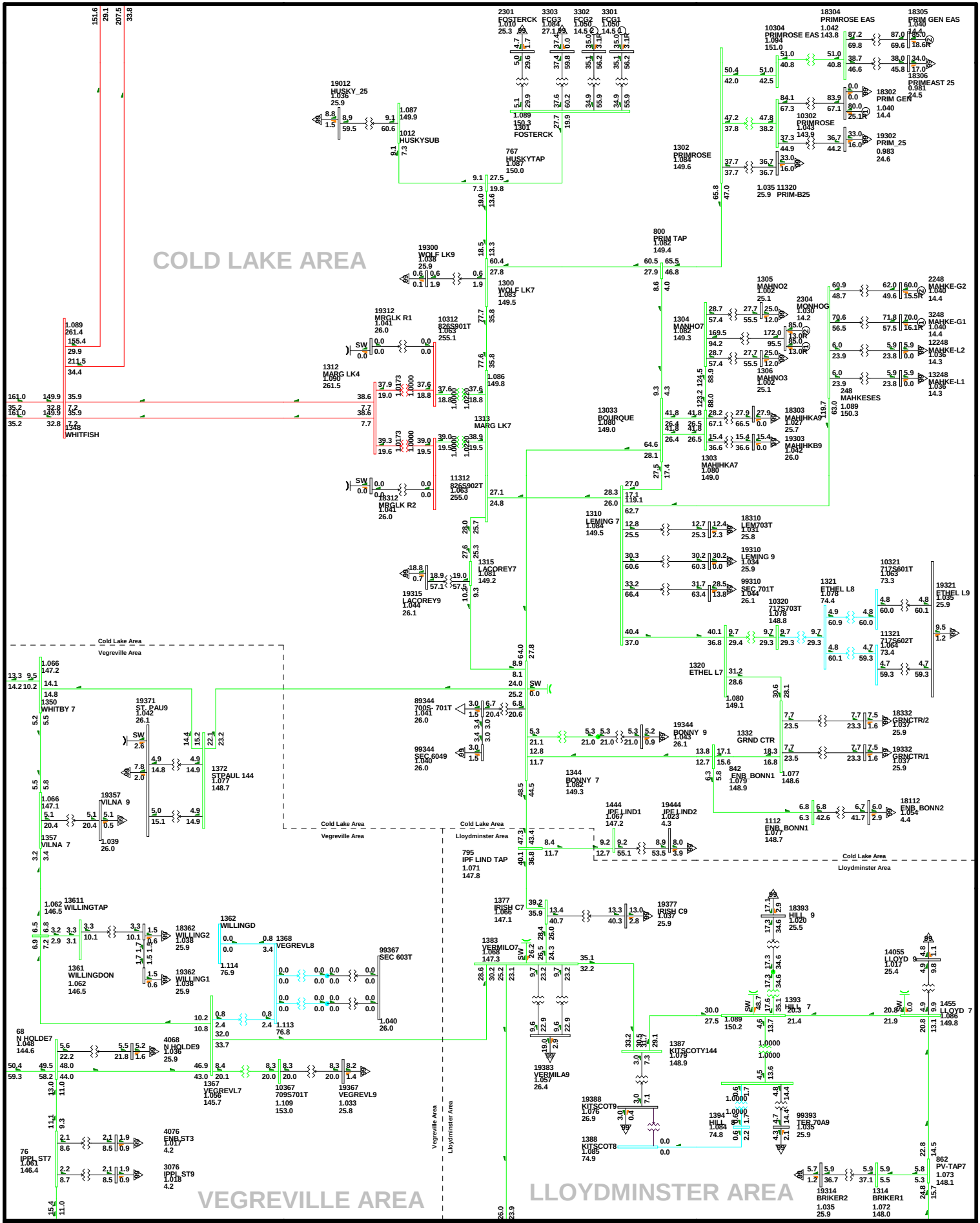


CENTRAL AREA STUDY
2012 SUMMER LIGHT BASE CASE REVISION 7.2.1
THU, APR 08 2010 15:24
D1-13

2012SL-Alt 2-5.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

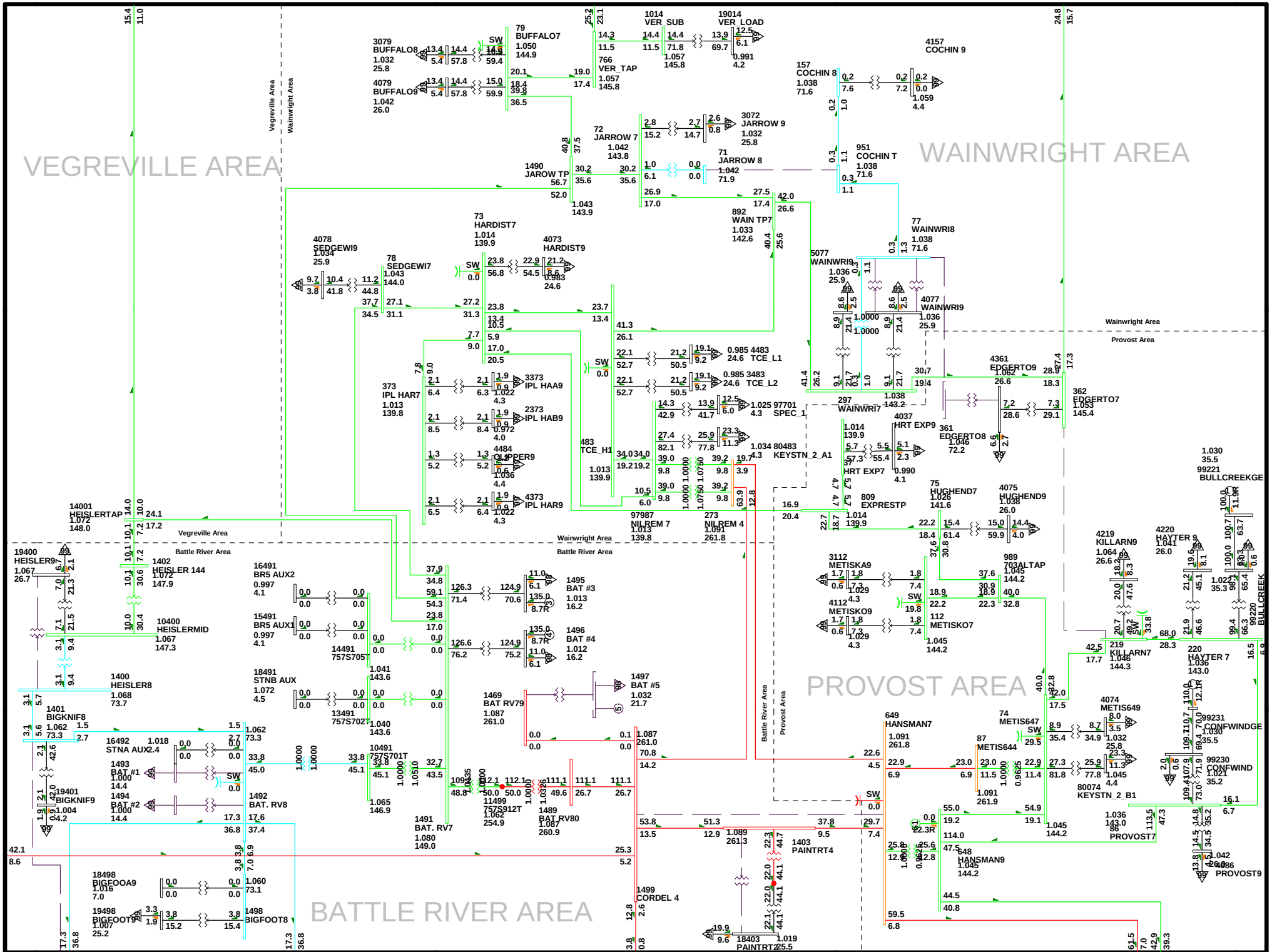

VEGREVILLE AREA
WAINWRIGHT AREA
PROVOST AREA
BATTLE RIVER AREA
Vegreville Area
Wainwright Area
Battle River Area
Provost Area
3079 BUFFALO8 1.037 25.9
4079 BUFFALO9 1.034 25.8
79 BUFFALO7 1.055 145.5
766 VER_TAP 1.062 146.6
1014 VER_SUB 71.7 1.062 146.5
19014 VER_LOAD 69.7 0.996 4.2
4157 COCHIN 9
157 COCHIN 8 1.045 72.1
951 COCHIN T 1.045 72.1
1066 4.4
72 JAROW 7 1.046 144.4
3072 JARROW 9 1.037 25.9
71 JARROW 8 1.046 72.2
1490 JAROW TP 52.9 48.6 1.047 144.4
892 WAIN TP7 1.038 143.2
77 WAINWRI8 1.045 72.1
5077 WAINWRI9 1.043 26.1
4077 WAINWRI9 1.043 26.1
297 WAINWRI7 1.045 144.2
4078 SEDGEWI9 1.035 25.9
78 SEDGEWI7 1.044 144.1
73 HARDIST7 1.015 140.1
4073 HARDIST9 1.0384 24.6
373 IPL HAR7 1.015 140.1
3373 IPL HAA9 1.024 4.3
2373 IPL HAB9 0.973 4.0
4484 OLDUPPER9 1.038 4.4
4373 IPL HAR9 1.024 4.3
483 TCE_H1 1.015 140.1
0.987 4483 24.7 TCE_L1
0.987 3483 24.7 TCE_L2
1.026 97701 SPEC_1 4.3
1.036 80483 KEYSTN_2_A1 4.4
97987 NILREM 7 1.015 140.1
273 NILREM 4 1.092 262.1
4361 EDGERTO9 1.073 26.8
362 EDGERTO7 1.064 146.8
361 EDGERTO8 1.046 72.2
4037 HRT EXP9 1.015 140.1
HRT EXP7 0.992 4.1
809 EXPRESTP 1.016 140.2
75 HUGHEND7 1.027 141.8
4075 HUGHEND9 1.039 26.0
14001 HEISLERTAP 1.073 148.0
19400 HEISLER9 1.067 26.7
1402 HEISLER 144 1.072 148.0
10400 HEISLERMID 1.068 147.4
1400 HEISLER8 1.068 73.7
1401 BIGKNIF8 1.062 73.3
19401 BIGKNIF9 1.004 4.2
16491 BR5 AUX2 0.997 4.1
15491 BR5 AUX1 0.997 4.1
18491 STNB AUX 1.072 4.5
16492 STNA AUX 2.4
14491 757S705T 1.041 143.6
13491 757S702T 1.040 143.6
10491 757S701T 45.3 1.065 146.9
1493 BAT #1 1.000 14.4
1494 BAT #2 1.000 14.4
1492 BAT. RV8 17.7
1491 BAT. RV7 1.080 149.0
1495 BAT #3 1.012 16.2
1496 BAT #4 1.011 16.2
1497 BAT #5 1.032 21.7
1469 BAT RV79 1.088 261.1
11499 757S912T 1.063 255.1
1489 BAT RV80 1.088 261.0
1403 PAINTRT4 1.045 144.3
18403 PAINTRT2 1.020 25.5
1499 CORDEL 4 2.5
18498 BIGFOOA9 1.016 7.0
19498 BIGFOOT9 1.007 25.2
1498 BIGFOOT8 15.4
649 HANSMAN7 1.091 261.9
74 METIS647 29.5
87 METIS644 1.091 261.9
4074 METIS649 1.032 25.8
80074 KEYSTN_2_B1 4.4
648 HANSMAN9 1.045 144.2
1030 142.1 86 PROVOST7
PROVOST9
3112 METISKA9 1.029 4.3
4112 METISKO9 1.029 4.3
112 METISKO7 1.045 144.3
989 703ALTAP 1.045 144.3
4219 KILLARN9 1.084 27.1
219 KILLARN7 1.065 146.9
4220 HAYTER 9 1.039 26.0
220 HAYTER 7 1.022 141.0
99221 BULLCREEKGE
99220 BULLCREEK
99231 CONFWINDGE 1.030 35.5
99230 CONFWIND 1.018 35.1
CENTRAL AREA STUDY
2012 SUMMER LIGHT BASE CASE REVISION 7.2.1
THU, APR 08 2010 15:24
D1-13
2012SL-Alt 2-5.b
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER LIGHT BASE CASE REVISION 7.2.1
THU, APR 08 2010 16:19
D1-16

2012SL-Alt 2-6.a

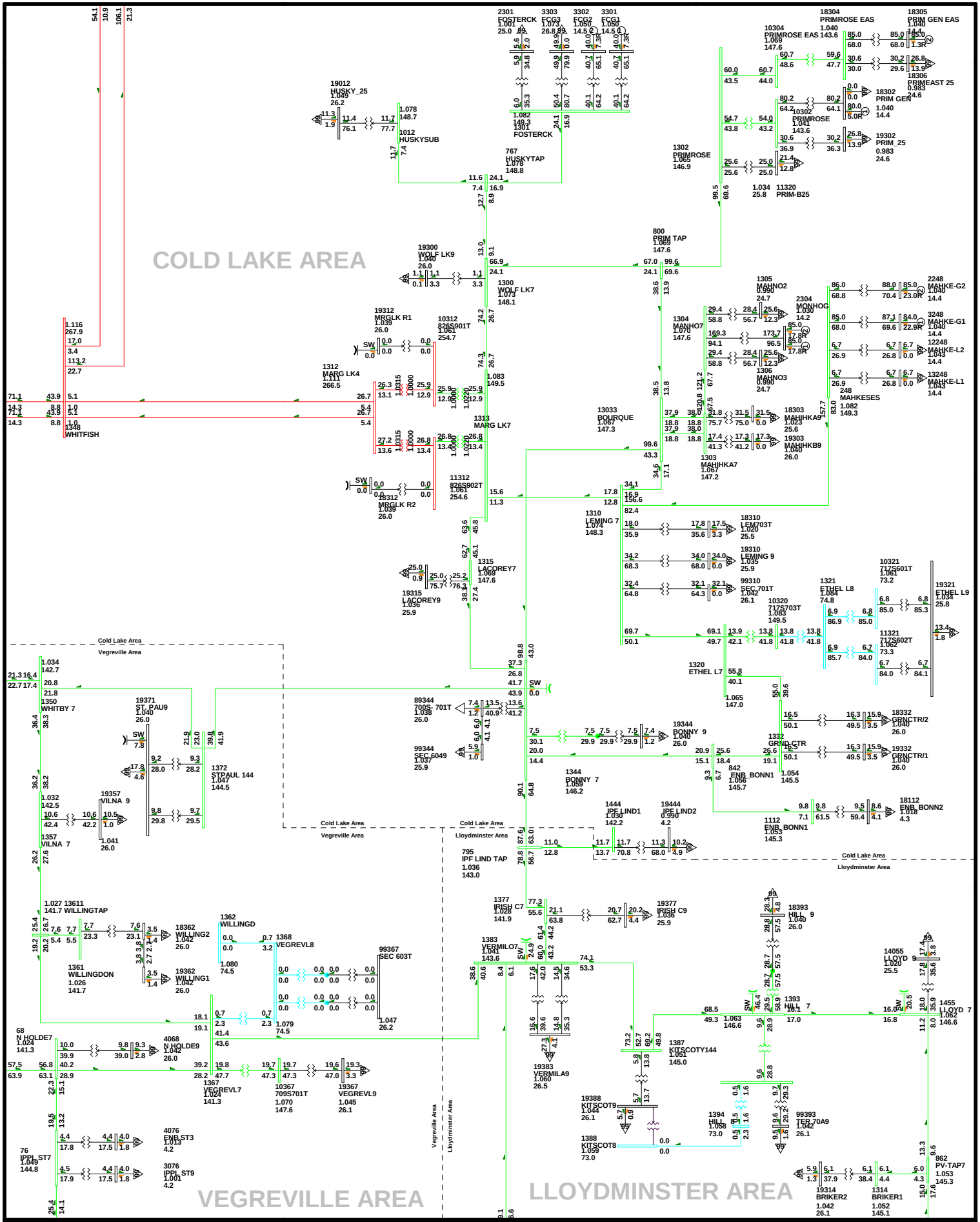
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER LIGHT BASE CASE REVISION 7.2.1
THU, APR 08 2010 16:19
D1-16

2012SL-Alt 2-6.b

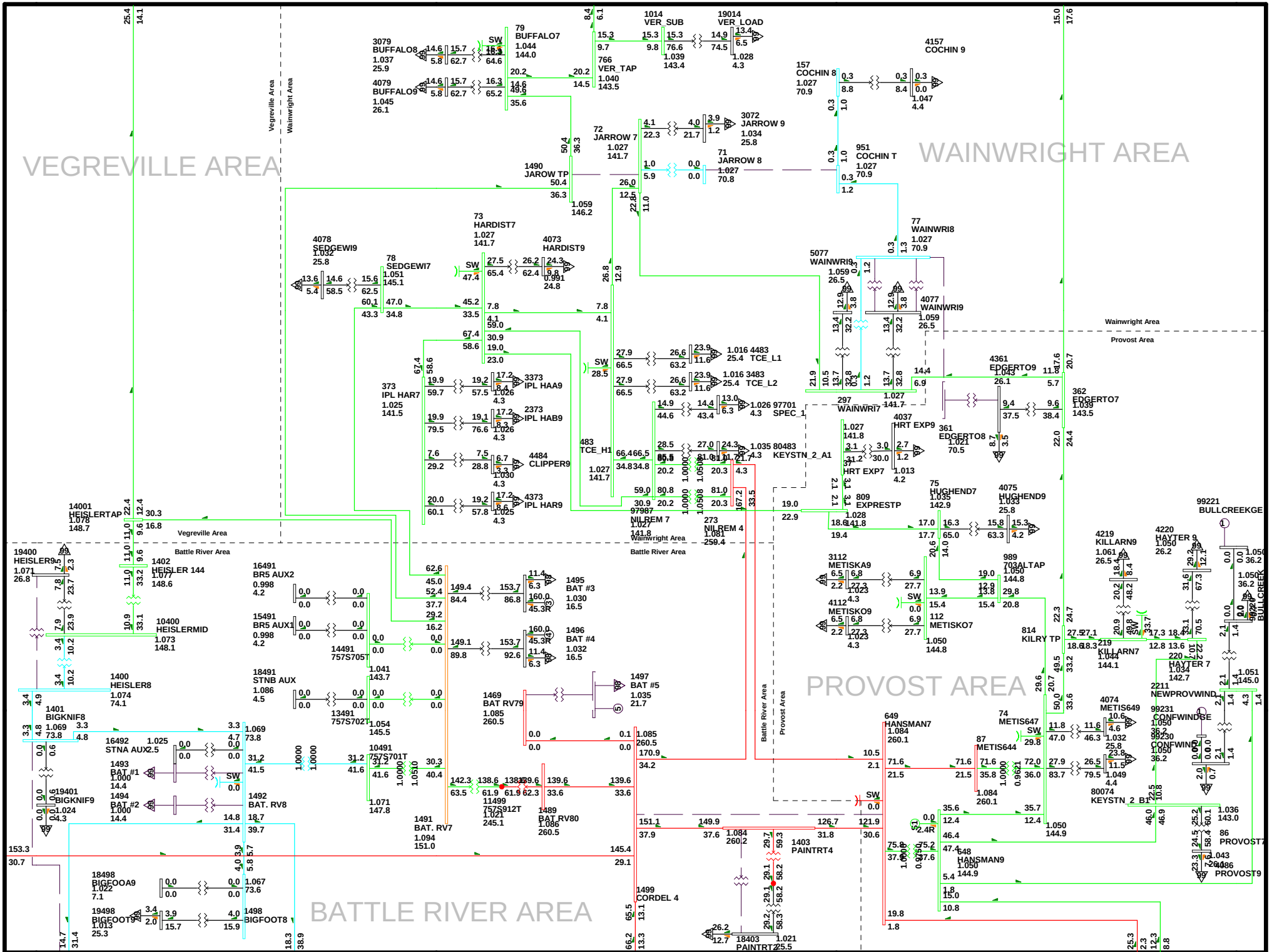
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
THU, APR 08 2010 17:03
D1-00

2012WP-Alt 3-1.a

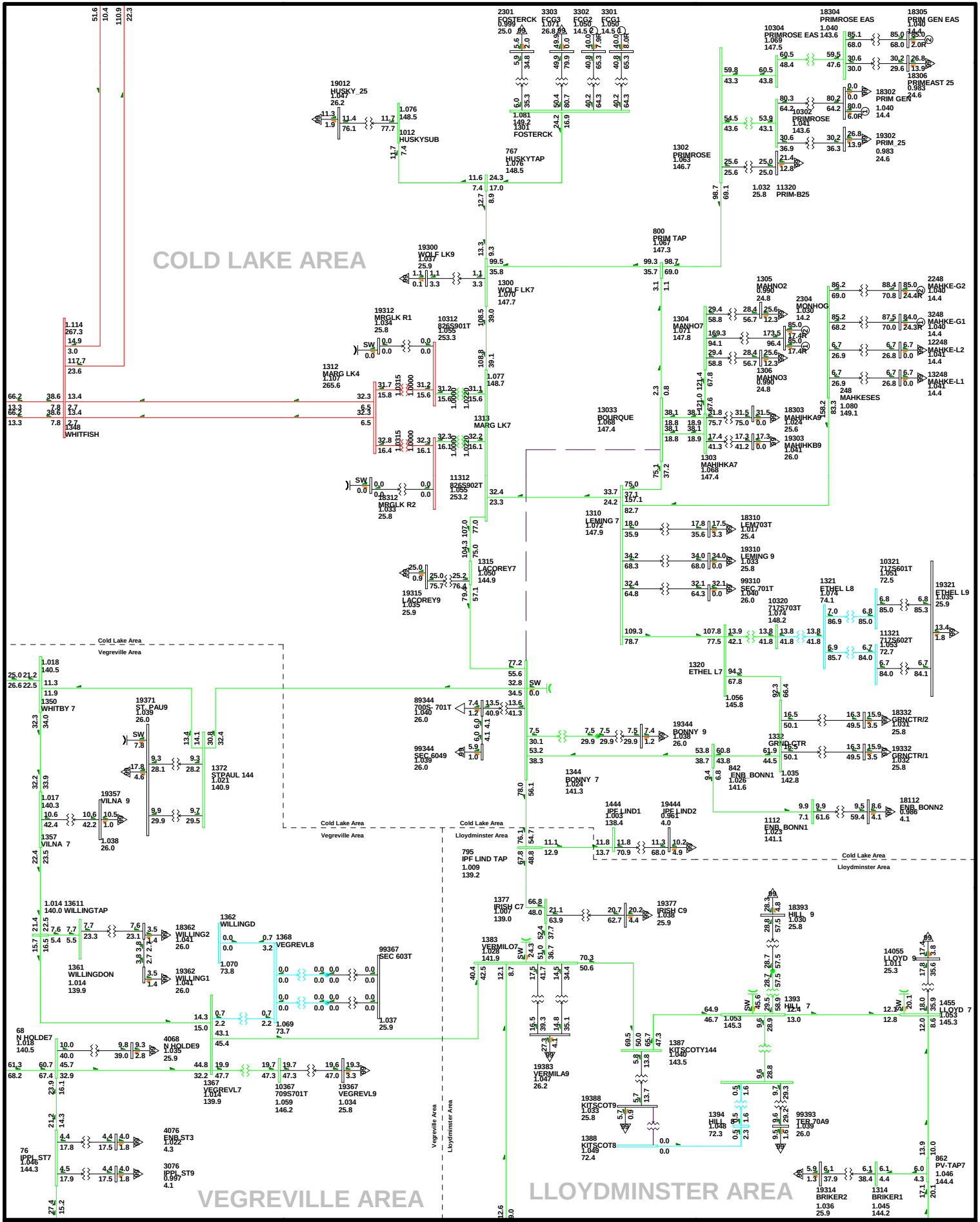
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
THU, APR 08 2010 17:04
D1-00

2012WP-Alt 3-1.b

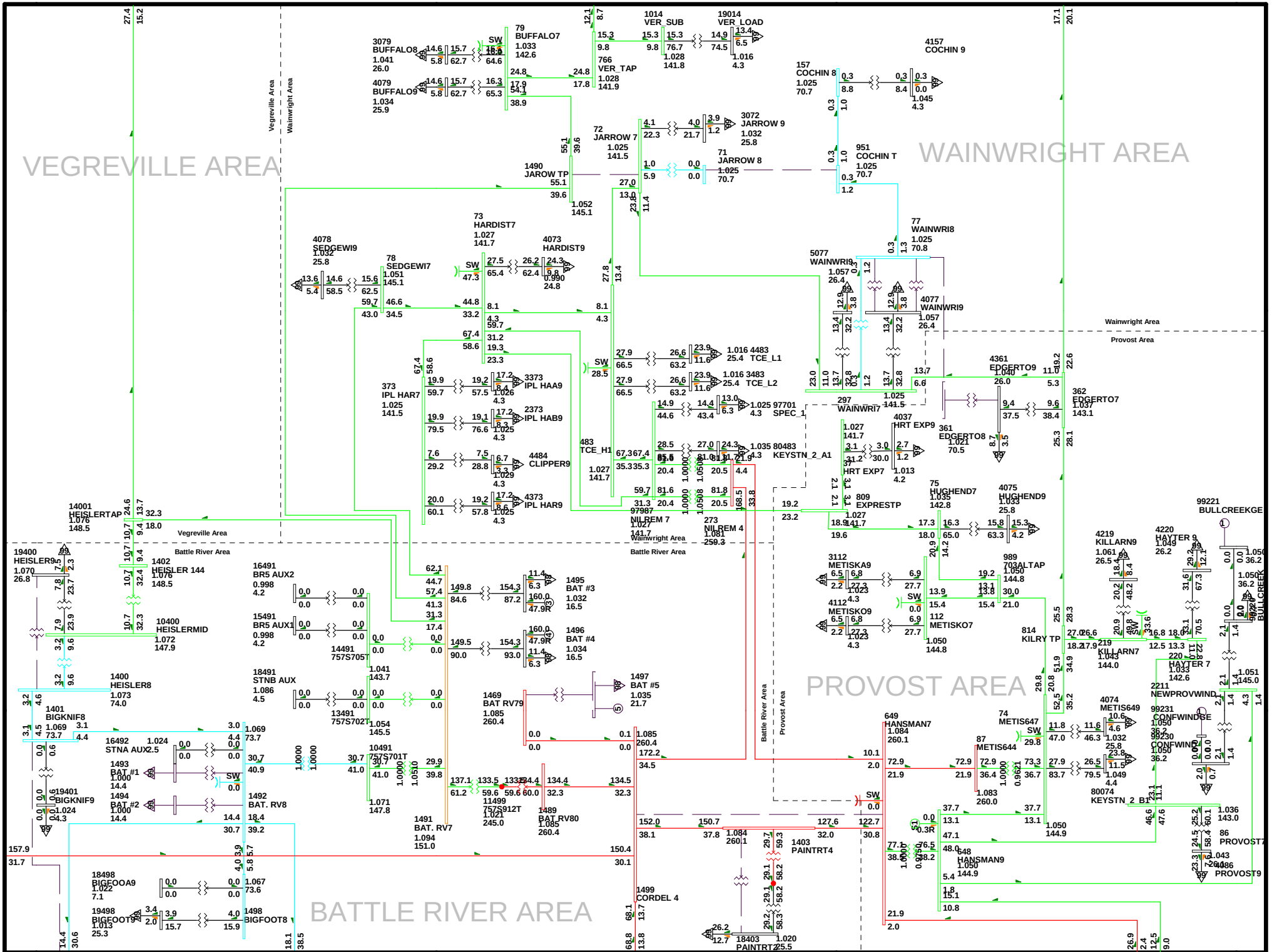
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090V 0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000

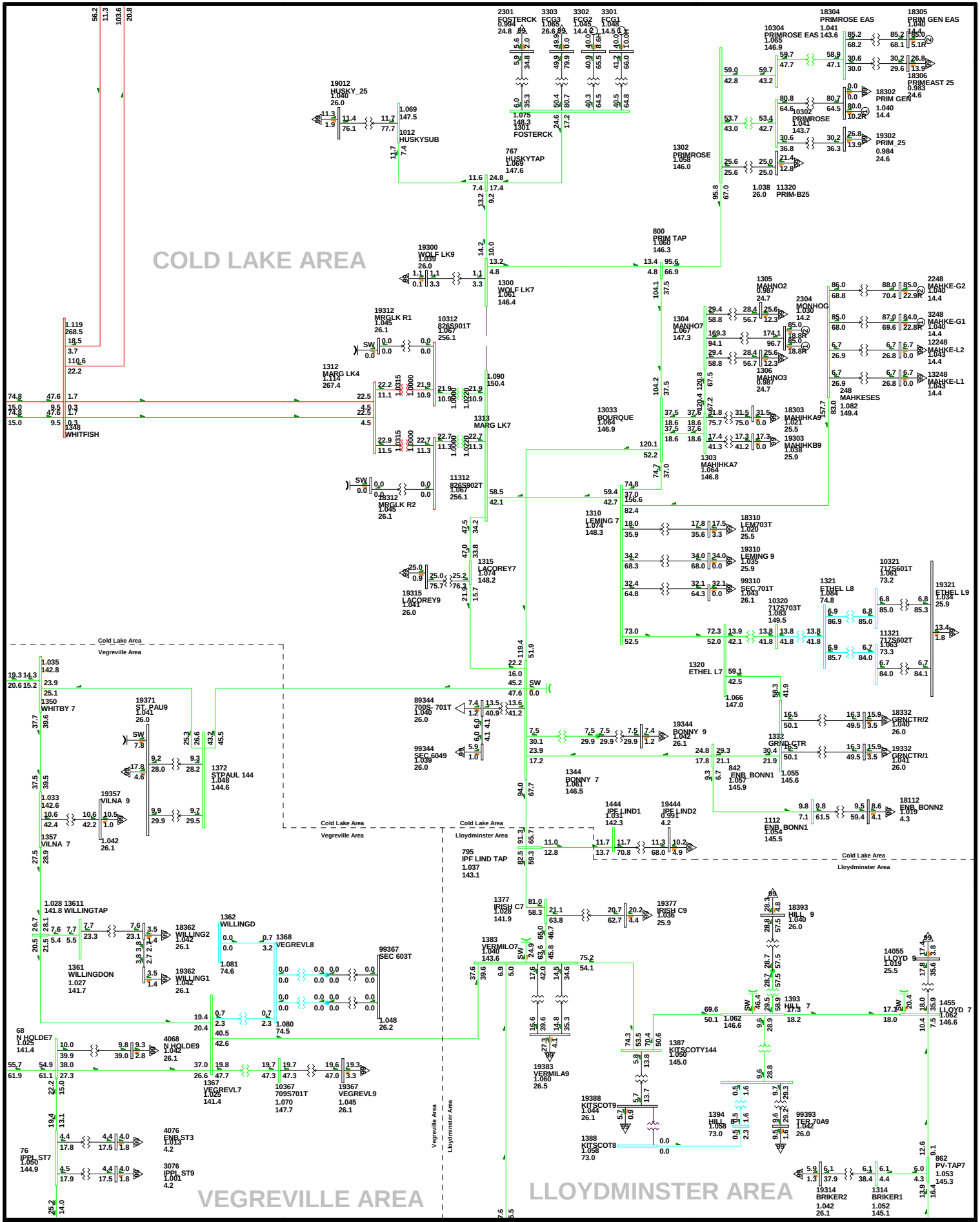


CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
THU, APR 08 2010 17:04
D1-01

2012WP-Alt 3-2.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

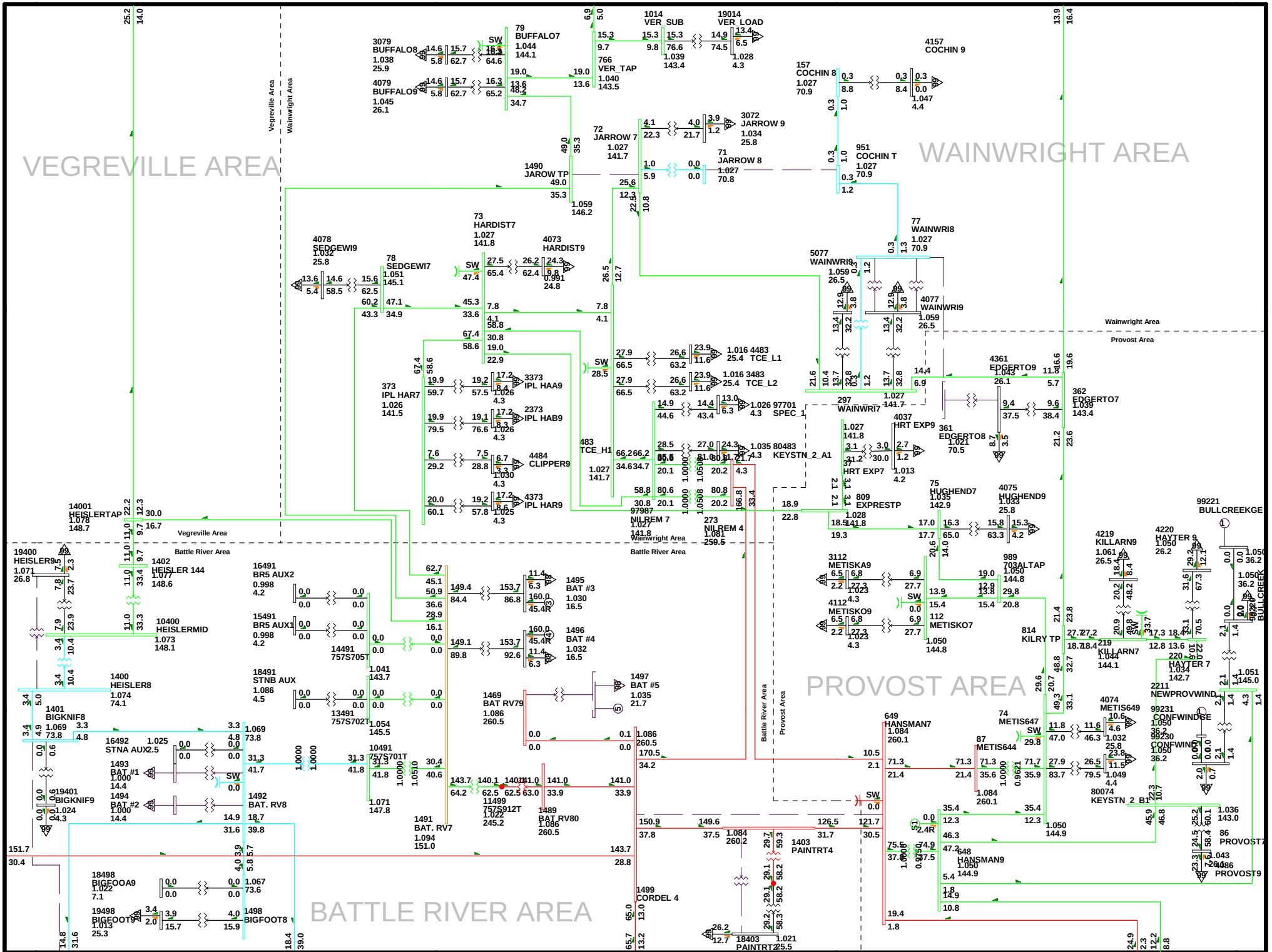

VEGREVILLE AREA
WAINWRIGHT AREA
PROVOST AREA
BATTLE RIVER AREA
Vegreville Area
Wainwright Area
Battle River Area
Provost Area
3079 BUFFALO8 1.041 26.0
4079 BUFFALO9 1.034 25.9
79 BUFFALO7 1.033 142.6
766 VER_TAP 1.028 141.9
1014 VER_SUB 1.028 141.8
19014 VER_LOAD 1.016 4.3
4157 COCHIN 9
157 COCHIN 8 1.025 70.7
951 COCHIN T 1.025 70.7
1.045 4.3
72 JARROW 7 1.025 141.5
3072 JARROW 9 1.032 25.8
71 JARROW 8 1.025 70.7
1490 JAROW TP 55.1 39.6 1.052 145.1
77 WAINWRI8 1.025 70.8
5077 WAINWRI9 1.057 26.4
4077 WAINWRI9 1.057 26.4
4078 SEDGEWI9 1.032 25.8
78 SEDGEWI7 1.051 145.1
73 HARDIST7 1.027 141.7
4073 HARDIST9 0.990 24.8
373 IPL HAR7 1.025 141.5
3373 IPL HAA9 1.026
2373 IPL HAB9 1.025
4484 CLIPPER9 1.029
4373 IPL HAR9 1.025
1.016 4483 TCE_L1 25.4
1.016 3483 TCE_L2 25.4
483 TCE_H1 1.027 141.7
1.025 97701 SPEC_1 4.3
1.035 80483 KEYSTN_2_A1 4.3
297 WAINWRI7 1.025 141.5
4361 EDGERTO9 1.040 26.0
362 EDGERTO7 1.037 143.1
361 EDGERTO8 1.021 70.5
4037 HRT EXP9 1.027 141.7
HRT EXP7 1.013 4.2
809 EXPRESTP 1.027 141.7
75 HUGHEND7 1.035 142.8
4075 HUGHEND9 1.033 25.8
97987 NIL_REM 7 1.027 141.7
273 NIL_REM 4 1.081 259.3
14001 HEISLERTAP 1.076 148.5
19400 HEISLER9 1.070 26.8
1402 HEISLER 144 1.076 148.5
10400 HEISLERMID 1.072 147.9
1400 HEISLER8 1.073 74.0
1401 BIGKNIF8 1.069 73.7
19401 BIGKNIF9 1.024 14.3
16492 STNA AUX 2.5
1493 BAT #1 1.000 14.4
1494 BAT #2 1.000 14.4
1492 BAT. RV8 18.4
16491 BR5 AUX2 0.998 4.2
15491 BR5 AUX1 0.998 4.2
14491 757S705T 1.041 143.7
18491 STNB AUX 1.086 4.5
13491 757S702T 1.054 145.5
10491 757S701T 1.071 147.8
1495 BAT #3 1.032 16.5
1496 BAT #4 1.034 16.5
1497 BAT #5 1.035 21.7
1469 BAT RV79 1.085 260.4
1491 BAT. RV7 1.094 151.0
11499 757S912T 1.021 245.0
1489 BAT RV80 1.085 260.4
1499 CORDEL 4 1.085 260.4
1403 PAINTRT4 1.084 260.1
18403 PAINTRT2 1.020 25.5
649 HANSMAN7 1.084 260.1
74 METIS647 1.050 144.8
87 METIS644 1.083 260.0
648 HANSMAN9 1.050 144.9
3112 METISKA9 1.023 4.3
4112 METISKO9 1.023 4.3
112 METISKO7 1.050 144.8
989 703ALTAP 1.050 144.8
814 KILRY TP 1.050 144.8
4074 METIS649 1.050 144.9
80074 KEYSTN_2_B1 1.049 4.4
4219 KILLARN9 1.061 26.5
219 KILLARN7 1.043 144.0
4220 HAYTER 9 1.049 26.2
220 HAYTER 7 1.033 142.6
2211 NEWPROVWIND 1.050 36.2
99231 CONFWINDGE 1.050 36.2
99230 CONFWIND 1.050 36.2
99221 BULLCREEKGE 1.050 36.2
BULLCREEK 1.050 36.2
86 PROVOST7 1.036 143.0
1486 PROVOST9 1.043 144.0
18498 BIGFOOA9 1.022 7.1
19498 BIGFOOT9 1.013 25.3
1498 BIGFOOT8 1.067 73.6
CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
THU, APR 08 2010 17:04
D1-01
2012WP-Alt 3-2.b
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090V 0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000

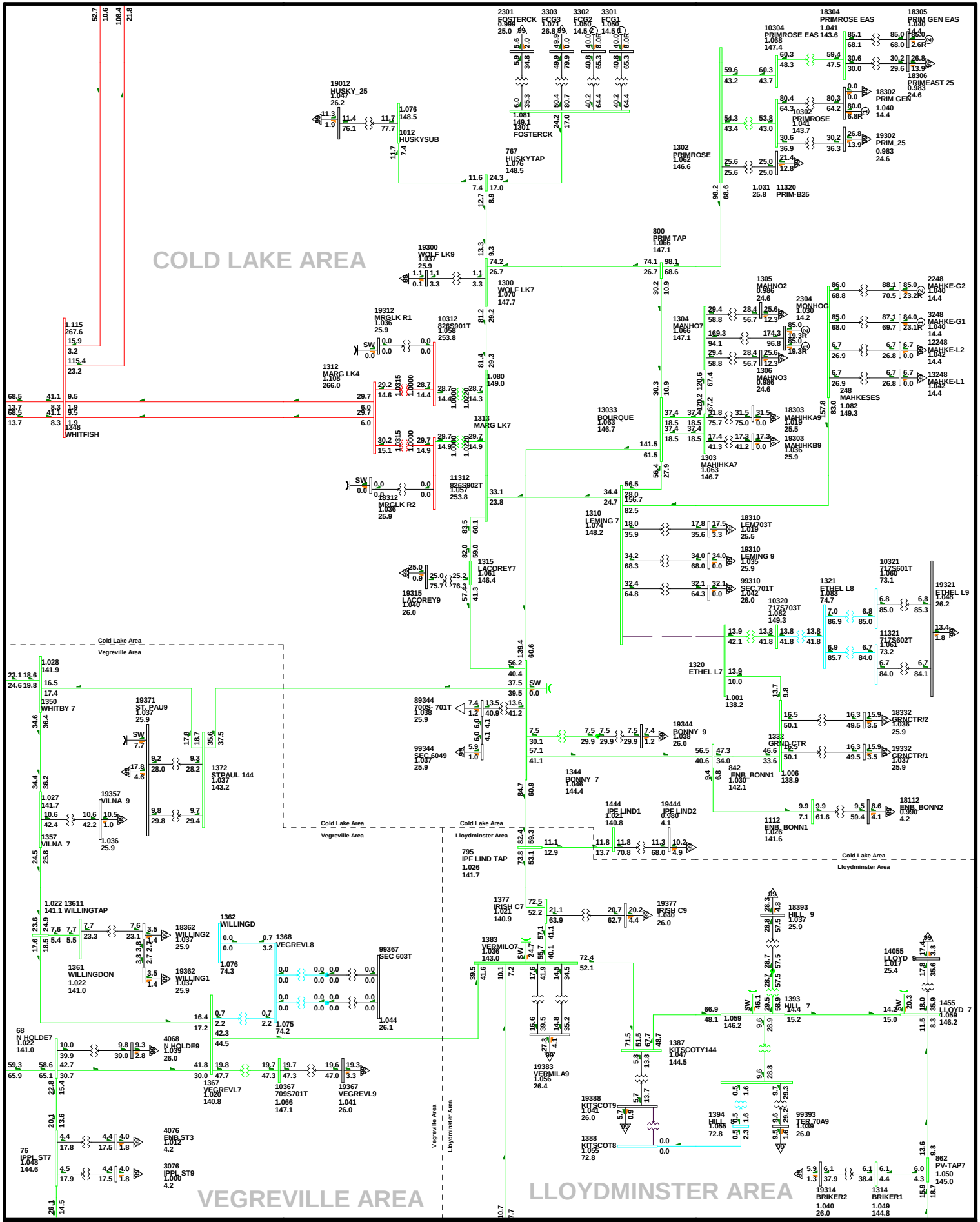


CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
THU, APR 08 2010 17:04
D1-02

2012WP-Alt 3-3.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

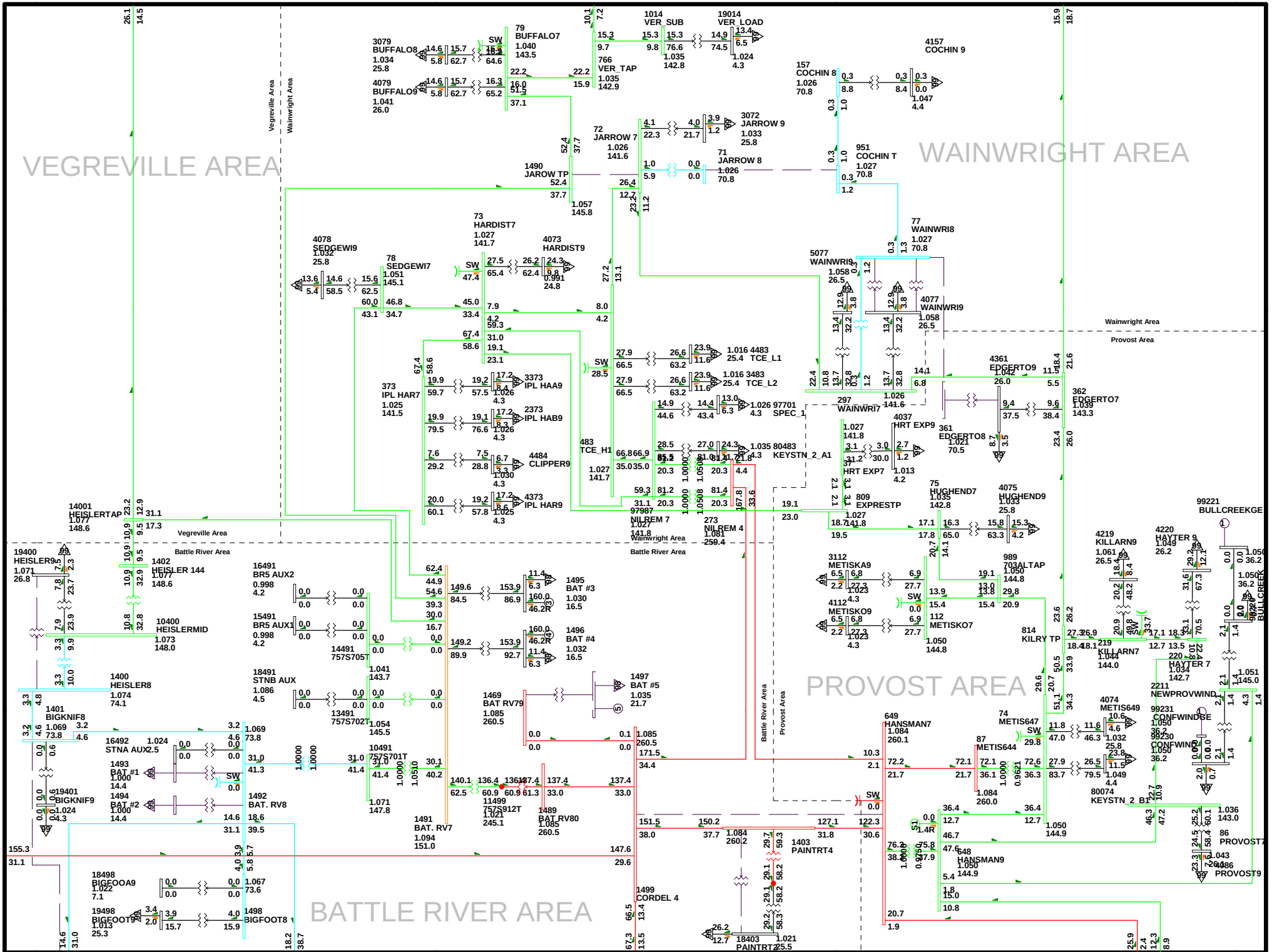

VEGREVILLE AREA
WAINWRIGHT AREA
PROVOST AREA
BATTLE RIVER AREA
Vegreville Area
Wainwright Area
Battle River Area
Provost Area
3079 BUFFALO8 1.038 25.9
4079 BUFFALO9 1.045 26.1
79 BUFFALO7 1.044 144.1
766 VER_TAP 1.040 143.5
1014 VER_SUB
19014 VER_LOAD
4157 COCHIN 9
157 COCHIN 8 1.027 70.9
951 COCHIN T 1.027 70.9
1.047 4.4
72 JARROW 7 1.027 141.7
3072 JARROW 9 1.034 25.8
71 JARROW 8 1.027 70.8
1490 JAROW TP 49.0 35.3
1.059 146.2
4078 SEDGEWI9 1.032 25.8
78 SEDGEWI7 1.051 145.1
73 HARDIST7 1.027 141.8
4073 HARDIST9 0.991 24.8
77 WAINWRI8 1.027 70.9
5077 WAINWRI9 1.059 26.5
4077 WAINWRI9 1.059 26.5
297 WAINWRI7 1.027 141.7
4361 EDGERTO9 1.043 26.1
362 EDGERTO7 1.039 143.4
361 EDGERTO8 1.021 70.5
4037 HRT EXP9
HRT EXP7 1.013 4.2
373 IPL HAR7 1.026 141.5
3373 IPL HAA9 1.026 4.3
2373 IPL HAB9 1.026 4.3
4484 CLIPPER9 1.030 4.3
4373 IPL HAR9 1.025 4.3
1.016 4483 25.4 TCE_L1
1.016 3483 25.4 TCE_L2
1.026 97701 SPEC_1
483 TCE_H1 1.027 141.7
1.035 80483 KEYSTN_2_A1
97987 NIL_REM 7 1.027 141.8
273 NIL_REM 4 1.081 259.5
809 EXPRESTP 1.028 141.8
75 HUGHEND7 1.035 142.9
4075 HUGHEND9 1.033 25.8
989 703ALTAP 1.050 144.8
814 KILRY TP
112 METISKO7 1.050 144.8
3112 METISKA9 1.023 4.3
4112 METISKO9 1.023 4.3
14001 HEISLERTAP 1.078 148.7
1402 HEISLER 144 1.077 148.6
10400 HEISLERMID 1.073 148.1
19400 HEISLER9 1.071 26.8
1400 HEISLER8 1.074 74.1
1401 BIGKNIF8 1.069 73.8
19401 BIGKNIF9 1.024 4.3
16491 BR5 AUX2 0.998 4.2
15491 BR5 AUX1 0.998 4.2
14491 757S705T 1.041 143.7
18491 STNB AUX 1.086 4.5
13491 757S702T 1.054 145.5
16492 STNA AUX 1.025 2.5
1493 BAT #1 1.000 14.4
1494 BAT #2 1.000 14.4
1492 BAT. RV8 14.9 18.7
10491 757S701T 1.071 147.8
1491 BAT. RV7 1.094 151.0
1469 BAT RV79 1.086 260.5
1495 BAT #3 1.030 16.5
1496 BAT #4 1.032 16.5
1497 BAT #5 1.035 21.7
11499 757S912T 1.022 245.2
1489 BAT RV80 1.086 260.5
1499 CORDEL 4 1.086 260.5
1403 PAINTRT4 1.084 260.2
18403 PAINTRT2 1.021 25.5
649 HANSMAN7 1.084 260.1
74 METIS647 1.050 144.9
87 METIS644 1.084 260.1
4074 METIS649 1.050 144.9
80074 KEYSTN_2_B1 1.049 4.4
648 HANSMAN9 1.050 144.9
18498 BIGFOOA9 1.022 7.1
19498 BIGFOOT9 1.013 25.3
1498 BIGFOOT8 1.067 73.6
99221 BULLCREEKGE 1.050 36.2
4219 KILLARN9 1.061 26.5
219 KILLARN7 1.044 144.1
4220 HAYTER 9 1.050 26.2
220 HAYTER 7 1.034 142.7
2211 NEWPROVWIND 1.050 36.2
99231 CONFWINDGE 1.050 36.2
99230 CONFWIND 1.050 36.2
86 PROVOST7 1.043 144.6
86 PROVOST9 1.036 143.0
CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
THU, APR 08 2010 17:04
D1-02
2012WP-Alt 3-3.b
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090V 0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000

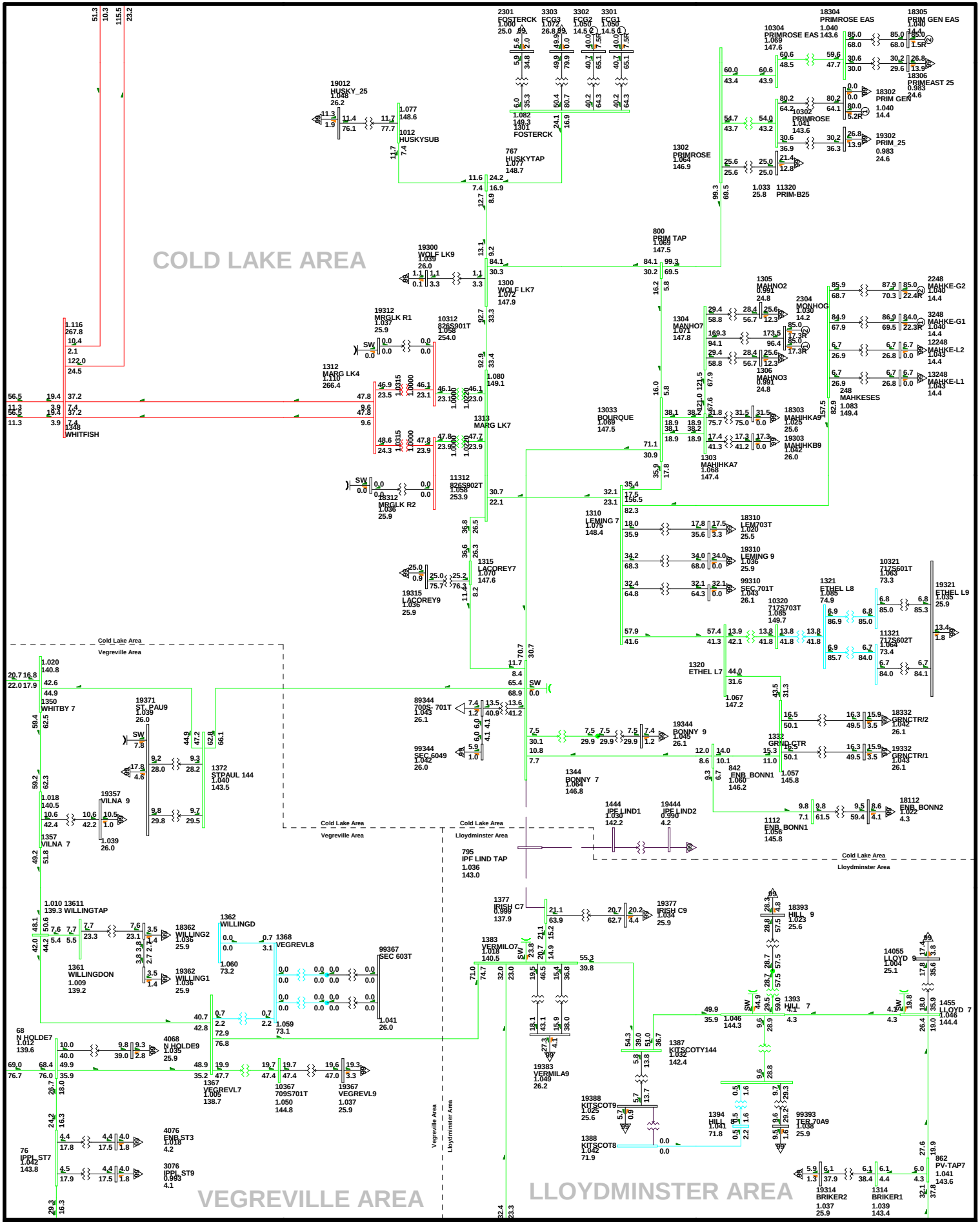


CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
THU, APR 08 2010 17:04
D1-03

2012WP-Alt 3-4.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

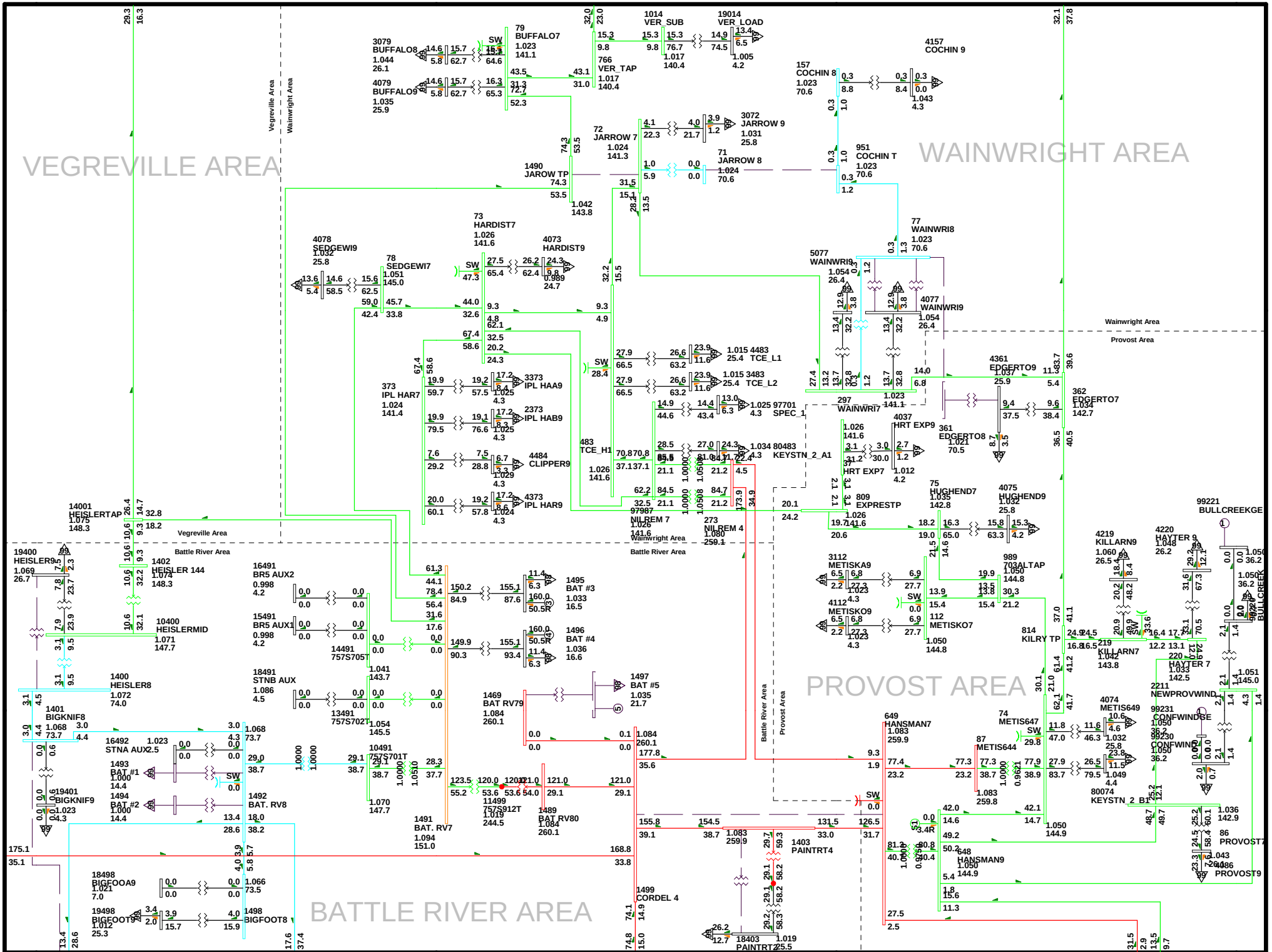

VEGREVILLE AREA
WAINWRIGHT AREA
PROVOST AREA
BATTLE RIVER AREA
Vegreville Area
Wainwright Area
Battle River Area
Provost Area
3079 BUFFALO8 1.034 25.8
4079 BUFFALO9 1.041 26.0
79 BUFFALO7 1.040 143.5
766 VER_TAP 1.035 142.9
1014 VER_SUB 1.035 142.8
19014 VER_LOAD 1.024 4.3
4157 COCHIN 9
157 COCHIN 8 1.026 70.8
951 COCHIN T 1.027 70.8
1.047 4.4
72 JARROW 7 1.026 141.6
3072 JARROW 9 1.033 25.8
71 JARROW 8 1.026 70.8
1490 JAROW TP 52.4 37.7 1.057 145.8
4078 SEDGEWI9 1.032 25.8
78 SEDGEWI7 1.051 145.1
73 HARDIST7 1.027 141.7
4073 HARDIST9 0.991 24.8
77 WAINWRI8 1.027 70.8
5077 WAINWRI9 1.058 26.5
4077 WAINWRI9 1.058 26.5
297 WAINWRI7 1.026 141.6
4361 EDGERTO9 1.042 26.0
362 EDGERTO7 1.039 143.3
361 EDGERTO8 1.021 70.5
4037 HRT EXP9
HRT EXP7 1.013 4.2
373 IPL HAR7 1.025 141.5
3373 IPL HAA9 1.026 4.3
2373 IPL HAB9 1.026 4.3
4484 CLIPPER9 1.030 4.3
4373 IPL HAR9 1.025 4.3
1.016 4483 25.4 TCE_L1
1.016 3483 25.4 TCE_L2
483 TCE_H1 1.027 141.7
1.026 97701 SPEC_1 4.3
1.035 80483 KEYSTN_2_A1 4.3
97987 NIL REM 7 1.027 141.8
273 NIL REM 4 1.081 259.4
809 EXPRESTP 1.027 141.8
75 HUGHEND7 1.035 142.8
4075 HUGHEND9 1.033 25.8
99221 BULLCREEKGE
14001 HEISLERTAP 1.077 148.6
19400 HEISLER9 1.071 26.8
1402 HEISLER 144 1.077 148.6
10400 HEISLERMID 1.073 148.0
1400 HEISLER8 1.074 74.1
1401 BIGKNIF8 1.069 73.8
19401 BIGKNIF9 1.024 4.3
16491 BR5 AUX2 0.998 4.2
15491 BR5 AUX1 0.998 4.2
14491 757S705T 1.041 143.7
18491 STNB AUX 1.086 4.5
13491 757S702T 1.054 145.5
16492 STNA AUX 1.024 2.5
1493 BAT #1 1.000 14.4
1494 BAT #2 1.000 14.4
1492 BAT. RV8 18.6
10491 757S701T 1.071 147.8
1491 BAT. RV7 1.094 151.0
1495 BAT #3 1.030 16.5
1496 BAT #4 1.032 16.5
1497 BAT #5 1.035 21.7
1469 BAT RV79 1.085 260.5
11499 757S912T 1.021 245.1
1489 BAT RV80 1.085 260.5
1499 CORDEL 4 1.084 260.2
1403 PAINTRT4 1.084 260.1
18403 PAINTRT2 1.021 25.5
649 HANSMAN7 1.084 260.1
74 METIS647 1.050 144.8
87 METIS644 1.084 260.0
4074 METIS649 1.049 4.4
80074 KEYSTN_2_B1 4.4
648 HANSMAN9 1.050 144.9
3112 METISKA9 1.023 4.3
4112 METISKO9 1.023 4.3
112 METISKO7 1.050 144.8
989 703ALTAP 1.050 144.8
814 KILRY TP
4219 KILLARN9 1.061 26.5
219 KILLARN7 1.044 144.0
4220 HAYTER 9 1.049 26.2
220 HAYTER 7 1.034 142.7
2211 NEWPROVWIND 1.050 36.2
99231 CONFWINDGE 1.050 36.2
99230 CONFWIND 1.050 36.2
18498 BIGFOOA9 1.022 7.1
19498 BIGFOOT9 1.013 25.3
1498 BIGFOOT8 15.9
86 PROVOST7 1.043 144.0
PROVOST9 1.036 143.0
CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
THU, APR 08 2010 17:04
D1-03
2012WP-Alt 3-4.b
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.050V 0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
THU, APR 08 2010 17:04
D1-04

2012WP-Alt 3-5.a

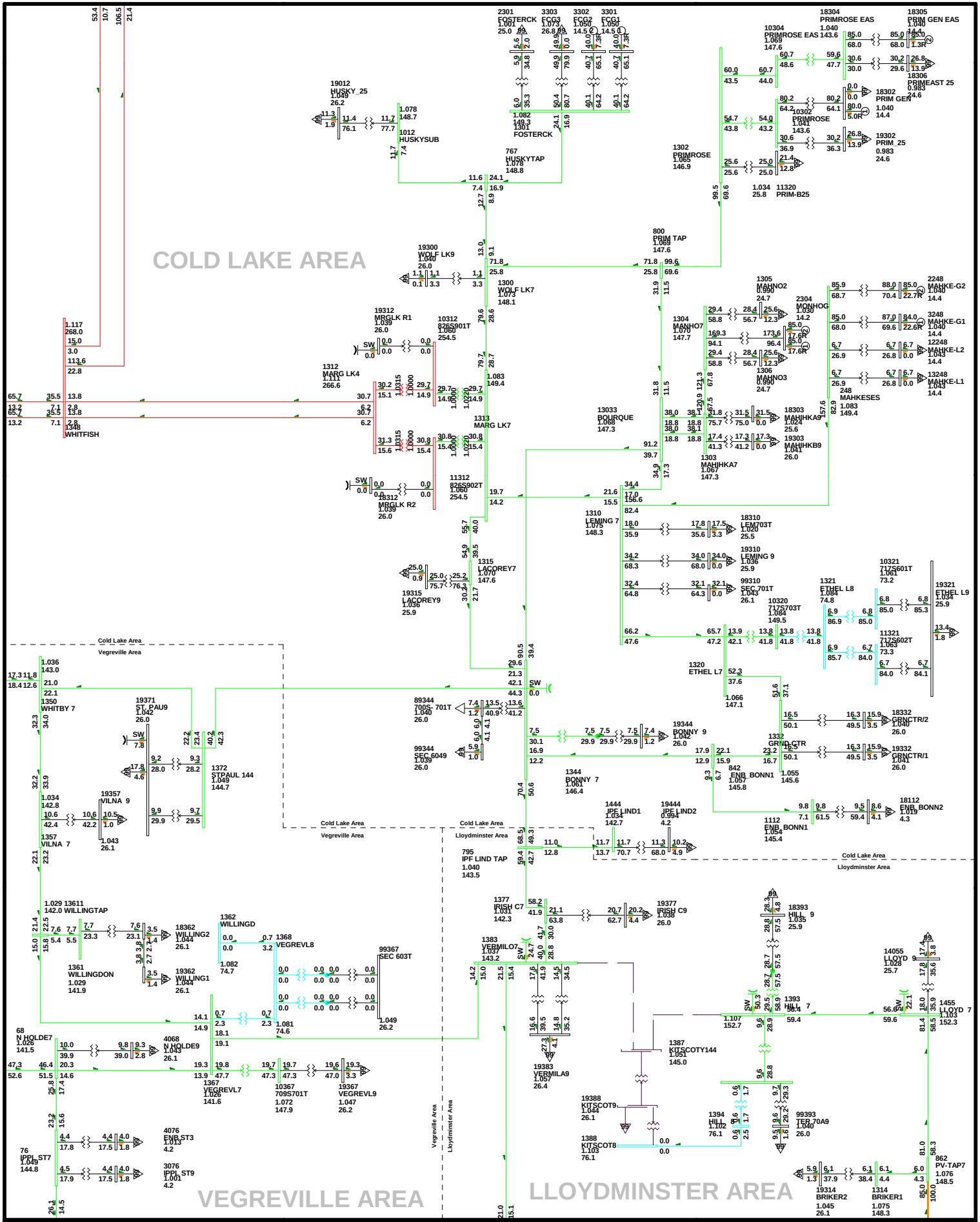
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
THU, APR 08 2010 17:04
D1-04

2012WP-Alt 3-5.b

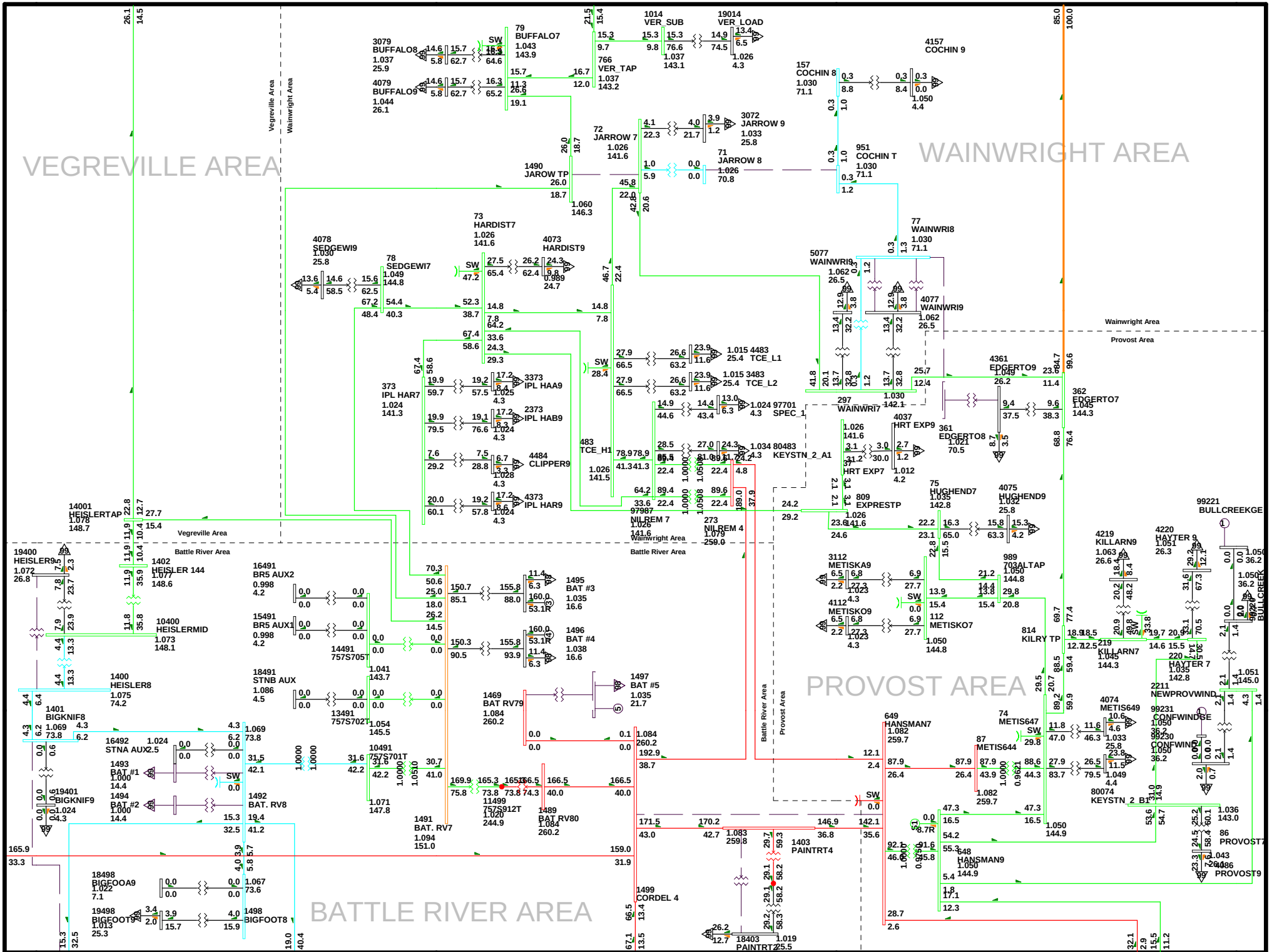
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090V 0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
THU, APR 08 2010 17:04
D1-05

2012WP-Alt 3-6.a

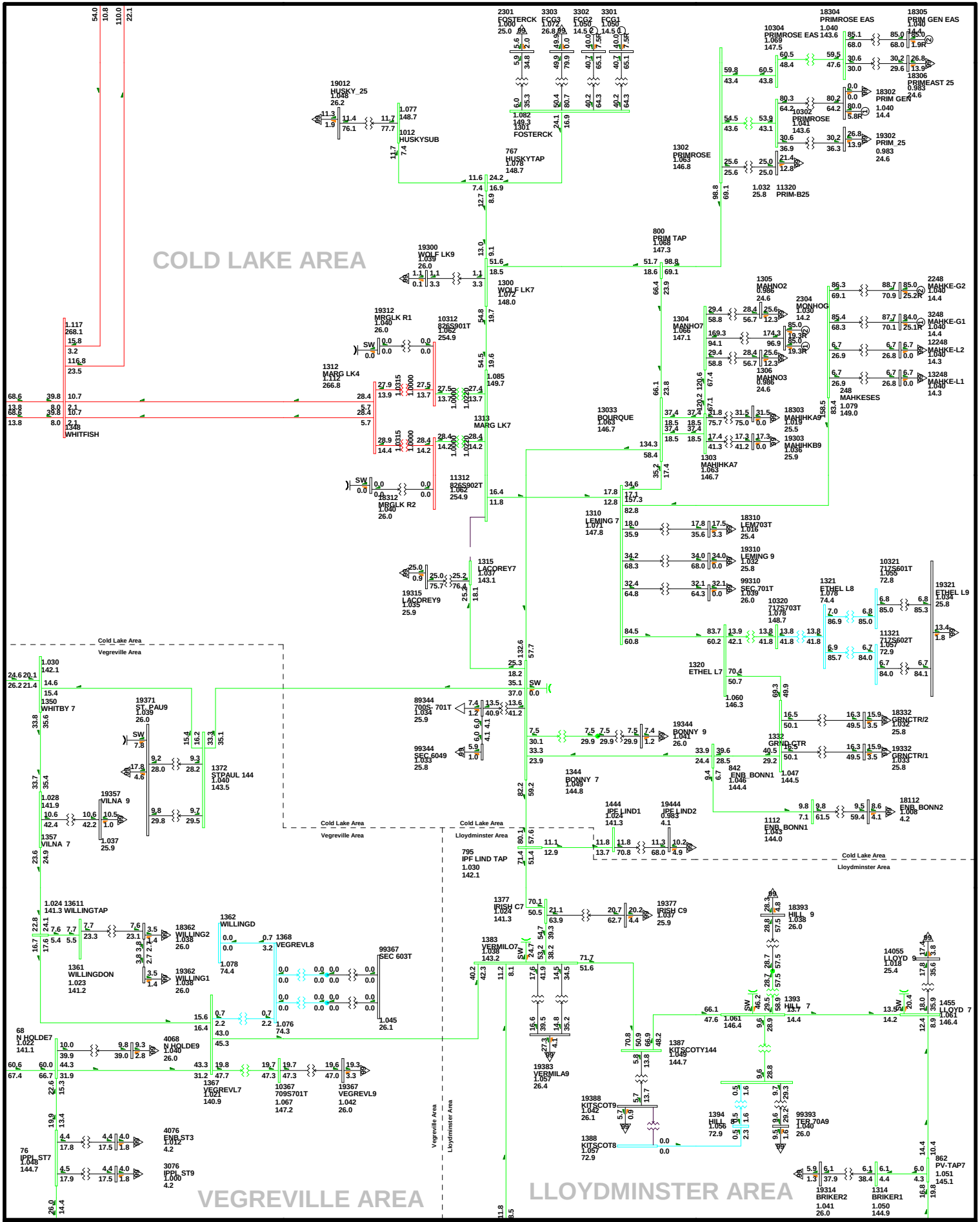
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
THU, APR 08 2010 17:04
D1-05

2012WP-Alt 3-6.b

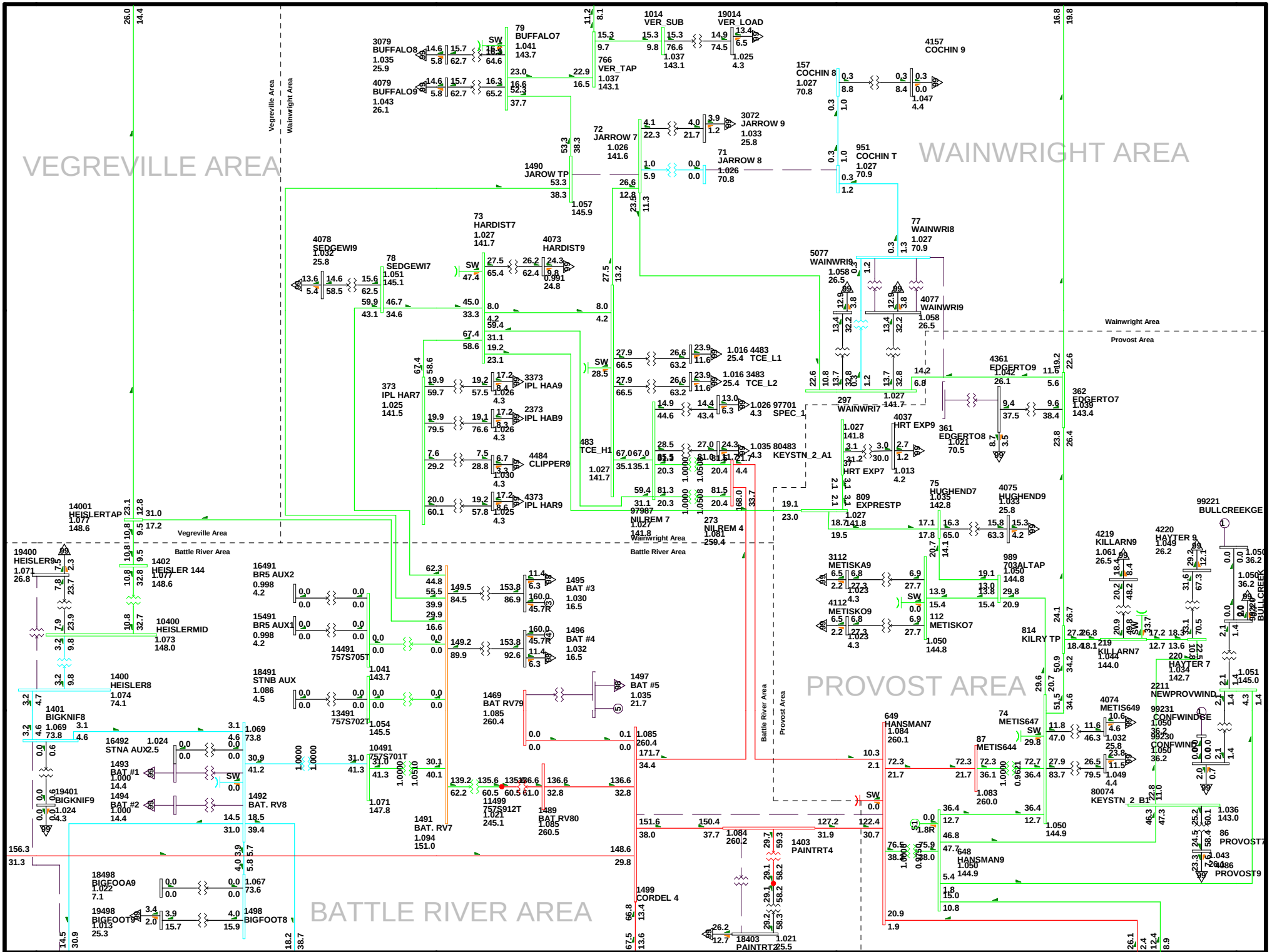
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090V 0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
THU, APR 08 2010 17:04
D1-06

2012WP-Alt 3-7.a

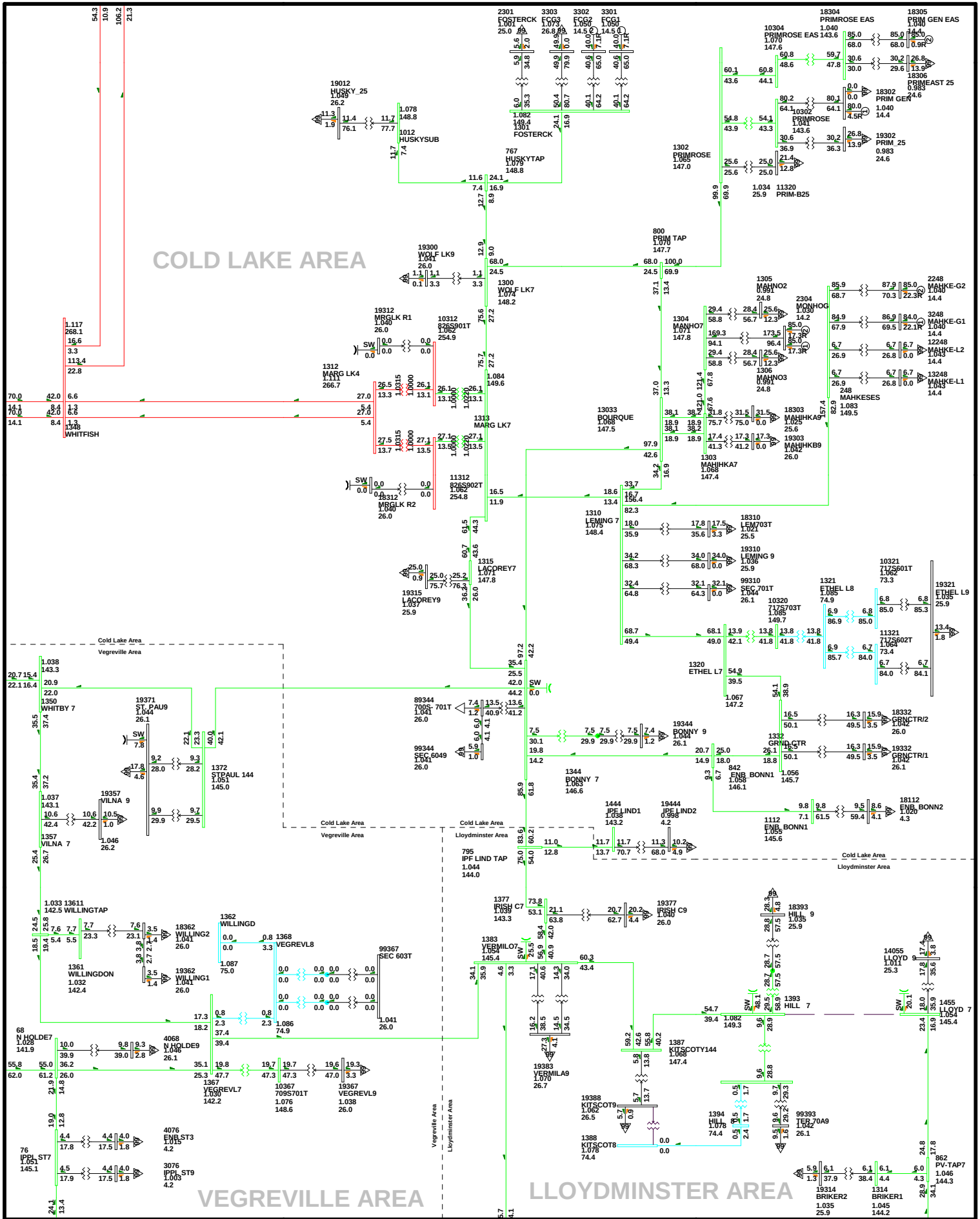
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
THU, APR 08 2010 17:04
D1-06

2012WP-Alt 3-7.b

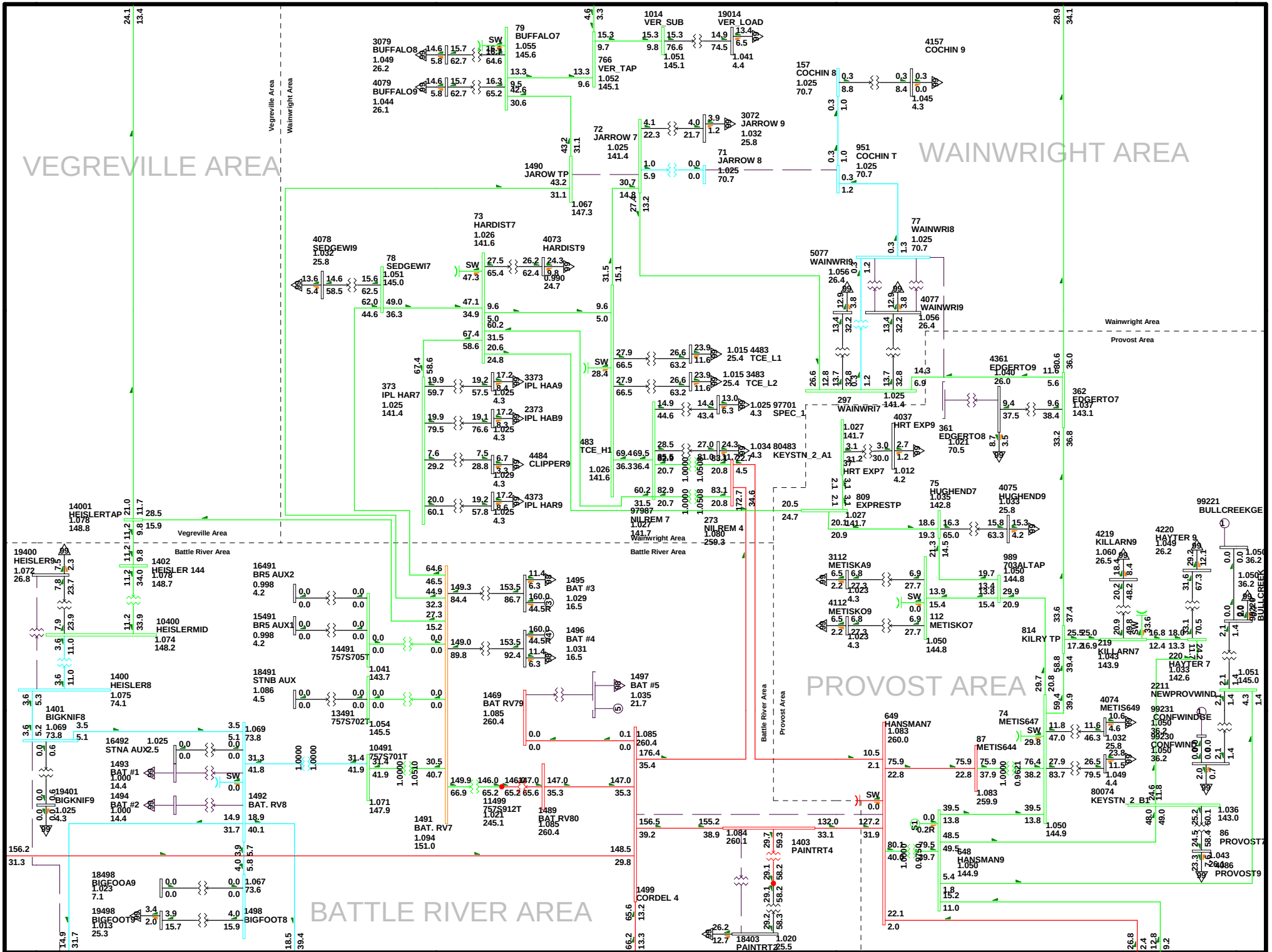
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090V 0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
THU, APR 08 2010 17:04
D1-07

2012WP-Alt 3-8.a

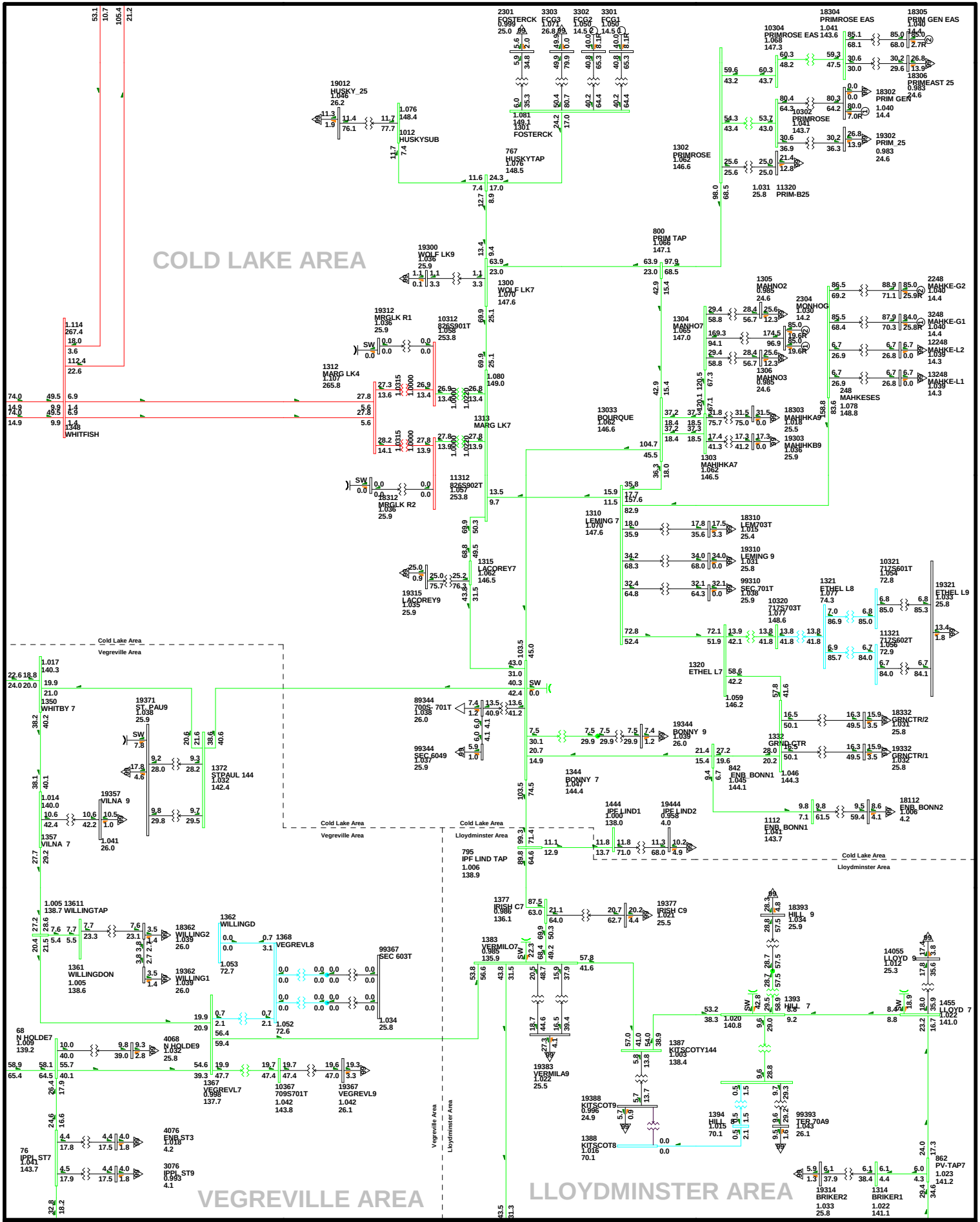
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
THU, APR 08 2010 17:04
D1-07

2012WP-Alt 3-8.b

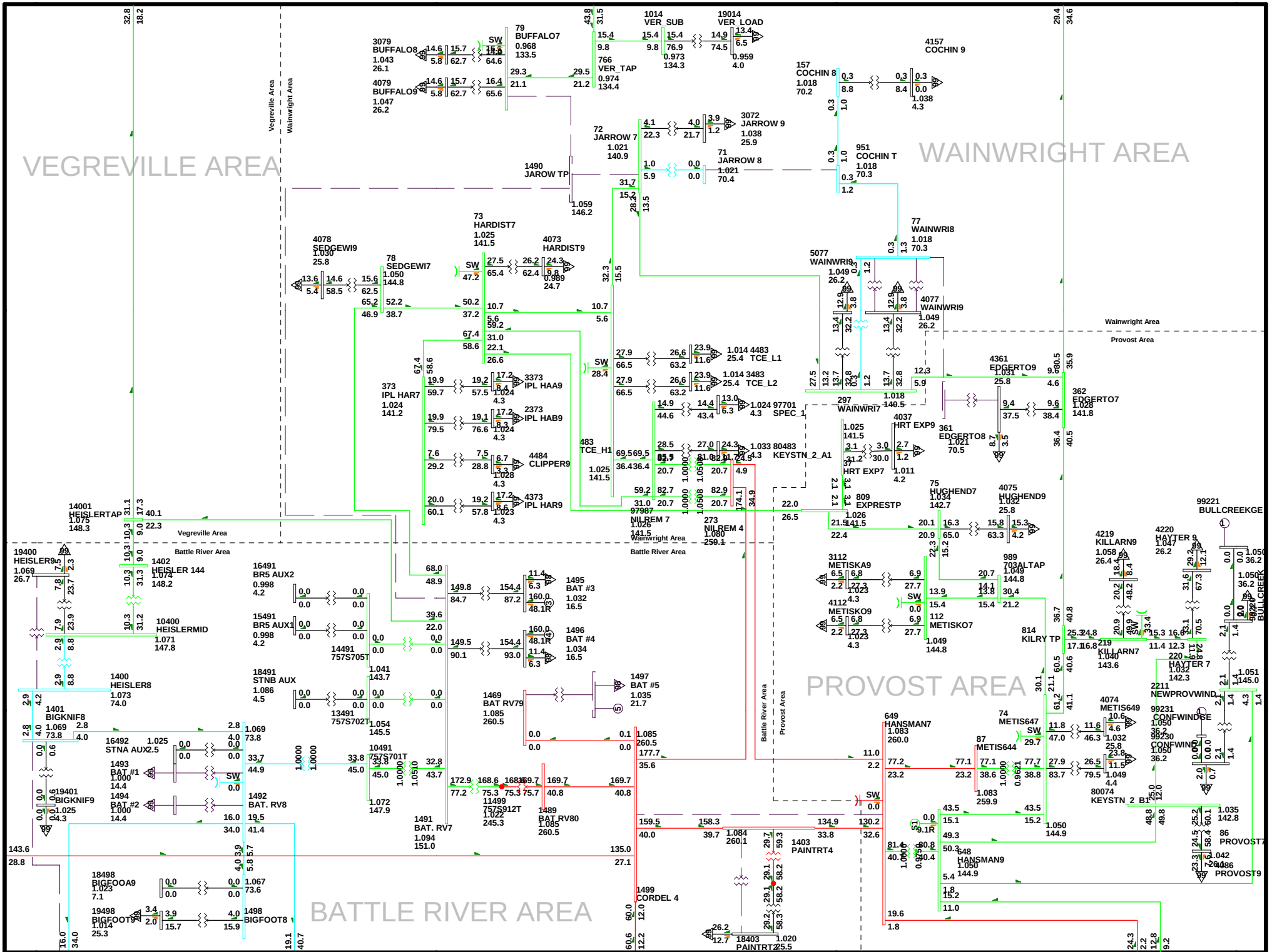
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090V/0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
THU, APR 08 2010 17:04
D1-09

2012WP-Alt 3-9.a

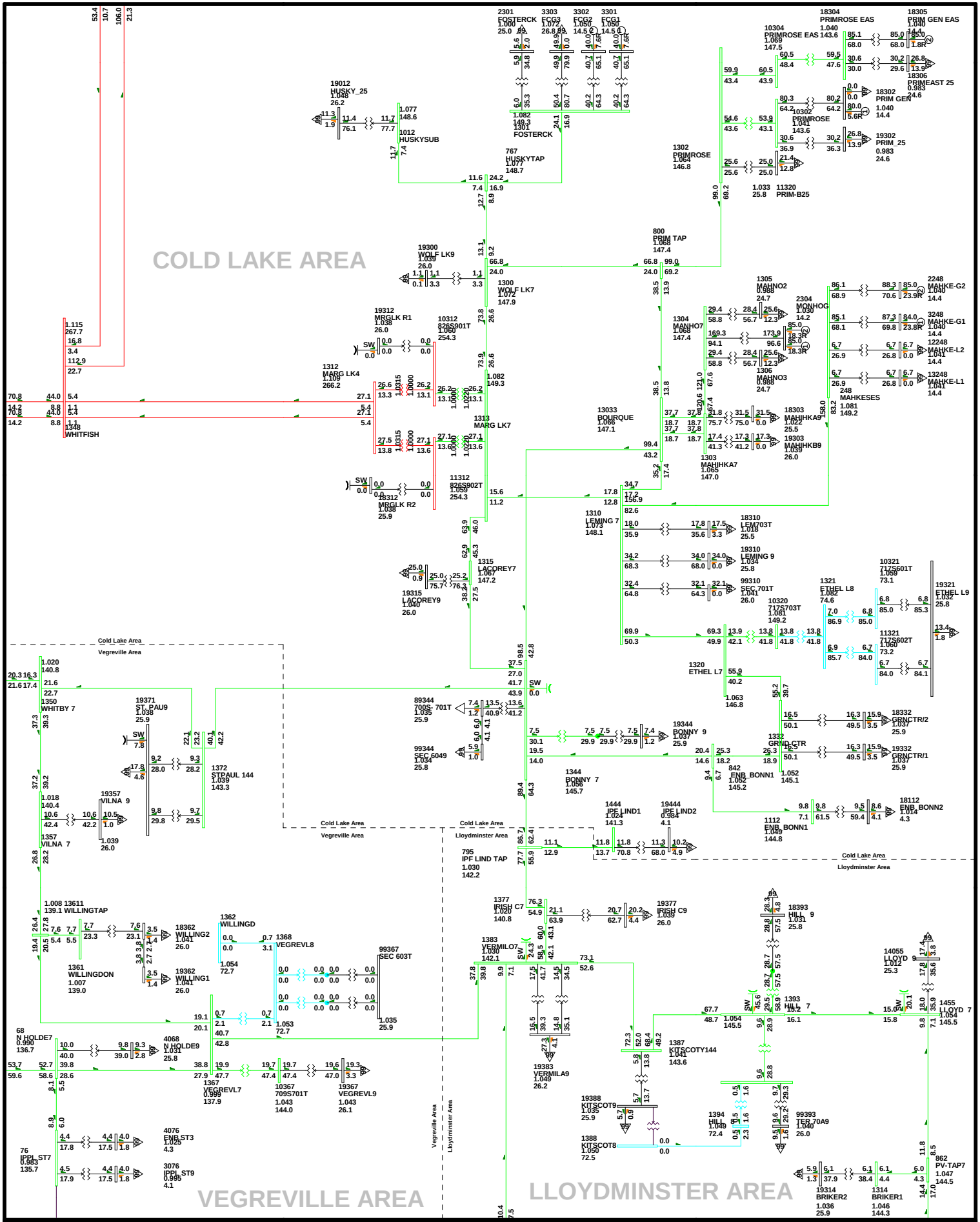
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
THU, APR 08 2010 17:04
D1-09

2012WP-Alt 3-9.b

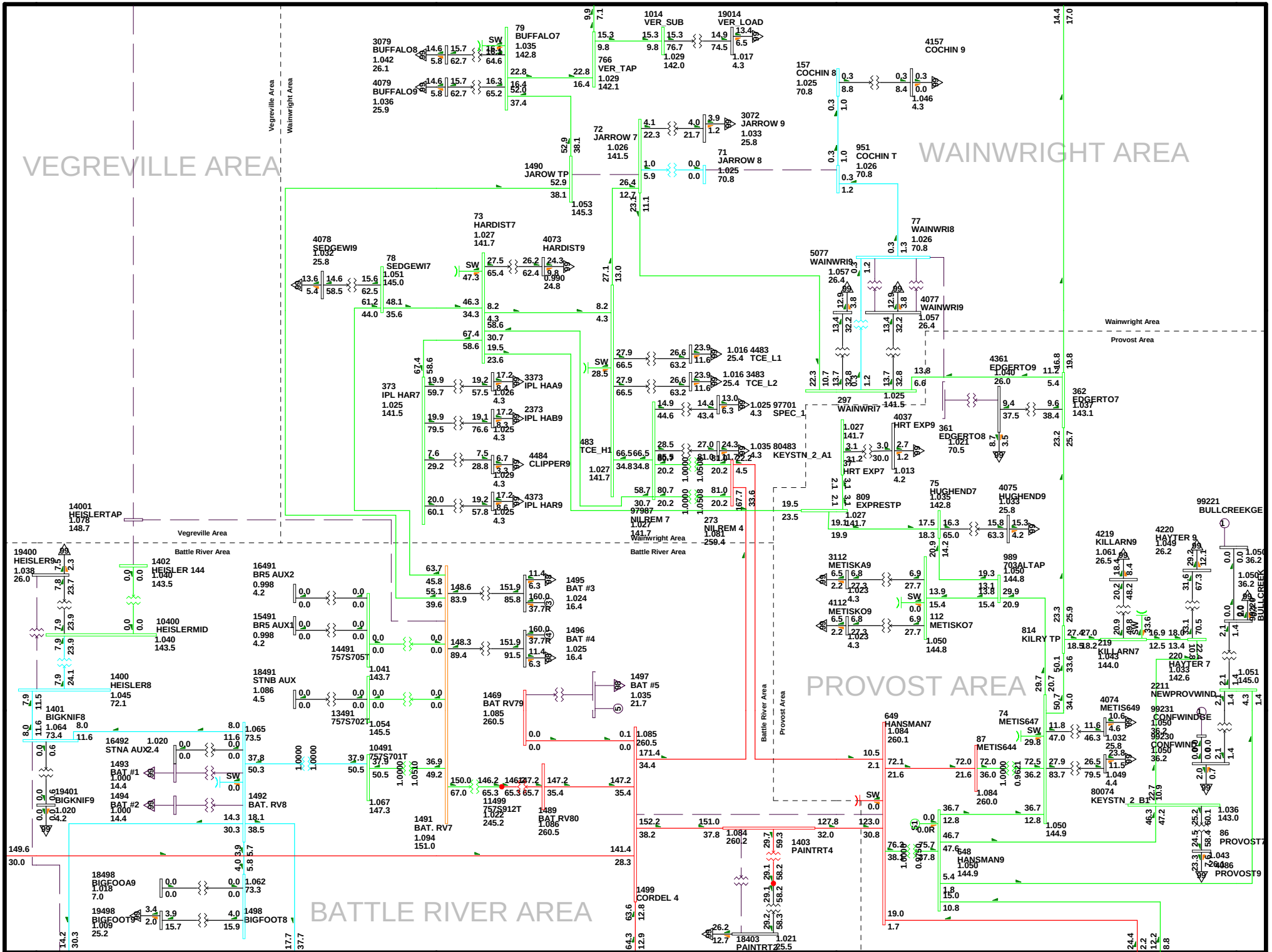
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090V 0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
THU, APR 08 2010 17:05
D1-10

2012WP-Alt 3-10.a

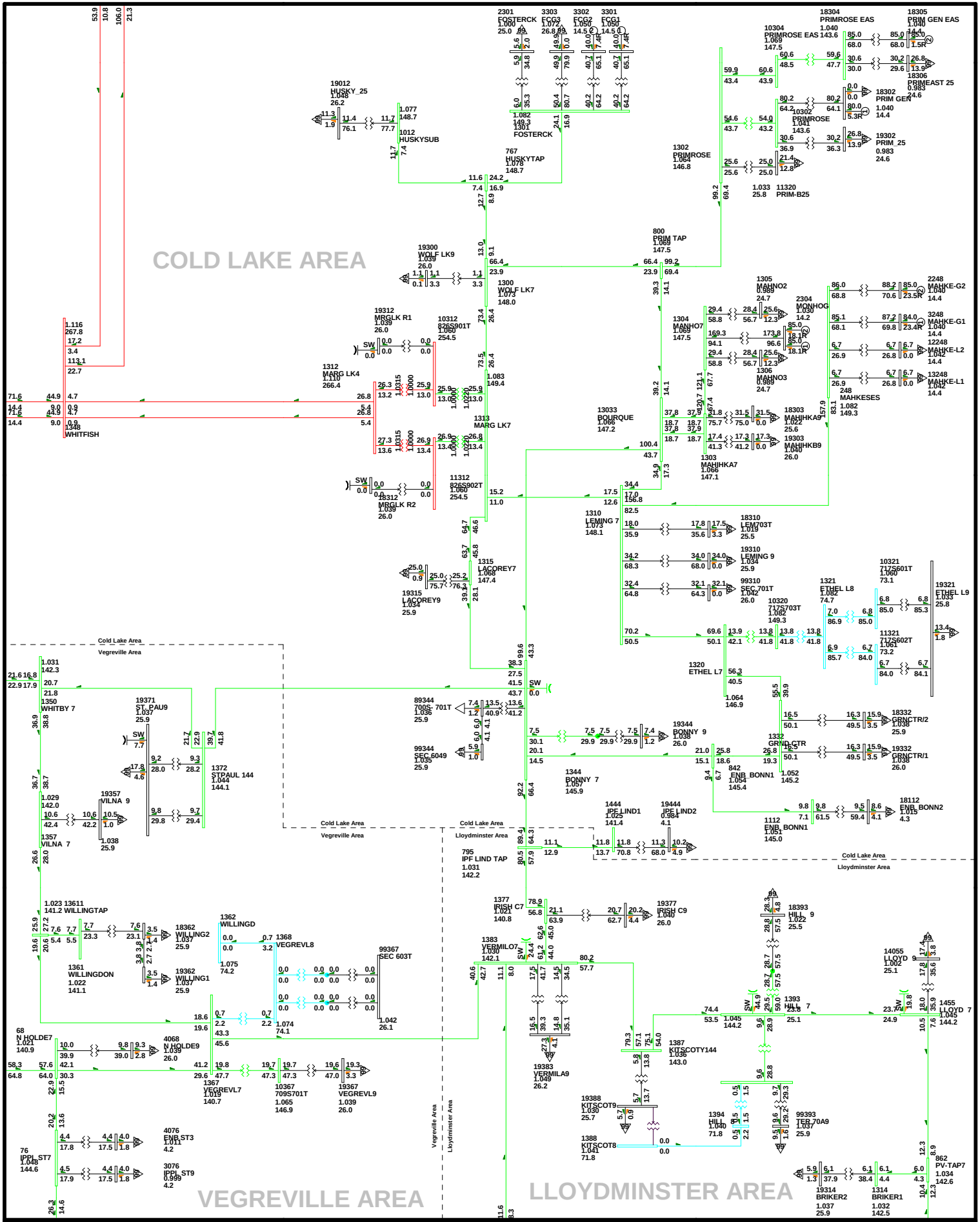
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
THU, APR 08 2010 17:05
D1-10

2012WP-Alt 3-10.b

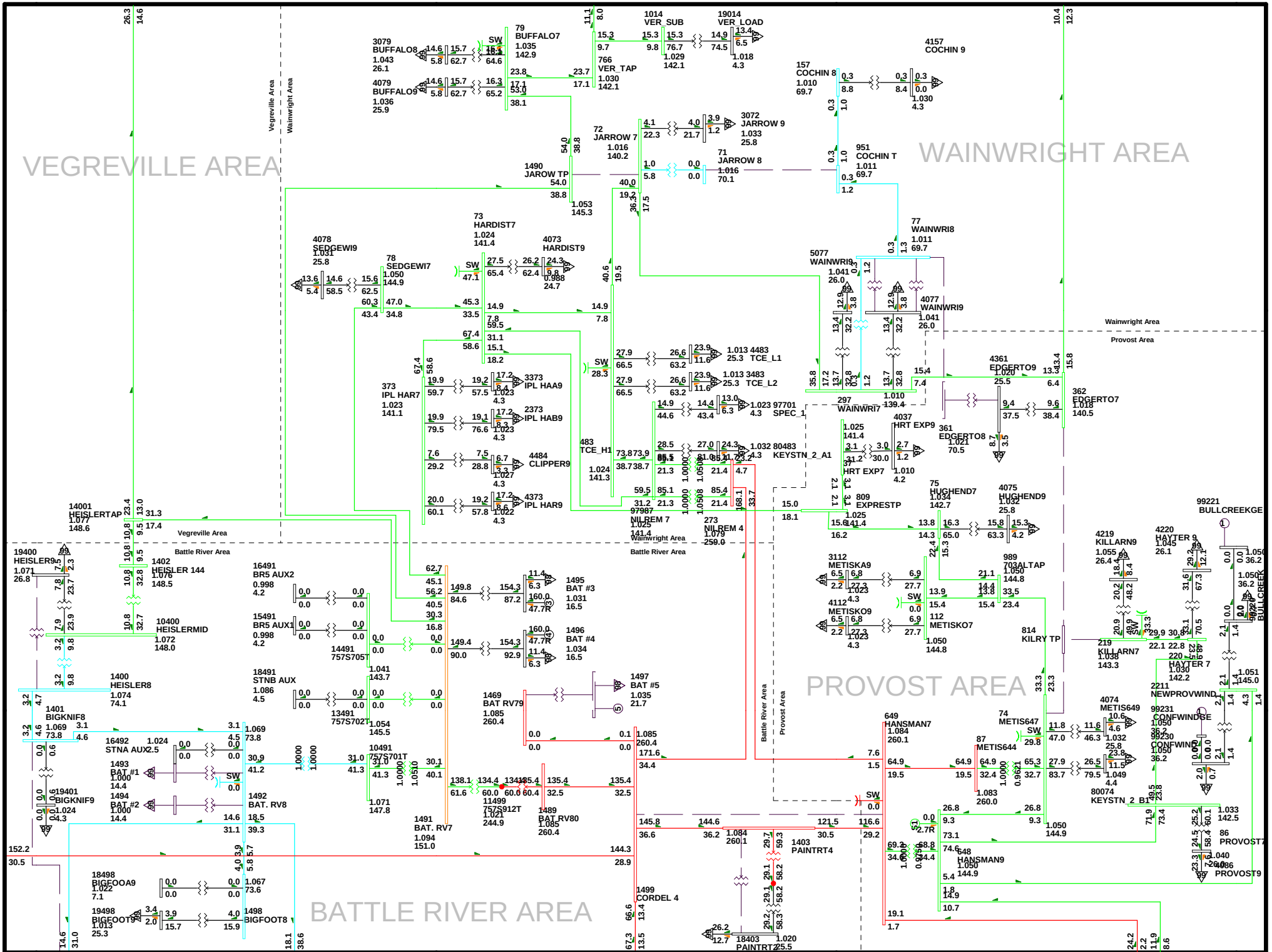
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090V 0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
THU, APR 08 2010 17:05
D1-11b

2012WP-Alt 3-11.a

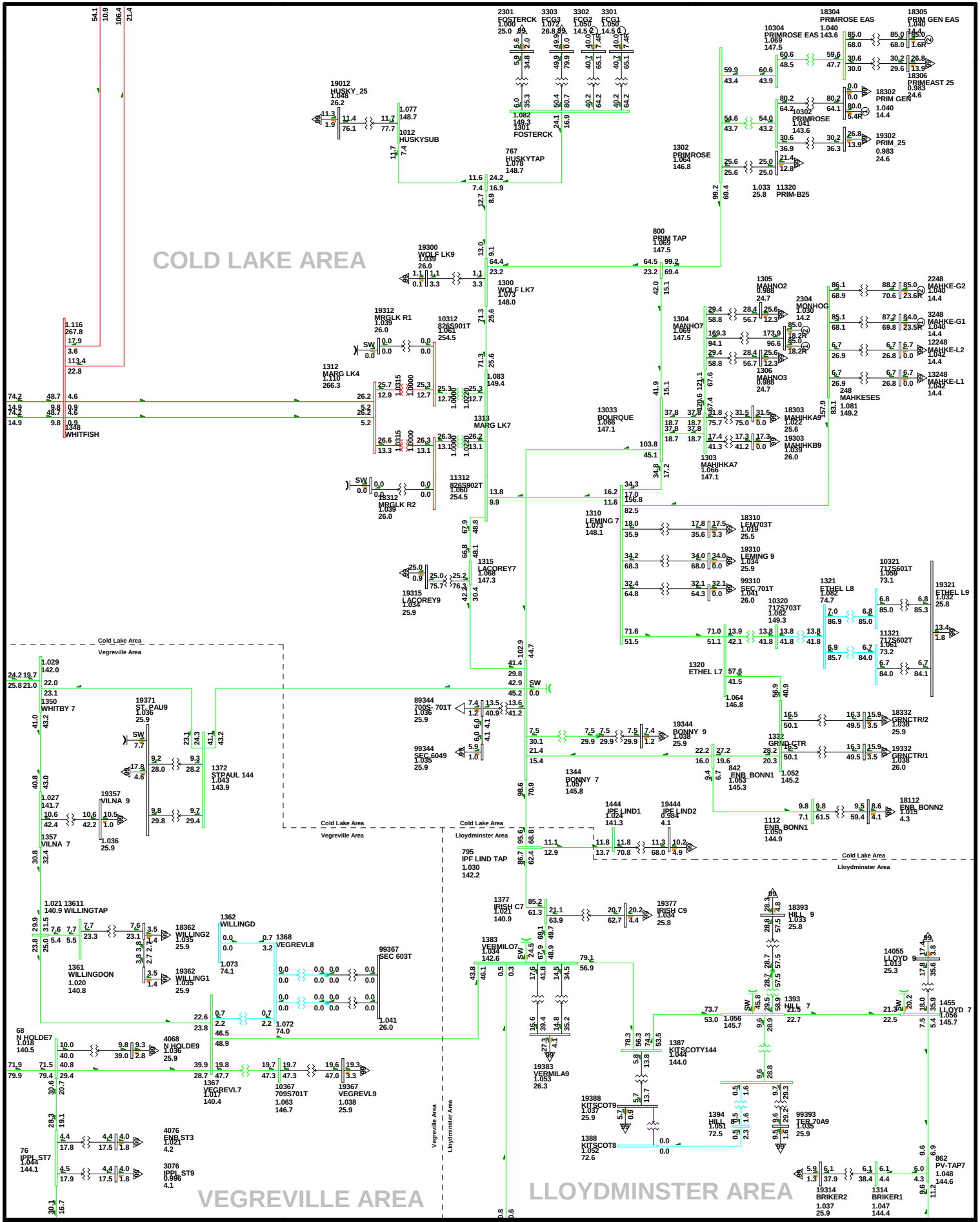
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
THU, APR 08 2010 17:05
D1-11b

2012WP-Alt 3-11.b

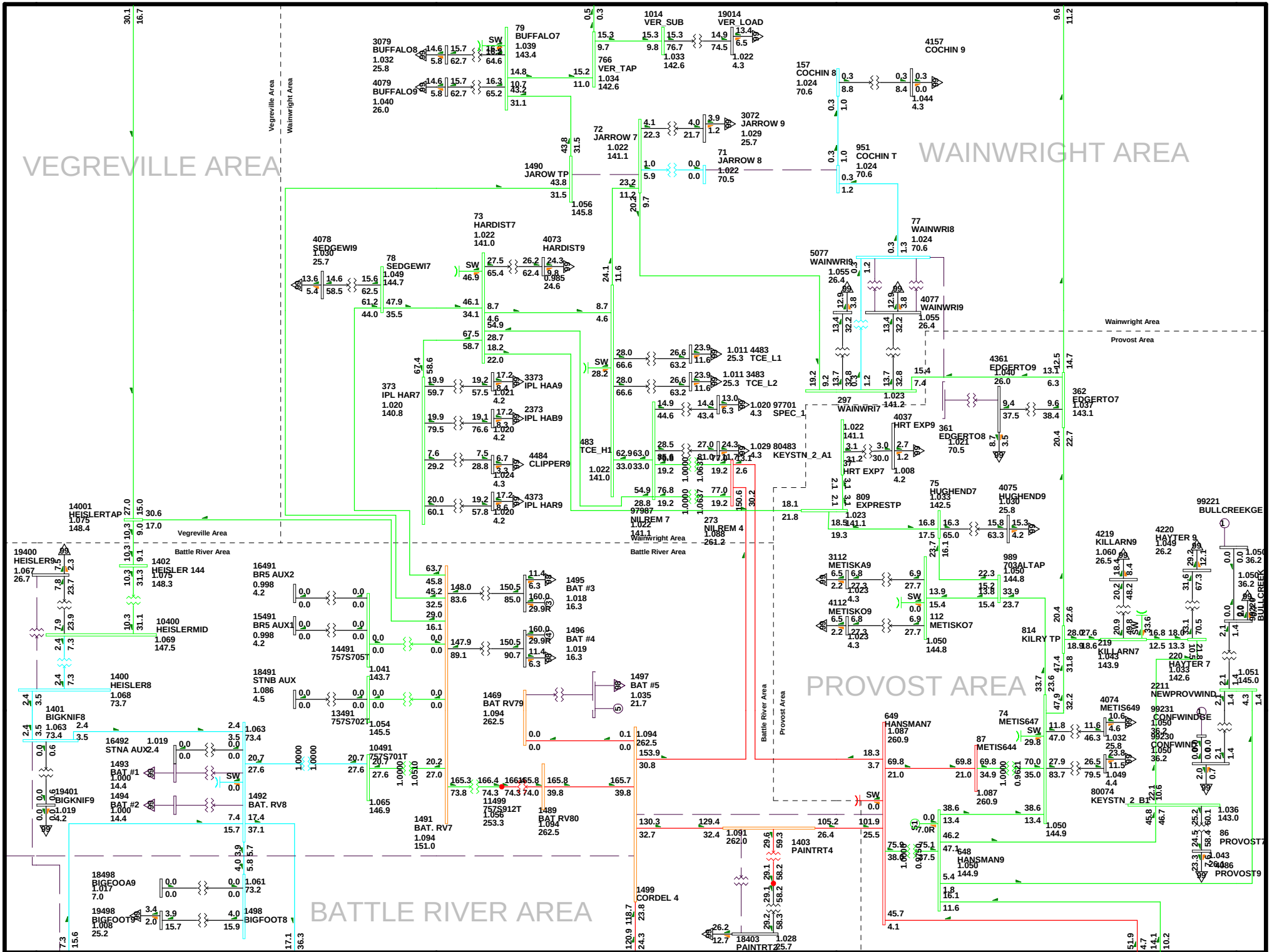
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090V 0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
THU, APR 08 2010 17:05
D1-14

2012WP-Alt 3-12.a

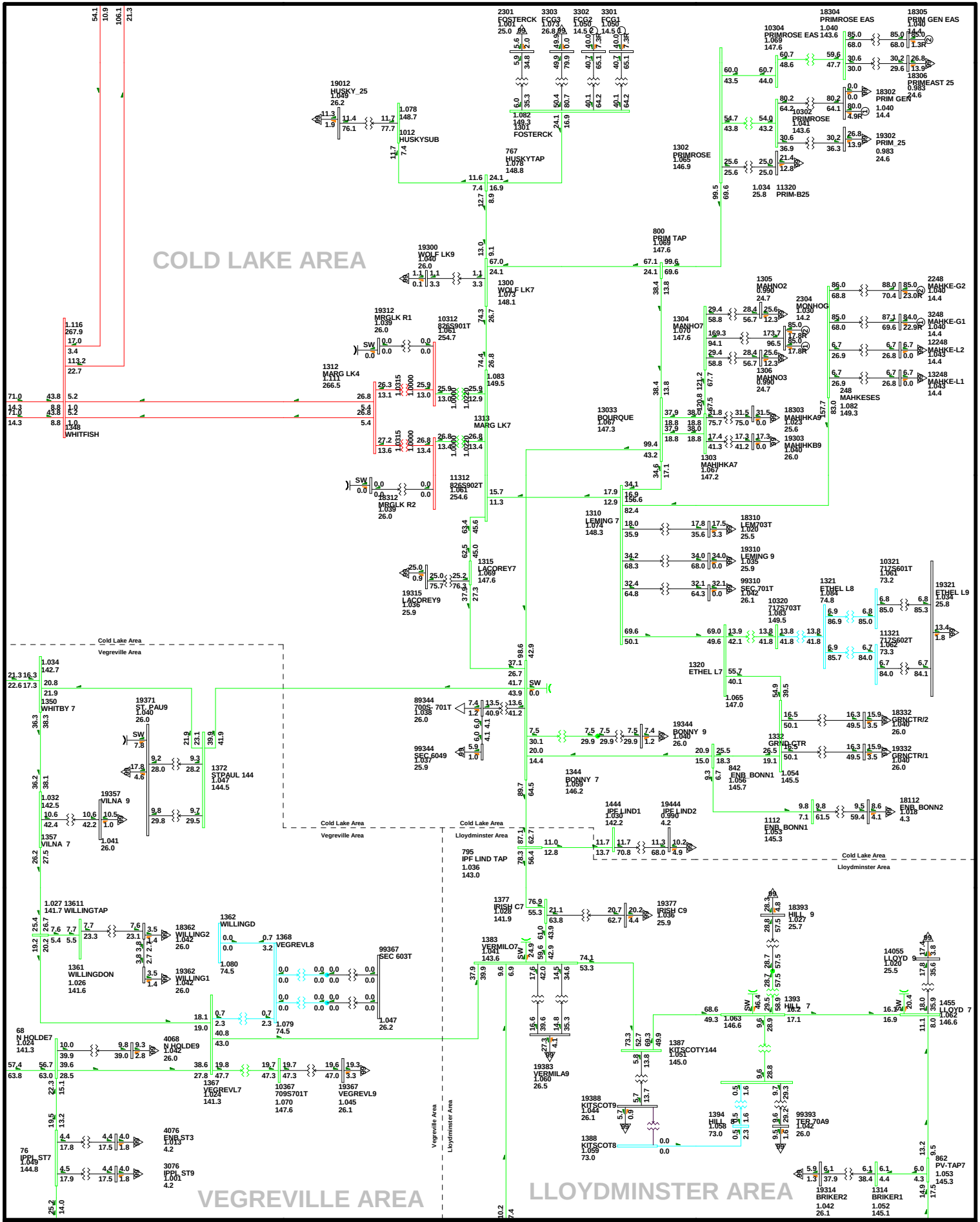
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
THU, APR 08 2010 17:05
D1-14

2012WP-Alt 3-12.b

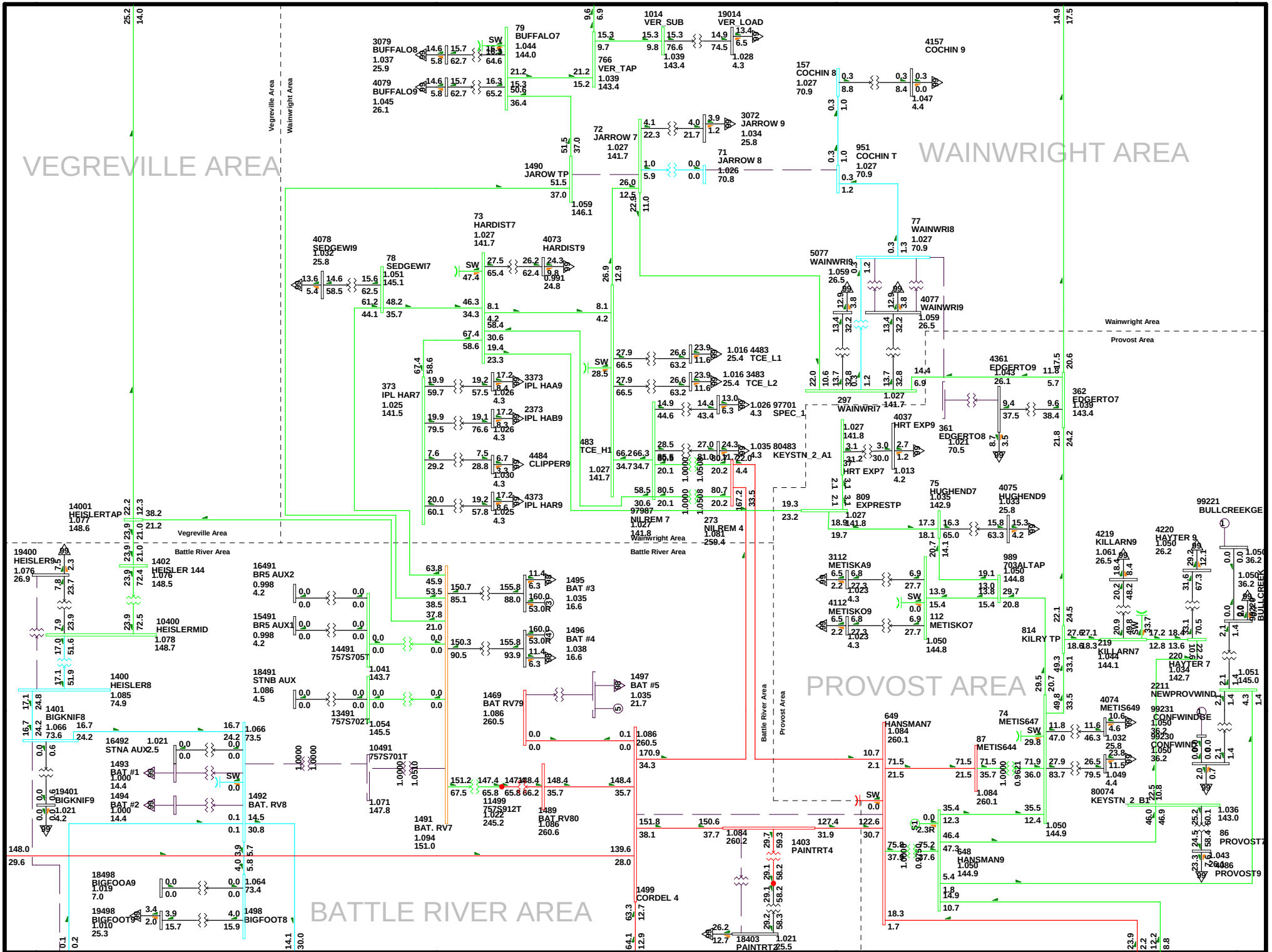
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090V0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000

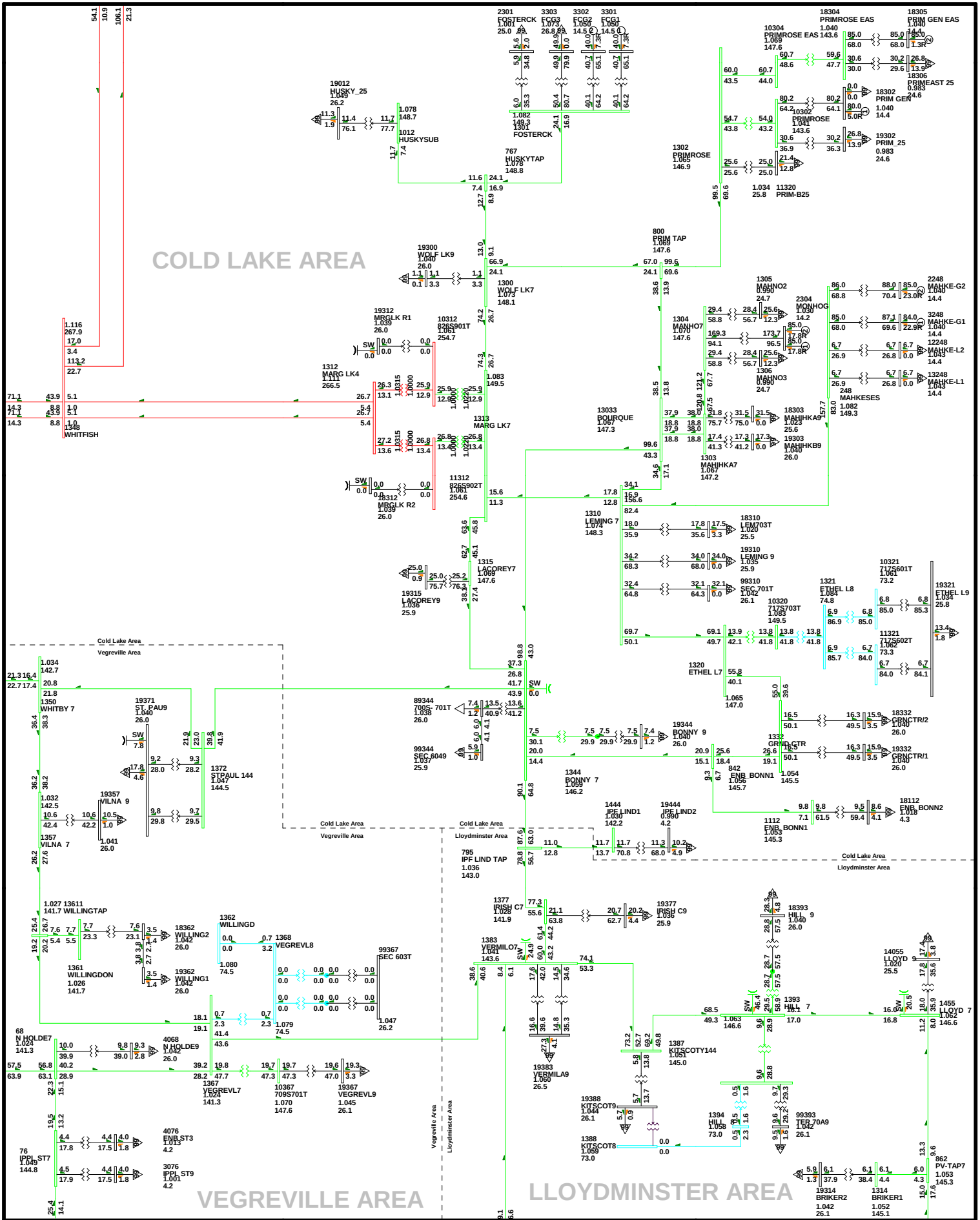


CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
THU, APR 08 2010 17:05
D1-15

2012WP-Alt 3-13.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

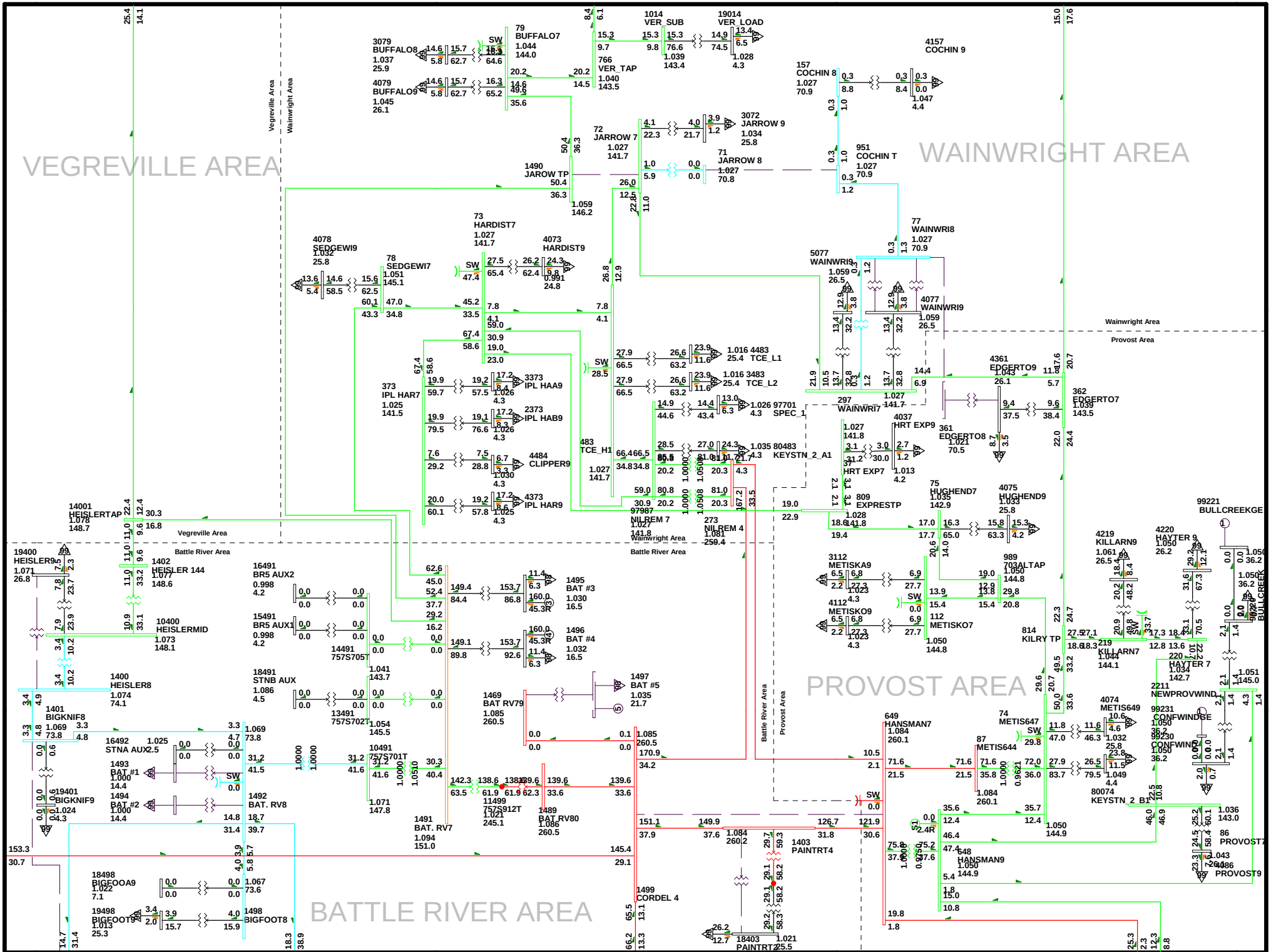

VEGREVILLE AREA
WAINWRIGHT AREA
PROVOST AREA
BATTLE RIVER AREA
Vegreville Area
Wainwright Area
Battle River Area
Provost Area
3079 BUFFALO8 1.037 25.9
4079 BUFFALO9 1.045 26.1
79 BUFFALO7 1.044 144.0
766 VER_TAP 1.039 143.4
1014 VER_SUB 1.039 143.4
19014 VER_LOAD 1.028 4.3
4157 COCHIN 9
157 COCHIN 8 1.027 70.9
951 COCHIN T 1.027 70.9
1.047 4.4
72 JARROW 7 1.027 141.7
3072 JARROW 9 1.034 25.8
71 JARROW 8 1.026 70.8
1490 JAROW TP 51.5 37.0
1.059 146.1
4078 SEDGEWI9 1.032 25.8
78 SEDGEWI7 1.051 145.1
73 HARDIST7 1.027 141.7
4073 HARDIST9 0.991 24.8
77 WAINWRI8 1.027 70.9
5077 WAINWRI9 1.059 26.5
4077 WAINWRI9 1.059 26.5
297 WAINWRI7 1.027 141.7
4361 EDGERTO9 1.043 26.1
362 EDGERTO7 1.039 143.4
361 EDGERTO8 1.021 70.5
4037 HRT EXP9
HRT EXP7 1.013 4.2
373 IPL HAR7 1.025 141.5
3373 IPL HAA9 1.026 4.3
2373 IPL HAB9 1.026 4.3
4484 CLIPPER9 1.030 4.3
4373 IPL HAR9 1.025 4.3
1.016 4483 25.4 TCE_L1
1.016 3483 25.4 TCE_L2
483 TCE_H1 1.027 141.7
1.026 97701 4.3 SPEC_1
1.035 80483 4.3 KEYSTN_2_A1
97987 NIL REM 7 1.027 141.8
273 NIL REM 4 1.081 259.4
809 EXPRESTP 1.027 141.8
75 HUGHEND7 1.035 142.9
4075 HUGHEND9 1.033 25.8
14001 HEISLERTAP 1.077 148.6
1402 HEISLER 144 1.076 148.5
10400 HEISLERMID 1.078 148.7
19400 HEISLER9 1.076 26.9
1400 HEISLER8 1.085 74.9
1401 BIGKNIF8 1.066 73.6
19401 BIGKNIF9 1.021 4.2
16491 BR5 AUX2 0.998 4.2
15491 BR5 AUX1 0.998 4.2
14491 757S705T 1.041 143.7
18491 STNB AUX 1.086 4.5
13491 757S702T 1.054 145.5
16492 STNA AUX 1.021 2.5
1493 BAT #1 1.000 14.4
1494 BAT #2 1.000 14.4
1492 BAT. RV8 14.5 30.8
10491 757S701T 1.071 147.8
1491 BAT. RV7 1.094 151.0
1495 BAT #3 1.035 16.6
1496 BAT #4 1.038 16.6
1497 BAT #5 1.035 21.7
1469 BAT RV79 1.086 260.5
11499 757S912T 1.022 245.2
1489 BAT RV80 1.086 260.6
1499 CORDEL 4
18403 PAINTRT2 1.021 25.5
1403 PAINTRT4
649 HANSMAN7 1.084 260.1
648 HANSMAN9 1.050 144.9
74 METIS647
87 METIS644
4074 METIS649
80074 KEYSTN_2_B1 1.049 4.4
3112 METISKA9
4112 METISKO9
112 METISKO7 1.050 144.8
989 703ALTAP 1.050 144.8
814 KILRY TP
4219 KILLARN9 1.061 26.5
219 KILLARN7 1.044 144.1
4220 HAYTER 9 1.050 26.2
220 HAYTER 7 1.034 142.7
2211 NEWPROVWIND 1.050 36.2
99231 CONFWINDGE 1.050 36.2
99230 CONFWIND 1.050 36.2
99221 BULLCREEKGE
BULLCREEK 1.050 36.2
86 PROVOST7 1.036 143.0
PROVOST9 1.043 143.6
18498 BIGFOOA9 1.019 7.0
19498 BIGFOOT9 1.010 25.3
1498 BIGFOOT8 15.9
CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
THU, APR 08 2010 17:05
D1-15
2012WP-Alt 3-13.b
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090V 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

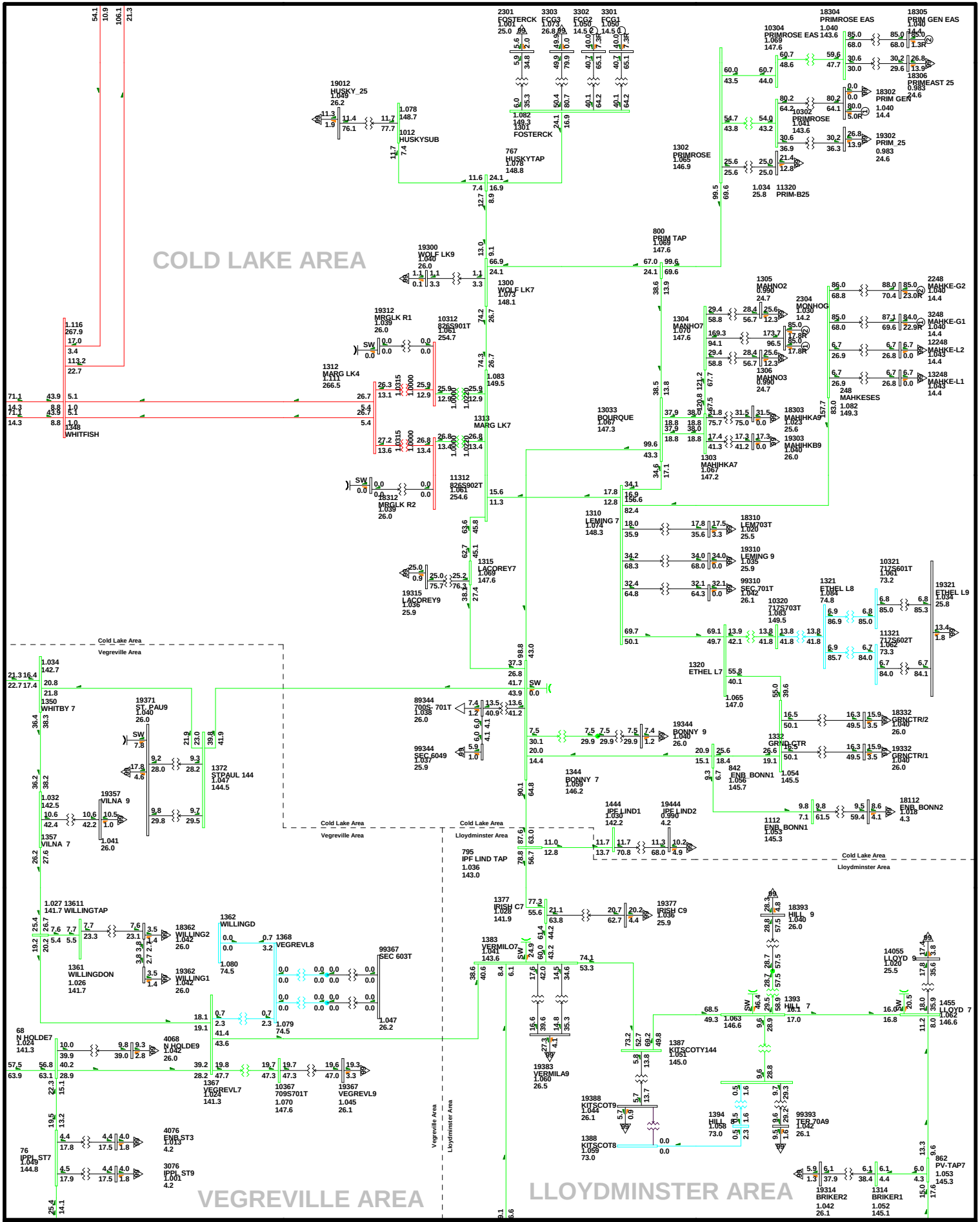


CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
THU, APR 08 2010 17:05
D1-18

2012WP-Alt 3-14.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

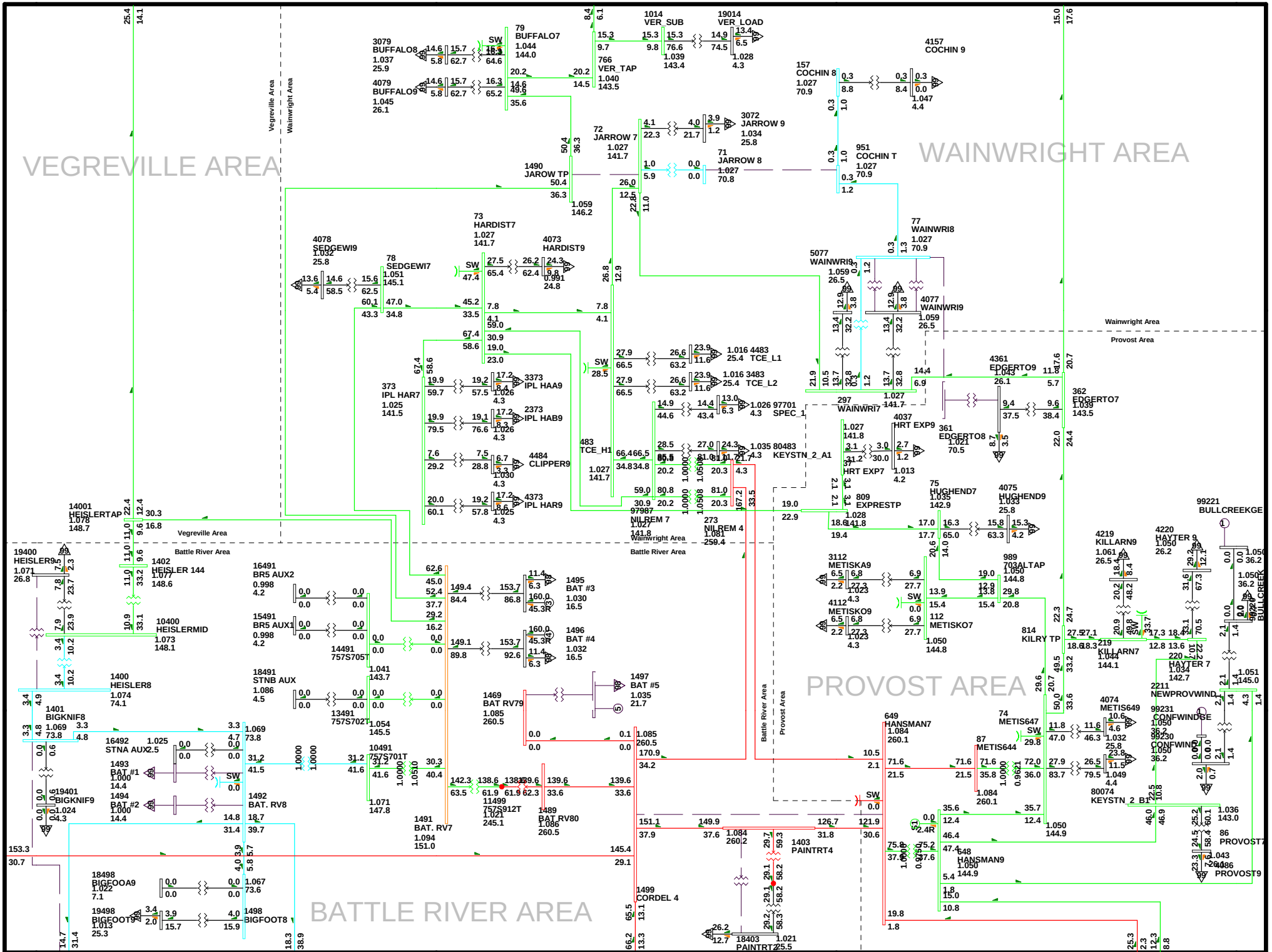

VEGREVILLE AREA
WAINWRIGHT AREA
PROVOST AREA
BATTLE RIVER AREA
Vegreville Area
Wainwright Area
Battle River Area
Provost Area
3079 BUFFALO8 1.037 25.9
4079 BUFFALO9 1.045 26.1
79 BUFFALO7 1.044 144.0
766 VER_TAP 1.040 143.5
1014 VER_SUB
19014 VER_LOAD
4157 COCHIN 9
157 COCHIN 8 1.027 70.9
951 COCHIN T 1.027 70.9
1.047 4.4
72 JARROW 7 1.027 141.7
3072 JARROW 9 1.034 25.8
71 JARROW 8 1.027 70.8
1490 JAROW TP 50.4 36.3
1.059 146.2
4078 SEDGEWI9 1.032 25.8
78 SEDGEWI7 1.051 145.1
73 HARDIST7 1.027 141.7
4073 HARDIST9 0.991 24.8
77 WAINWRI8 1.027 70.9
5077 WAINWRI9 1.059 26.5
4077 WAINWRI9 1.059 26.5
297 WAINWRI7 1.027 141.7
4361 EDGERTO9 1.043 26.1
362 EDGERTO7 1.039 143.5
361 EDGERTO8 1.021 70.5
4037 HRT EXP9
HRT EXP7 1.013 4.2
373 IPL HAR7 1.025 141.5
3373 IPL HAA9 1.026 4.3
2373 IPL HAB9 1.026 4.3
4484 CLIPPER9 1.030 4.3
4373 IPL HAR9 1.025 4.3
1.016 4483 25.4 TCE_L1
1.016 3483 25.4 TCE_L2
483 TCE_H1 1.027 141.7
1.026 97701 SPEC_1
1.035 80483 KEYSTN_2_A1
97987 NIL_REM 7 1.027 141.8
273 NIL_REM 4 1.081 259.4
809 EXPRESTP 1.028 141.8
75 HUGHEND7 1.035 142.9
4075 HUGHEND9 1.033 25.8
3112 METISKA9 1.023 4.3
4112 METISKO9 1.023 4.3
112 METISKO7 1.050 144.8
989 703ALTAP 1.050 144.8
814 KILRY TP
4219 KILLARN9 1.061 26.5
219 KILLARN7 1.044 144.1
4220 HAYTER 9 1.050 26.2
220 HAYTER 7 1.034 142.7
99221 BULLCREEKGE
BULLCREEK
2211 NEWPROVWIND
99231 CONFWINDGE 1.050 36.2
99230 CONFWIND2 1.050 36.2
4074 METIS649 1.032 25.8
80074 KEYSTN_2_B1 1.049 4.4
74 METIS647 1.050 144.9
87 METIS644 1.084 260.1
649 HANSMAN7 1.084 260.1
648 HANSMAN9 1.050 144.9
86 PROVOST7 1.036 143.0
PROVOST9 1.043 143.6
19400 HEISLER9 1.071 26.8
1402 HEISLER 144 1.077 148.6
10400 HEISLERMID 1.073 148.1
14001 HEISLERTAP 1.078 148.7
1400 HEISLER8 1.074 74.1
1401 BIGKNIF8 1.069 73.8
19401 BIGKNIF9 1.024 4.3
16492 STNA AUX 1.025 2.5
1493 BAT #1 1.000 14.4
1494 BAT #2 1.000 14.4
1492 BAT. RV8 1.069 73.8
18498 BIGFOOA9 1.022 7.1
19498 BIGFOOT9 1.013 25.3
1498 BIGFOOT8 1.067 73.6
16491 BR5 AUX2 0.998 4.2
15491 BR5 AUX1 0.998 4.2
14491 757S705T 1.041 143.7
18491 STNB AUX 1.086 4.5
13491 757S702T 1.054 145.5
10491 757S701T 1.071 147.8
1491 BAT. RV7 1.094 151.0
1495 BAT #3 1.030 16.5
1496 BAT #4 1.032 16.5
1497 BAT #5 1.035 21.7
1469 BAT RV79 1.085 260.5
1489 BAT RV80 1.086 260.5
11499 757S912T 1.021 245.1
1499 CORDEL 4
18403 PAINTRT2 1.021 25.5
1403 PAINTRT4
CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
THU, APR 08 2010 17:05
D1-18
2012WP-Alt 3-14.b
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090VO 0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000

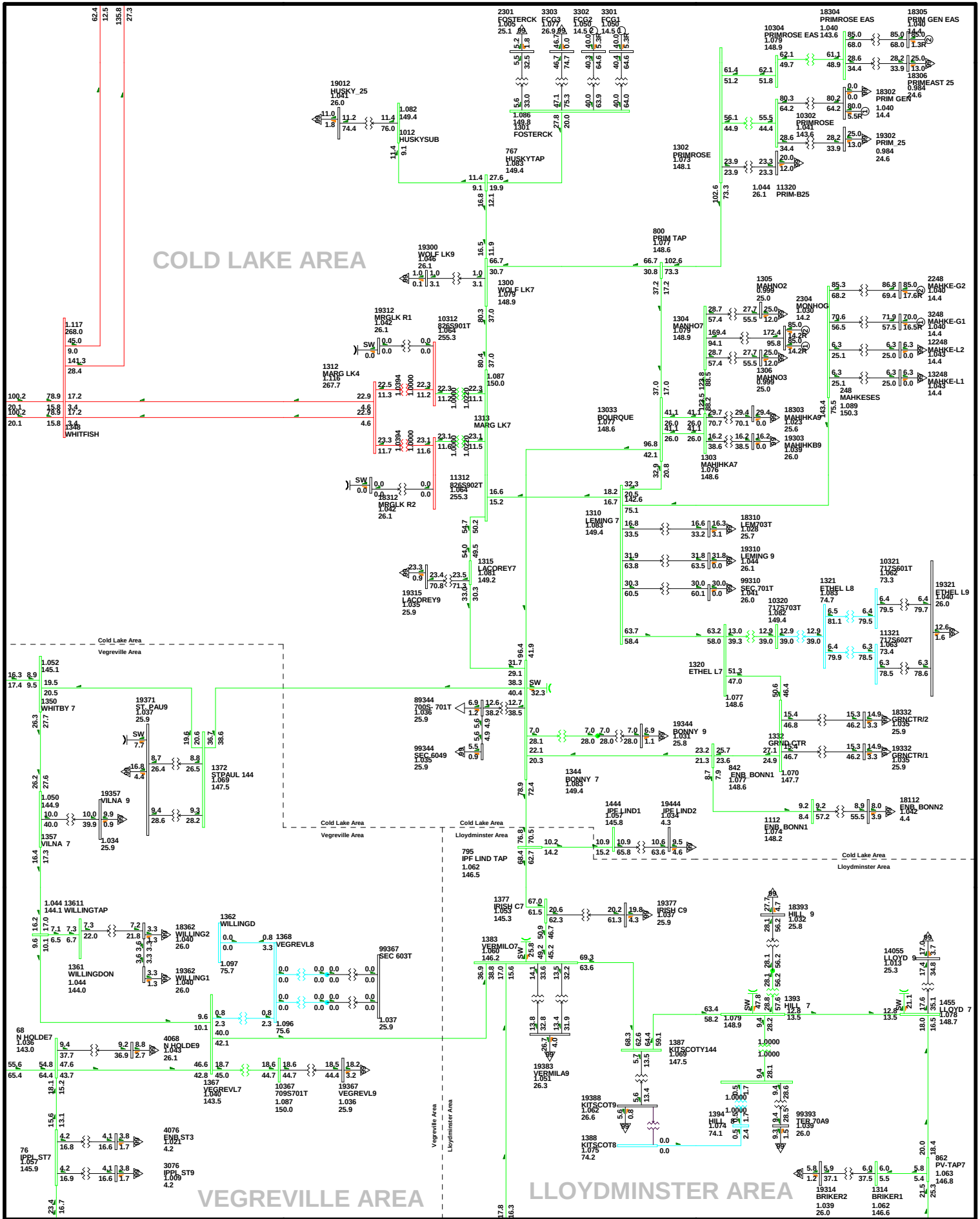


CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
THU, APR 08 2010 17:05
D1-19

2012WP-Alt 3-15.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

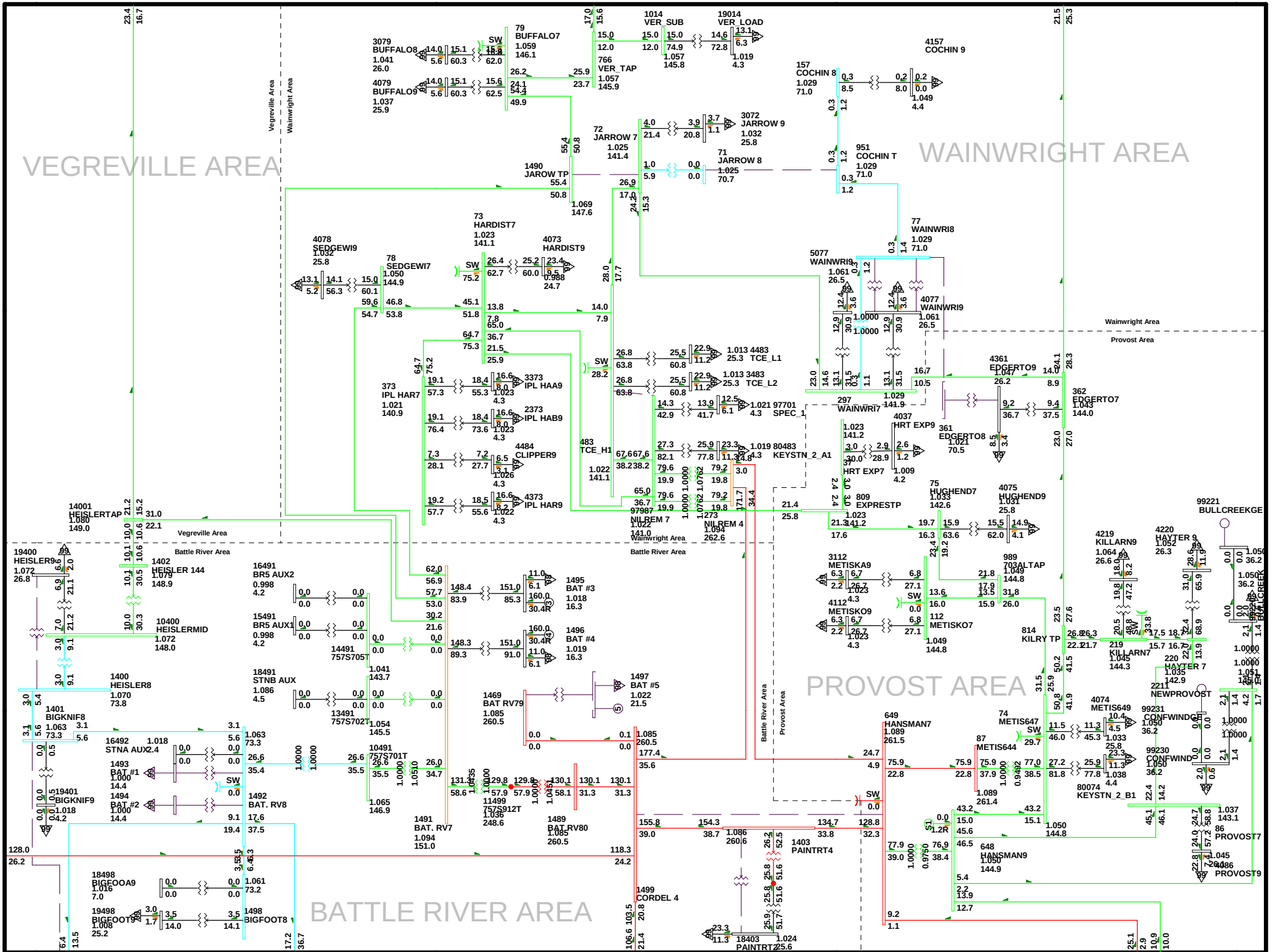

VEGREVILLE AREA
WAINWRIGHT AREA
PROVOST AREA
BATTLE RIVER AREA
Vegreville Area
Wainwright Area
Battle River Area
Provost Area
3079 BUFFALO8 1.037 25.9
4079 BUFFALO9 1.045 26.1
79 BUFFALO7 1.044 144.0
766 VER_TAP 1.040 143.5
1014 VER_SUB
19014 VER_LOAD
4157 COCHIN 9
157 COCHIN 8 1.027 70.9
951 COCHIN T 1.027 70.9
1047 4.4
72 JARROW 7 1.027 141.7
3072 JARROW 9 1.034 25.8
71 JARROW 8 1.027 70.8
1490 JAROW TP 50.4 36.3
1059 146.2
4078 SEDGEWI9 1.032 25.8
78 SEDGEWI7 1.051 145.1
73 HARDIST7 1.027 141.7
4073 HARDIST9 0.991 24.8
77 WAINWRI8 1.027 70.9
5077 WAINWRI9 1.059 26.5
4077 WAINWRI9 1.059 26.5
373 IPL HAR7 1.025 141.5
3373 IPL HAA9 1.026 4.3
2373 IPL HAB9 1.026 4.3
4484 CLIPPER9 1.030 4.3
4373 IPL HAR9 1.025 4.3
1016 4483 25.4 TCE_L1
1016 3483 25.4 TCE_L2
483 TCE_H1 1.027 141.7
1026 97701 SPEC_1 4.3
1035 80483 KEYSTN_2_A1 4.3
297 WAINWRI7 1.027 141.7
4037 HRT EXP9 1.027 141.8
HRT EXP7 1.013 4.2
361 EDGERTO8 1.021 70.5
4361 EDGERTO9 1.043 26.1
362 EDGERTO7 1.039 143.5
809 EXPRESTP 1.028 141.8
75 HUGHEND7 1.035 142.9
4075 HUGHEND9 1.033 25.8
97987 NIL REM 7 1.027 141.8
273 NIL REM 4 1.081 259.4
99221 BULLCREEKGE
14001 HEISLERTAP 1.078 148.7
1402 HEISLER 144 1.077 148.6
10400 HEISLERMID 1.073 148.1
19400 HEISLER9 1.071 26.8
1400 HEISLER8 1.074 74.1
1401 BIGKNIF8 1.069 73.8
19401 BIGKNIF9 1.024 4.3
16491 BR5 AUX2 0.998 4.2
15491 BR5 AUX1 0.998 4.2
14491 757S705T 1.041 143.7
18491 STNB AUX 1.086 4.5
13491 757S702T 1.054 145.5
16492 STNA AUX 1.025 2.5
1493 BAT #1 1.000 14.4
1494 BAT #2 1.000 14.4
1492 BAT. RV8 1.071 147.8
10491 757S701T 1.021 245.1
11499 757S912T 1.021 245.1
1491 BAT. RV7 1.094 151.0
1495 BAT #3 1.030 16.5
1496 BAT #4 1.032 16.5
1497 BAT #5 1.035 21.7
1469 BAT RV79 1.085 260.5
1489 BAT RV80 1.086 260.5
1499 CORDEL 4 1.084 260.2
1403 PAINTRT4 1.084 260.1
18403 PAINTRT2 1.021 25.5
18498 BIGFOOA9 1.022 7.1
19498 BIGFOOT9 1.013 25.3
1498 BIGFOOT8 1.067 73.6
649 HANSMAN7 1.084 260.1
648 HANSMAN9 1.050 144.9
74 METIS647 1.050 144.8
87 METIS644 1.084 260.1
4074 METIS649 1.050 144.9
80074 KEYSTN_2_B1 1.049 4.4
3112 METISKA9 1.023 4.3
4112 METISKO9 1.023 4.3
112 METISKO7 1.050 144.8
989 703ALTAP 1.050 144.8
814 KILRY TP 1.044 144.1
219 KILLARN7 1.044 144.1
4219 KILLARN9 1.061 26.5
4220 HAYTER 9 1.050 26.2
220 HAYTER 7 1.034 142.7
2211 NEWPROVWIND 1.050 36.2
99231 CONFWINDGE 1.050 36.2
99230 CONFWIND 1.050 36.2
86 PROVOST7 1.043 144.0
1486 PROVOST9 1.036 143.0
CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
THU, APR 08 2010 17:05
D1-19
2012WP-Alt 3-15.b
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090V/0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 09 2010 9:25
D1-00

2012SP-Alt 3-1.a

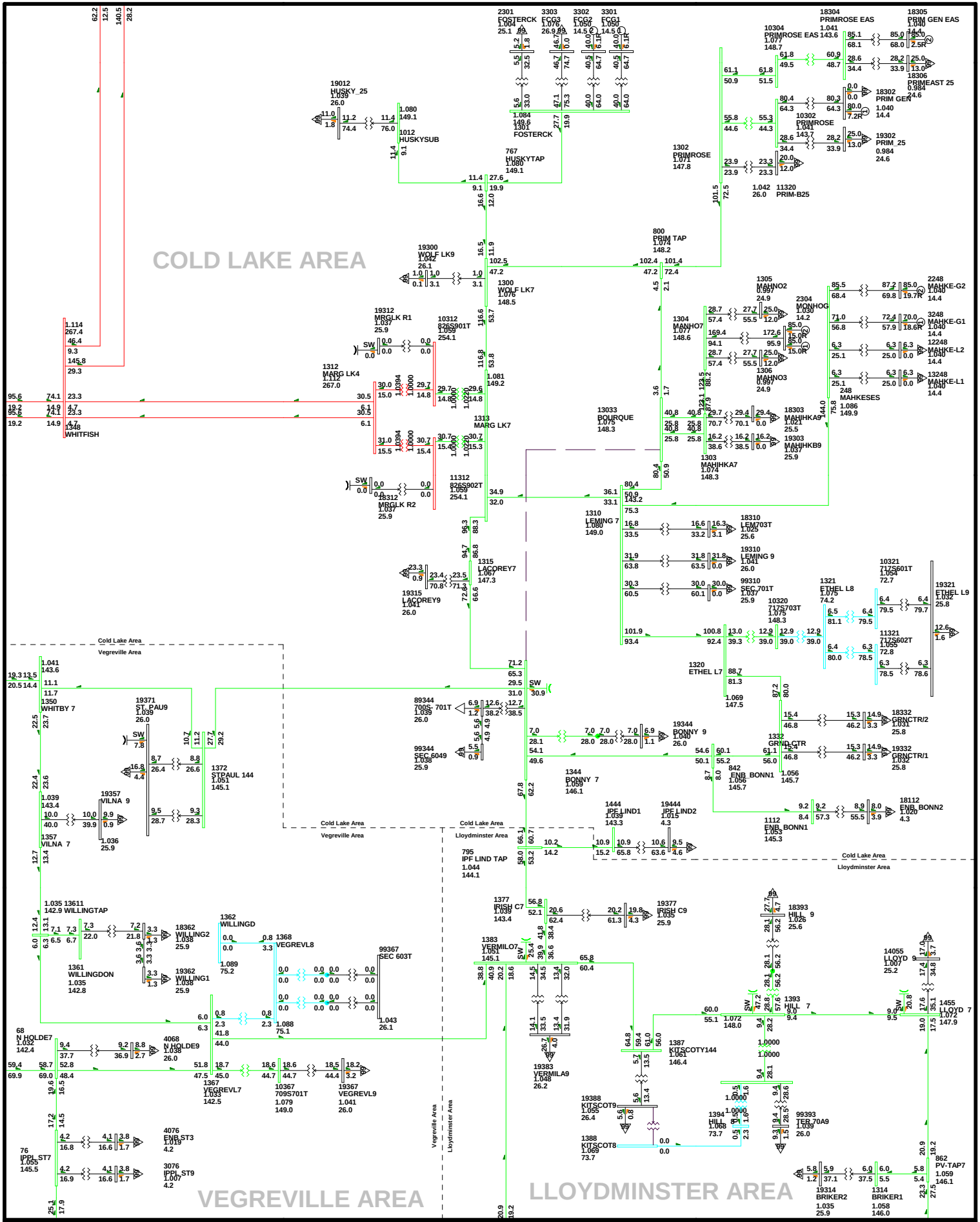
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 09 2010 9:25
D1-00

2012SP-Alt 3-1.b

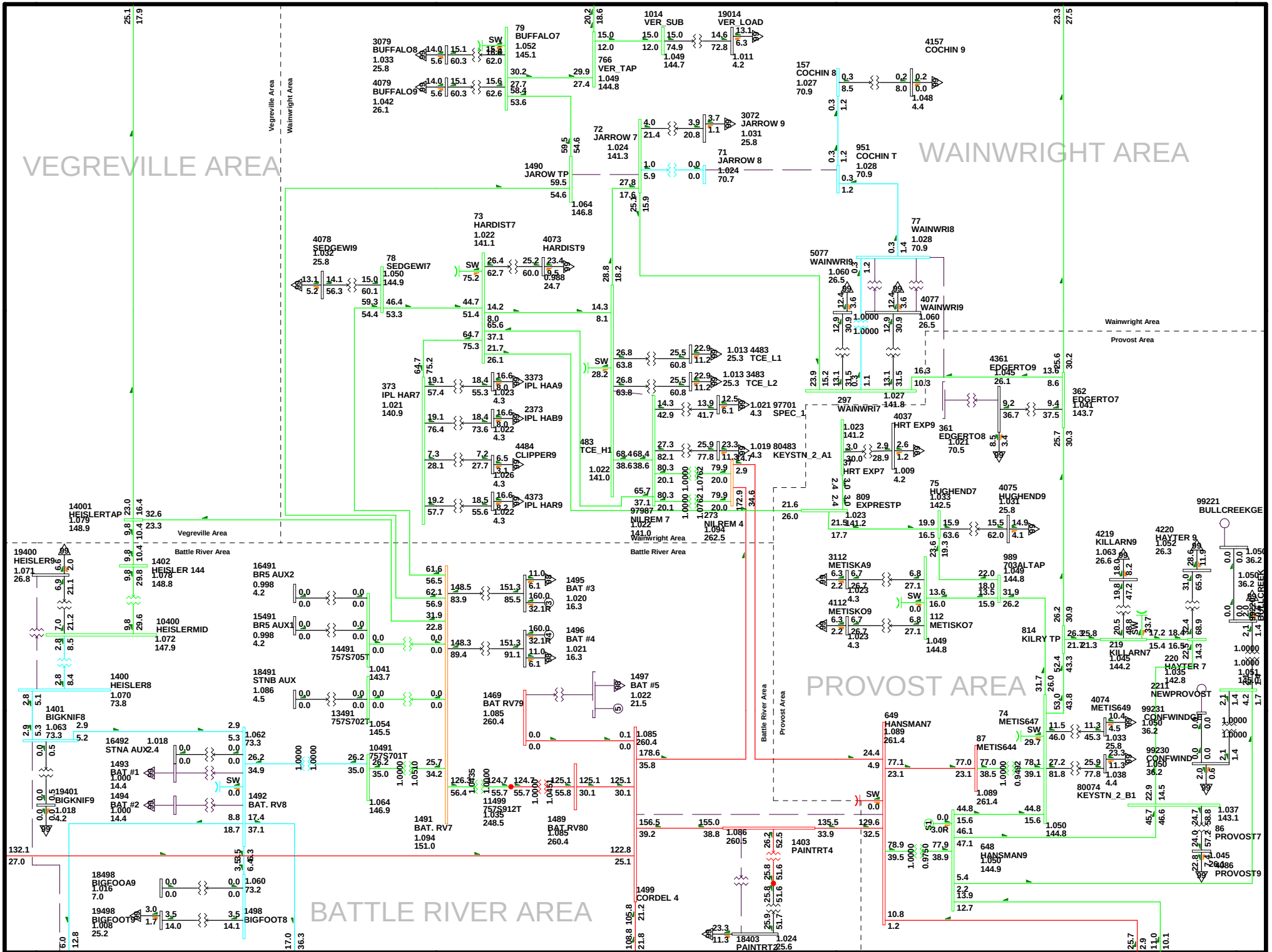
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 09 2010 9:26
D1-01

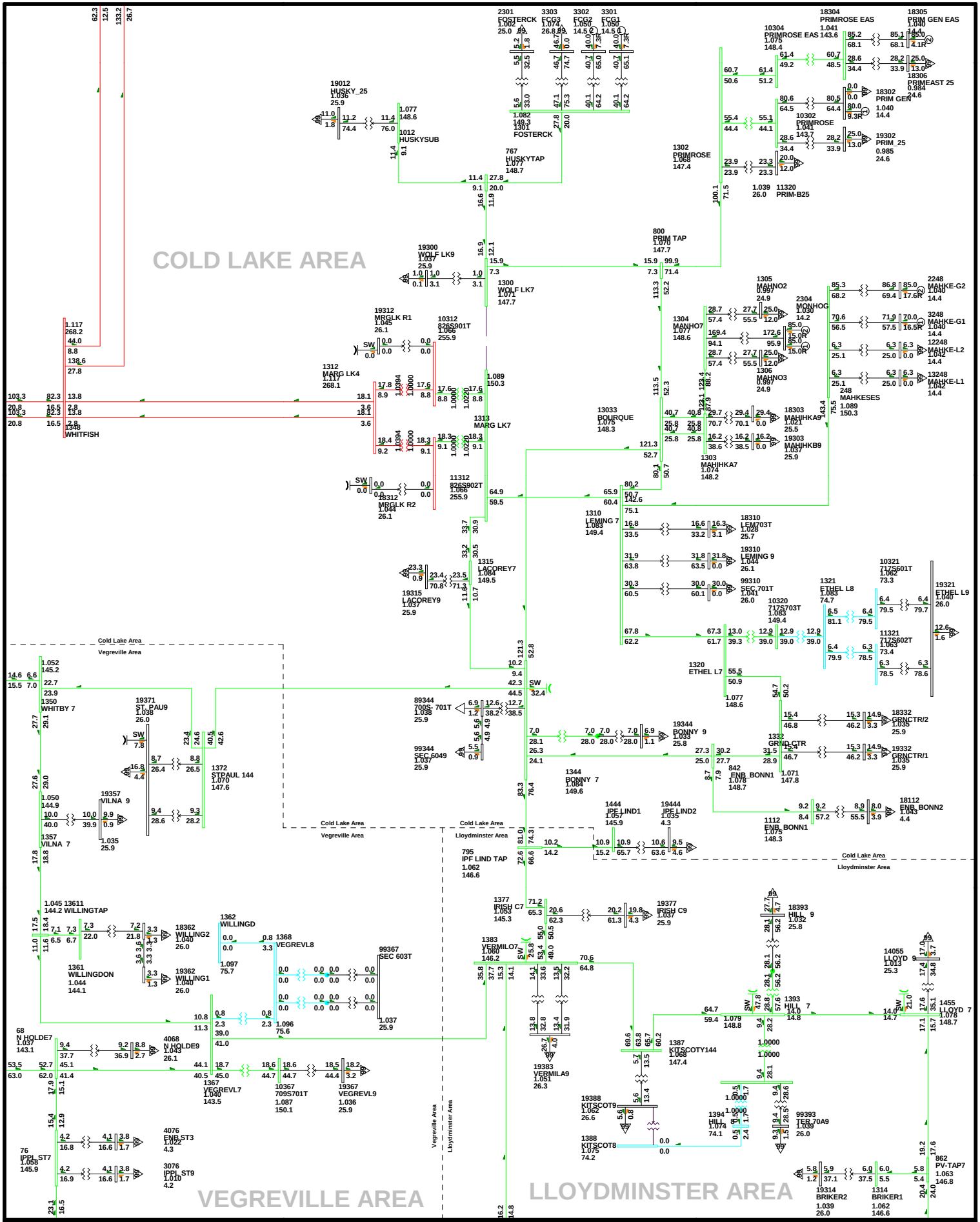
2012SP-Alt 3-2.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 09 2010 9:26
D1-01

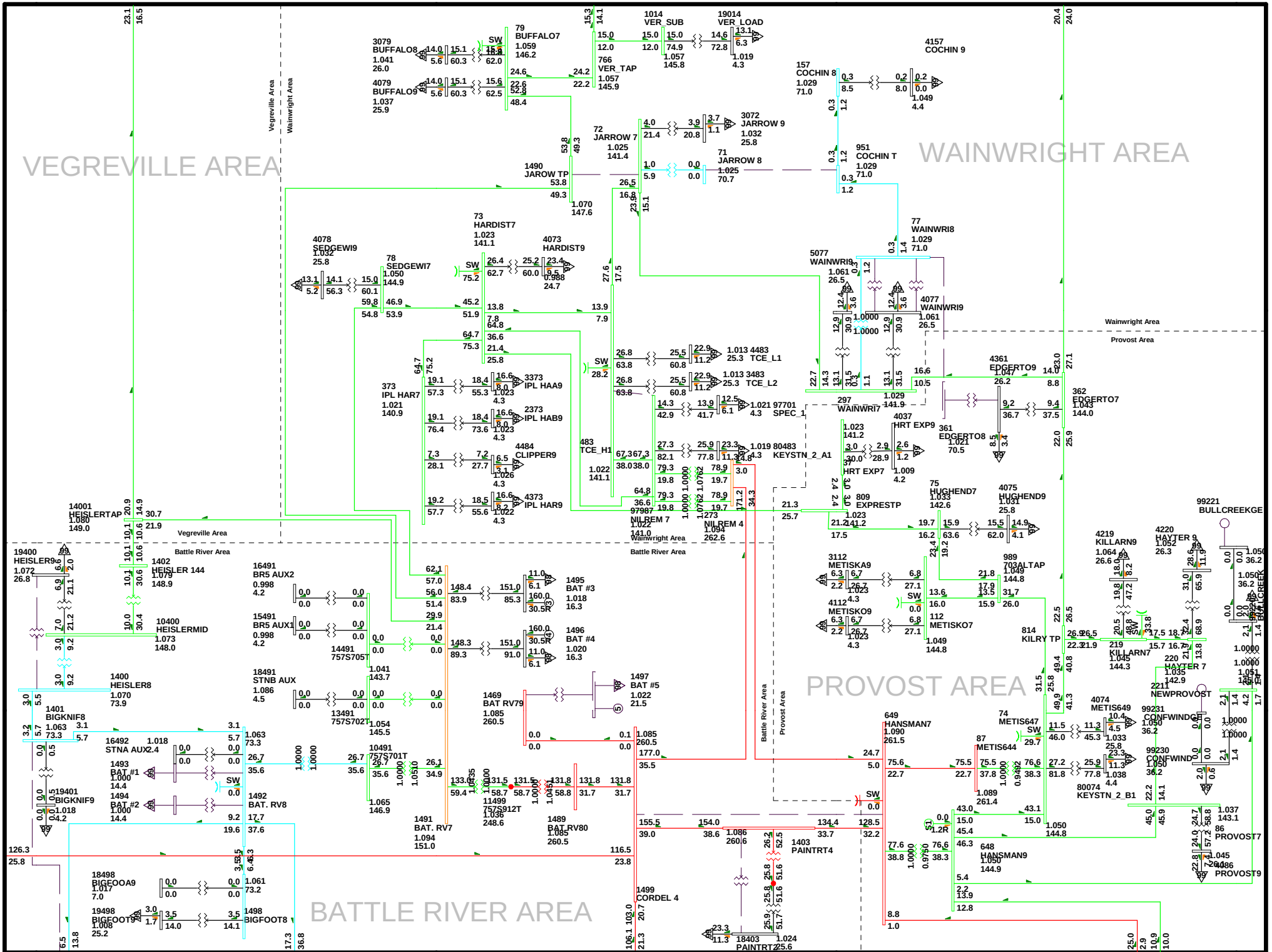
2012SP-Alt 3-2.b



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 09 2010 9:26
D1-02

2012SP-Alt 3-3.a

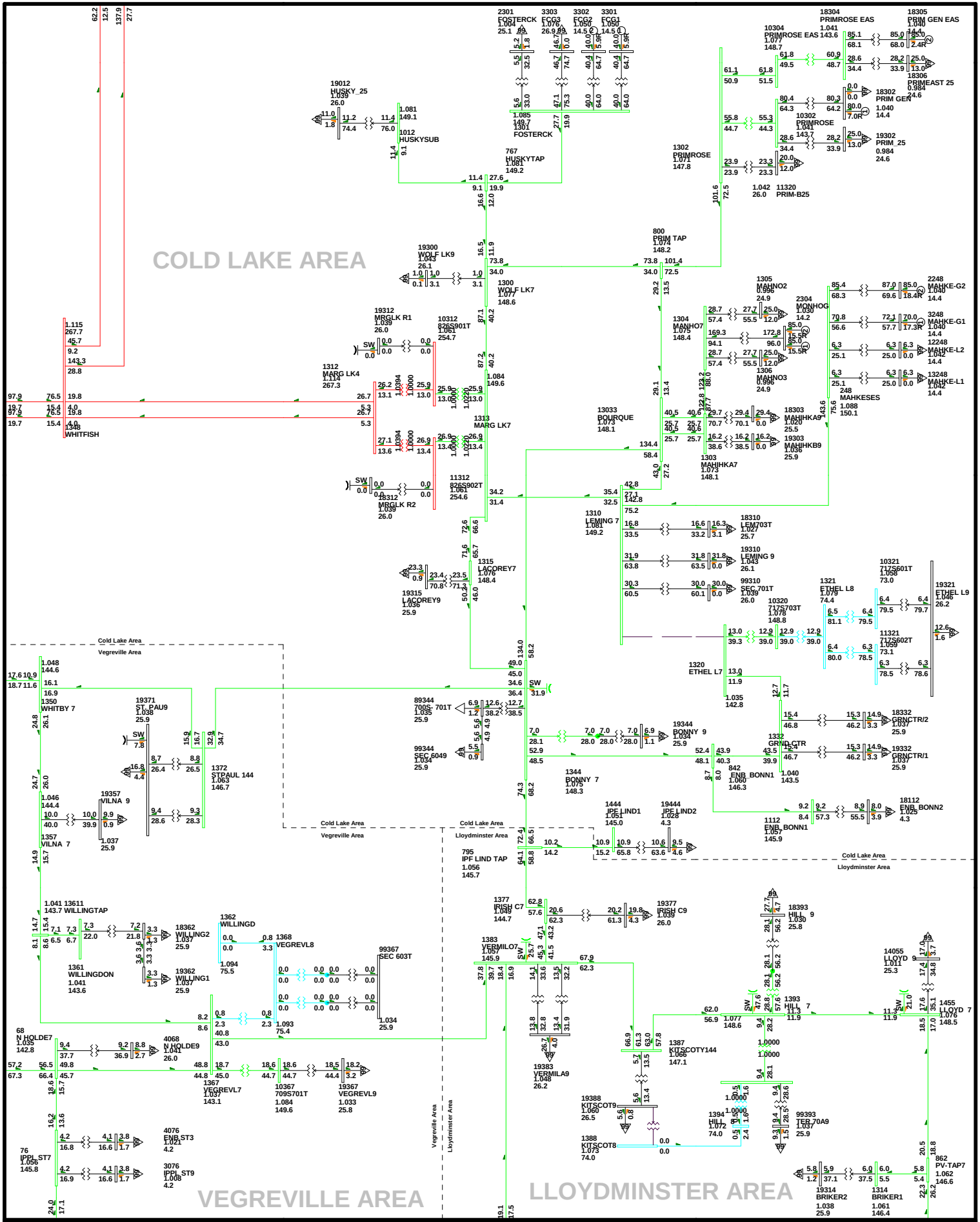
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 09 2010 9:26
D1-02

2012SP-Alt 3-3.b

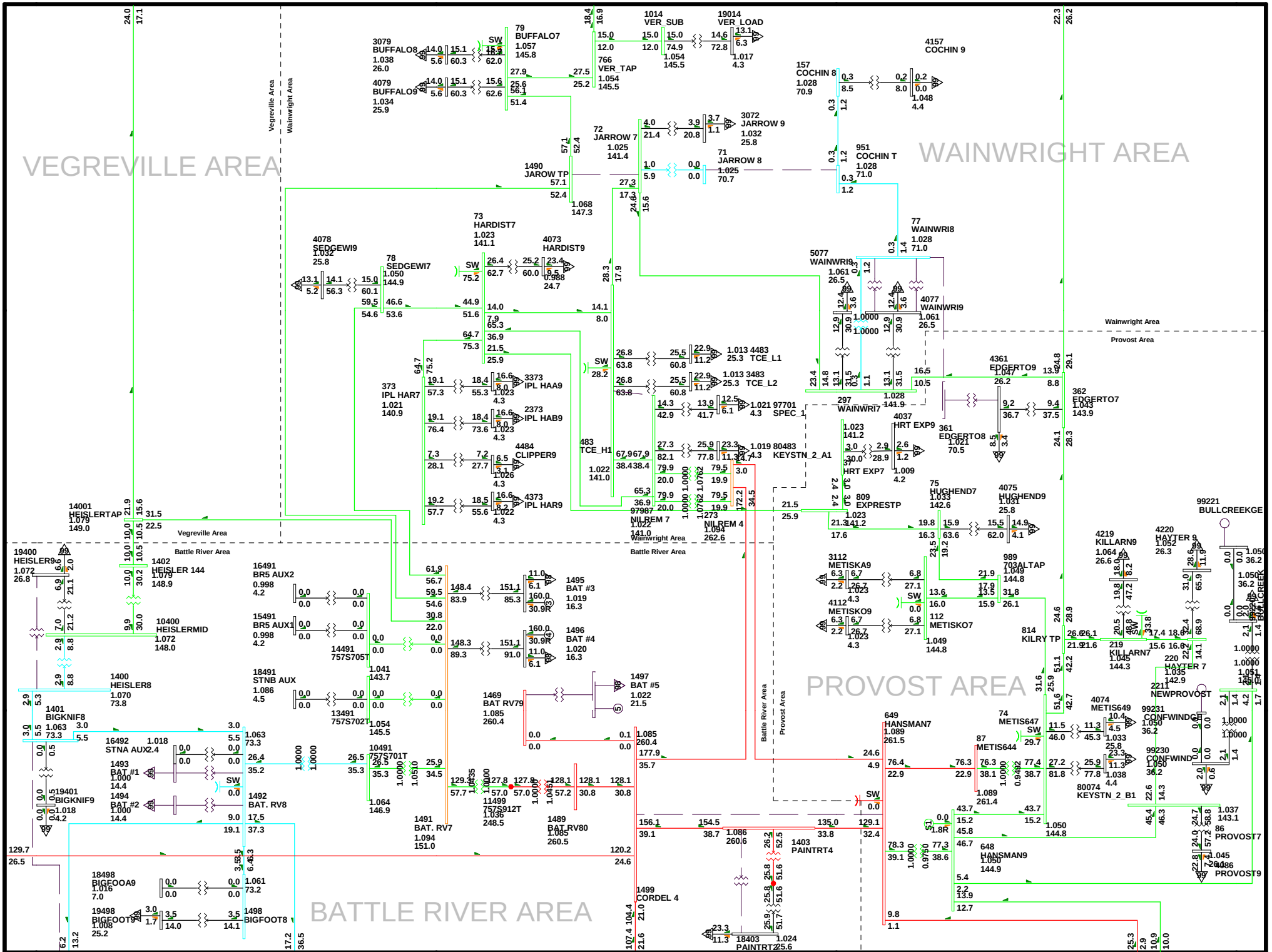
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 09 2010 9:26
D1-03

2012SP-Alt 3-4.a

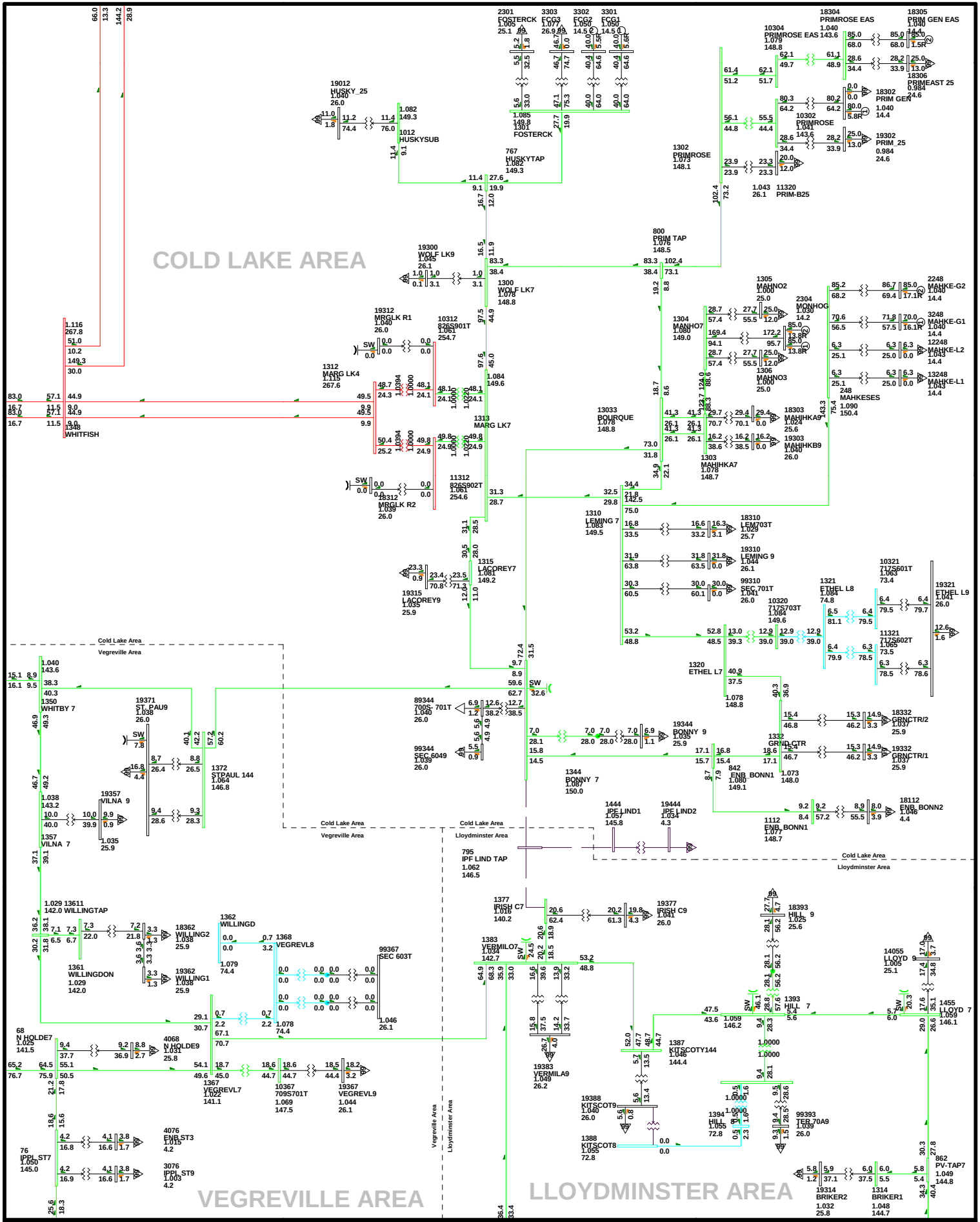
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 09 2010 9:26
D1-03

2012SP-Alt 3-4.b

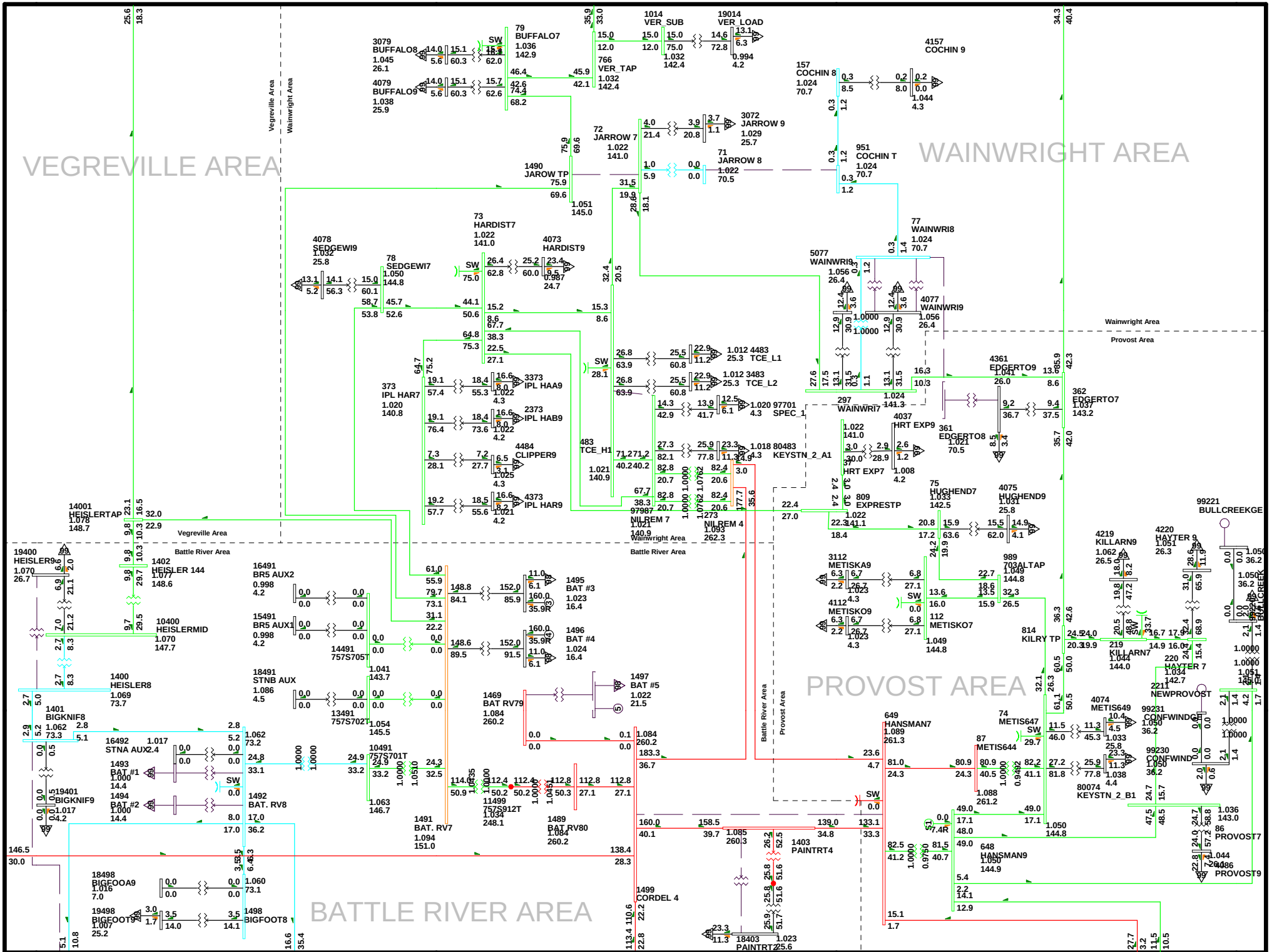
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 09 2010 9:26
D1-04

2012SP-Alt 3-5.a

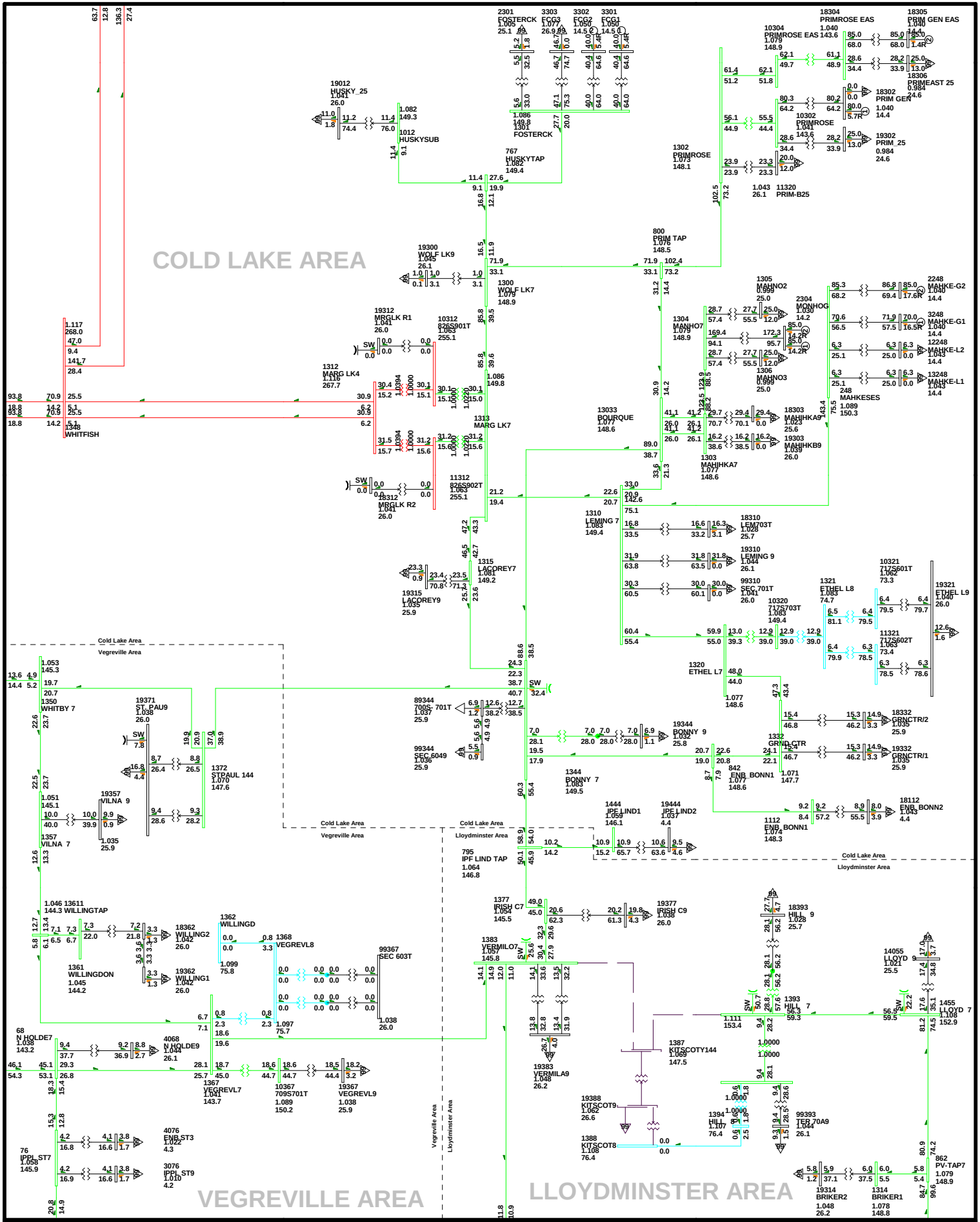
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 09 2010 9:26
D1-04

2012SP-Alt 3-5.b

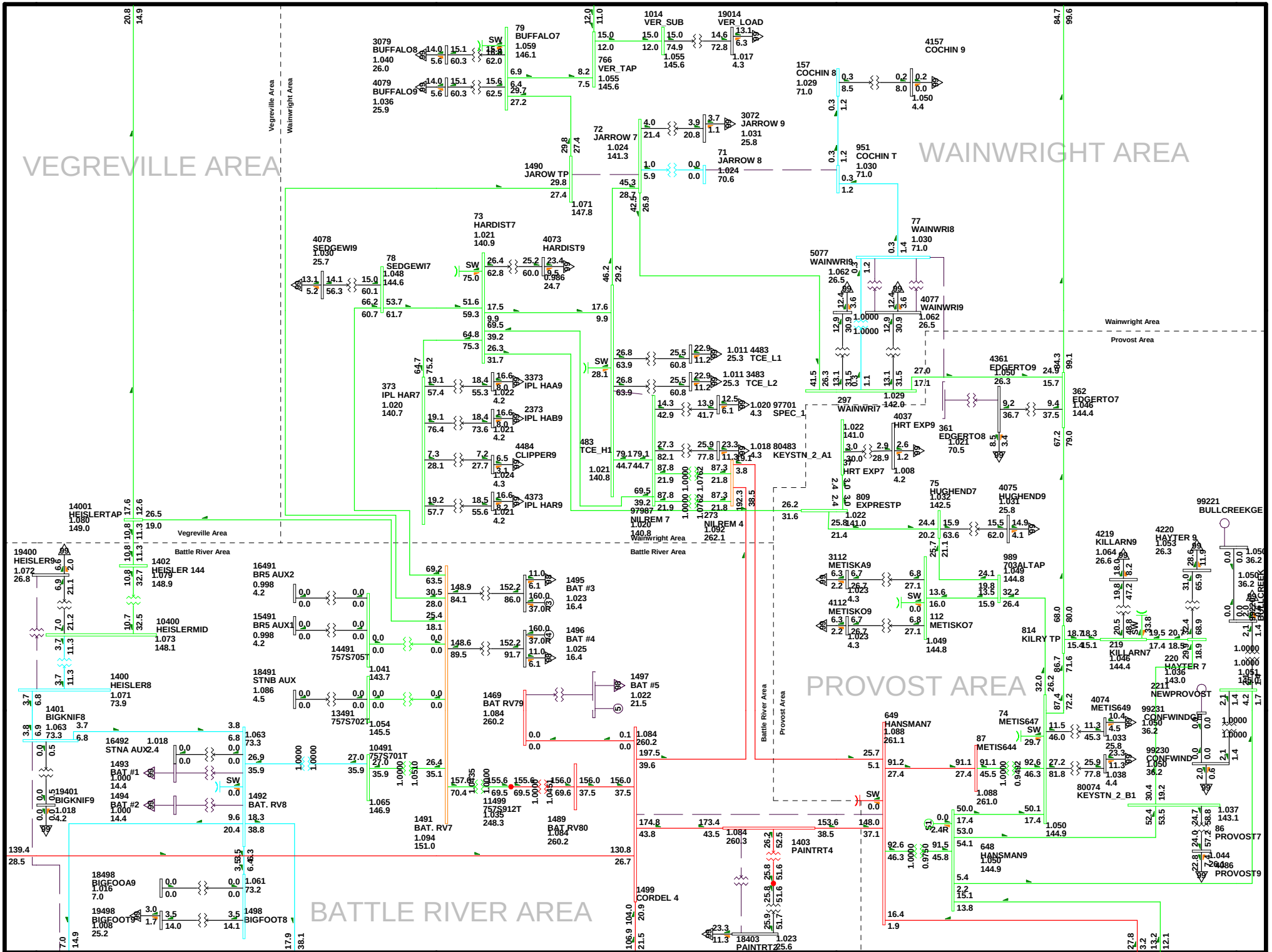
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 09 2010 9:26
D1-05

2012SP-Alt 3-6.a

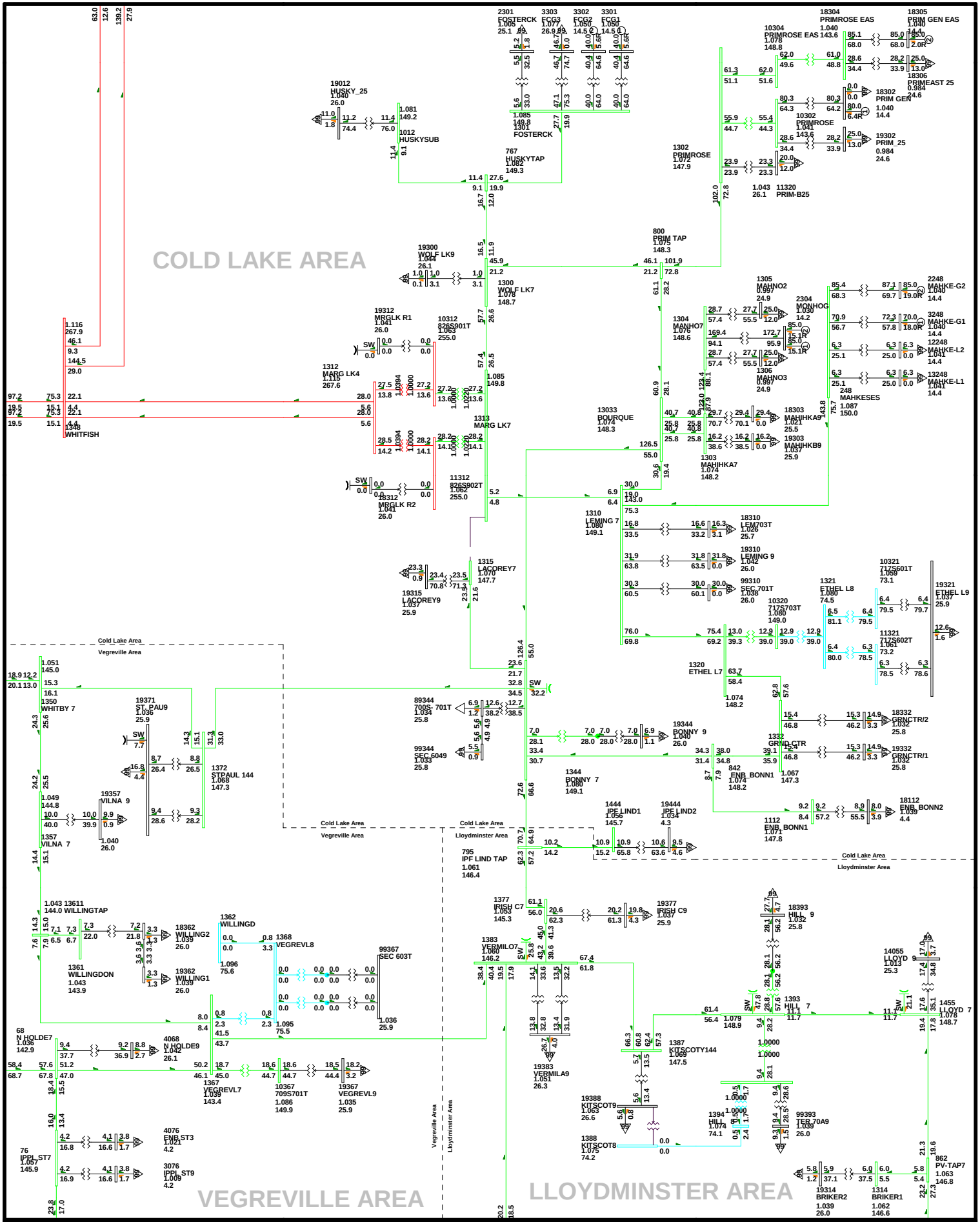
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 09 2010 9:26
D1-05

2012SP-Alt 3-6.b

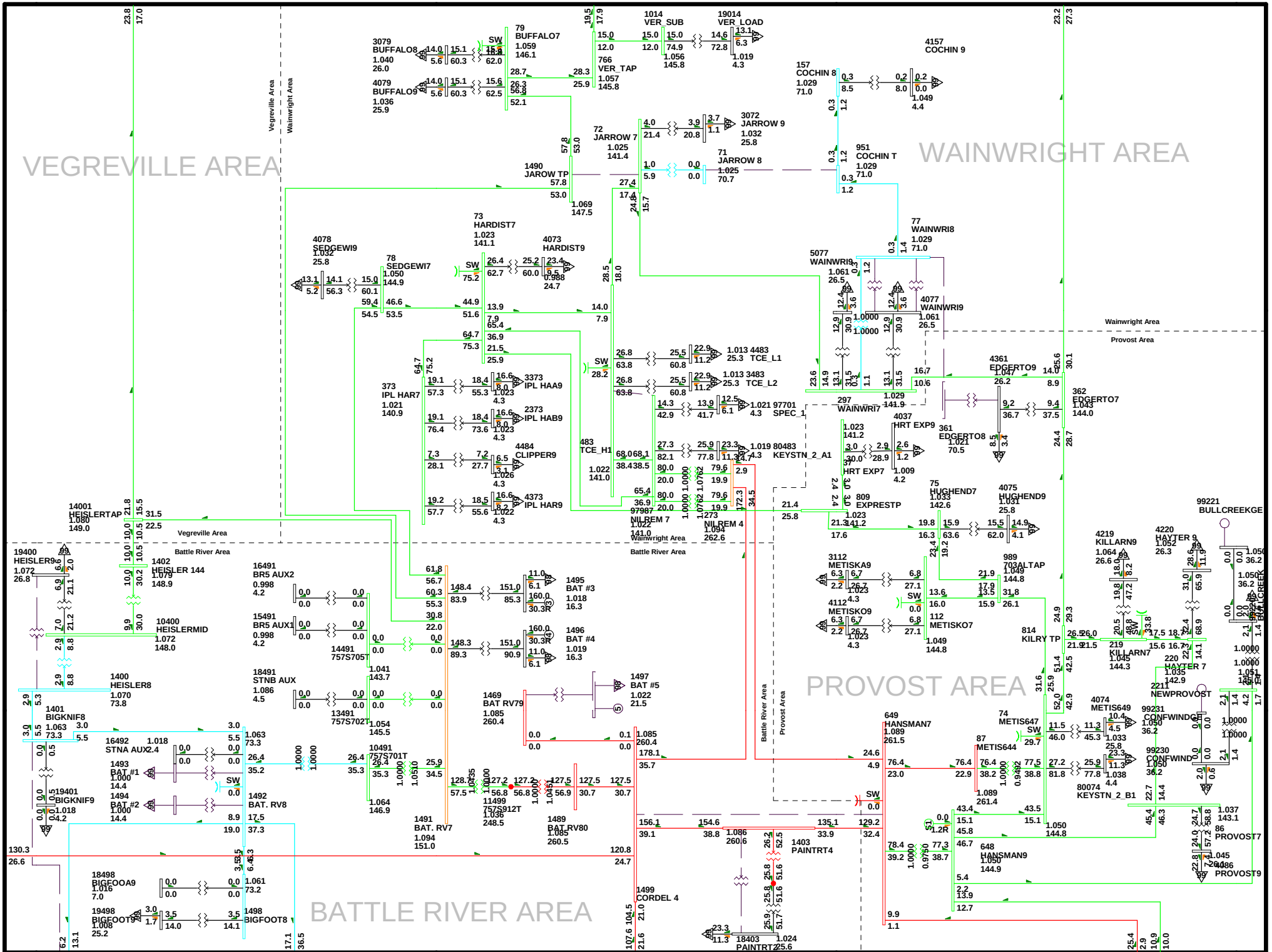
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 09 2010 9:26
D1-06

2012SP-Alt 3-7.a

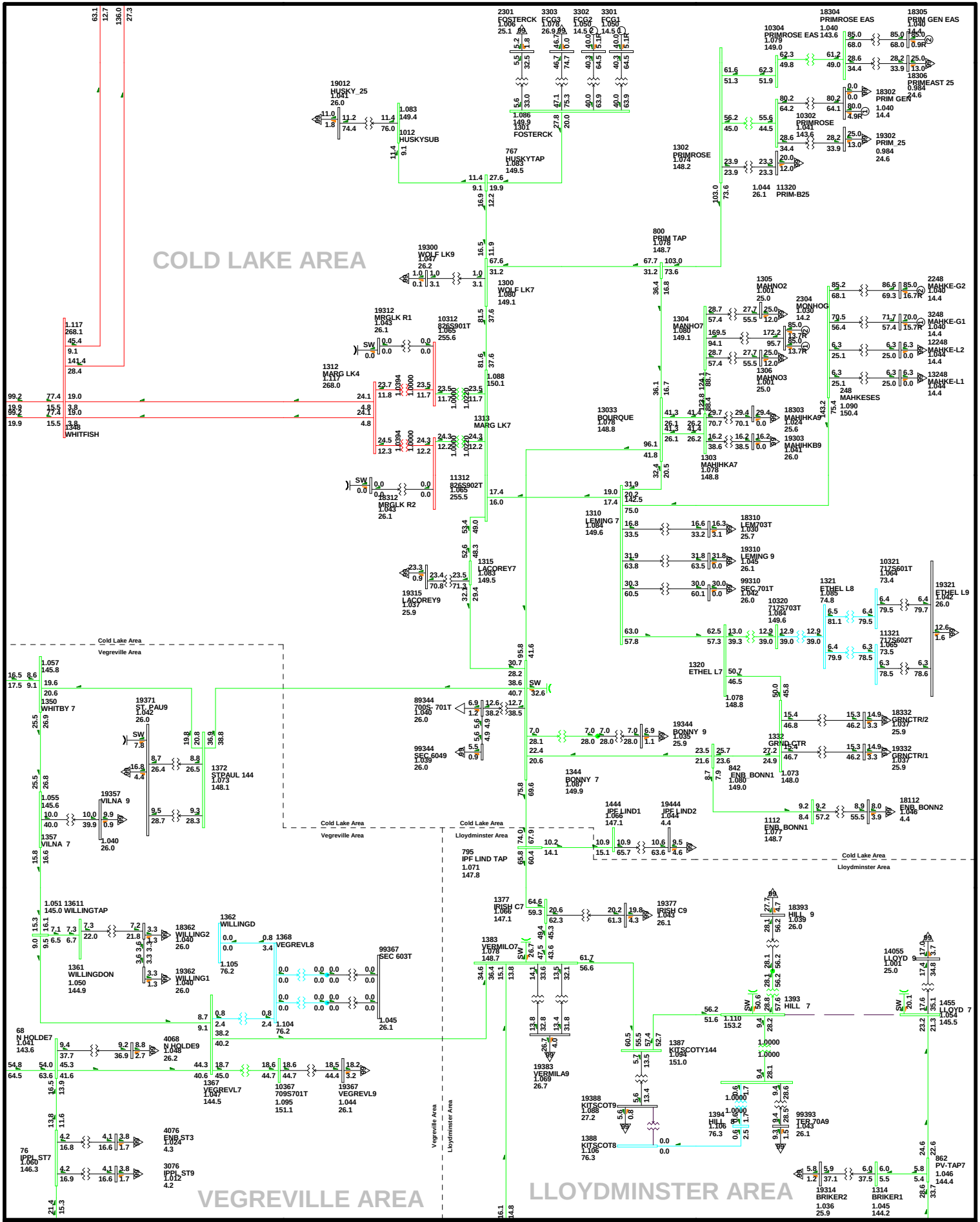
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 09 2010 9:26
D1-06

2012SP-Alt 3-7.b

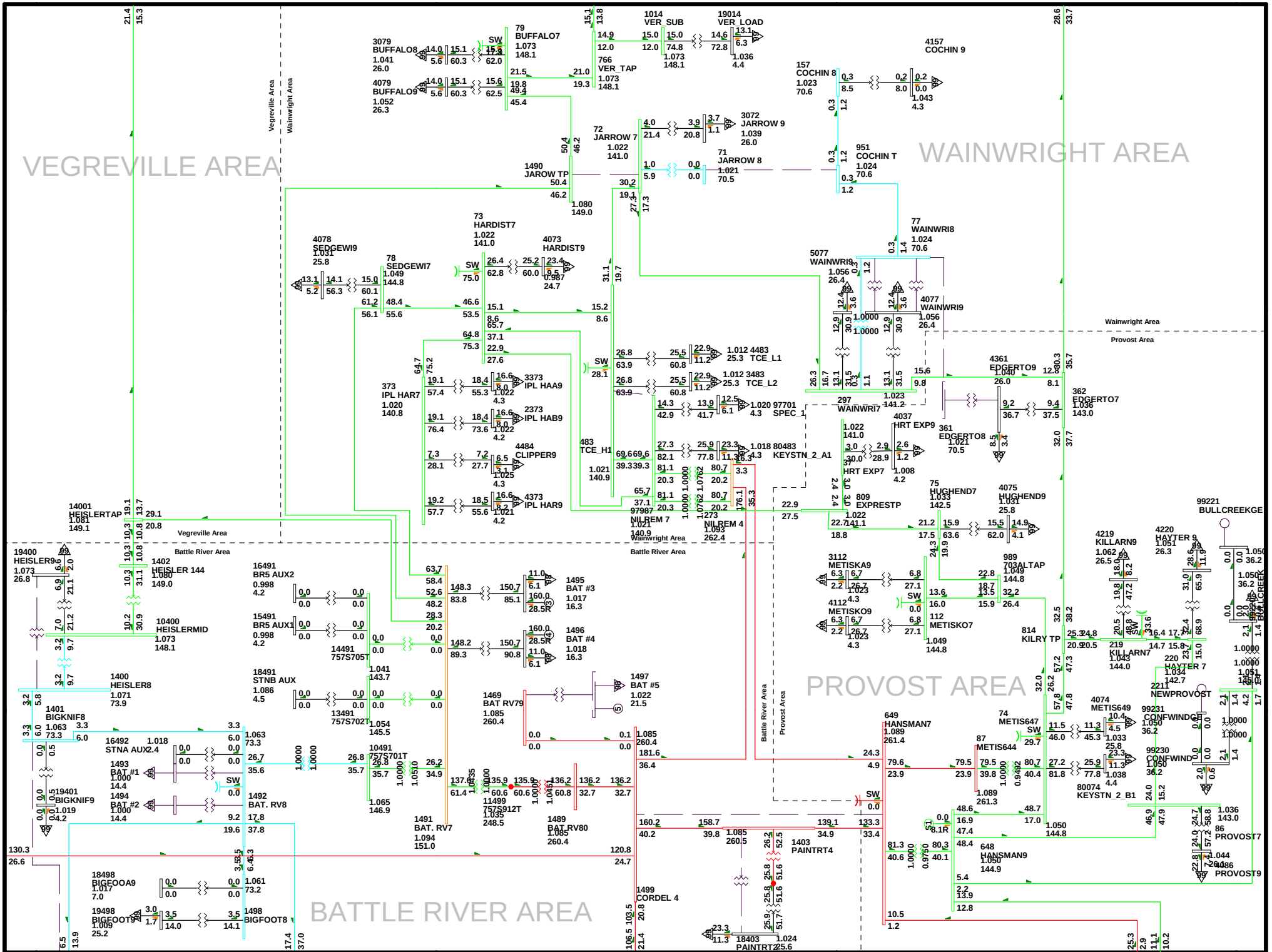
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 09 2010 9:26
D1-07

2012SP-Alt 3-8.a

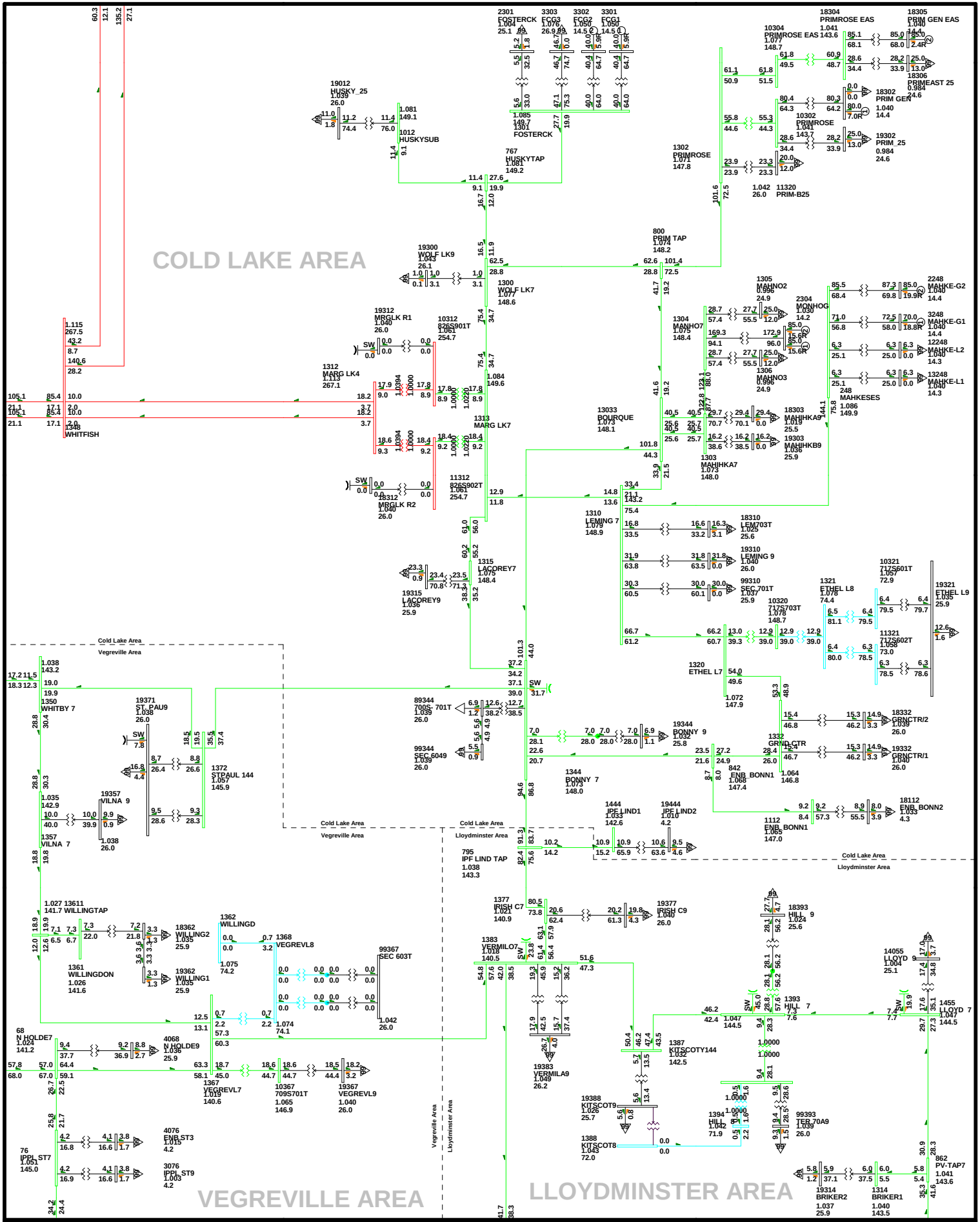
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 09 2010 9:26
D1-07

2012SP-Alt 3-8.b

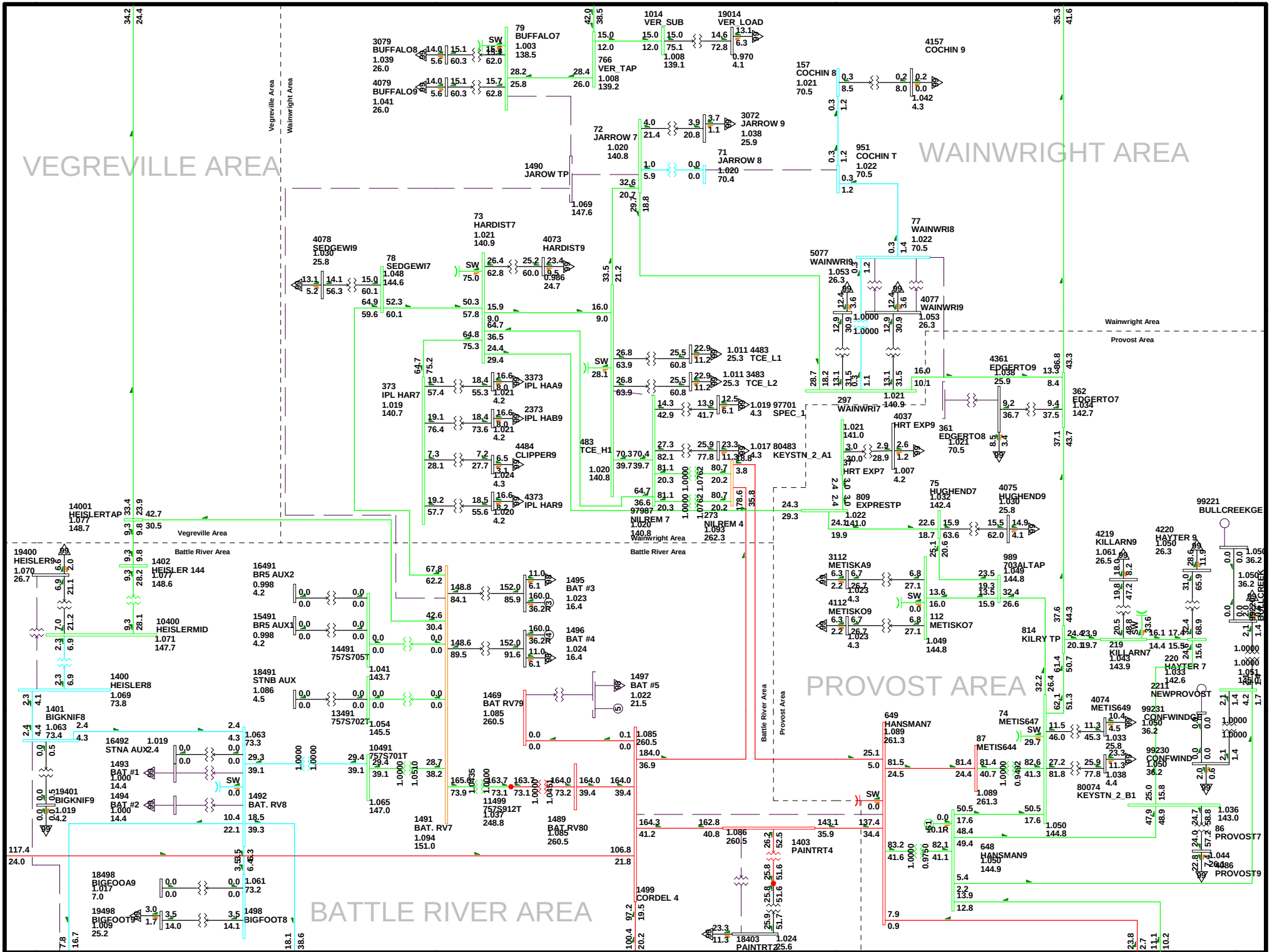
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

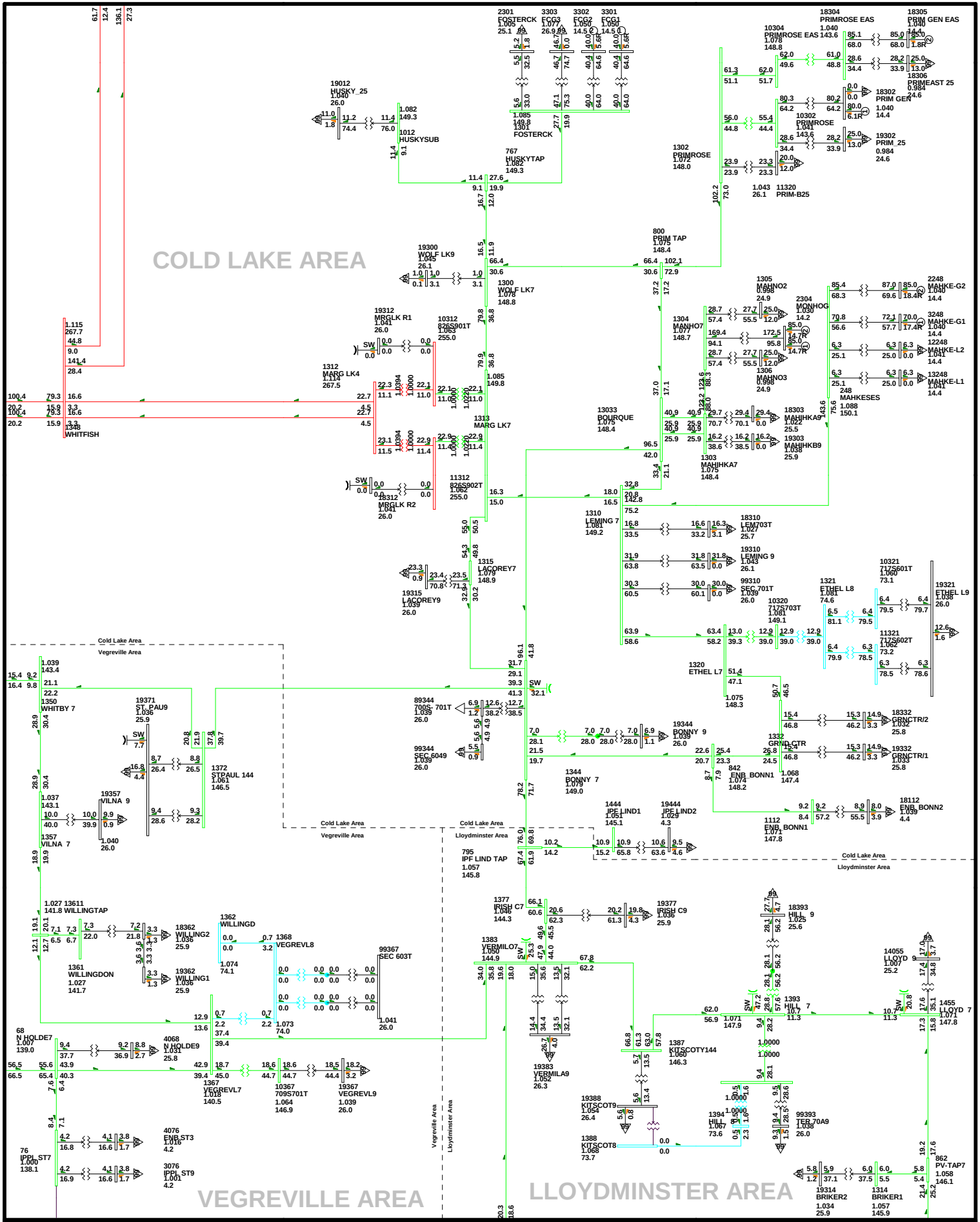


CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 09 2010 9:26
D1-09

2012SP-Alt 3-9.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

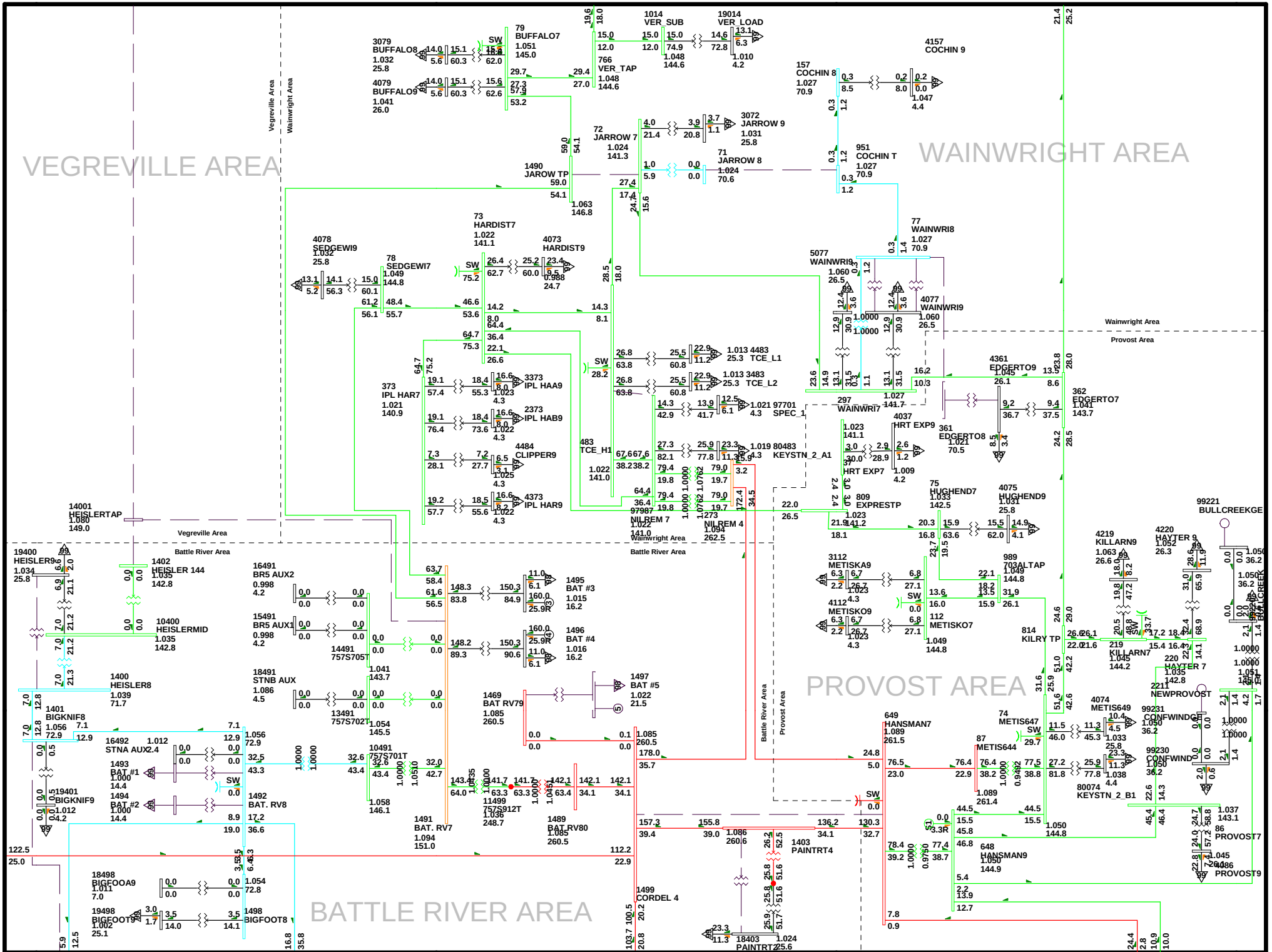

VEGREVILLE AREA
WAINWRIGHT AREA
PROVOST AREA
BATTLE RIVER AREA
Vegreville Area
Wainwright Area
Battle River Area
Provost Area
3079 BUFFALO8 1.039 26.0
4079 BUFFALO9 1.041 26.0
79 BUFFALO7 1.003 138.5
766 VER_TAP 1.008 139.2
1014 VER_SUB 1.008 139.1
19014 VER_LOAD 0.970 4.1
4157 COCHIN 9
157 COCHIN 8 1.021 70.5
1042 4.3
951 COCHIN T 1.022 70.5
72 JARROW 7 1.020 140.8
3072 JARROW 9 1.038 25.9
71 JARROW 8 1.020 70.4
1490 JAROW TP 1.069 147.6
73 HARDIST7 1.021 140.9
4073 HARDIST9 0.986 24.7
4078 SEDGEWI9 1.030 25.8
78 SEDGEWI7 1.048 144.6
77 WAINWRI8 1.022 70.5
5077 WAINWRI9 1.053 26.3
4077 WAINWRI9 1.053 26.3
297 WAINWRI7 1.021 140.9
4361 EDGERTO9 1.038 25.9
362 EDGERTO7 1.034 142.7
361 EDGERTO8 1.021 70.5
4037 HRT EXP9
HRT EXP7 1.007 4.2
373 IPL HAR7 1.019 140.7
3373 IPL HAA9 1.021 4.2
2373 IPL HAB9 1.021 4.2
4484 CLIPPER9 1.024 4.3
4373 IPL HAR9 1.020 4.2
1.011 4483 25.3 TCE_L1
1.011 3483 25.3 TCE_L2
483 TCE_H1 1.020 140.8
1.019 97701 4.3 SPEC_1
1.017 80483 4.3 KEYSTN_2_A1
97987 NIL REM 7 1.020 140.8
1273 NIL REM 4 1.093 262.3
809 EXPRESTP 1.022 141.0
75 HUGHEND7 1.032 142.4
4075 HUGHEND9 1.030 25.8
14001 HEISLERTAP 1.077 148.7
1402 HEISLER 144 1.077 148.6
10400 HEISLERMID 1.071 147.7
19400 HEISLER9 1.070 26.7
1400 HEISLER8 1.069 73.8
1401 BIGKNIF8 1.063 73.4
19401 BIGKNIF9 1.019 4.2
16491 BR5 AUX2 0.998 4.2
15491 BR5 AUX1 0.998 4.2
14491 757S705T 1.041 143.7
18491 STNB AUX 1.086 4.5
13491 757S702T 1.054 145.5
10491 757S701T 1.065 147.0
16492 STNA AUX 1.019 2.4
1493 BAT #1 1.000 14.4
1494 BAT #2 1.000 14.4
1492 BAT. RV8 18.5
1491 BAT. RV7 1.094 151.0
1495 BAT #3 1.023 16.4
1496 BAT #4 1.024 16.4
1497 BAT #5 1.022 21.5
1469 BAT RV79 1.085 260.5
11499 757S912T 1.037 248.8
1489 BAT RV80 1.085 260.5
1499 CORDEL 4
1403 PAINTRT4
18403 PAINTRT 1.024 25.6
18498 BIGEOOA9 1.017 7.0
19498 BIGFOOT9 1.009 25.2
1498 BIGFOOT8 1.061 73.2
649 HANSMAN7 1.089 261.3
74 METIS647
87 METIS644
1.089 261.3
648 HANSMAN9 1.050 144.9
3112 METISKA9
4112 METISKO9
112 METISKO7 1.049 144.8
989 703ALTAP 1.049 144.8
814 KILRY TP
4074 METIS649
80074 KEYSTN_2_B1
4219 KILLARN9 1.061 26.5
219 KILLARN7 1.043 143.9
4220 HAYTER 9 1.050 26.3
220 HAYTER 7 1.033 142.6
2211 NEWPROVOST
99221 BULLCREEKGE
99231 CONFWINDGE 1.050 36.2
99230 CONFWIND 1.050 36.2
86 PROVOST7 1.036 143.0
86 PROVOST9 1.044 144.6
CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 09 2010 9:26
D1-09
2012SP-Alt 3-9.b
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 09 2010 9:26
D1-10

2012SP-Alt 3-10.a

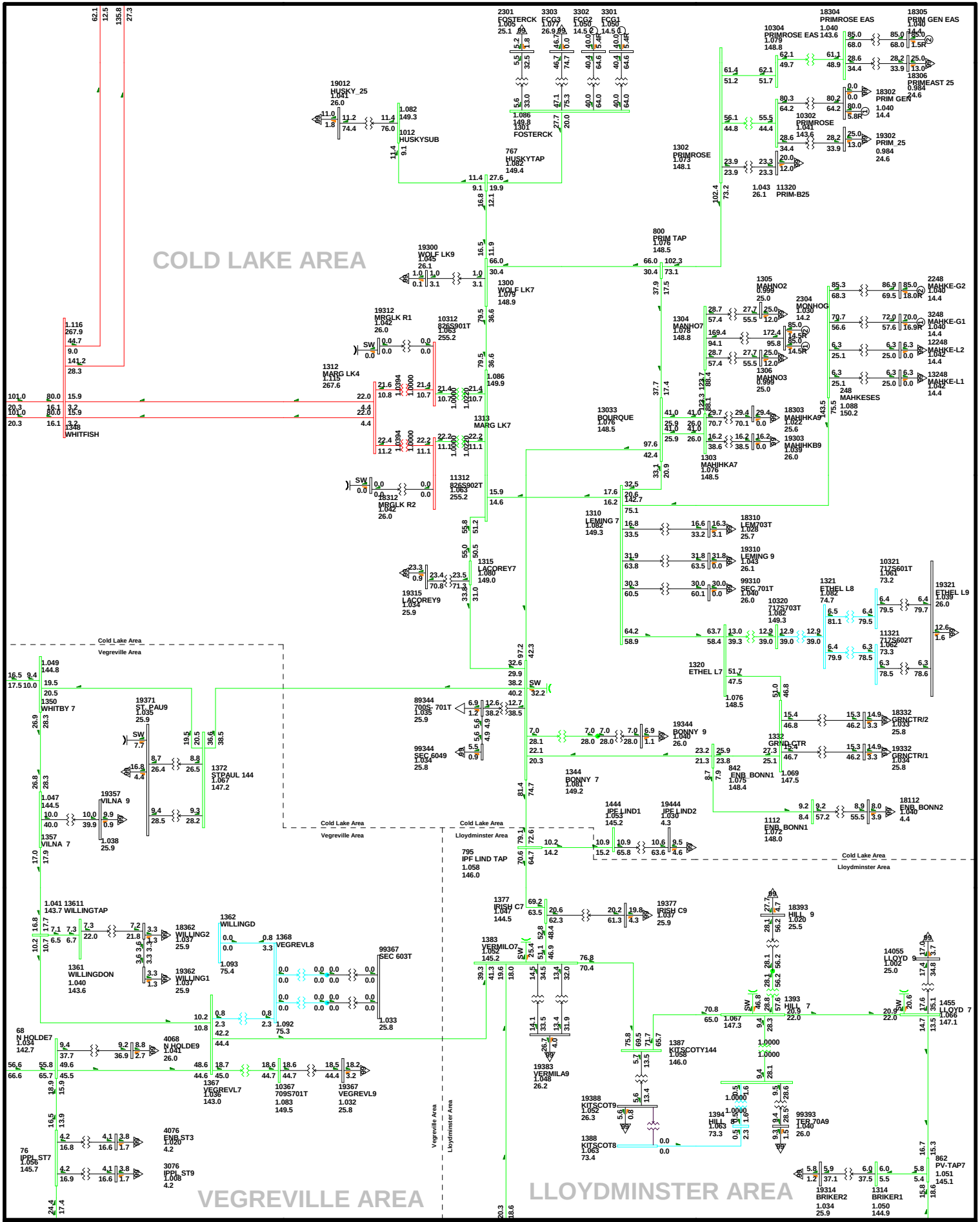
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 09 2010 9:27
D1-10

2012SP-Alt 3-10.b

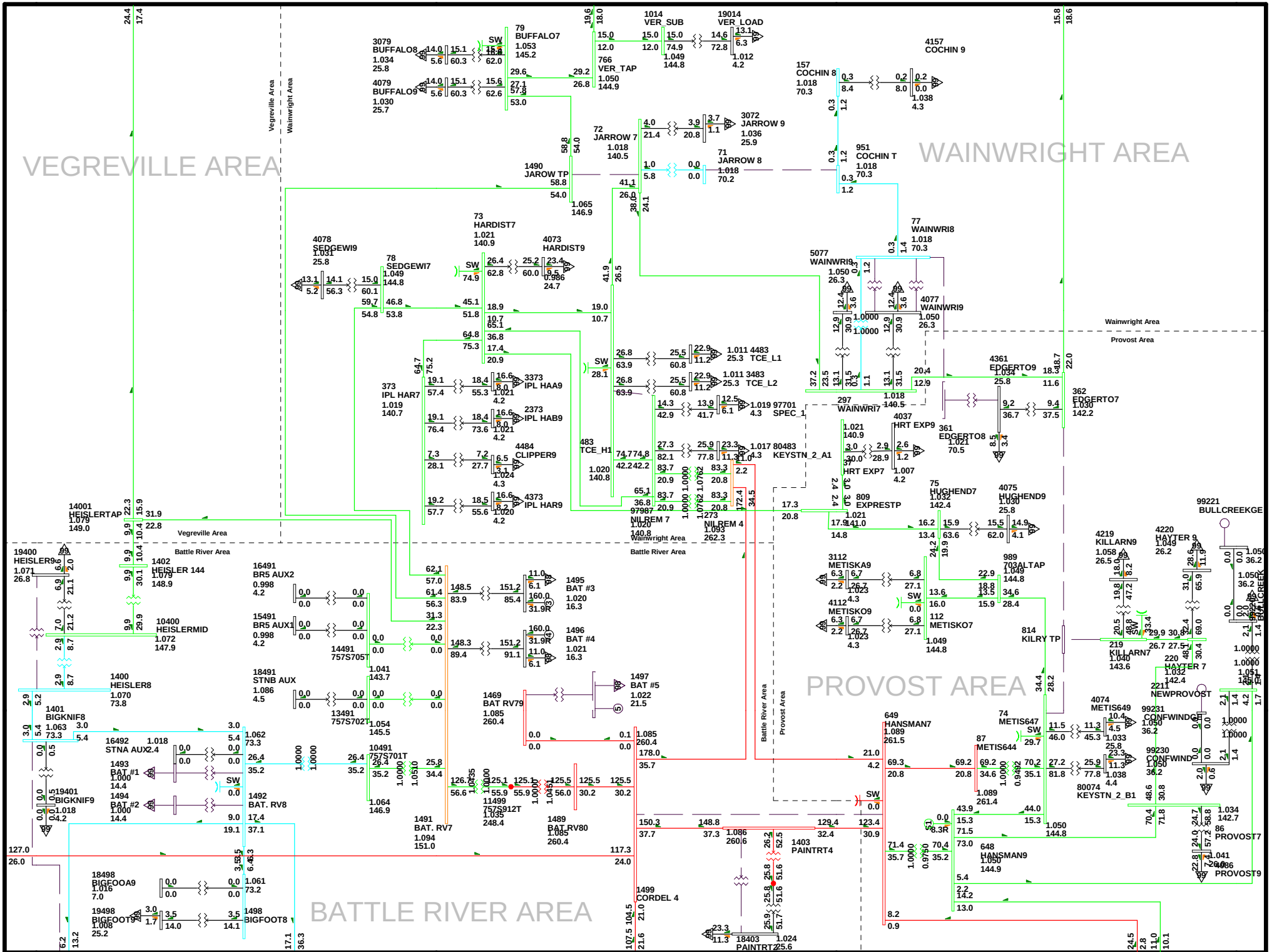
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 09 2010 9:27
D1-11b

2012SP-Alt 3-11.a

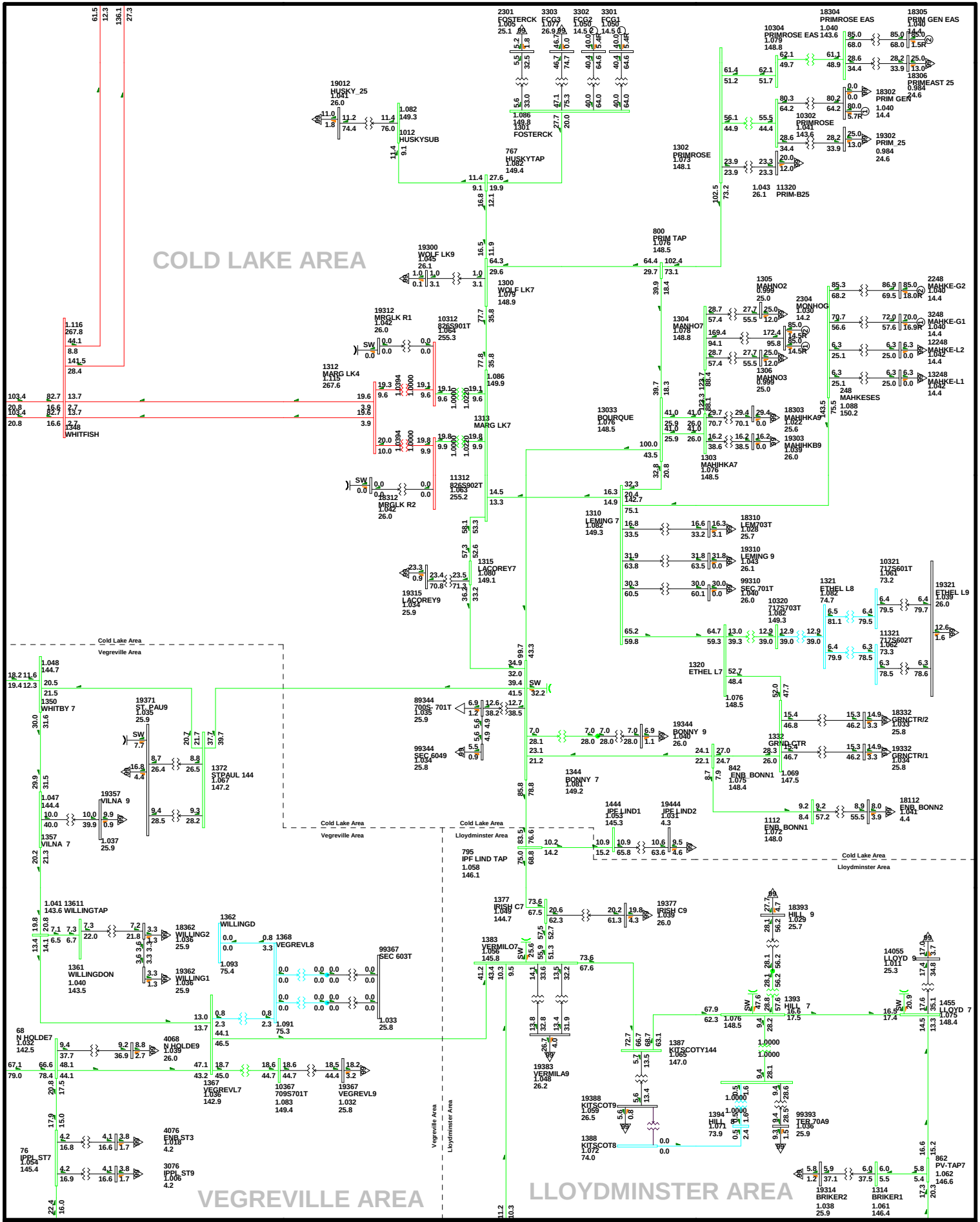
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 09 2010 9:27
D1-11b

2012SP-Alt 3-11.b

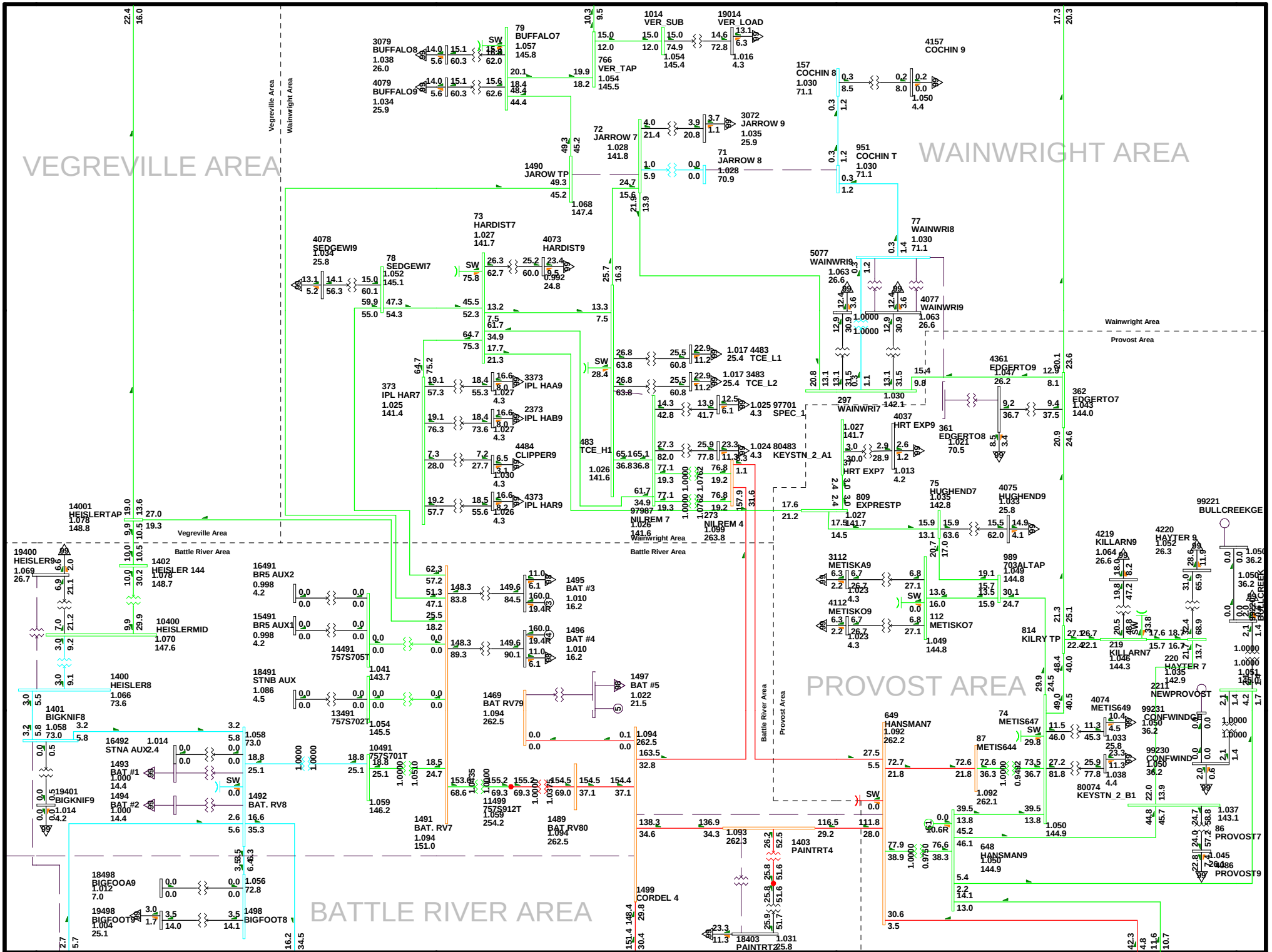
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 09 2010 9:27
D1-14

2012SP-Alt 3-12.a

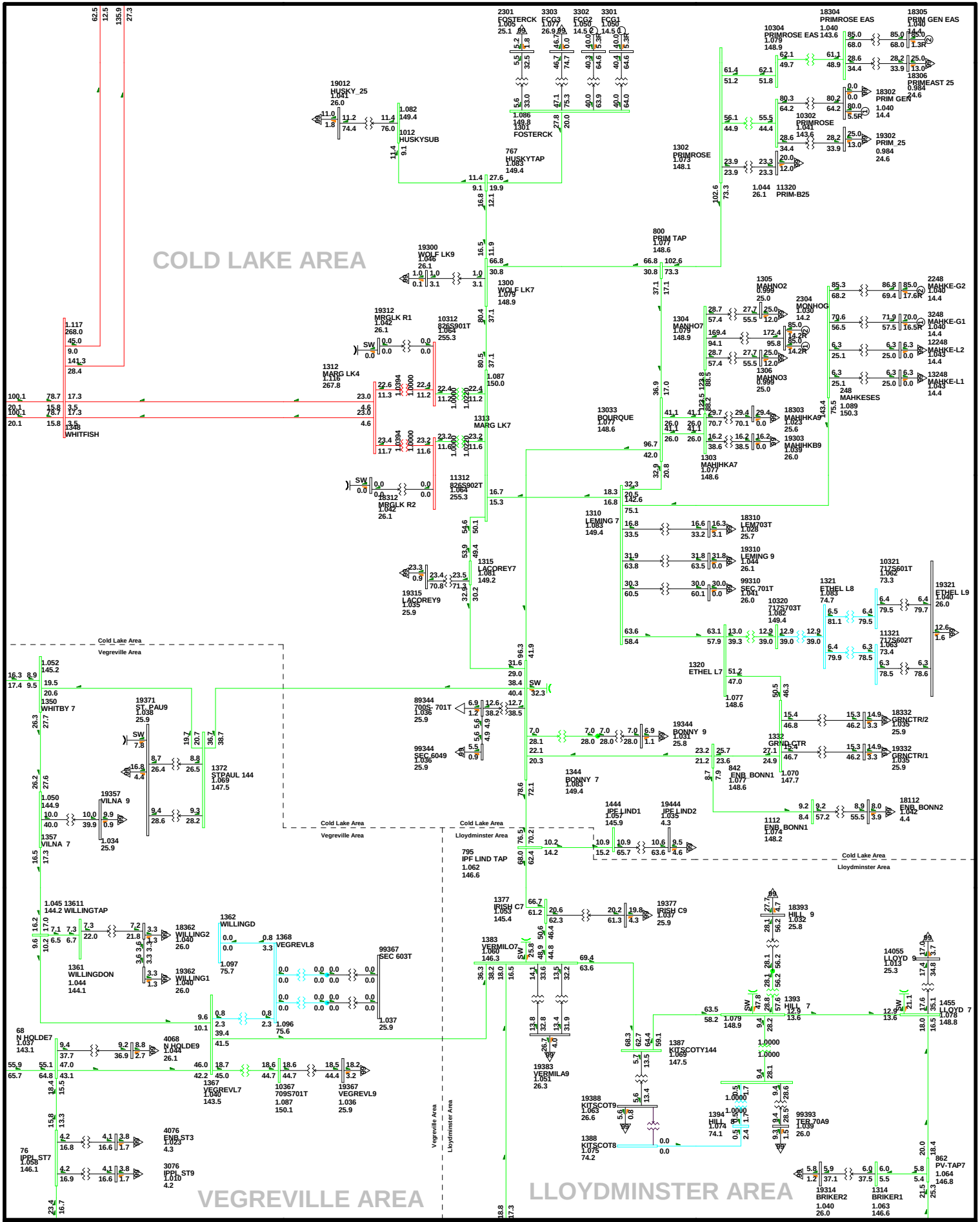
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 09 2010 9:27
D1-14

2012SP-Alt 3-12.b

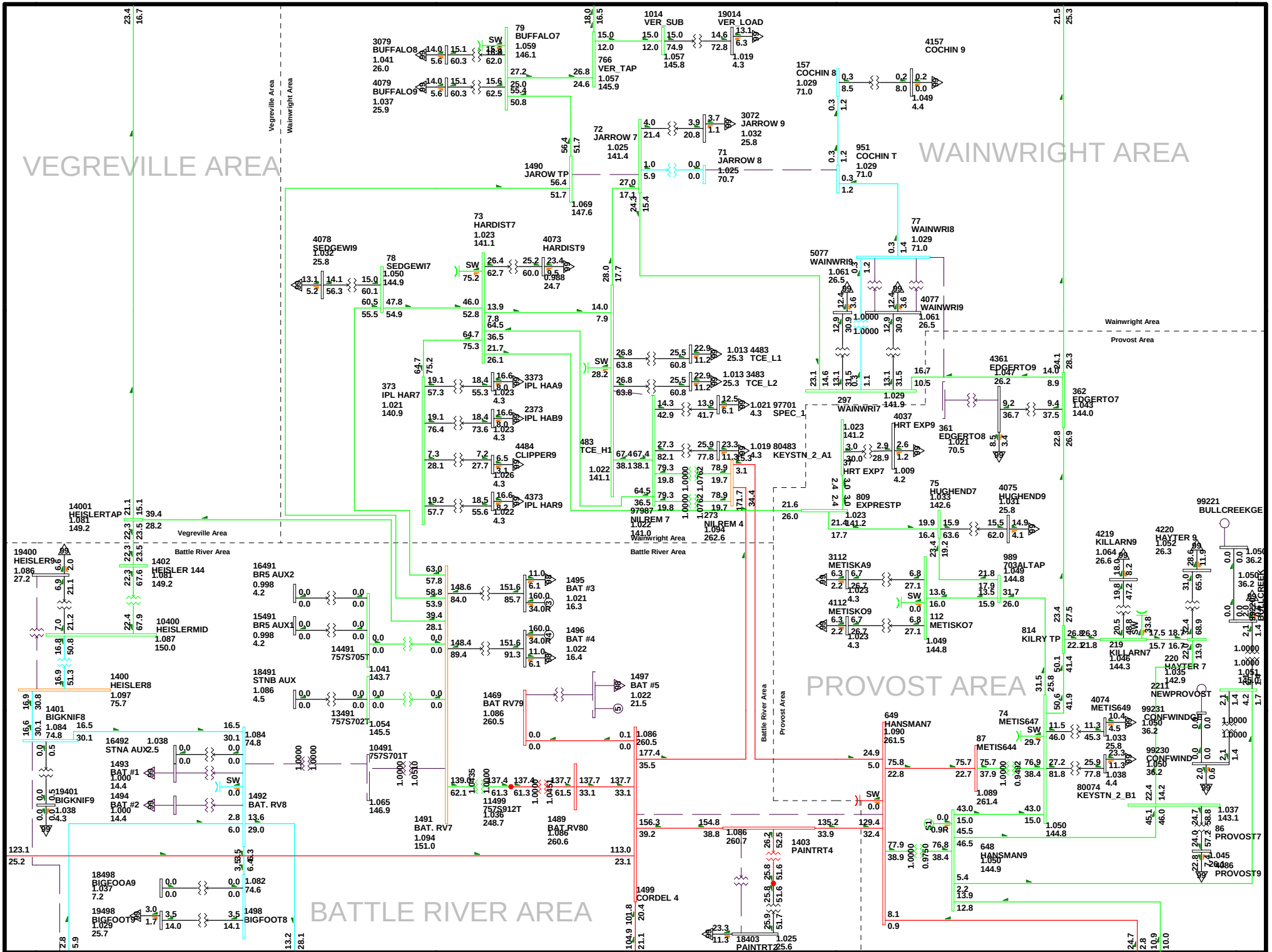
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 09 2010 9:27
D1-15

2012SP-Alt 3-13.a

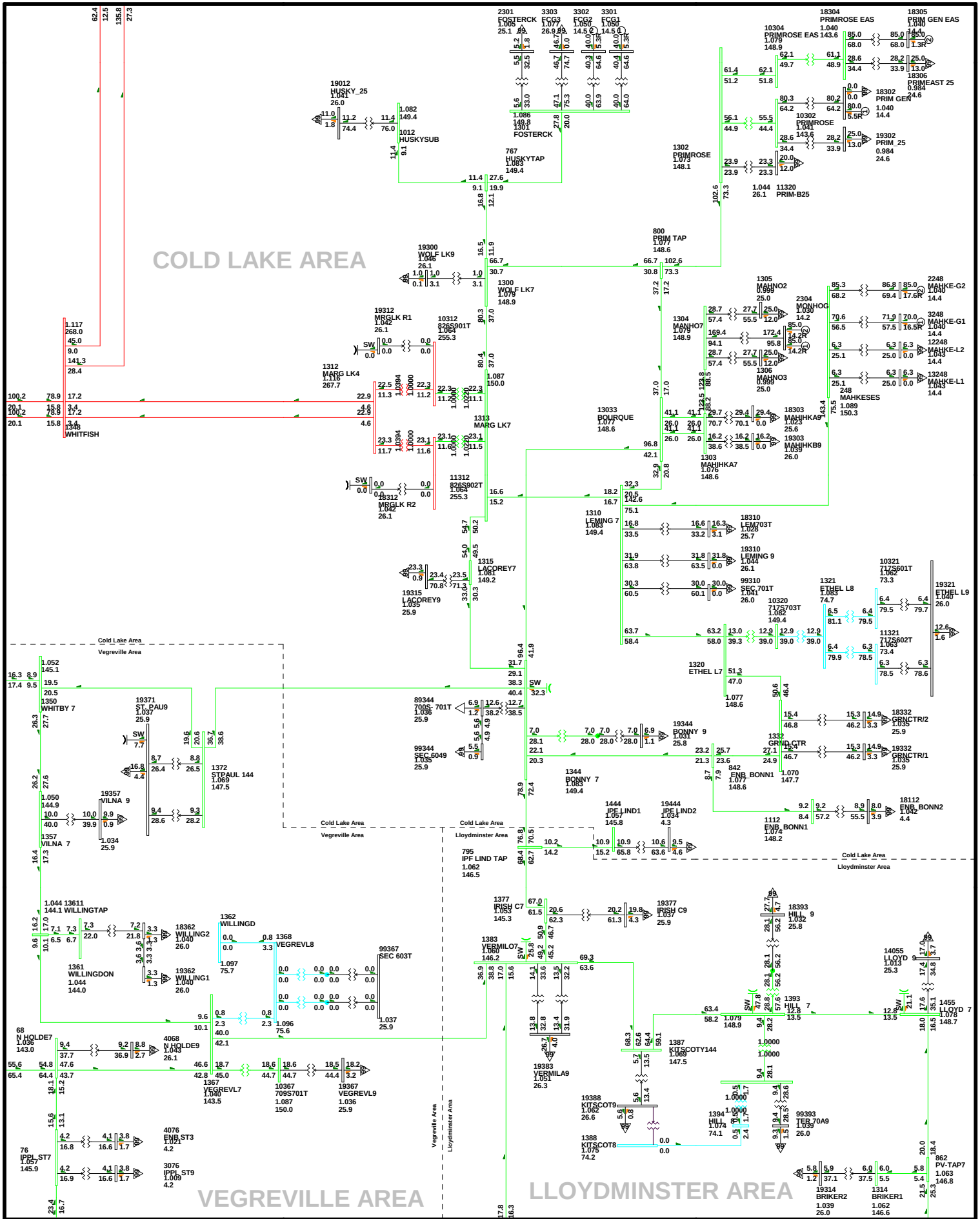
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 09 2010 9:27
D1-15

2012SP-Alt 3-13.b

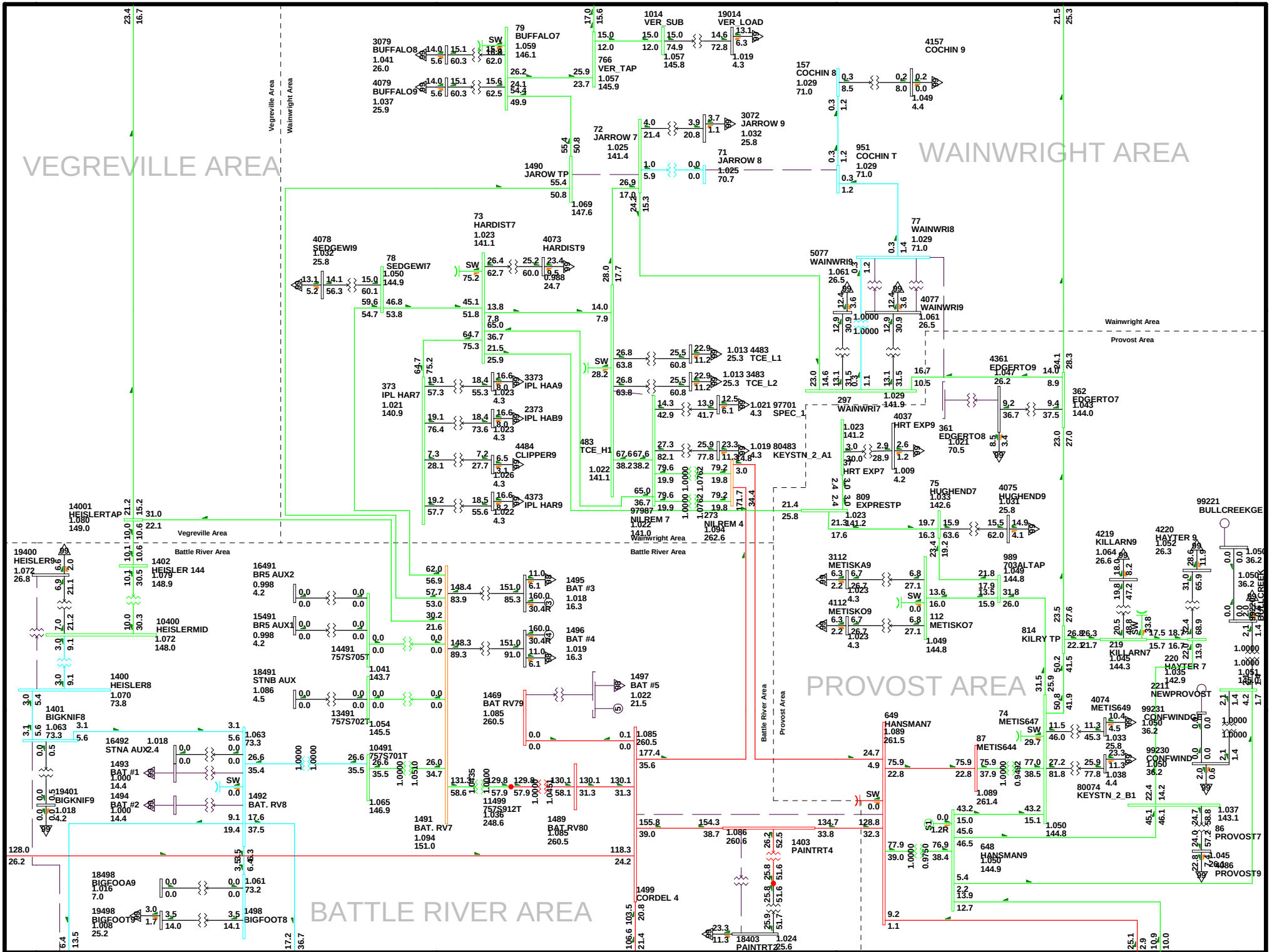
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 09 2010 9:27
D1-18

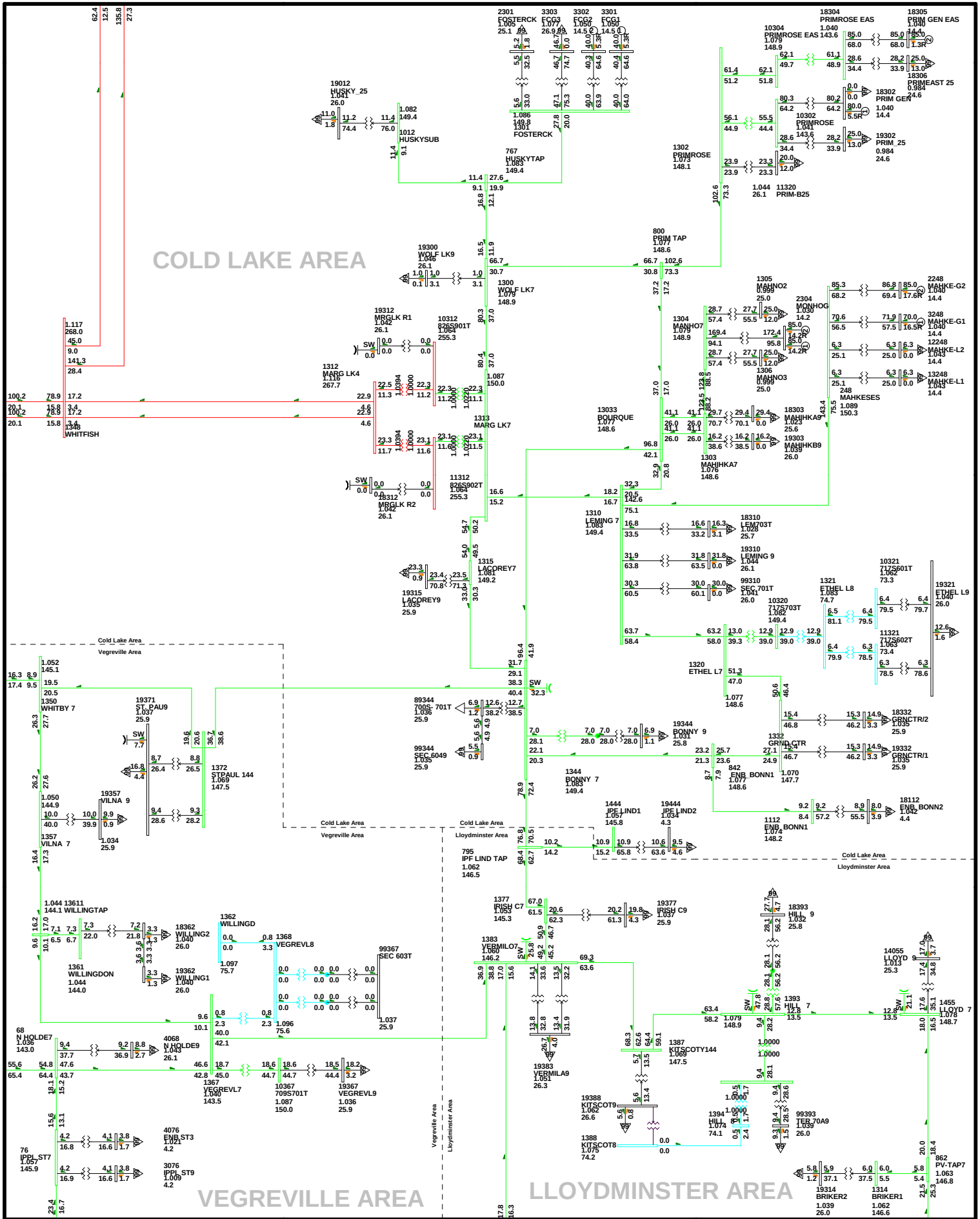
2012SP-Alt 3-14.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 09 2010 9:27
D1-18

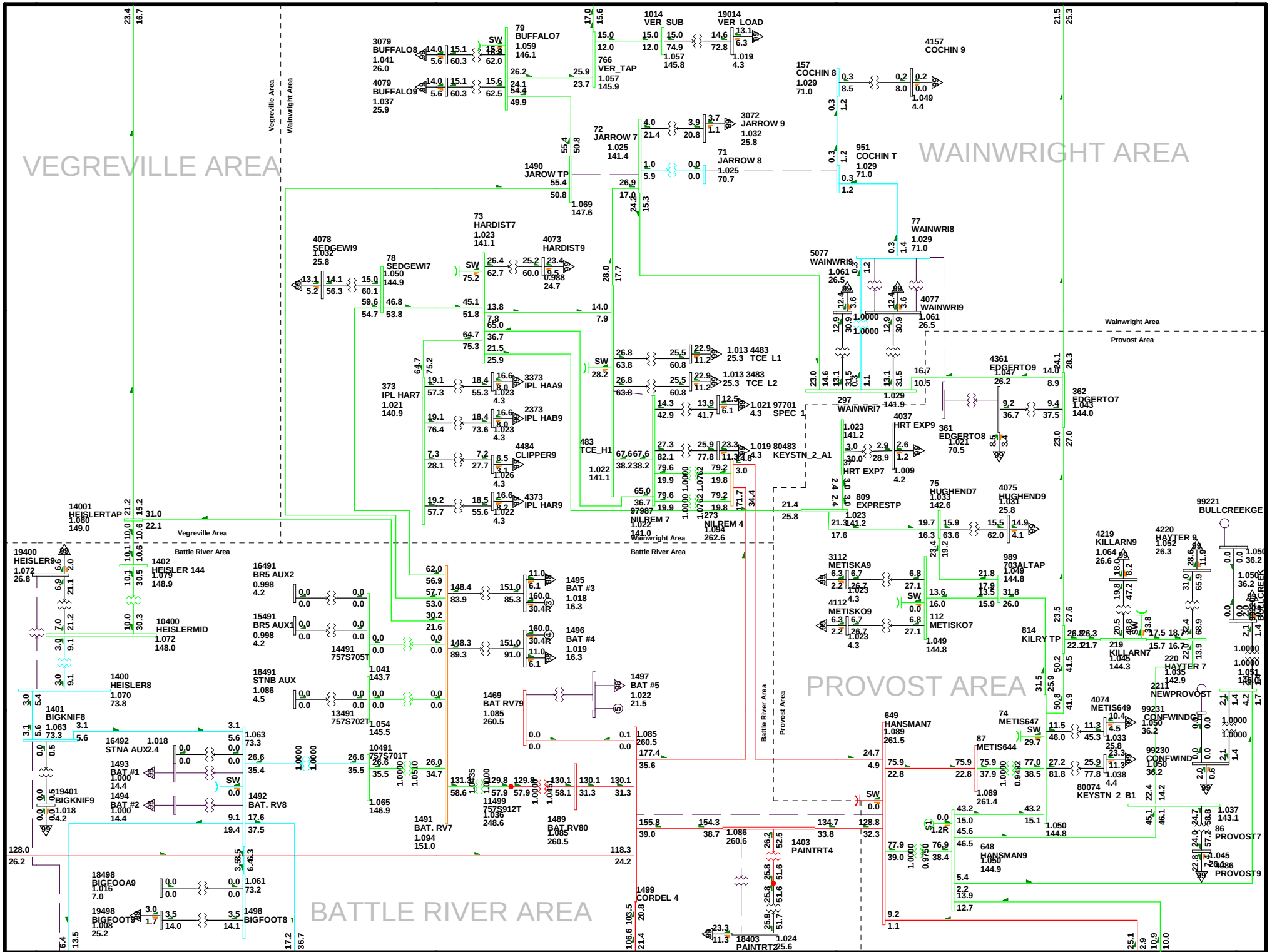
2012SP-Alt 3-14.b



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 09 2010 9:27
D1-19

2012SP-Alt 3-15.a

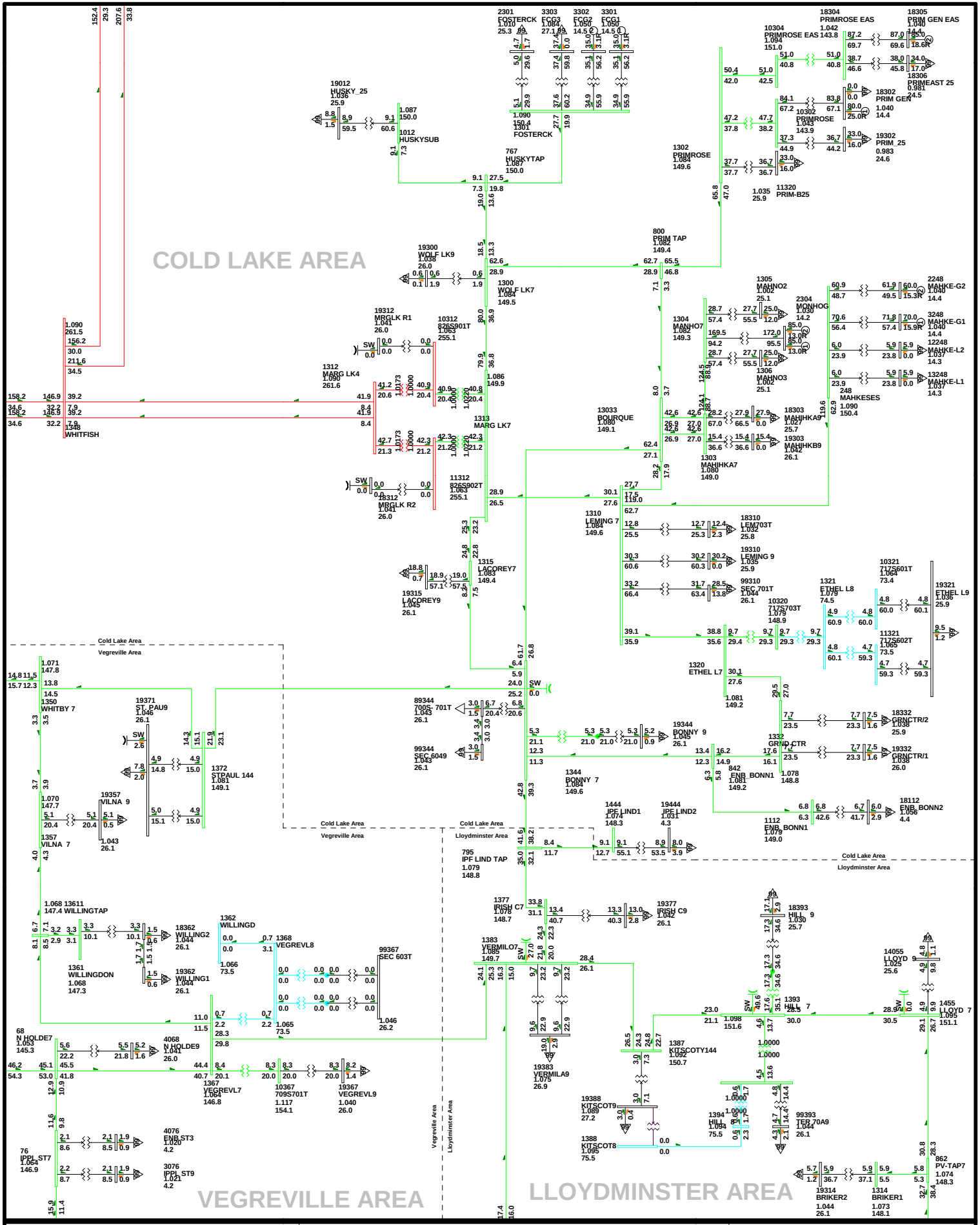
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 09 2010 9:27
D1-19

2012SP-Alt 3-15.b

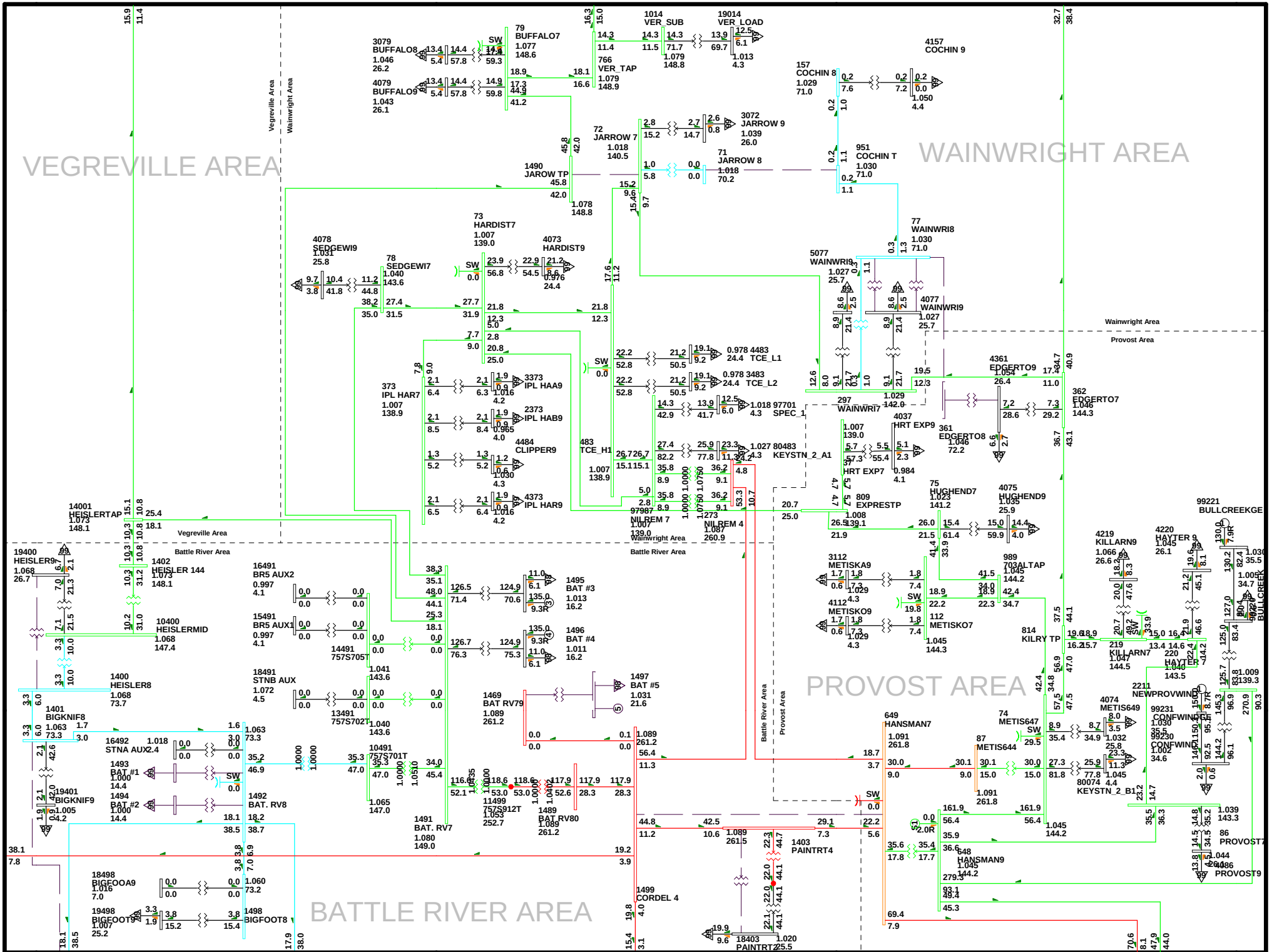
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

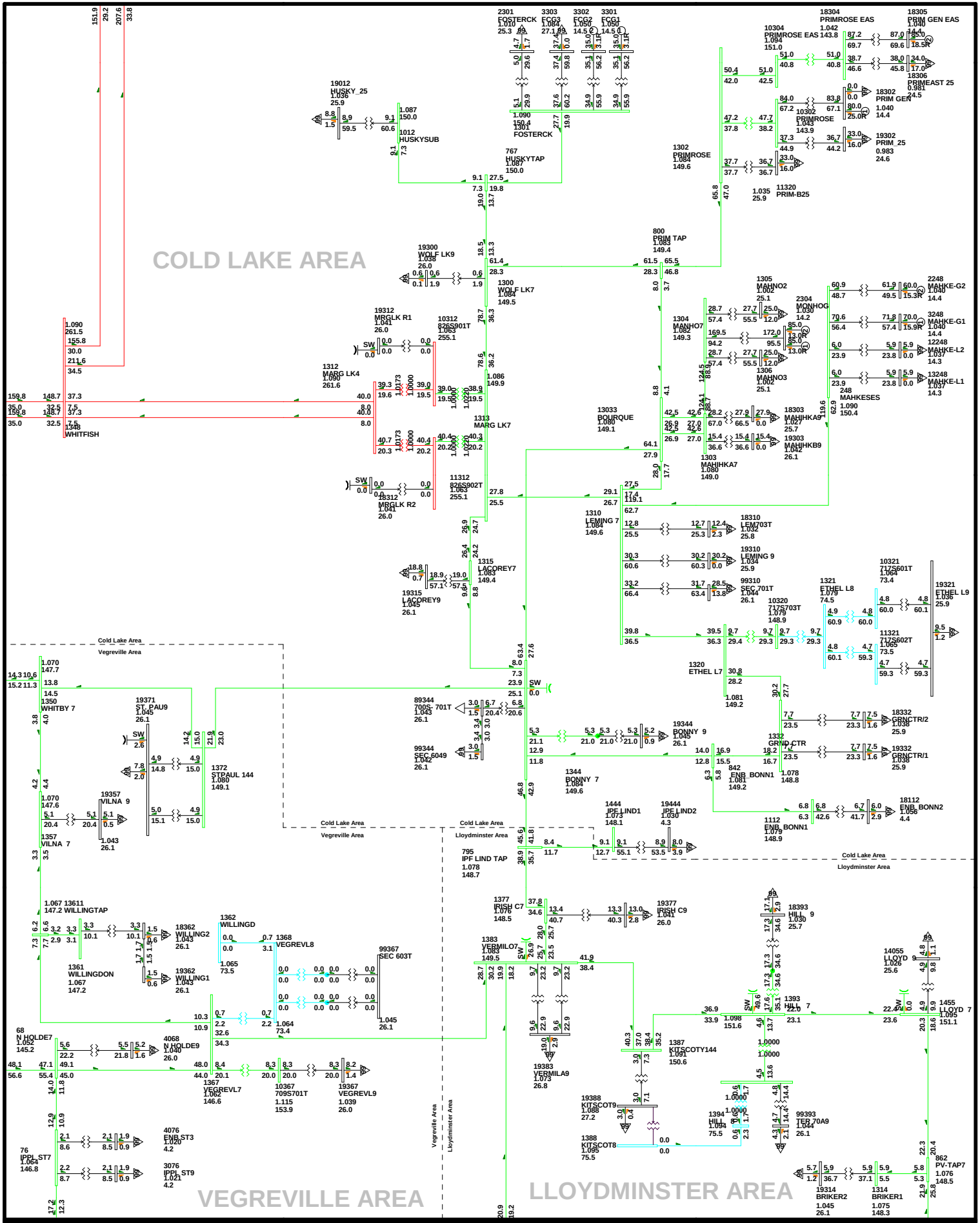


CENTRAL AREA STUDY
2012 SUMMER LIGHT BASE CASE REVISION 7.2.1
FRI, APR 09 2010 9:31
D1-00

2012SL-Alt 3-1.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120PU 0.940PU
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

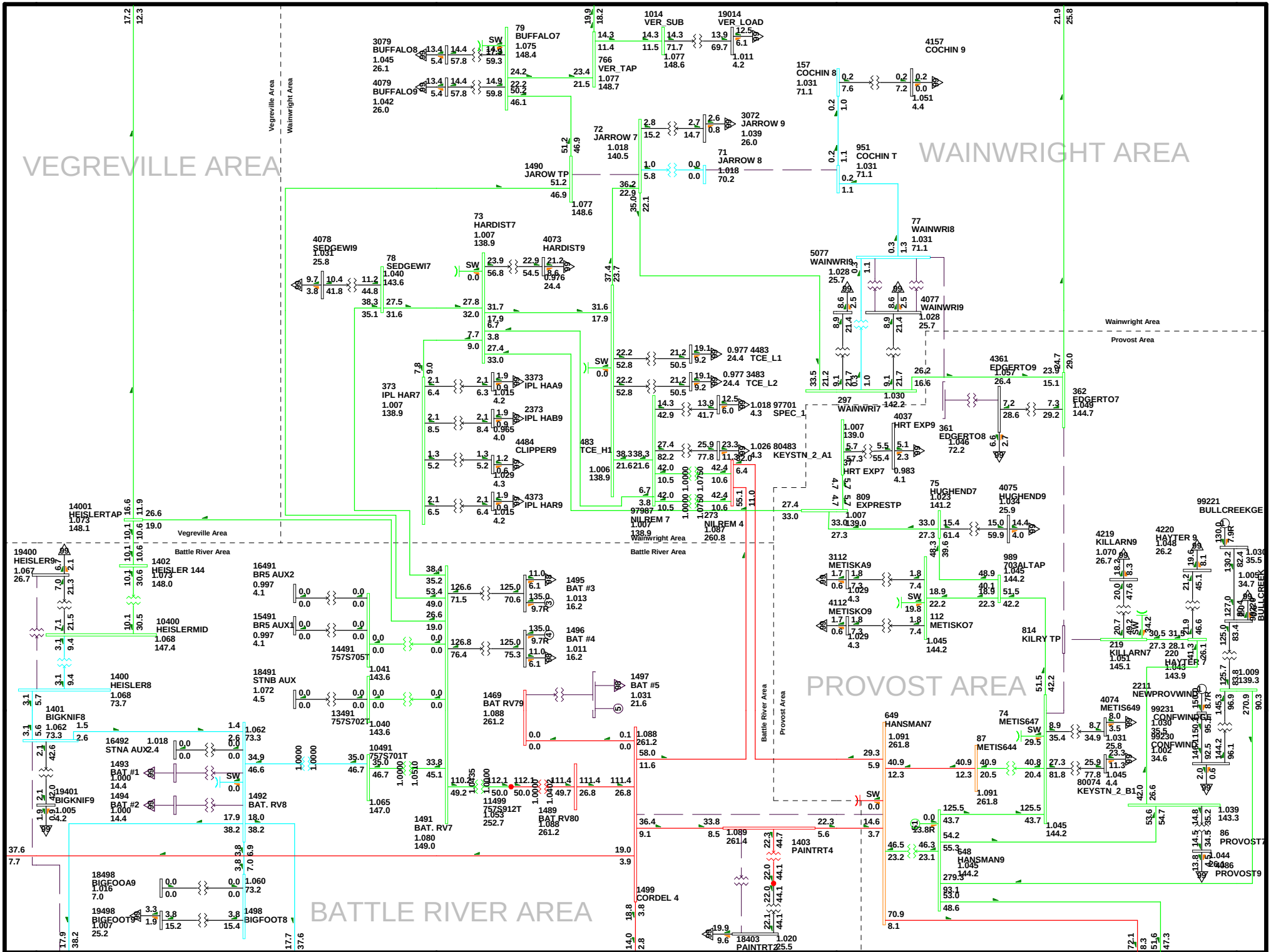

VEGREVILLE AREA
WAINWRIGHT AREA
PROVOST AREA
BATTLE RIVER AREA
Vegreville Area
Wainwright Area
Battle River Area
Provost Area
3079 BUFFALO8 1.046 26.2
4079 BUFFALO9 1.043 26.1
79 BUFFALO7 1.077 148.6
766 VER_TAP 1.079 148.9
1014 VER_SUB 1.079 148.8
19014 VER_LOAD 1.013 4.3
4157 COCHIN 9
157 COCHIN 8 1.029 71.0
1.050 4.4
951 COCHIN T 1.030 71.0
72 JARROW 7 1.018 140.5
3072 JARROW 9 1.039 26.0
71 JARROW 8 1.018 70.2
1490 JAROW TP 45.8 42.0
1.078 148.8
73 HARDIST7 1.007 139.0
4073 HARDIST9 0.976 24.4
4078 SEDGEWI9 1.031 25.8
78 SEDGEWI7 1.040 143.6
77 WAINWRI8 1.030 71.0
5077 WAINWRI9 1.027 25.7
4077 WAINWRI9 1.027 25.7
4361 EDGERTO9 1.054 26.4
362 EDGERTO7 1.046 144.3
361 EDGERTO8 1.046 72.2
373 IPL HAR7 1.007 138.9
3373 IPL HAA9 1.016 4.2
2373 IPL HAB9 0.965 4.0
4484 CLIPPER9 1.030 4.3
4373 IPL HAR9 1.016 4.2
0.978 4483 TCE_L1 24.4
0.978 3483 TCE_L2 24.4
483 TCE_H1 1.007 138.9
1.018 97701 SPEC_1 4.3
1.027 80483 KEYSTN_2_A1 4.3
297 WAINWRI7 1.029 142.0
4037 HRT EXP9 1.007 139.0
HRT EXP7 0.984 4.1
809 EXPRESTP 1.008 139.1
75 HUGHEND7 1.023 141.2
4075 HUGHEND9 1.035 25.9
97987 NIL REM 7 1.007 139.0
1273 NIL REM 4 1.087 260.9
14001 HEISLERTAP 1.073 148.1
1402 HEISLER 144 1.073 148.1
10400 HEISLERMID 1.068 147.4
19400 HEISLER9 1.068 26.7
1400 HEISLER8 1.068 73.7
1401 BIGKNIF8 1.063 73.3
19401 BIGKNIF9 1.005 4.2
16491 BR5 AUX2 0.997 4.1
15491 BR5 AUX1 0.997 4.1
18491 STNB AUX 1.072 4.5
16492 STNA AUX 1.018 2.4
13491 757S702T 1.040 143.6
14491 757S705T 1.041 143.6
10491 757S701T 1.065 147.0
11499 757S912T 1.053 252.7
1495 BAT #3 1.013 16.2
1496 BAT #4 1.011 16.2
1497 BAT #5 1.031 21.6
1469 BAT RV79 1.089 261.2
1493 BAT #1 1.000 14.4
1494 BAT #2 1.000 14.4
1492 BAT. RV8
1491 BAT. RV7 1.080 149.0
1489 BAT.RV80 1.089 261.2
1499 CORDEL 4
18403 PAINTRT2 1.020 25.5
1403 PAINTRT4
649 HANSMAN7 1.091 261.8
648 HANSMAN9 1.045 144.2
87 METIS644 1.091 261.8
74 METIS647 1.032 25.8
80074 KEYSTN_2_B1 4.4
3112 METISKA9 1.029 4.3
4112 METISKO9 1.029 4.3
112 METISKO7 1.045 144.3
989 703ALTAP 1.045 144.2
814 KILRY TP
4074 METIS649 1.002 34.6
99231 CONFWING1 1.030 35.5
99230 CONFWING2 1.002 34.6
2211 NEWPROVWIND 1.045 144.2
4219 KILLARN9 1.066 26.6
219 KILLARN7 1.047 144.5
4220 HAYTER 9 1.045 26.1
220 HAYTER 1.040 143.5
99221 BULLCREEKGE
BULLCREEK
18498 BIGFOOA9 1.016 7.0
19498 BIGFOOT9 1.007 25.2
1498 BIGFOOT8 1.060 73.2
86 PROVOST7 1.039 143.3
PROVOST9 1.044 144.1
CENTRAL AREA STUDY
2012 SUMMER LIGHT BASE CASE REVISION 7.2.1
FRI, APR 09 2010 9:31
D1-00
2012SL-Alt 3-1.b
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER LIGHT BASE CASE REVISION 7.2.1
FRI, APR 09 2010 9:31
D1-11b

2012SL-Alt 3-2.a

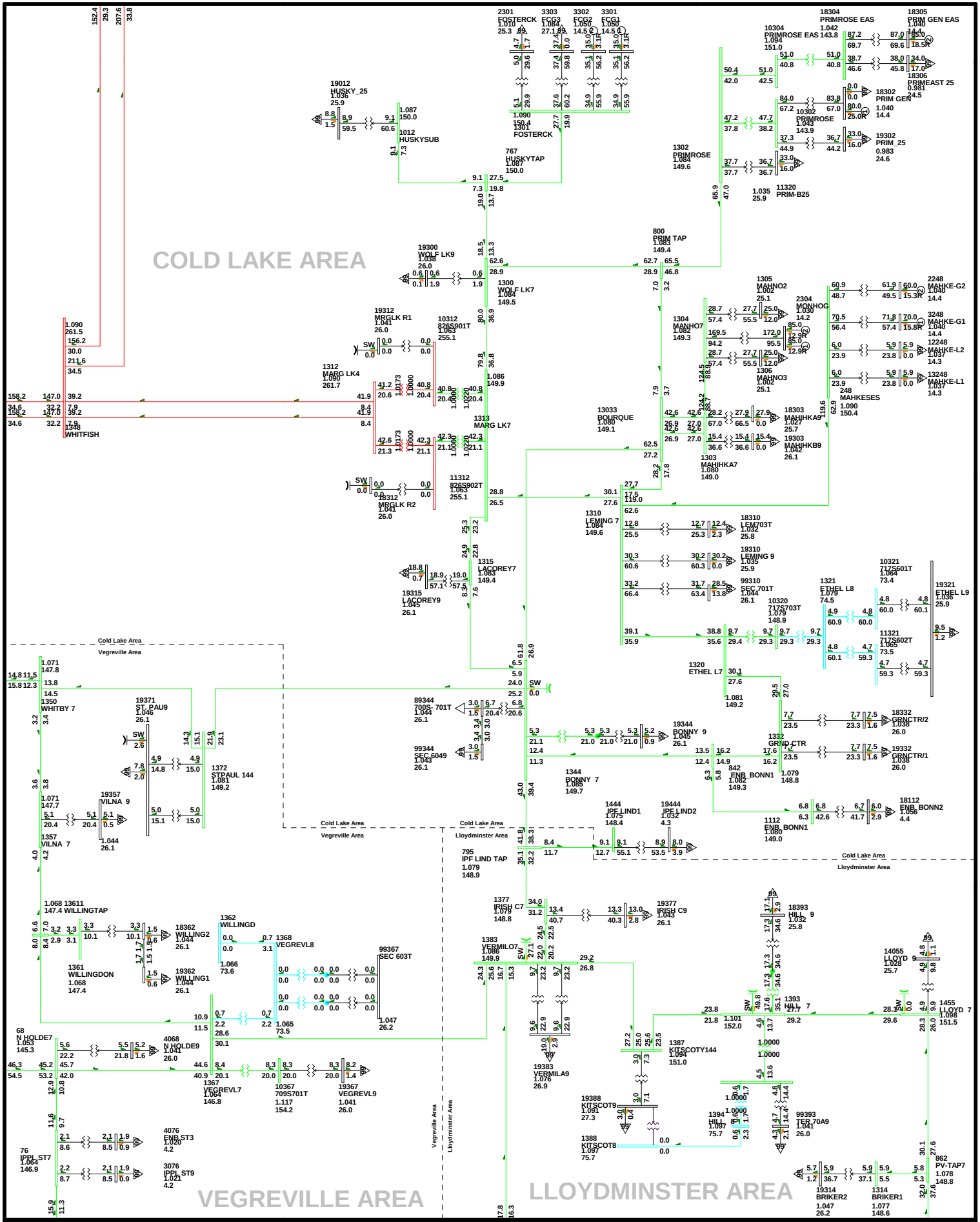
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120PU 0.940PU
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER LIGHT BASE CASE REVISION 7.2.1
FRI, APR 09 2010 9:31
D1-11b

2012SL-Alt 3-2.b

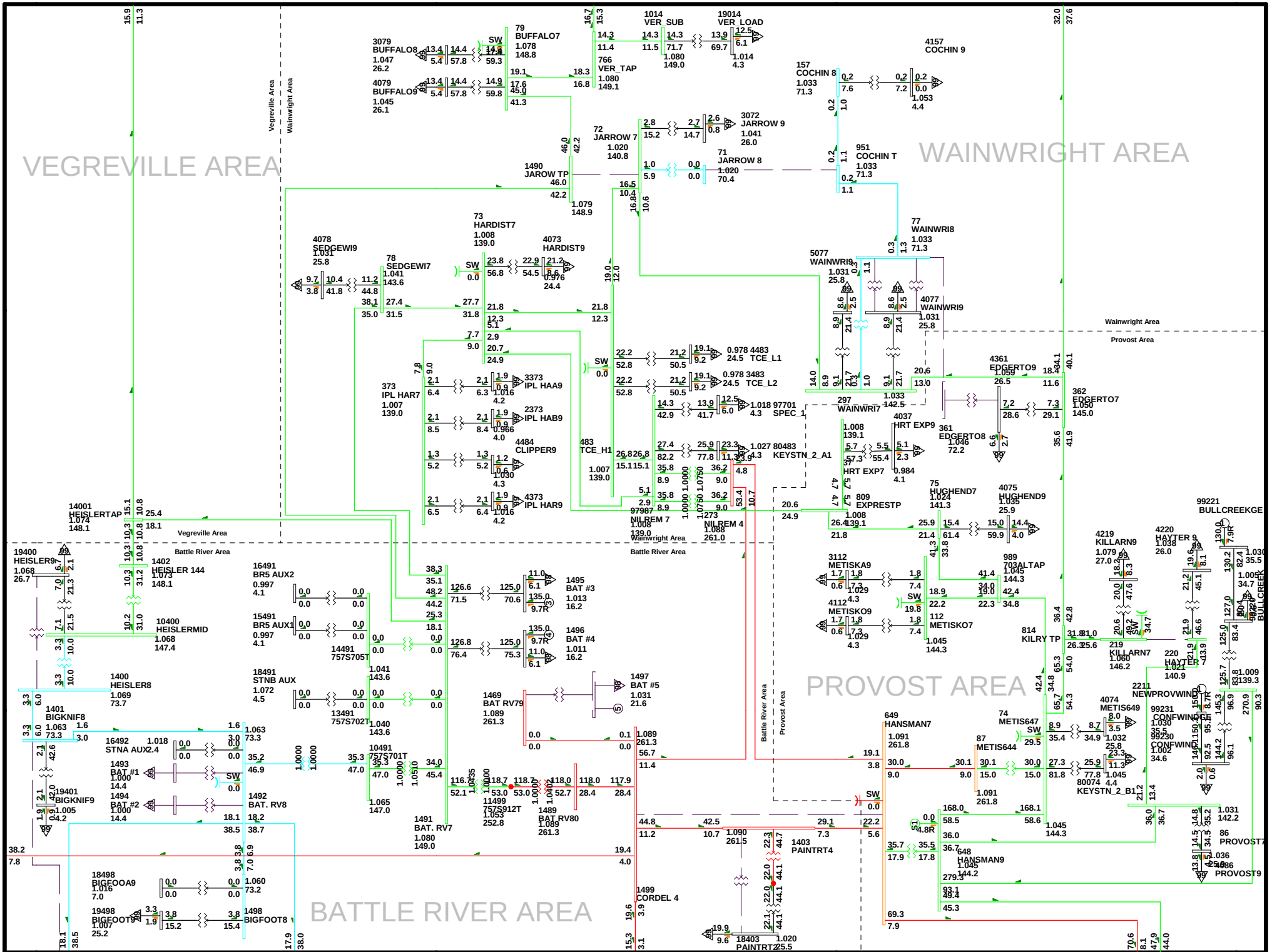
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER LIGHT BASE CASE REVISION 7.2.1
FRI, APR 09 2010 9:32
D1-13

2012SL-Alt 3-3.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120PU 0.940PU
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER LIGHT BASE CASE REVISION 7.2.1
FRI, APR 09 2010 9:32
D1-13

2012SL-Alt 3-3.b

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

2012 Power Flow Plots

Alternatives 1, 2 & 3
Battle River Unit # 5 ON

Case Summary Page	2012 Alt 1 WP BR #5 ON	
Contingency Number	**Fig #**	**Description**
D1-00	2012WP-Alt 1 BR #5 ON-1.a	Base Case
D1-00	2012WP-Alt 1 BR #5 ON-1.b	Base Case
D1-21	2012WP-Alt 1 BR #5 ON-2.a	Bonnyville 700S to Irish Creek 706S (7L53) and Battle River 757S to Buffalo Creek 526S (7L50) Jarrow 252S Tap
D1-21	2012WP-Alt 1 BR #5 ON-2.b	Bonnyville 700S to Irish Creek 706S (7L53) and Battle River 757S to Buffalo Creek 526S (7L50) Jarrow 252S Tap
D1-23	2012WP-Alt 1 BR #5 ON-3.a	Bonnyville 700S to Irish Creek 706S (7L53) and Hill 751S (7L14) to Kitscoty 705S Tap
D1-23	2012WP-Alt 1 BR #5 ON-3.b	Bonnyville 700S to Irish Creek 706S (7L53) and Hill 751S (7L14) to Kitscoty 705S Tap
D1-24	2012WP-Alt 1 BR #5 ON-4.a	Battle River 757S to Buffalo Creek 526S (7L50) Jarrow 252S Tap and Edgerton 899S to Lloydminster 716S (7L749) Briker 880S Tap
D1-24	2012WP-Alt 1 BR #5 ON-4.b	Battle River 757S to Buffalo Creek 526S (7L50) Jarrow 252S Tap and Edgerton 899S to Lloydminster 716S (7L749) Briker 880S Tap
D1-24b	2012WP-Alt 1 BR #5 ON-5.a	Battle River 757S to Buffalo Creek 526S (7L50) Jarrow 252S Tap and Edgerton 899S to Lloydminster 716S (7L749) Briker 880S Tap
D1-24b	2012WP-Alt 1 BR #5 ON-5.b	Battle River 757S to Buffalo Creek 526S (7L50) Jarrow 252S Tap and Edgerton 899S to Lloydminster 716S (7L749) Briker 880S Tap
D1-25	2012WP-Alt 1 BR #5 ON-6.a	Hansman Lake 650S to Provost 545S (715L) and Metiskow 648S to Killarney 267S (7L749)
D1-25	2012WP-Alt 1 BR #5 ON-6.b	Hansman Lake 650S to Provost 545S (715L) and Metiskow 648S to Killarney 267S (7L749)
D1-26	2012WP-Alt 1 BR #5 ON-7.a	Cordel 755S to Paintearth Creek 863S (9L27) and Cordel 755S to Nilrem (9LNew)
D1-26	2012WP-Alt 1 BR #5 ON-7.b	Cordel 755S to Paintearth Creek 863S (9L27) and Cordel 755S to Nilrem (9LNew)
D1-27	2012WP-Alt 1 BR #5 ON-8.a	Bonnyville 700S (7L24) (7L53) (7L89) (7L139)
D1-27	2012WP-Alt 1 BR #5 ON-8.b	Bonnyville 700S (7L24) (7L53) (7L89) (7L139)
D1-28	2012WP-Alt 1 BR #5 ON-9.a	Battle River 757S
D1-28	2012WP-Alt 1 BR #5 ON-9.b	Battle River 757S
D1-30	2012WP-Alt 1 BR #5 ON-10.a	Hansman Lake (650S) 138 kV
D1-30	2012WP-Alt 1 BR #5 ON-10.b	Hansman Lake (650S) 138 kV
D1-31	2012WP-Alt 1 BR #5 ON-11.a	Hansman Lake (650S) 240 kV
D1-31	2012WP-Alt 1 BR #5 ON-11.b	Hansman Lake (650S) 240 kV
D1-32	2012WP-Alt 1 BR #5 ON-12.a	Tucuman (478S) 138 kV
D1-32	2012WP-Alt 1 BR #5 ON-12.b	Tucuman (478S) 138 kV
D1-33	2012WP-Alt 1 BR #5 ON-13.a	Nilrem 240 kV
D1-33	2012WP-Alt 1 BR #5 ON-13.b	Nilrem 240 kV
D1-34	2012WP-Alt 1 BR #5 ON-14.a	Cordel 240 kV
D1-34	2012WP-Alt 1 BR #5 ON-14.b	Cordel 240 kV
D1-35	2012WP-Alt 1 BR #5 ON-15.a	Marguerite Lake (826S)
D1-35	2012WP-Alt 1 BR #5 ON-15.b	Marguerite Lake (826S)
D1-36	2012WP-Alt 1 BR #5 ON-16.a	Battle River Generating Station 3-4-6
D1-36	2012WP-Alt 1 BR #5 ON-16.b	Battle River Generating Station 3-4-6

Case Summary Page	2012 Alt 1 SP BR #5 ON	
Contingency Number	**Fig #**	**Description**
D1-00	2012SP-Alt 1 BR #5 ON-1.a	Base Case
D1-00	2012SP-Alt 1 BR #5 ON-1.b	Base Case
D1-21	2012SP-Alt 1 BR #5 ON-2.a	Bonnyville 700S to Irish Creek 706S (7L53) and Battle River 757S to Buffalo Creek 526S (7L50) Jarrow 252S Tap
D1-21	2012SP-Alt 1 BR #5 ON-2.b	Bonnyville 700S to Irish Creek 706S (7L53) and Battle River 757S to Buffalo Creek 526S (7L50) Jarrow 252S Tap
D1-23	2012SP-Alt 1 BR #5 ON-3.a	Bonnyville 700S to Irish Creek 706S (7L53) and Hill 751S (7L14) to Kitscoty 705S Tap
D1-23	2012SP-Alt 1 BR #5 ON-3.b	Bonnyville 700S to Irish Creek 706S (7L53) and Hill 751S (7L14) to Kitscoty 705S Tap
D1-24	2012SP-Alt 1 BR #5 ON-4.a	Battle River 757S to Buffalo Creek 526S (7L50) Jarrow 252S Tap and Edgerton 899S to Lloydminster 716S (7L749) Briker 880S Tap
D1-24	2012SP-Alt 1 BR #5 ON-4.b	Battle River 757S to Buffalo Creek 526S (7L50) Jarrow 252S Tap and Edgerton 899S to Lloydminster 716S (7L749) Briker 880S Tap
D1-24b	2012SP-Alt 1 BR #5 ON-5.a	Battle River 757S to Buffalo Creek 526S (7L50) Jarrow 252S Tap and Edgerton 899S to Lloydminster 716S (7L749) Briker 880S Tap
D1-24b	2012SP-Alt 1 BR #5 ON-5.b	Battle River 757S to Buffalo Creek 526S (7L50) Jarrow 252S Tap and Edgerton 899S to Lloydminster 716S (7L749) Briker 880S Tap
D1-25	2012SP-Alt 1 BR #5 ON-6.a	Hansman Lake 650S to Provost 545S (715L) and Metiskow 648S to Killarney 267S (7L749)
D1-25	2012SP-Alt 1 BR #5 ON-6.b	Hansman Lake 650S to Provost 545S (715L) and Metiskow 648S to Killarney 267S (7L749)
D1-26	2012SP-Alt 1 BR #5 ON-7.a	Cordel 755S to Paintearth Creek 863S (9L27) and Cordel 755S to Nilrem (9LNew)
D1-26	2012SP-Alt 1 BR #5 ON-7.b	Cordel 755S to Paintearth Creek 863S (9L27) and Cordel 755S to Nilrem (9LNew)
D1-27	2012SP-Alt 1 BR #5 ON-8.a	Bonnyville 700S (7L24) (7L53) (7L89) (7L139)
D1-27	2012SP-Alt 1 BR #5 ON-8.b	Bonnyville 700S (7L24) (7L53) (7L89) (7L139)
D1-28	2012SP-Alt 1 BR #5 ON-9.a	Battle River 757S
D1-28	2012SP-Alt 1 BR #5 ON-9.b	Battle River 757S
D1-30	2012SP-Alt 1 BR #5 ON-10.a	Hansman Lake (650S) 138 kV
D1-30	2012SP-Alt 1 BR #5 ON-10.b	Hansman Lake (650S) 138 kV
D1-31	2012SP-Alt 1 BR #5 ON-11.a	Hansman Lake (650S) 240 kV
D1-31	2012SP-Alt 1 BR #5 ON-11.b	Hansman Lake (650S) 240 kV
D1-32	2012SP-Alt 1 BR #5 ON-12.a	Tucuman (478S) 138 kV
D1-32	2012SP-Alt 1 BR #5 ON-12.b	Tucuman (478S) 138 kV
D1-33	2012SP-Alt 1 BR #5 ON-13.a	Nilrem 240 kV
D1-33	2012SP-Alt 1 BR #5 ON-13.b	Nilrem 240 kV
D1-34	2012SP-Alt 1 BR #5 ON-14.a	Cordel 240 kV
D1-34	2012SP-Alt 1 BR #5 ON-14.b	Cordel 240 kV
D1-35	2012SP-Alt 1 BR #5 ON-15.a	Marguerite Lake (826S)
D1-35	2012SP-Alt 1 BR #5 ON-15.b	Marguerite Lake (826S)
D1-36	2012SP-Alt 1 BR #5 ON-16.a	Battle River Generating Station 3-4-6
D1-36	2012SP-Alt 1 BR #5 ON-16.b	Battle River Generating Station 3-4-6

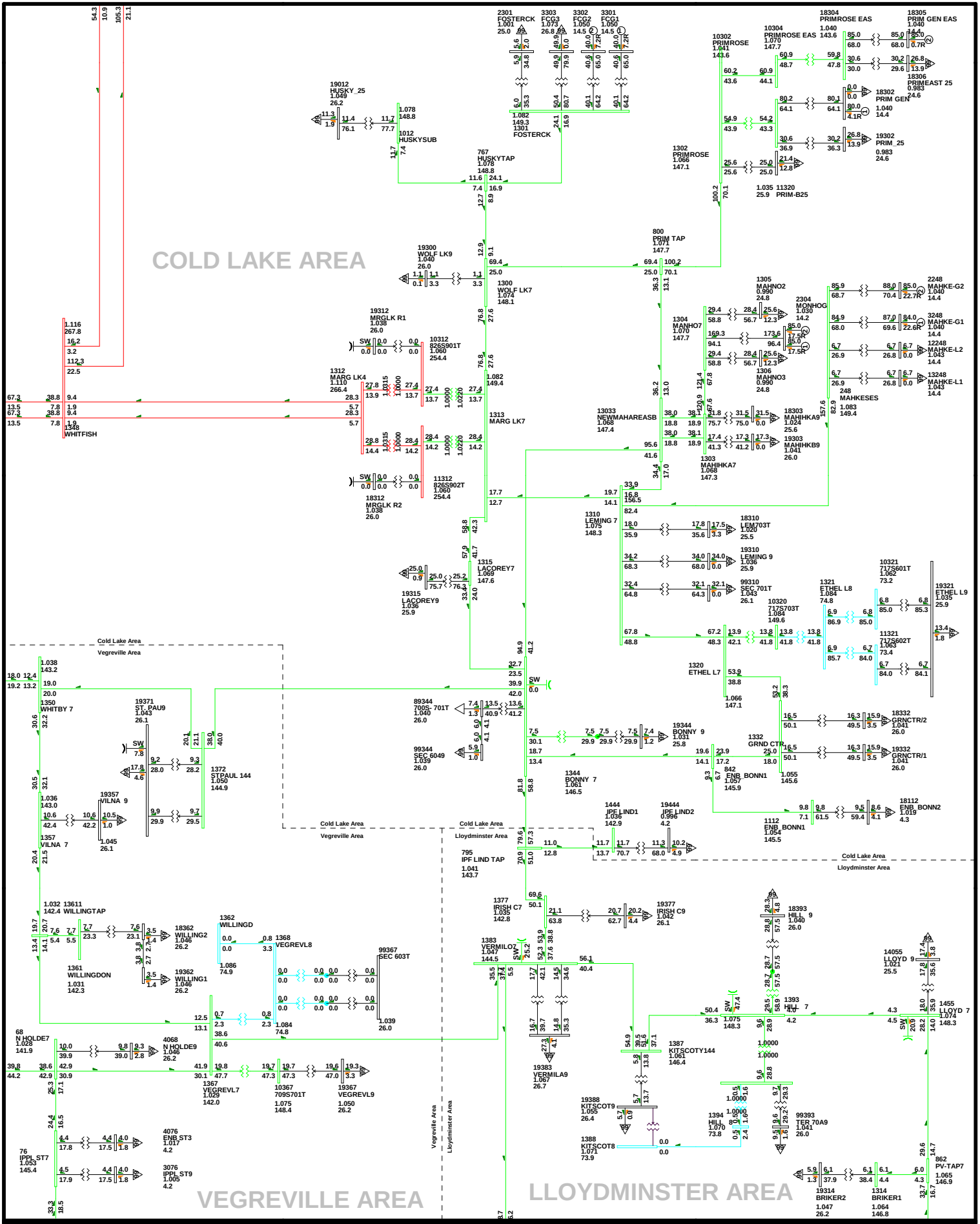
Case Summary Page 2012 Alt 2 WP BR #5 ON

Contingency Number	Fig #	Description
D1-00	2012WP-Alt 2 BR #5 ON-1.a	Base Case
D1-00	2012WP-Alt 2 BR #5 ON-1.b	Base Case
D1-23	2012WP-Alt 2 BR #5 ON-2.a	Bonnyville 700S to Irish Creek 706S (7L53) and Hill 751S (7L14) to Kitscoty 705S Tap
D1-23	2012WP-Alt 2 BR #5 ON-2.b	Bonnyville 700S to Irish Creek 706S (7L53) and Hill 751S (7L14) to Kitscoty 705S Tap
D1-24	2012WP-Alt 2 BR #5 ON-3.a	Battle River 757S to Buffalo Creek 526S (7L50) Jarrow 252S Tap and Edgerton 899S to Lloydminster 716S (7L749) Briker 880S Tap
D1-24	2012WP-Alt 2 BR #5 ON-3.b	Battle River 757S to Buffalo Creek 526S (7L50) Jarrow 252S Tap and Edgerton 899S to Lloydminster 716S (7L749) Briker 880S Tap
D1-25	2012WP-Alt 2 BR #5 ON-4.a	Hansman Lake 650S to Provost 545S (715L) and Metiskow 648S to Killarney 267S (7L749)
D1-25	2012WP-Alt 2 BR #5 ON-4.b	Hansman Lake 650S to Provost 545S (715L) and Metiskow 648S to Killarney 267S (7L749)
D1-26	2012WP-Alt 2 BR #5 ON-5.a	Cordel 755S to Paintearth Creek 863S (9L27) and Cordel 755S to Nilrem (9LNew)
D1-26	2012WP-Alt 2 BR #5 ON-5.b	Cordel 755S to Paintearth Creek 863S (9L27) and Cordel 755S to Nilrem (9LNew)
D1-27	2012WP-Alt 2 BR #5 ON-6.a	Bonnyville 700S (7L24) (7L53) (7L89) (7L139)
D1-27	2012WP-Alt 2 BR #5 ON-6.b	Bonnyville 700S (7L24) (7L53) (7L89) (7L139)
D1-28	2012WP-Alt 2 BR #5 ON-7.a	Battle River 757S
D1-28	2012WP-Alt 2 BR #5 ON-7.b	Battle River 757S
D1-30	2012WP-Alt 2 BR #5 ON-8.a	Hansman Lake (650S) 138 kV
D1-30	2012WP-Alt 2 BR #5 ON-8.b	Hansman Lake (650S) 138 kV
D1-31	2012WP-Alt 2 BR #5 ON-9.a	Hansman Lake (650S) 240 kV
D1-31	2012WP-Alt 2 BR #5 ON-9.b	Hansman Lake (650S) 240 kV
D1-32	2012WP-Alt 2 BR #5 ON-10.a	Tucuman (478S) 138 kV
D1-32	2012WP-Alt 2 BR #5 ON-10.b	Tucuman (478S) 138 kV
D1-33	2012WP-Alt 2 BR #5 ON-11.a	Nilrem 240 kV
D1-33	2012WP-Alt 2 BR #5 ON-11.b	Nilrem 240 kV
D1-34	2012WP-Alt 2 BR #5 ON-12.a	Cordel 240 kV
D1-34	2012WP-Alt 2 BR #5 ON-12.b	Cordel 240 kV
D1-35	2012WP-Alt 2 BR #5 ON-13.a	Marguerite Lake (826S)
D1-35	2012WP-Alt 2 BR #5 ON-13.b	Marguerite Lake (826S)
D1-36	2012WP-Alt 2 BR #5 ON-14.a	Battle River Generating Station 3-4-6
D1-36	2012WP-Alt 2 BR #5 ON-14.b	Battle River Generating Station 3-4-6

Case Summary Page	2012 Alt 2 SP BR #5 ON	
Contingency Number	**Fig #**	**Description**
D1-00	2017SP-Alt 2 BR #5 ON-1.a	Base Case
D1-00	2017SP-Alt 2 BR #5 ON-1.b	Base Case
D1-23	2017SP-Alt 2 BR #5 ON-2.a	Bonnyville 700S to Irish Creek 706S (7L53) and Hill 751S (7L14) to Kitscoty 705S Tap
D1-23	2017SP-Alt 2 BR #5 ON-2.b	Bonnyville 700S to Irish Creek 706S (7L53) and Hill 751S (7L14) to Kitscoty 705S Tap
D1-24	2017SP-Alt 2 BR #5 ON-3.a	Battle River 757S to Buffalo Creek 526S (7L50) Jarrow 252S Tap and Edgerton 899S to Lloydminster 716S (7L749) Briker 880S Tap
D1-24	2017SP-Alt 2 BR #5 ON-3.b	Battle River 757S to Buffalo Creek 526S (7L50) Jarrow 252S Tap and Edgerton 899S to Lloydminster 716S (7L749) Briker 880S Tap
D1-25	2017SP-Alt 2 BR #5 ON-4.a	Hansman Lake 650S to Provost 545S (715L) and Metiskow 648S to Killarney 267S (7L749)
D1-25	2017SP-Alt 2 BR #5 ON-4.b	Hansman Lake 650S to Provost 545S (715L) and Metiskow 648S to Killarney 267S (7L749)
D1-26	2017SP-Alt 2 BR #5 ON-5.a	Cordel 755S to Paintearth Creek 863S (9L27) and Cordel 755S to Nilrem (9LNew)
D1-26	2017SP-Alt 2 BR #5 ON-5.b	Cordel 755S to Paintearth Creek 863S (9L27) and Cordel 755S to Nilrem (9LNew)
D1-27	2017SP-Alt 2 BR #5 ON-6.a	Bonnyville 700S (7L24) (7L53) (7L89) (7L139)
D1-27	2017SP-Alt 2 BR #5 ON-6.b	Bonnyville 700S (7L24) (7L53) (7L89) (7L139)
D1-28	2017SP-Alt 2 BR #5 ON-7.a	Battle River 757S
D1-28	2017SP-Alt 2 BR #5 ON-7.b	Battle River 757S
D1-30	2017SP-Alt 2 BR #5 ON-8.a	Hansman Lake (650S) 138 kV
D1-30	2017SP-Alt 2 BR #5 ON-8.b	Hansman Lake (650S) 138 kV
D1-31	2017SP-Alt 2 BR #5 ON-9.a	Hansman Lake (650S) 240 kV
D1-31	2017SP-Alt 2 BR #5 ON-9.b	Hansman Lake (650S) 240 kV
D1-32	2017SP-Alt 2 BR #5 ON-10.a	Tucuman (478S) 138 kV
D1-32	2017SP-Alt 2 BR #5 ON-10.b	Tucuman (478S) 138 kV
D1-33	2017SP-Alt 2 BR #5 ON-11.a	Nilrem 240 kV
D1-33	2017SP-Alt 2 BR #5 ON-11.b	Nilrem 240 kV
D1-34	2017SP-Alt 2 BR #5 ON-12.a	Cordel 240 kV
D1-34	2017SP-Alt 2 BR #5 ON-12.b	Cordel 240 kV
D1-35	2017SP-Alt 2 BR #5 ON-13.a	Marguerite Lake (826S)
D1-35	2017SP-Alt 2 BR #5 ON-13.b	Marguerite Lake (826S)
D1-36	2017SP-Alt 2 BR #5 ON-14.a	Battle River Generating Station 3-4-6
D1-36	2017SP-Alt 2 BR #5 ON-14.b	Battle River Generating Station 3-4-6

Case Summary Page	2012 Alt 3 WP BR #5 ON	
Contingency Number	**Fig #**	**Description**
D1-00	2012WP-Alt 3 BR #5 ON-1.a	Base Case
D1-00	2012WP-Alt 3 BR #5 ON-1.b	Base Case
D1-20	2012WP-Alt 3 BR #5 ON-2.a	Bonnyville 700S to Irish Creek 706S (7L53) and Hill 751S to Loydminster 716S (7L42)
D1-20	2012WP-Alt 3 BR #5 ON-2.b	Bonnyville 700S to Irish Creek 706S (7L53) and Hill 751S to Loydminster 716S (7L42)
D1-21	2012WP-Alt 3 BR #5 ON-3.a	Bonnyville 700S to Irish Creek 706S (7L53) and Battle River 757S to Buffalo Creek 526S (7L50) Jarrow 252S Tap
D1-21	2012WP-Alt 3 BR #5 ON-3.b	Bonnyville 700S to Irish Creek 706S (7L53) and Battle River 757S to Buffalo Creek 526S (7L50) Jarrow 252S Tap
D1-22	2012WP-Alt 3 BR #5 ON-4.a	Bonnyville 700S to Irish Creek 706S (7L53) and Vermilion 710S to Kitscoty 705S Tap
D1-22	2012WP-Alt 3 BR #5 ON-4.b	Bonnyville 700S to Irish Creek 706S (7L53) and Vermilion 710S to Kitscoty 705S Tap
D1-23	2012WP-Alt 3 BR #5 ON-5.a	Bonnyville 700S to Irish Creek 706S (7L53) and Hill 751S (7L14) to Kitscoty 705S Tap
D1-23	2012WP-Alt 3 BR #5 ON-5.b	Bonnyville 700S to Irish Creek 706S (7L53) and Hill 751S (7L14) to Kitscoty 705S Tap
D1-24	2012WP-Alt 3 BR #5 ON-6.a	Battle River 757S to Buffalo Creek 526S (7L50) Jarrow 252S Tap and Edgerton 899S to Lloydminster 716S (7L749) Briker 880S Tap
D1-24	2012WP-Alt 3 BR #5 ON-6.b	Battle River 757S to Buffalo Creek 526S (7L50) Jarrow 252S Tap and Edgerton 899S to Lloydminster 716S (7L749) Briker 880S Tap
D1-24b	2012WP-Alt 3 BR #5 ON-7.a	Battle River 757S to Buffalo Creek 526S (7L50) Jarrow 252S Tap and Edgerton 899S to Lloydminster 716S (7L749) Briker 880S Tap
D1-24b	2012WP-Alt 3 BR #5 ON-7.b	Battle River 757S to Buffalo Creek 526S (7L50) Jarrow 252S Tap and Edgerton 899S to Lloydminster 716S (7L749) Briker 880S Tap
D1-26	2012WP-Alt 3 BR #5 ON-8.a	Cordel 755S to Paintearth Creek 863S (9L27) and Cordel 755S to Nilrem (9LNew)
D1-26	2012WP-Alt 3 BR #5 ON-8.b	Cordel 755S to Paintearth Creek 863S (9L27) and Cordel 755S to Nilrem (9LNew)
D1-27	2012WP-Alt 3 BR #5 ON-9.a	Bonnyville 700S (7L24) (7L53) (7L89) (7L139)
D1-27	2012WP-Alt 3 BR #5 ON-9.b	Bonnyville 700S (7L24) (7L53) (7L89) (7L139)
D1-28	2012WP-Alt 3 BR #5 ON-10.a	Battle River 757S
D1-28	2012WP-Alt 3 BR #5 ON-10.b	Battle River 757S
D1-29	2012WP-Alt 3 BR #5 ON-11.a	Metiskow (648S) 138 kV (70L3) (749L) (885L) (Killarney Tap)
D1-29	2012WP-Alt 3 BR #5 ON-11.b	Metiskow (648S) 138 kV (70L3) (749L) (885L) (Killarney Tap)
D1-30b	2012WP-Alt 3 BR #5 ON-12.a	Hansman Lake (650S) 138 kV
D1-30b	2012WP-Alt 3 BR #5 ON-12.b	Hansman Lake (650S) 138 kV
D1-31	2012WP-Alt 3 BR #5 ON-13.a	Hansman Lake (650S) 240 kV
D1-31	2012WP-Alt 3 BR #5 ON-13.b	Hansman Lake (650S) 240 kV
D1-32	2012WP-Alt 3 BR #5 ON-14.a	Tucuman (478S) 138 kV
D1-32	2012WP-Alt 3 BR #5 ON-14.b	Tucuman (478S) 138 kV
D1-33	2012WP-Alt 3 BR #5 ON-15.a	Nilrem 240 kV
D1-33	2012WP-Alt 3 BR #5 ON-15.b	Nilrem 240 kV
D1-34	2012WP-Alt 3 BR #5 ON-16.a	Cordel 240 kV
D1-34	2012WP-Alt 3 BR #5 ON-16.b	Cordel 240 kV
D1-35	2012WP-Alt 3 BR #5 ON-17.a	Marguerite Lake (826S)
D1-35	2012WP-Alt 3 BR #5 ON-17.b	Marguerite Lake (826S)
D1-36	2012WP-Alt 3 BR #5 ON-18.a	Battle River Generating Station 3-4-6
D1-36	2012WP-Alt 3 BR #5 ON-18.b	Battle River Generating Station 3-4-6

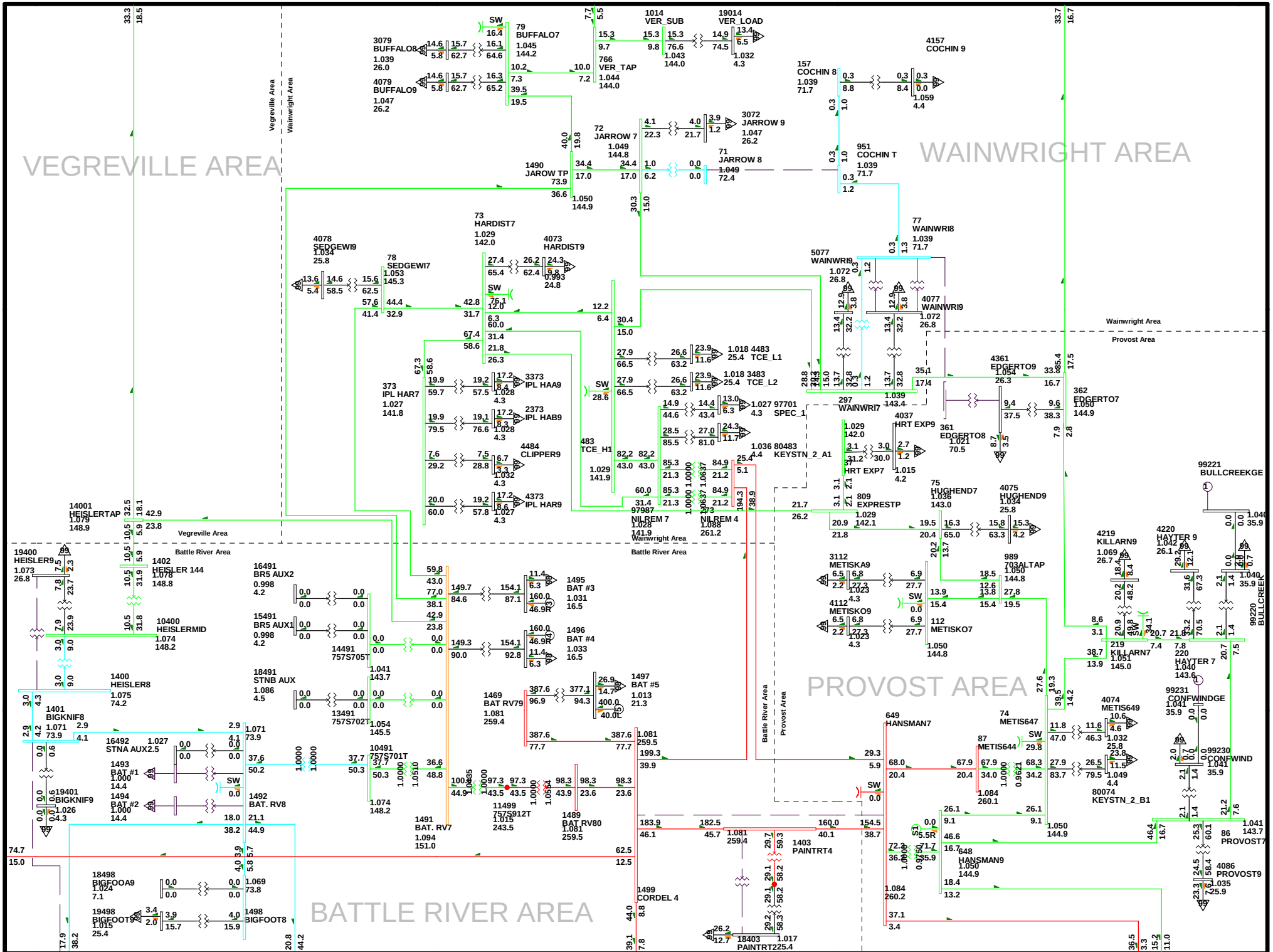
Case Summary Page	2012 Alt 3 SP BR #5 ON	
Contingency Number	Fig #	Description
D1-00	2012SP-Alt 3 BR #5 ON-1.a	Base Case
D1-00	2012SP-Alt 3 BR #5 ON-1.b	Base Case
D1-20	2012SP-Alt 3 BR #5 ON-2.a	Bonnyville 700S to Irish Creek 706S (7L53) and Hill 751S to Loydminster 716S (7L42)
D1-20	2012SP-Alt 3 BR #5 ON-2.b	Bonnyville 700S to Irish Creek 706S (7L53) and Hill 751S to Loydminster 716S (7L42)
D1-21	2012SP-Alt 3 BR #5 ON-3.a	Bonnyville 700S to Irish Creek 706S (7L53) and Battle River 757S to Buffalo Creek 526S (7L50) Jarrow 252S Tap
D1-21	2012SP-Alt 3 BR #5 ON-3.b	Bonnyville 700S to Irish Creek 706S (7L53) and Battle River 757S to Buffalo Creek 526S (7L50) Jarrow 252S Tap
D1-22	2012SP-Alt 3 BR #5 ON-4.a	Bonnyville 700S to Irish Creek 706S (7L53) and Vermilion 710S to Kitscoty 705S Tap
D1-22	2012SP-Alt 3 BR #5 ON-4.b	Bonnyville 700S to Irish Creek 706S (7L53) and Vermilion 710S to Kitscoty 705S Tap
D1-23	2012SP-Alt 3 BR #5 ON-5.a	Bonnyville 700S to Irish Creek 706S (7L53) and Hill 751S (7L14) to Kitscoty 705S Tap
D1-23	2012SP-Alt 3 BR #5 ON-5.b	Bonnyville 700S to Irish Creek 706S (7L53) and Hill 751S (7L14) to Kitscoty 705S Tap
D1-24	2012SP-Alt 3 BR #5 ON-6.a	Battle River 757S to Buffalo Creek 526S (7L50) Jarrow 252S Tap and Edgerton 899S to Lloydminster 716S (7L749) Briker 880S Tap
D1-24	2012SP-Alt 3 BR #5 ON-6.b	Battle River 757S to Buffalo Creek 526S (7L50) Jarrow 252S Tap and Edgerton 899S to Lloydminster 716S (7L749) Briker 880S Tap
D1-24b	2012SP-Alt 3 BR #5 ON-7.a	Battle River 757S to Buffalo Creek 526S (7L50) Jarrow 252S Tap and Edgerton 899S to Lloydminster 716S (7L749) Briker 880S Tap
D1-24b	2012SP-Alt 3 BR #5 ON-7.b	Battle River 757S to Buffalo Creek 526S (7L50) Jarrow 252S Tap and Edgerton 899S to Lloydminster 716S (7L749) Briker 880S Tap
D1-26	2012SP-Alt 3 BR #5 ON-8.a	Cordel 755S to Paintearth Creek 863S (9L27) and Cordel 755S to Nilrem (9LNew)
D1-26	2012SP-Alt 3 BR #5 ON-8.b	Cordel 755S to Paintearth Creek 863S (9L27) and Cordel 755S to Nilrem (9LNew)
D1-27	2012SP-Alt 3 BR #5 ON-9.a	Bonnyville 700S (7L24) (7L53) (7L89) (7L139)
D1-27	2012SP-Alt 3 BR #5 ON-9.b	Bonnyville 700S (7L24) (7L53) (7L89) (7L139)
D1-28	2012SP-Alt 3 BR #5 ON-10.a	Battle River 757S
D1-28	2012SP-Alt 3 BR #5 ON-10.b	Battle River 757S
D1-29	2012SP-Alt 3 BR #5 ON-11.a	Metiskow (648S) 138 kV (70L3) (749L) (885L) (Killarney Tap)
D1-29	2012SP-Alt 3 BR #5 ON-11.b	Metiskow (648S) 138 kV (70L3) (749L) (885L) (Killarney Tap)
D1-30b	2012SP-Alt 3 BR #5 ON-12.a	Hansman Lake (650S) 138 kV
D1-30b	2012SP-Alt 3 BR #5 ON-12.b	Hansman Lake (650S) 138 kV
D1-31	2012SP-Alt 3 BR #5 ON-13.a	Hansman Lake (650S) 240 kV
D1-31	2012SP-Alt 3 BR #5 ON-13.b	Hansman Lake (650S) 240 kV
D1-32	2012SP-Alt 3 BR #5 ON-14.a	Tucuman (478S) 138 kV
D1-32	2012SP-Alt 3 BR #5 ON-14.b	Tucuman (478S) 138 kV
D1-33	2012SP-Alt 3 BR #5 ON-15.a	Nilrem 240 kV
D1-33	2012SP-Alt 3 BR #5 ON-15.b	Nilrem 240 kV
D1-34	2012SP-Alt 3 BR #5 ON-16.a	Cordel 240 kV
D1-34	2012SP-Alt 3 BR #5 ON-16.b	Cordel 240 kV
D1-35	2012SP-Alt 3 BR #5 ON-17.a	Marguerite Lake (826S)
D1-35	2012SP-Alt 3 BR #5 ON-17.b	Marguerite Lake (826S)
D1-36	2012SP-Alt 3 BR #5 ON-18.a	Battle River Generating Station 3-4-6
D1-36	2012SP-Alt 3 BR #5 ON-18.b	Battle River Generating Station 3-4-6



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
FRI, APR 30 2010 13:11
D1-00

2012WP-Alt 1 BR#5 ON-1.a

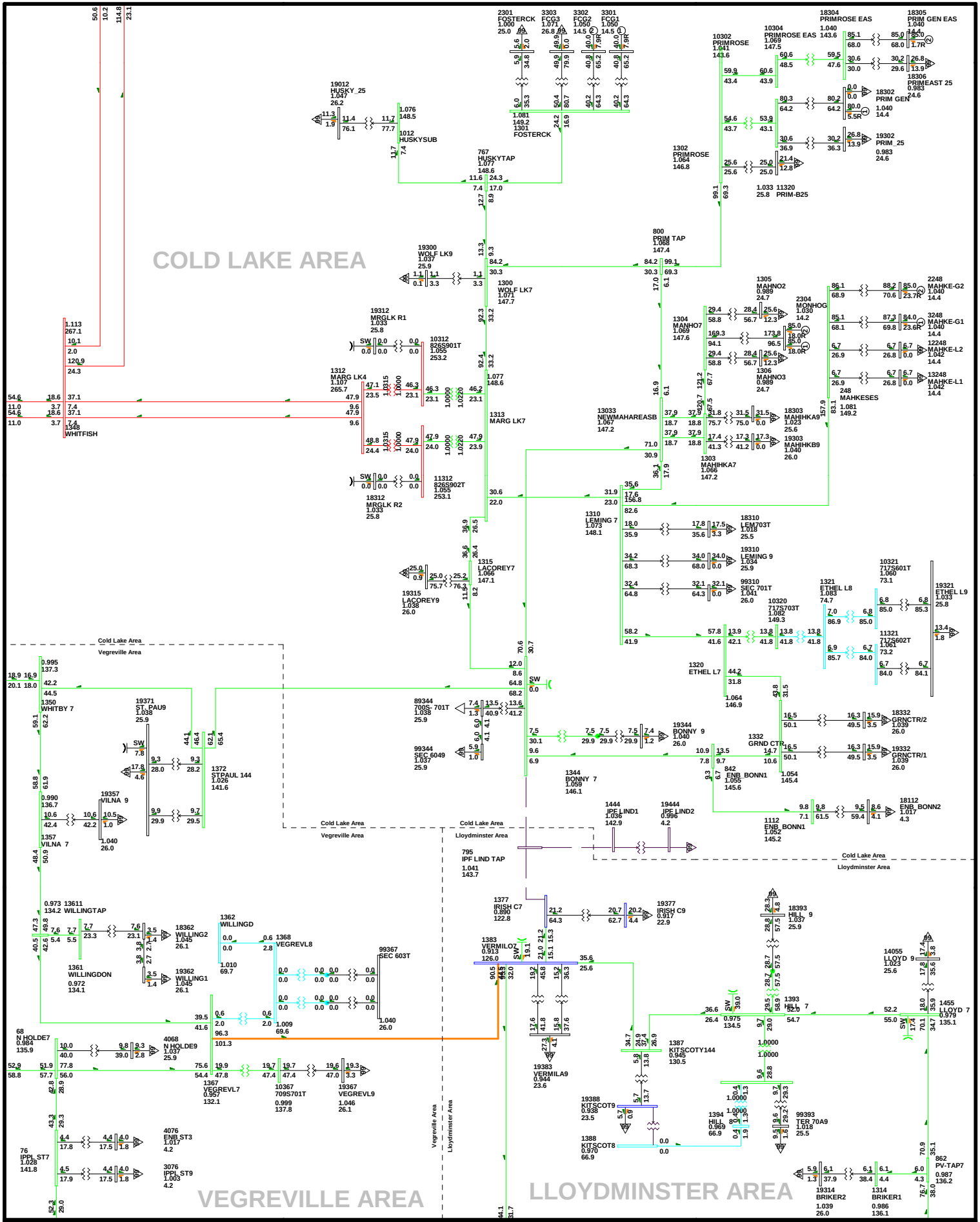
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
FRI, APR 30 2010 13:11
D1-00

2012WP-Alt 1 BR#5 ON-1.b

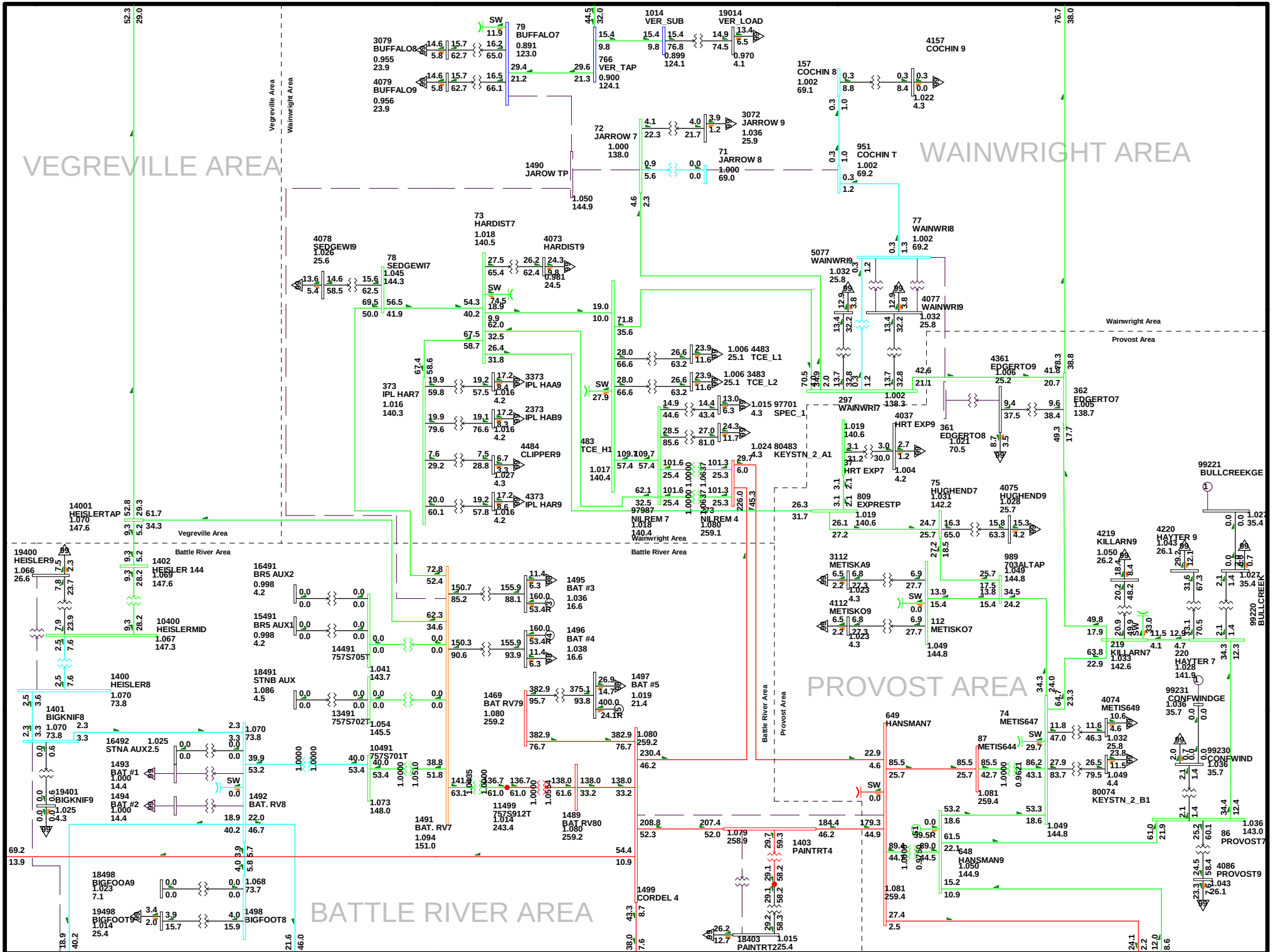
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV 0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
FRI, APR 30 2010 13:11
D1-21

2012WP-Alt 1 BR#5 ON-2.a

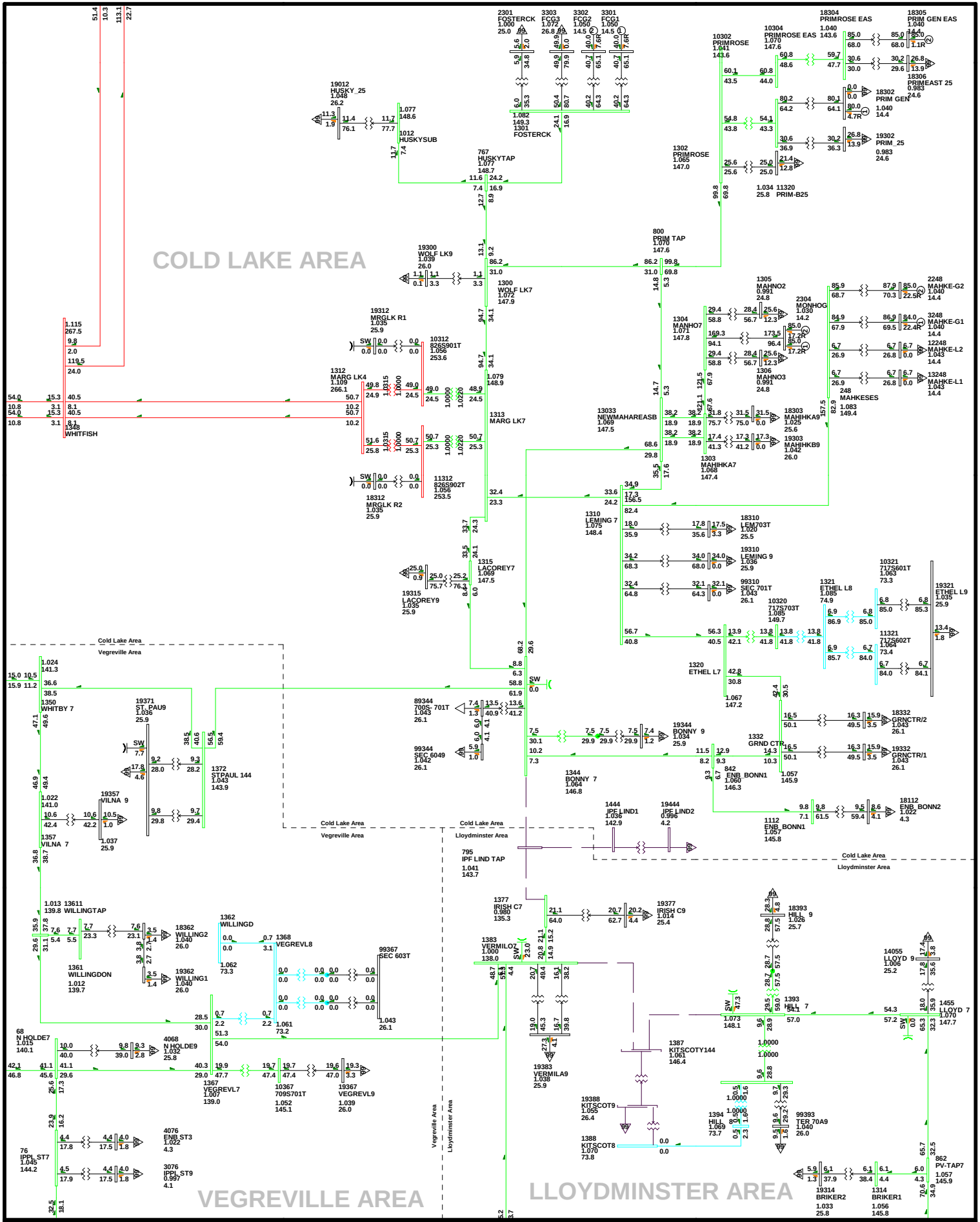
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
FRI, APR 30 2010 13:11
D1-21

2012WP-Alt 1 BR#5 ON-2.b

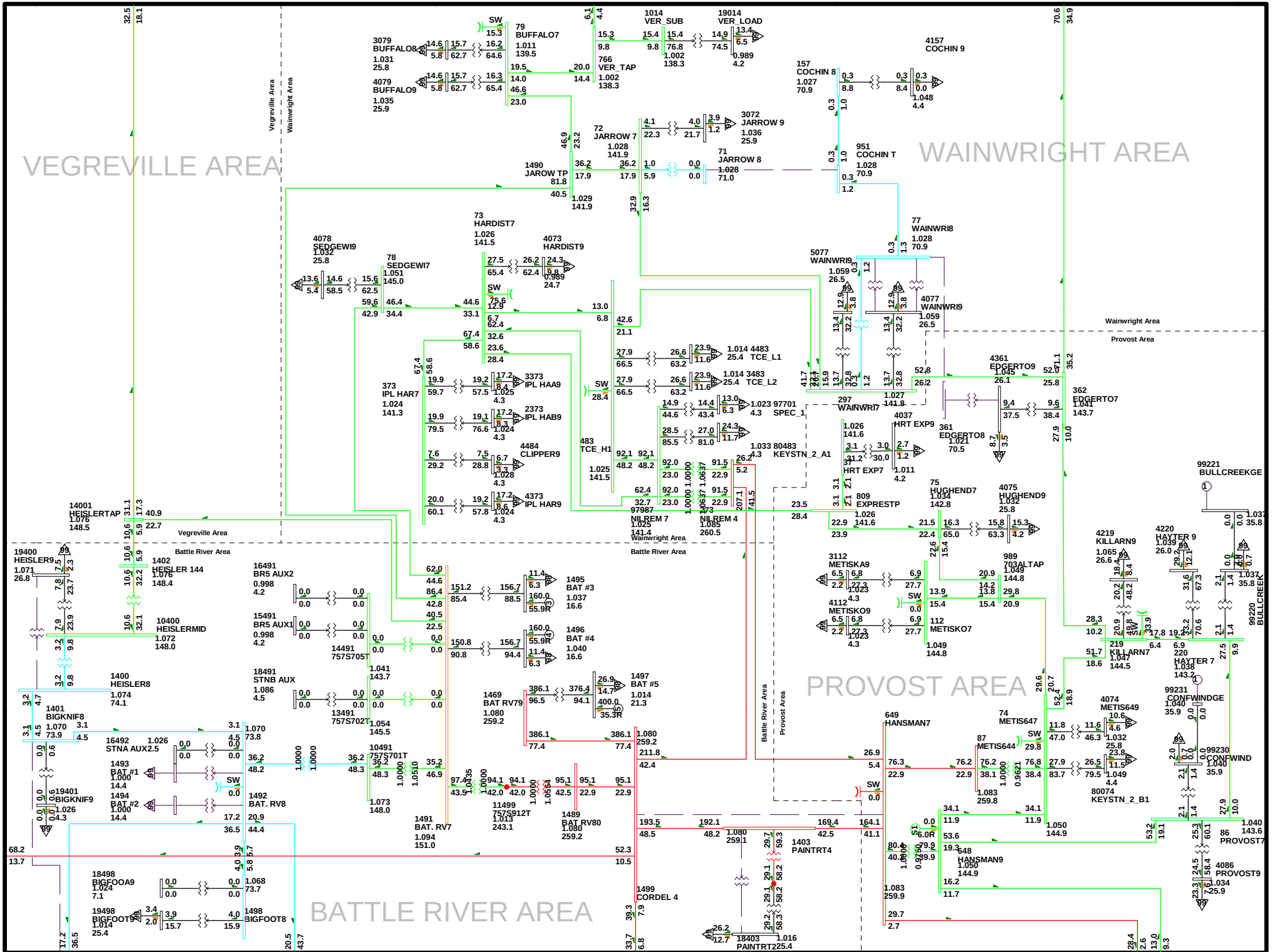
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV 0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
FRI, APR 30 2010 13:11
D1-23

2012WP-Alt 1 BR#5 ON-3.a

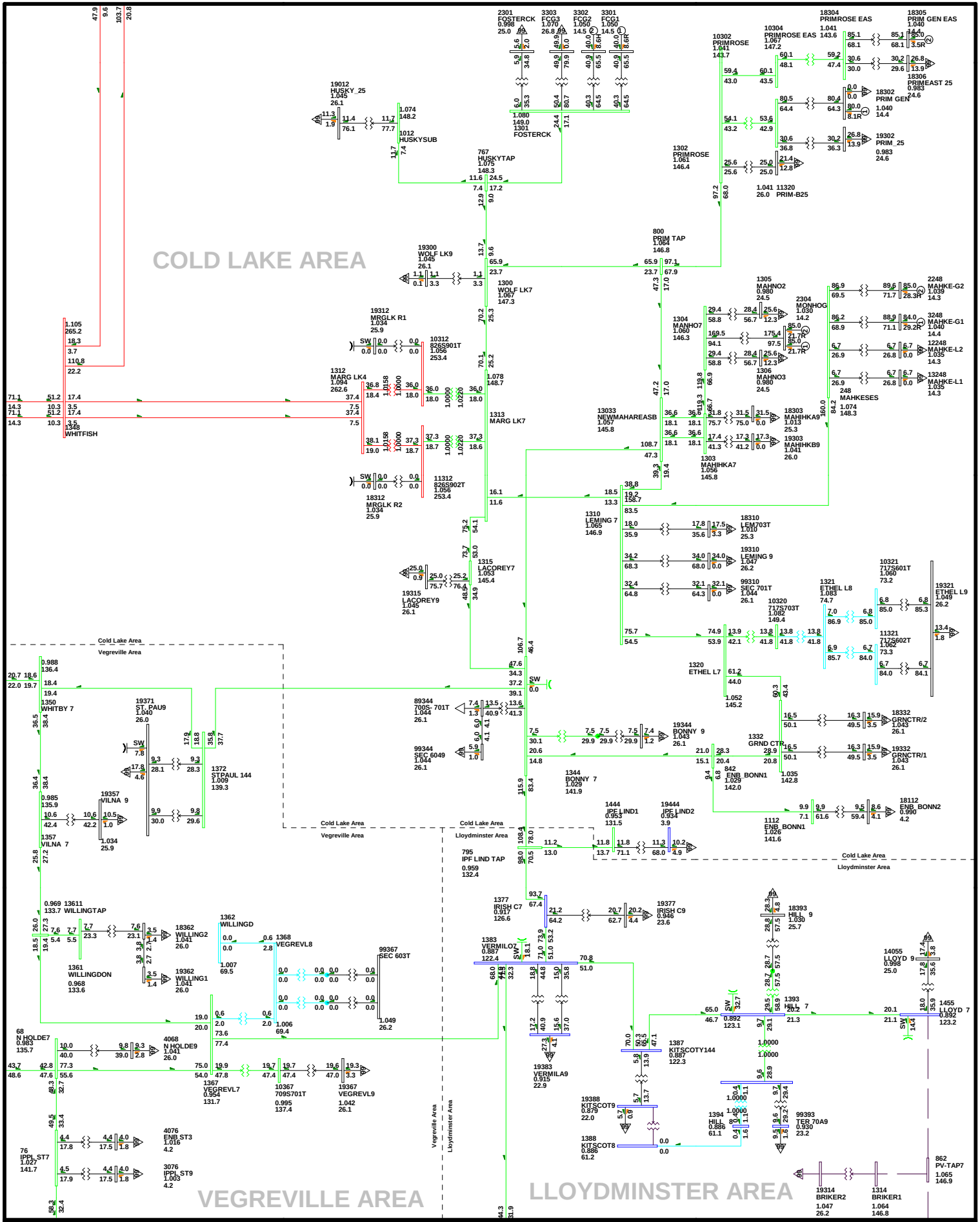
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
FRI, APR 30 2010 13:11
D1-23

2012WP-Alt 1 BR#5 ON-3.b

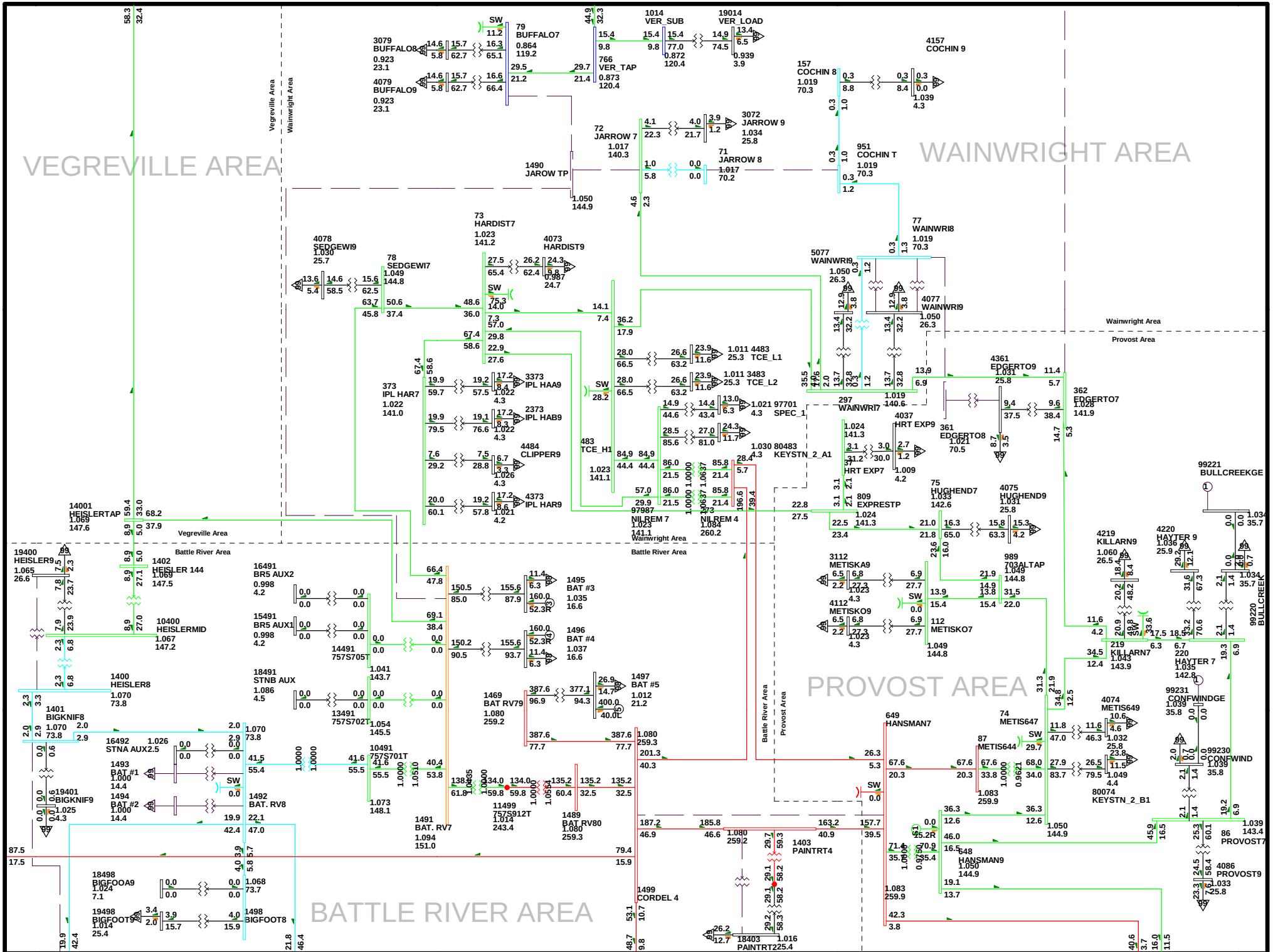
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV 0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000

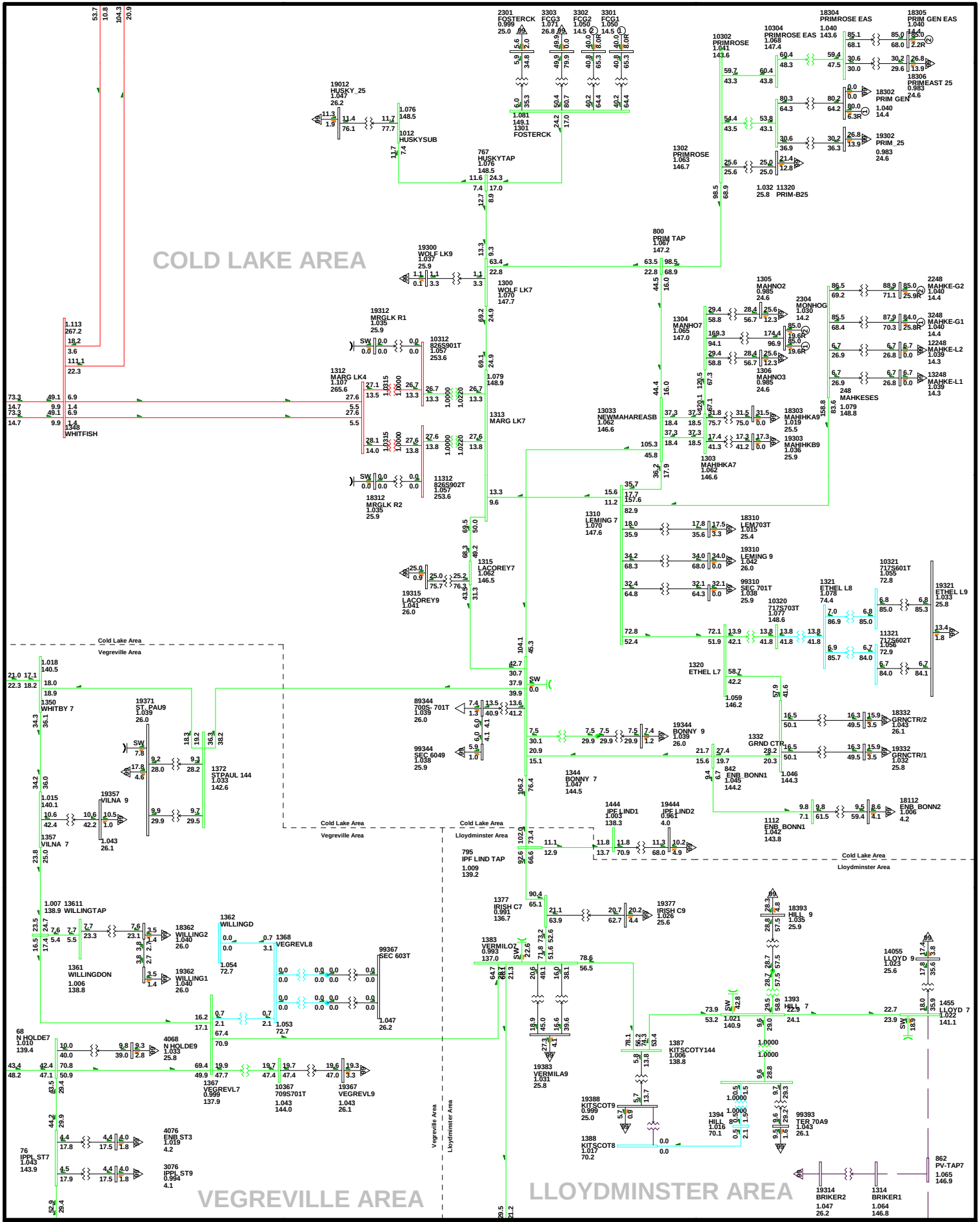


CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
FRI, APR 30 2010 13:12
D1-24

2012WP-Alt 1 BR#5 ON-4.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

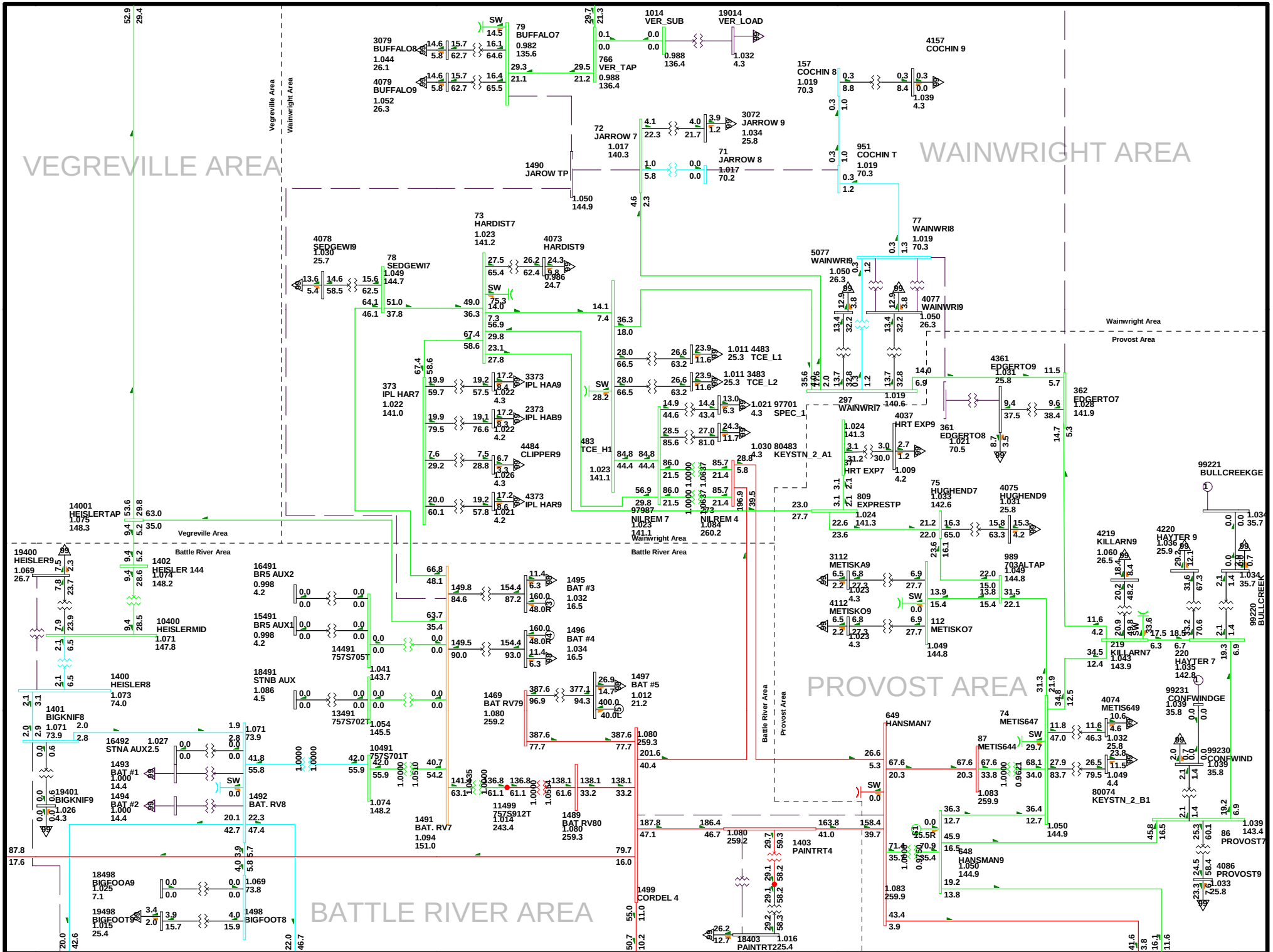

VEGREVILLE AREA
WAINWRIGHT AREA
PROVOST AREA
BATTLE RIVER AREA
Vegreville Area
Wainwright Area
Battle River Area
Provost Area
79 BUFFALO7 0.864 119.2
3079 BUFFALO8 0.923 23.1
4079 BUFFALO9 0.923 23.1
766 VER_TAP 0.873 120.4
1014 VER_SUB
19014 VER_LOAD
4157 COCHIN 9
157 COCHIN 8 1.019 70.3
951 COCHIN T 1.019 70.3
1039 4.3
72 JARROW 7 1.017 140.3
3072 JARROW 9 1.034 25.8
71 JARROW 8 1.017 70.2
1490 JAROW TP 1.050 144.9
77 WAINWRI8 1.019 70.3
5077 WAINWRI9 1.050 26.3
4077 WAINWRI9 1.050 26.3
297 WAINWRI7 1.019 140.6
4078 SEDGEWI9 1.030 25.7
78 SEDGEWI7 1.049 144.8
73 HARDIST7 1.023 141.2
4073 HARDIST9 0.987 24.7
373 IPL HAR7 1.022 141.0
3373 IPL HAA9 1.022 4.3
2373 IPL HAB9 1.022 4.3
4484 CLIPPER9 1.026 4.3
4373 IPL HAR9 1.021 4.2
1011 4483 TCE_L1 25.3
1011 3483 TCE_L2 25.3
483 TCE_H1 1.023 141.1
1021 97701 SPEC_1 4.3
1030 80483 KEYSTN_2_A1 4.3
97987 NIL REM 7 1.023 141.1
273 NIL REM 4 1.084 260.2
4037 HRT EXP9 1.024 141.3
HRT EXP7 1.009 4.2
361 EDGERTO8 1.021 70.5
4361 EDGERTO9 1.031 25.8
362 EDGERTO7 1.028 141.9
809 EXPRESTP 1.024 141.3
75 HUGHEND7 1.033 142.6
4075 HUGHEND9 1.031 25.8
14001 HEISLERTAP 1.069 147.6
1402 HEISLER 144 1.069 147.5
10400 HEISLERMID 1.067 147.2
19400 HEISLER9 1.065 26.6
1400 HEISLER8 1.070 73.8
1401 BIGKNIF8 1.070 73.8
19401 BIGKNIF9 1.025 4.3
16491 BR5 AUX2 0.998 4.2
15491 BR5 AUX1 0.998 4.2
18491 STNB AUX 1.086 4.5
16492 STNA AUX2.5 1.026
14491 757S705T 1.041 143.7
13491 757S702T 1.054 145.5
10491 757S701T 41.6 55.5 1.073 148.1
11499 757S912T 1.014 243.4
1491 BAT. RV7 1.094 151.0
1469 BAT RV79 1.080 259.2
1495 BAT #3 1.035 16.6
1496 BAT #4 1.037 16.6
1497 BAT #5 1.012 21.2
1489 BAT RV80 1.080 259.3
1493 BAT #1 1.000 14.4
1494 BAT #2 1.000 14.4
1492 BAT. RV8 22.1 47.0
1499 CORDEL 4
1403 PAINTRT4
18403 PAINTRT2 1.016 25.4
649 HANSMAN7
648 HANSMAN9 1.050 144.9
74 METIS647
87 METIS644
4074 METIS649 1.032 25.8
80074 KEYSTN_2_B1 1.049 4.4
3112 METISKA9 1.023 4.3
4112 METISKO9 1.023 4.3
112 METISKO7 1.049 144.8
989 703ALTAP 1.049 144.8
99221 BULLCREEKGE 1.034 35.7
99220 BULLCREEK
4219 KILLARN9 1.060 26.5
219 KILLARN7 1.043 143.9
4220 HAYTER 9 1.036 25.9
220 HAYTER 7 1.035 142.8
99231 CONFWINDGE 1.039 35.8
99230 CONFWIND 1.039 35.8
86 PROVOST7 1.039 143.4
4086 PROVOST9 1.033 25.8
18498 BIGFOOA9 1.024 7.1
19498 BIGFOOT9 1.014 25.4
1498 BIGFOOT8 1.068 73.7
CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
FRI, APR 30 2010 13:12
D1-24
2012WP-Alt 1 BR#5 ON-4.b
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV 0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000

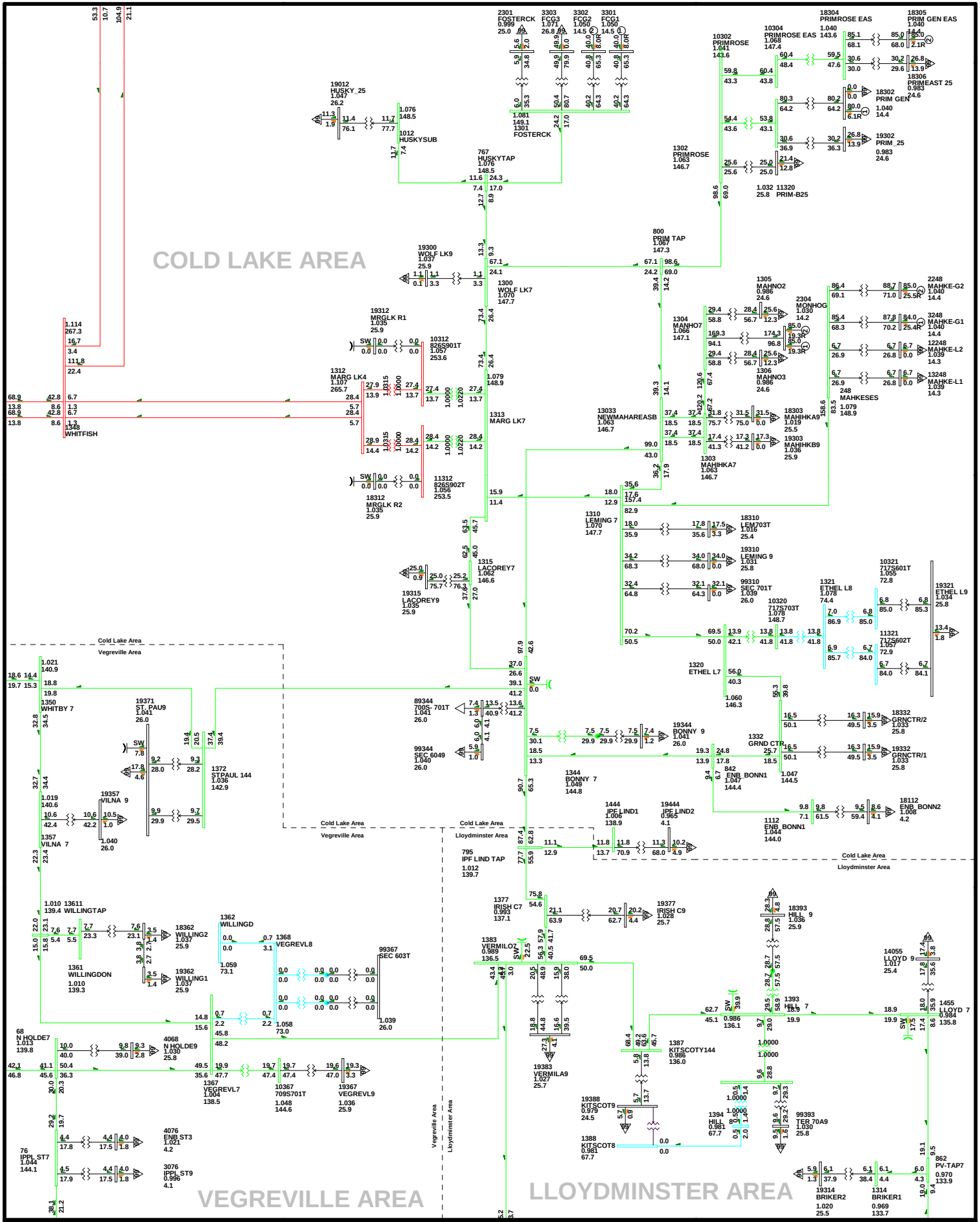


CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
FRI, APR 30 2010 13:12
D1-24b

2012WP-Alt 1 BR#5 ON-5.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

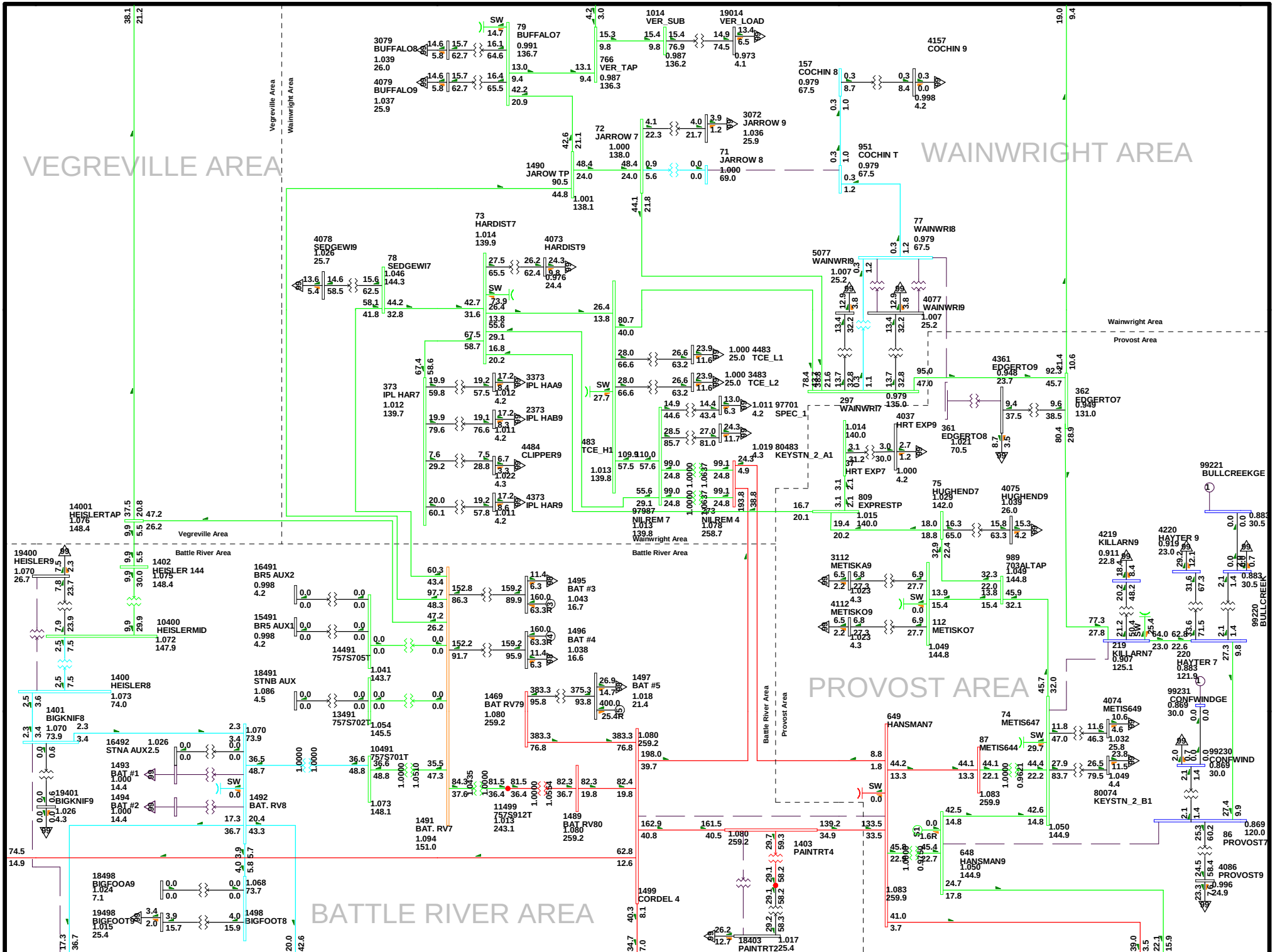

VEGREVILLE AREA
WAINWRIGHT AREA
PROVOST AREA
BATTLE RIVER AREA
Vegreville Area
Wainwright Area
Battle River Area
Provost Area
79 BUFFALO7 0.982 135.6
3079 BUFFALO8 1.044 26.1
4079 BUFFALO9 1.052 26.3
1014 VER_SUB
19014 VER_LOAD 1.032 4.3
766 VER_TAP 0.988 136.4
0.988 136.4
4157 COCHIN 9
157 COCHIN 8 1.019 70.3
1.039 4.3
951 COCHIN T 1.019 70.3
72 JAROW 7 1.017 140.3
71 JAROW 8 1.017 70.2
3072 JAROW 9 1.034 25.8
1490 JAROW TP 1.050 144.9
73 HARDIST7 1.023 141.2
4073 HARDIST9 0.986 24.7
4078 SEDGEWI9 1.030 25.7
78 SEDGEWI7 1.049 144.7
77 WAINWRI8 1.019 70.3
5077 WAINWRI9 1.050 26.3
4077 WAINWRI9 1.050 26.3
297 WAINWRI7 1.019 140.6
373 IPL HAR7 1.022 141.0
3373 IPL HAA9 1.022 4.3
2373 IPL HAB9 1.022 4.2
4484 CLIPPER9 1.026 4.3
4373 IPL HAR9 1.021 4.2
1.011 4483 25.3 TCE_L1
1.011 3483 25.3 TCE_L2
483 TCE_H1 1.023 141.1
1.021 97701 SPEC_1 4.3
1.030 80483 KEYSTN_2_A1 4.3
97987 NIL REM 7 1.023 141.1
273 NIL REM 4 1.084 260.2
4037 HRT EXP9
361 EDGERTO8 1.021 70.5
HRT EXP7 1.009 4.2
4361 EDGERTO9 1.031 25.8
362 EDGERTO7 1.028 141.9
809 EXPRESTP 1.024 141.3
75 HUGHEND7 1.033 142.6
4075 HUGHEND9 1.031 25.8
14001 HEISLERTAP 1.075 148.3
1402 HEISLER 144 1.074 148.2
10400 HEISLERMID 1.071 147.8
19400 HEISLER9 1.069 26.7
1400 HEISLER8 1.073 74.0
1401 BIGKNIF8 1.071 73.9
19401 BIGKNIF9 1.026 14.3
16491 BR5 AUX2 0.998 4.2
15491 BR5 AUX1 0.998 4.2
14491 757S705T 1.041 143.7
18491 STNB AUX 1.086 4.5
13491 757S702T 1.054 145.5
16492 STNA AUX2.5 1.027 4.3
10491 757S701T 1.074 148.2
1493 BAT #1 1.000 14.4
1494 BAT #2 1.000 14.4
1492 BAT. RV8 22.3 47.4
1491 BAT. RV7 1.094 151.0
1495 BAT #3 1.032 16.5
1496 BAT #4 1.034 16.5
1497 BAT #5 1.012 21.2
1469 BAT RV79 1.080 259.2
11499 757S912T 1.014 243.4
1489 BAT RV80 1.080 259.3
1499 CORDEL 4
18498 BIGFOOA9 1.025 7.1
19498 BIGFOOT9 1.015 25.4
1498 BIGFOOT8 1.069 73.8
18403 PAINTRT2 1.016 25.4
1403 PAINTRT4
649 HANSMAN7
648 HANSMAN9 1.050 144.9
74 METIS647
87 METIS644 1.083 259.9
4074 METIS649 1.032 25.8
80074 KEYSTN_2_B1 1.049 4.4
3112 METISKA9 1.023 4.3
4112 METISKO9 1.023 4.3
112 METISKO7 1.049 144.8
989 703ALTAP 1.049 144.8
99221 BULLCREEKGE
4219 KILLARN9 1.060 26.5
219 KILLARN7 1.043 143.9
4220 HAYTER 9 1.036 25.9
220 HAYTER 7 1.035 142.8
99231 CONFWINDGE 1.039 35.8
99230 CONFWIND 1.039 35.8
99220 BULLCREEK
4086 PROVOST9 1.033 25.8
86 PROVOST7 1.039 143.4
CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
FRI, APR 30 2010 13:12
D1-24b
2012WP-Alt 1 BR#5 ON-5.b
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV 0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000

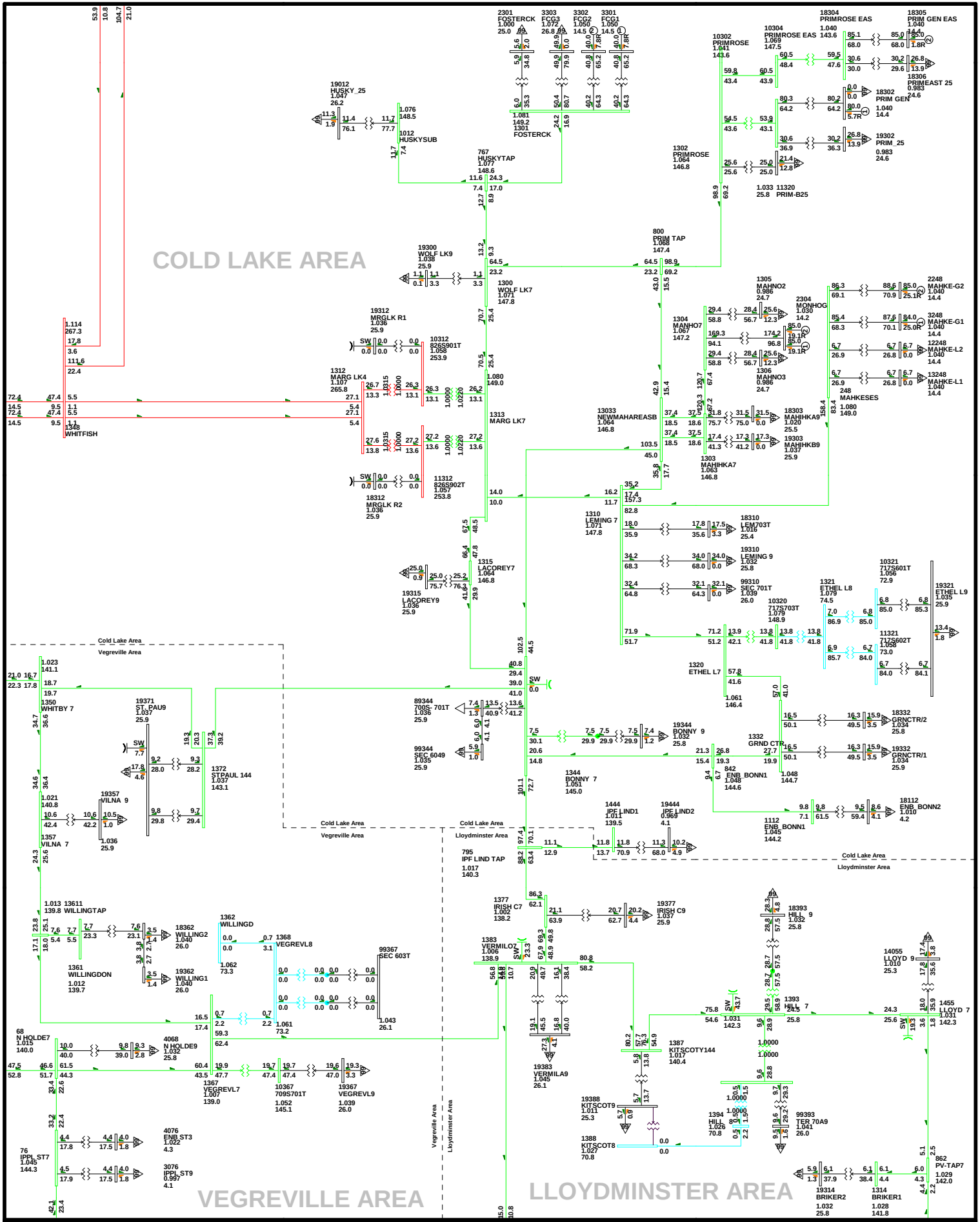


CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
FRI, APR 30 2010 13:12
D1-25

2012WP-Alt 1 BR#5 ON-6.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

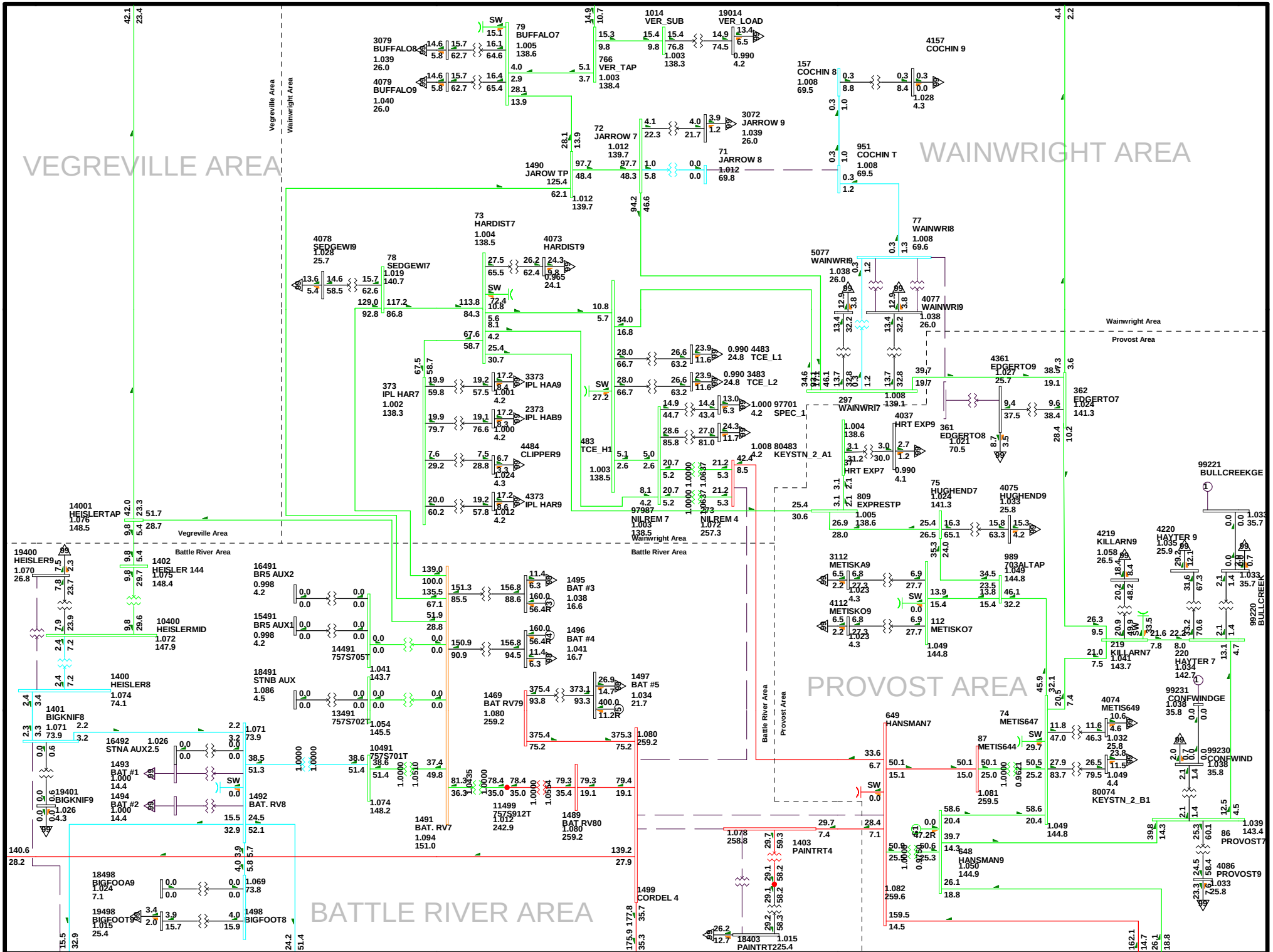

VEGREVILLE AREA
WAINWRIGHT AREA
PROVOST AREA
BATTLE RIVER AREA
Vegreville Area
Wainwright Area
Battle River Area
Provost Area
79 BUFFALO7 0.991 136.7
3079 BUFFALO8 1.039 26.0
4079 BUFFALO9 1.037 25.9
766 VER_TAP 0.987 136.3
1014 VER_SUB 0.987 136.2
19014 VER_LOAD 0.973 4.1
4157 COCHIN 9
157 COCHIN 8 0.979 67.5
951 COCHIN T 0.979 67.5
0.998 4.2
72 JAROW 7 1.000 138.0
3072 JAROW 9 1.036 25.9
71 JAROW 8 1.000 69.0
1490 JAROW TP 90.5 1.001 138.1
73 HARDIST7 1.014 139.9
4073 HARDIST9 0.976 24.4
4078 SEDGEWI9 1.026 25.7
78 SEDGEWI7 1.046 144.3
77 WAINWRI8 0.979 67.5
5077 WAINWRI9 1.007 25.2
4077 WAINWRI9 1.007 25.2
373 IPL HAR7 1.012 139.7
3373 IPL HAA9 1.012 4.2
2373 IPL HAB9 1.011 4.2
4484 CLIPPER9 1.022 4.3
4373 IPL HAR9 1.011 4.2
483 TCE_H1 1.013 139.8
1.000 4483 25.0 TCE_L1
1.000 3483 25.0 TCE_L2
1.011 97701 4.2 SPEC_1
1.019 80483 4.3 KEYSTN_2_A1
297 WAINWRI7 0.979 135.0
4037 HRT EXP9 1.021 70.5
HRT EXP7 1.000 4.2
361 EDGERTO8 1.021 70.5
4361 EDGERTO9 0.948 23.7
362 EDGERTO7 0.949 131.0
97987 NIL REM 7 1.013 139.8
273 NIL REM 4 1.078 258.7
809 EXPRESTP 1.015 140.0
75 HUGHEND7 1.029 142.0
4075 HUGHEND9 1.039 26.0
99221 BULLCREEKGE
99220 BULLCREEK
14001 HEISLERTAP 1.076 148.4
19400 HEISLER9 1.070 26.7
1402 HEISLER 144 1.075 148.4
10400 HEISLERMID 1.072 147.9
1400 HEISLER8 1.073 74.0
1401 BIGKNIF8 1.070 73.9
19401 BIGKNIF9 1.026 74.3
16491 BR5 AUX2 0.998 4.2
15491 BR5 AUX1 0.998 4.2
14491 757S705T 1.041 143.7
18491 STNB AUX 1.086 4.5
13491 757S702T 1.054 145.5
16492 STNA AUX2.5 1.026 74.3
10491 757S701T 1.073 148.1
1493 BAT #1 1.000 14.4
1494 BAT #2 1.000 14.4
1492 BAT. RV8 20.4 43.3
18498 BIGFOOA9 1.024 7.1
19498 BIGFOOT9 1.015 25.4
1498 BIGFOOT8 1.068 73.7
1491 BAT. RV7 1.094 151.0
1495 BAT #3 1.043 16.7
1496 BAT #4 1.038 16.6
1497 BAT #5 1.018 21.4
1469 BAT RV79 1.080 259.2
11499 757S912T 1.013 243.1
1489 BAT RV80 1.080 259.2
1499 CORDEL 4 1.080 259.2
18403 PAINTRT2 1.017 25.4
1403 PAINTRT4 1.080 259.2
649 HANSMAN7 1.050 144.9
648 HANSMAN9 1.050 144.9
74 METIS647 1.049 144.8
87 METIS644 1.083 259.9
3112 METISKA9 1.023 4.3
4112 METISKO9 1.023 4.3
112 METISKO7 1.049 144.8
989 703ALTAP 1.049 144.8
80074 KEYSTN_2_B1 1.049 4.4
4074 METIS649 1.032 25.8
4086 PROVOST9 0.996 24.9
86 PROVOST7 0.869 120.0
4219 KILLARN9 0.911 22.8
219 KILLARN7 0.907 125.1
4220 HAYTER 9 0.919 23.0
220 HAYTER 7 0.883 121.9
99231 CONFWINDGE 0.869 30.0
99230 CONFWIND 0.869 30.0
CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
FRI, APR 30 2010 13:12
D1-25
2012WP-Alt 1 BR#5 ON-6.b
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV 0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
FRI, APR 30 2010 13:12
D1-26

2012WP-Alt 1 BR#5 ON-7.a

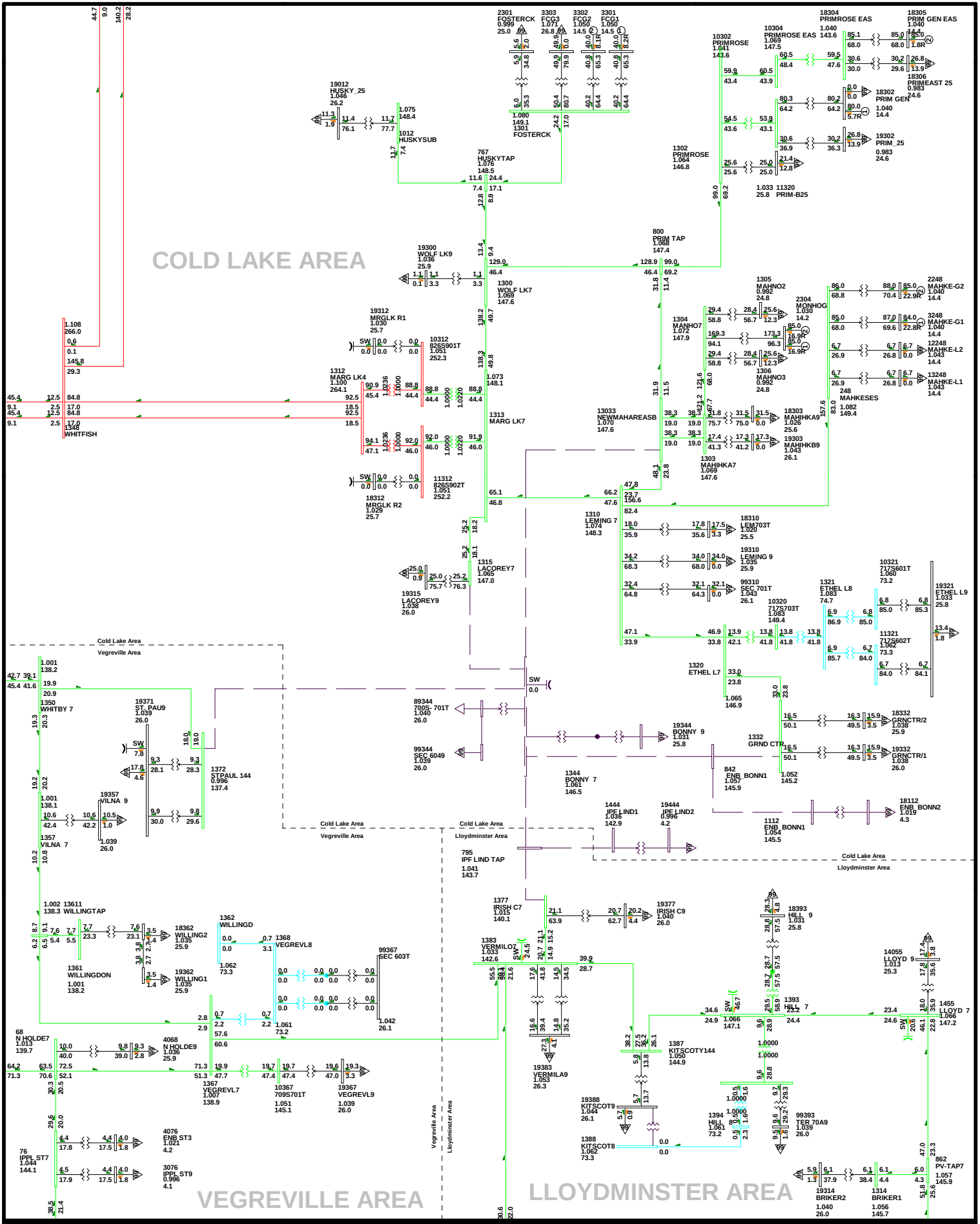
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
FRI, APR 30 2010 13:12
D1-26

2012WP-Alt 1 BR#5 ON-7.b

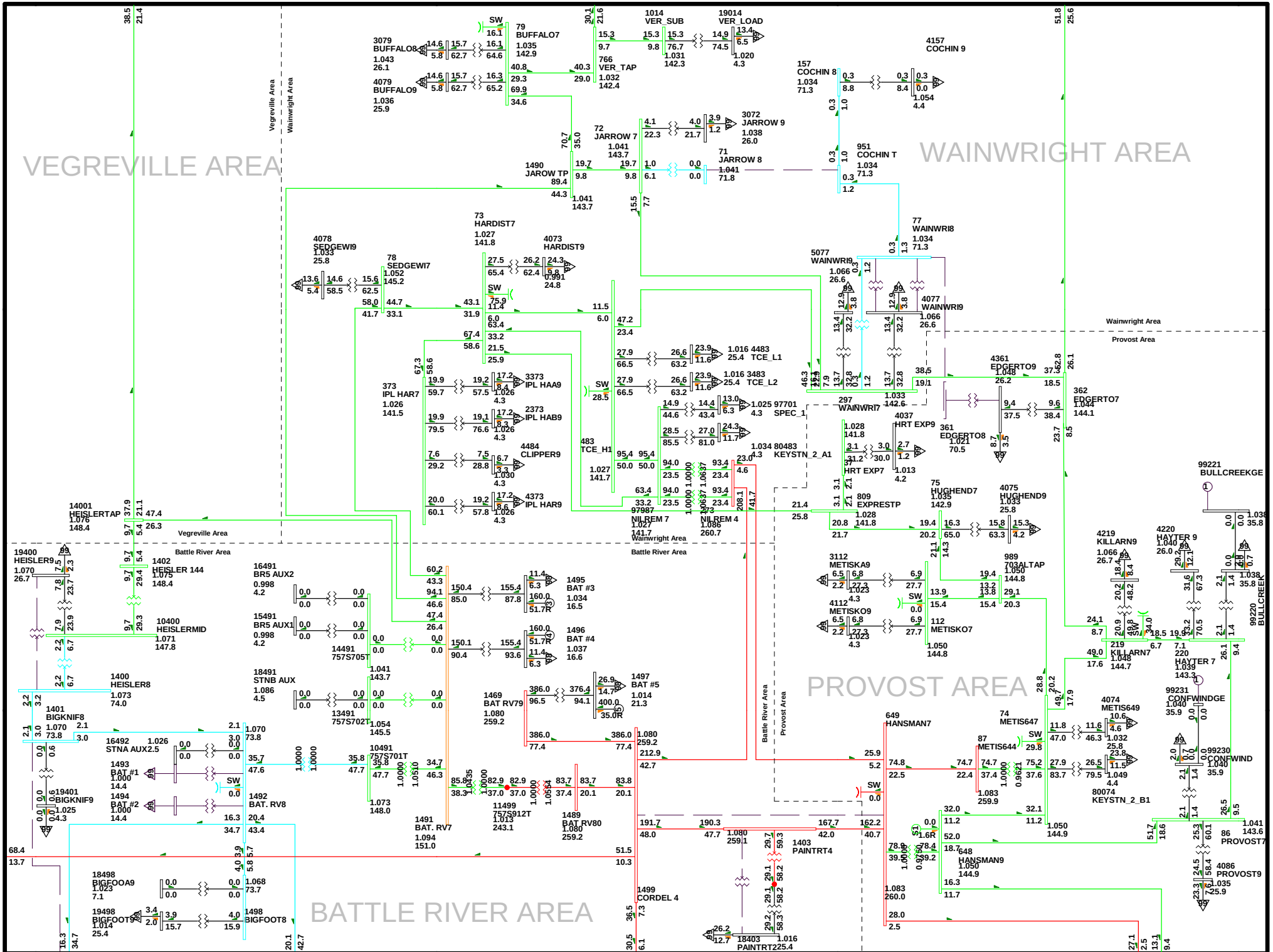
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV 0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
FRI, APR 30 2010 13:12
D1-27

2012WP-Alt 1 BR#5 ON-8.a

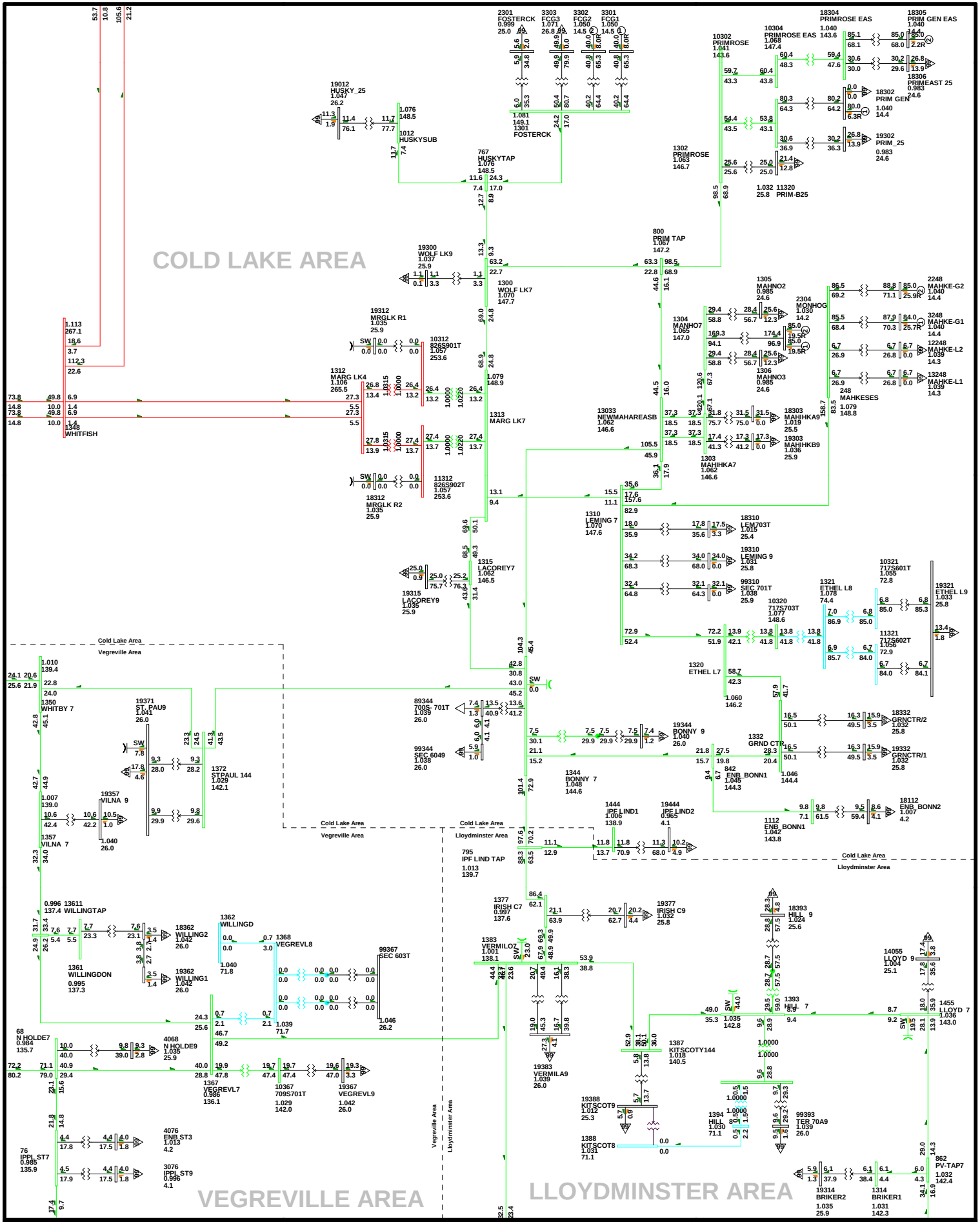
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
FRI, APR 30 2010 13:12
D1-27

2012WP-Alt 1 BR#5 ON-8.b

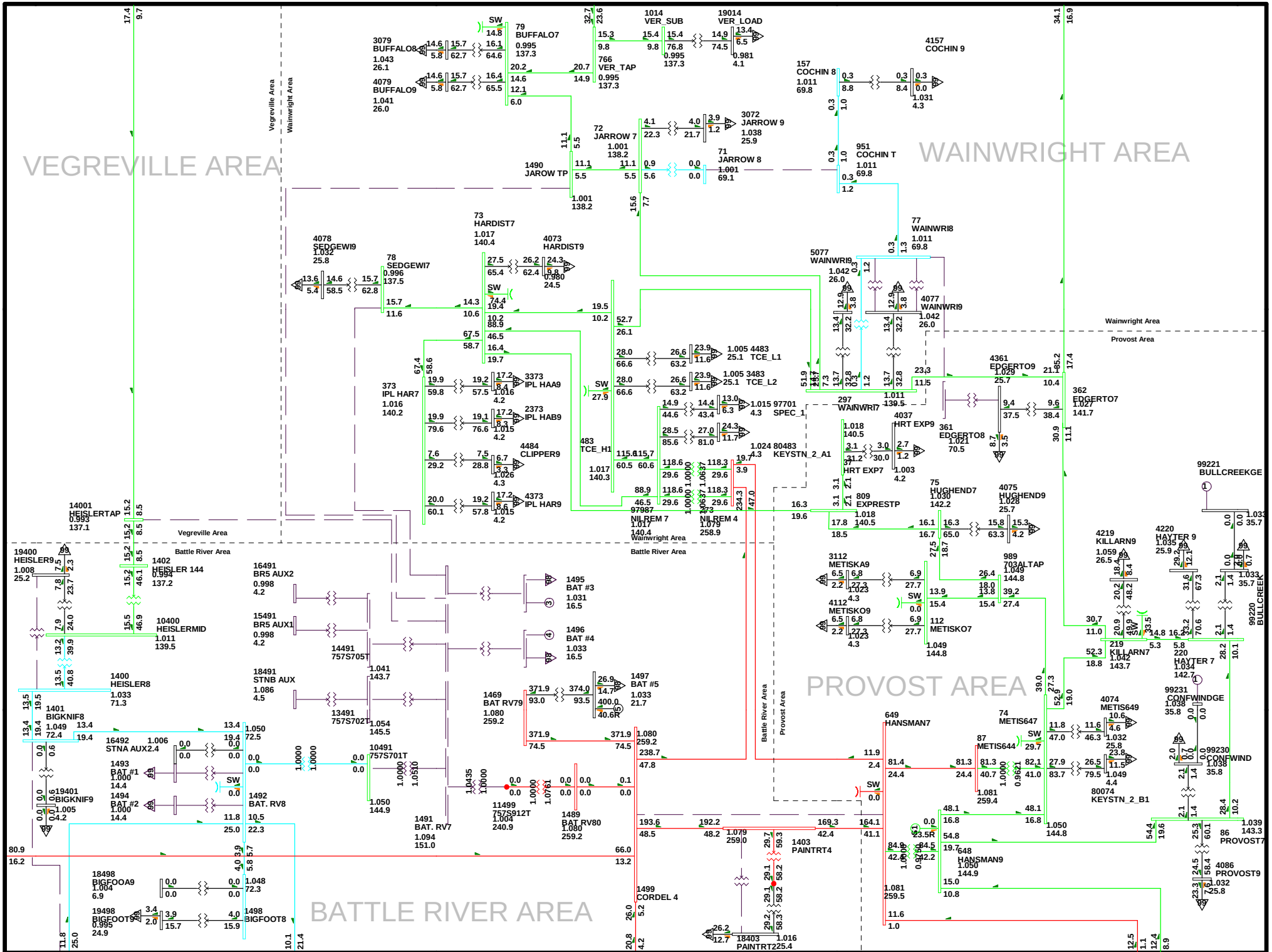
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV 0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
FRI, APR 30 2010 13:12
D1-28

2012WP-Alt 1 BR#5 ON-9.a

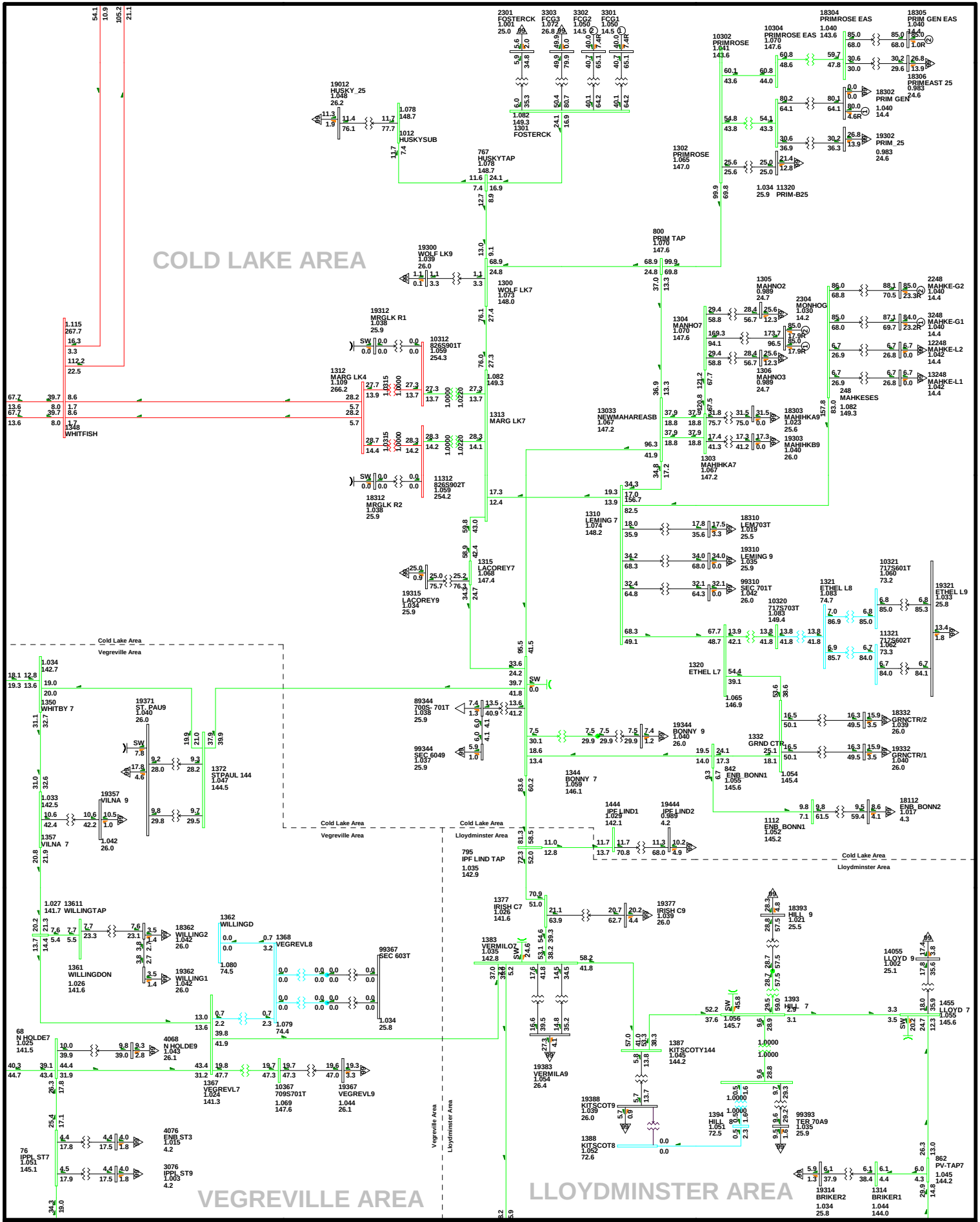
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
FRI, APR 30 2010 13:12
D1-28

2012WP-Alt 1 BR#5 ON-9.b

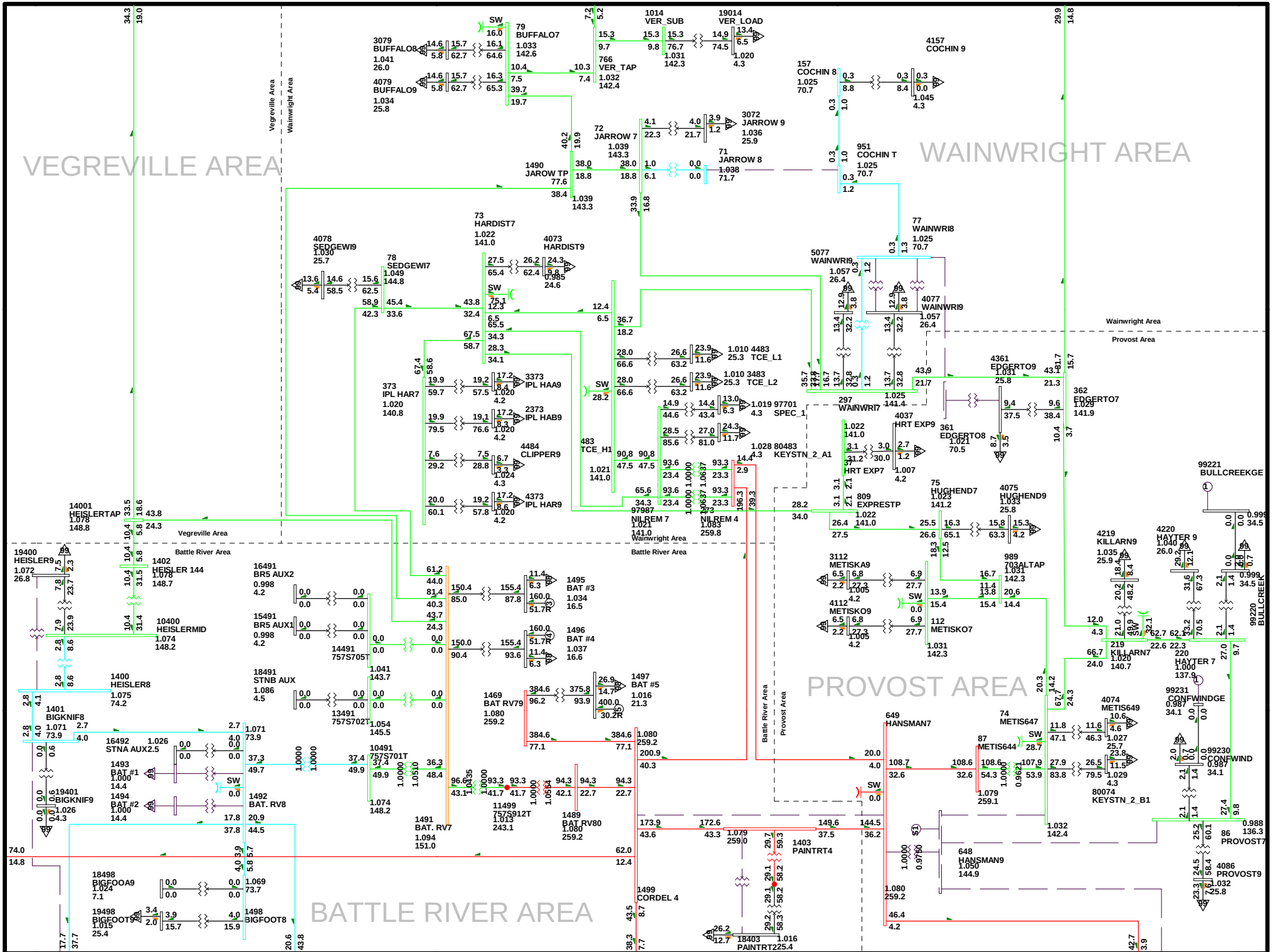
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV 0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000

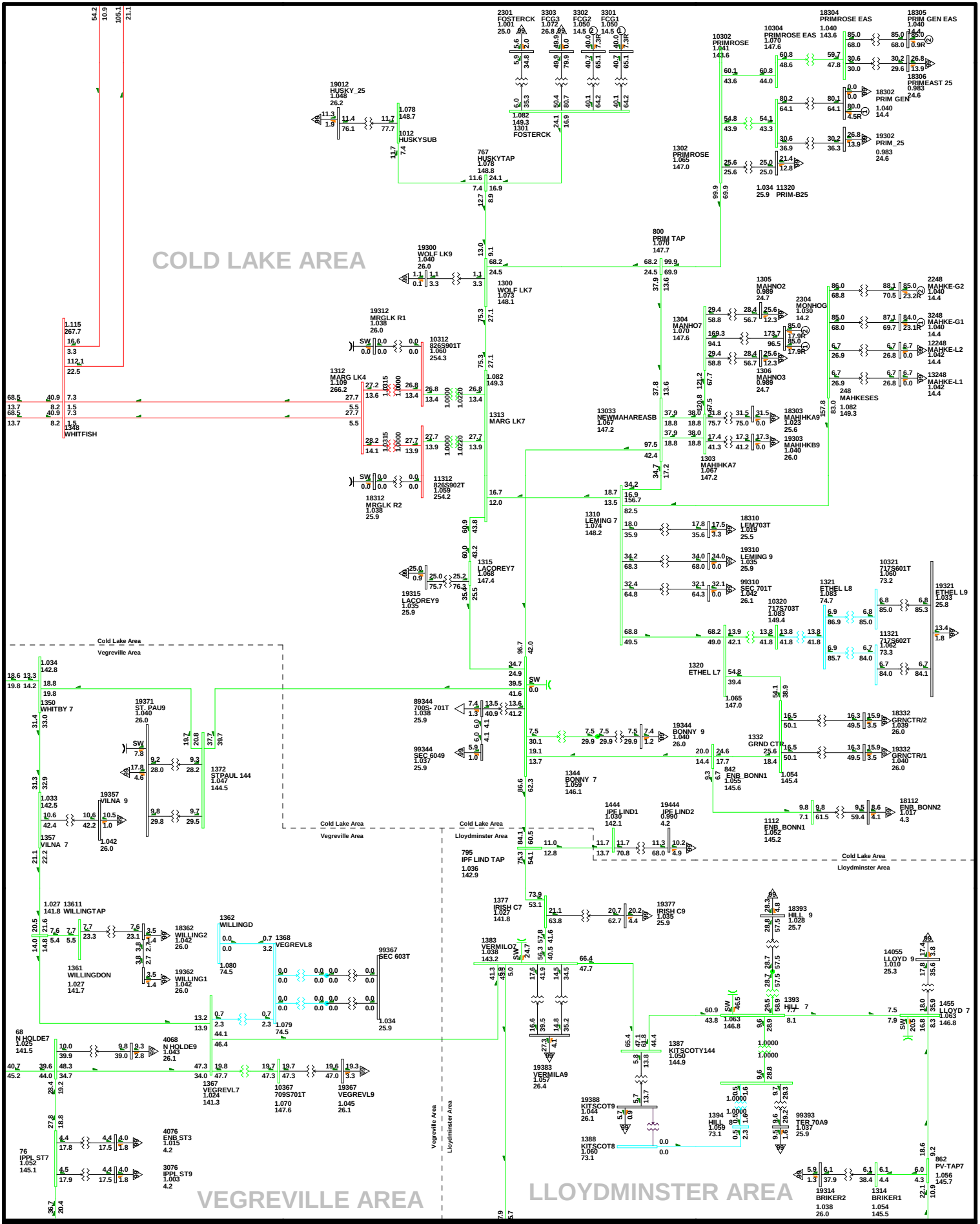


CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
FRI, APR 30 2010 13:12
D1-30

2012WP-Alt 1 BR#5 ON-10.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

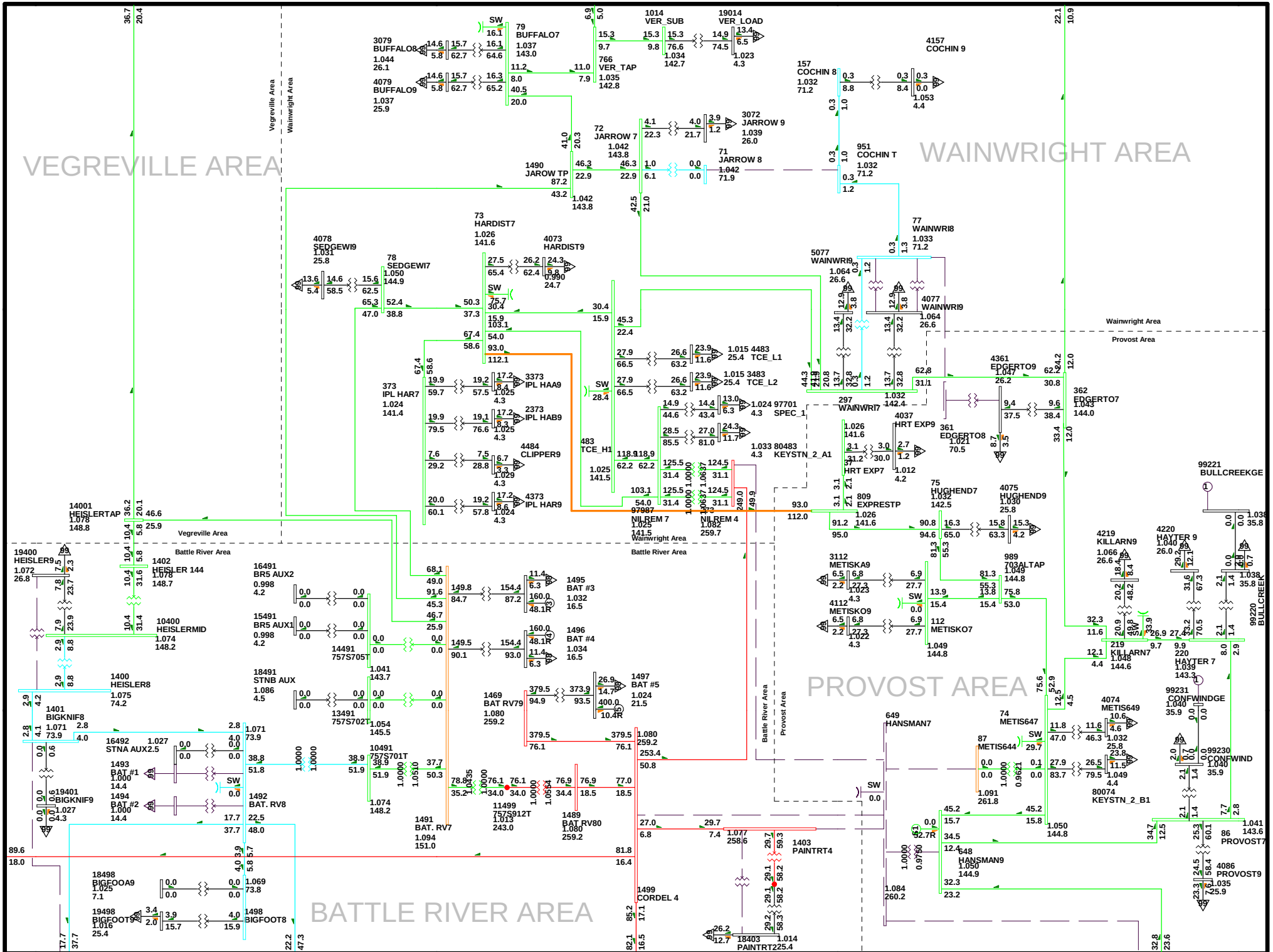

VEGREVILLE AREA
WAINWRIGHT AREA
PROVOST AREA
BATTLE RIVER AREA
Vegreville Area
Wainwright Area
Battle River Area
Provost Area
79 BUFFALO7 1.033 142.6
3079 BUFFALO8 1.041 26.0
4079 BUFFALO9 1.034 25.8
766 VER_TAP 1.032 142.4
1014 VER_SUB
19014 VER_LOAD
4157 COCHIN 9
157 COCHIN 8 1.025 70.7
951 COCHIN T 1.025 70.7
1045 4.3
72 JAROW 7 1.039 143.3
3072 JAROW 9 1.036 25.9
71 JAROW 8 1.038 71.7
1490 JAROW TP 77.6 1.039 143.3
77 WAINWRI8 1.025 70.7
5077 WAINWRI9 1.057 26.4
4077 WAINWRI9 1.057 26.4
297 WAINWRI7 1.025 141.4
4078 SEDGEWI9 1.030 25.7
78 SEDGEWI7 1.049 144.8
73 HARDIST7 1.022 141.0
4073 HARDIST9 0.985 24.6
373 IPL HAR7 1.020 140.8
3373 IPL HAA9 1.020 4.2
2373 IPL HAB9 1.020 4.2
4484 CLIPPER9 1.024 4.3
4373 IPL HAR9 1.020 4.2
483 TCE_H1 1.021 141.0
1010 4483 25.3 TCE_L1
1010 3483 25.3 TCE_L2
1019 97701 4.3 SPEC_1
1028 80483 4.3 KEYSTN_2_A1
97987 NII REM 7 1.021 141.0
273 NII REM 4 1.083 259.8
4037 HRT EXP9 1.022 141.0
361 EDGERTO8 1.021 70.5
HRT EXP7 1.007 4.2
4361 EDGERTO9 1.031 25.8
362 EDGERTO7 1.029 141.9
809 EXPRESTP 1.022 141.0
75 HUGHEND7 1.023 141.2
4075 HUGHEND9 1.033 25.8
14001 HEISLERTAP 1.078 148.8
1402 HEISLER 144 1.076 148.7
10400 HEISLERMID 1.074 148.2
19400 HEISLER9 1.072 26.8
1400 HEISLER8 1.075 74.2
1401 BIGKNIF8 1.071 73.9
19401 BIGKNIF9 1.026 4.3
16491 BR5 AUX2 0.998 4.2
15491 BR5 AUX1 0.998 4.2
14491 757S705T 1.041 143.7
18491 STNB AUX 1.086 4.5
13491 757S702T 1.054 145.5
16492 STNA AUX2.5 1.026
10491 757S701T 1.074 148.2
1493 BAT #1 1.000 14.4
1494 BAT #2 1.000 14.4
1492 BAT. RV8 1.071 73.9
1491 BAT. RV7 1.094 151.0
1495 BAT #3 1.034 16.5
1496 BAT #4 1.037 16.6
1497 BAT #5 1.016 21.3
1469 BAT RV79 1.080 259.2
11499 757S912T 1.013 243.1
1489 BAT RV80 1.080 259.2
1499 CORDEL 4 1.080 259.2
18403 PAINTRT2 1.016 25.4
1403 PAINTRT4 1.079 259.0
649 HANSMAN7 1.050 144.9
648 HANSMAN9 1.050 144.9
74 METIS647 1.032 142.4
87 METIS644 1.079 259.1
4074 METIS649 1.027 25.7
80074 KEYSTN_2_B1 1.029 4.3
3112 METISKA9 1.005 4.2
4112 METISKO9 1.005 4.2
112 METISKO7 1.031 142.3
989 703ALTAP 1.031 142.3
18498 BIGFOOA9 1.024 7.1
19498 BIGFOOT9 1.015 25.4
1498 BIGFOOT8 1.069 73.7
99221 BULLCREEKGE
99220 BULLCREEK
4219 KILLARN9 1.035 25.9
219 KILLARN7 1.020 140.7
4220 HAYTER 9 1.040 26.0
220 HAYTER 7 1.000 137.9
99231 CONFWINDGE 0.987 34.1
99230 CONFWIND 0.987 34.1
86 PROVOST7 0.988 136.3
4086 PROVOST9 1.032 25.8
CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
FRI, APR 30 2010 13:12
D1-30
2012WP-Alt 1 BR#5 ON-10.b
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV 0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
FRI, APR 30 2010 13:12
D1-31

2012WP-Alt 1 BR#5 ON-11.a

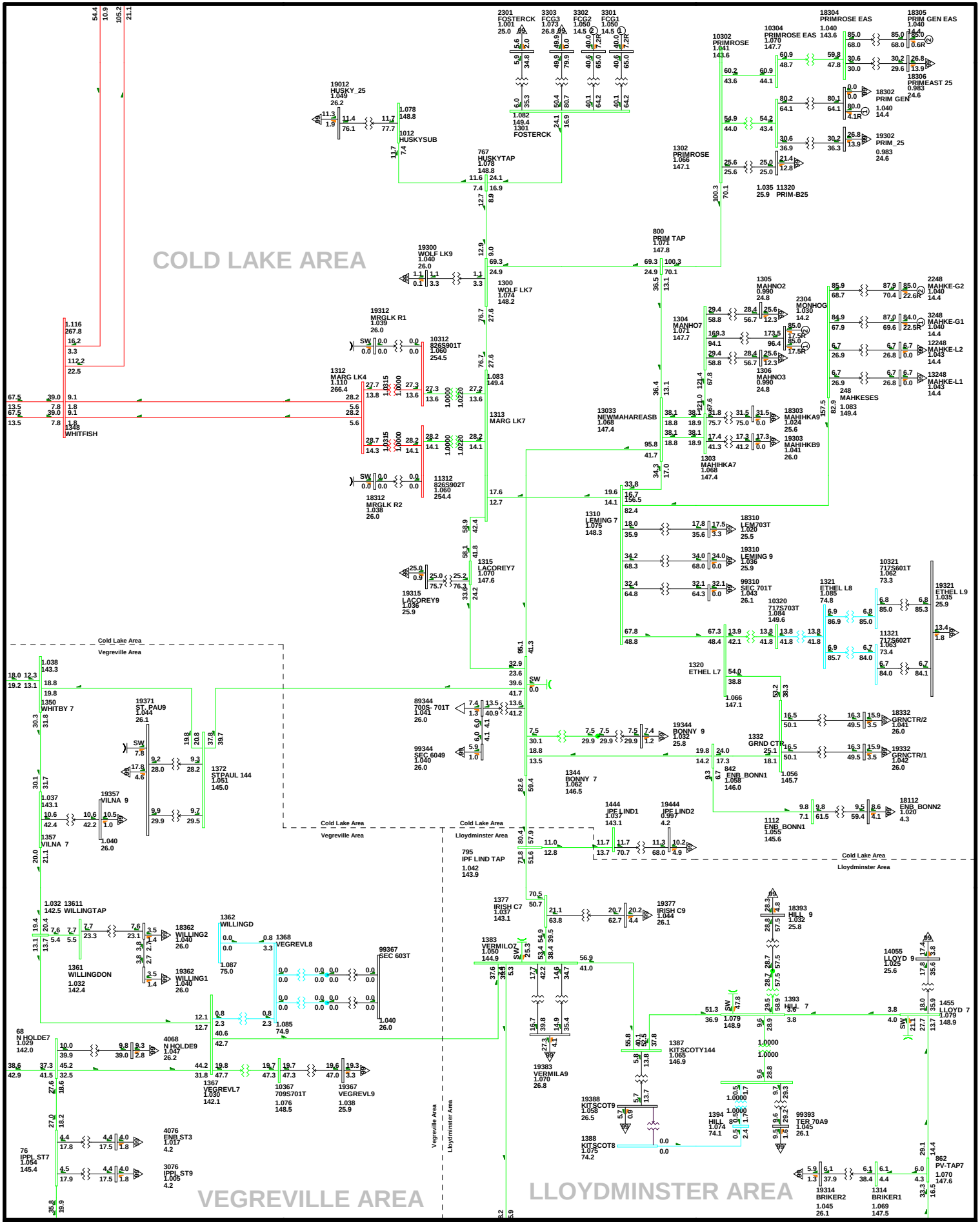
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
FRI, APR 30 2010 13:12
D1-31

2012WP-Alt 1 BR#5 ON-11.b

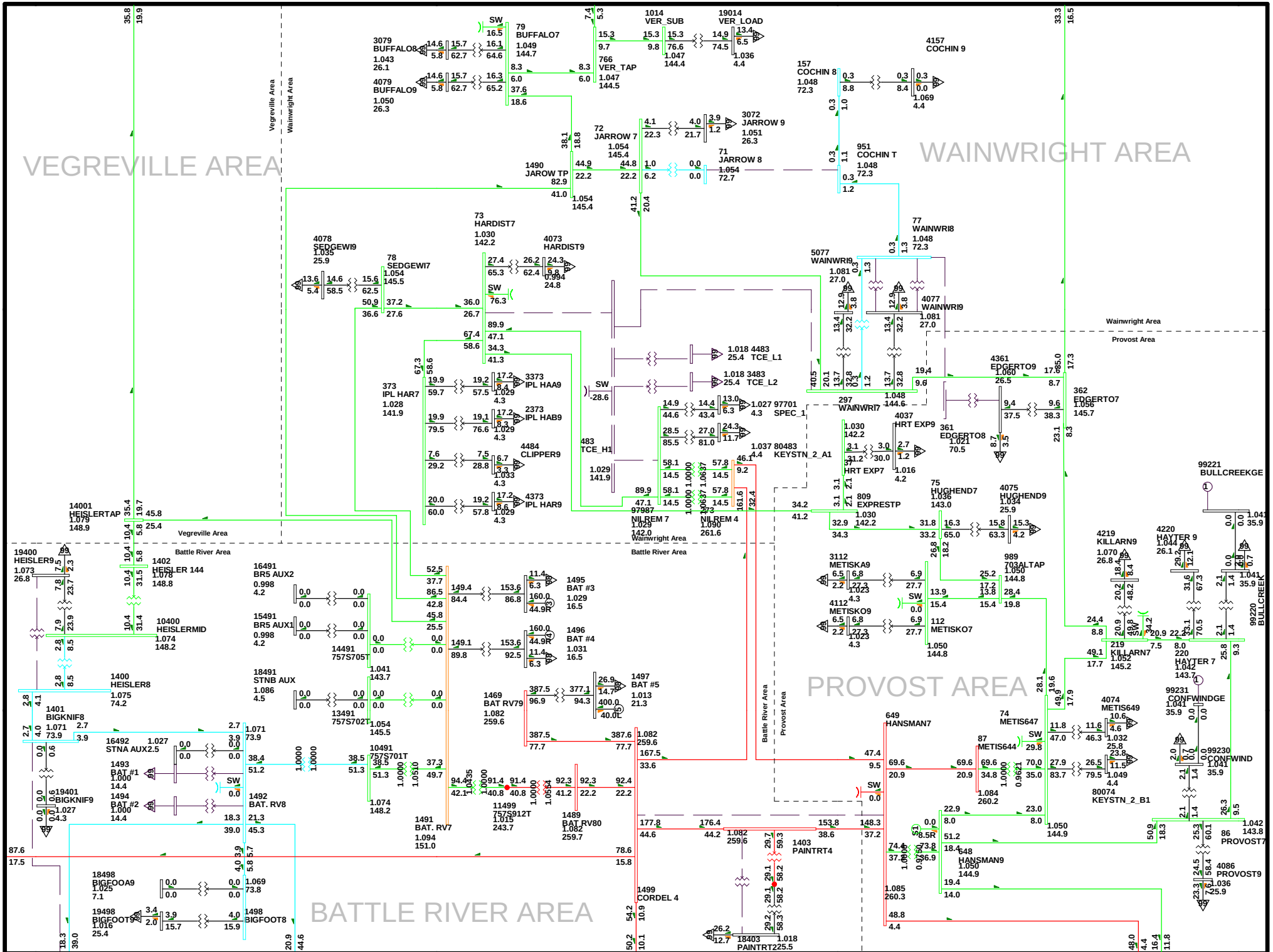
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV 0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
FRI, APR 30 2010 13:13
D1-32

2012WP-Alt 1 BR#5 ON-12.a

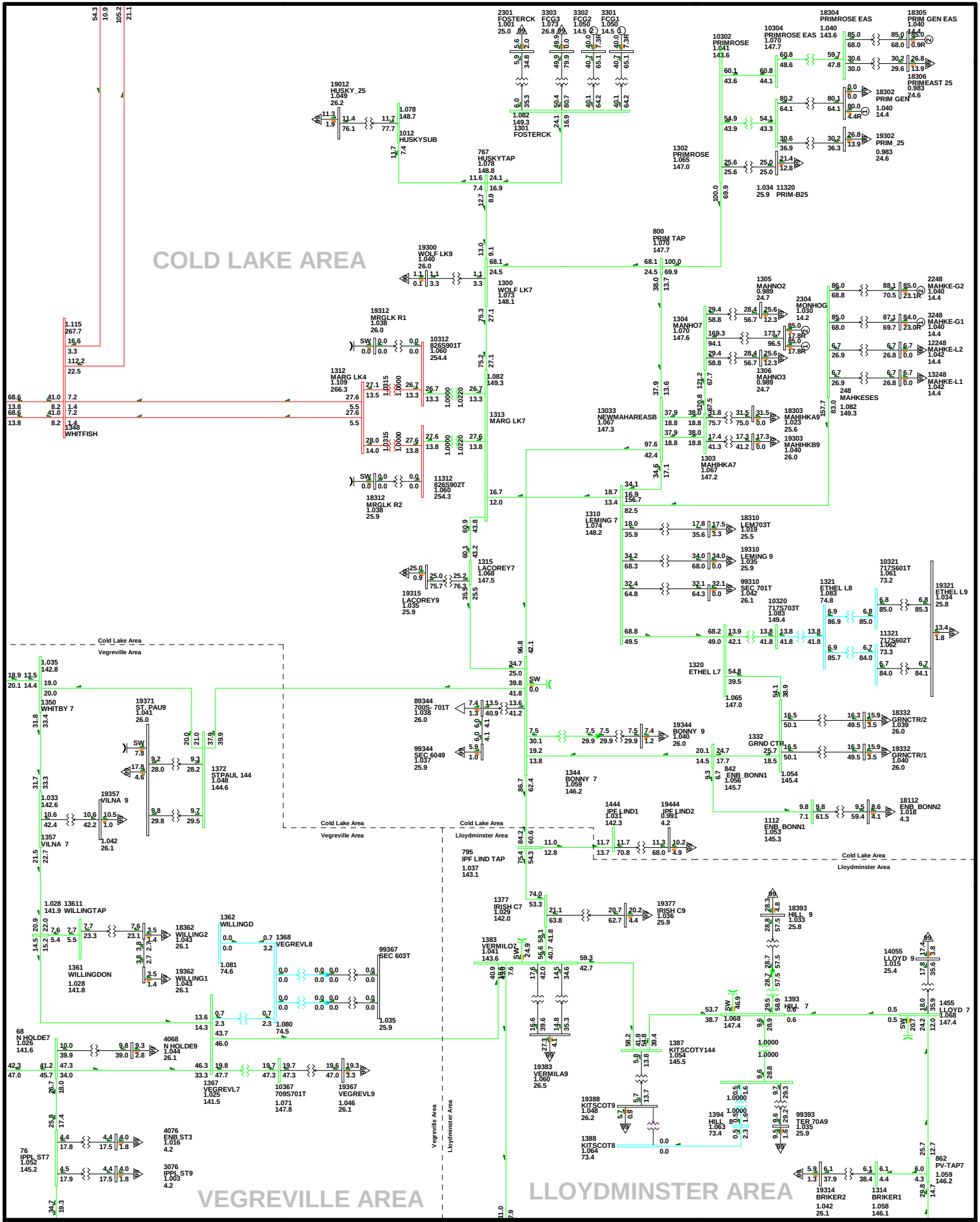
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
FRI, APR 30 2010 13:13
D1-32

2012WP-Alt 1 BR#5 ON-12.b

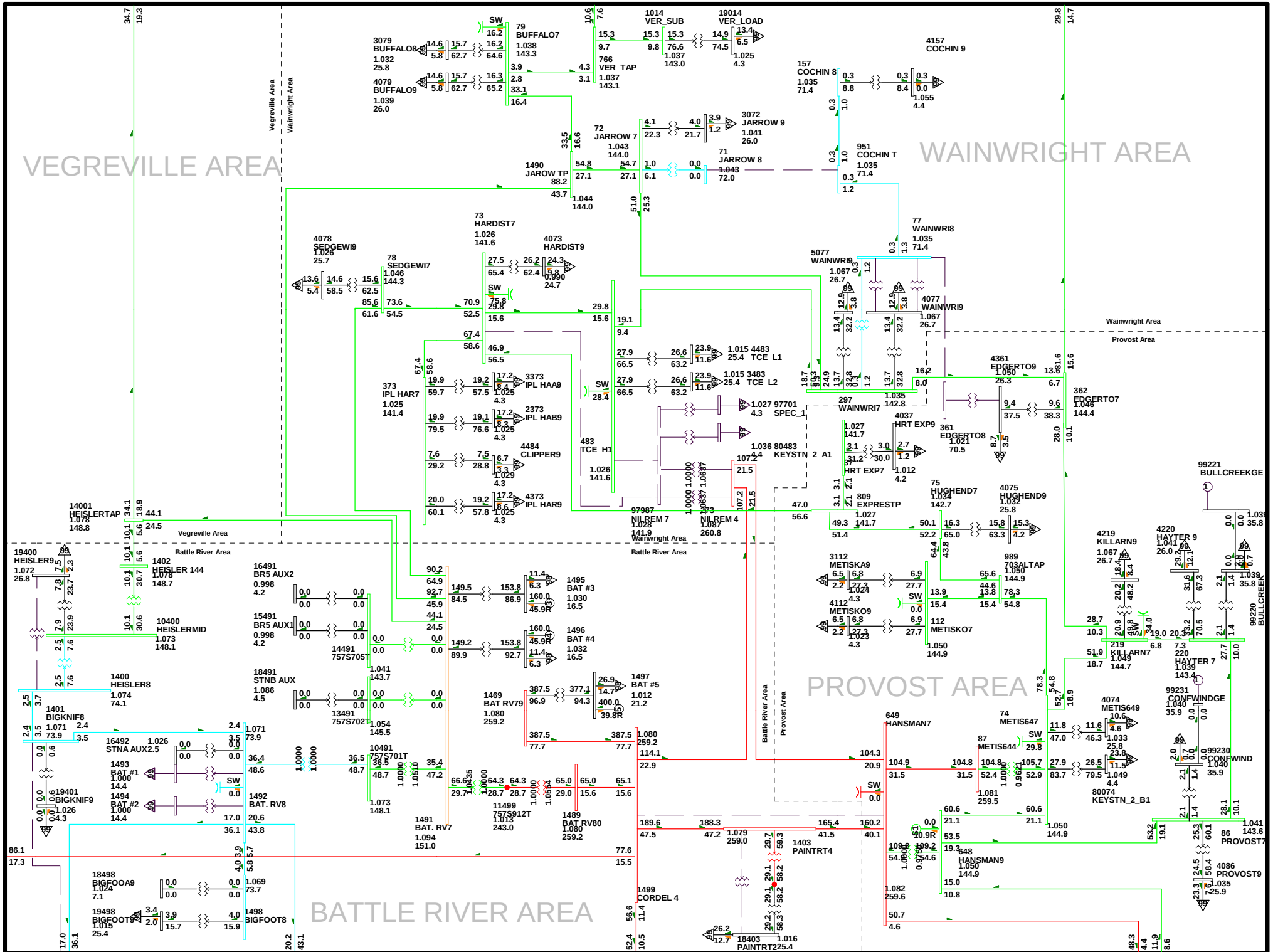
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV 0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
FRI, APR 30 2010 13:13
D1-33

2012WP-Alt 1 BR#5 ON-13.a

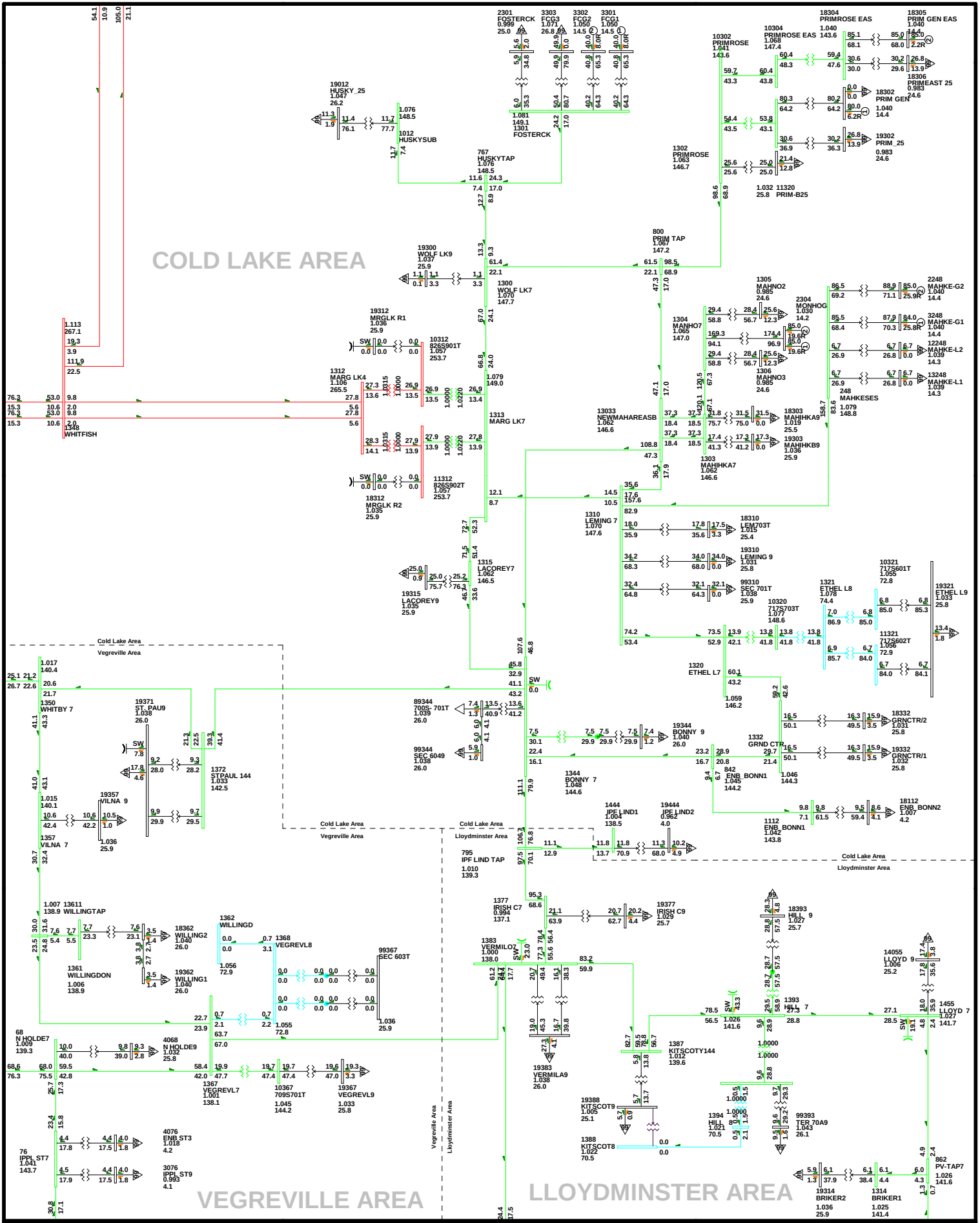
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
FRI, APR 30 2010 13:13
D1-33

2012WP-Alt 1 BR#5 ON-13.b

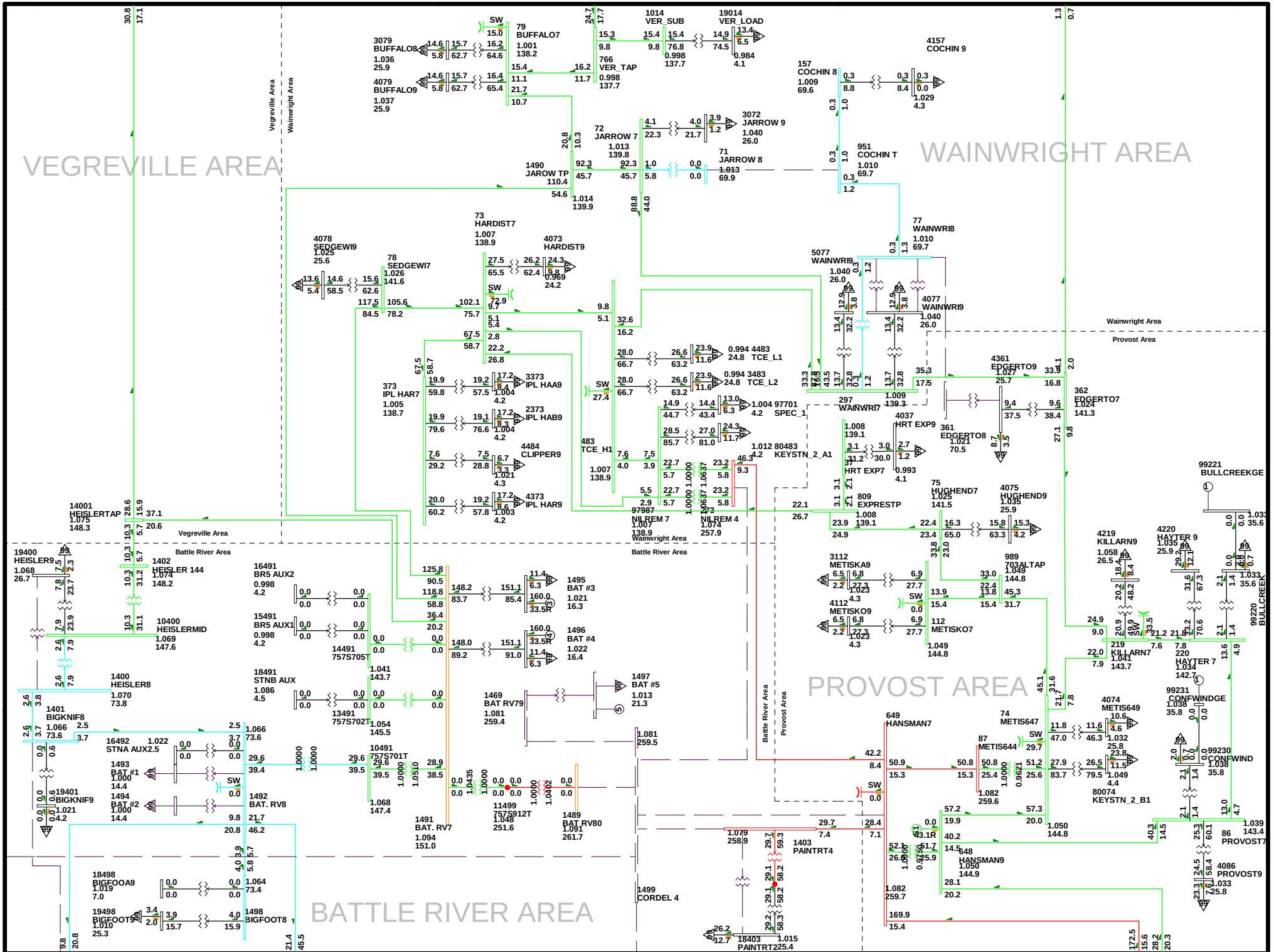
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV 0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
FRI, APR 30 2010 13:13
D1-34

2012WP-Alt 1 BR#5 ON-14.a

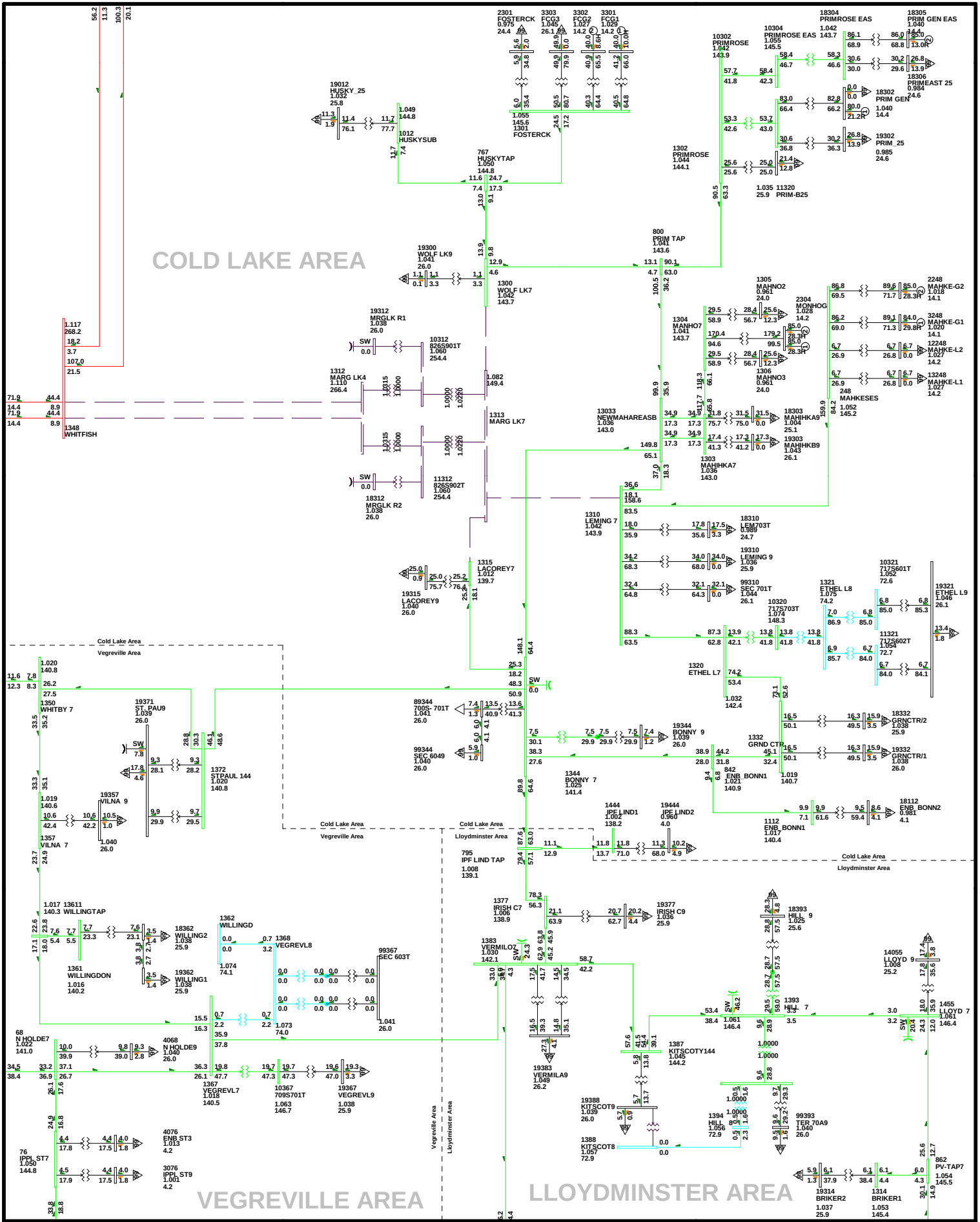
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
FRI, APR 30 2010 13:13
D1-34

2012WP-Alt 1 BR#5 ON-14.b

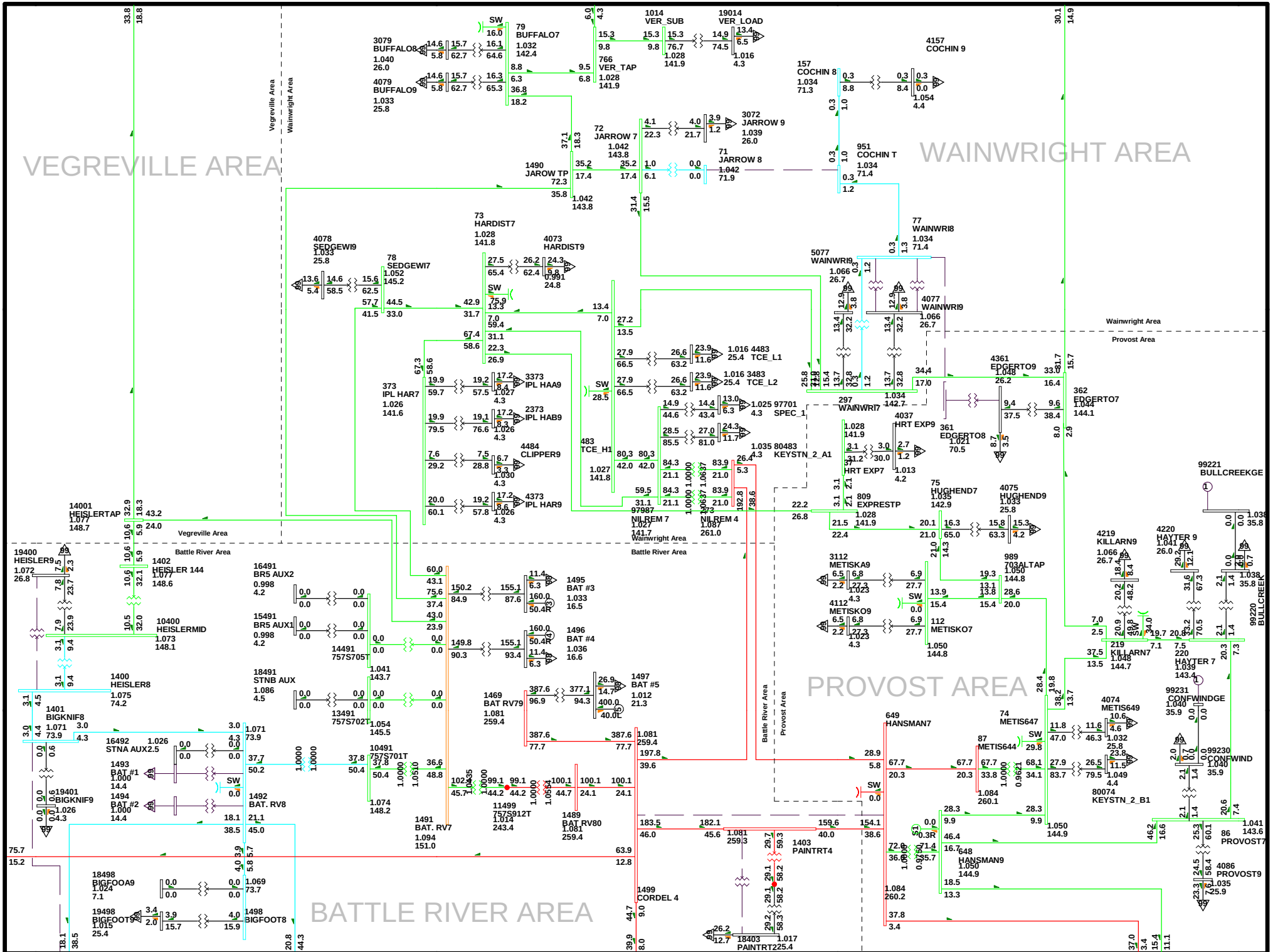
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV 0.920UV
kV: >0.000<=35.000<=69.000<=138.000<=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
FRI, APR 30 2010 13:13
D1-35

2012WP-Alt 1 BR#5 ON-15.a

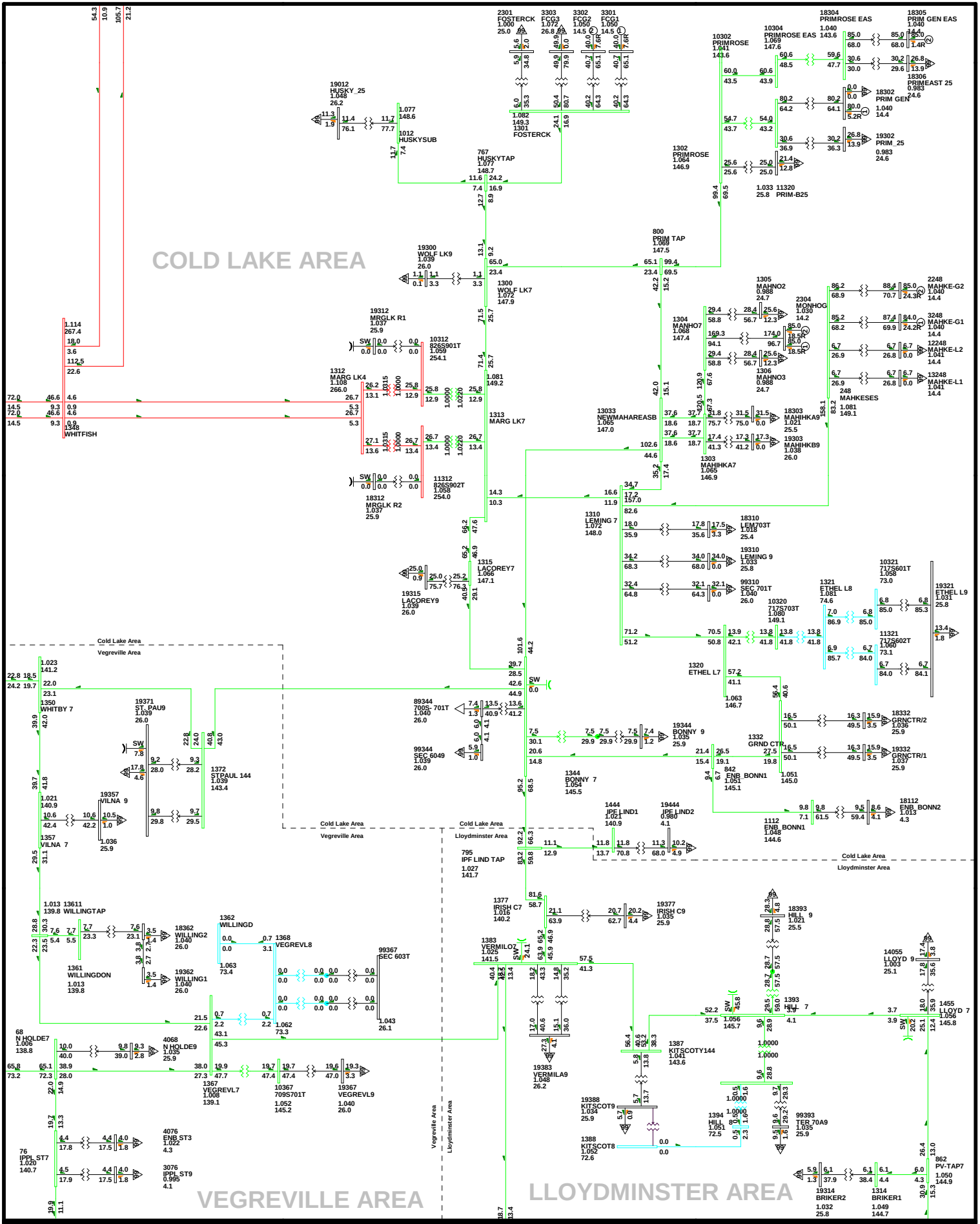
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
FRI, APR 30 2010 13:13
D1-35

2012WP-Alt 1 BR#5 ON-15.b

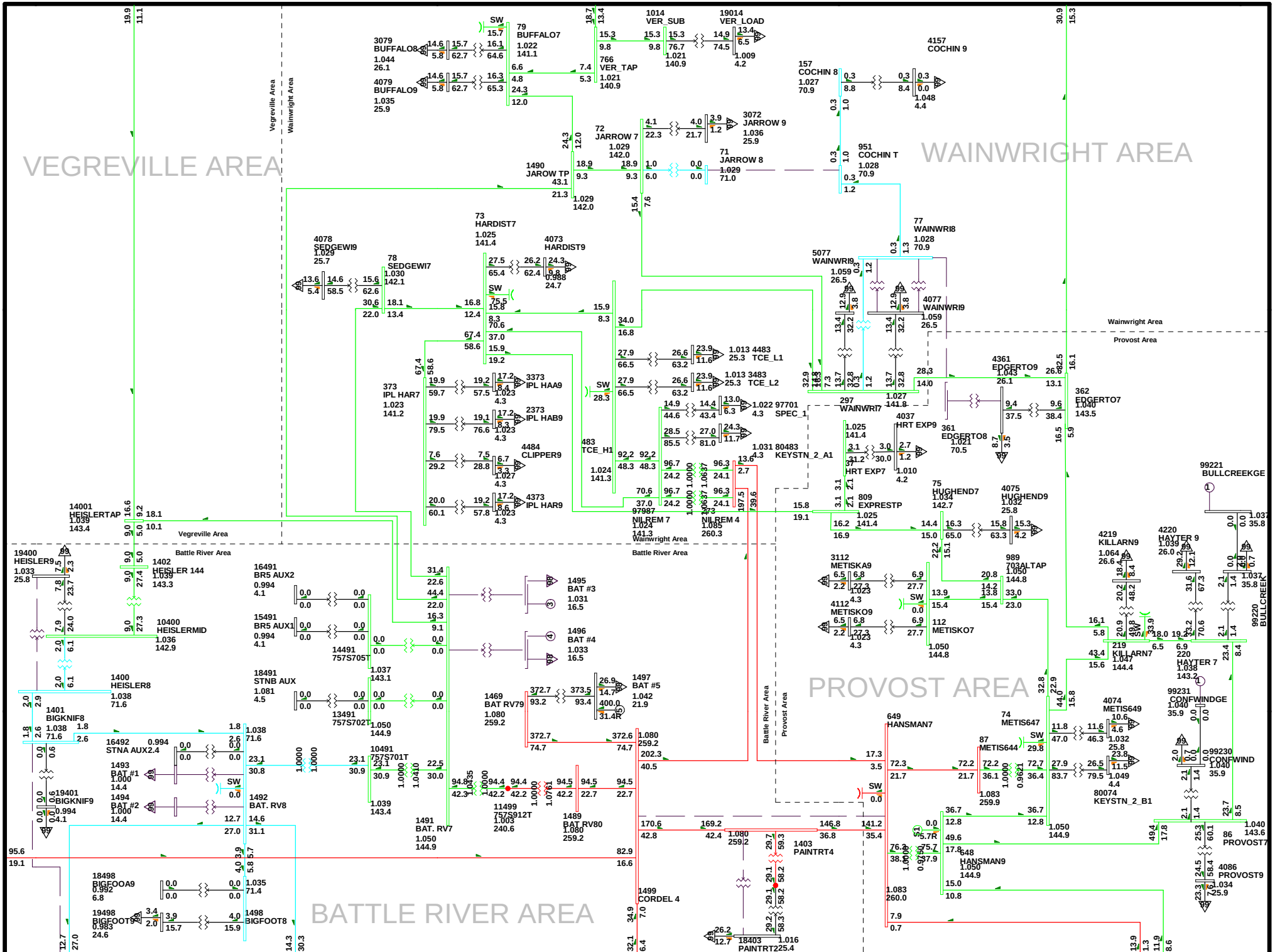
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV 0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
FRI, APR 30 2010 13:13
D1-36

2012WP-Alt 1 BR#5 ON-16.a

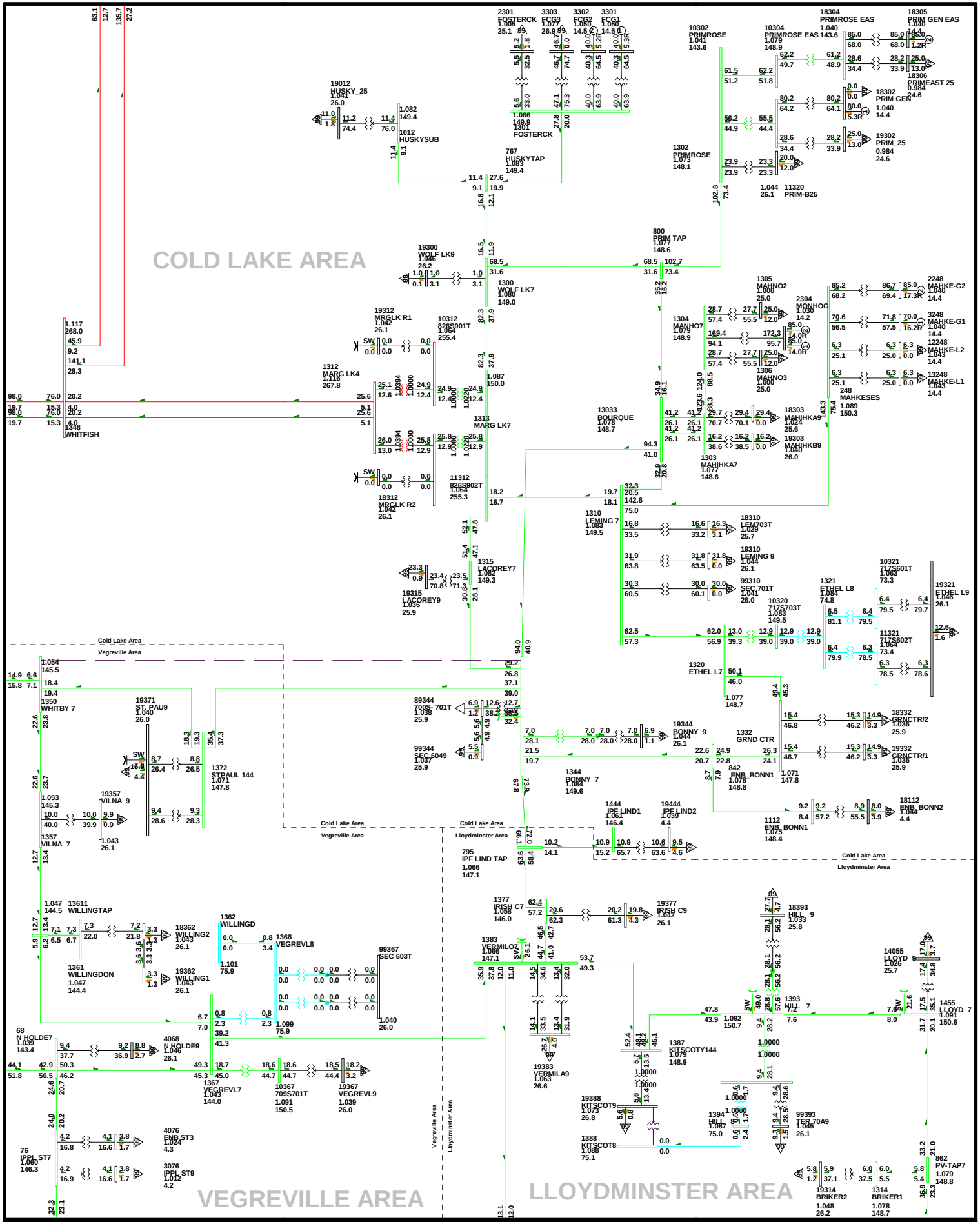
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
FRI, APR 30 2010 13:13
D1-36

2012WP-Alt 1 BR#5 ON-16.b

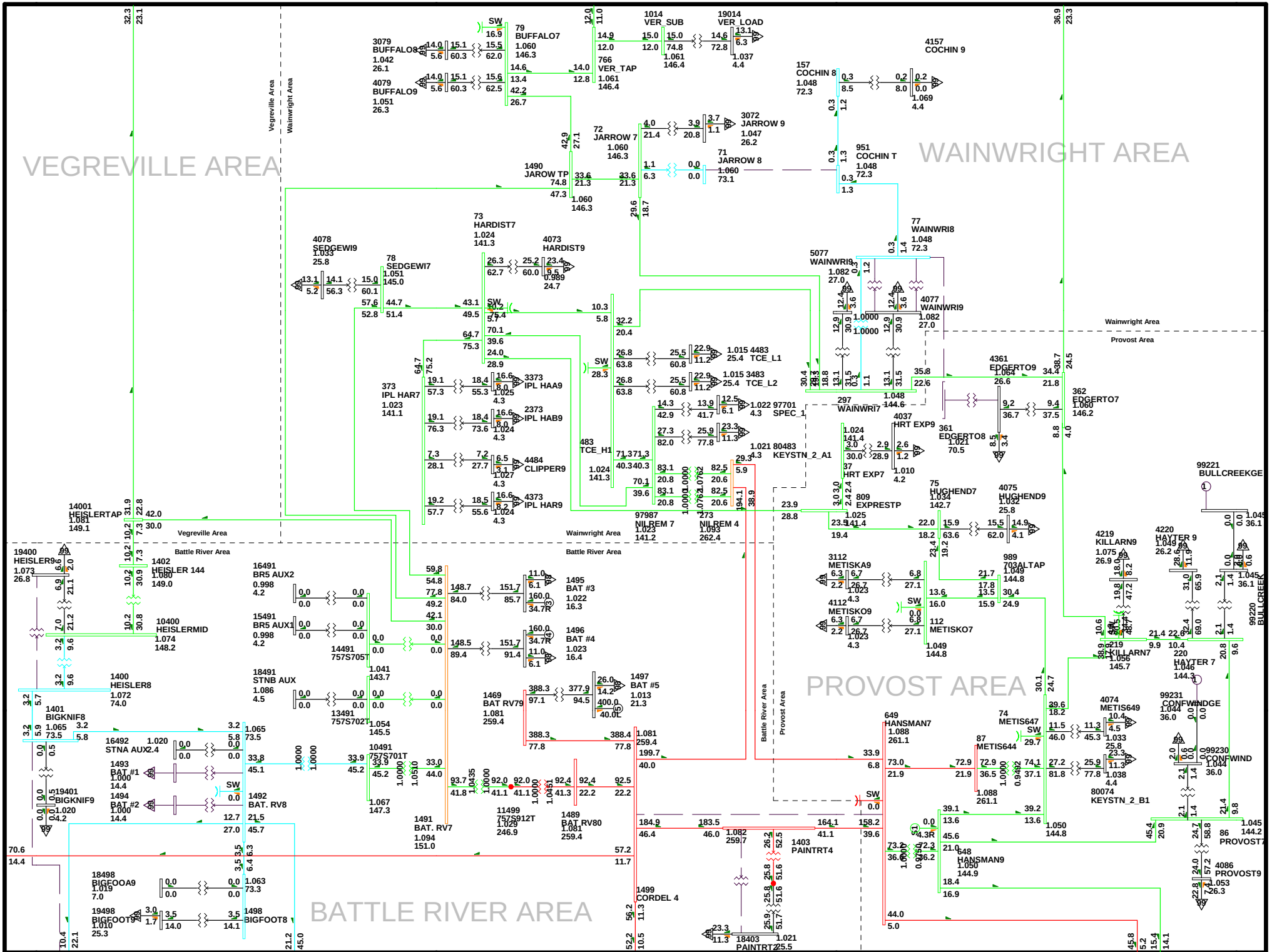
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV 0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 30 2010 16:47
D1-00

2012SP-Alt 1 BR#5 ON-1.a

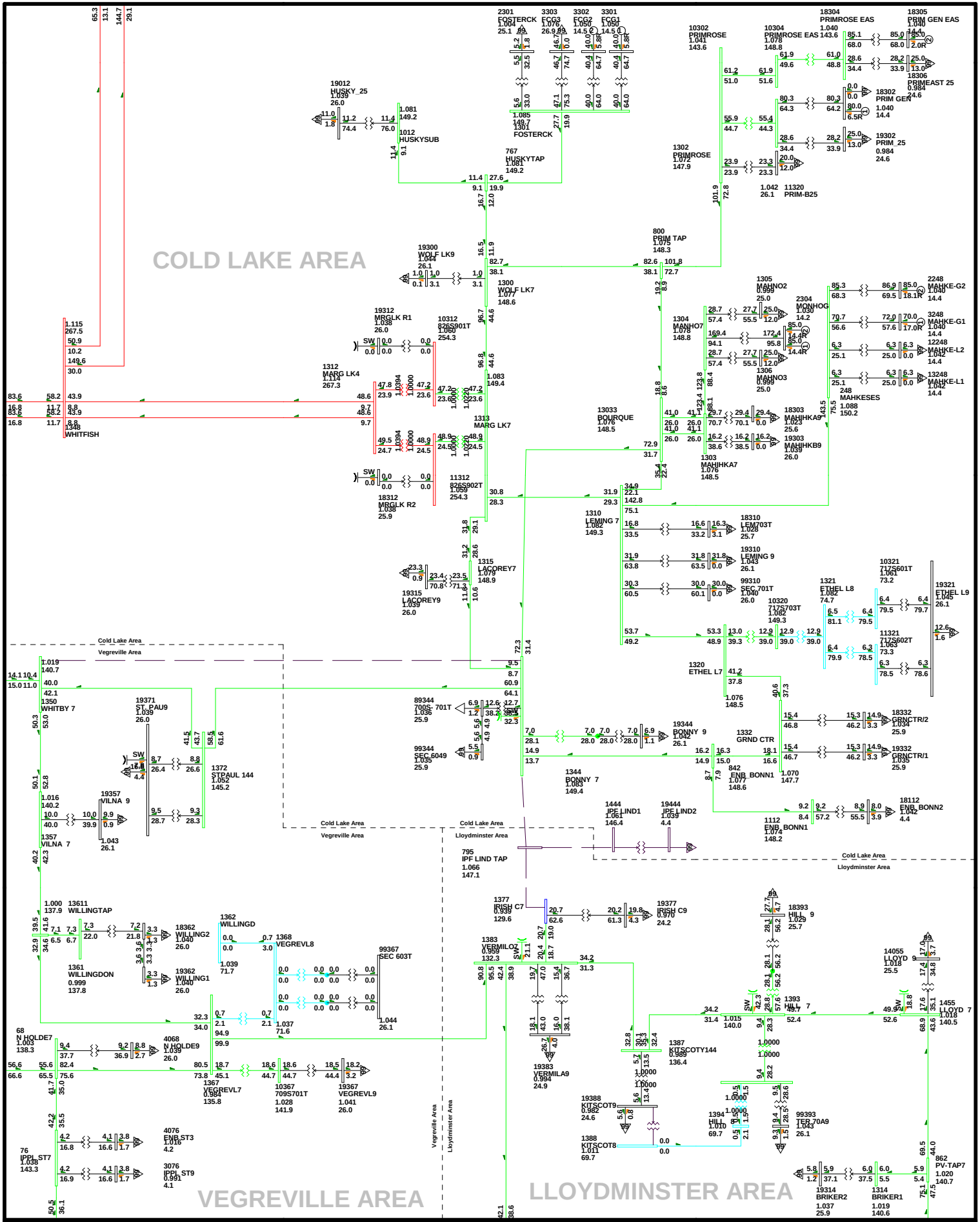
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 30 2010 16:47
D1-00

2012SP-Alt 1 BR#5 ON-1.b

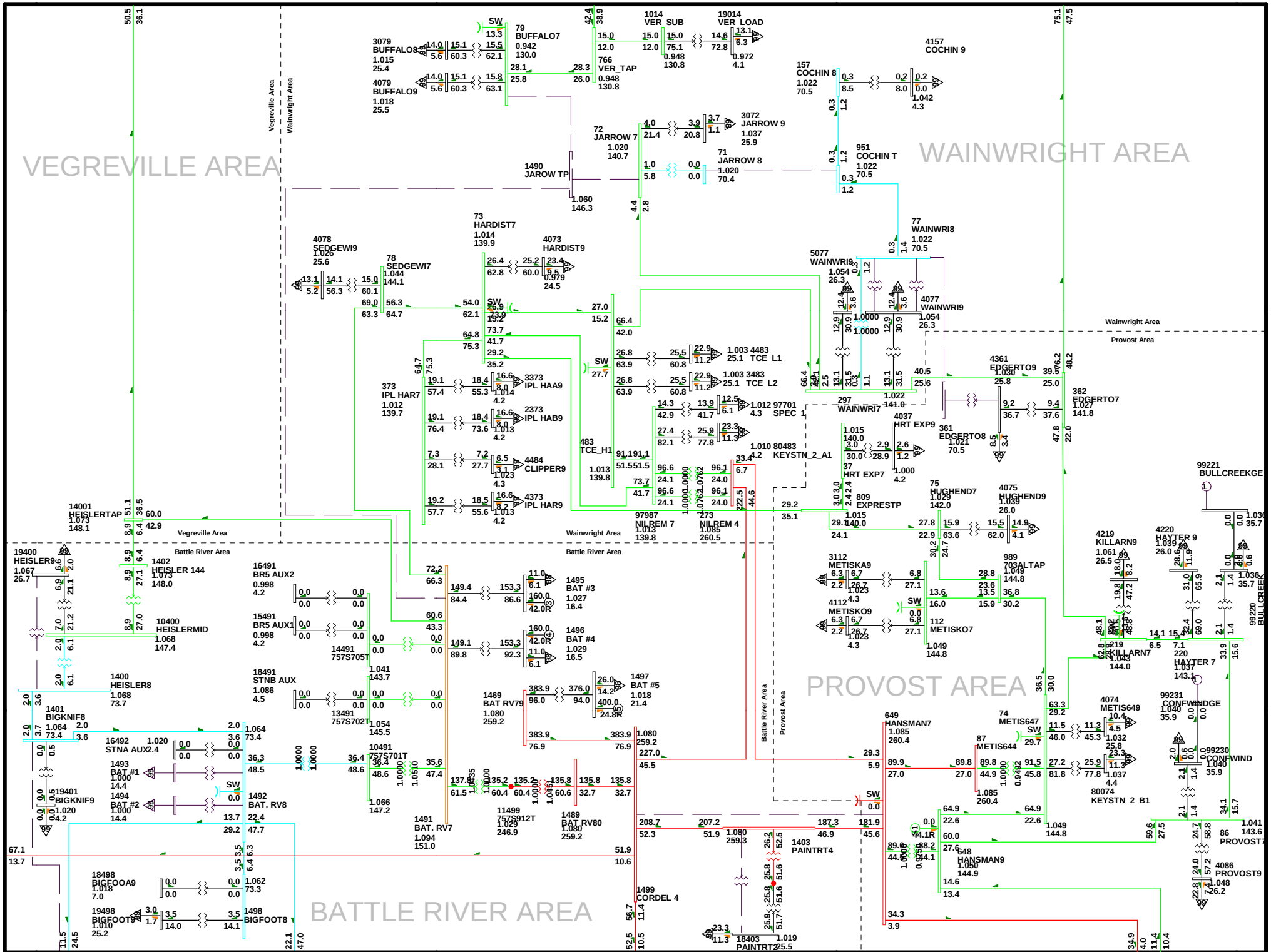
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 30 2010 16:47
D1-21

2012SP-Alt 1 BR#5 ON-2.a

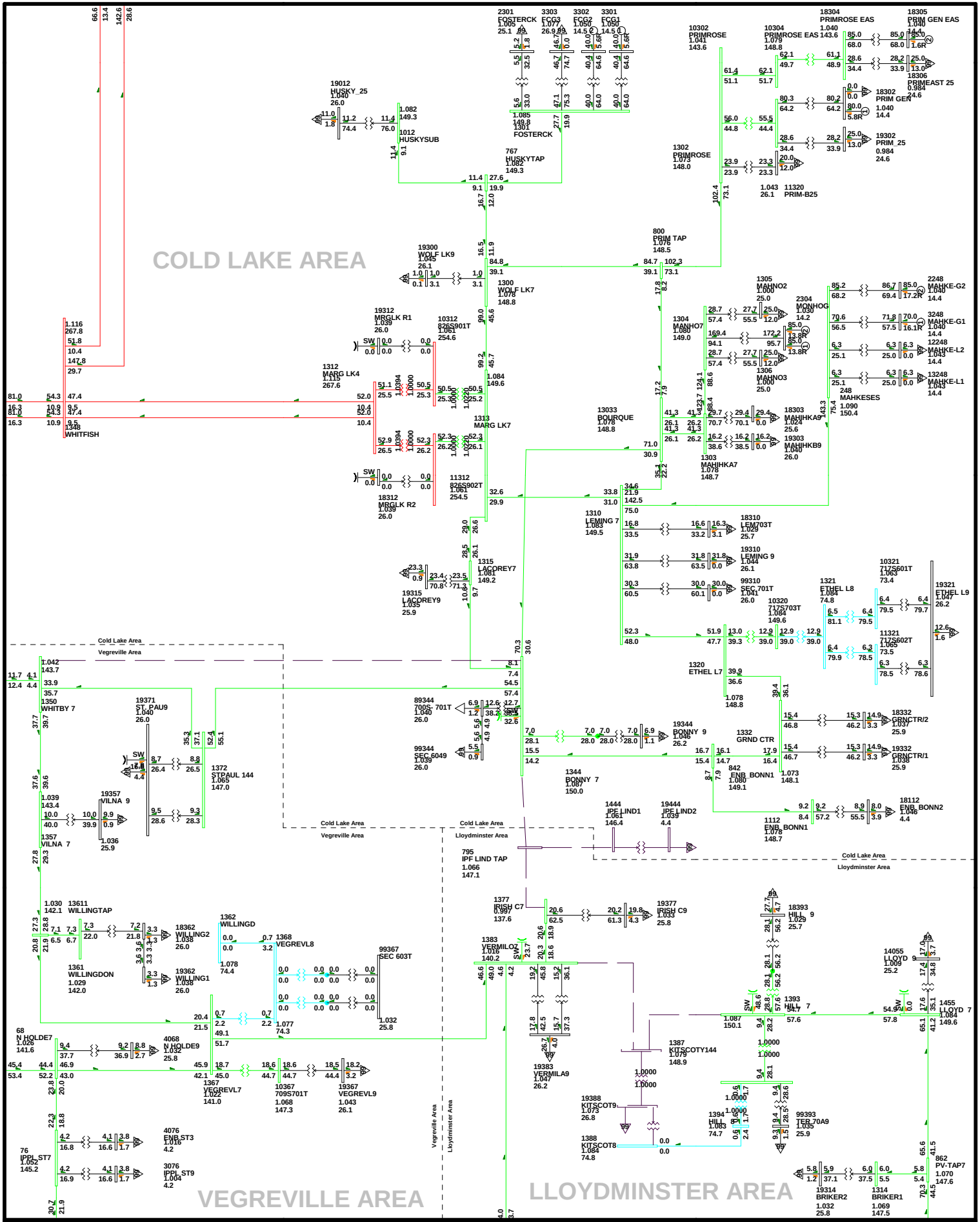
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 30 2010 16:47
D1-21

2012SP-Alt 1 BR#5 ON-2.b

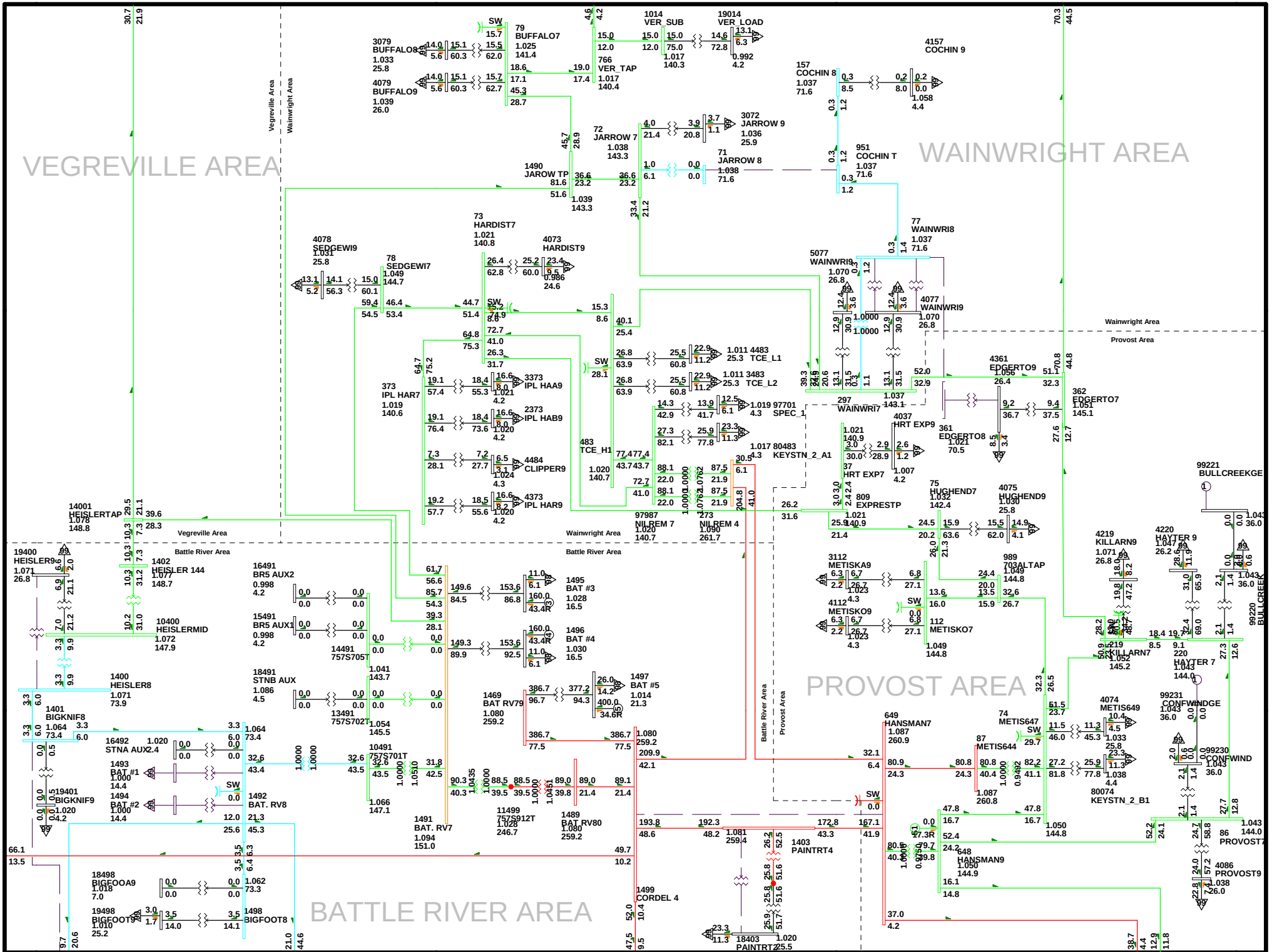
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 30 2010 16:47
D1-23

2012SP-Alt 1 BR#5 ON-3.a

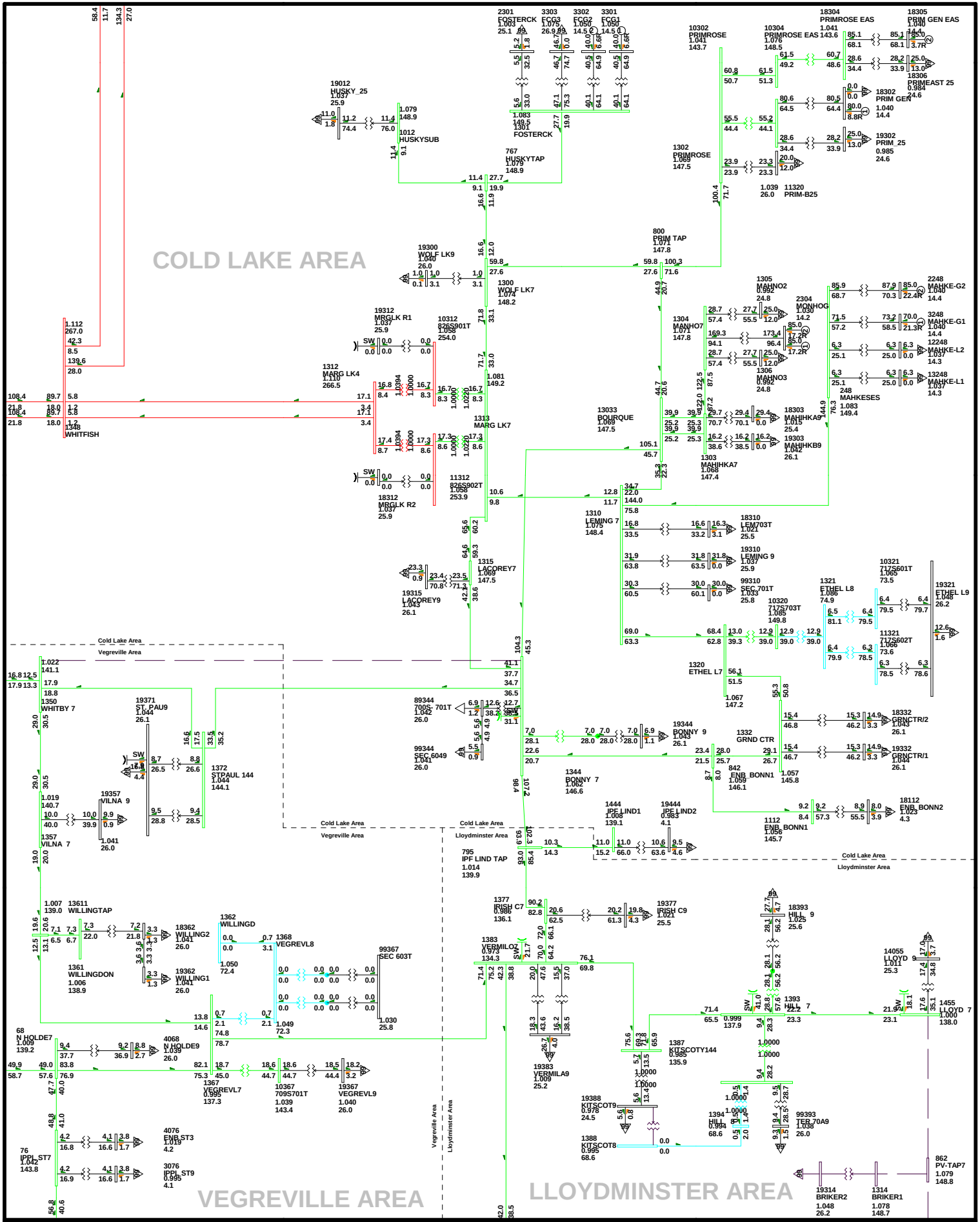
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 30 2010 16:47
D1-23

2012SP-Alt 1 BR#5 ON-3.b

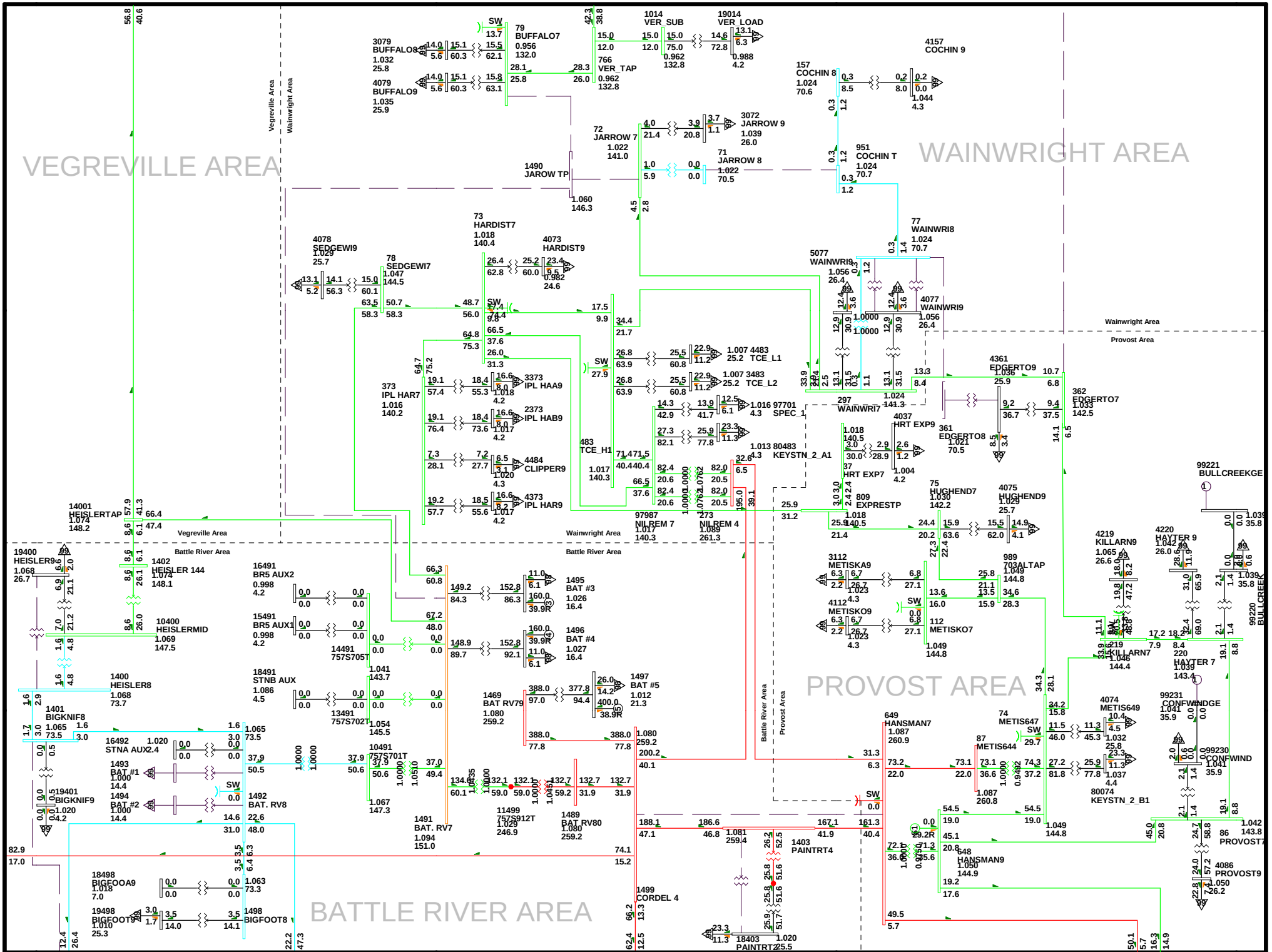
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 30 2010 16:47
D1-24

2012SP-Alt 1 BR#5 ON-4.a

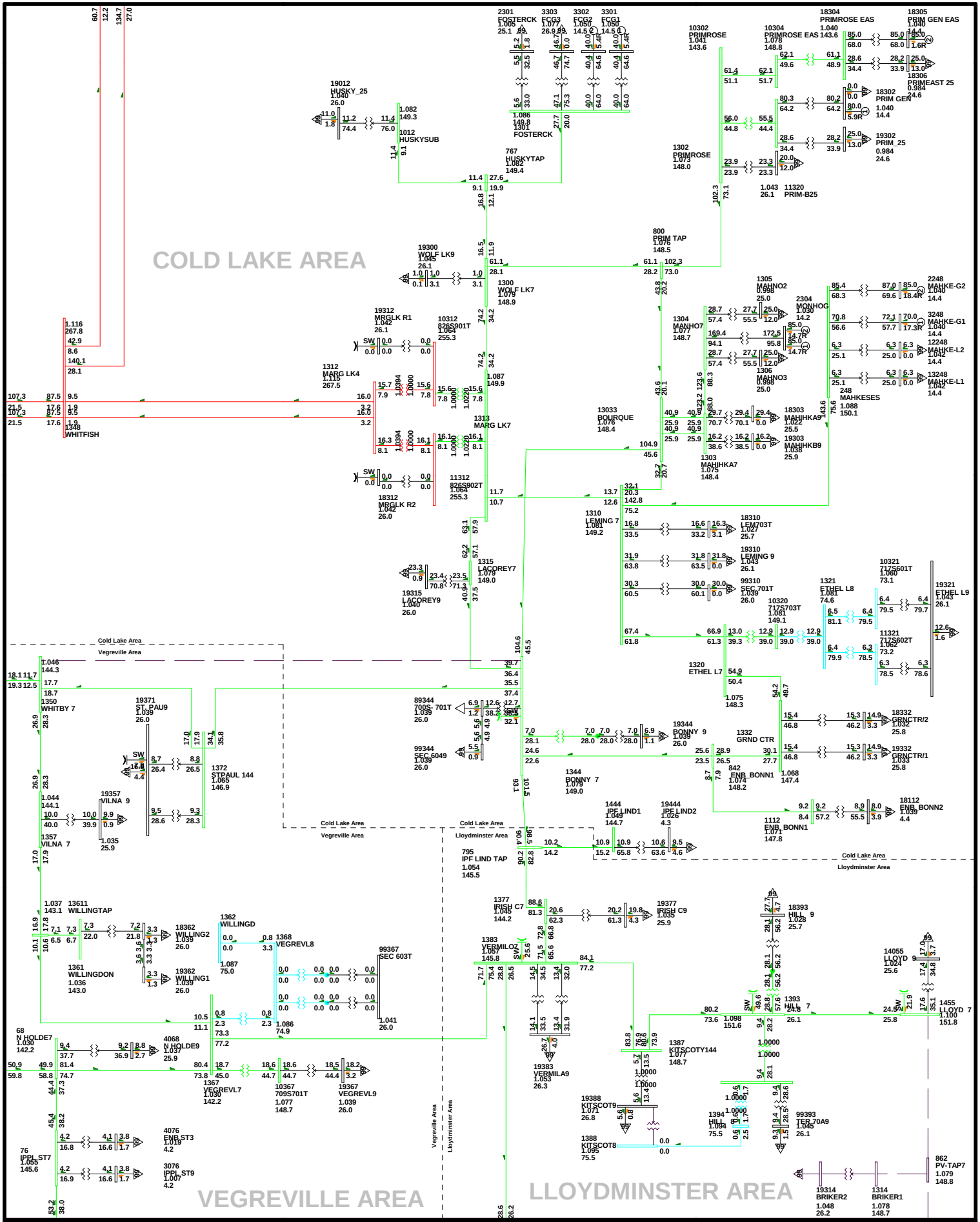
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 30 2010 16:47
D1-24

2012SP-Alt 1 BR#5 ON-4.b

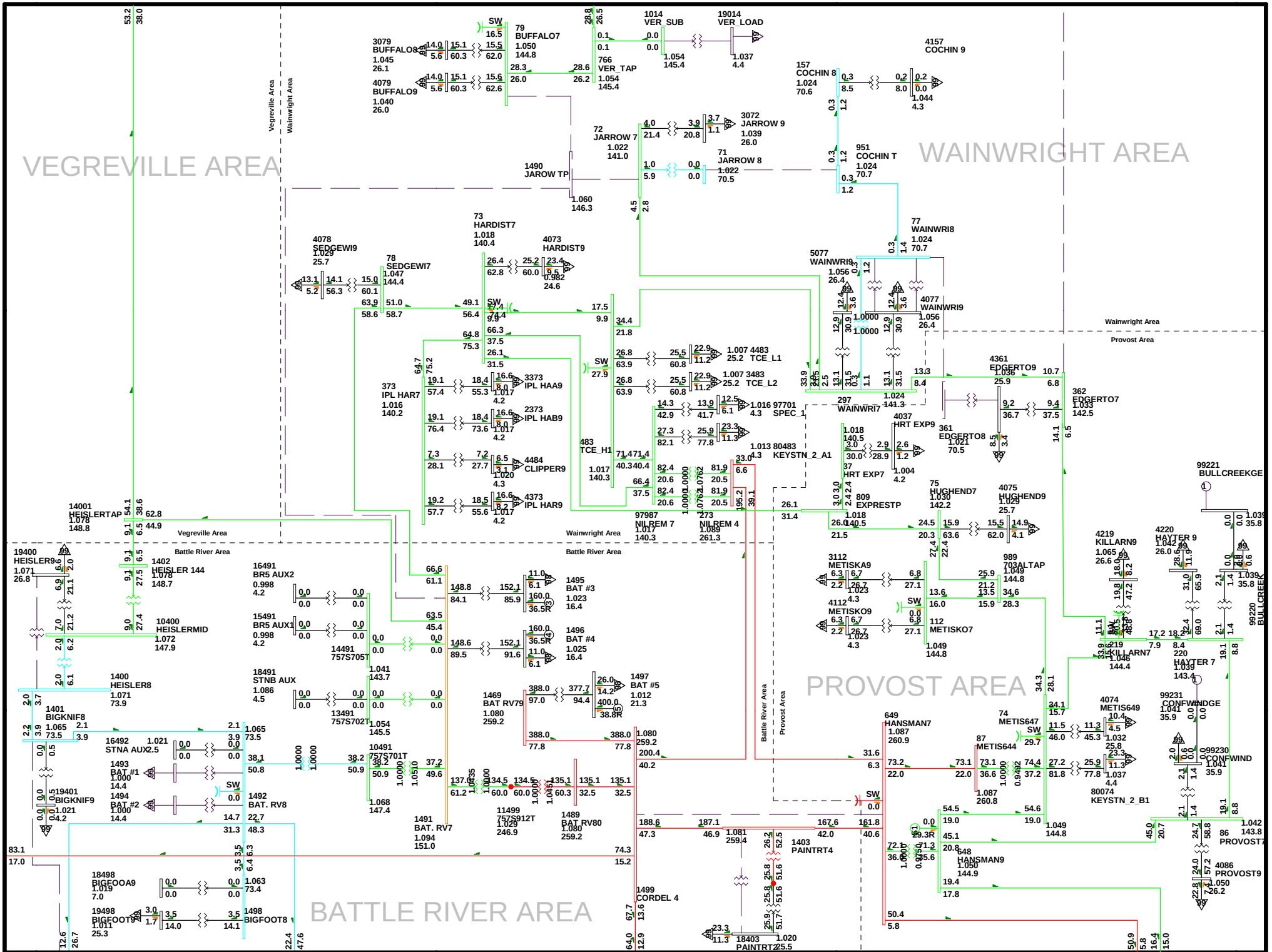
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 30 2010 16:47
D1-24b

2012SP-Alt 1 BR#5 ON-5.a

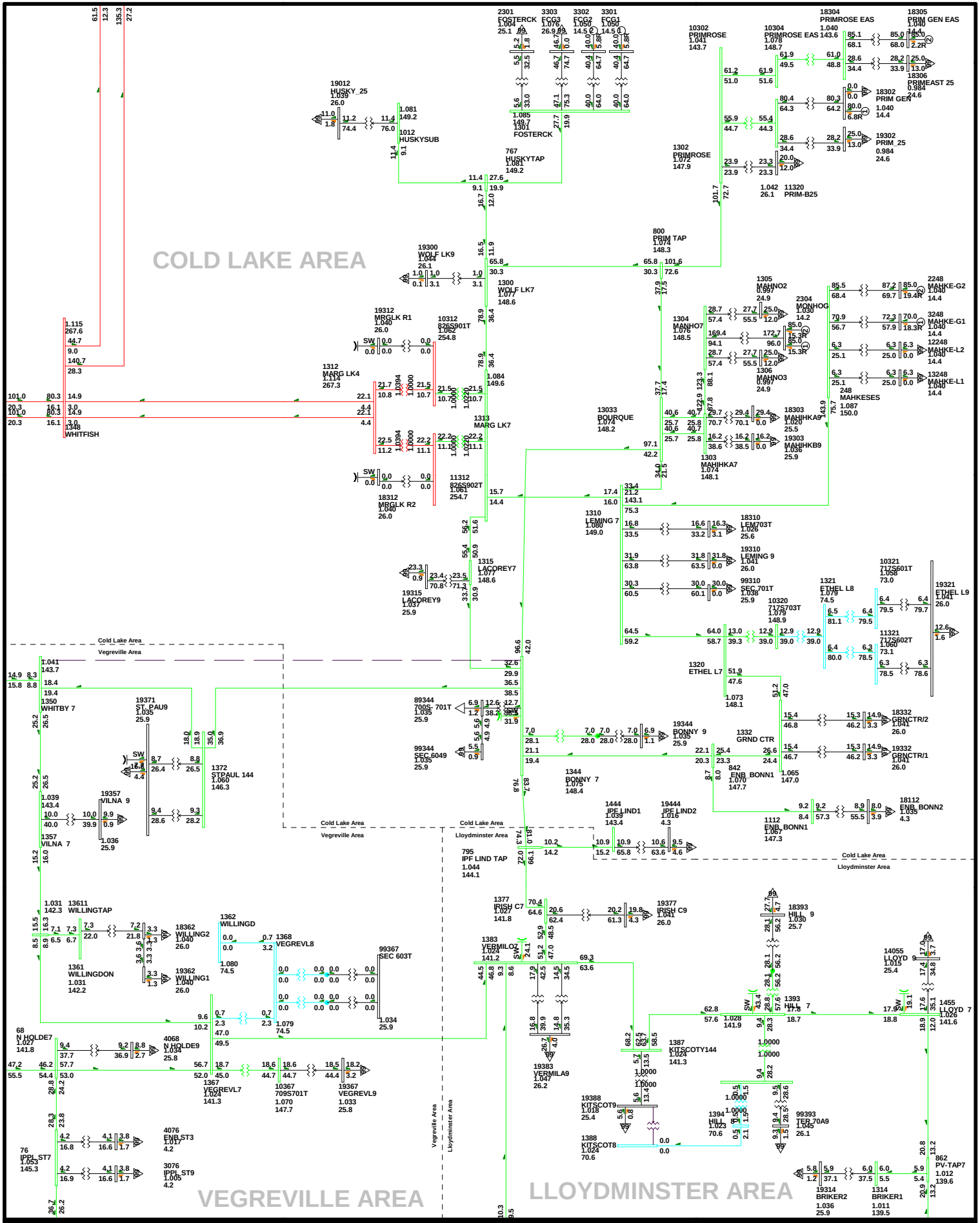
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 30 2010 16:47
D1-24b

2012SP-Alt 1 BR#5 ON-5.b

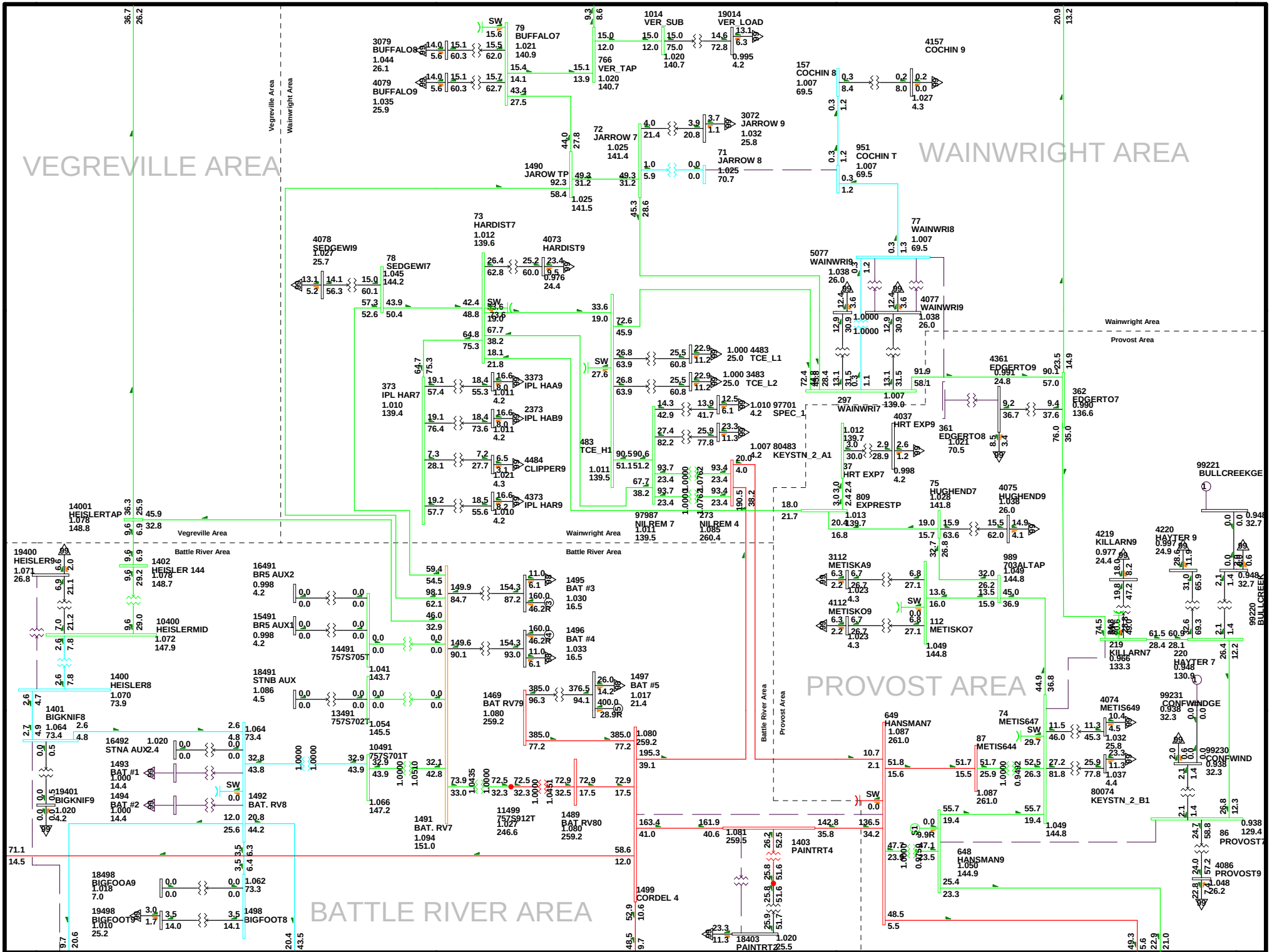
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 30 2010 16:47
D1-25

2012SP-Alt 1 BR#5 ON-6.a

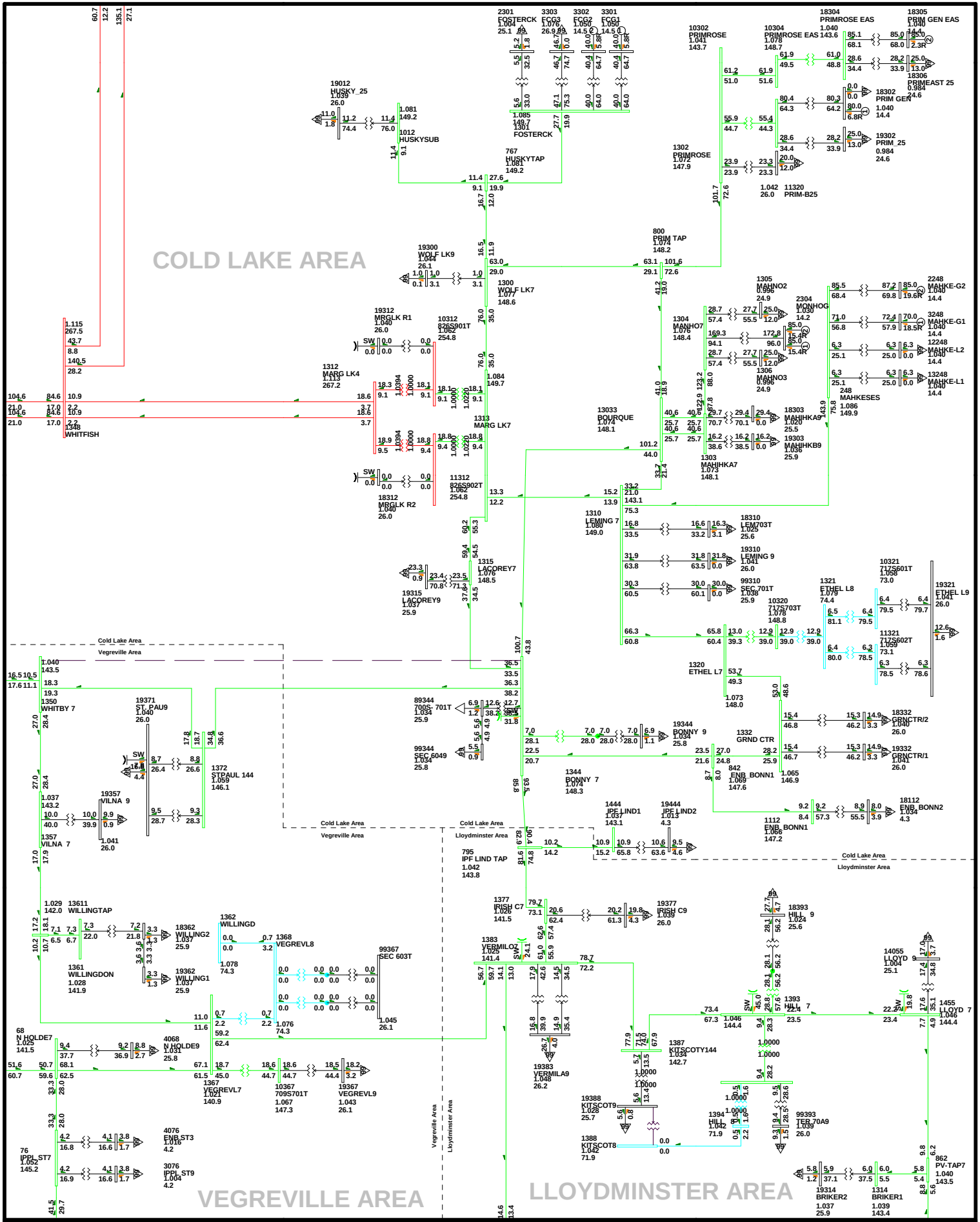
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 30 2010 16:47
D1-25

2012SP-Alt 1 BR#5 ON-6.b

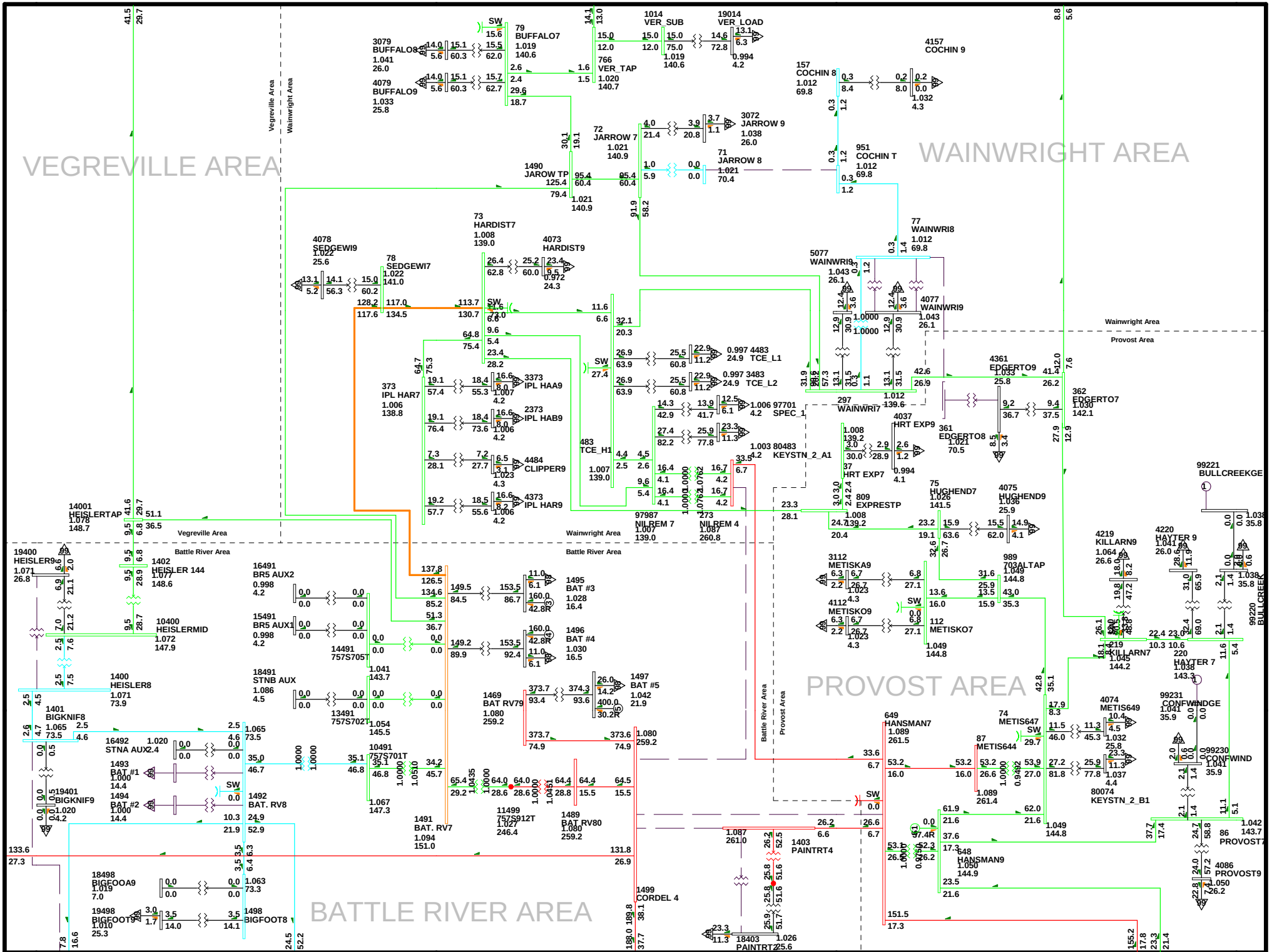
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 30 2010 16:48
D1-26

2012SP-Alt 1 BR#5 ON-7.a

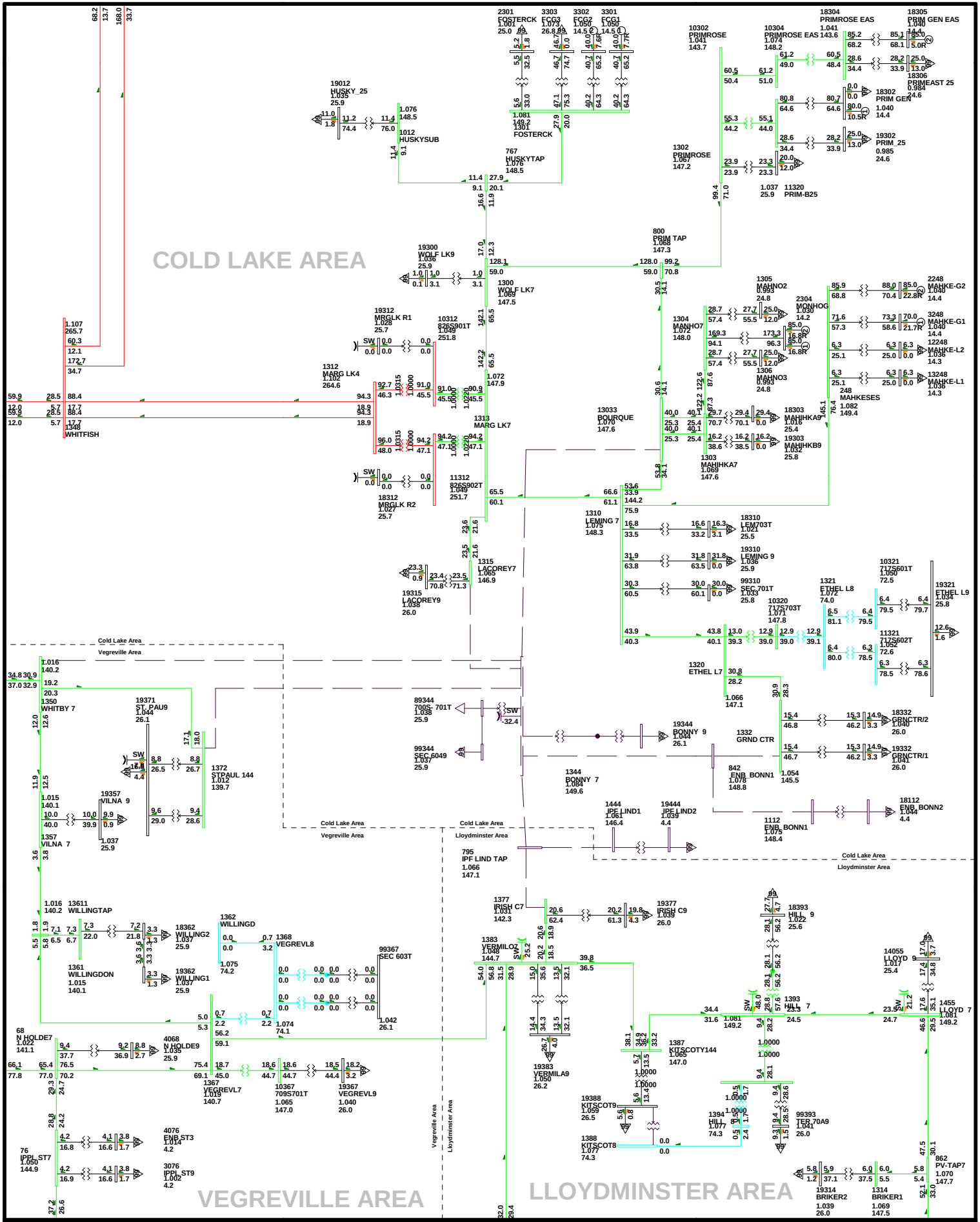
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 30 2010 16:48
D1-26

2012SP-Alt 1 BR#5 ON-7.b

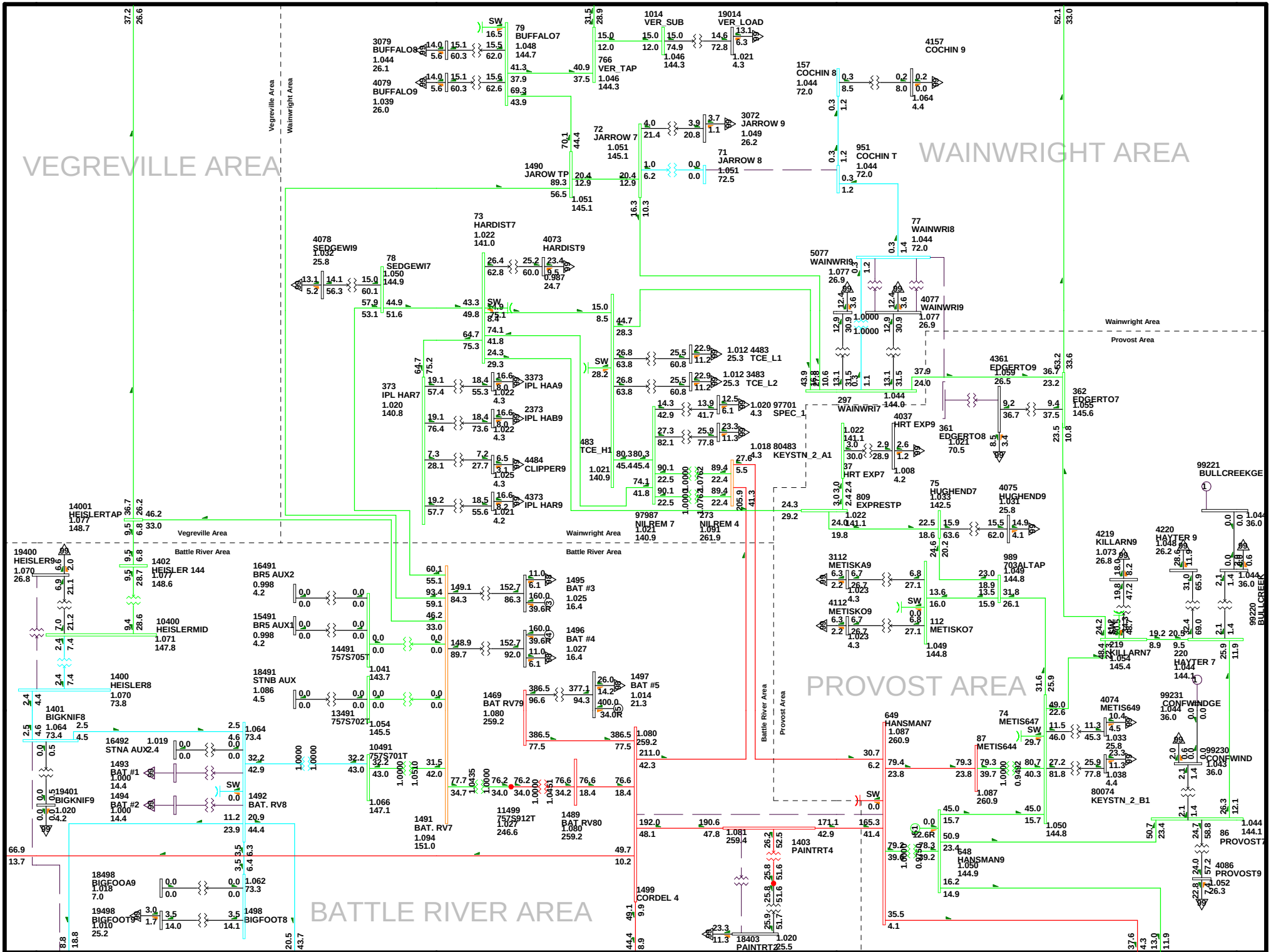
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

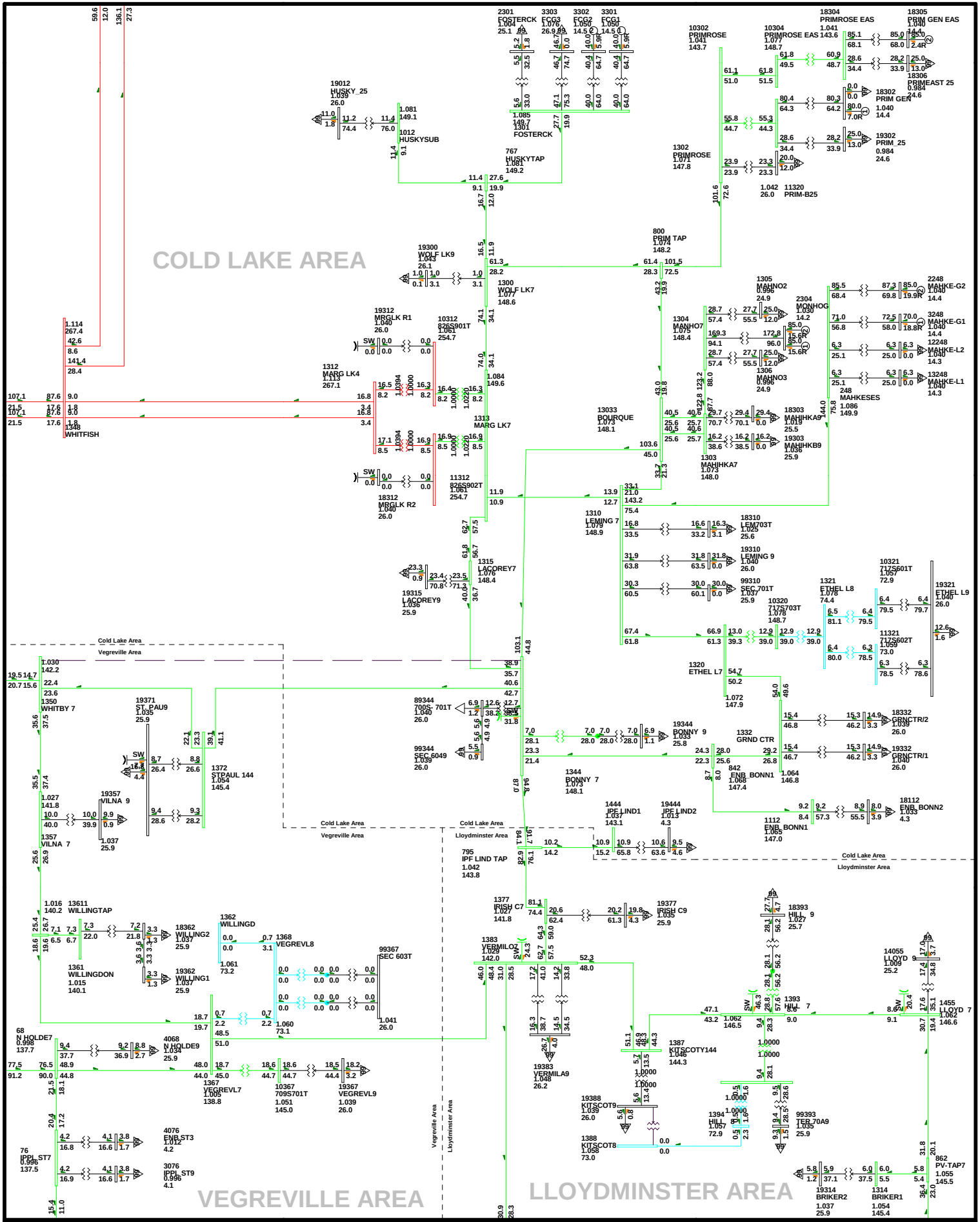


CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 30 2010 16:48
D1-27

2012SP-Alt 1 BR#5 ON-8.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

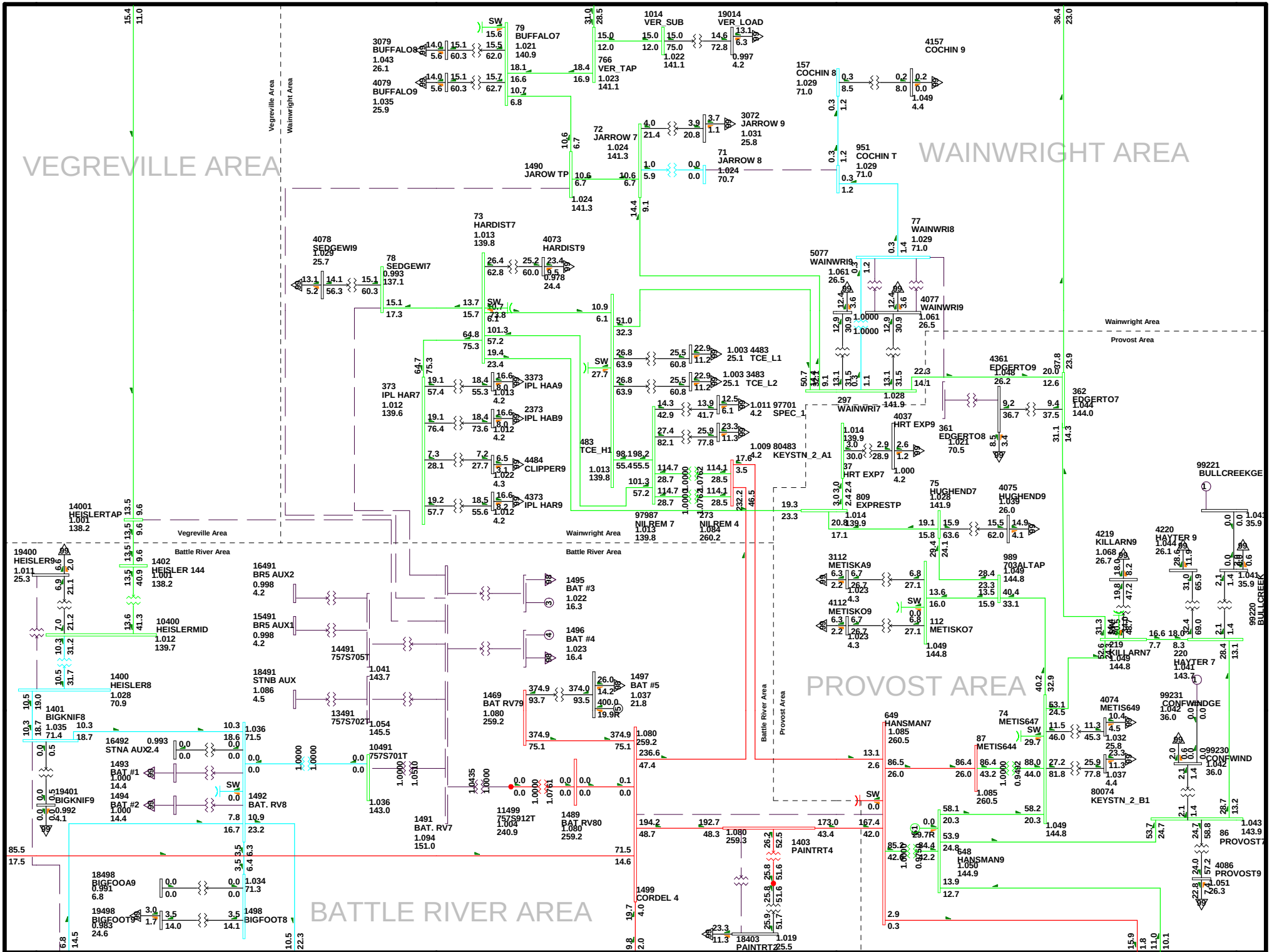

VEGREVILLE AREA
WAINWRIGHT AREA
PROVOST AREA
BATTLE RIVER AREA
Vegreville Area
Wainwright Area
Battle River Area
Provost Area
79 BUFFALO7 1.048 144.7
3079 BUFFALO8 1.044 26.1
4079 BUFFALO9 1.039 26.0
766 VER_TAP 1.046 144.3
1014 VER_SUB
19014 VER_LOAD
157 COCHIN 8 1.044 72.0
4157 COCHIN 9
951 COCHIN T 1.044 72.0
72 JARROW 7 1.051 145.1
3072 JARROW 9 1.049 26.2
71 JARROW 8 1.051 72.5
1490 JAROW TP 89.3 56.5
73 HARDIST7 1.022 141.0
4073 HARDIST9
4078 SEDGEWI9 1.032 25.8
78 SEDGEWI7 1.050 144.9
77 WAINWRI8 1.044 72.0
5077 WAINWRI9 1.077 26.9
4077 WAINWRI9 1.077 26.9
297 WAINWRI7 1.044 144.0
4361 EDGERTO9 1.059 26.5
362 EDGERTO7 1.055 145.6
361 EDGERTO8 1.021 70.5
4037 HRT EXP9
37 HRT EXP7 1.008 4.2
373 IPL HAR7 1.020 140.8
3373 IPL HAA9 1.022
2373 IPL HAB9 1.022
4484 CLIPPER9 1.025
4373 IPL HAR9 1.021
483 TCE_H1 1.021 140.9
1012 4483 TCE_L1 25.3
1012 3483 TCE_L2 25.3
1020 97701 SPEC_1 4.3
1018 80483 KEYSTN_2_A1 4.3
97987 NILREM 7 1.021 140.9
273 NILREM 4 1.091 261.9
809 EXPRESTP 1.022 141.1
75 HUGHEND7 1.033 142.5
4075 HUGHEND9 1.031 25.8
989 703ALTAP 1.049 144.8
3112 METISKA9
4112 METISKO9
112 METISKO7 1.049 144.8
4219 KILLARN9 1.073 26.8
219 KILLARN7 1.054 145.4
4220 HAYTER 9 1.048 26.2
220 HAYTER 7 1.044 144.1
99221 BULLCREEKGE
99220 BULLCREEK
99231 CONFWINDGE 1.044 36.0
99230 CONFWIND 1.043 36.0
4074 METIS649
74 METIS647
87 METIS644
80074 KEYSTN_2_B1
649 HANSMAN7 1.087 260.9
648 HANSMAN9 1.050 144.9
1403 PAINTRT4
18403 PAINTRT2 1.020 25.5
4086 PROVOST9 1.052 26.3
86 PROVOST7 1.044 144.1
14001 HEISLERTAP 1.077 148.7
1402 HEISLER 144 1.077 148.6
10400 HEISLERMID 1.071 147.8
19400 HEISLER9 1.070 26.8
1400 HEISLER8 1.070 73.8
1401 BIGKNIF8 1.064 73.4
19401 BIGKNIF9 1.020 4.2
16491 BR5 AUX2 0.998 4.2
15491 BR5 AUX1 0.998 4.2
14491 757S705T 1.041 143.7
18491 STNB AUX 1.086 4.5
13491 757S702T 1.054 145.5
16492 STNA AUX 1.019 2.4
10491 757S701T 1.066 147.1
1493 BAT #1 1.000 14.4
1494 BAT #2 1.000 14.4
1492 BAT. RV8 20.9
1491 BAT. RV7 1.094 151.0
1495 BAT #3 1.025 16.4
1496 BAT #4 1.027 16.4
1497 BAT #5 1.014 21.3
1469 BAT RV79 1.080 259.2
11499 757S912T 1.027 246.6
1489 BAT RV80 1.080 259.2
1499 CORDEL 4
18498 BIGFOOA9 1.018 7.0
19498 BIGFOOT9 1.010 25.2
1498 BIGFOOT8 1.062 73.3
CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 30 2010 16:48
D1-27
2012SP-Alt 1 BR#5 ON-8.b
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 30 2010 16:48
D1-28

2012SP-Alt 1 BR#5 ON-9.a

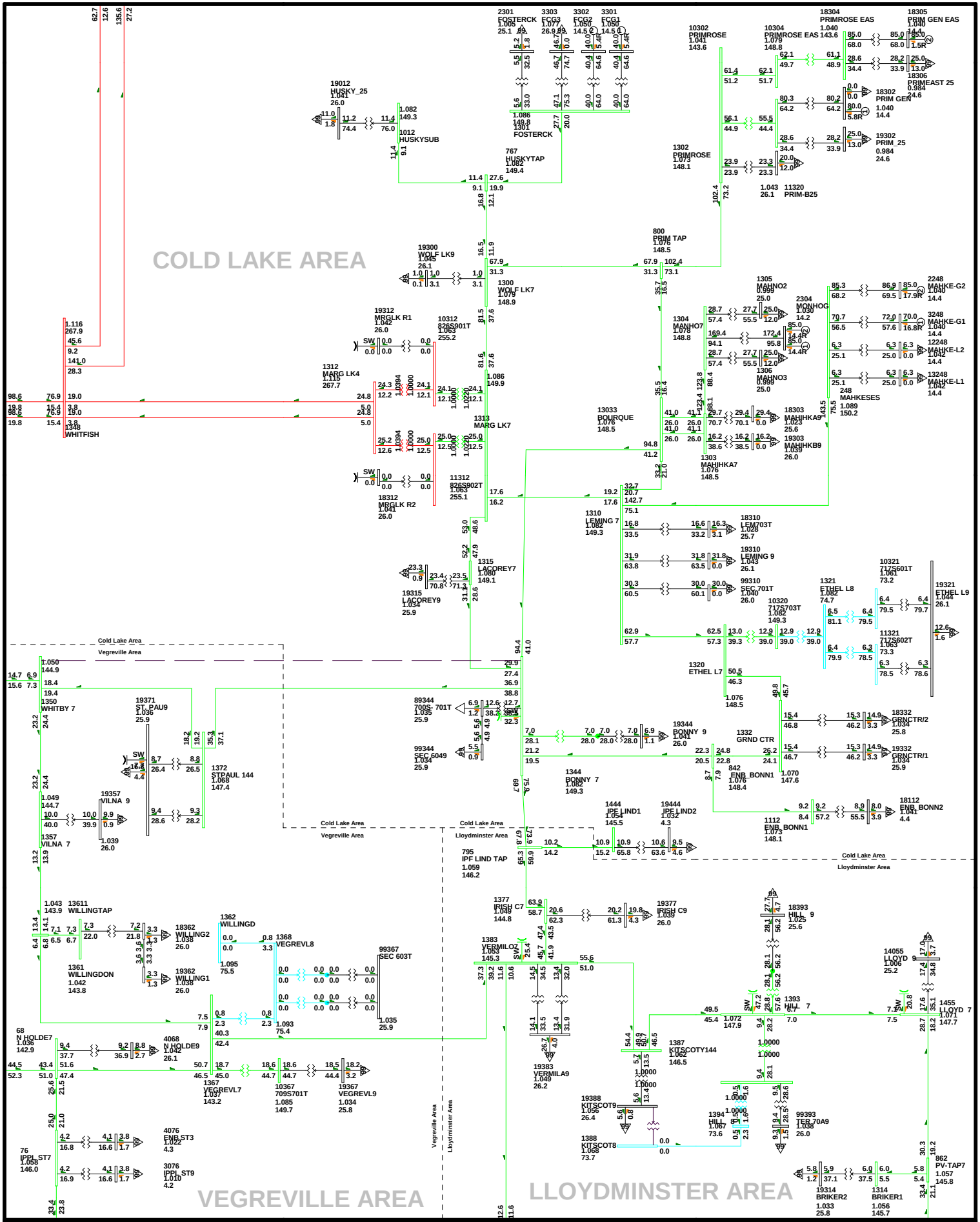
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 30 2010 16:48
D1-28

2012SP-Alt 1 BR#5 ON-9.b

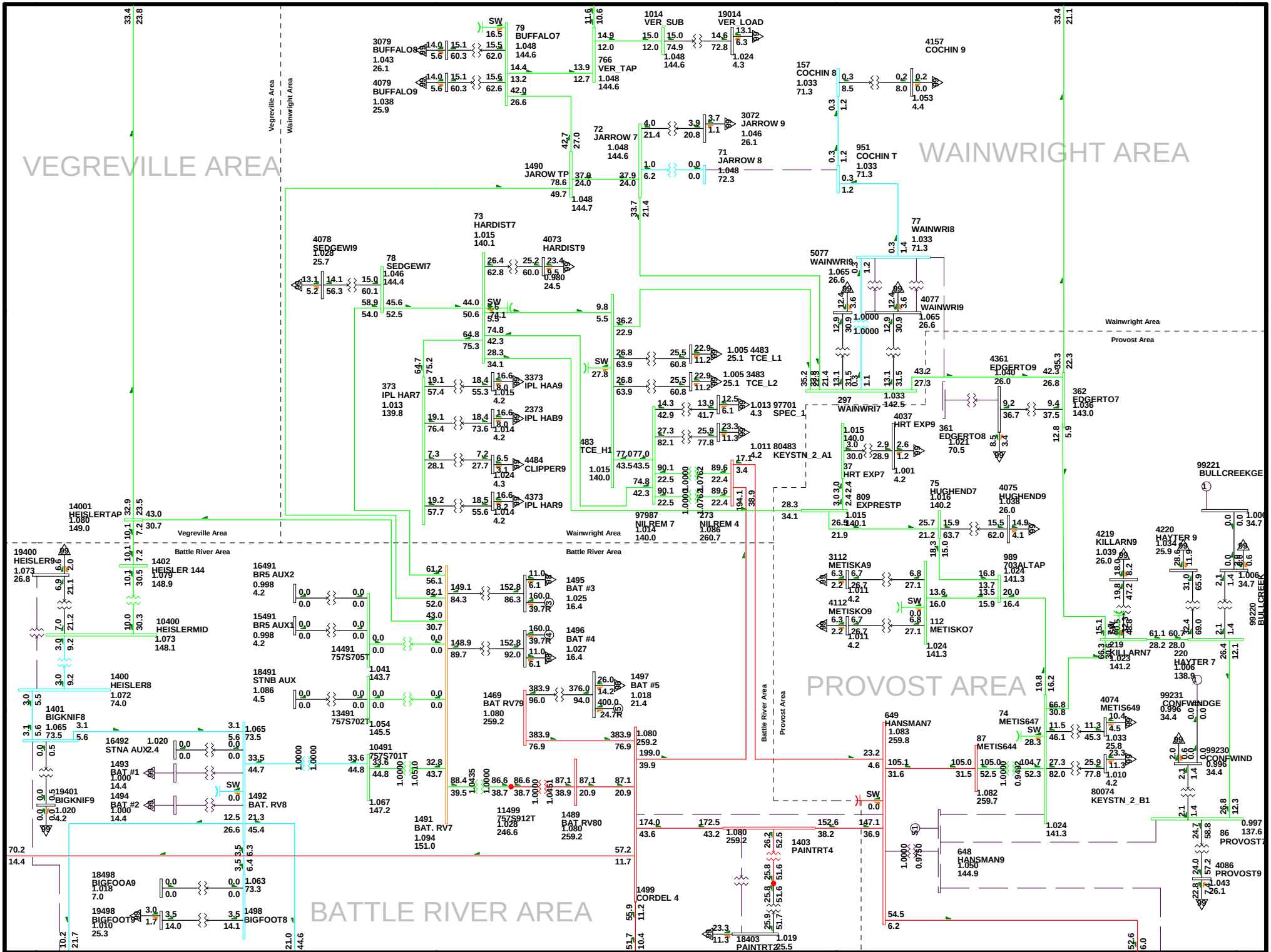
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 30 2010 16:48
D1-30

2012SP-Alt 1 BR#5 ON-10.a

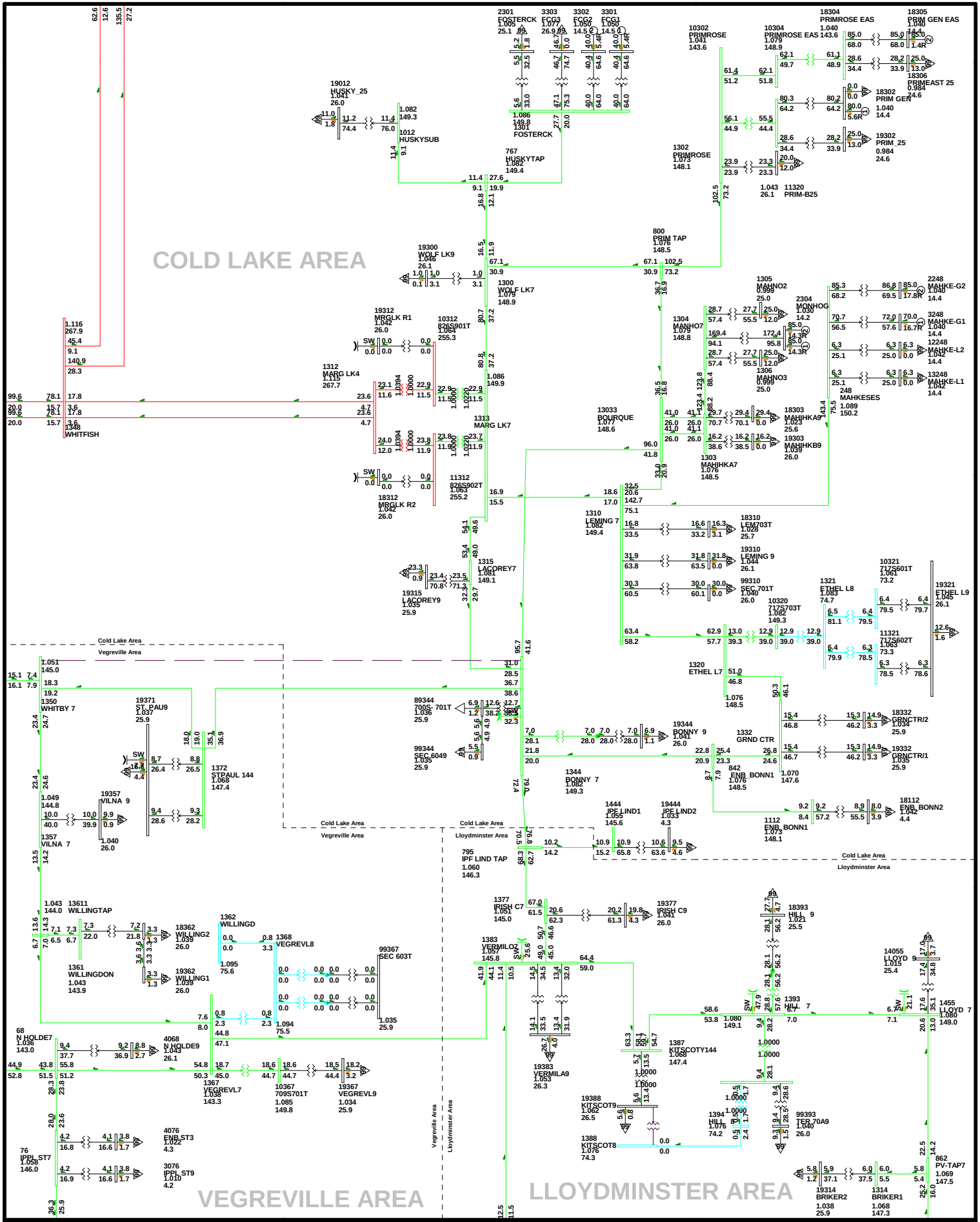
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 30 2010 16:48
D1-30

2012SP-Alt 1 BR#5 ON-10.b

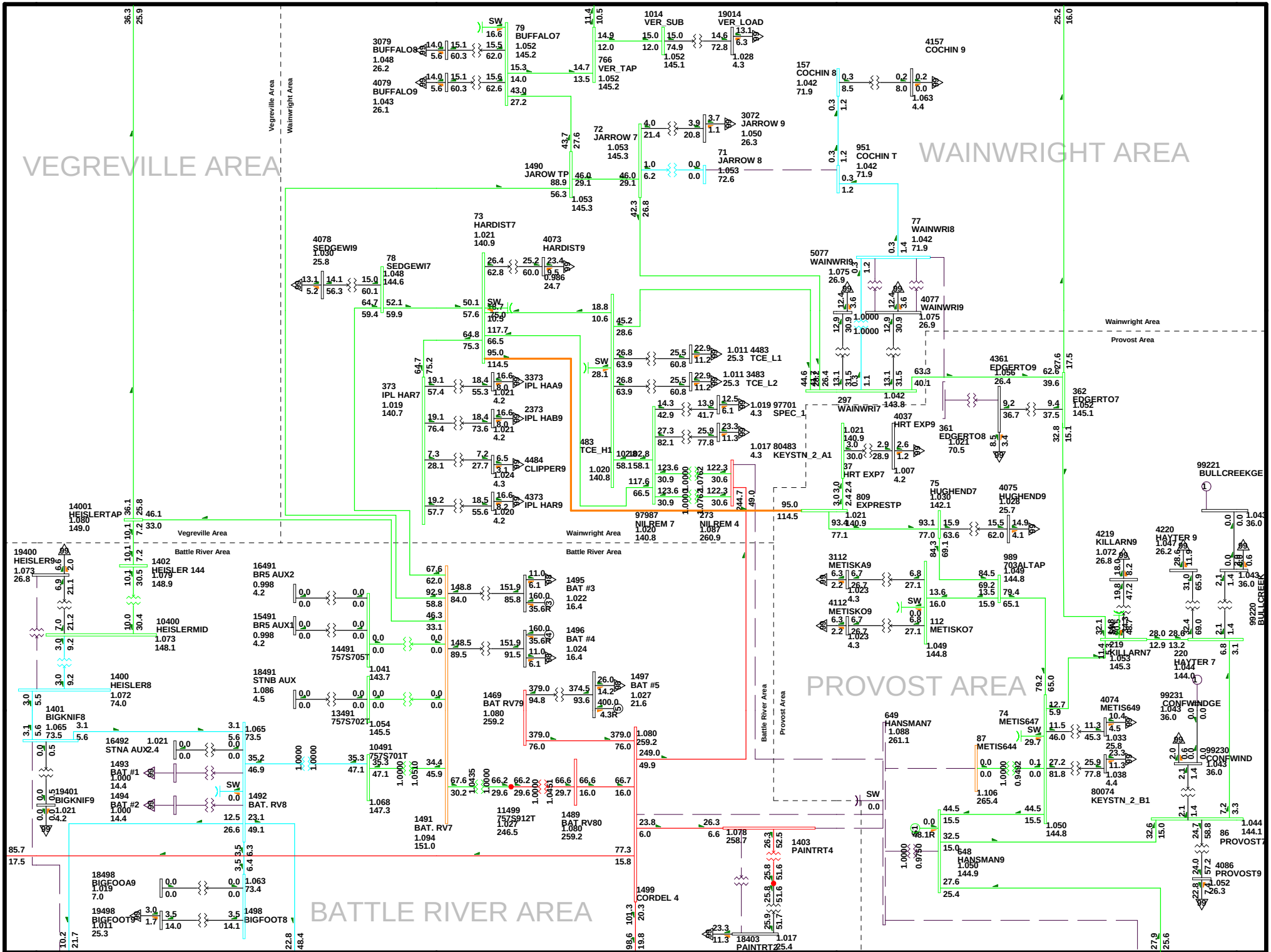
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 30 2010 16:48
D1-31

2012SP-Alt 1 BR#5 ON-11.a

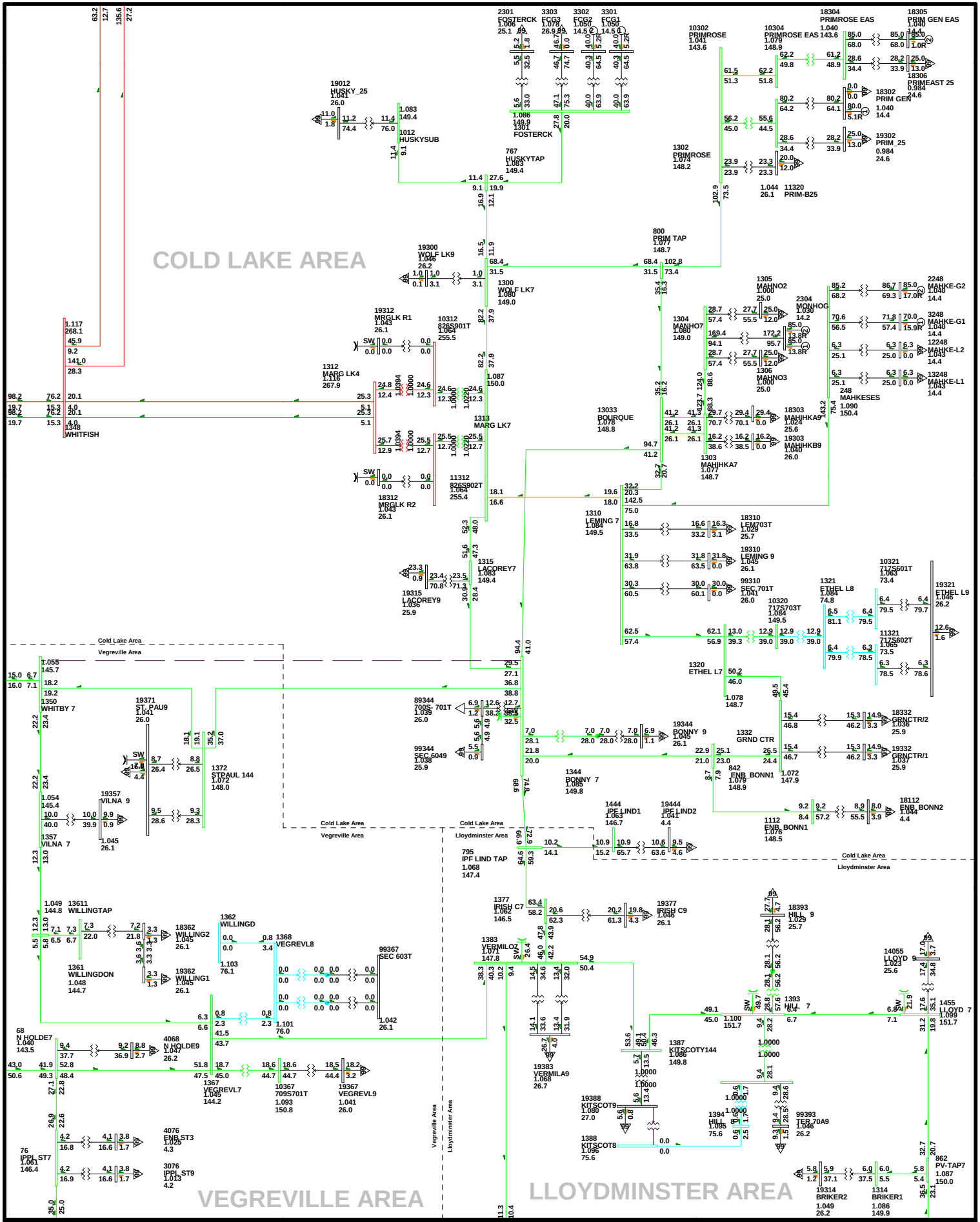
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 30 2010 16:48
D1-31

2012SP-Alt 1 BR#5 ON-11.b

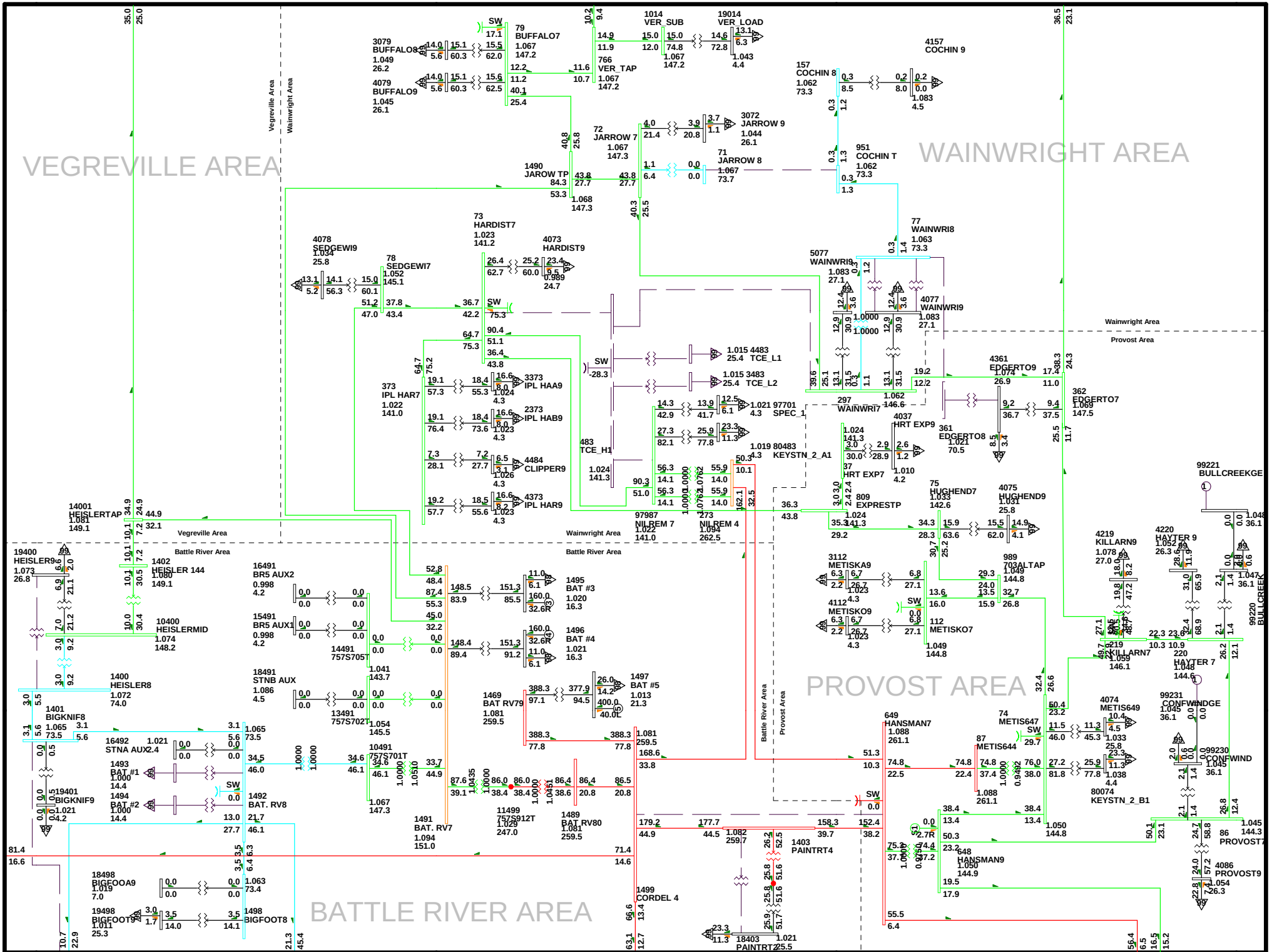
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 30 2010 16:48
D1-32

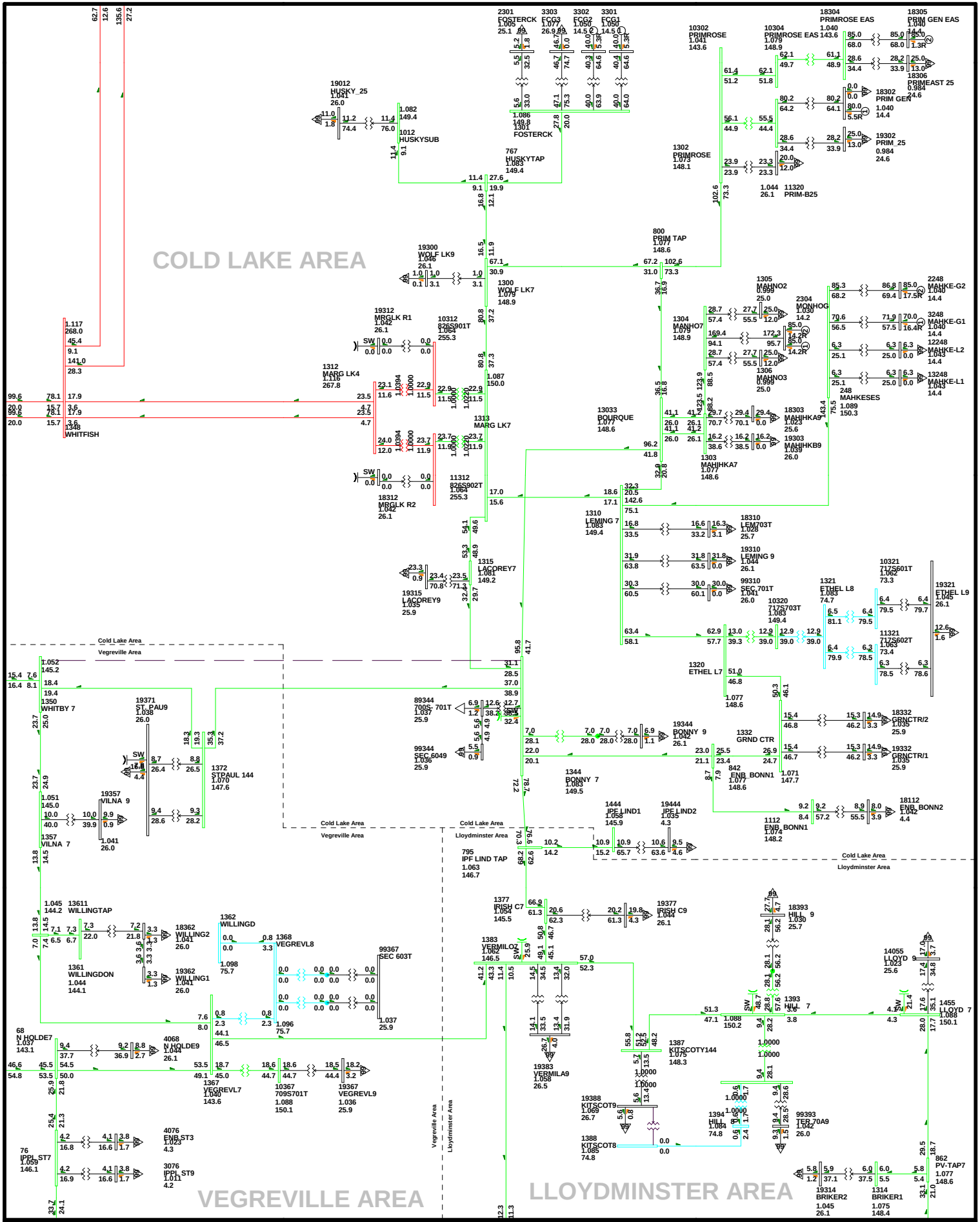
2012SP-Alt 1 BR#5 ON-12.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 30 2010 16:48
D1-32

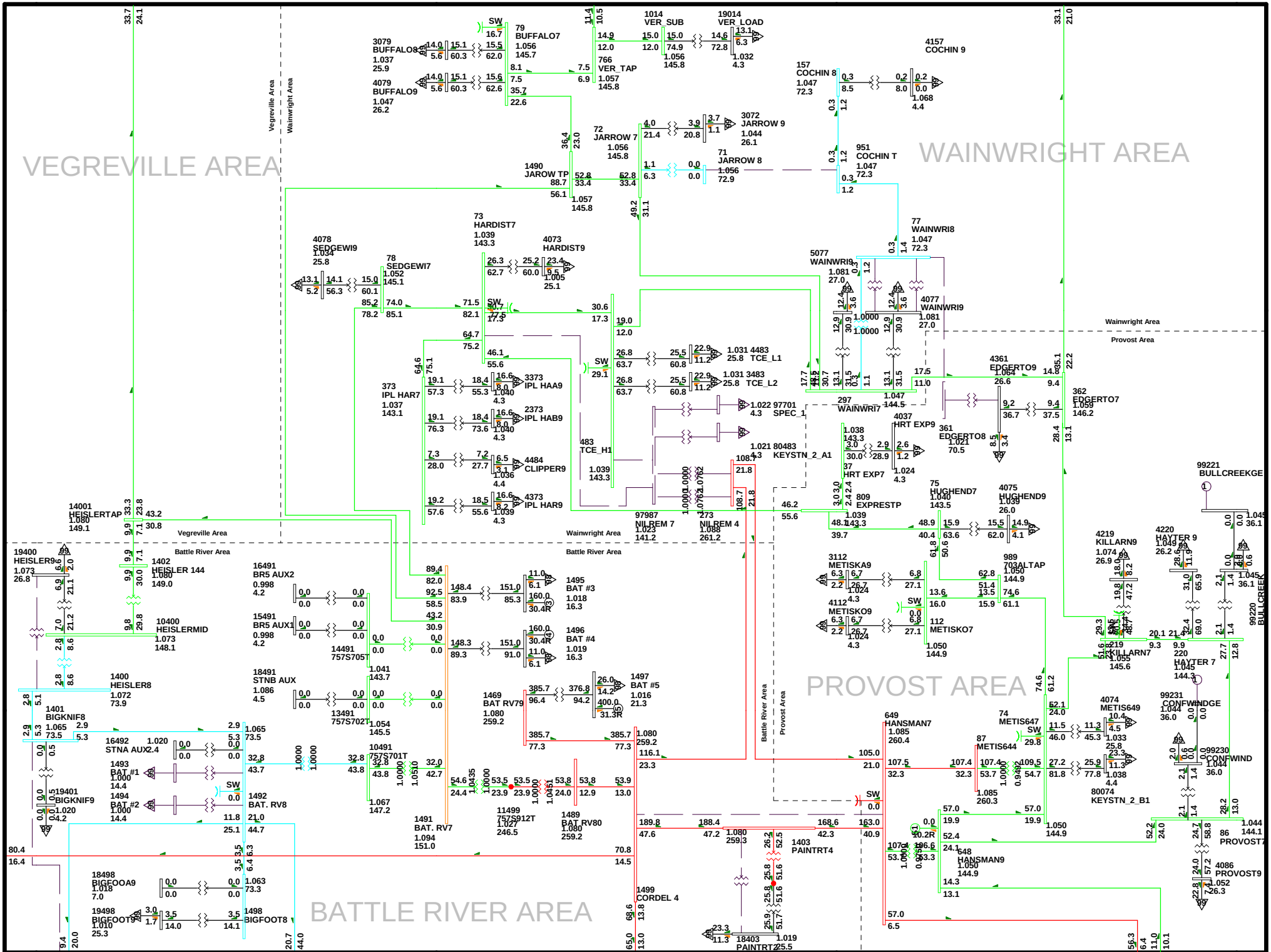
2012SP-Alt 1 BR#5 ON-12.b



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 30 2010 16:48
D1-33

2012SP-Alt 1 BR#5 ON-13.a

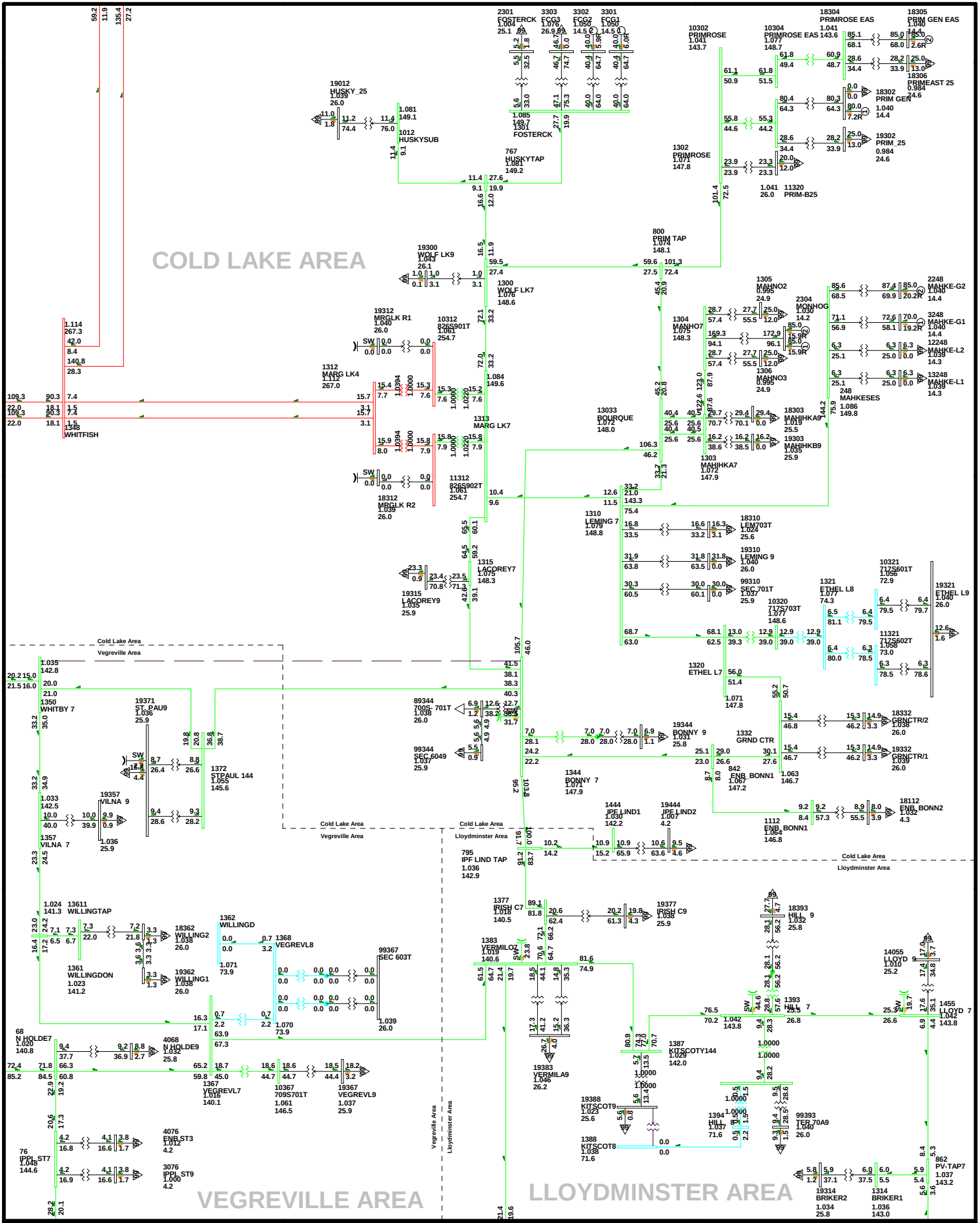
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 30 2010 16:48
D1-33

2012SP-Alt 1 BR#5 ON-13.b

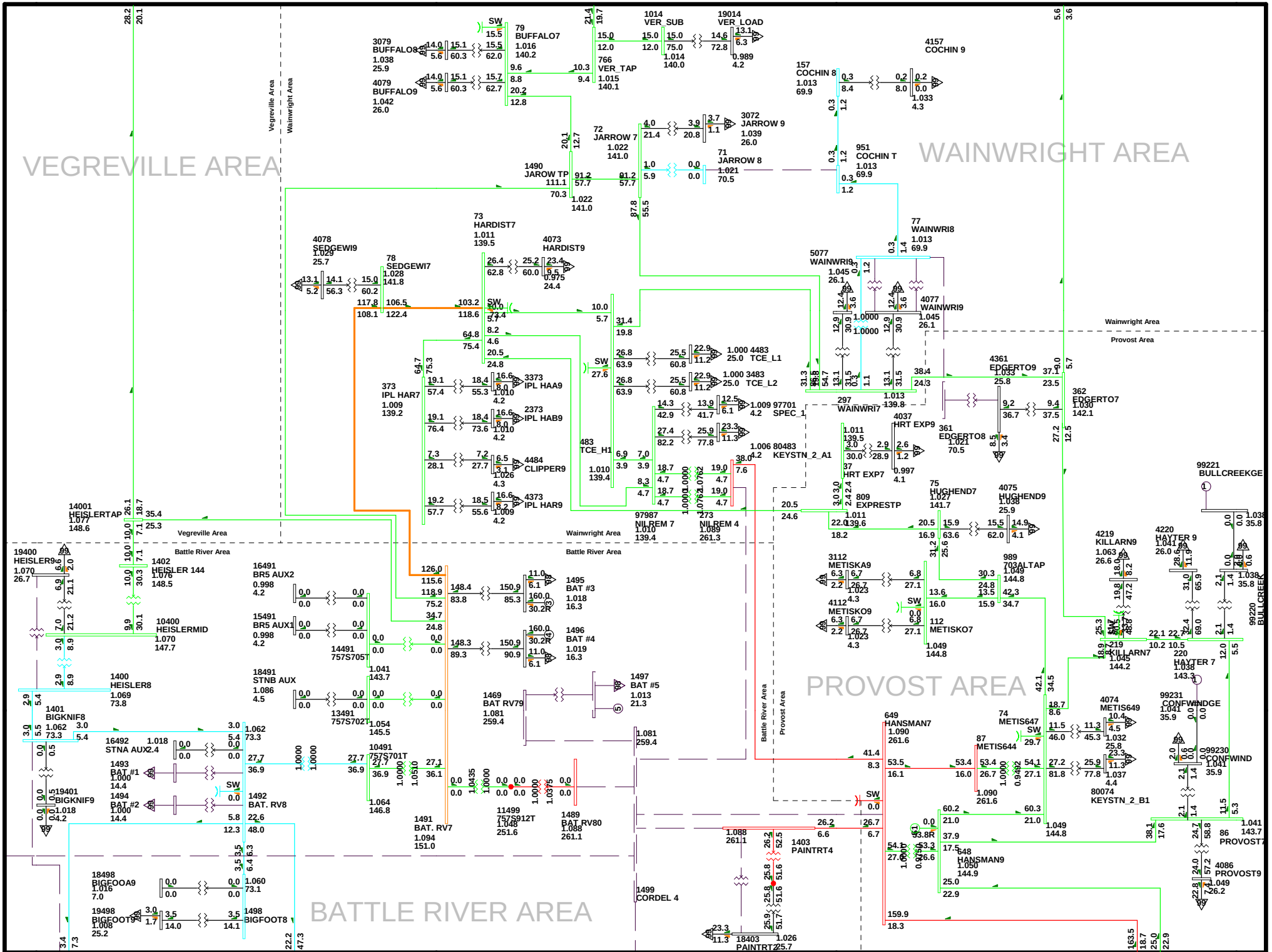
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

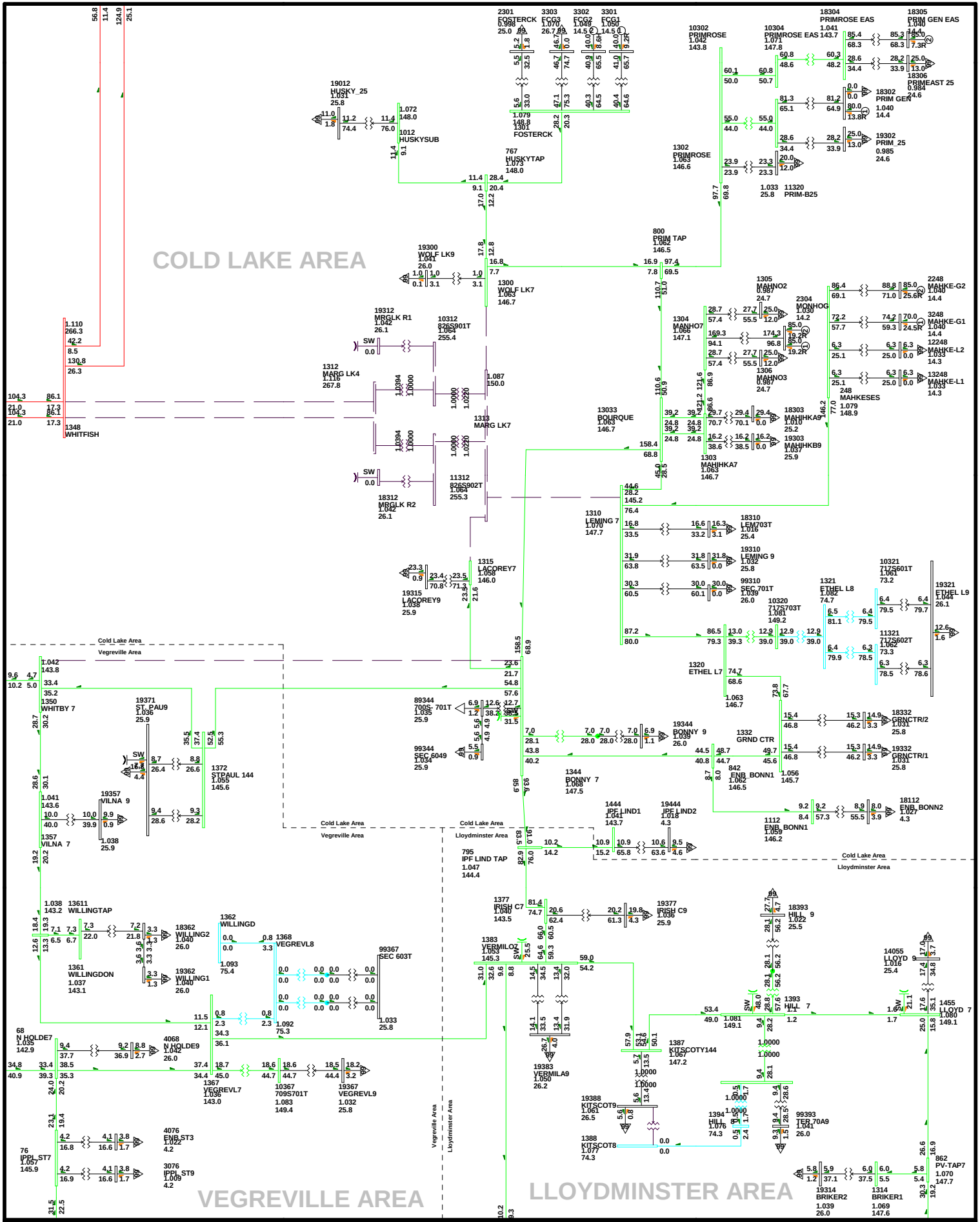


CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 30 2010 16:48
D1-34

2012SP-Alt 1 BR#5 ON-14.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

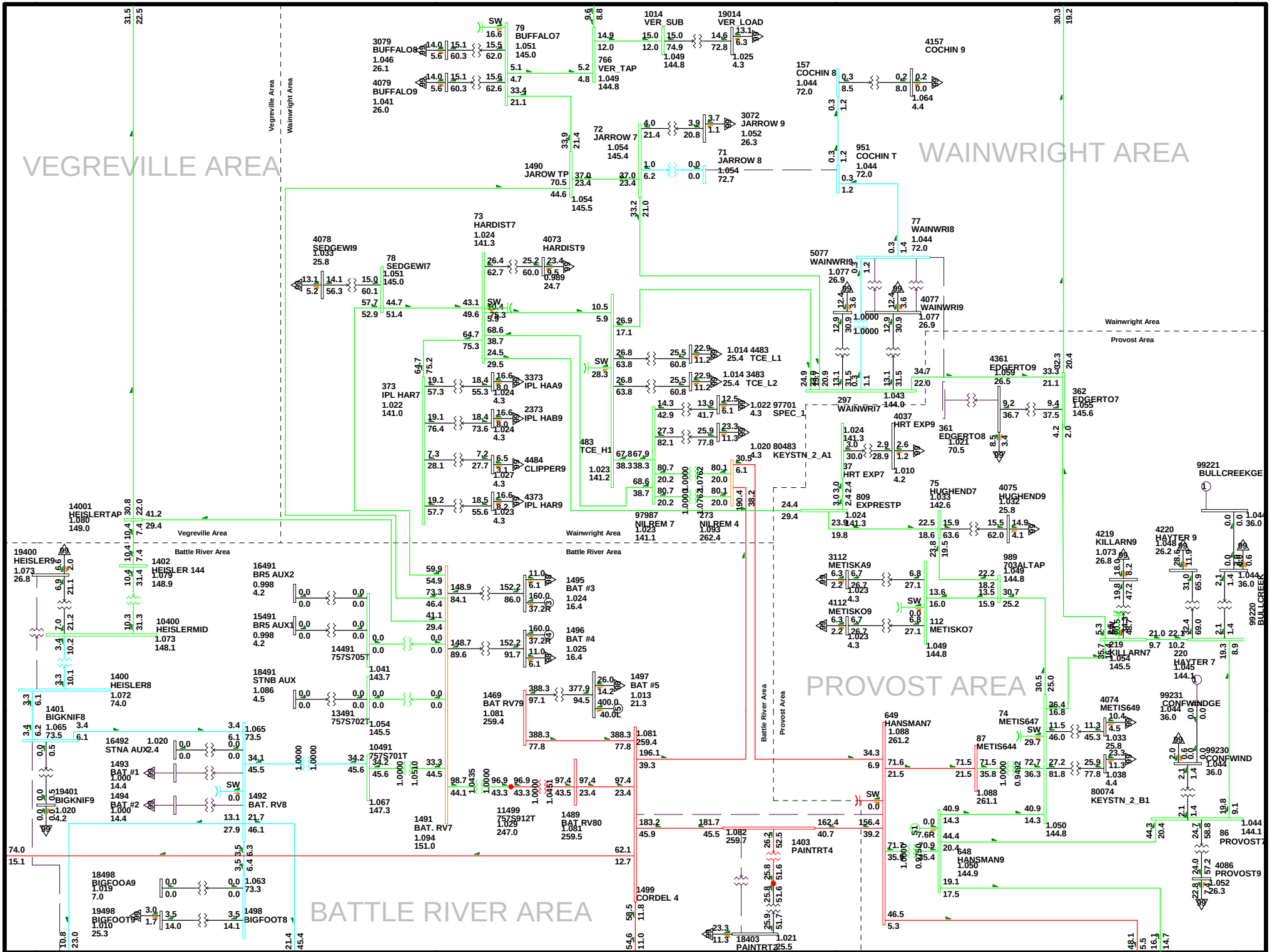

VEGREVILLE AREA
WAINWRIGHT AREA
PROVOST AREA
BATTLE RIVER AREA
Vegreville Area
Wainwright Area
Battle River Area
Provost Area
79 BUFFALO7 1.016 140.2
3079 BUFFALO8 1.038 25.9
4079 BUFFALO9 1.042 26.0
766 VER_TAP 1.015 140.1
1014 VER_SUB
19014 VER_LOAD
4157 COCHIN 9
157 COCHIN 8 1.013 69.9
951 COCHIN T 1.013 69.9
72 JAROW 7 1.022 141.0
3072 JARROW 9 1.039 26.0
71 JARROW 8 1.021 70.5
1490 JAROW TP 111.1 70.3
73 HARDIST7 1.011 139.5
4073 HARDIST9
4078 SEDGEWI9 1.029 25.7
78 SEDGEWI7 1.028 141.8
77 WAINWRI8 1.013 69.9
5077 WAINWRI9 1.045 26.1
4077 WAINWRI9 1.045 26.1
297 WAINWRI7
4361 EDGERTO9 1.033 25.8
362 EDGERTO7 1.030 142.1
361 EDGERTO8 1.021 70.5
4037 HRT EXP9
37 HRT EXP7
373 IPL HAR7 1.009 139.2
3373 IPL HAA9 1.010 4.2
2373 IPL HAB9 1.010 4.2
4484 CLIPPER9 1.026 4.3
4373 IPL HAR9 1.009 4.2
483 TCE_H1 1.010 139.4
1000 4483 25.0 TCE_L1
1000 3483 25.0 TCE_L2
1009 97701 SPEC_1 4.2
1006 80483 KEYSTN_2_A1 4.2
97987 NILREM 7 1.010 139.4
273 NILREM 4 1.089 261.3
809 EXPRESTP 1.011 139.6
75 HUGHEND7 1.027 141.7
4075 HUGHEND9 1.038 25.9
989 703ALTAP 1.049 144.8
3112 METISKA9
4112 METISKO9
112 METISKO7 1.049 144.8
4219 KILLARN9 1.063 26.6
219 KILLARN7 1.045 144.2
4220 HAYTER 9 1.041 26.0
220 HAYTER 7 1.038 143.3
99221 BULLCREEKGE
99220 BULLCREEK
99231 CONFWNDGE 1.041 35.9
99230 CONFWIND 1.041 35.9
4074 METIS649
74 METIS647
87 METIS644
649 HANSMAN7 1.090 261.6
648 HANSMAN9 1.050 144.9
80074 KEYSTN_2_B1
14001 HEISLERTAP 1.077 148.6
19400 HEISLER9 1.070 26.7
1402 HEISLER 144 1.076 148.5
10400 HEISLERMID 1.070 147.7
1400 HEISLER8 1.069 73.8
1401 BIGKNIF8 1.062 73.3
19401 BIGKNIF9 1.018 4.2
16492 STNA AUX 1.018 2.4
1493 BAT #1 1.000 14.4
1494 BAT #2 1.000 14.4
1492 BAT. RV8 22.6 48.0
18498 BIGFOOA9 1.016 7.0
19498 BIGFOOT9 1.008 25.2
1498 BIGFOOT8 1.060 73.1
16491 BR5 AUX2 0.998 4.2
15491 BR5 AUX1 0.998 4.2
18491 STNB AUX 1.086 4.5
14491 757S705T
13491 757S702T
10491 757S701T
11499 757S912T 1.048 251.6
1491 BAT. RV7 1.094 151.0
1495 BAT #3 1.018 16.3
1496 BAT #4 1.019 16.3
1497 BAT #5 1.013 21.3
1469 BAT RV79 1.081 259.4
1489 BAT RV80 1.088 261.1
1499 CORDEL 4
1088 261.1
1403 PAINTRT4
18403 PAINTRT 1.026 25.7
1041 143.7 86 PROVOST7
4086 PROVOST9 1.049 26.2
CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 30 2010 16:48
D1-34
2012SP-Alt 1 BR#5 ON-14.b
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 30 2010 16:49
D1-35

2012SP-Alt 1 BR#5 ON-15.a

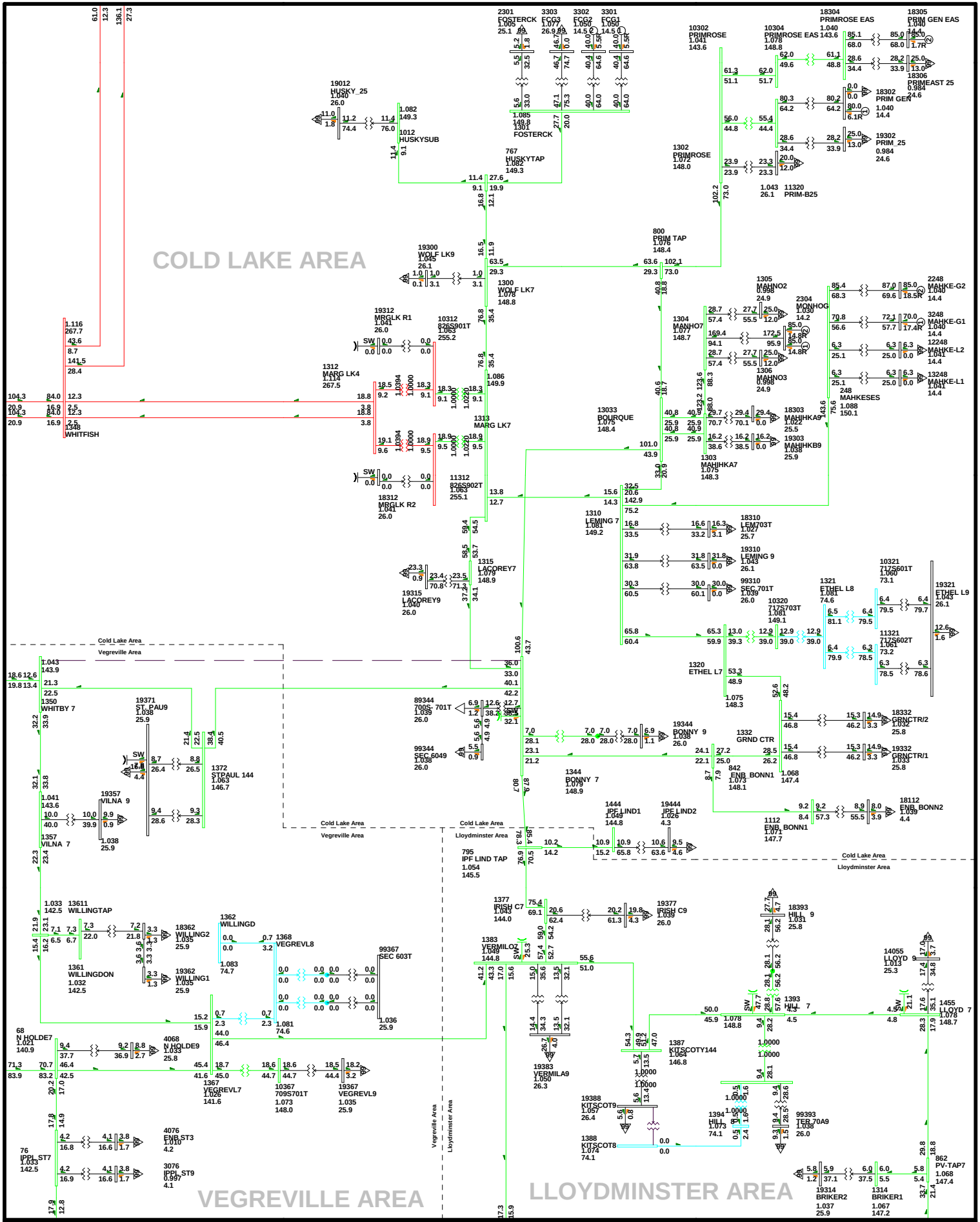
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 30 2010 16:49
D1-35

2012SP-Alt 1 BR#5 ON-15.b

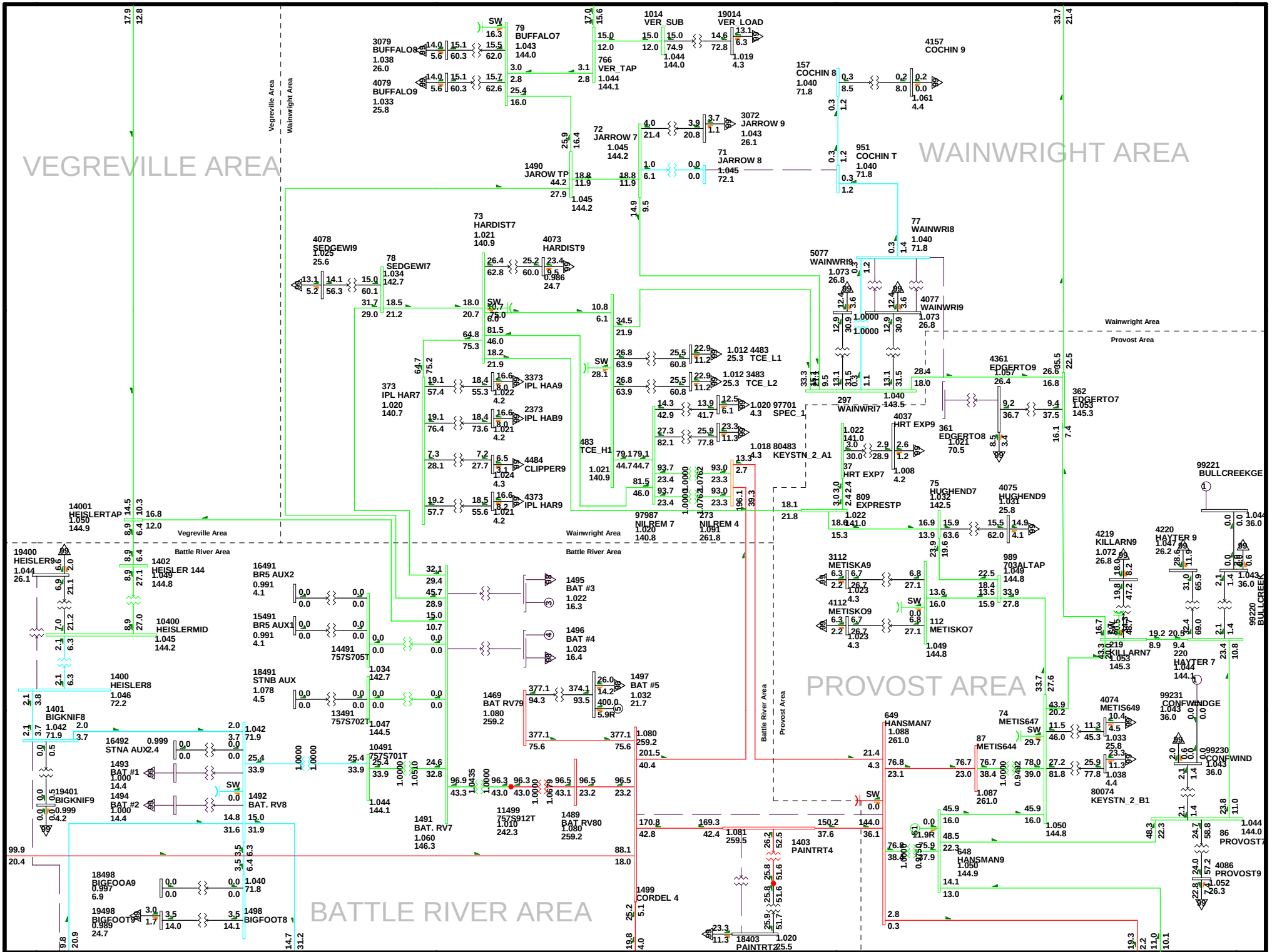
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 30 2010 16:49
D1-36

2012SP-Alt 1 BR#5 ON-16.a

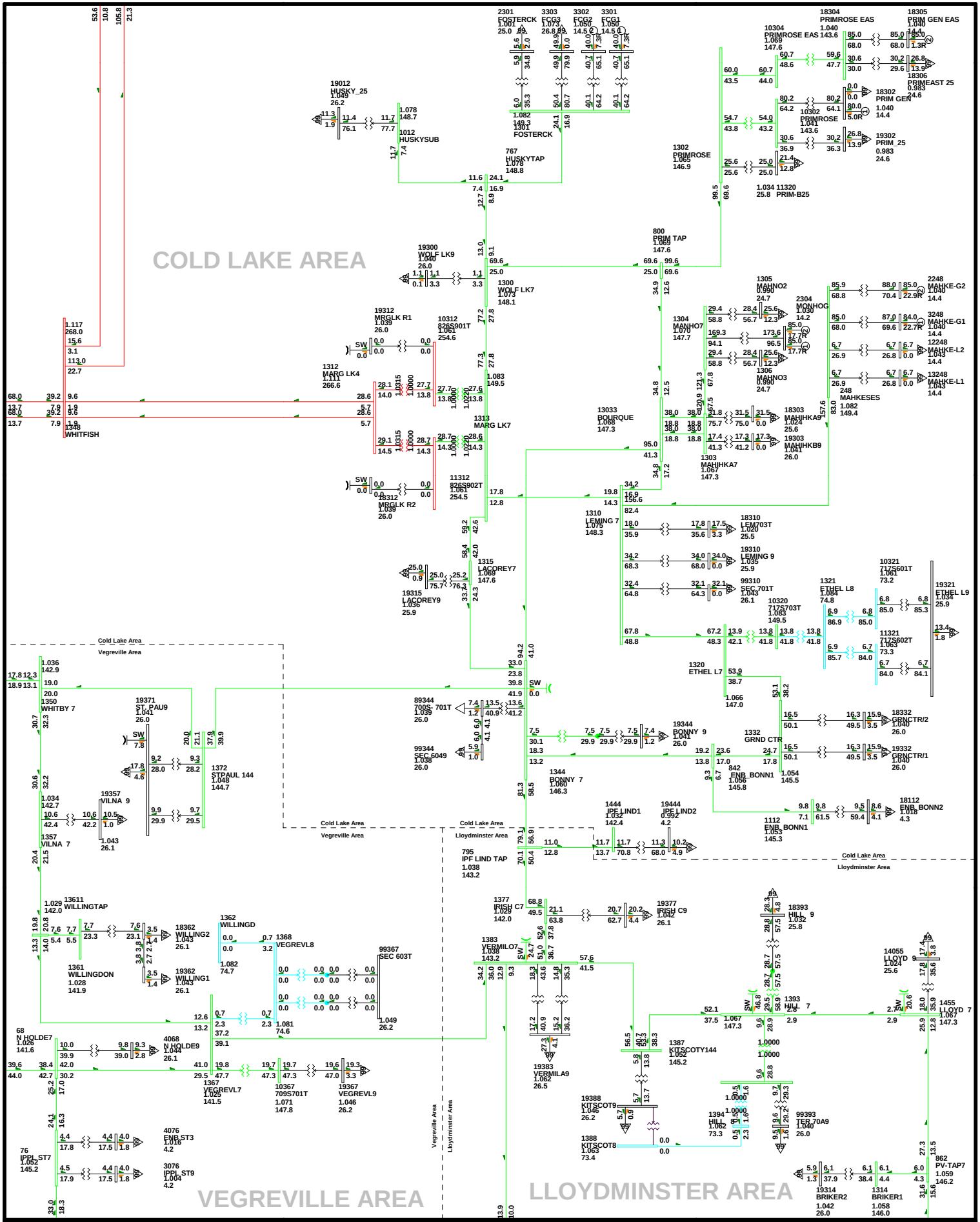
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 30 2010 16:49
D1-36

2012SP-Alt 1 BR#5 ON-16.b

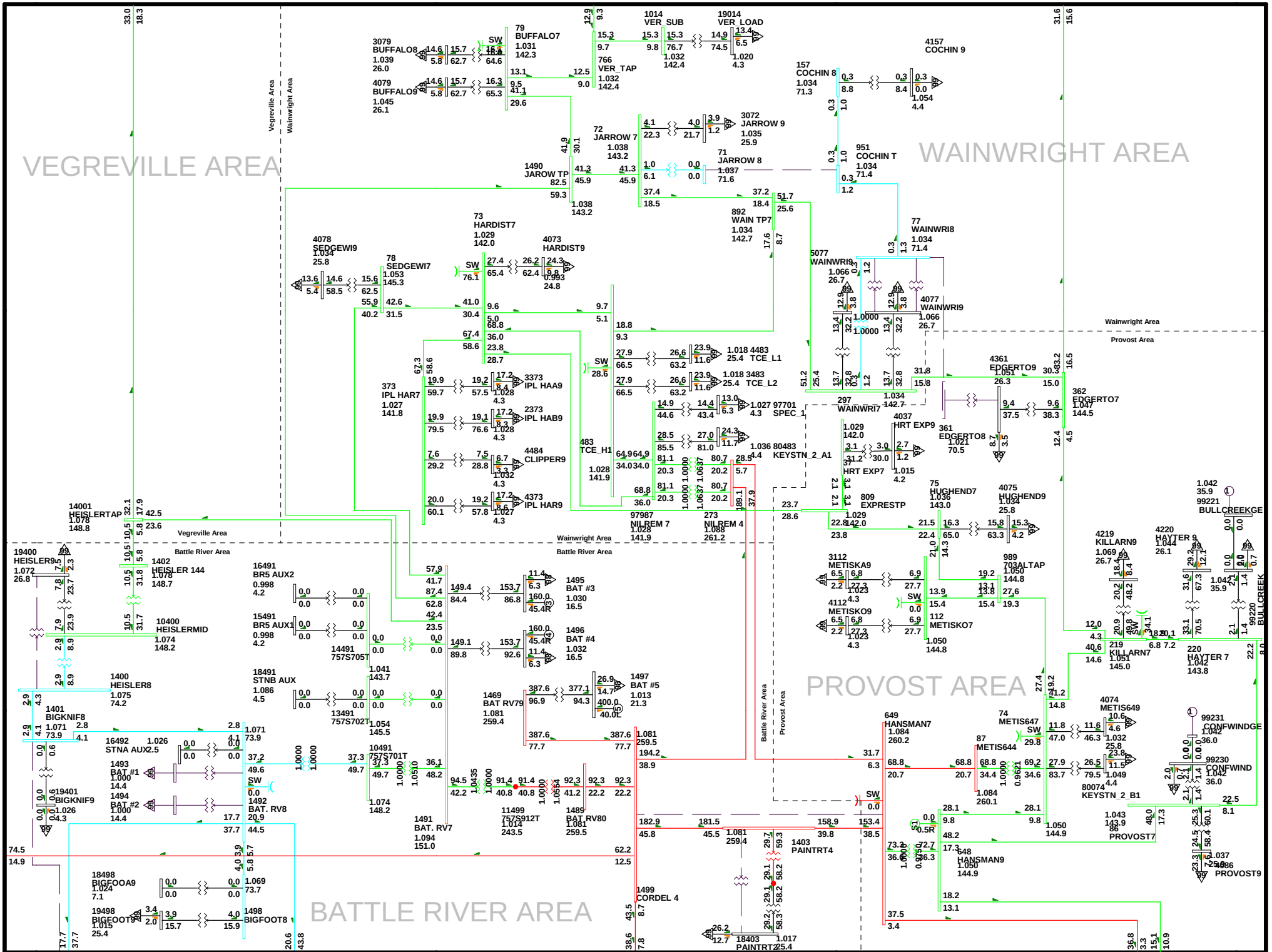
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
FRI, APR 09 2010 10:51
D1-00

2012WP-Alt 2 BR#5 ON-1.a

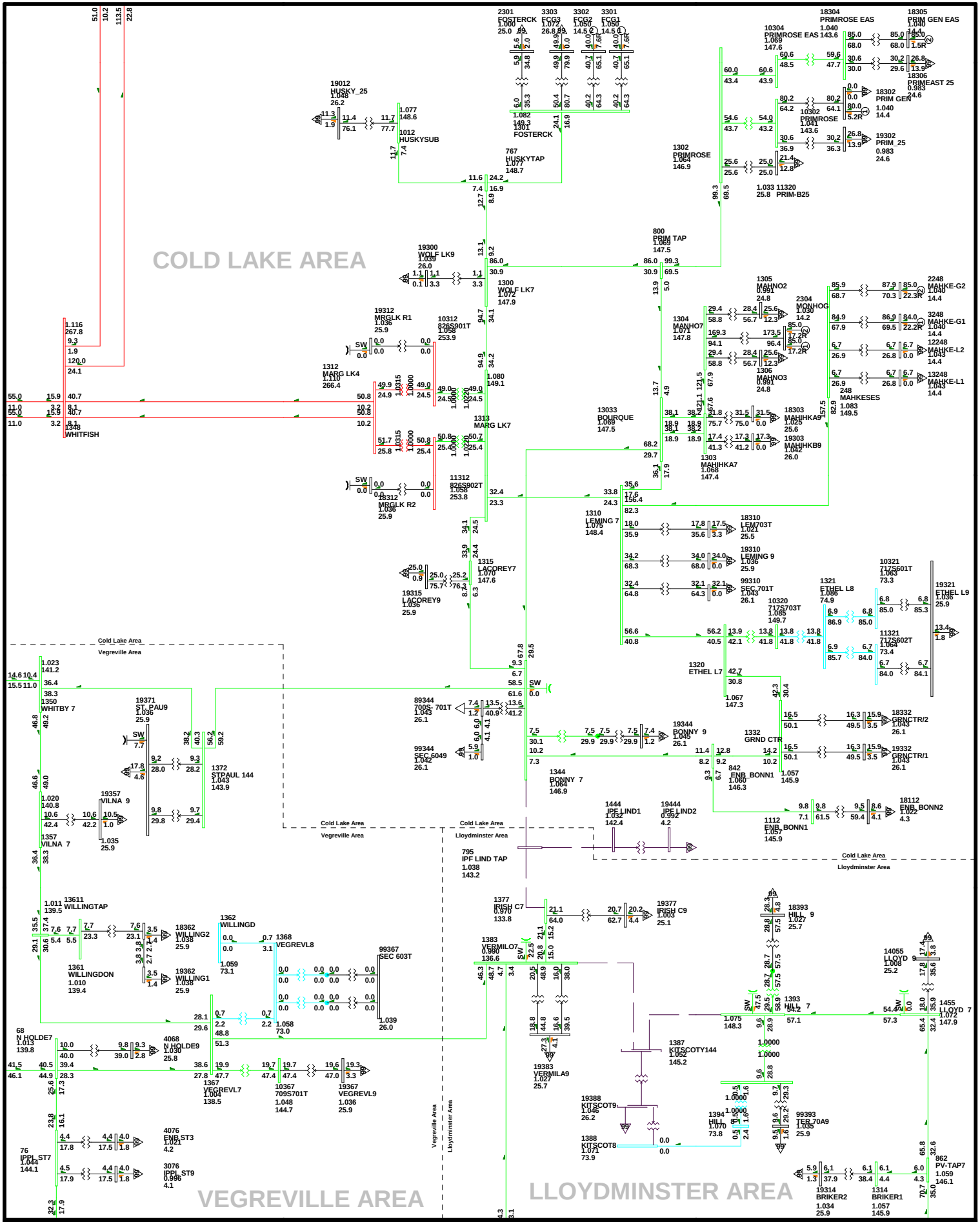
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
FRI, APR 09 2010 10:51
D1-00

2012WP-Alt 2 BR#5 ON-1.b

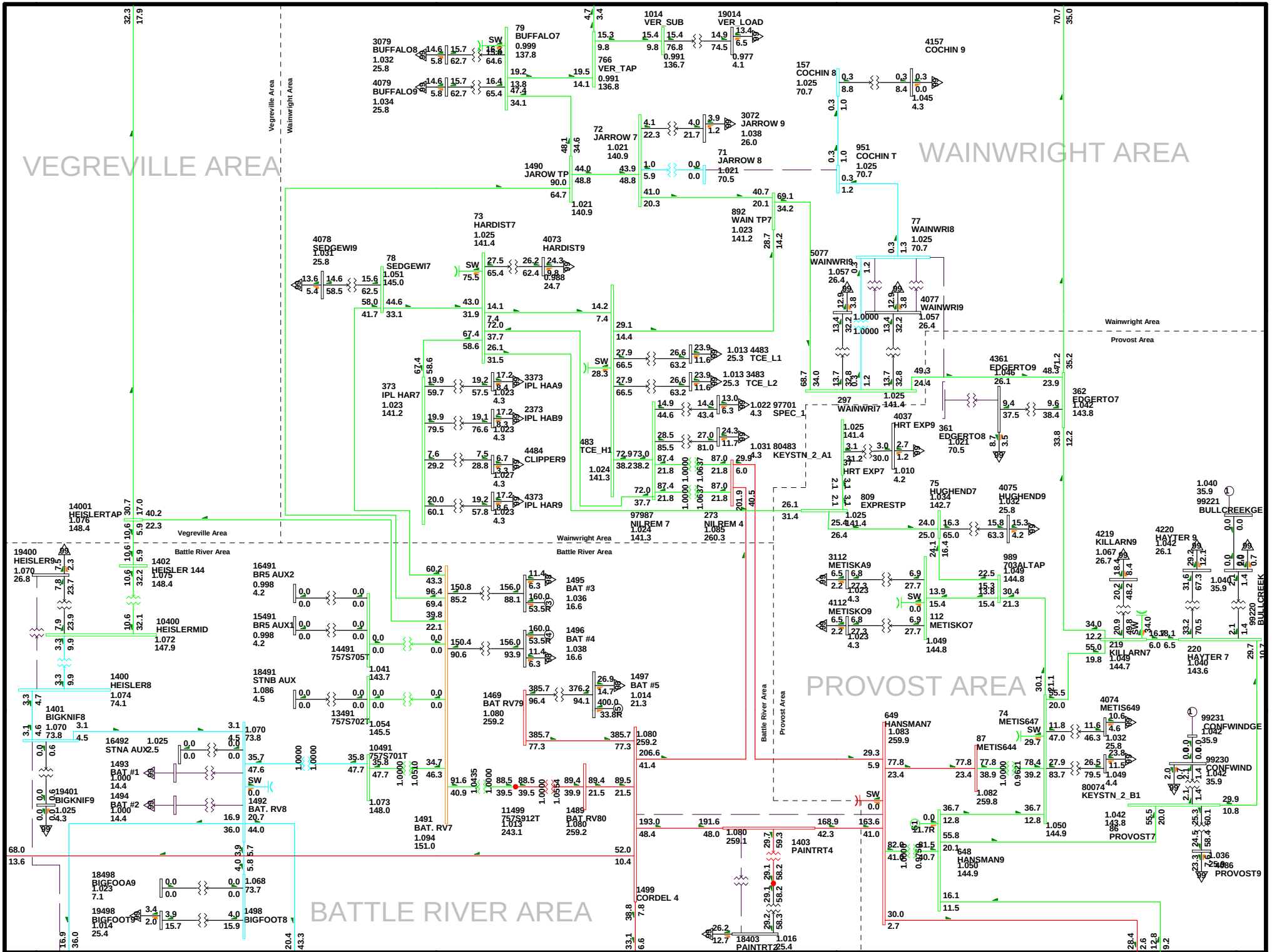
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000

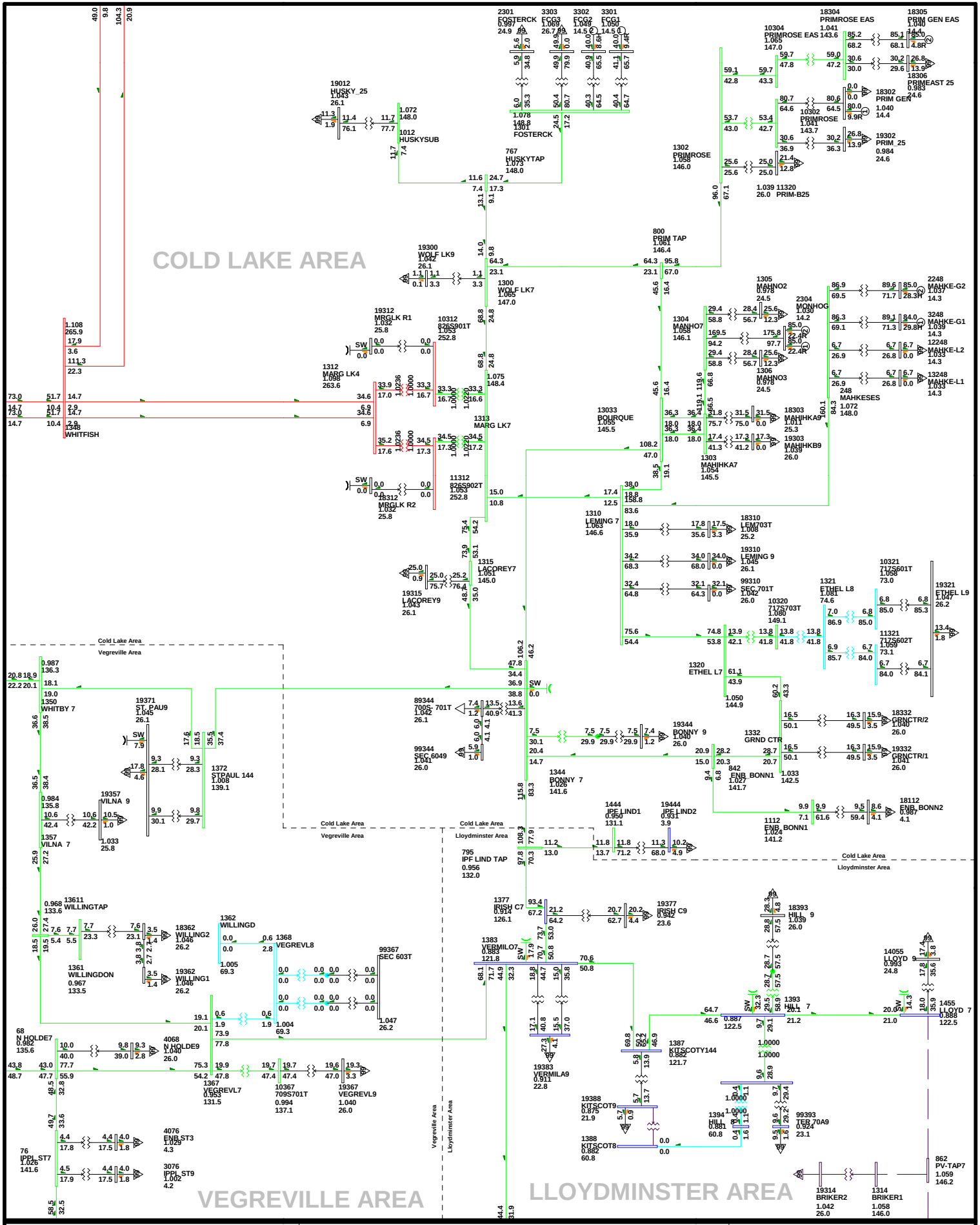


CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
FRI, APR 09 2010 10:51
D1-23

2012WP-Alt 2 BR#5 ON-2.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

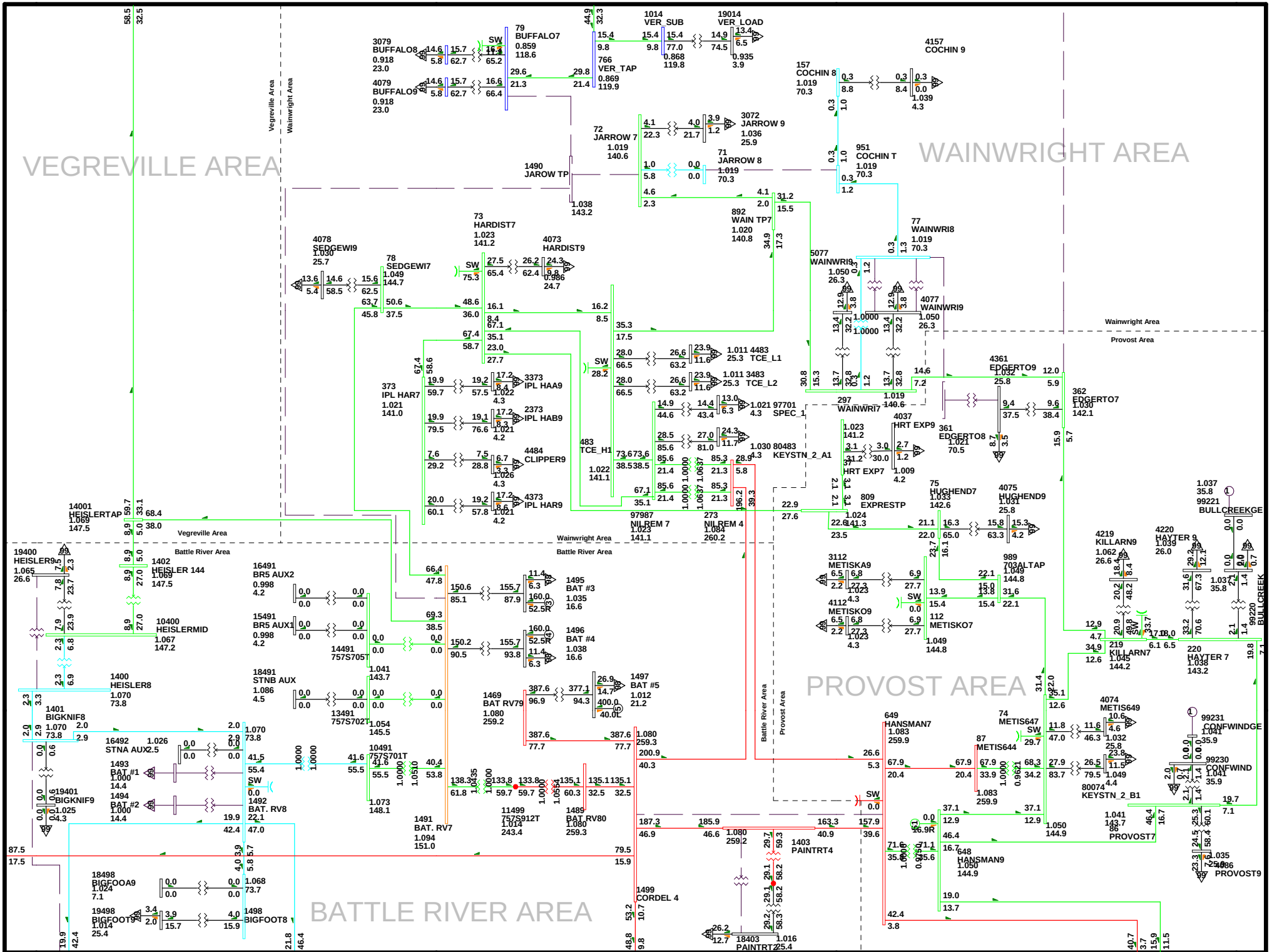

VEGREVILLE AREA
WAINWRIGHT AREA
PROVOST AREA
BATTLE RIVER AREA
Vegreville Area
Wainwright Area
Battle River Area
Provost Area
3079 BUFFALO8 1.032 25.8
4079 BUFFALO9 1.034 25.8
79 BUFFALO7 0.999 137.8
766 VER_TAP 0.991 136.8
1014 VER_SUB 0.991 136.7
19014 VER_LOAD 0.977 4.1
72 JARROW 7 1.021 140.9
3072 JARROW 9 1.038 26.0
71 JARROW 8 1.021 70.5
1490 JAROW TP 1.021 140.9
157 COCHIN 8 1.025 70.7
4157 COCHIN 9
951 COCHIN T 1.025 70.7
1.045 4.3
892 WAIN TP7 1.023 141.2
77 WAINWRI8 1.025 70.7
5077 WAINWRI9 1.057 26.4
4077 WAINWRI9 1.057 26.4
297 WAINWRI7 1.025 141.4
4078 SEDGEWI9 1.031 25.8
78 SEDGEWI7 1.051 145.0
73 HARDIST7 1.025 141.4
4073 HARDIST9 0.988 24.7
373 IPL HAR7 1.023 141.2
3373 IPL HAA9 1.023 4.3
2373 IPL HAB9 1.023 4.3
4484 CLIPPER9 1.027 4.3
4373 IPL HAR9 1.023 4.3
483 TCE_H1 1.024 141.3
1.013 4483 25.3 TCE_L1
1.013 3483 25.3 TCE_L2
1.022 97701 4.3 SPEC_1
1.031 80483 4.3 KEYSTN_2_A1
97987 NIL REM 7 1.024 141.3
273 NIL REM 4 1.085 260.3
4037 HRT EXP9 1.021 70.5
HRT EXP7 1.010 4.2
4361 EDGERTO9 1.046 26.1
361 EDGERTO8 1.021 70.5
362 EDGERTO7 1.042 143.8
809 EXPRESTP 1.025 141.4
75 HUGHEND7 1.034 142.7
4075 HUGHEND9 1.032 25.8
14001 HEISLERTAP 1.076 148.4
1402 HEISLER 144 1.075 148.4
10400 HEISLERMID 1.072 147.9
19400 HEISLER9 1.070 26.8
1400 HEISLER8 1.074 74.1
1401 BIGKNIF8 1.070 73.8
19401 BIGKNIF9 1.025 4.3
16491 BR5 AUX2 0.998 4.2
15491 BR5 AUX1 0.998 4.2
14491 757S705T 1.041 143.7
18491 STNB AUX 1.086 4.5
13491 757S702T 1.054 145.5
16492 STNA AUX 1.025 2.5
10491 757S701T 1.073 148.0
1493 BAT #1 1.000 14.4
1494 BAT #2 1.000 14.4
1492 BAT. RV8 20.7
1491 BAT. RV7 1.094 151.0
1495 BAT #3 1.036 16.6
1496 BAT #4 1.038 16.6
1497 BAT #5 1.014 21.3
1469 BAT RV79 1.080 259.2
11499 757S912T 1.013 243.1
1489 BAT RV80 1.080 259.2
1499 CORDEL 4 7.8
18403 PAINTRT2 1.016 25.4
1403 PAINTRT4
649 HANSMAN7 1.083 259.9
648 HANSMAN9 1.050 144.9
74 METIS647 87 METIS644
4074 METIS649 1.032 25.8
80074 KEYSTN_2_B1
PROVOST7 1.042 143.8
PROVOST9 1.036 25.8
3112 METISKA9 4112 METISKO9
112 METISKO7 1.049 144.8
989 703ALTAP 1.049 144.8
4219 KILLARN9 1.067 26.7
219 KILLARN7 1.049 144.7
4220 HAYTER 9 1.042 26.1
220 HAYTER 7 1.040 143.6
99221 BULLCREEKGE
99220 BULLCREEK
99231 CONFWINDGE 1.042 35.9
99230 CONFWIND 1.042 35.9
18498 BIGFOOA9 1.023 7.1
19498 BIGFOOT9 1.014 25.4
1498 BIGFOOT8
CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
FRI, APR 09 2010 10:51
D1-23
2012WP-Alt 2 BR#5 ON-2.b
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
FRI, APR 09 2010 10:51
D1-24

2012WP-Alt 2 BR#5 ON-3.a

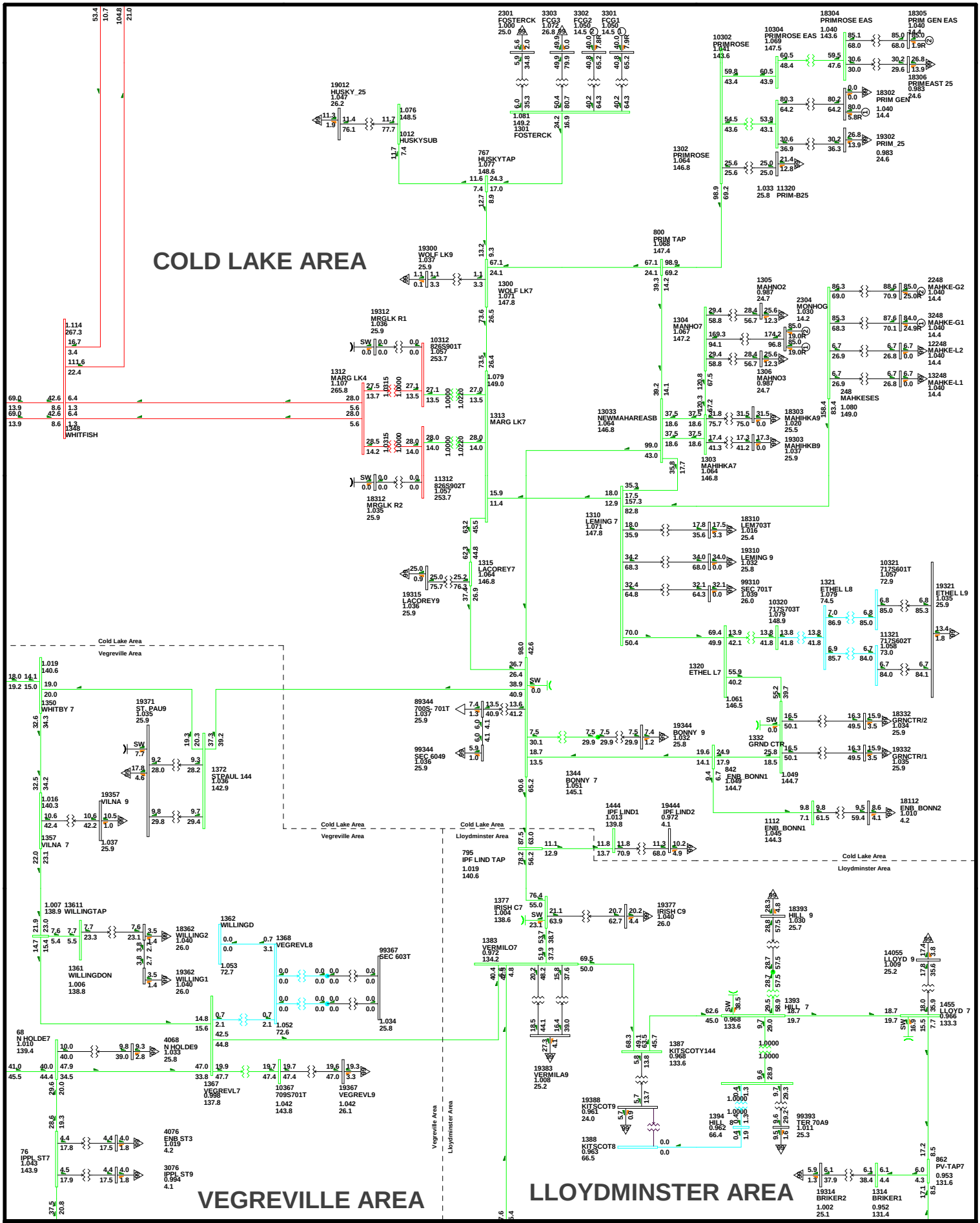
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
FRI, APR 09 2010 10:51
D1-24

2012WP-Alt 2 BR#5 ON-3.b

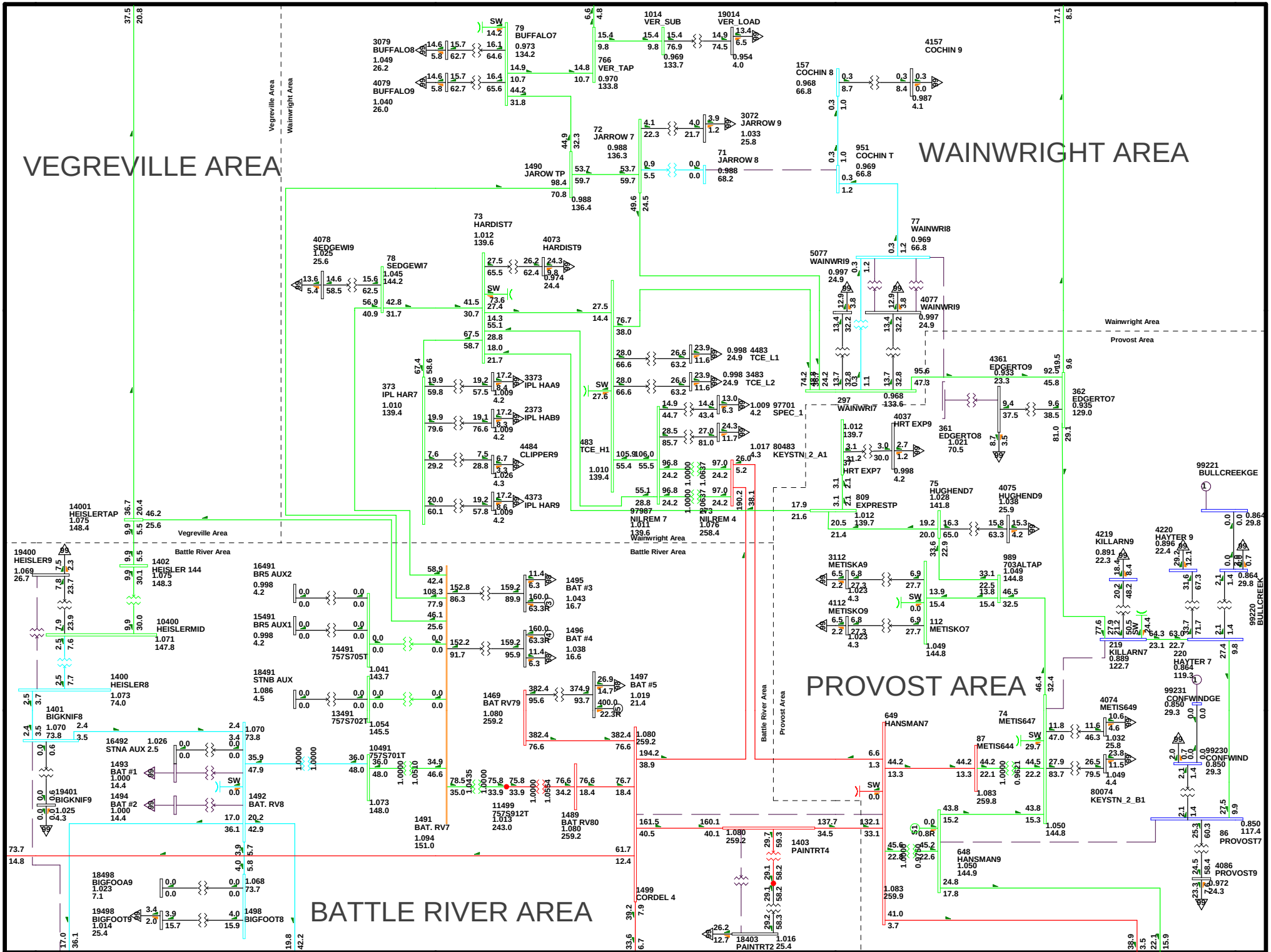
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
FRI, APR 09 2010 12:24

2012WP-Alt 2 BR#5 ON-4.a

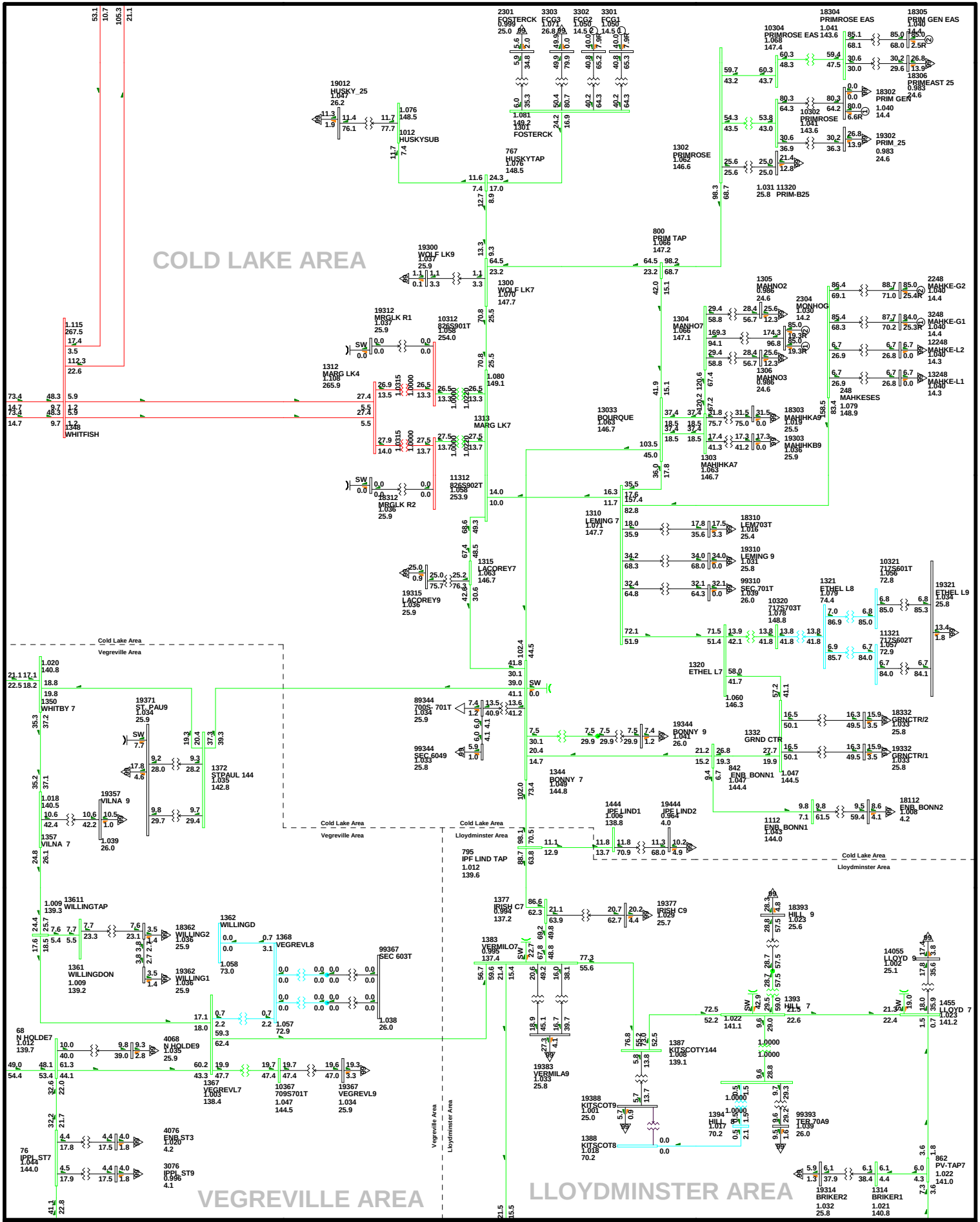
Bus - VOLTAGE (KV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/MVAR
100.0%RATEB
1.100 0.940UV
KV: >0.000<=35.000<=69.000<=138.000<=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
FRI, APR 09 2010 12:24

2012WP-Alt 2 BR#5 ON-4.b

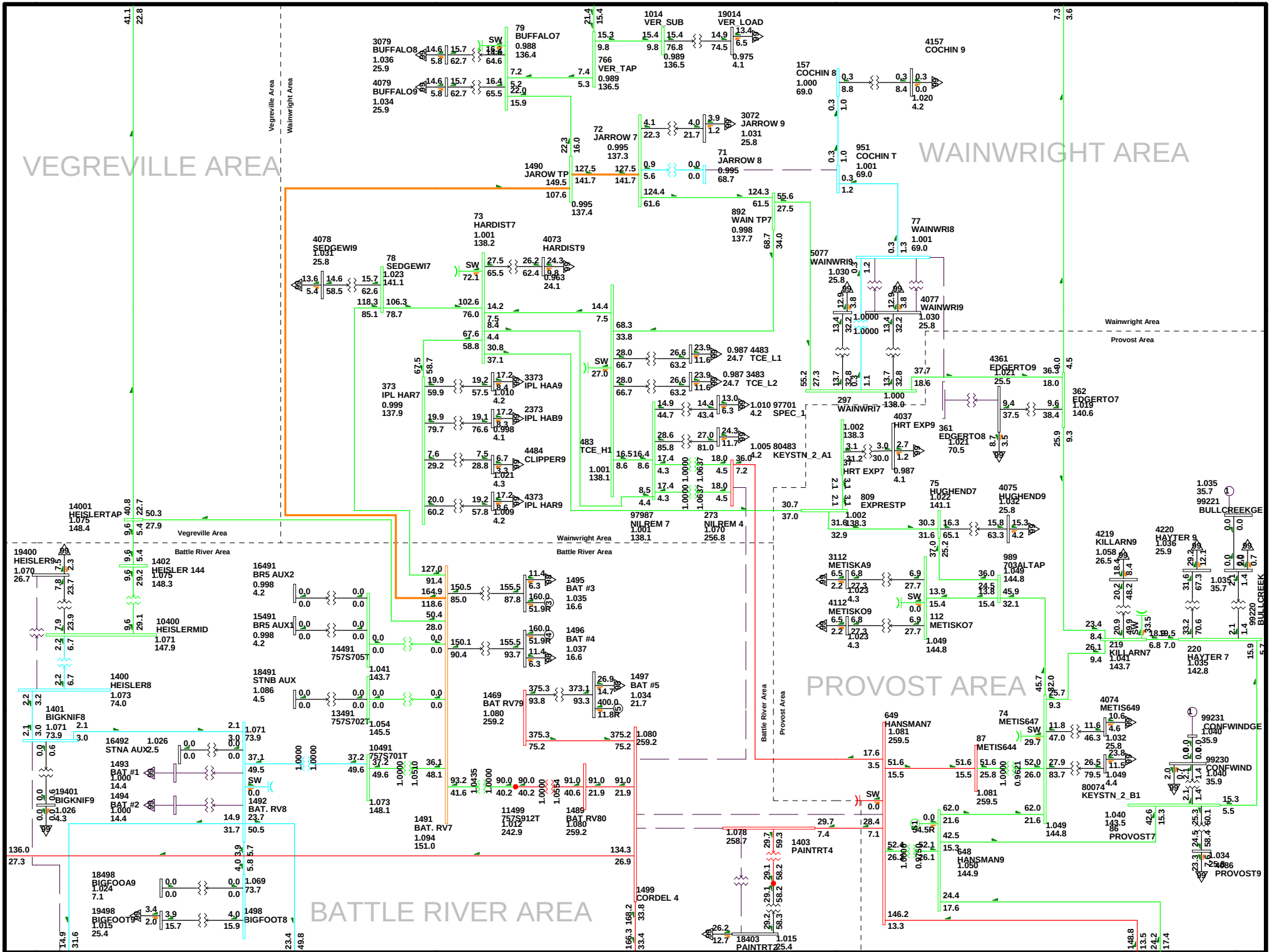
Bus - VOLTAGE (KV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/MVAR
100.0%RATEB
1.090OV 0.920UV
KV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

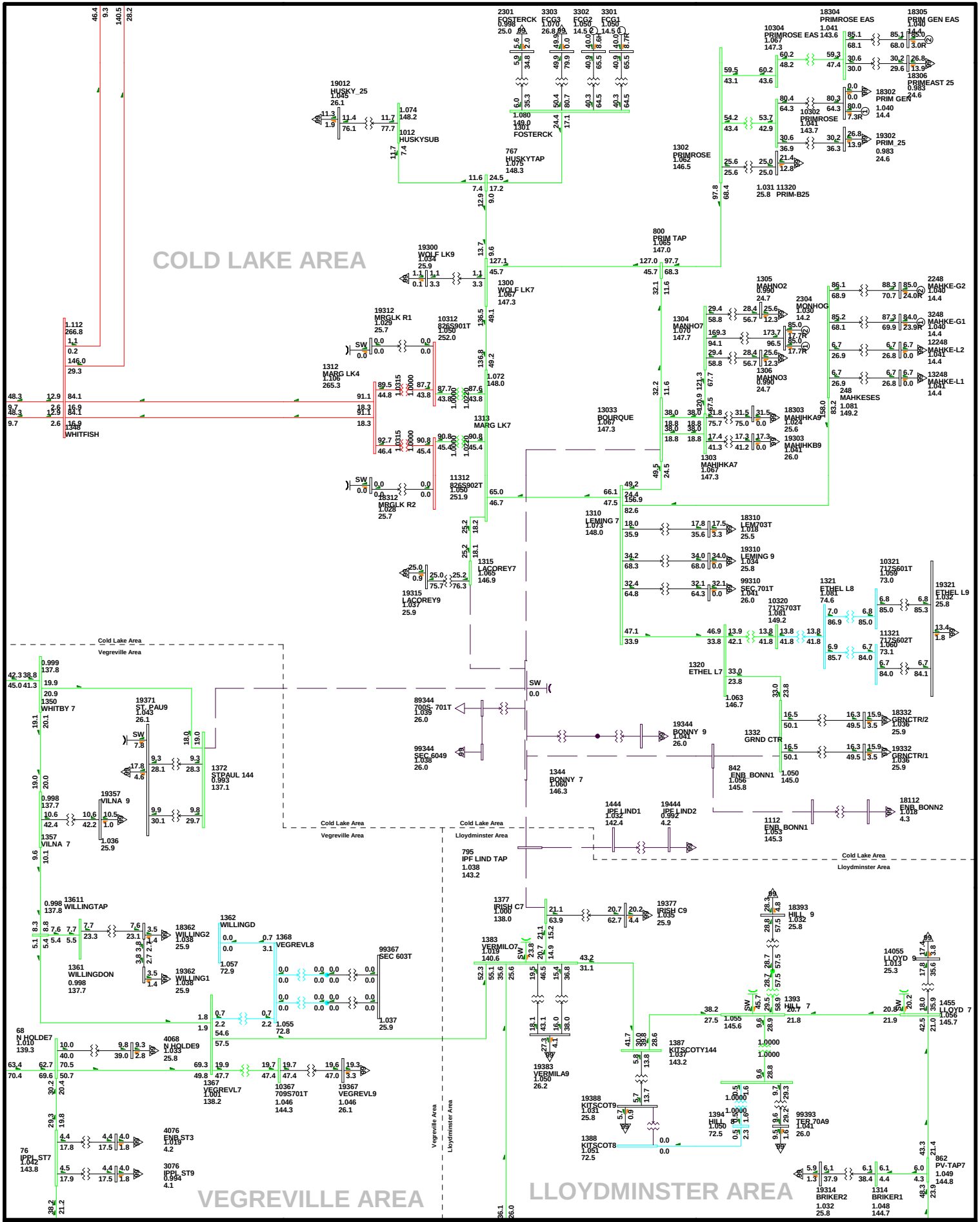


CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
FRI, APR 09 2010 10:52
D1-26

2012WP-Alt 2 BR#5 ON-5.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

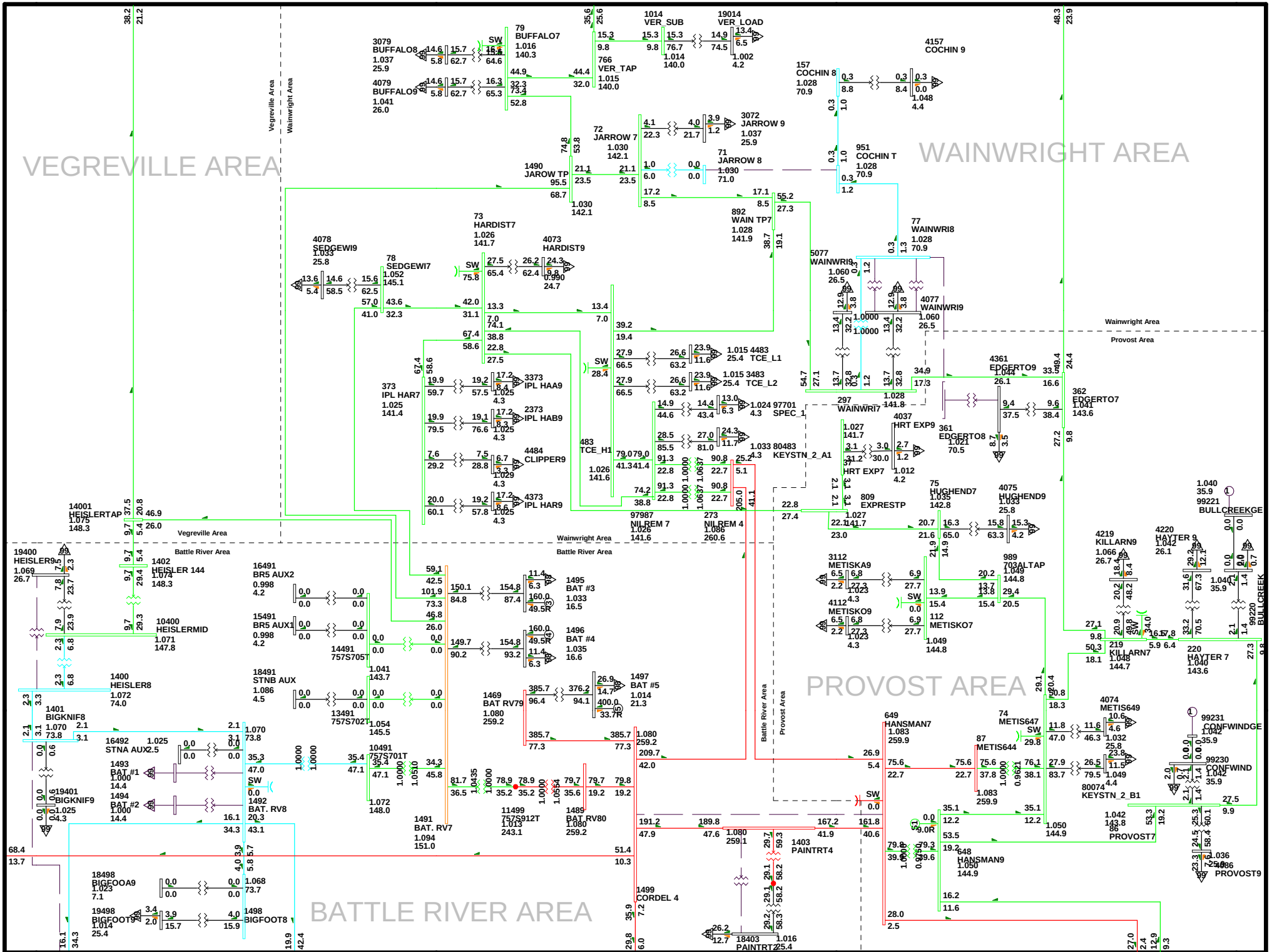

VEGREVILLE AREA
WAINWRIGHT AREA
PROVOST AREA
BATTLE RIVER AREA
Vegreville Area
Wainwright Area
Battle River Area
Provost Area
14001 HEISLERTAP 1.075 148.4
19400 HEISLER9 1.070 26.7
1402 HEISLER 144 1.075 148.3
10400 HEISLERMID 1.071 147.9
1400 HEISLER8 1.073 74.0
1401 BIGKNIF8 1.071 73.9
19401 BIGKNIF9 1.026 14.3
1493 BAT #1 1.000 14.4
1494 BAT #2 1.000 14.4
1492 BAT. RV8 23.7 50.5
18498 BIGFOOA9 1.024 7.1
19498 BIGFOOT9 1.015 25.4
1498 BIGFOOT8 1.069 73.7
16492 STNA AUX 1.026 2.5
16491 BR5 AUX2 0.998 4.2
15491 BR5 AUX1 0.998 4.2
18491 STNB AUX 1.086 4.5
14491 757S705T 1.041 143.7
13491 757S702T 1.054 145.5
10491 757S701T 1.073 148.1
1491 BAT. RV7 1.094 151.0
11499 757S912T 1.012 242.9
1495 BAT #3 1.035 16.6
1496 BAT #4 1.037 16.6
1497 BAT #5 1.034 21.7
1469 BAT RV79 1.080 259.2
1489 BAT RV80 1.080 259.2
1499 CORDEL 4
18403 PAINTRT2 1.015 25.4
1403 PAINTRT4
3079 BUFFALO8 1.036 25.9
4079 BUFFALO9 1.034 25.9
79 BUFFALO7 0.988 136.4
766 VER_TAP 0.989 136.5
1014 VER_SUB 0.989 136.5
19014 VER_LOAD 0.975 4.1
1490 JAROW TP 149.5 107.6
72 JAROW 7 0.995 137.3
3072 JARROW 9 1.031 25.8
71 JARROW 8 0.995 68.7
892 WAIN TP7 0.998 137.7
4078 SEDGEWI9 1.031 25.8
78 SEDGEWI7 1.023 141.1
73 HARDIST7 1.001 138.2
4073 HARDIST9 0.963 24.1
373 IPL HAR7 0.999 137.9
3373 IPL HAA9 1.010 4.2
2373 IPL HAB9 0.998 4.1
4484 CLIPPER9 1.021 4.3
4373 IPL HAR9 1.009 4.2
483 TCE_H1 1.001 138.1
0.987 4483 24.7 TCE_L1
0.987 3483 24.7 TCE_L2
1.010 97701 4.2 SPEC_1
1.005 80483 4.2 KEYSTN_2_A1
97987 NILREM 7 1.001 138.1
273 NILREM 4 1.070 256.8
4157 COCHIN 9
157 COCHIN 8 1.000 69.0
1.020 4.2
951 COCHIN T 1.001 69.0
77 WAINWRI8 1.001 69.0
5077 WAINWRI9 1.030 25.8
4077 WAINWRI9 1.030 25.8
297 WAINWRI7 1.000 138.0
4037 HRT EXP9 1.002 138.3
HRT EXP7 0.987 4.1
809 EXPRESTP 1.002 138.3
75 HUGHEND7 1.022 141.1
4075 HUGHEND9 1.032 25.8
3112 METISKA9 1.023 4.3
4112 METISKO9 1.023 4.3
112 METISKO7 1.049 144.8
989 703ALTAP 1.049 144.8
649 HANSMAN7 1.081 259.5
74 METIS647 1.081 259.5
87 METIS644 1.081 259.5
648 HANSMAN9 1.050 144.9
4074 METIS649 1.032 25.8
80074 KEYSTN_2_B1 1.049 4.4
PROVOST7 1.040 142.5
4361 EDGERTO9 1.021 25.5
362 EDGERTO7 1.019 140.6
361 EDGERTO8 1.021 70.5
4219 KILLARN9 1.058 26.5
219 KILLARN7 1.041 143.7
4220 HAYTER 9 1.036 25.9
220 HAYTER 7 1.035 142.8
99221 BULLCREEKGE 1.035 35.7
99220 BULLCREEK 1.035 35.7
99231 CONFWINDGE 1.040 35.9
99230 CONFWIND 1.040 35.9
PROVOST9 1.034 25.8
CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
FRI, APR 09 2010 10:52
D1-26
2012WP-Alt 2 BR#5 ON-5.b
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
FRI, APR 09 2010 10:52
D1-27

2012WP-Alt 2 BR#5 ON-6.a

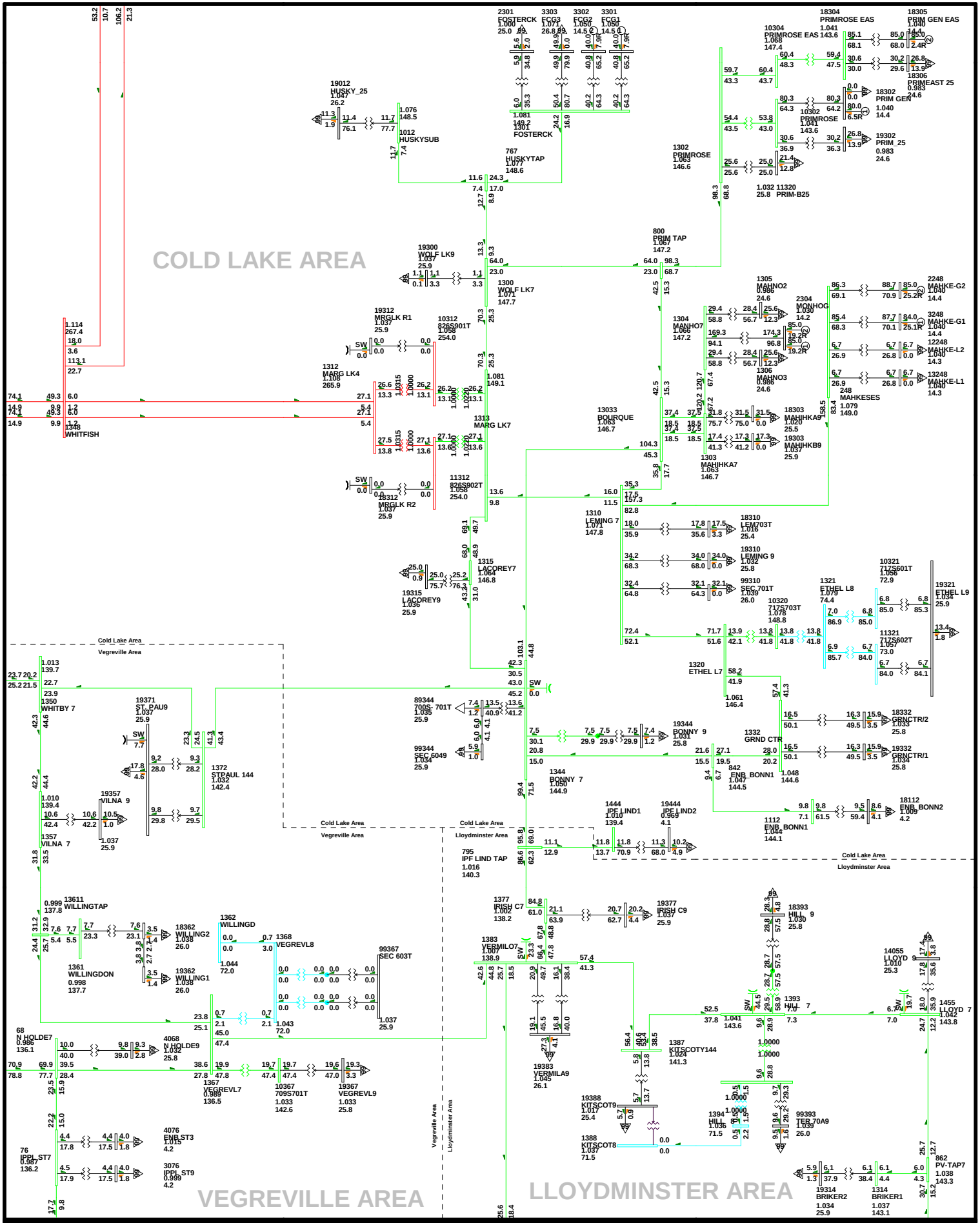
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
FRI, APR 09 2010 10:52
D1-27

2012WP-Alt 2 BR#5 ON-6.b

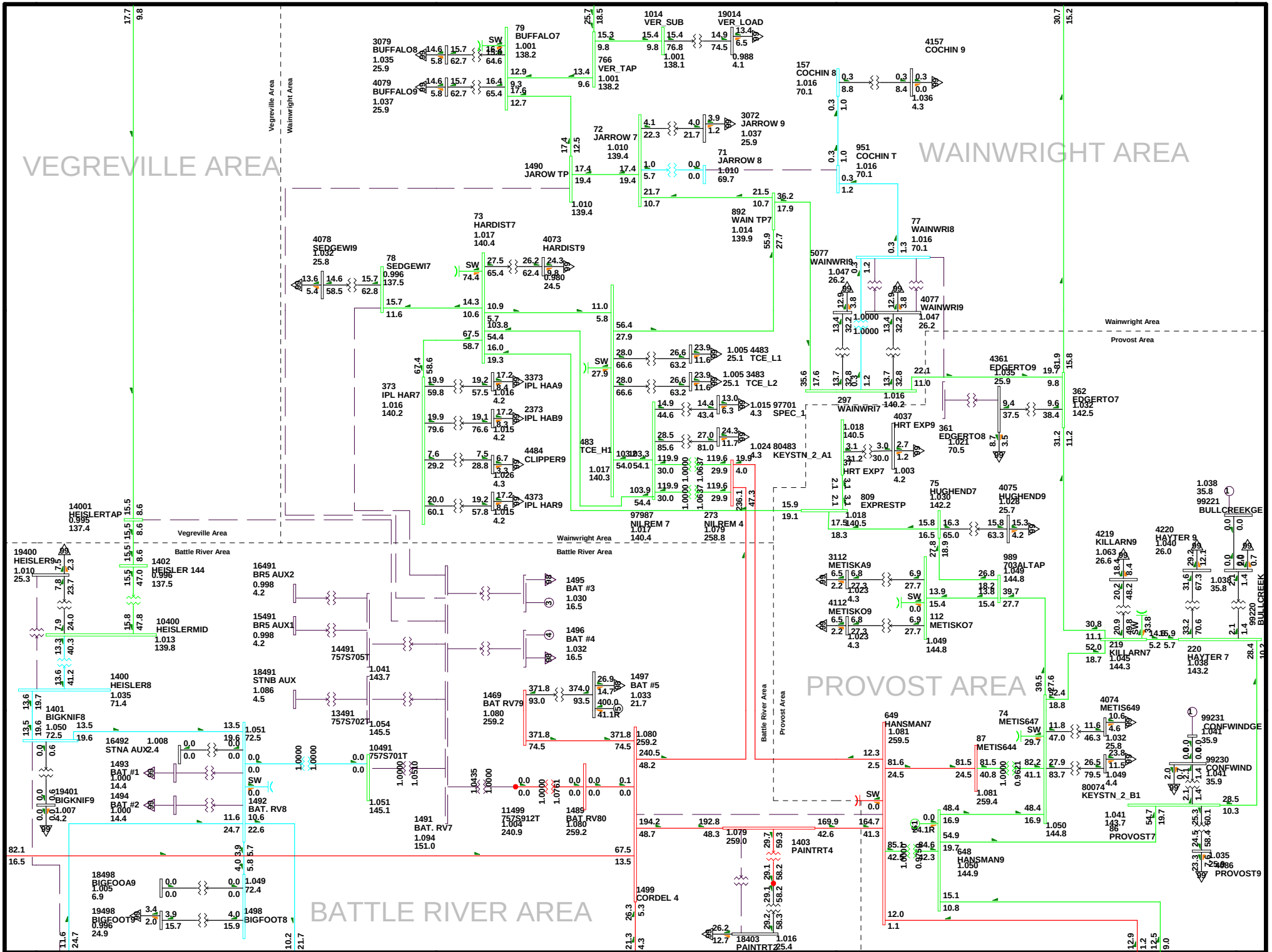
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
FRI, APR 09 2010 10:52
D1-28

2012WP-Alt 2 BR#5 ON-7.a

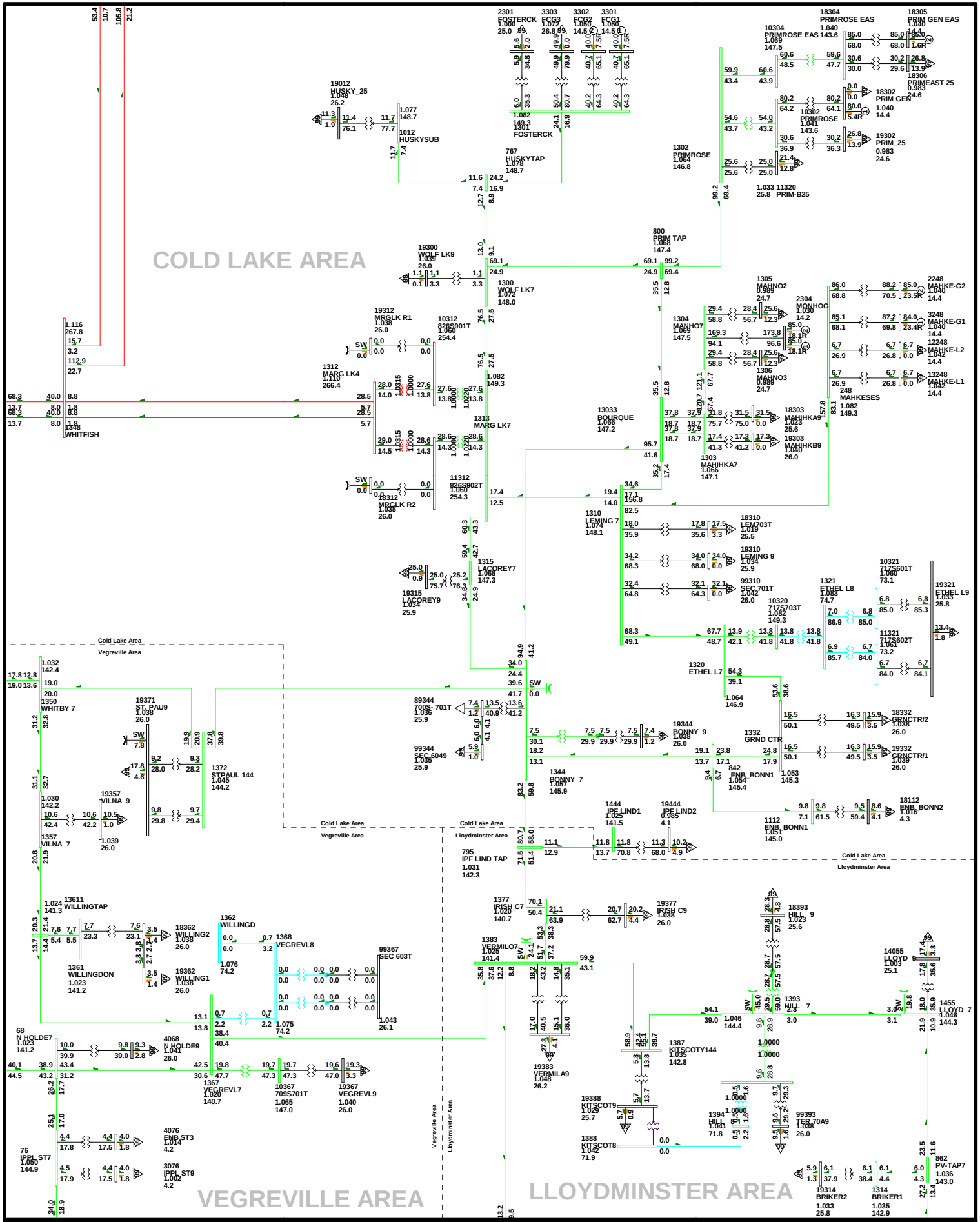
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
FRI, APR 09 2010 10:52
D1-28

2012WP-Alt 2 BR#5 ON-7.b

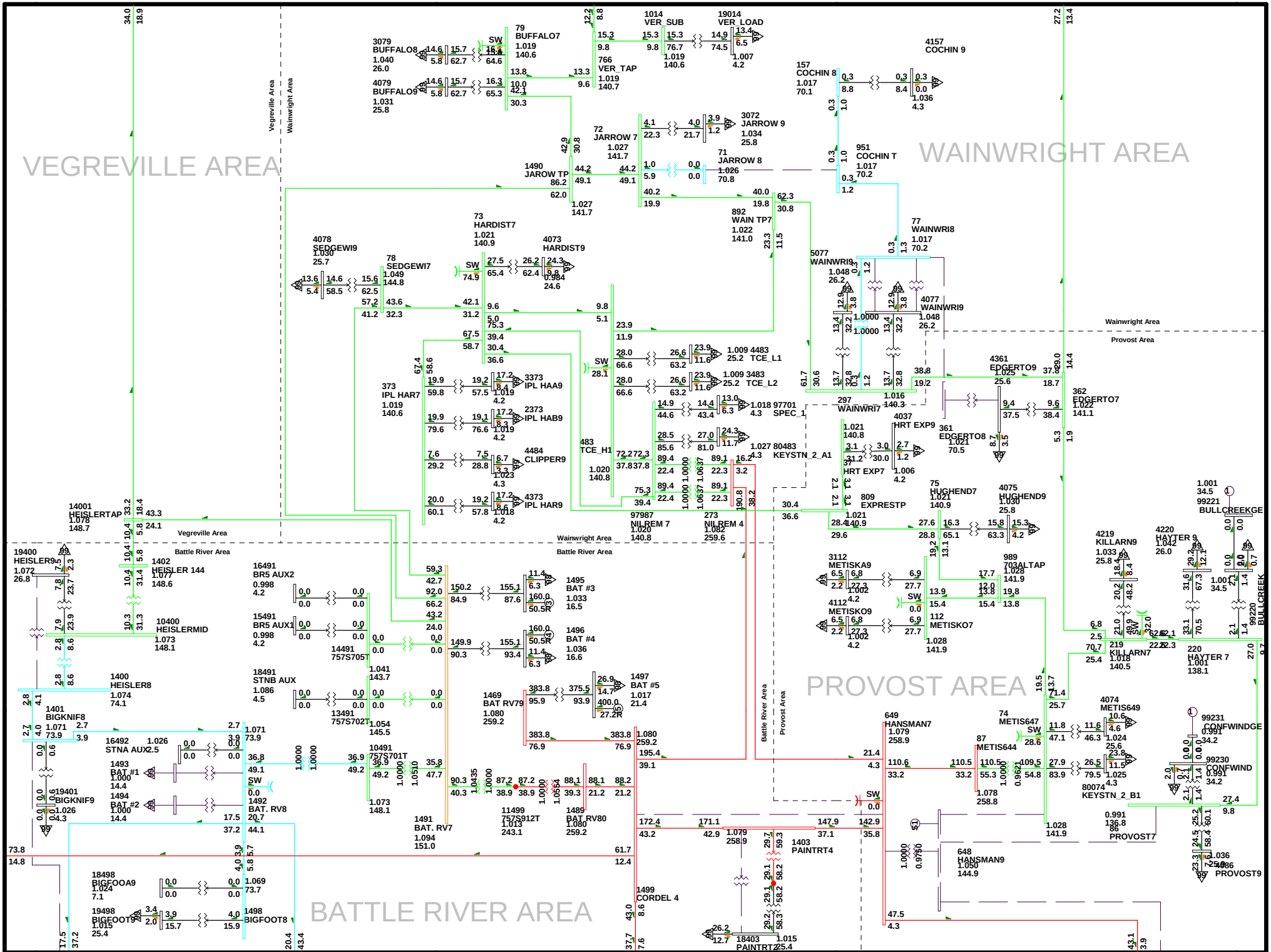
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
FRI, APR 09 2010 10:52
D1-30

2012WP-Alt 2 BR#5 ON-8.a

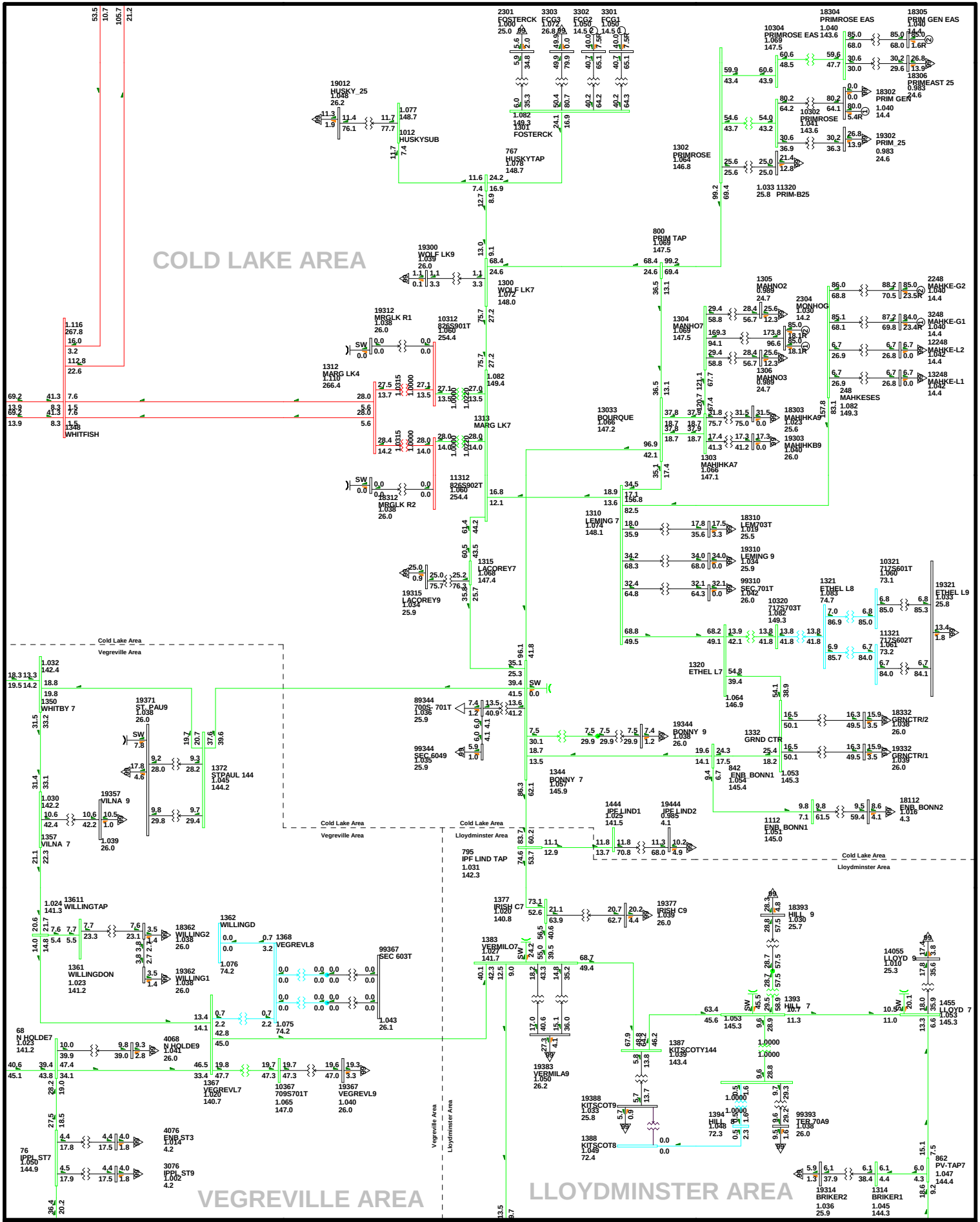
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
FRI, APR 09 2010 10:52
D1-30

2012WP-Alt 2 BR#5 ON-8.b

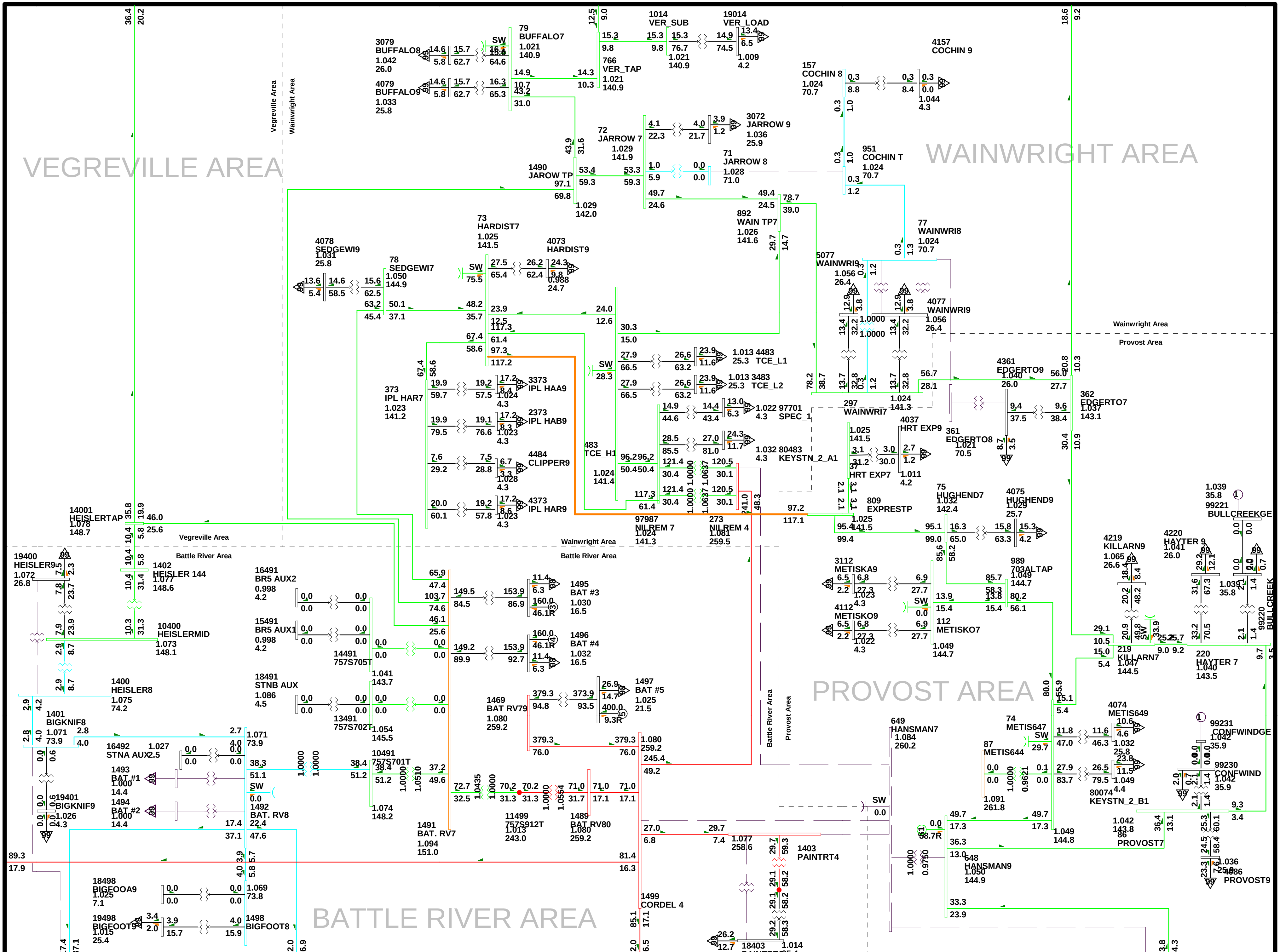
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
FRI, APR 09 2010 10:52
D1-31

2012WP-Alt 2 BR#5 ON-9.a

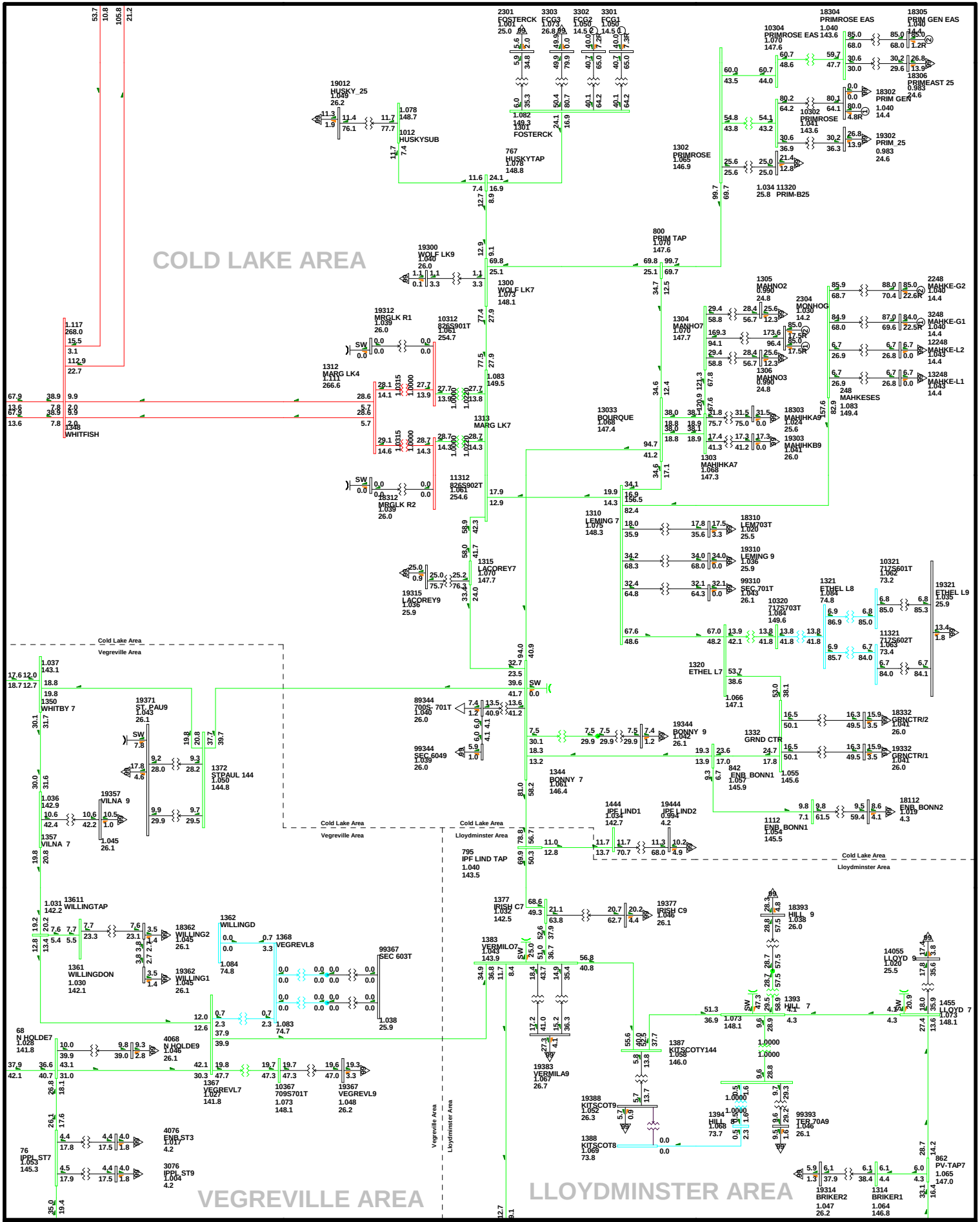
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
FRI, APR 09 2010 10:52
D1-31

2012WP-Alt 2 BR#5 ON-9.b

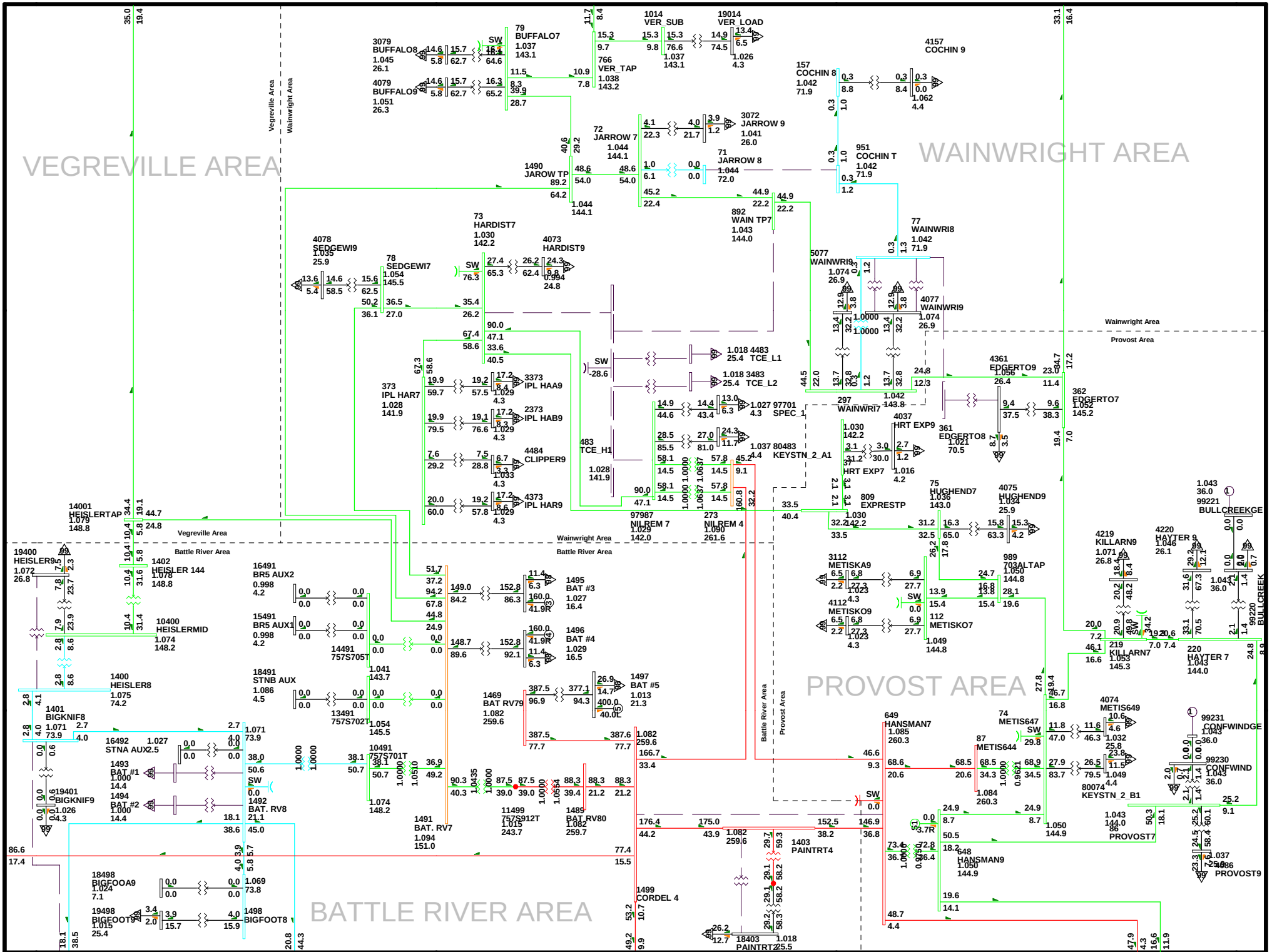
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
FRI, APR 09 2010 10:52
D1-32

2012WP-Alt 2 BR#5 ON-10.a

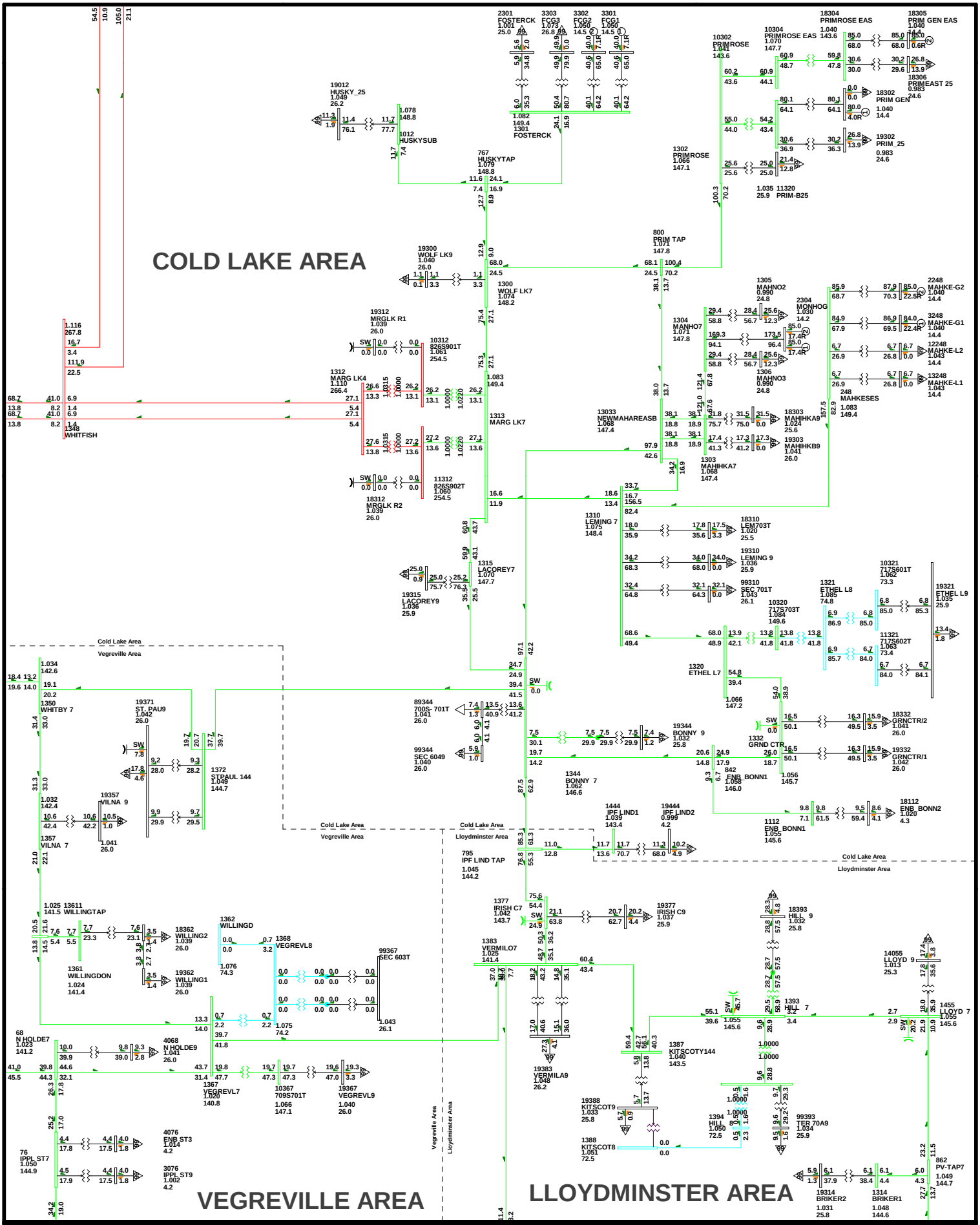
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
FRI, APR 09 2010 10:52
D1-32

2012WP-Alt 2 BR#5 ON-10.b

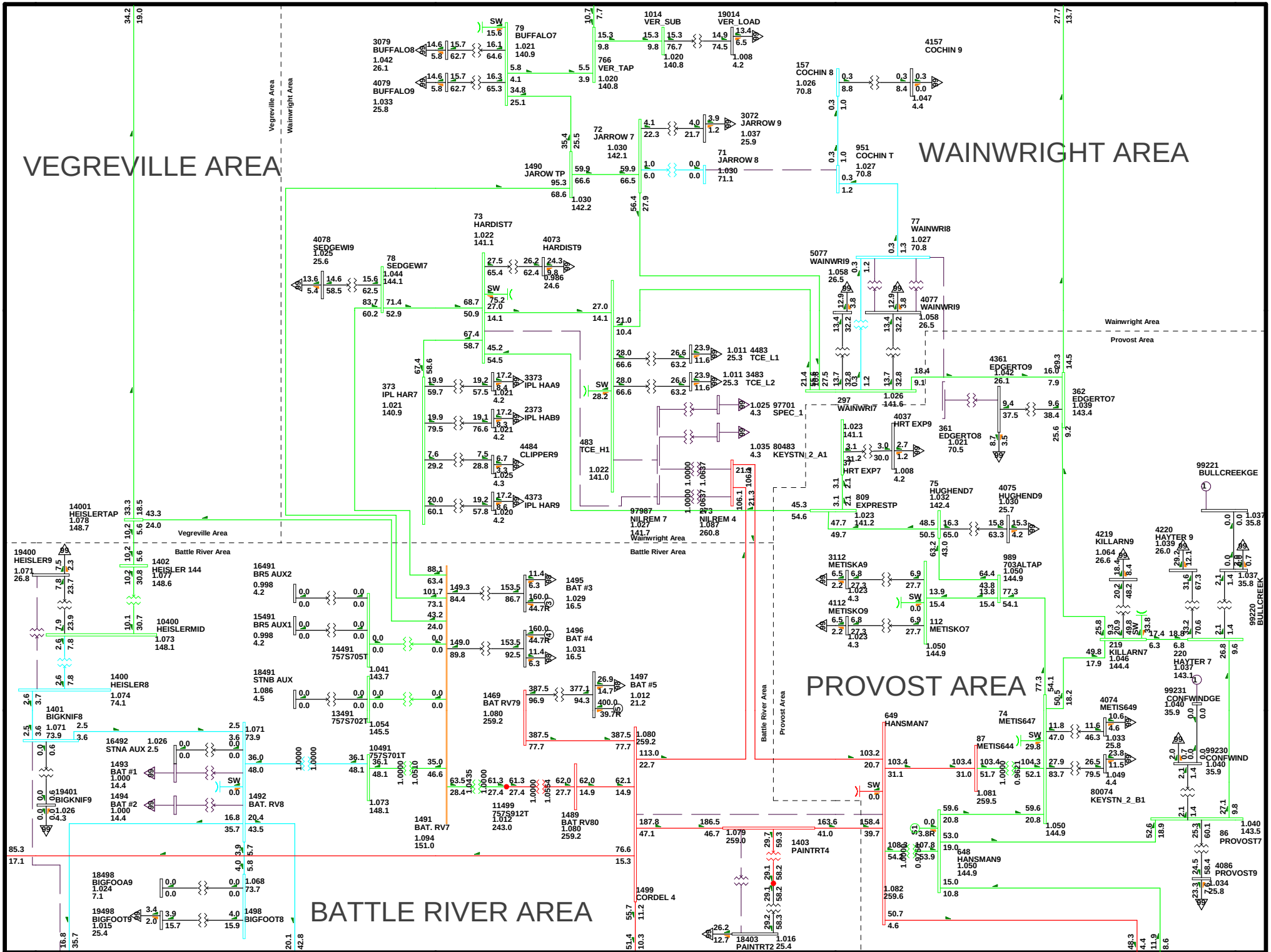
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
FRI, APR 09 2010 11:39

2012WP-Alt 2 BR#5 ON-11.a

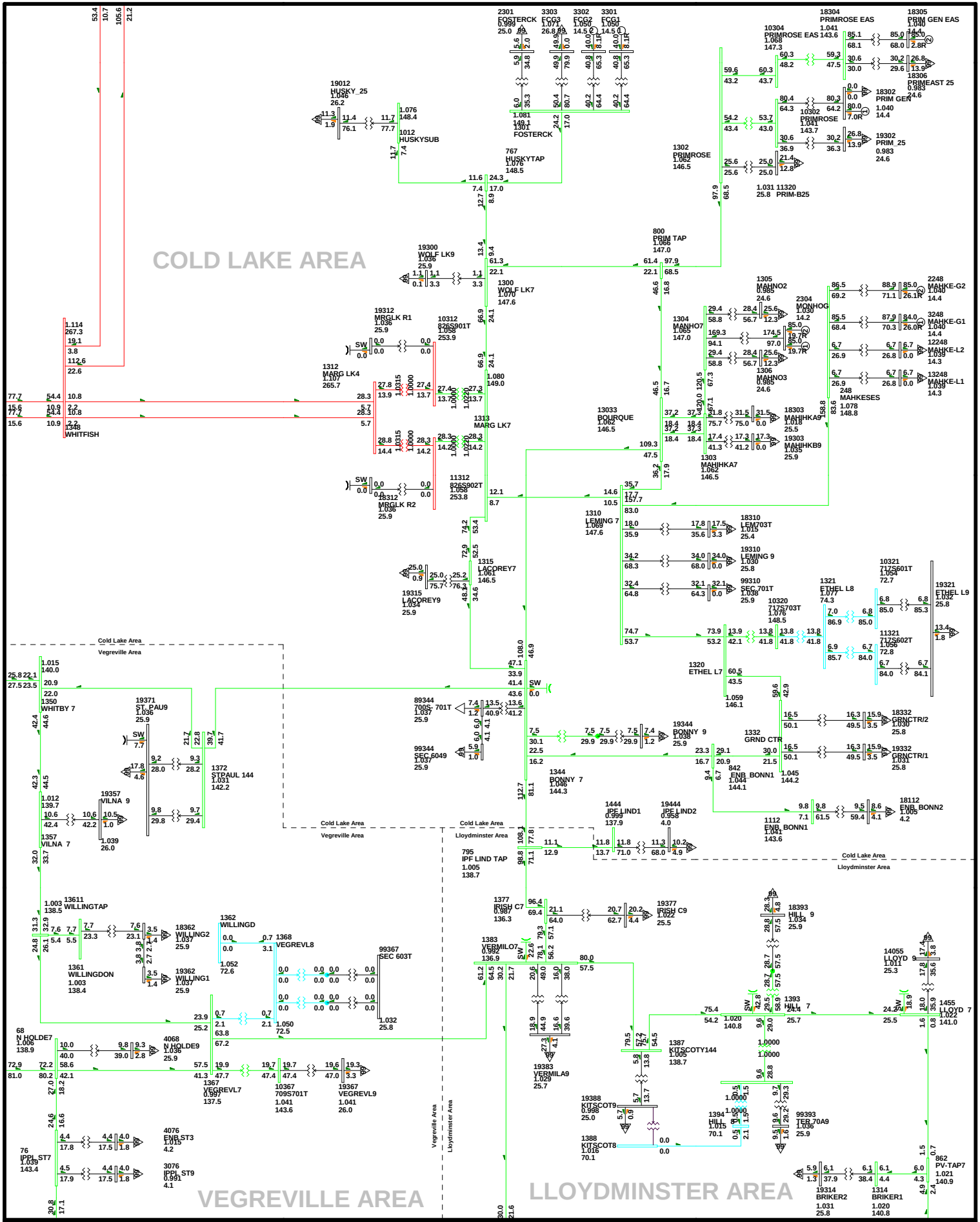
Bus - VOLTAGE (KV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/MVAR
100.0%RATEB
1.100 0.940UV
KV: >0.000<=35.000<=69.000<=138.000<=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
FRI, APR 09 2010 11:39

2012WP-Alt 2 BR#5 ON-11.b

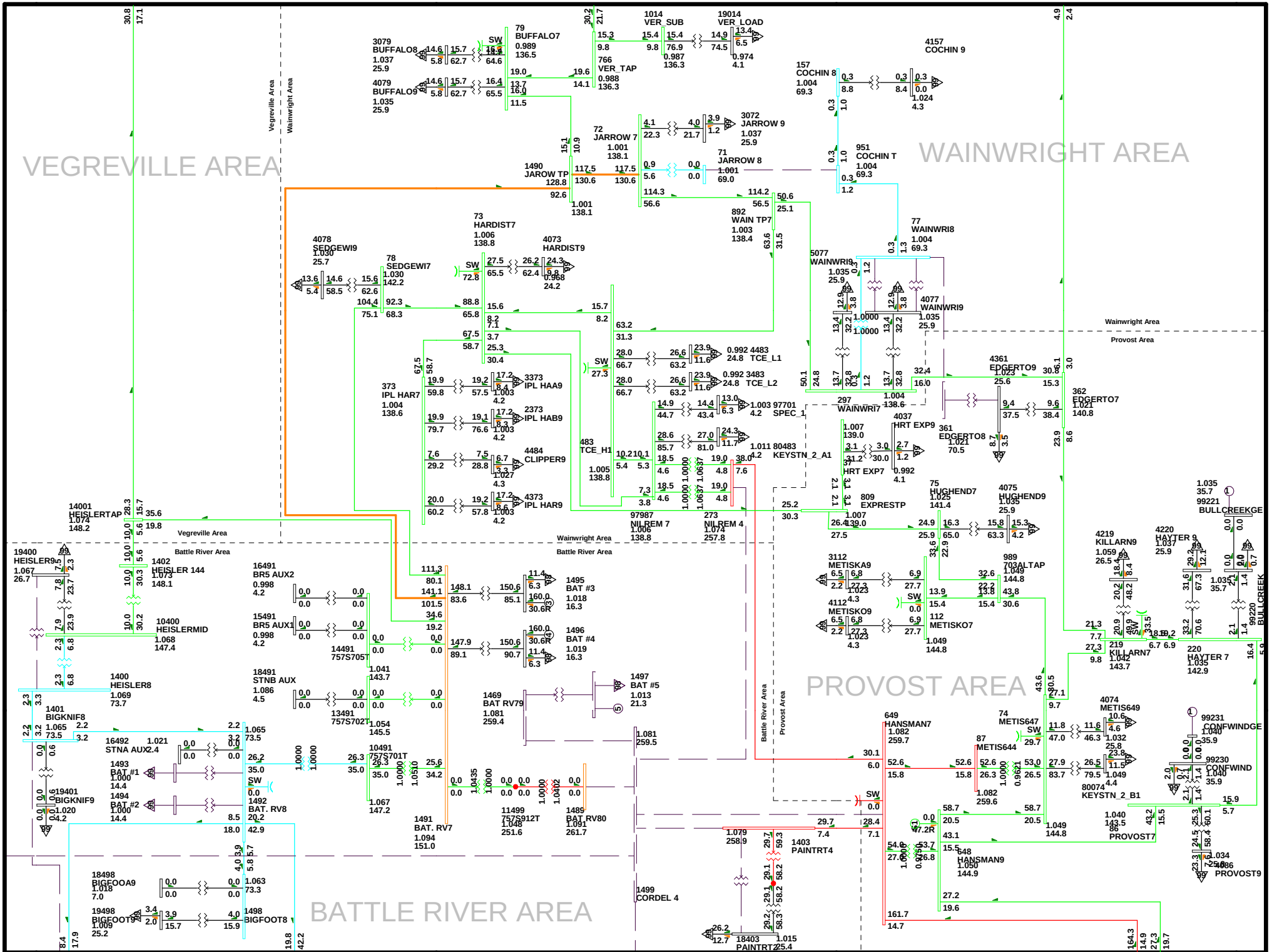
Bus - VOLTAGE (KV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/MVAR
100.0%RATEB
1.090OV 0.920UV
KV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
FRI, APR 09 2010 10:52
D1-34

2012WP-Alt 2 BR#5 ON-12.a

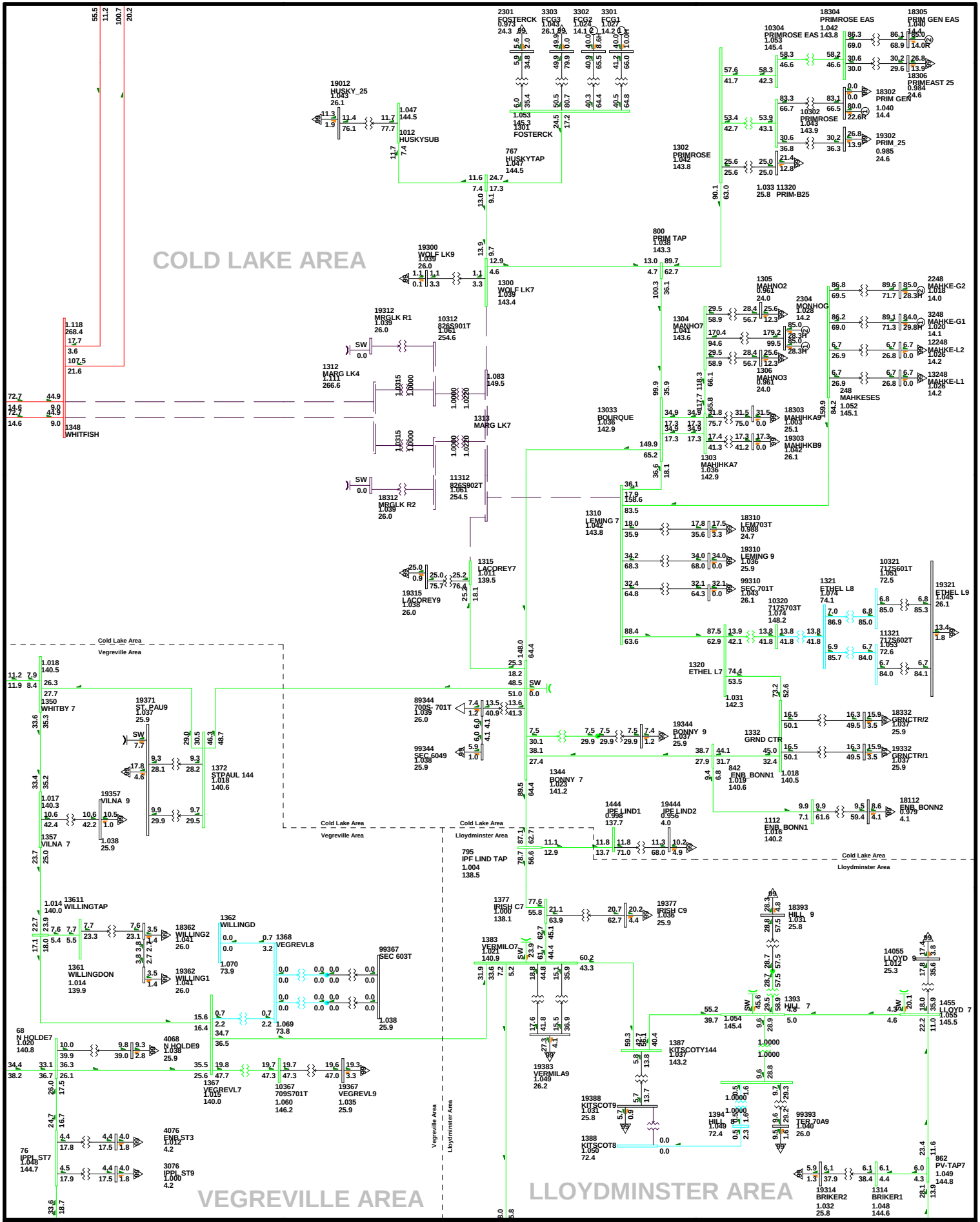
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
FRI, APR 09 2010 10:52
D1-34

2012WP-Alt 2 BR#5 ON-12.b

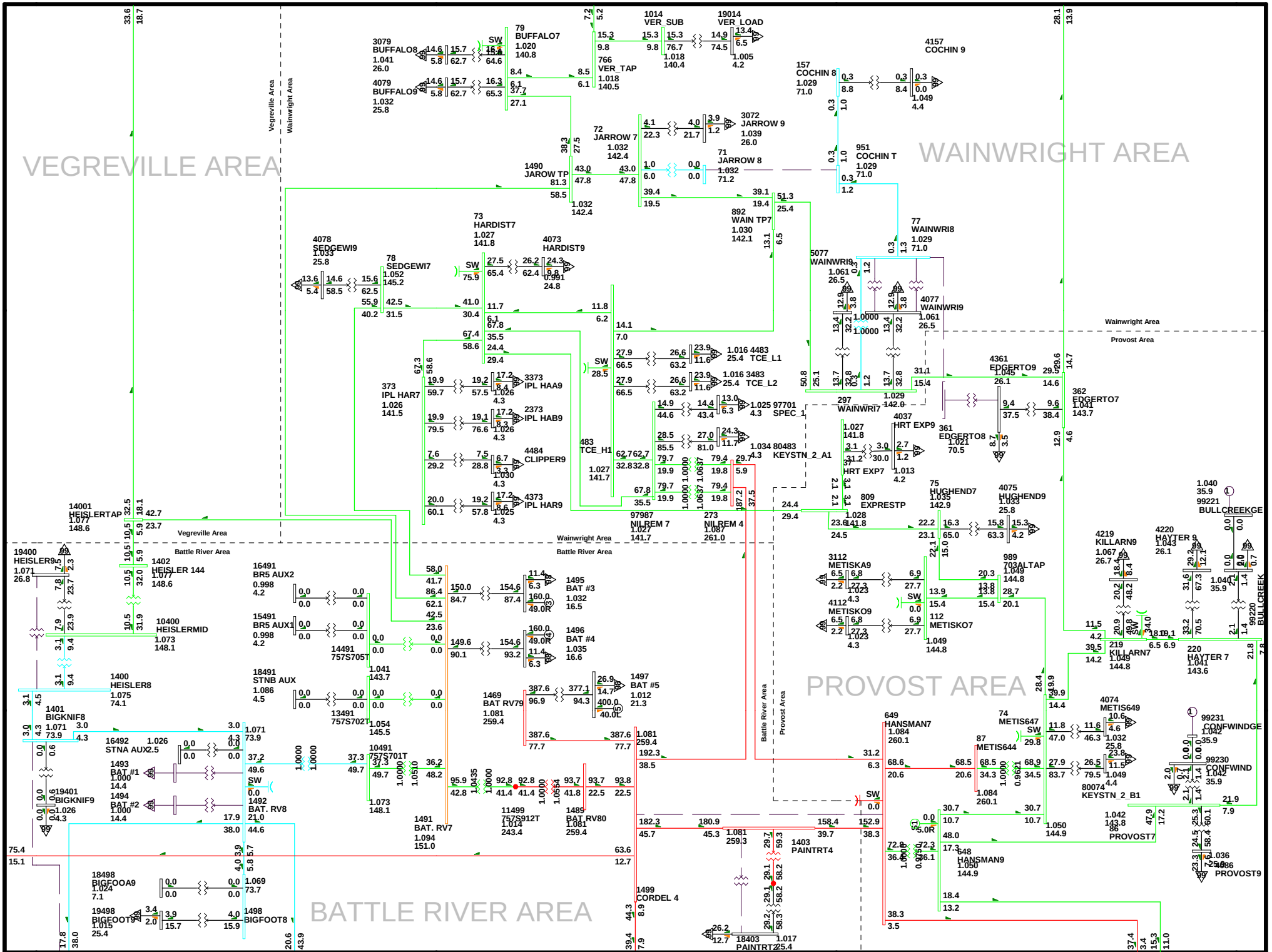
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
FRI, APR 09 2010 10:52
D1-35

2012WP-Alt 2 BR#5 ON-13.a

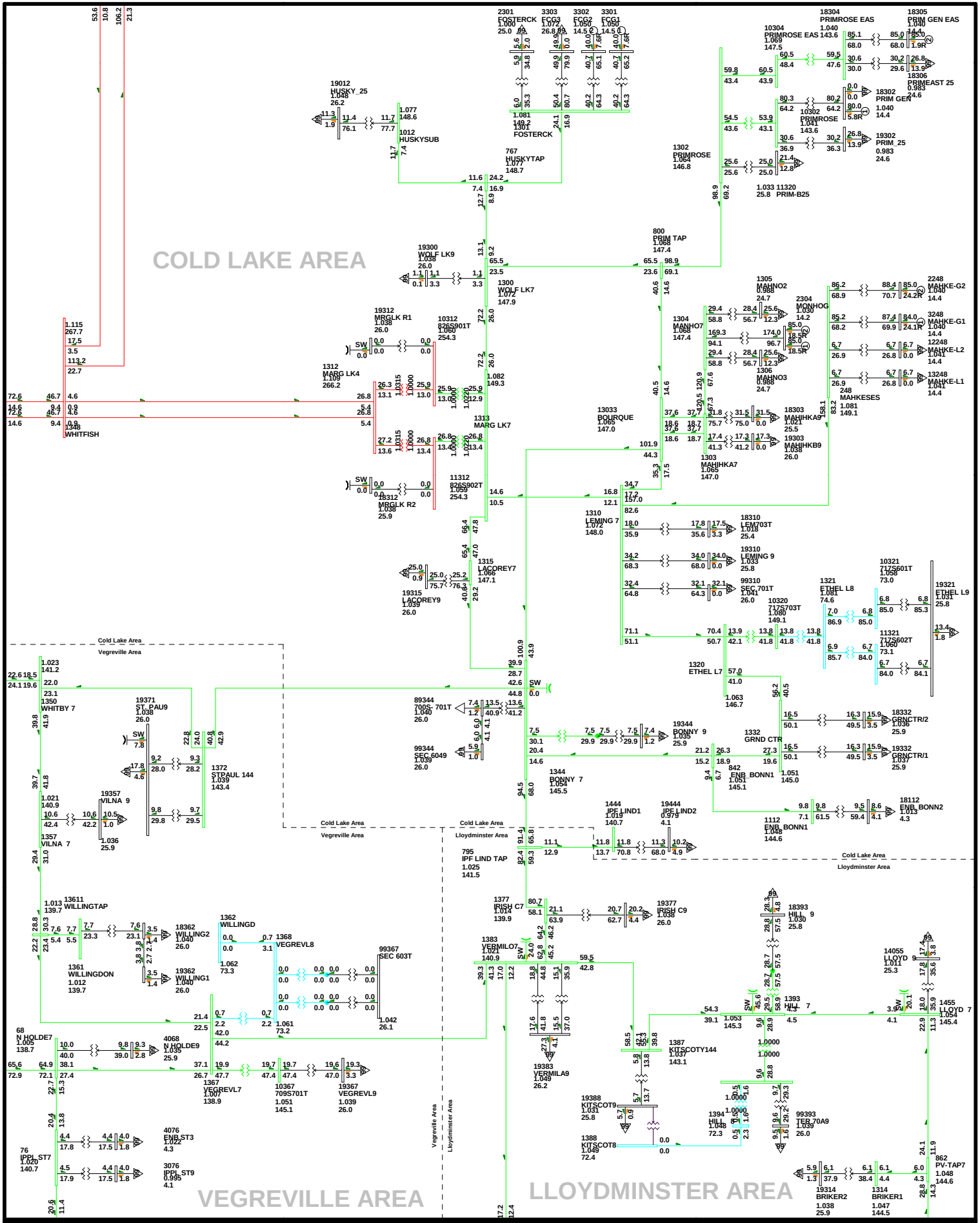
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
FRI, APR 09 2010 10:53
D1-35

2012WP-Alt 2 BR#5 ON-13.b

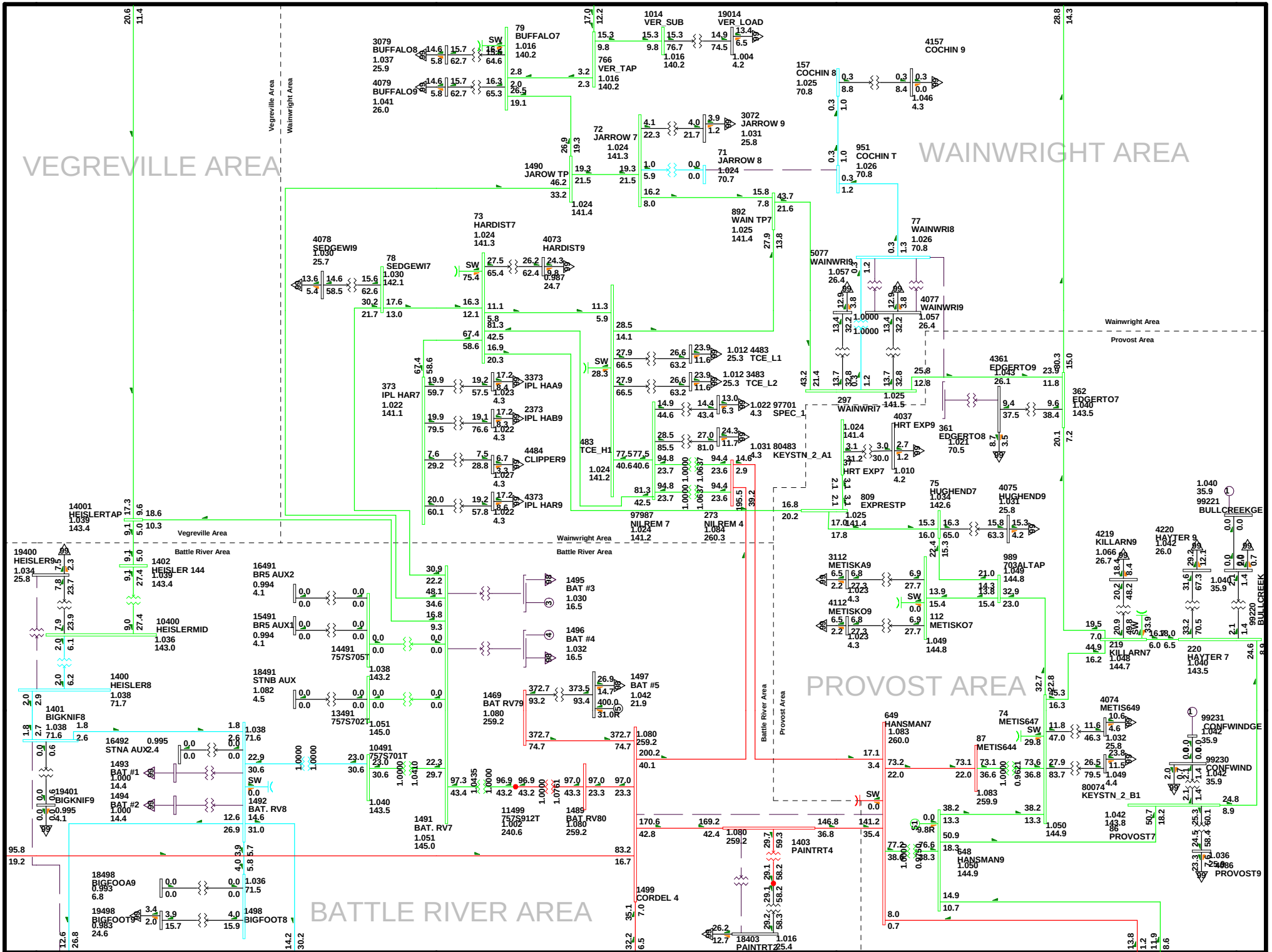
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000

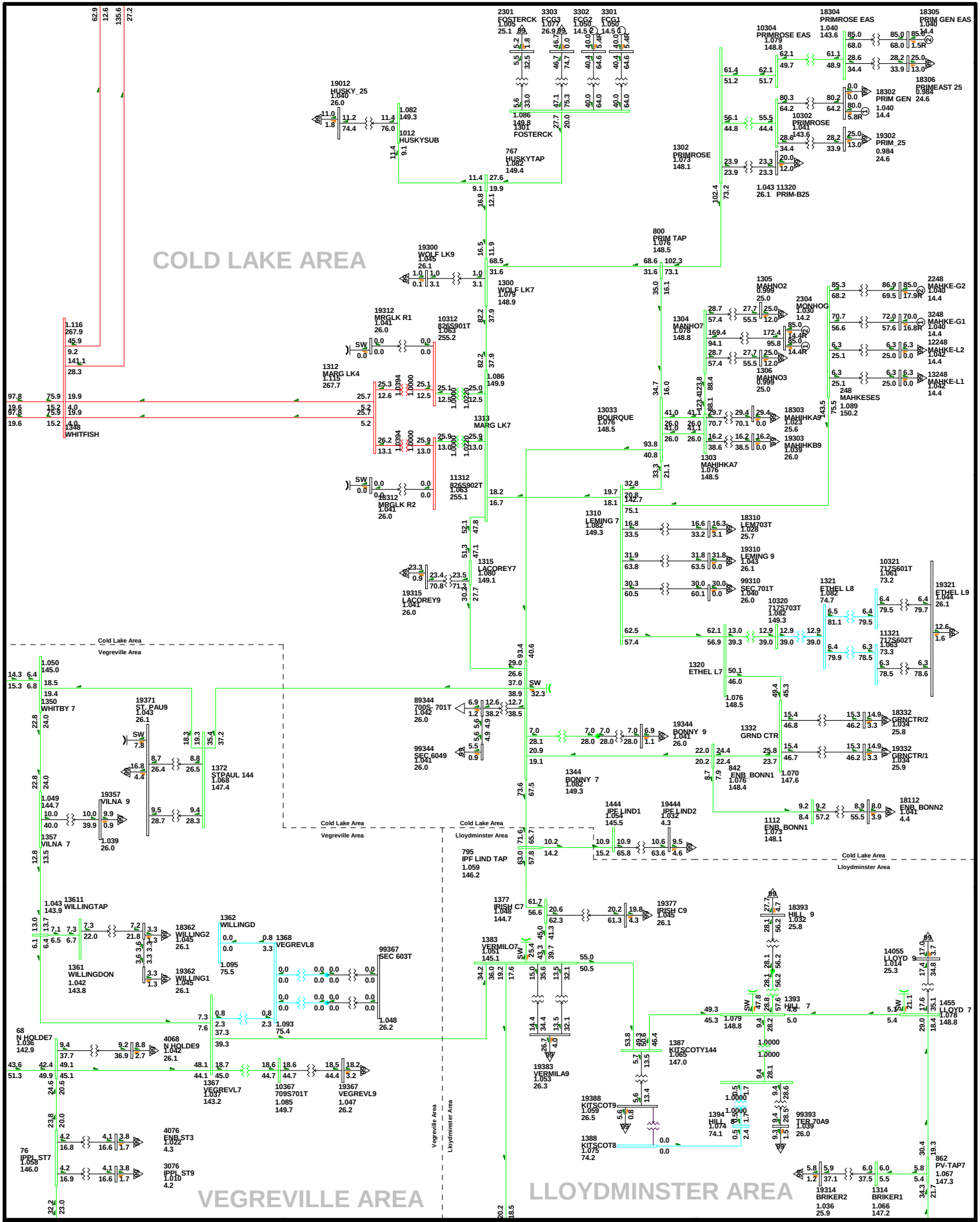


CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
FRI, APR 09 2010 10:53
D1-36

2012WP-Alt 2 BR#5 ON-14.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

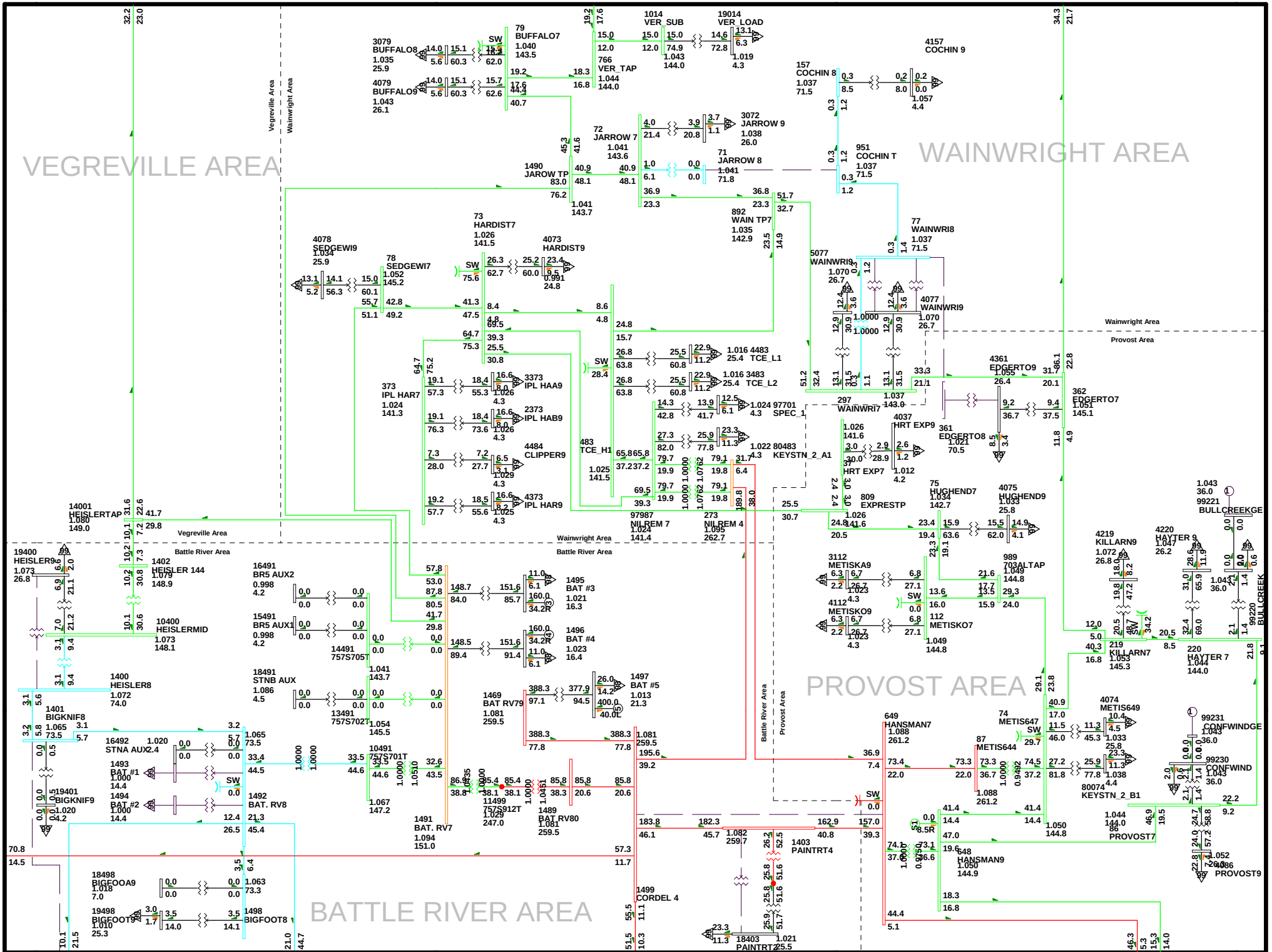

VEGREVILLE AREA
WAINWRIGHT AREA
PROVOST AREA
BATTLE RIVER AREA
Vegreville Area
Wainwright Area
Battle River Area
Provost Area
79 BUFFALO7 1.016 140.2
3079 BUFFALO8 1.037 25.9
4079 BUFFALO9 1.041 26.0
766 VER_TAP 1.016 140.2
1014 VER_SUB
19014 VER_LOAD
4157 COCHIN 9
157 COCHIN 8 1.025 70.8
951 COCHIN T 1.026 70.8
72 JARROW 7 1.024 141.3
3072 JARROW 9 1.031 25.8
71 JARROW 8 1.024 70.7
1490 JAROW TP 46.2 33.2 1.024 141.4
892 WAIN TP7 1.025 141.4
77 WAINWRI8 1.026 70.8
5077 WAINWRI9 1.057 26.4
4077 WAINWRI9 1.057 26.4
297 WAINWRI7 1.024 141.4
4078 SEDGEWI9 1.030 25.7
78 SEDGEWI7 1.030 142.1
73 HARDIST7 1.024 141.3
4073 HARDIST9 0.987 24.7
373 IPL HAR7 1.022 141.1
3373 IPL HAA9 1.023 4.3
2373 IPL HAB9 1.022 4.3
4484 CLIPPER9 1.027 4.3
4373 IPL HAR9 1.022 4.3
483 TCE_H1 1.024 141.2
1.012 4483 25.3 TCE_L1
1.012 3483 25.3 TCE_L2
1.022 97701 4.3 SPEC_1
1.031 80483 4.3 KEYSTN_2_A1
97987 NIL REM 7 1.024 141.2
273 NIL REM 4 1.084 260.3
4037 HRT EXP9 1.024 141.4
HRT EXP7 1.025 141.5
809 EXPRESTP 1.025 141.4
1.010 4.2
4361 EDGERTO9 1.043 26.1
361 EDGERTO8 1.021 70.5
362 EDGERTO7 1.040 143.5
75 HUGHEND7 1.034 142.6
4075 HUGHEND9 1.031 25.8
14001 HEISLERTAP 1.039 143.4
19400 HEISLER9 1.034 25.8
1402 HEISLER 144 1.039 143.4
10400 HEISLERMID 1.036 143.0
1400 HEISLER8 1.038 71.7
1401 BIGKNIF8 1.038 71.6
19401 BIGKNIF9 0.995 24.1
16492 STNA AUX 0.995 2.4
1493 BAT #1 1.000 14.4
1494 BAT #2 1.000 14.4
1492 BAT. RV8 14.6 31.0
16491 BR5 AUX2 0.994 4.1
15491 BR5 AUX1 0.994 4.1
14491 757S705T 1.038 143.2
18491 STNB AUX 1.082 4.5
13491 757S702T 1.051 145.0
10491 757S701T 1.040 143.5
1491 BAT. RV7 1.051 145.0
1495 BAT #3 1.030 16.5
1496 BAT #4 1.032 16.5
1497 BAT #5 1.042 21.9
1469 BAT RV79 1.080 259.2
11499 757S912T 1.002 240.6
1489 BAT RV80 1.080 259.2
1499 CORDEL 4 1.080 259.2
1403 PAINTRT4 1.080 259.2
18403 PAINTRT2 1.016 25.4
649 HANSMAN7 1.083 260.0
87 METIS644 1.083 259.9
74 METIS647 1.032 25.8
4074 METIS649 1.042 143.8
80074 KEYSTN_2_B1 1.042 143.8
648 HANSMAN9 1.050 144.9
PROVOST7 1.050 144.9
3112 METISKA9 1.023 4.3
4112 METISKO9 1.023 4.3
112 METISKO7 1.049 144.8
989 703ALTAP 1.049 144.8
4219 KILLARN9 1.066 26.7
219 KILLARN7 1.048 144.7
4220 HAYTER 9 1.042 26.0
220 HAYTER 7 1.040 143.5
99221 BULLCREEKGE 1.040 35.9
99220 BULLCREEK 1.040 35.9
99231 CONFWINDGE 1.042 35.9
99230 CONFWIND 1.042 35.9
PROVOST9 1.036 25.8
18498 BIGFOOA9 0.993 6.8
19498 BIGFOOT9 0.983 24.6
1498 BIGFOOT8 1.036 71.5
CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
FRI, APR 09 2010 10:53
D1-36
2012WP-Alt 2 BR#5 ON-14.b
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000

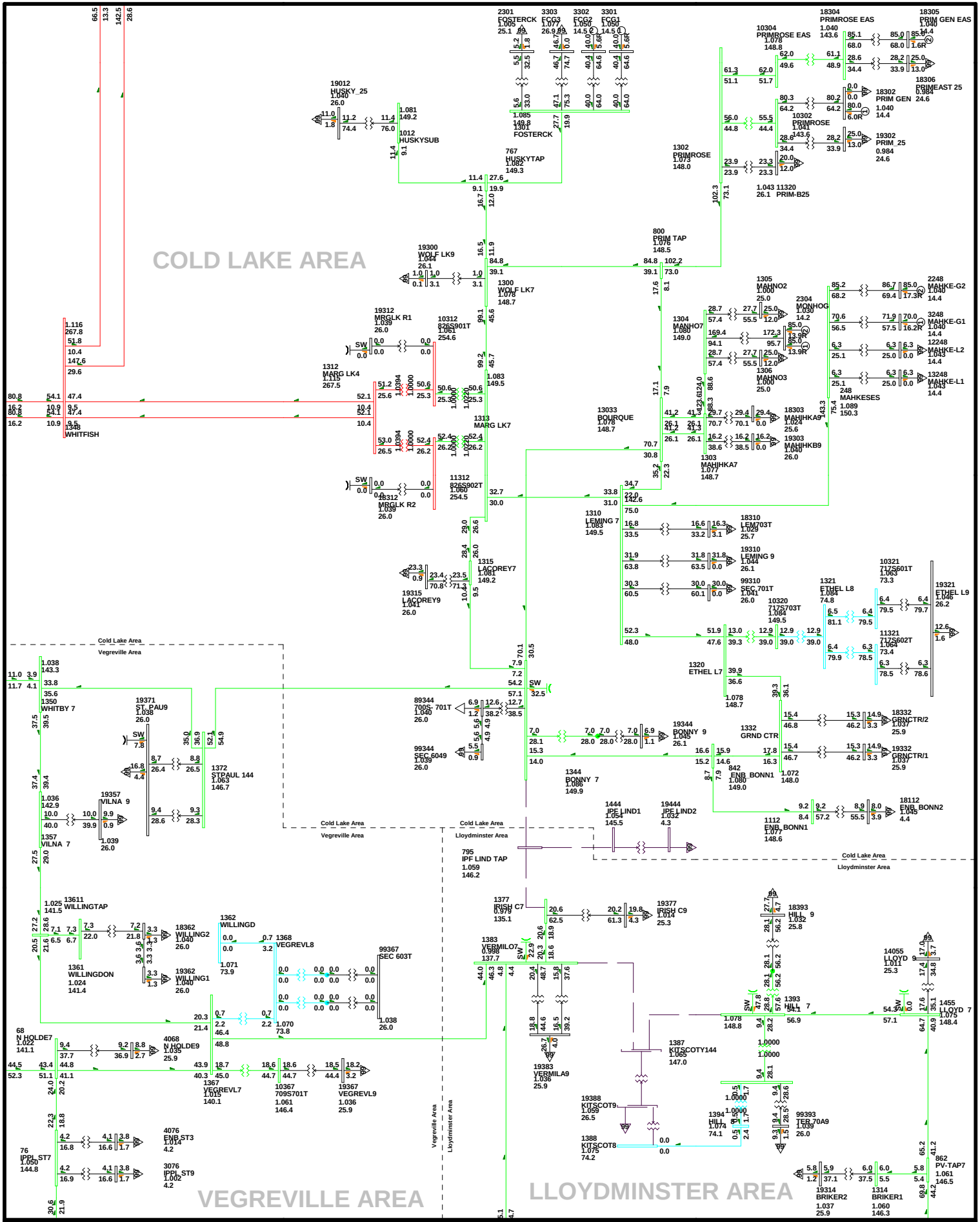


CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 09 2010 10:56
D1-00

2012SP-Alt 2 BR#5 ON-1.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

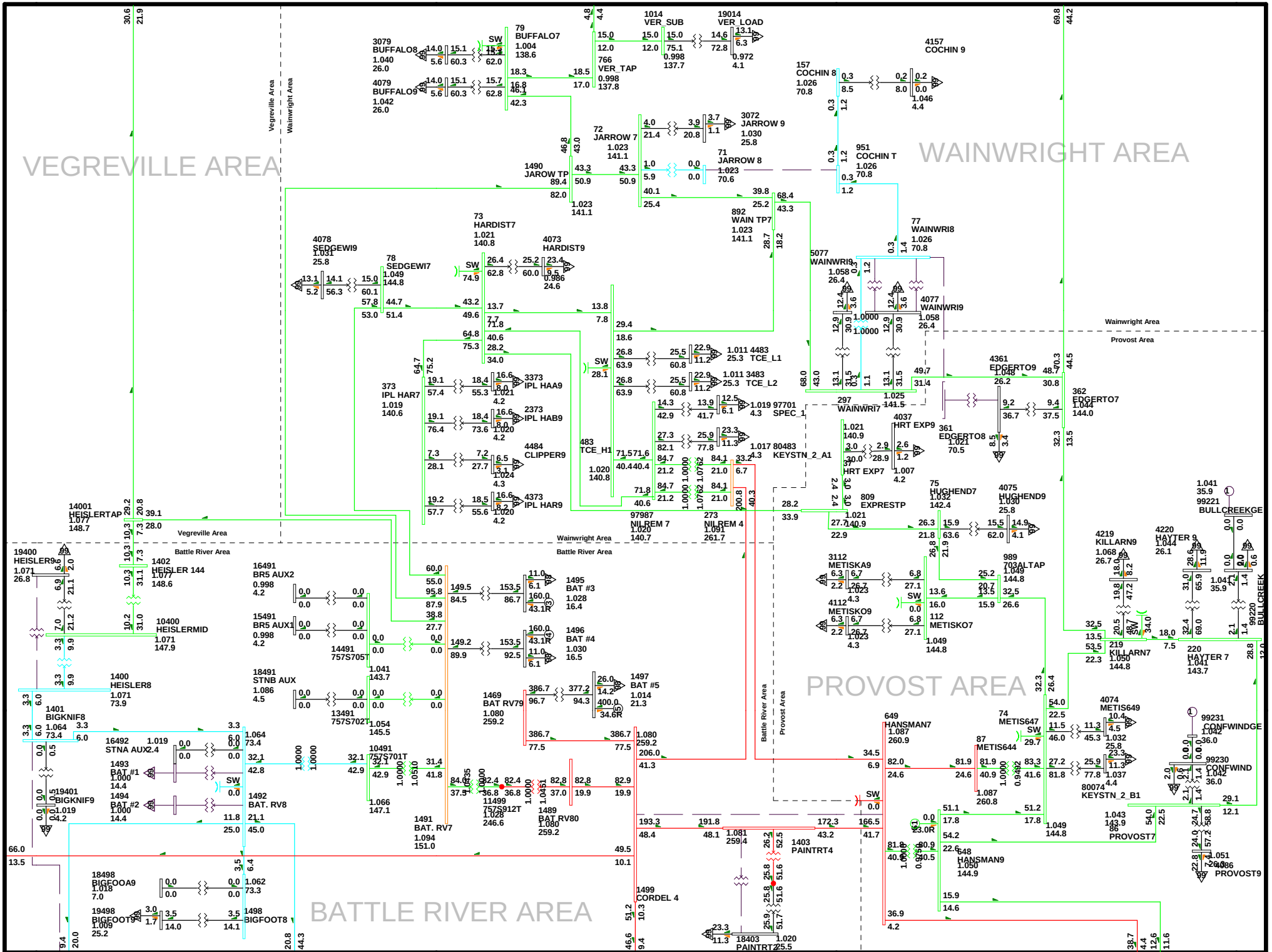

VEGREVILLE AREA
WAINWRIGHT AREA
PROVOST AREA
BATTLE RIVER AREA
Vegreville Area
Wainwright Area
Battle River Area
Provost Area
3079 BUFFALO8
4079 BUFFALO9
79 BUFFALO7
766 VER_TAP
1014 VER_SUB
19014 VER_LOAD
4157 COCHIN 9
157 COCHIN 8
951 COCHIN T
72 JARROW 7
3072 JARROW 9
71 JARROW 8
1490 JAROW TP
892 WAIN TP7
77 WAINWRI8
5077 WAINWRI9
4077 WAINWRI9
297 WAINWRI7
4078 SEDGEWI9
78 SEDGEWI7
73 HARDIST7
4073 HARDIST9
373 IPL HAR7
3373 IPL HAA9
2373 IPL HAB9
4484 CLIPPER9
4373 IPL HAR9
483 TCE_H1
1016 4483 TCE_L1
1016 3483 TCE_L2
97701 SPEC_1
80483 KEYSTN_2_A1
4037 HRT EXP9
HRT EXP7
361 EDGERTO8
4361 EDGERTO9
362 EDGERTO7
809 EXPRESTP
75 HUGHEND7
4075 HUGHEND9
14001 HEISLERTAP
1402 HEISLER 144
10400 HEISLERMID
19400 HEISLER9
1400 HEISLER8
1401 BIGKNIF8
19401 BIGKNIF9
16492 STNA AUX
1493 BAT #1
1494 BAT #2
1492 BAT. RV8
18498 BIGFOOA9
19498 BIGFOOT9
1498 BIGFOOT8
16491 BR5 AUX2
15491 BR5 AUX1
14491 757S705T
18491 STNB AUX
13491 757S702T
10491 757S701T
1491 BAT. RV7
1495 BAT #3
1496 BAT #4
1497 BAT #5
1469 BAT RV79
11499 757S912T
1489 BAT RV80
1499 CORDEL 4
18403 PAINTRT2
1403 PAINTRT4
649 HANSMAN7
648 HANSMAN9
74 METIS647
87 METIS644
4074 METIS649
80074 KEYSTN_2_B1
PROVOST7
PROVOST9
3112 METISKA9
4112 METISKO9
112 METISKO7
989 703ALTAP
4219 KILLARN9
219 KILLARN7
4220 HAYTER 9
220 HAYTER 7
99221 BULLCREEKGE
99220 BULLCREEK
99231 CONFWINDGE
99230 CONFWIND
97987 NIL REM 7
273 NIL REM 4
CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 09 2010 10:56
D1-00
2012SP-Alt 2 BR#5 ON-1.b
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATE A
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

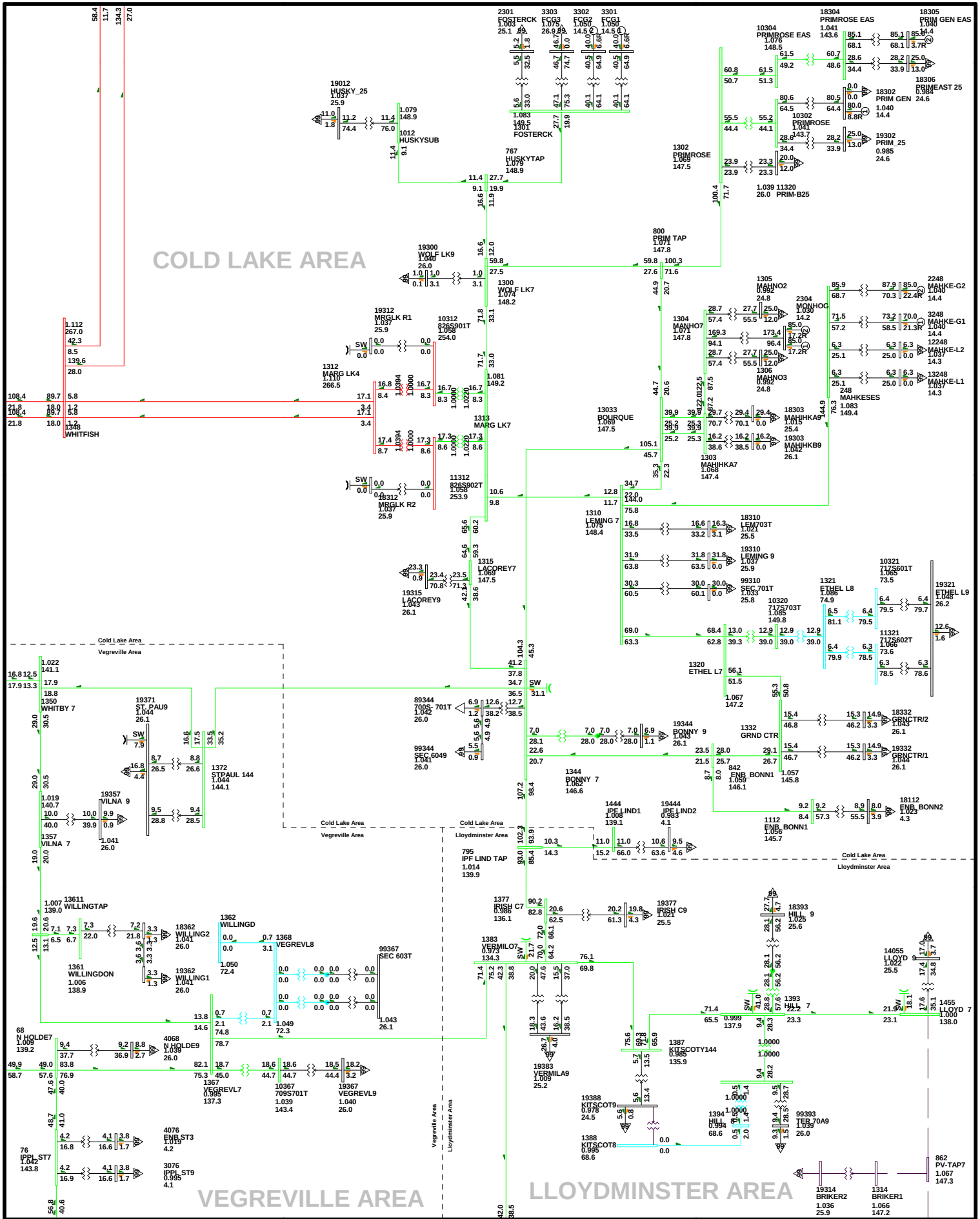


CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 09 2010 10:57
D1-23

2012SP-Alt 2 BR#5 ON-2.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

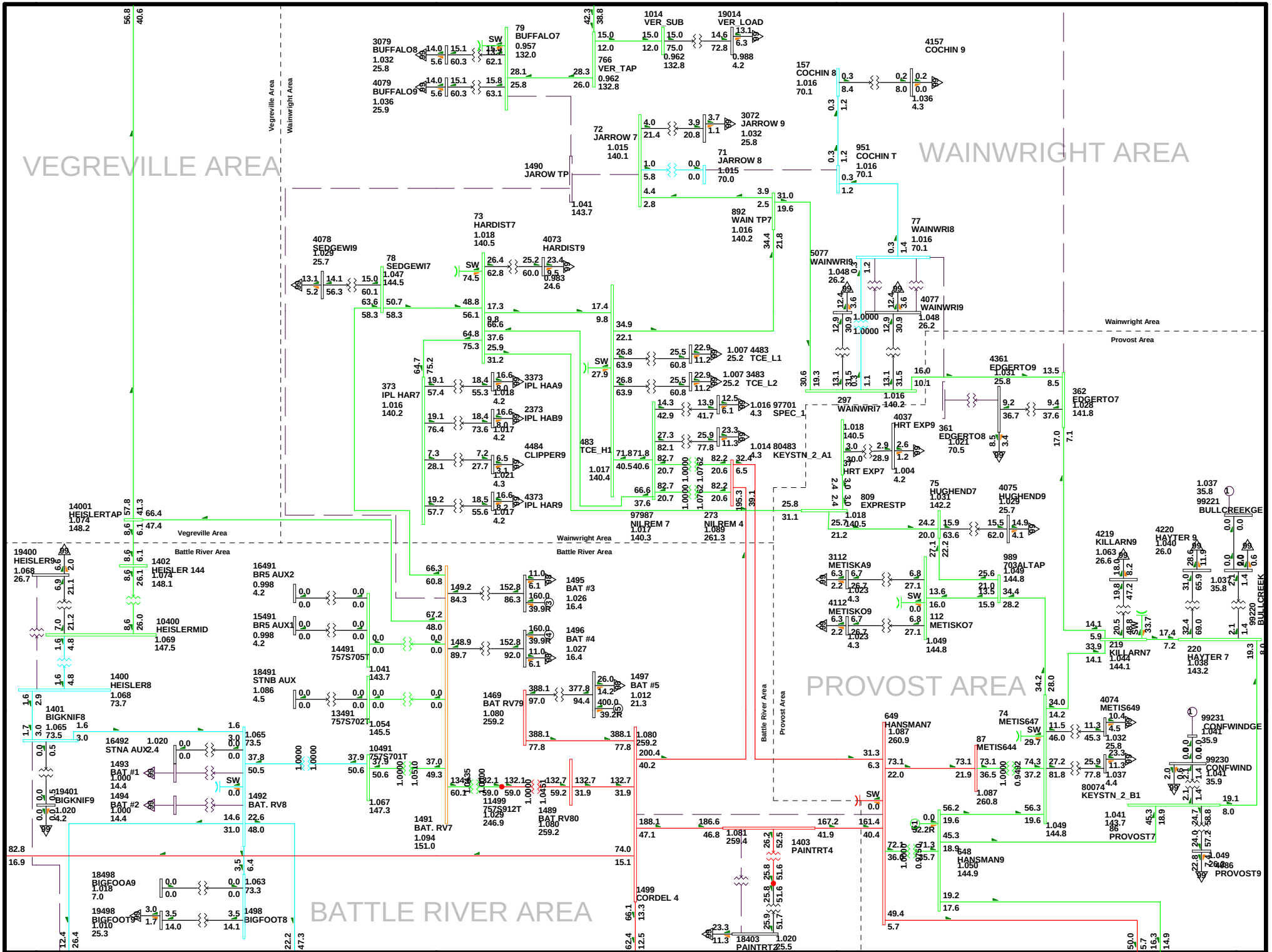

VEGREVILLE AREA
WAINWRIGHT AREA
PROVOST AREA
BATTLE RIVER AREA
Vegreville Area
Wainwright Area
Battle River Area
Provost Area
3079 BUFFALO8 1.040 26.0
4079 BUFFALO9 1.042 26.0
79 BUFFALO7 1.004 138.6
1014 VER_SUB
19014 VER_LOAD
766 VER_TAP 0.998 137.8
4157 COCHIN 9
157 COCHIN 8 1.026 70.8
951 COCHIN T 1.026 70.8
1.046 4.4
72 JARROW 7 1.023 141.1
3072 JARROW 9 1.030 25.8
71 JARROW 8 1.023 70.6
1490 JAROW TP 89.4 82.0 1.023 141.1
892 WAIN TP7 1.023 141.1
73 HARDIST7 1.021 140.8
4073 HARDIST9 0.986 24.6
4078 SEDGEWI9 1.031 25.8
78 SEDGEWI7 1.049 144.8
77 WAINWRI8 1.026 70.8
5077 WAINWRI9 1.058 26.4
4077 WAINWRI9 1.058 26.4
297 WAINWRI7 1.025 141.5
4361 EDGERTO9 1.048 26.2
362 EDGERTO7 1.044 144.0
361 EDGERTO8 1.021 70.5
373 IPL HAR7 1.019 140.6
3373 IPL HAA9 1.021 4.2
2373 IPL HAB9 1.020 4.2
4484 CLIPPER9 1.024 4.3
4373 IPL HAR9 1.020 4.2
1011 4483 TCE_L1 25.3
1011 3483 TCE_L2 25.3
483 TCE_H1 1.020 140.8
1019 97701 SPEC_1 4.3
1017 80483 KEYSTN_2_A1 4.3
4037 HRT EXP9
HRT EXP7 1.007 4.2
809 EXPRESTP 1.021 140.9
75 HUGHEND7 1.032 142.4
4075 HUGHEND9 1.030 25.8
97987 NILREM 7 1.020 140.7
273 NILREM 4 1.091 261.7
14001 HEISLERTAP 1.077 148.7
1402 HEISLER 144 1.077 148.6
19400 HEISLER9 1.071 26.8
10400 HEISLERMID 1.071 147.9
1400 HEISLER8 1.071 73.9
1401 BIGKNIF8 1.064 73.4
19401 BIGKNIF9 1.019 4.2
16491 BR5 AUX2 0.998 4.2
15491 BR5 AUX1 0.998 4.2
14491 757S705T 1.041 143.7
18491 STNB AUX 1.086 4.5
13491 757S702T 1.054 145.5
16492 STNA AUX 1.019 2.4
10491 757S701T 1.066 147.1
1493 BAT #1 1.000 14.4
1494 BAT #2 1.000 14.4
1492 BAT. RV8 21.1 45.0
1491 BAT. RV7 1.094 151.0
1495 BAT #3 1.028 16.4
1496 BAT #4 1.030 16.5
1497 BAT #5 1.014 21.3
1469 BAT RV79 1.080 259.2
11499 757S912T 1.028 246.6
1489 BAT RV80 1.080 259.2
1499 CORDEL 4
18403 PAINTRT2 1.020 25.5
1403 PAINTRT4 1.081 259.4
649 HANSMAN7 1.087 260.9
648 HANSMAN9 1.050 144.9
74 METIS647
87 METIS644 1.087 260.8
3112 METISKA9 1.023 4.3
4112 METISKO9 1.023 4.3
112 METISKO7 1.049 144.8
989 703ALTAP 1.049 144.8
4074 METIS649 1.032 25.8
80074 KEYSTN_2_B1 1.037 4.4
PROVOST7 1.049 144.8
PROVOST9 1.051 26.6
4219 KILLARN9 1.068 26.7
219 KILLARN7 1.050 144.8
4220 HAYTER 9 1.044 26.1
220 HAYTER 7 1.041 143.7
99221 BULLCREEKGE 1.041 35.9
99220 BULLCREEK 1.041 35.9
99231 CONFWINDGE 1.042 36.0
99230 CONFWIND 1.042 36.0
18498 BIGFOOA9 1.018 7.0
19498 BIGFOOT9 1.009 25.2
1498 BIGFOOT8 1.062 73.3
CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 09 2010 10:57
D1-23
2012SP-Alt 2 BR#5 ON-2.b
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATE
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 09 2010 10:57
D1-24

2012SP-Alt 2 BR#5 ON-3.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

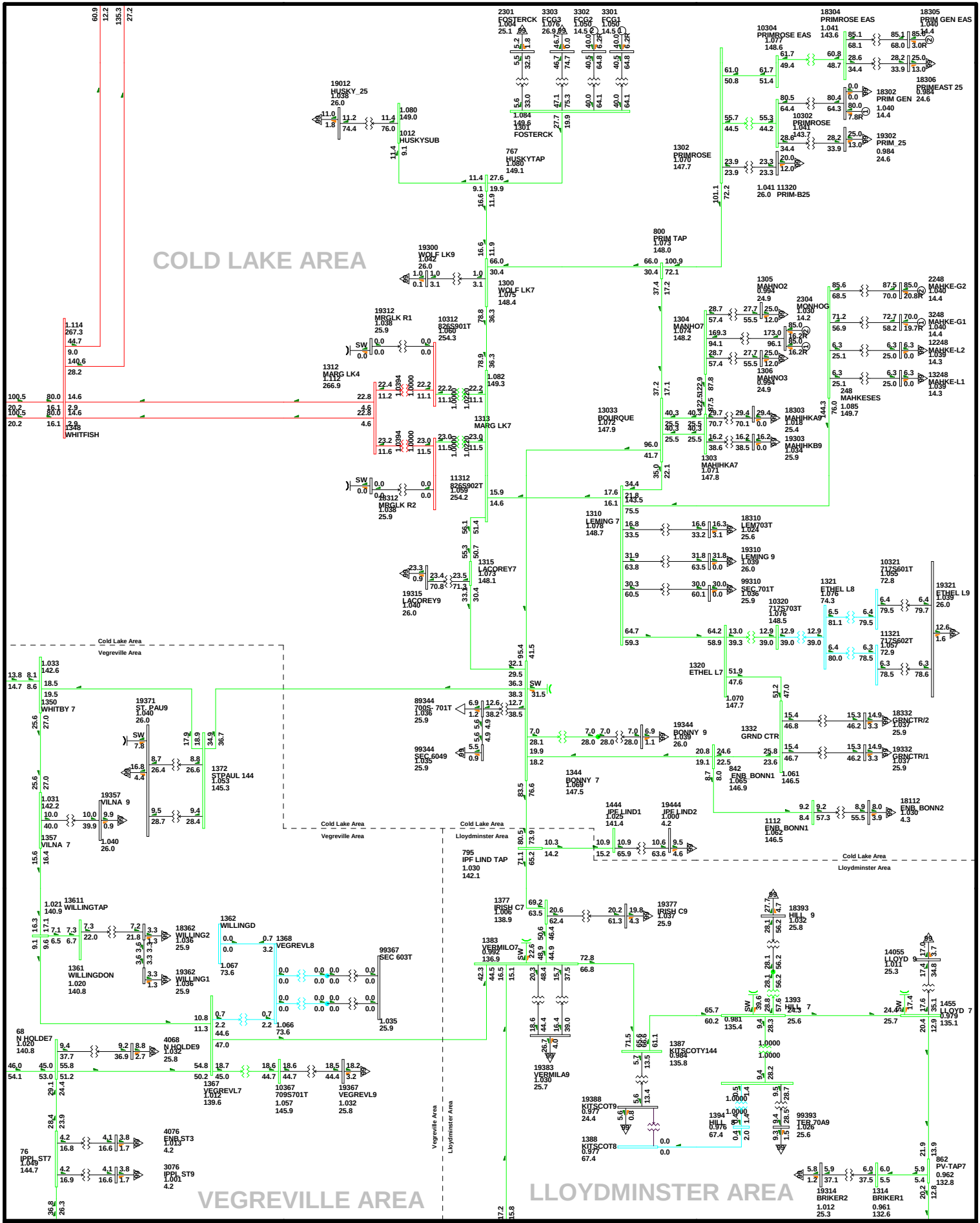


CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 09 2010 10:57
D1-24

2012SP-Alt 2 BR#5 ON-3.b

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar

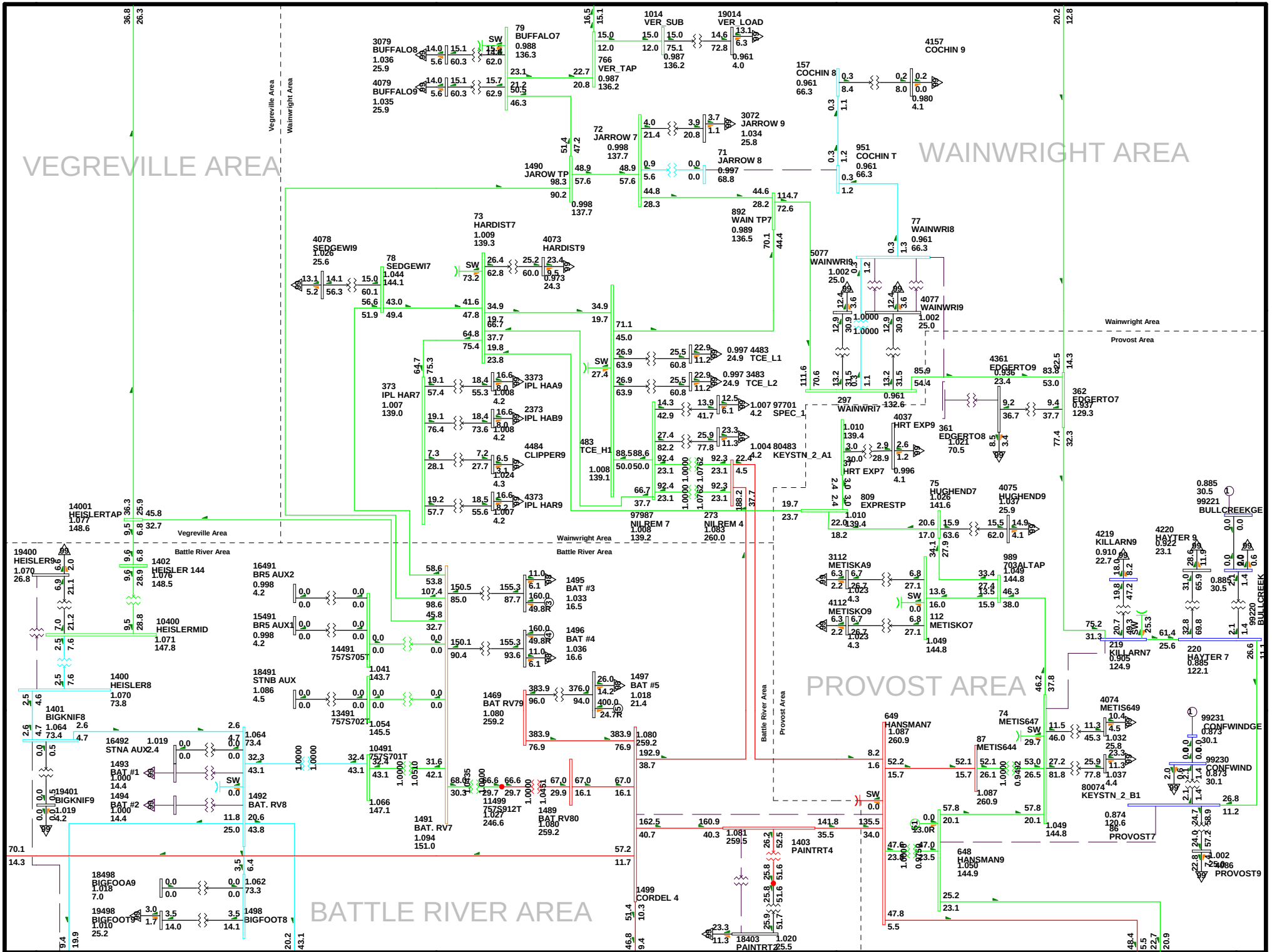
100.0%RATE A
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 09 2010 12:30
D1-25

2012SP-Alt 2 BR#5 ON-4.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

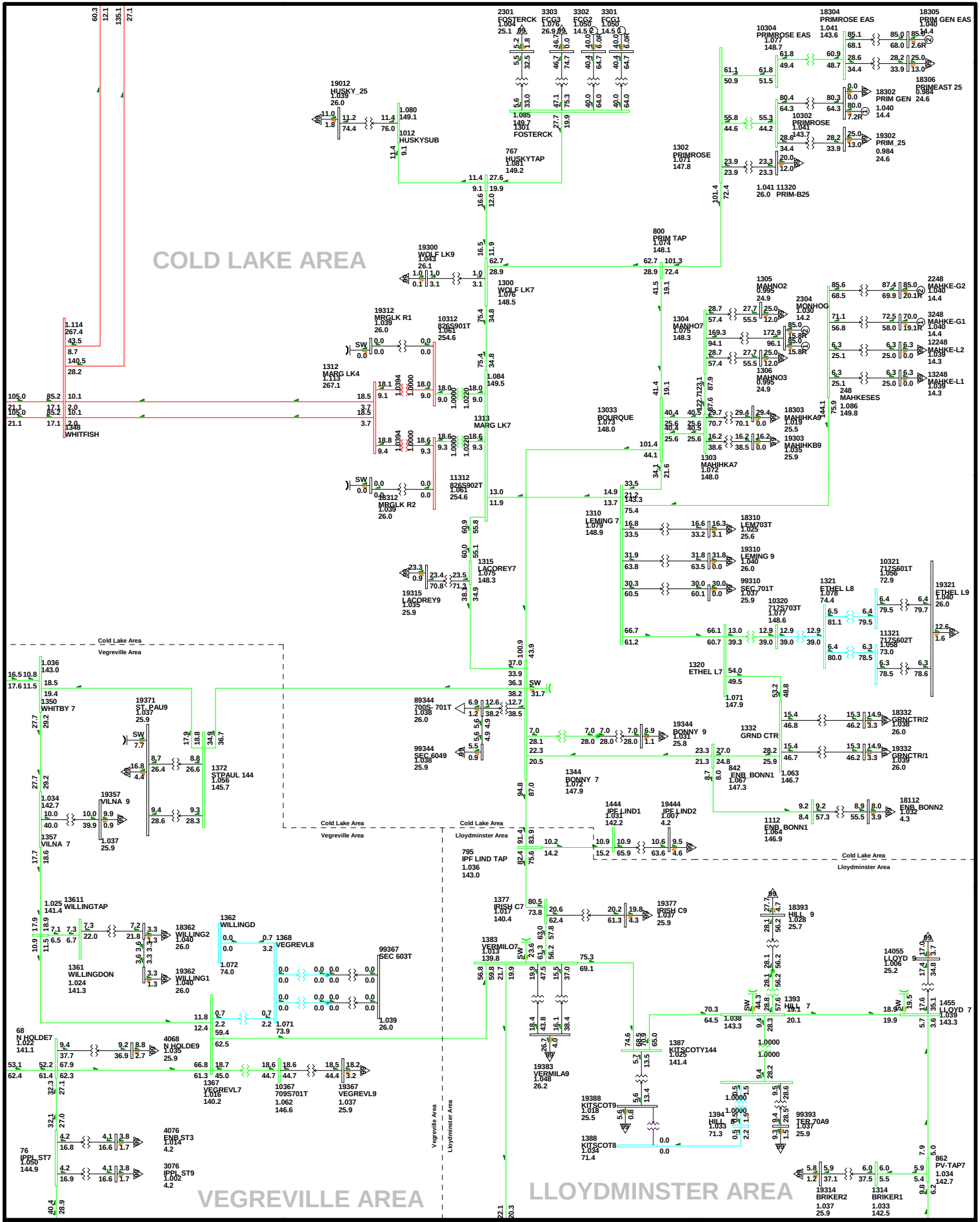


CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 09 2010 12:30
D1-25

2012SP-Alt 2 BR#5 ON-4.b

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar

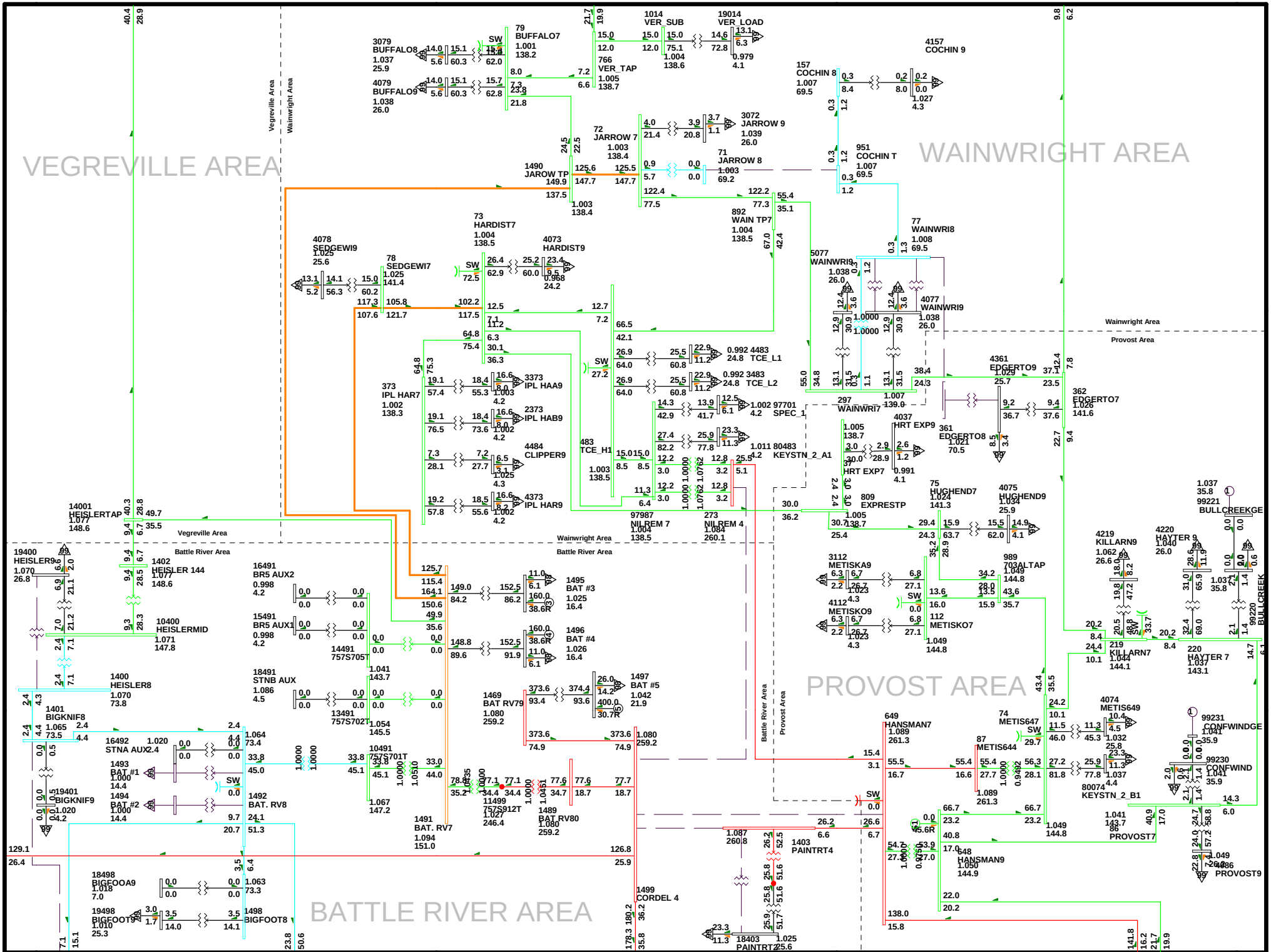
100.0%RATE A
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

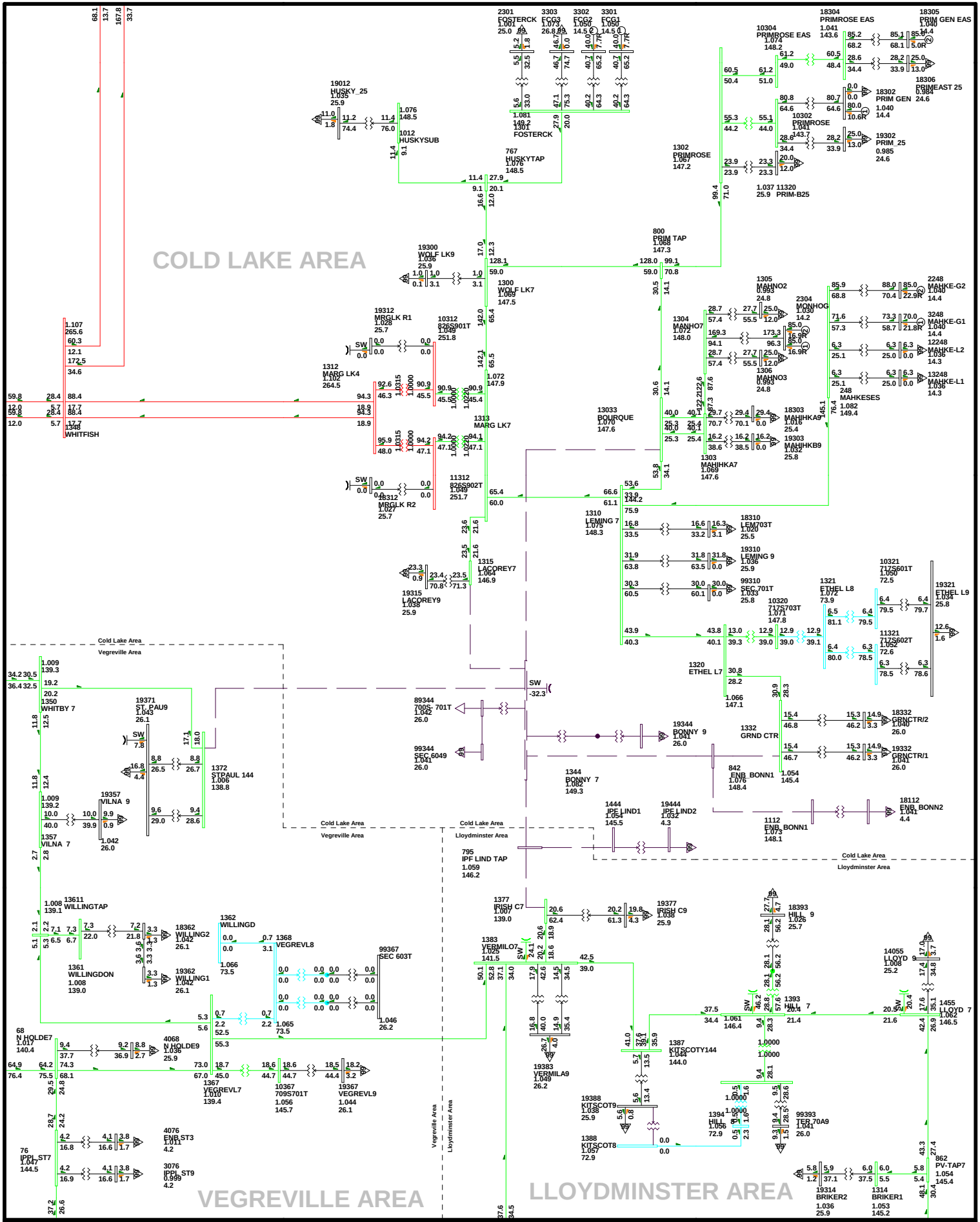


CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 09 2010 10:57
D1-26

2012SP-Alt 2 BR#5 ON-5.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

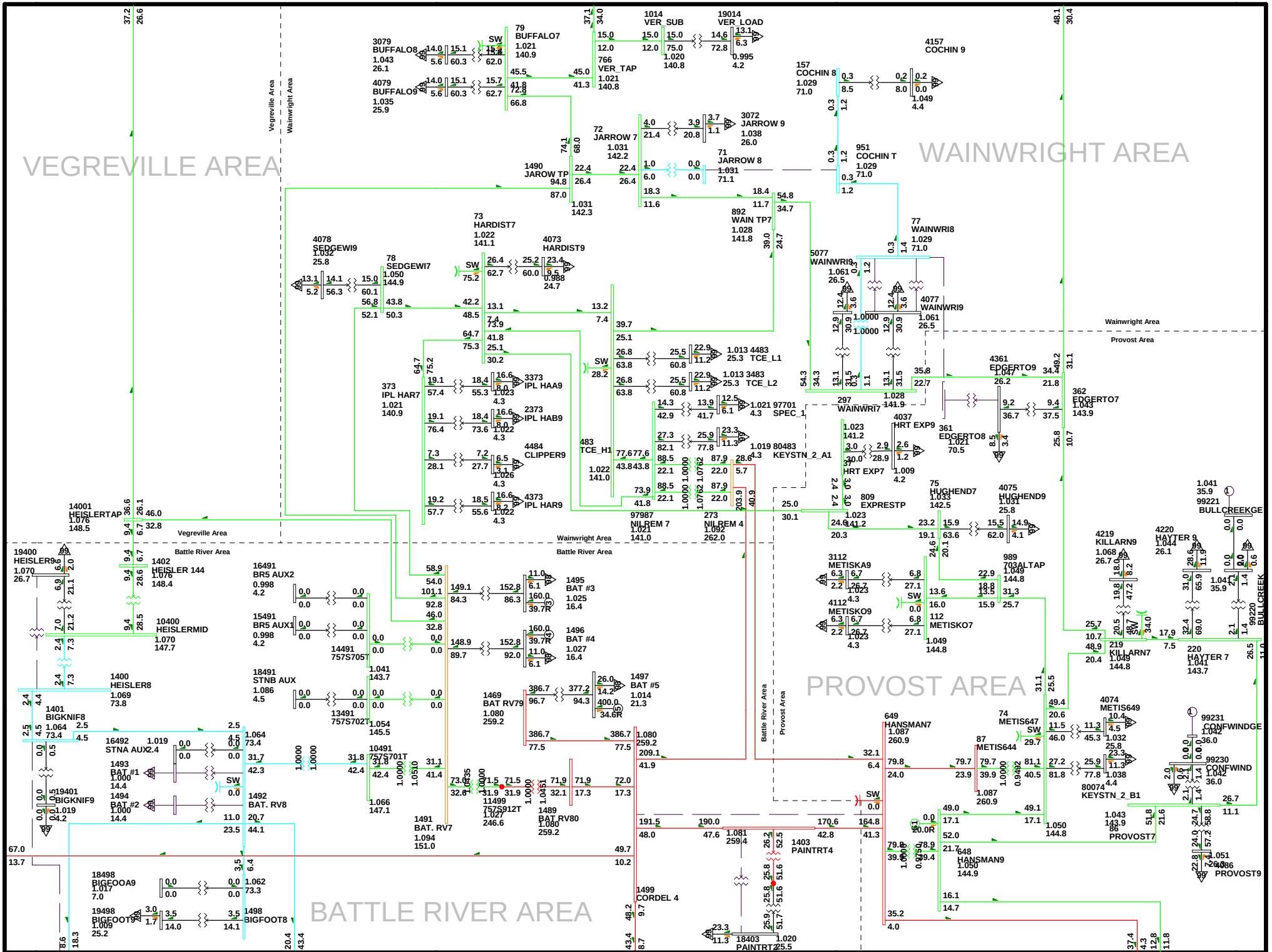

VEGREVILLE AREA
WAINWRIGHT AREA
PROVOST AREA
BATTLE RIVER AREA
Vegreville Area
Wainwright Area
Battle River Area
Provost Area
3079 BUFFALO8 1.037 25.9
4079 BUFFALO9 1.038 26.0
79 BUFFALO7 1.001 138.2
766 VER_TAP 1.005 138.7
1014 VER_SUB
19014 VER_LOAD
4157 COCHIN 9
157 COCHIN 8 1.007 69.5
951 COCHIN T 1.007 69.5
3072 JAROW 9 1.039 26.0
72 JAROW 7 1.003 138.4
71 JAROW 8 1.003 69.2
1490 JAROW TP 149.9 137.5
892 WAIN TP7 1.004 138.5
77 WAINWRI8 1.008 69.5
5077 WAINWRI9 1.038 26.0
4077 WAINWRI9 1.038 26.0
297 WAINWRI7 1.007 139.0
4078 SEDGEWI9 1.025 25.6
78 SEDGEWI7 1.025 141.4
73 HARDIST7 1.004 138.5
4073 HARDIST9 0.968 24.2
4361 EDGERTO9 1.029 25.7
362 EDGERTO7 1.026 141.6
361 EDGERTO8 1.021 70.5
4037 HRT EXP9
HRT EXP7 0.991 4.1
373 IPL HAR7 1.002 138.3
3373 IPL HAA9 1.003 4.2
2373 IPL HAB9 1.002 4.2
4484 CLIPPER9 1.025 4.3
4373 IPL HAR9 1.002 4.2
483 TCE_H1 1.003 138.5
0.992 4483 24.8 TCE_L1
0.992 3483 24.8 TCE_L2
1.002 97701 SPEC_1 4.2
1.011 80483 KEYSTN_2_A1 4.2
97987 NILREM 7 1.004 138.5
273 NILREM 4 1.084 260.1
809 EXPRESTP 1.005 138.7
75 HUGHEND7 1.024 141.3
4075 HUGHEND9 1.034 25.9
14001 HEISLERTAP 1.077 148.6
1402 HEISLER 144 1.077 148.6
10400 HEISLERMID 1.071 147.8
19400 HEISLER9 1.070 26.8
1400 HEISLER8 1.070 73.8
1401 BIGKNIF8 1.065 73.5
19401 BIGKNIF9 1.020 4.2
16491 BR5 AUX2 0.998 4.2
15491 BR5 AUX1 0.998 4.2
14491 757S705T 1.041 143.7
18491 STNB AUX 1.086 4.5
13491 757S702T 1.054 145.5
16492 STNA AUX 1.020 2.4
10491 757S701T 1.067 147.2
1493 BAT #1 1.000 14.4
1494 BAT #2 1.000 14.4
1492 BAT. RV8 24.1 51.3
1491 BAT. RV7 1.094 151.0
1495 BAT #3 1.025 16.4
1496 BAT #4 1.026 16.4
1497 BAT #5 1.042 21.9
1469 BAT RV79 1.080 259.2
11499 757S912T 1.027 246.4
1489 BAT RV80 1.080 259.2
1499 CORDEL 4
1403 PAINTRT4
18403 PAINTRT3 1.025 25.6
649 HANSMAN7 1.089 261.3
648 HANSMAN9 1.050 144.9
74 METIS647
87 METIS644 1.089 261.3
4074 METIS649
80074 KEYSTN_2_B1
PROVOST7
PROVOST9
3112 METISKA9
4112 METISKO9
112 METISKO7 1.049 144.8
989 703ALTAP 1.049 144.8
4219 KILLARN9 1.062 26.6
219 KILLARN7 1.044 144.1
4220 HAYTER 9 1.040 26.0
220 HAYTER 7 1.037 143.1
99221 BULLCREEKGE
99220 BULLCREEK
99231 CONFWINDGE 1.041 35.9
99230 CONFWIND 1.041 35.9
18498 BIGFOOA9 1.018 7.0
19498 BIGFOOT9 1.010 25.3
1498 BIGFOOT8 1.063 73.3
CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 09 2010 10:57
D1-26
2012SP-Alt 2 BR#5 ON-5.b
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATE A
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 09 2010 10:57
D1-27

2012SP-Alt 2 BR#5 ON-6.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

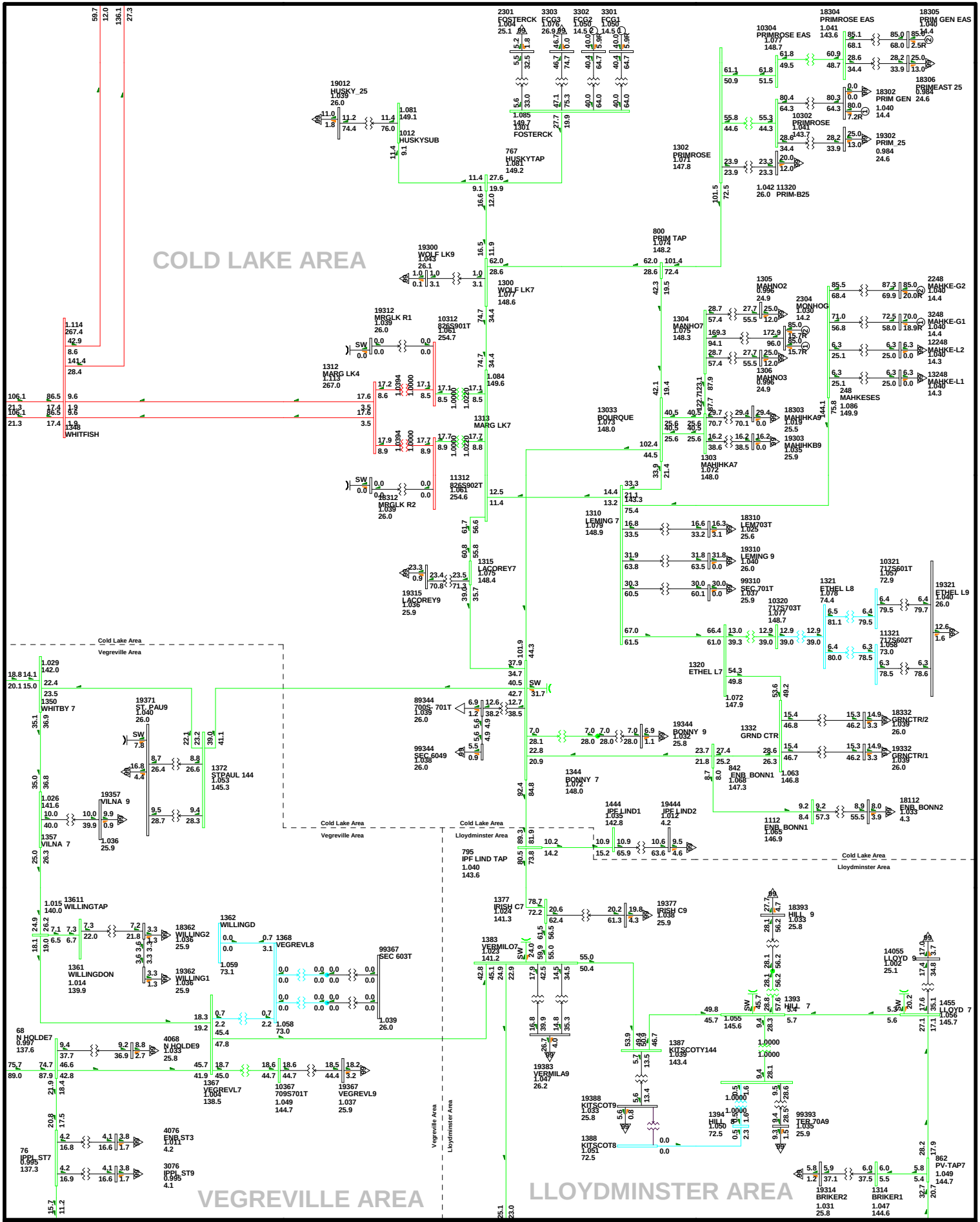


CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 09 2010 10:57
D1-27

2012SP-Alt 2 BR#5 ON-6.b

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar

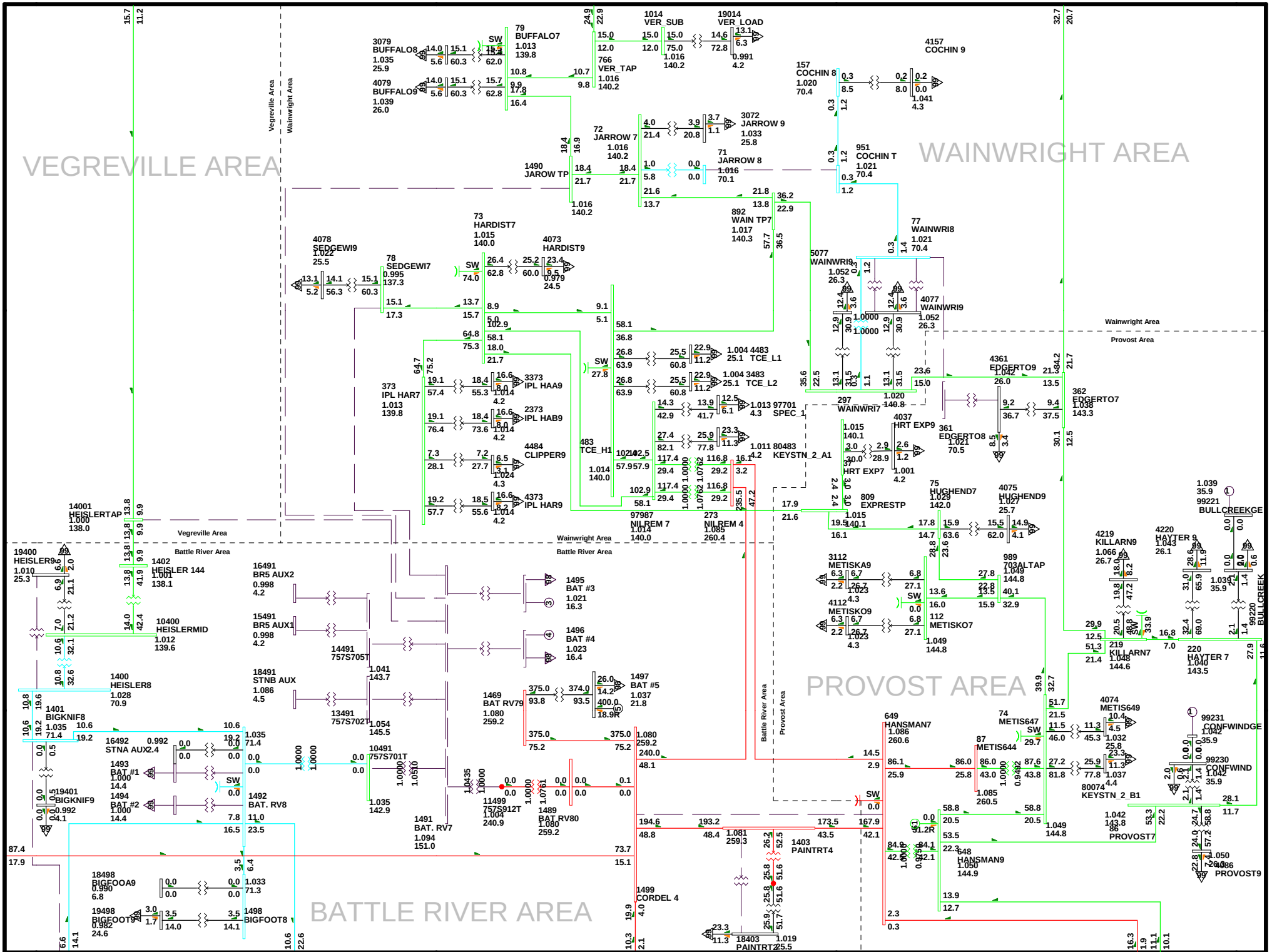
100.0%RATE A
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 09 2010 10:57
D1-28

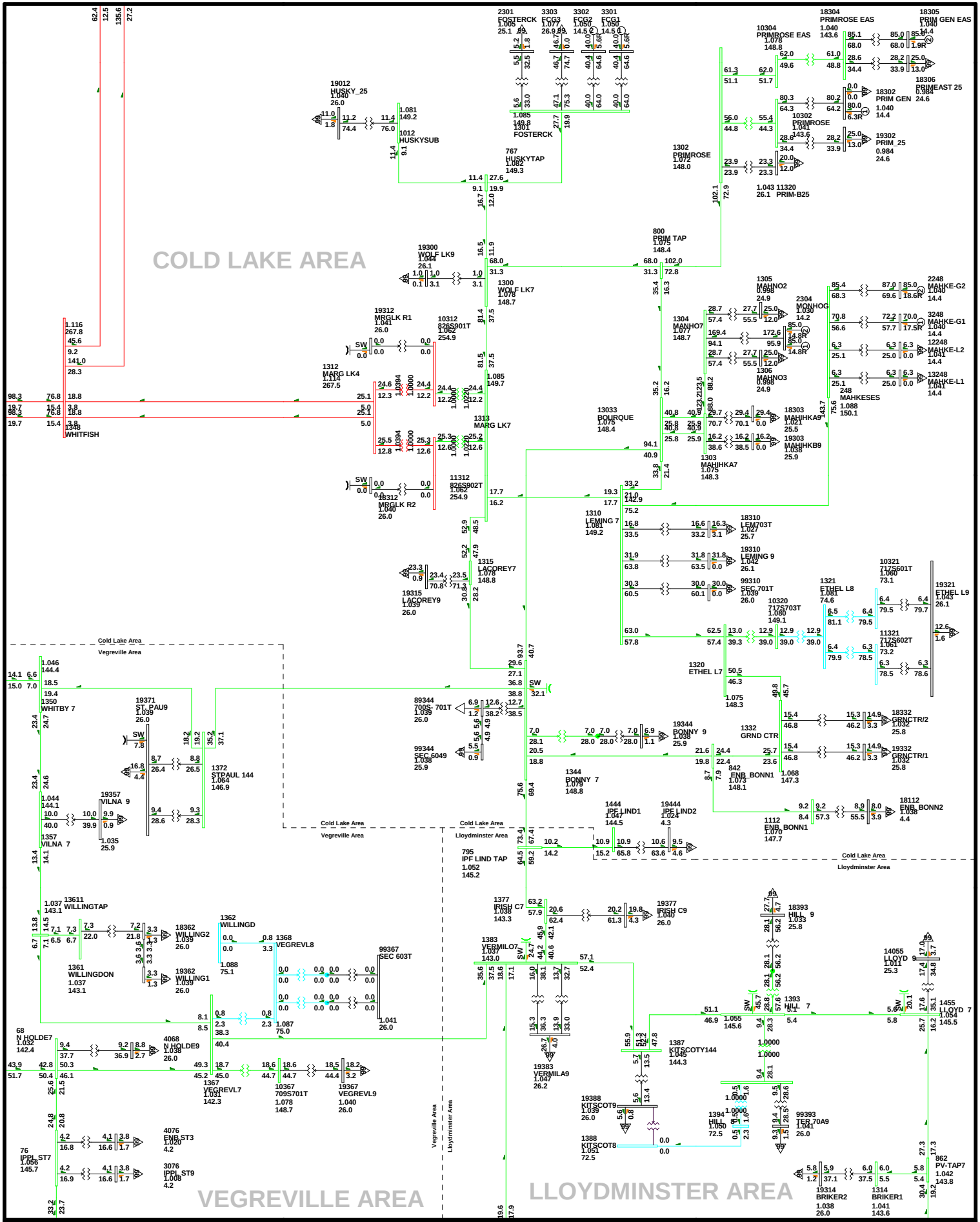
2012SP-Alt 2 BR#5 ON-7.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 09 2010 10:57
D1-28

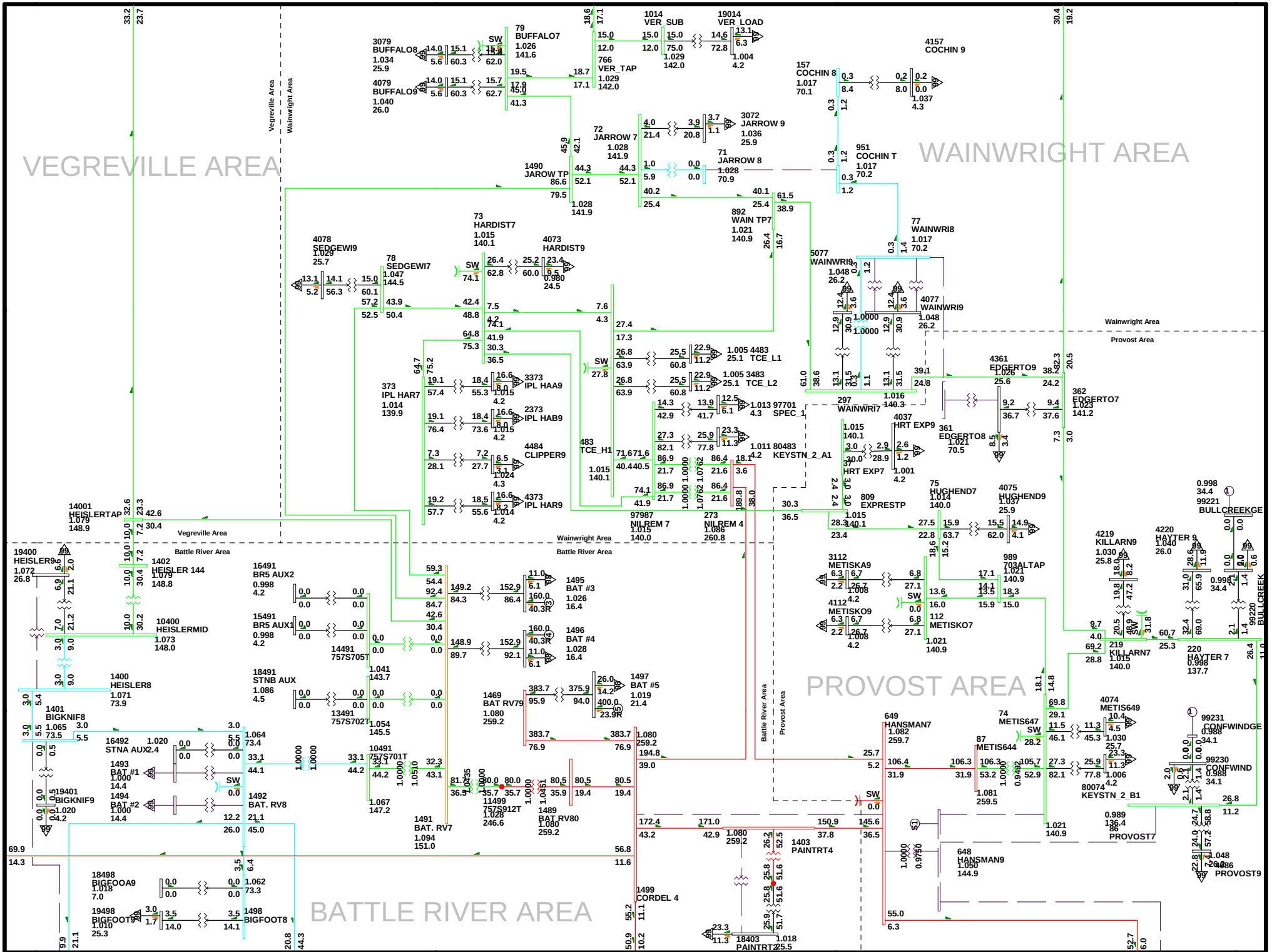
2012SP-Alt 2 BR#5 ON-7.b

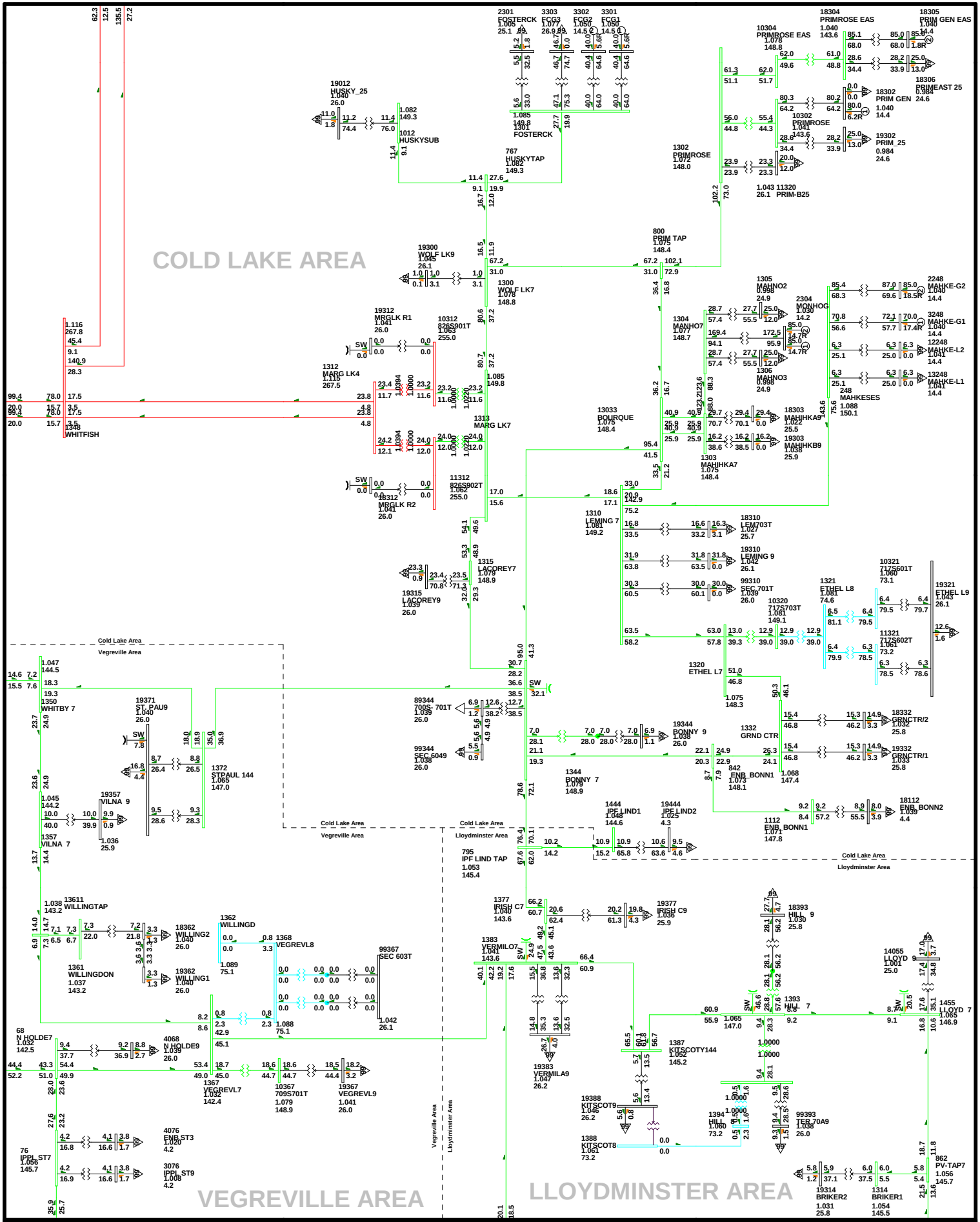


CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 09 2010 10:57
D1-30

2012SP-Alt 2 BR#5 ON-8.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

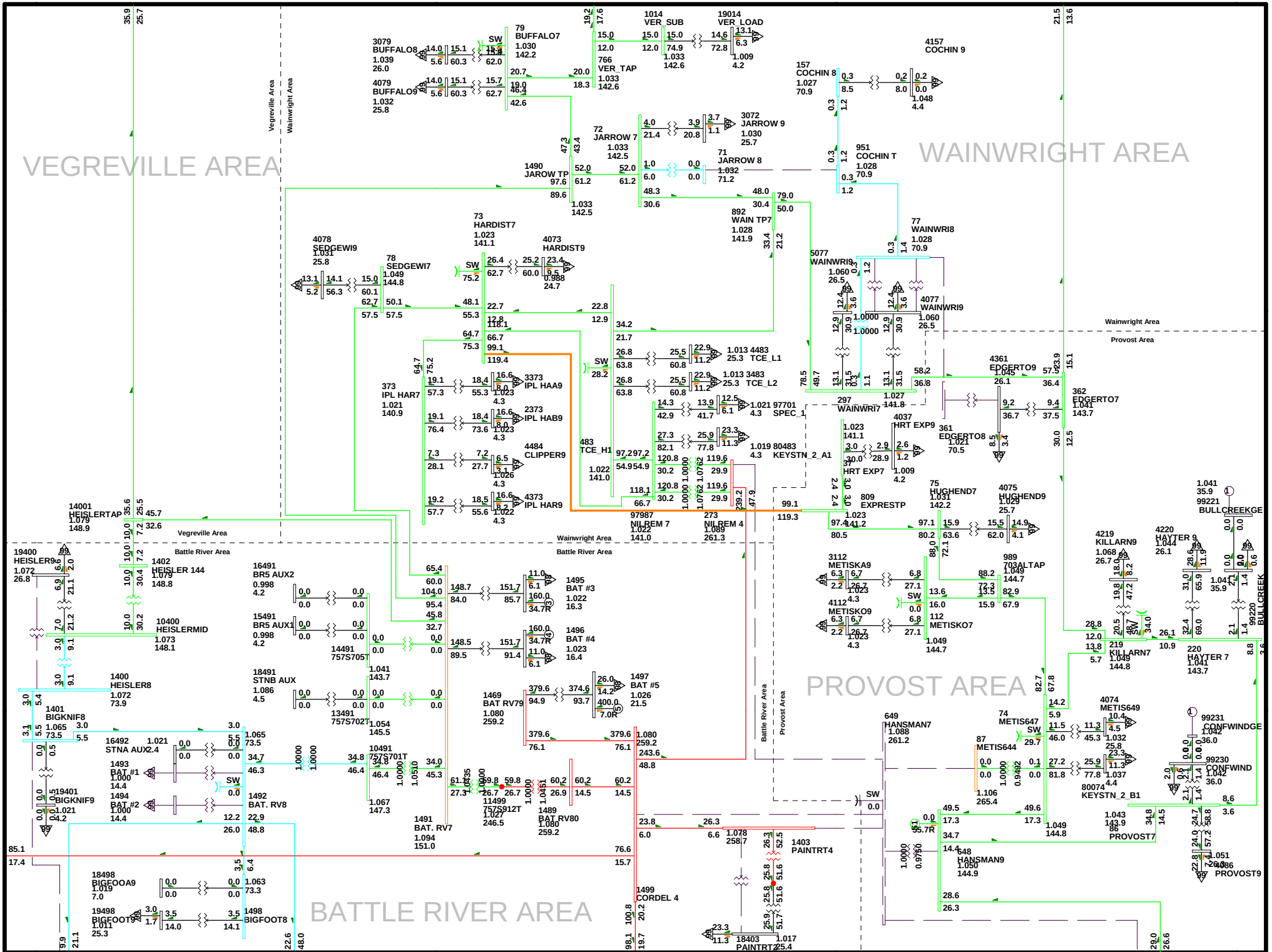

VEGREVILLE AREA
WAINWRIGHT AREA
PROVOST AREA
BATTLE RIVER AREA
Vegreville Area
Wainwright Area
Battle River Area
Provost Area
3079 BUFFALO8 1.034 25.9
4079 BUFFALO9 1.040 26.0
79 BUFFALO7 1.026 141.6
766 VER_TAP 1.029 142.0
1014 VER_SUB
19014 VER_LOAD
4157 COCHIN 9
157 COCHIN 8 1.017 70.1
951 COCHIN T 1.017 70.2
1037 4.3
3072 JAROW 9 1.036 25.9
72 JARROW 7 1.028 141.9
71 JARROW 8 1.028 70.9
1490 JAROW TP 86.6 79.5 1.028 141.9
892 WAIN TP7 1.021 140.9
77 WAINWRI8 1.017 70.2
5077 WAINWRI9 1.048 26.2
4077 WAINWRI9 1.048 26.2
4078 SEDGEWI9 1.029 25.7
78 SEDGEWI7 1.047 144.5
73 HARDIST7 1.015 140.1
4073 HARDIST9 0.980 24.5
1.005 4483 25.1 TCE_L1
1.005 3483 25.1 TCE_L2
373 IPL HAR7 1.014 139.9
3373 IPL HAA9 1.015 4.2
2373 IPL HAB9 1.015 4.2
4484 CLIPPER9 1.024 4.3
4373 IPL HAR9 1.014 4.2
483 TCE_H1 1.015 140.1
1.013 97701 4.3 SPEC_1
1.011 80483 4.2 KEYSTN_2_A1
297 WAINWRI7 1.016 140.3
4037 HRT EXP9 1.015 140.1
HRT EXP7 1.001 4.2
361 EDGERTO8 1.021 70.5
4361 EDGERTO9 1.026 25.6
362 EDGERTO7 1.023 141.2
809 EXPRESTP 1.015 140.1
97987 NILREM 7 1.015 140.0
273 NILREM 4 1.086 260.8
75 HUGHEND7 1.014 140.0
4075 HUGHEND9 1.037 25.9
14001 HEISLERTAP 1.079 148.9
1402 HEISLER 144 1.079 148.8
19400 HEISLER9 1.072 26.8
10400 HEISLERMID 1.073 148.0
1400 HEISLER8 1.071 73.9
1401 BIGKNIF8 1.065 73.5
19401 BIGKNIF9 1.020 4.2
16491 BR5 AUX2 0.998 4.2
15491 BR5 AUX1 0.998 4.2
14491 757S705T 1.041 143.7
18491 STNB AUX 1.086 4.5
13491 757S702T 1.054 145.5
16492 STNA AUX 1.020 2.4
10491 757S701T 1.067 147.2
1493 BAT #1 1.000 14.4
1494 BAT #2 1.000 14.4
1492 BAT. RV8 1.064 73.4
1491 BAT. RV7 1.094 151.0
1495 BAT #3 1.026 16.4
1496 BAT #4 1.028 16.4
1497 BAT #5 1.019 21.4
1469 BAT RV79 1.080 259.2
11499 757S912T 1.028 246.6
1489 BAT RV80 1.080 259.2
1499 CORDEL 4 1.080 259.2
1403 PAINTRT4 1.080 259.2
18403 PAINTRT5 1.018 25.5
18498 BIGFOOA9 1.018 7.0
19498 BIGFOOT9 1.010 25.3
1498 BIGFOOT8 1.062 73.3
649 HANSMAN7 1.082 259.7
648 HANSMAN9 1.050 144.9
74 METIS647 1.030 46.1
87 METIS644 1.081 259.5
3112 METISKA9 1.008 4.2
4112 METISKO9 1.008 4.2
112 METISKO7 1.021 140.9
989 703ALTAP 1.021 140.9
80074 KEYSTN_2_B1 0.989 136.4
4074 METIS649 1.030 25.7
PROVOST7 1.021 140.9
PROVOST9 1.048 26.6
4219 KILLARN9 1.030 25.8
219 KILLARN7 1.015 140.0
4220 HAYTER 9 1.040 26.0
220 HAYTER 7 0.998 137.7
0.998 34.4 99221 BULLCREEKGE
99220 BULLCREEK
99231 CONFWINDGE 0.988 34.1
99230 CONFWIND 0.988 34.1
1.048 26.6 99236 PROVOST9
CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 09 2010 10:57
D1-30
2012SP-Alt 2 BR#5 ON-8.b
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATE A
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

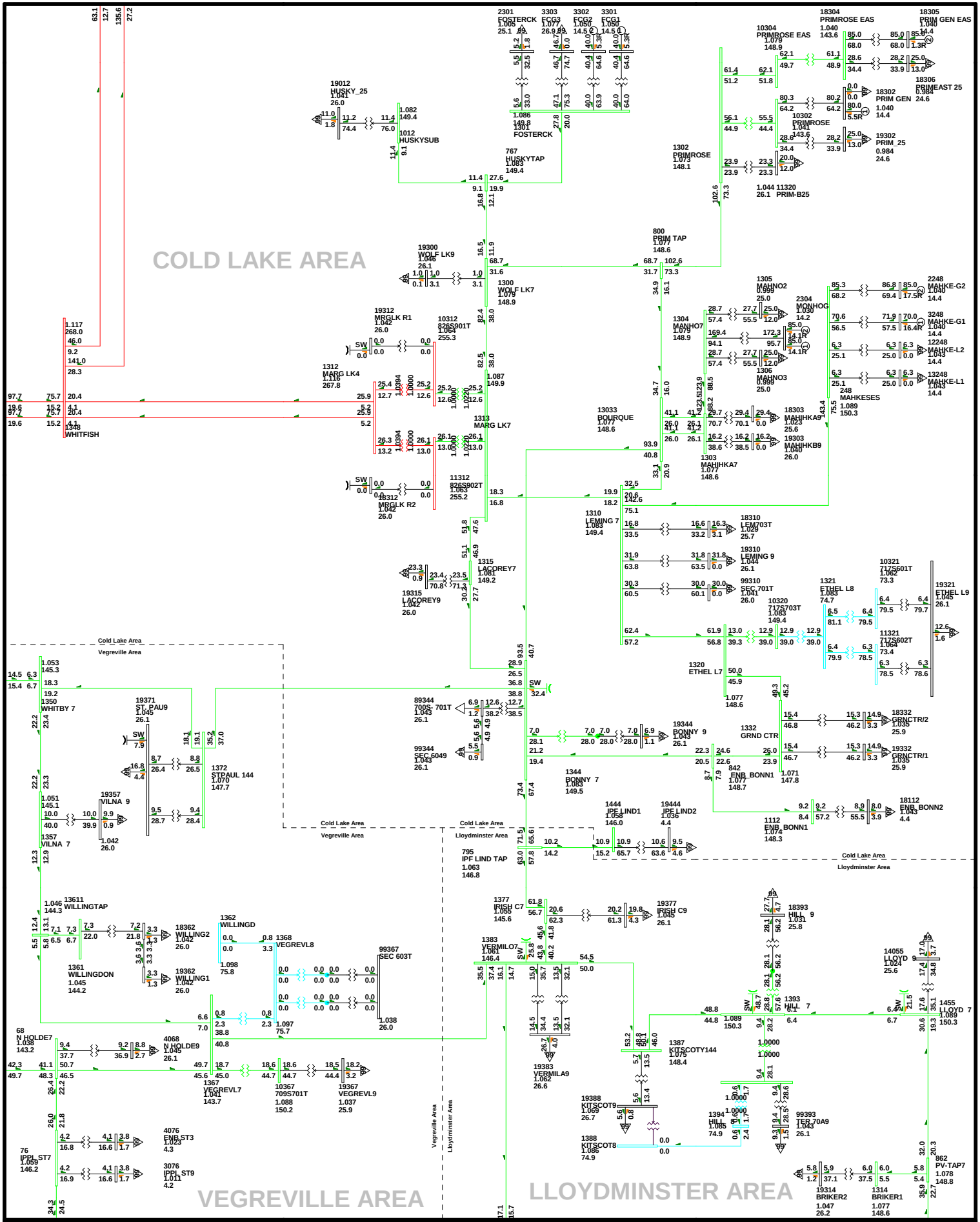


CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 09 2010 10:57
D1-31

2012SP-Alt 2 BR#5 ON-9.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

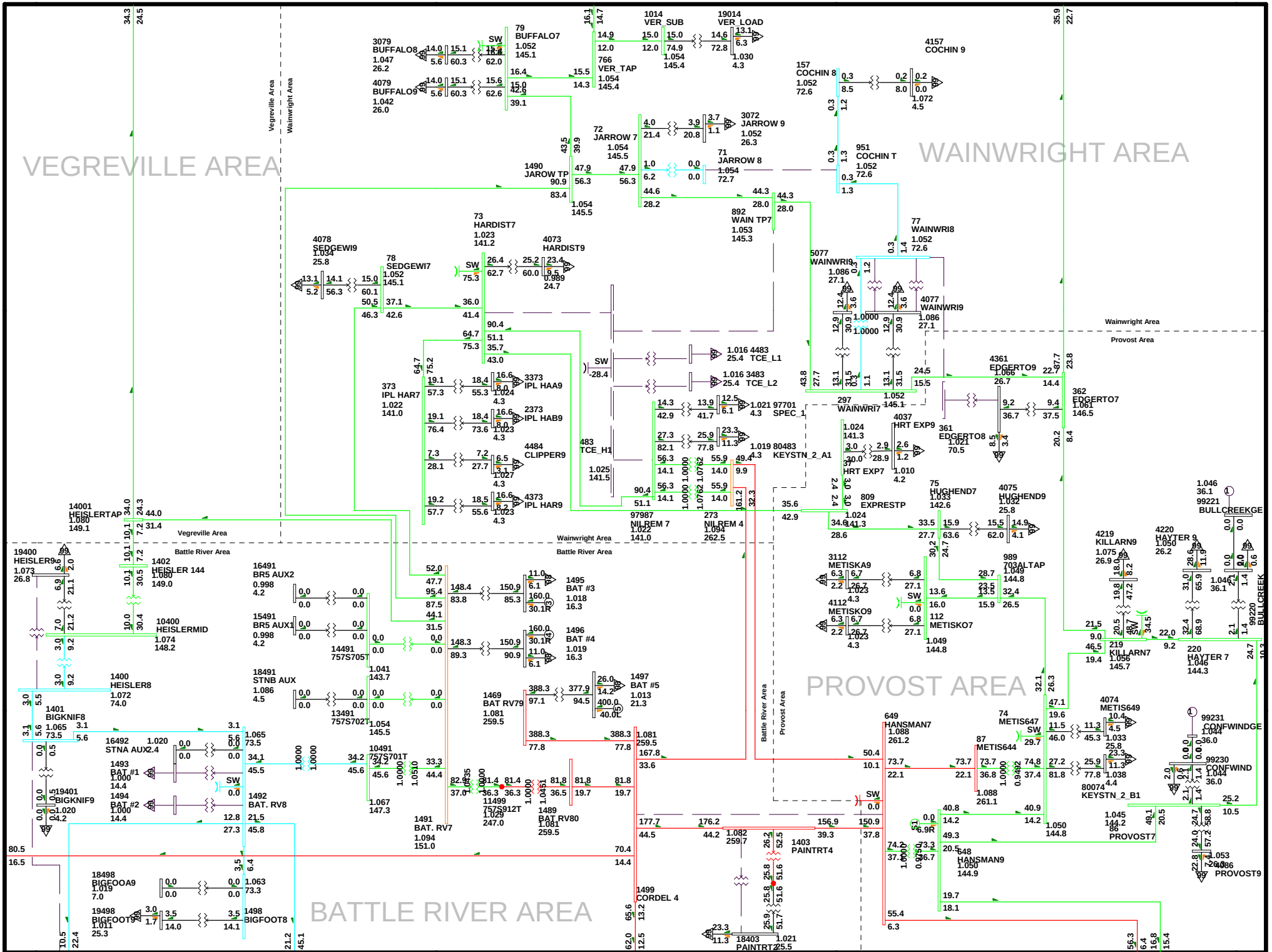

VEGREVILLE AREA
WAINWRIGHT AREA
PROVOST AREA
BATTLE RIVER AREA
Vegreville Area
Wainwright Area
Battle River Area
Provost Area
3079 BUFFALO8 1.039 26.0
4079 BUFFALO9 1.032 25.8
79 BUFFALO7 1.030 142.2
766 VER_TAP 1.033 142.6
1014 VER_SUB
19014 VER_LOAD 1.009 4.2
4157 COCHIN 9
157 COCHIN 8 1.027 70.9
1.048 4.4
951 COCHIN T 1.028 70.9
72 JARROW 7 1.033 142.5
3072 JARROW 9 1.030 25.7
71 JARROW 8 1.032 71.2
1490 JAROW TP 97.6 89.6 1.033 142.5
892 WAIN TP7 1.028 141.9
77 WAINWRI8 1.028 70.9
5077 WAINWRI9 1.060 26.5
4077 WAINWRI9 1.060 26.5
297 WAINWRI7 1.027 141.8
4078 SEDGEWI9 1.031 25.8
78 SEDGEWI7 1.049 144.8
73 HARDIST7 1.023 141.1
4073 HARDIST9 0.988 24.7
373 IPL HAR7 1.021 140.9
3373 IPL HAA9 1.023 4.3
2373 IPL HAB9 1.023 4.3
4484 CLIPPER9 1.026 4.3
4373 IPL HAR9 1.022 4.3
483 TCE_H1 1.022 141.0
1.013 4483 25.3 TCE_L1
1.013 3483 25.3 TCE_L2
1.021 97701 4.3 SPEC_1
1.019 80483 4.3 KEYSTN_2_A1
4037 HRT EXP9
HRT EXP7 1.009 4.2
361 EDGERTO8 1.021 70.5
4361 EDGERTO9 1.045 26.1
362 EDGERTO7 1.041 143.7
809 EXPRESTP 1.023 141.2
75 HUGHEND7 1.031 142.2
4075 HUGHEND9 1.029 25.7
97987 NILREM 7 1.022 141.0
273 NILREM 4 1.089 261.3
14001 HEISLERTAP 1.079 148.9
1402 HEISLER 144 1.079 148.8
10400 HEISLERMID 1.073 148.1
19400 HEISLER9 1.072 26.8
1400 HEISLER8 1.072 73.9
1401 BIGKNIF8 1.065 73.5
19401 BIGKNIF9 1.021 4.2
16491 BR5 AUX2 0.998 4.2
15491 BR5 AUX1 0.998 4.2
14491 757S705T 1.041 143.7
18491 STNB AUX 1.086 4.5
13491 757S702T 1.054 145.5
10491 757S701T 1.067 147.3
16492 STNA AUX 1.021 2.4
1493 BAT #1 1.000 14.4
1494 BAT #2 1.000 14.4
1492 BAT. RV8 22.9 48.8
1491 BAT. RV7 1.094 151.0
1495 BAT #3 1.022 16.3
1496 BAT #4 1.023 16.4
1497 BAT #5 1.026 21.5
1469 BAT RV79 1.080 259.2
11499 757S912T 1.027 246.5
1489 BAT RV80 1.080 259.2
1499 CORDEL 4 1.080 259.2 243.6
1403 PAINTRT4 1.078 258.7
18403 PAINTRT3 1.017 25.4
18498 BIGFOOA9 1.019 7.0
19498 BIGFOOT9 1.011 25.3
1498 BIGFOOT8 1.063 73.3
649 HANSMAN7 1.088 261.2
648 HANSMAN9 1.050 144.9
74 METIS647
87 METIS644 1.106 265.4
4074 METIS649 1.032 25.8
80074 KEYSTN_2_B1 1.037 4.4
PROVOST7 1.043 143.9
PROVOST9 1.051 144.6
3112 METISKA9 1.023 4.3
4112 METISKO9 1.023 4.3
112 METISKO7 1.049 144.7
989 703ALTAP 1.049 144.7
4219 KILLARN9 1.068 26.7
219 KILLARN7 1.049 144.8
4220 HAYTER 9 1.044 26.1
220 HAYTER 7 1.041 143.7
99221 BULLCREEKGE 1.041 35.9
99220 BULLCREEK 1.041 35.9
99231 CONFWINDGE 1.042 36.0
99230 CONFWIND 1.042 36.0
CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 09 2010 10:57
D1-31
2012SP-Alt 2 BR#5 ON-9.b
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATE A
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

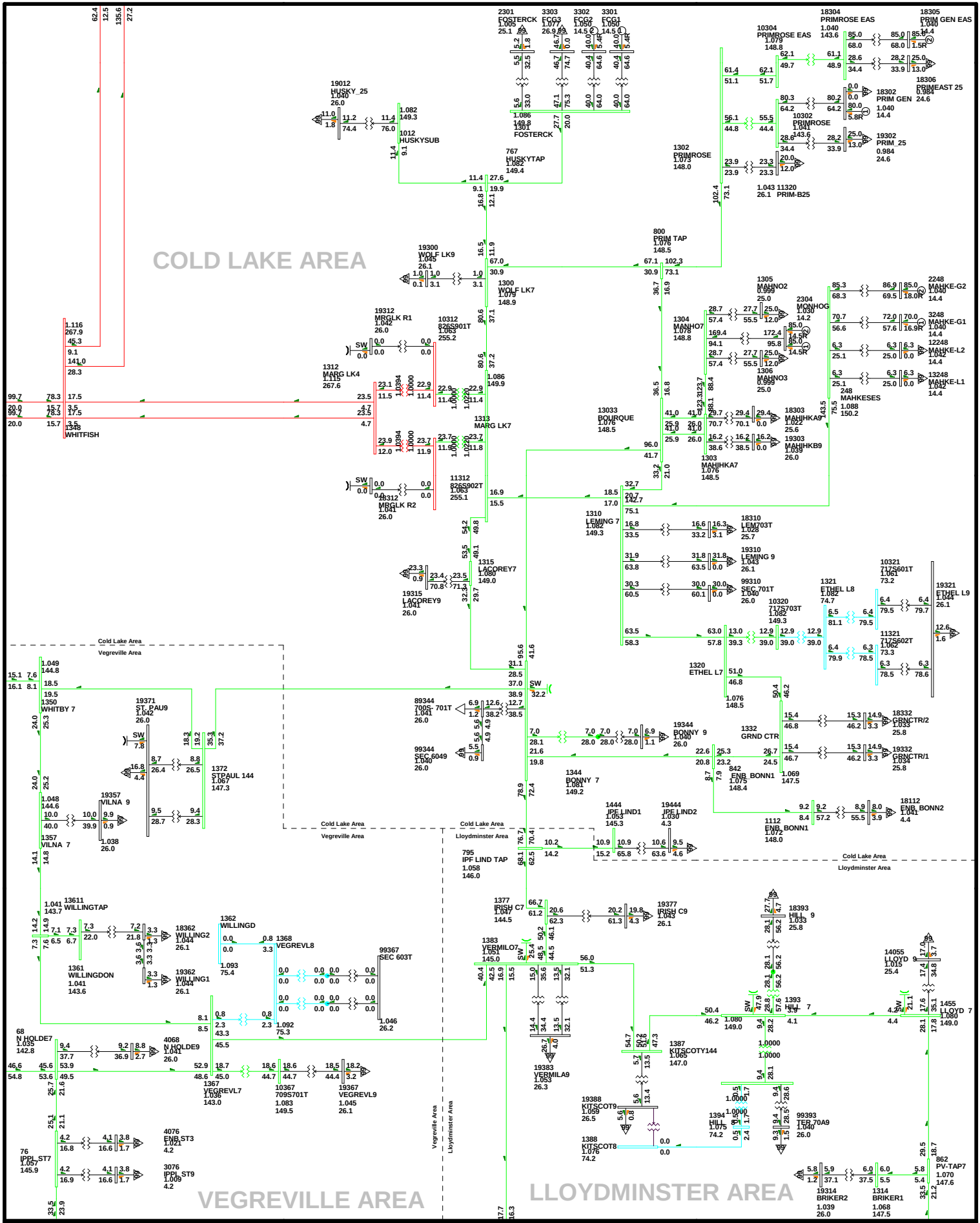


CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 09 2010 10:57
D1-32

2012SP-Alt 2 BR#5 ON-10.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

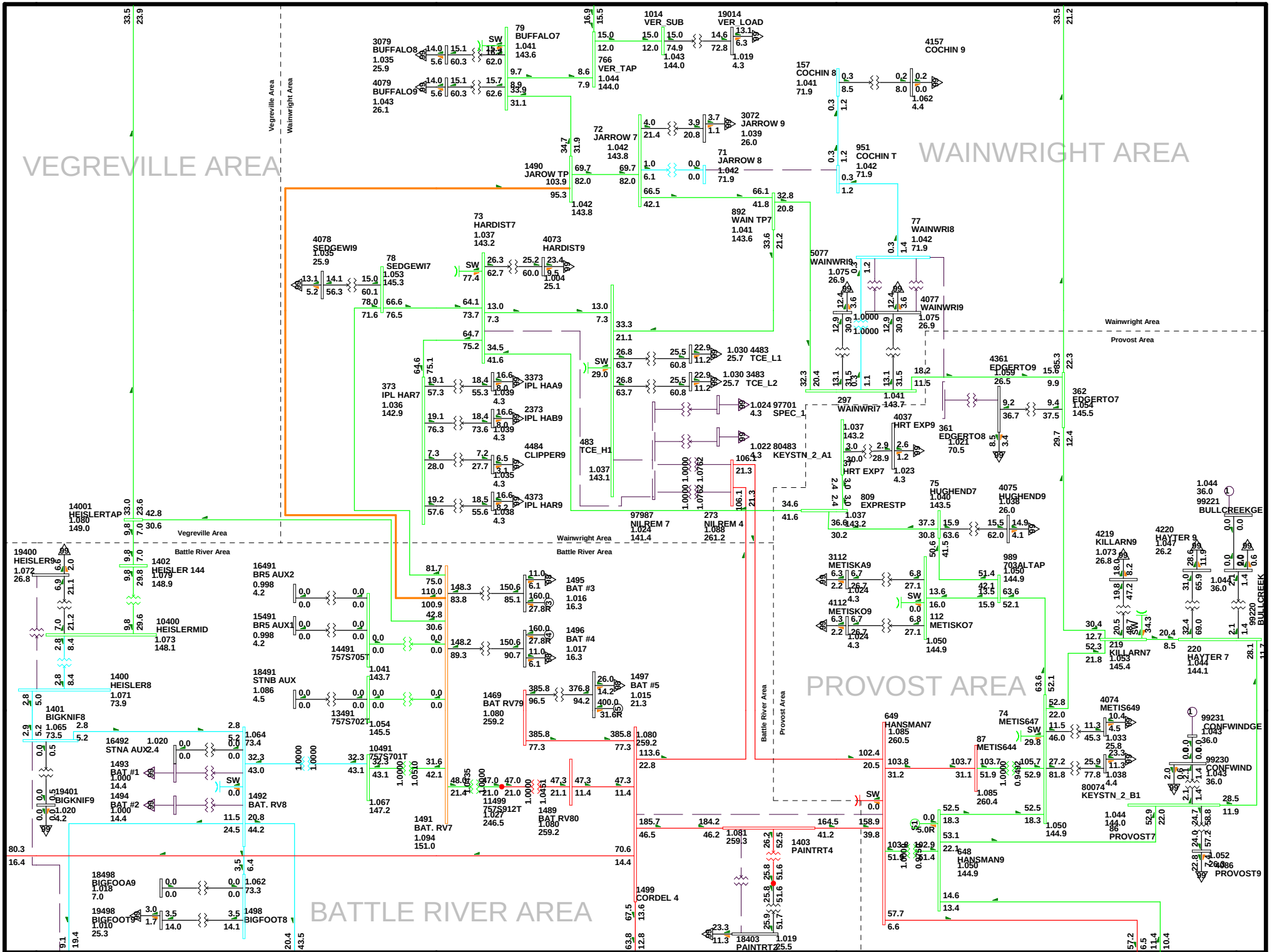

VEGREVILLE AREA
WAINWRIGHT AREA
PROVOST AREA
BATTLE RIVER AREA
Vegreville Area
Wainwright Area
Battle River Area
Provost Area
3079 BUFFALO8 1.047 26.2
4079 BUFFALO9 1.042 26.0
79 BUFFALO7 1.052 145.1
766 VER_TAP 1.054 145.4
1014 VER_SUB
19014 VER_LOAD
4157 COCHIN 9
157 COCHIN 8 1.052 72.6
951 COCHIN T 1.052 72.6
1072 4.5
3072 JAROW 9 1.052 26.3
72 JARROW 7 1.054 145.5
71 JARROW 8 1.054 72.7
1490 JAROW TP 90.9 83.4
1054 145.5
892 WAIN TP7 1.053 145.3
77 WAINWRI8 1.052 72.6
5077 WAINWRI9 1.086 27.1
4077 WAINWRI9 1.086 27.1
4078 SEDGEWI9 1.034 25.8
78 SEDGEWI7 1.052 145.1
73 HARDIST7 1.023 141.2
4073 HARDIST9 0.989 24.7
1016 4483 25.4 TCE_L1
1016 3483 25.4 TCE_L2
483 TCE_H1 1.025 141.5
373 IPL HAR7 1.022 141.0
3373 IPL HAA9 1.024 4.3
2373 IPL HAB9 1.023 4.3
4484 CLIPPER9 1.027 4.3
4373 IPL HAR9 1.023 4.3
297 WAINWRI7 1.052 145.1
1.021 97701 SPEC_1 4.3
4037 HRT EXP9 1.024 141.3
HRT EXP7 1.010 4.2
361 EDGERTO8 1.021 70.5
4361 EDGERTO9 1.066 26.7
362 EDGERTO7 1.061 146.5
1.019 80483 KEYSTN_2_A1 4.3
97987 NILREM 7 1.022 141.0
273 NILREM 4 1.094 262.5
809 EXPRESTP 1.024 141.3
75 HUGHEND7 1.033 142.6
4075 HUGHEND9 1.032 25.8
14001 HEISLERTAP 1.080 149.1
1402 HEISLER 144 1.080 149.0
10400 HEISLERMID 1.074 148.2
19400 HEISLER9 1.073 26.8
1400 HEISLER8 1.072 74.0
1401 BIGKNIF8 1.065 73.5
19401 BIGKNIF9 1.020 4.2
16491 BR5 AUX2 0.998 4.2
15491 BR5 AUX1 0.998 4.2
14491 757S705T 1.041 143.7
18491 STNB AUX 1.086 4.5
13491 757S702T 1.054 145.5
16492 STNA AUX 1.020 2.4
10491 757S701T 1.067 147.3
1493 BAT #1 1.000 14.4
1494 BAT #2 1.000 14.4
1492 BAT. RV8 1.011 25.3
18498 BIGFOOA9 1.019 7.0
19498 BIGFOOT9 1.011 25.3
1498 BIGFOOT8 1.011 25.3
1495 BAT #3 1.018 16.3
1496 BAT #4 1.019 16.3
1497 BAT #5 1.013 21.3
1469 BAT RV79 1.081 259.5
1491 BAT. RV7 1.094 151.0
11499 757S912T 1.029 247.0
1489 BAT RV80 1.081 259.5
1499 CORDEL 4 1.082 259.7
1403 PAINTRT4 1.050 144.9
18403 PAINTRT2 1.021 25.5
649 HANSMAN7 1.088 261.2
74 METIS647
87 METIS644 1.088 261.1
648 HANSMAN9 1.050 144.9
3112 METISKA9 1.023 4.3
4112 METISKO9 1.023 4.3
112 METISKO7 1.049 144.8
989 703ALTAP 1.049 144.8
4074 METIS649 1.033 25.8
80074 KEYSTN_2_B1 1.045 144.2
PROVOST7 1.050 144.8
PROVOST9 1.053 144.6
4219 KILLARN9 1.075 26.9
219 KILLARN7 1.056 145.7
4220 HAYTER 9 1.050 26.2
220 HAYTER 7 1.046 144.3
1.046 36.1 99221 BULLCREEKGE
99220 BULLCREEK
99231 CONFWINDGE 1.044 36.0
99230 CONFWIND 1.044 36.0
SW -28.4
SW 75.3
SW 0.0
SW 29.7
6.9R
CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 09 2010 10:58
D1-32
2012SP-Alt 2 BR#5 ON-10.b
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATE
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 09 2010 11:54
D1-33

2012SP-Alt 2 BR#5 ON-11.a

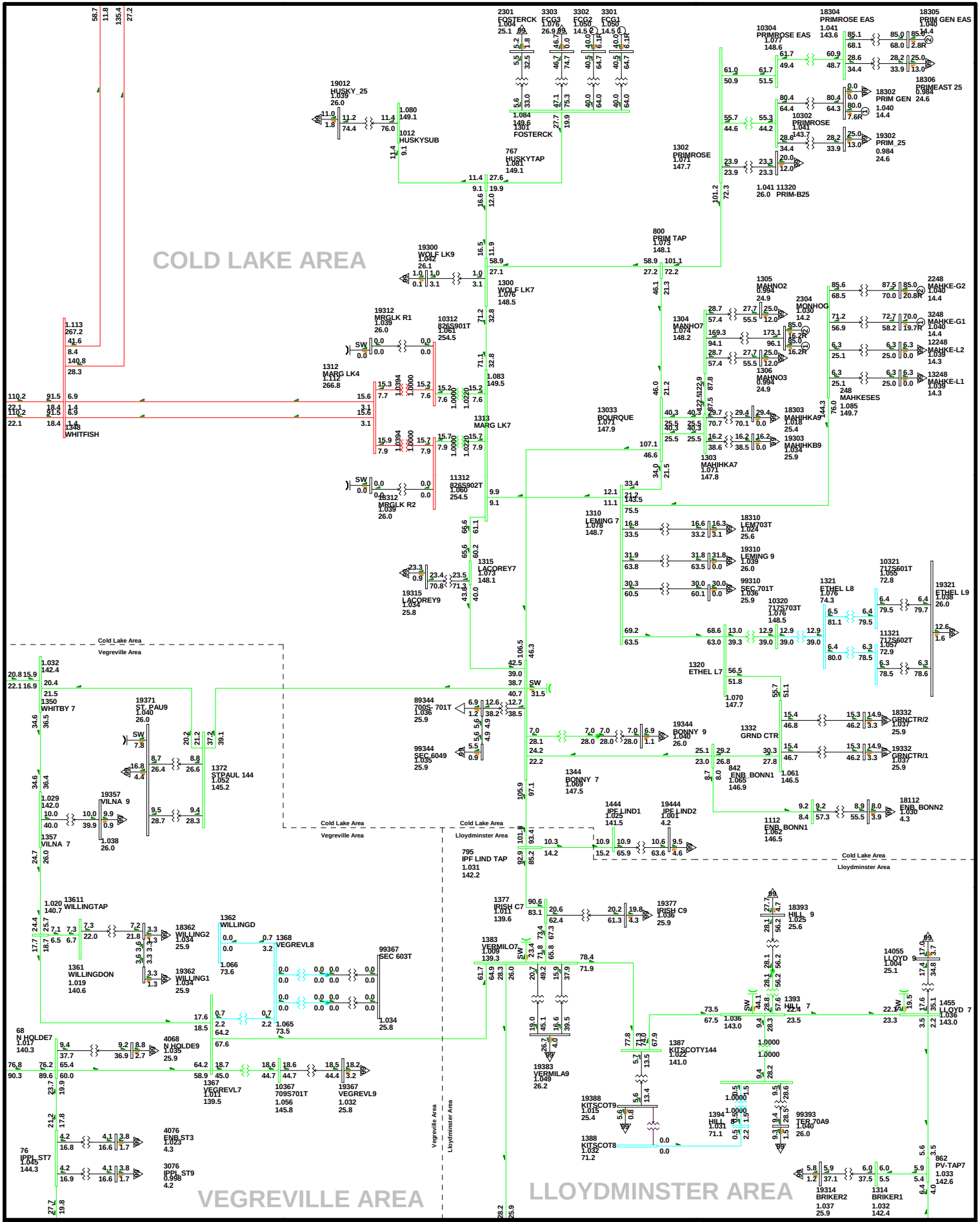
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 09 2010 11:54
D1-33

2012SP-Alt 2 BR#5 ON-11.b

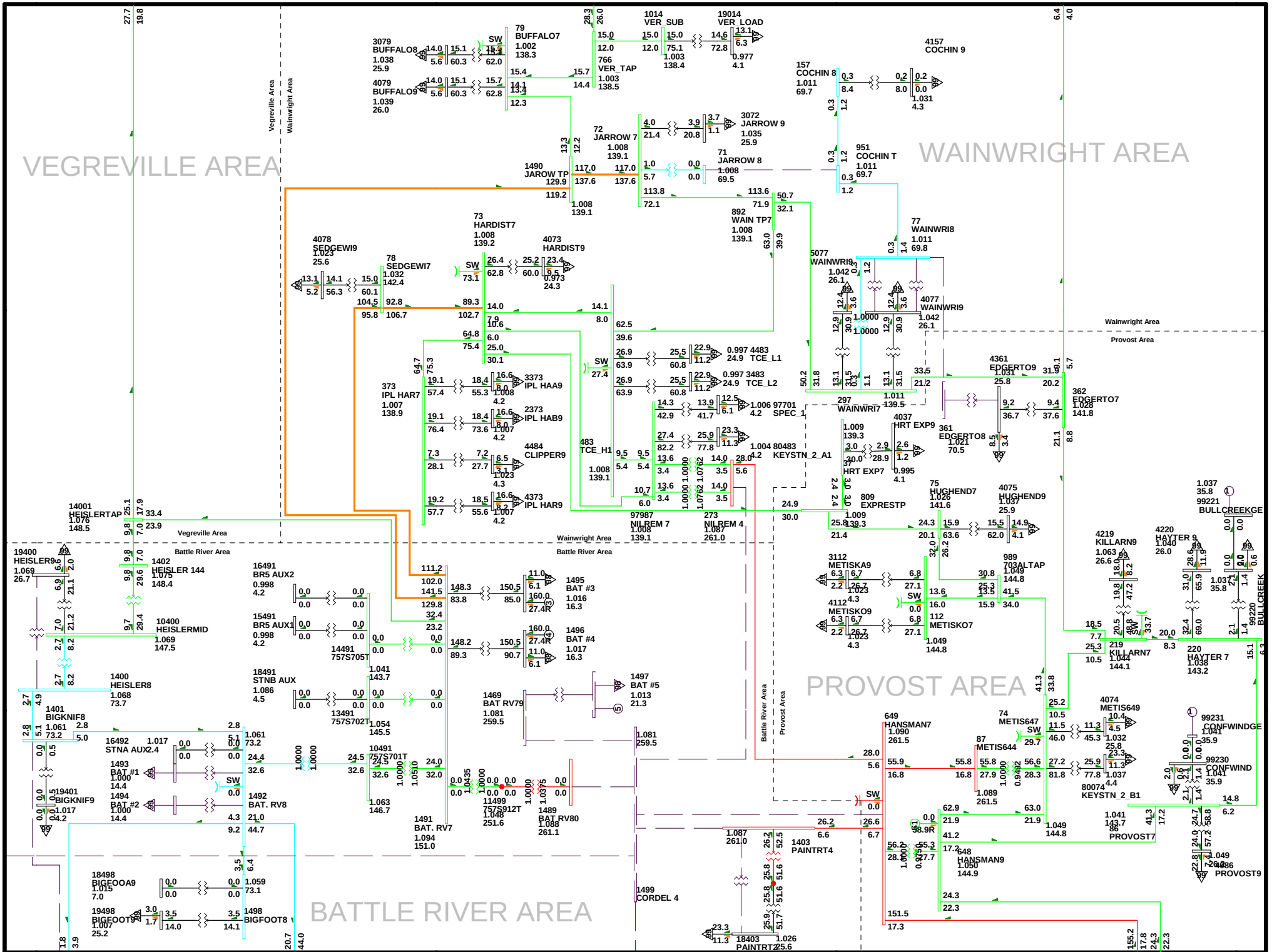
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATE A



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 09 2010 10:58
D1-34

2012SP-Alt 2 BR#5 ON-12.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

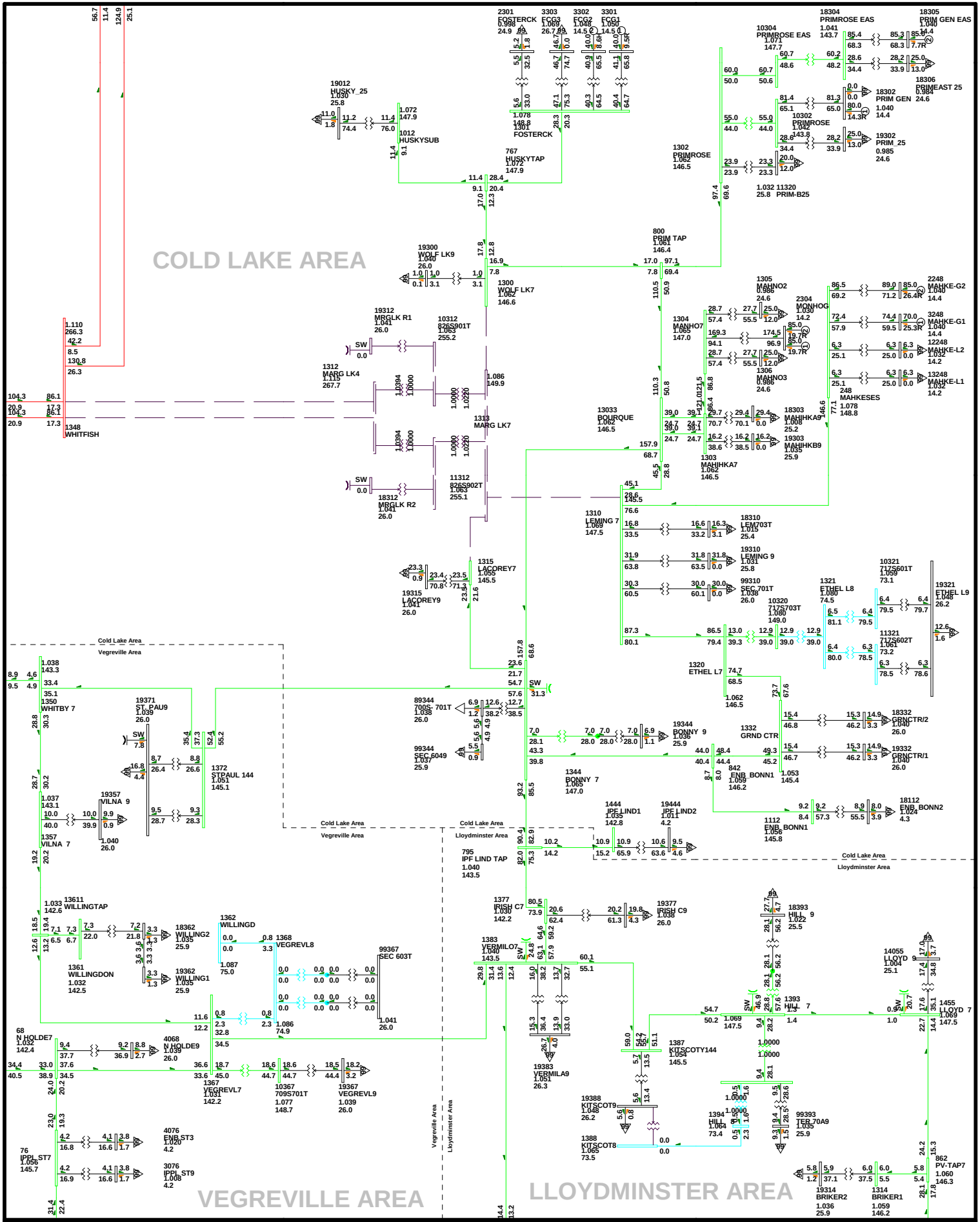


CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 09 2010 10:58
D1-34

2012SP-Alt 2 BR#5 ON-12.b

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar

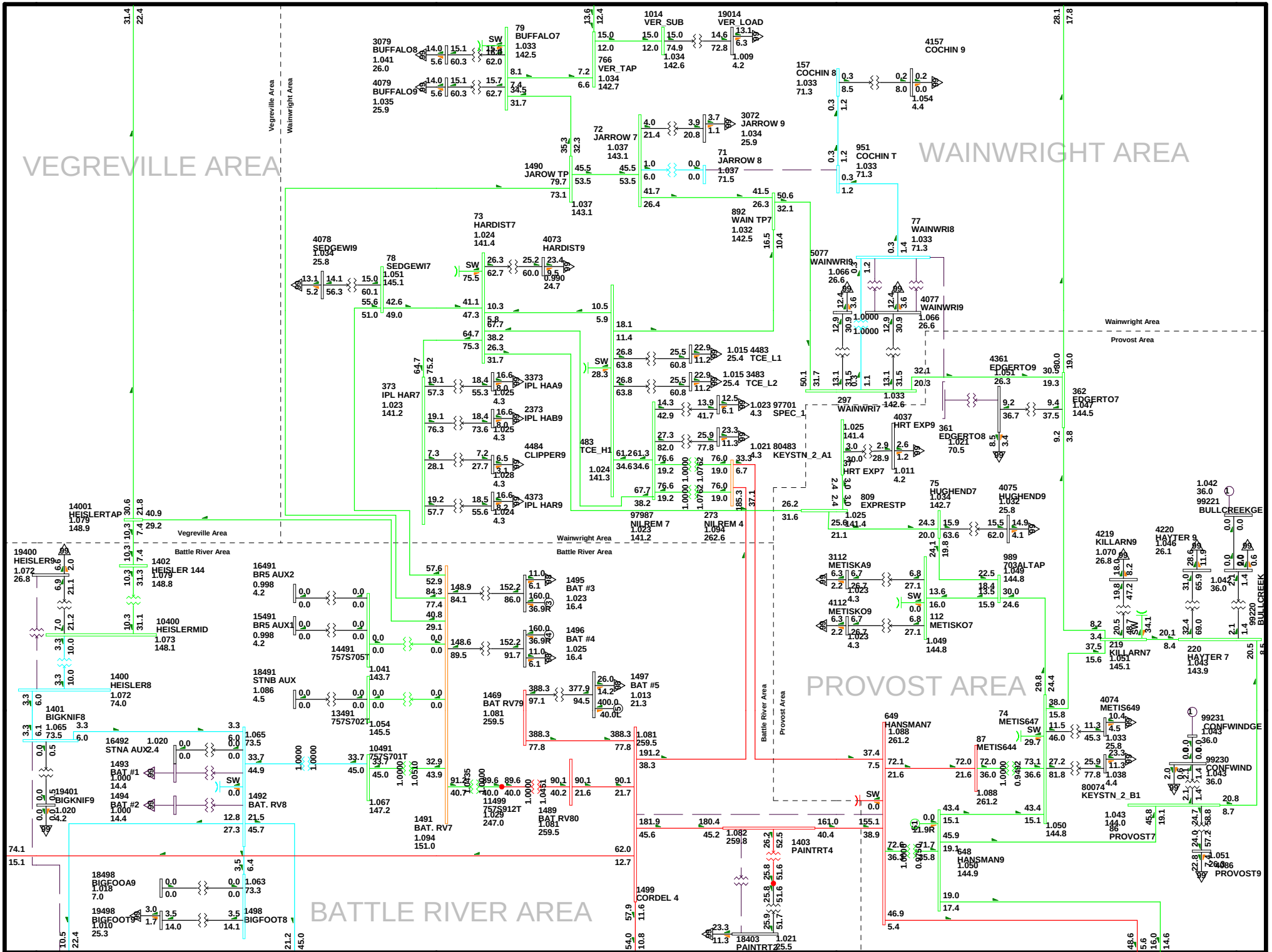
100.0%RATE A
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 09 2010 10:58
D1-35

2012SP-Alt 2 BR#5 ON-13.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

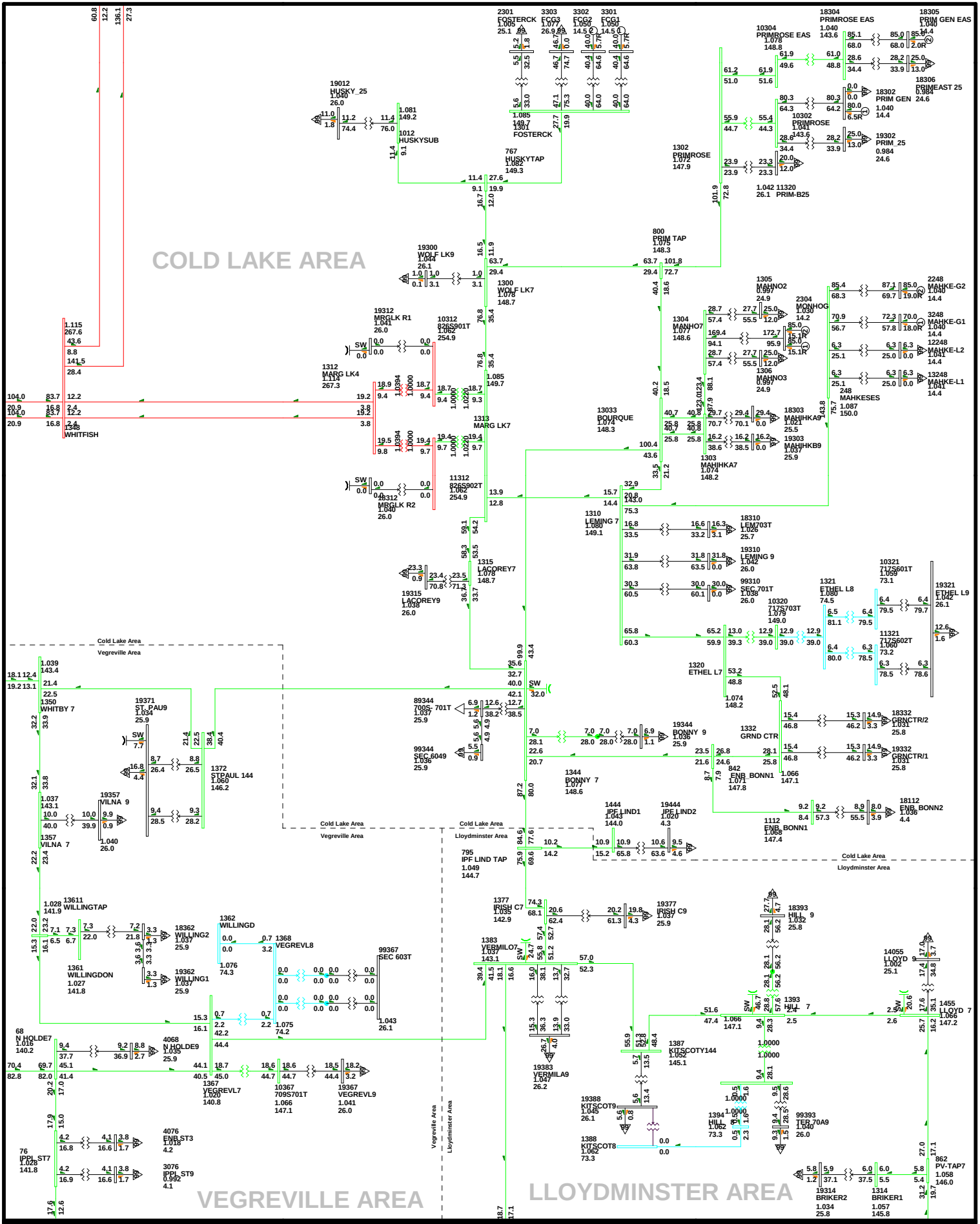


CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 09 2010 10:58
D1-35

2012SP-Alt 2 BR#5 ON-13.b

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar

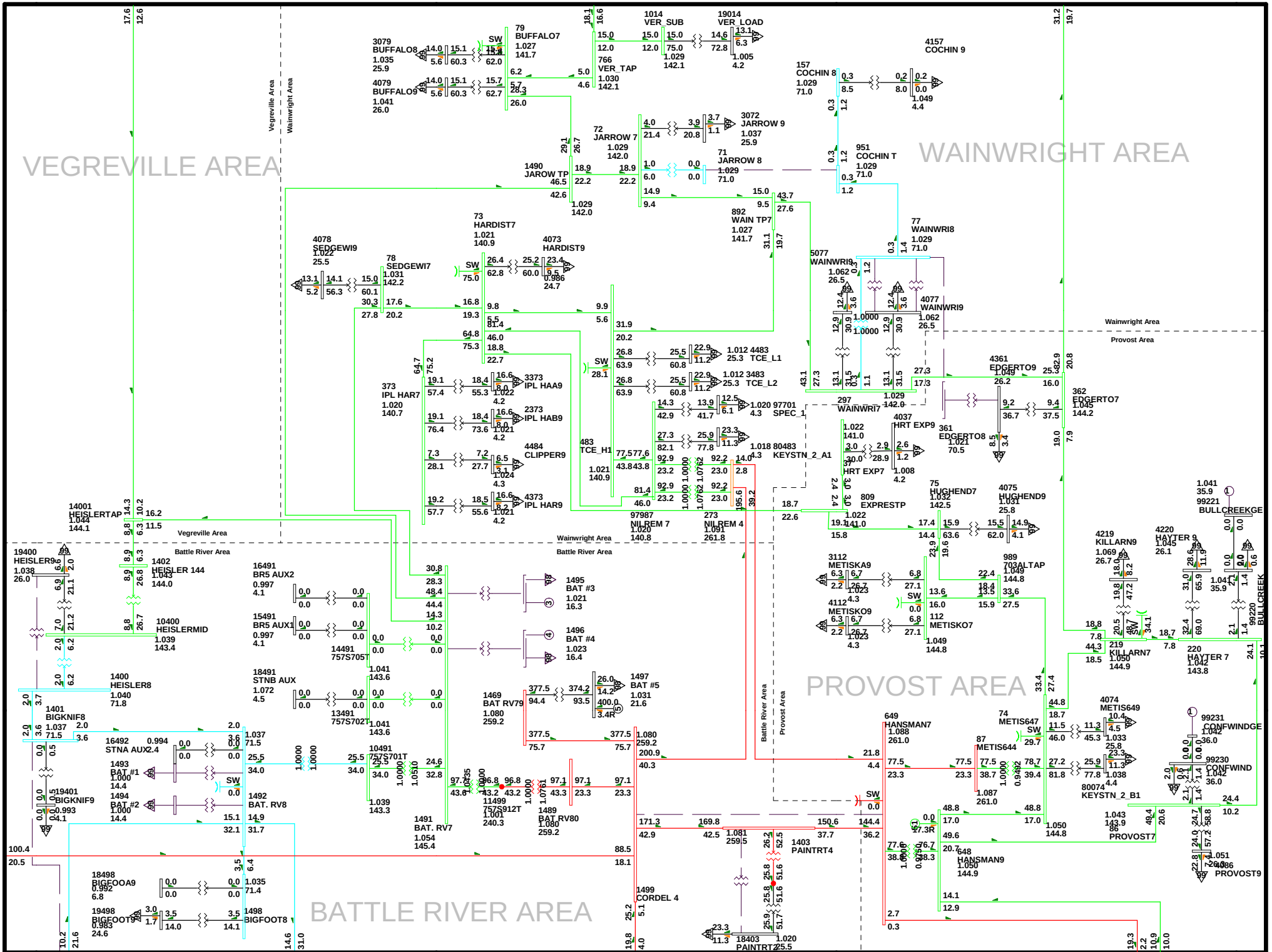
100.0%RATE A
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 09 2010 10:58
D1-36

2012SP-Alt 2 BR#5 ON-14.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

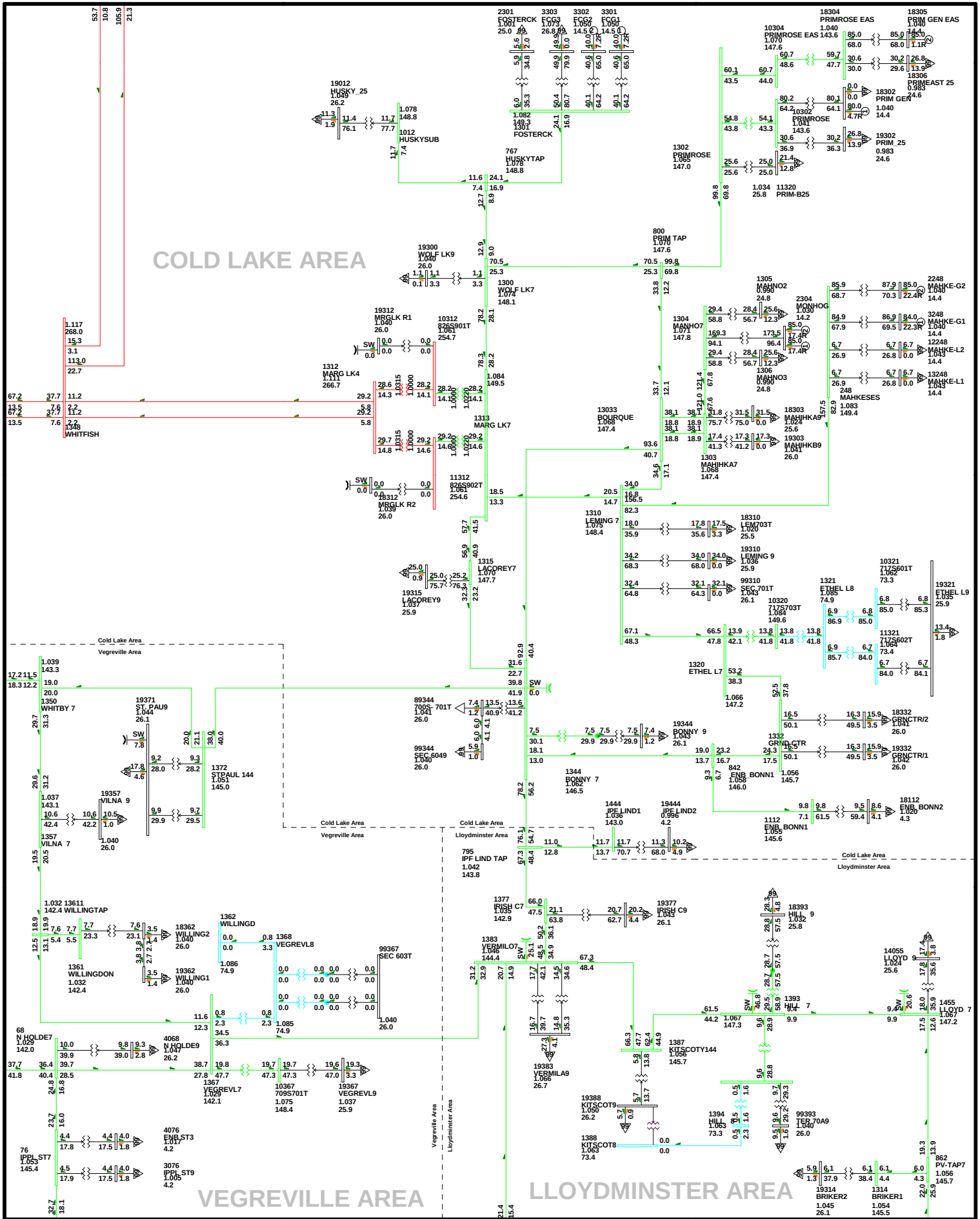


CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 09 2010 10:58
D1-36

2012SP-Alt 2 BR#5 ON-14.b

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar

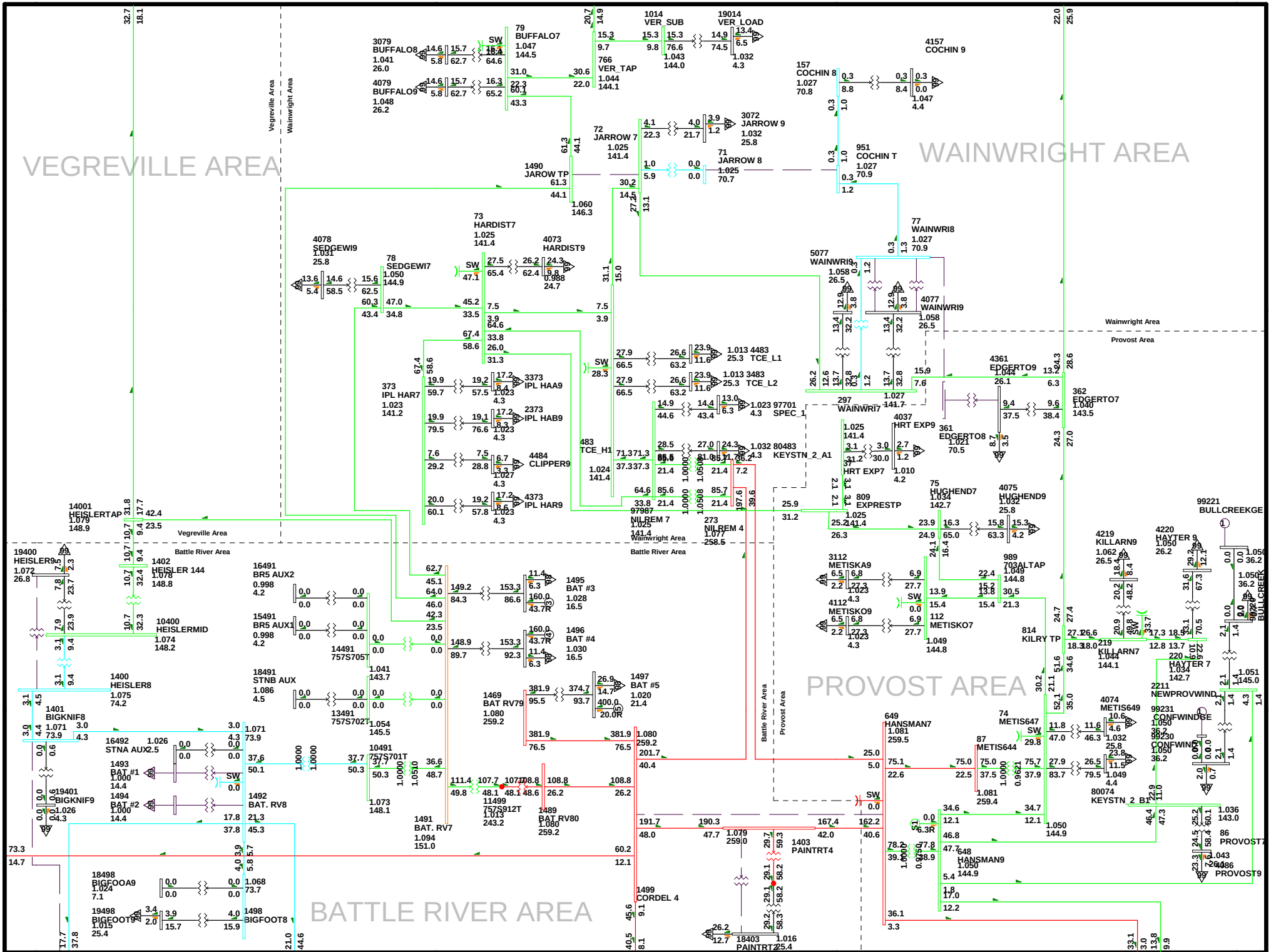
100.0%RATE A
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

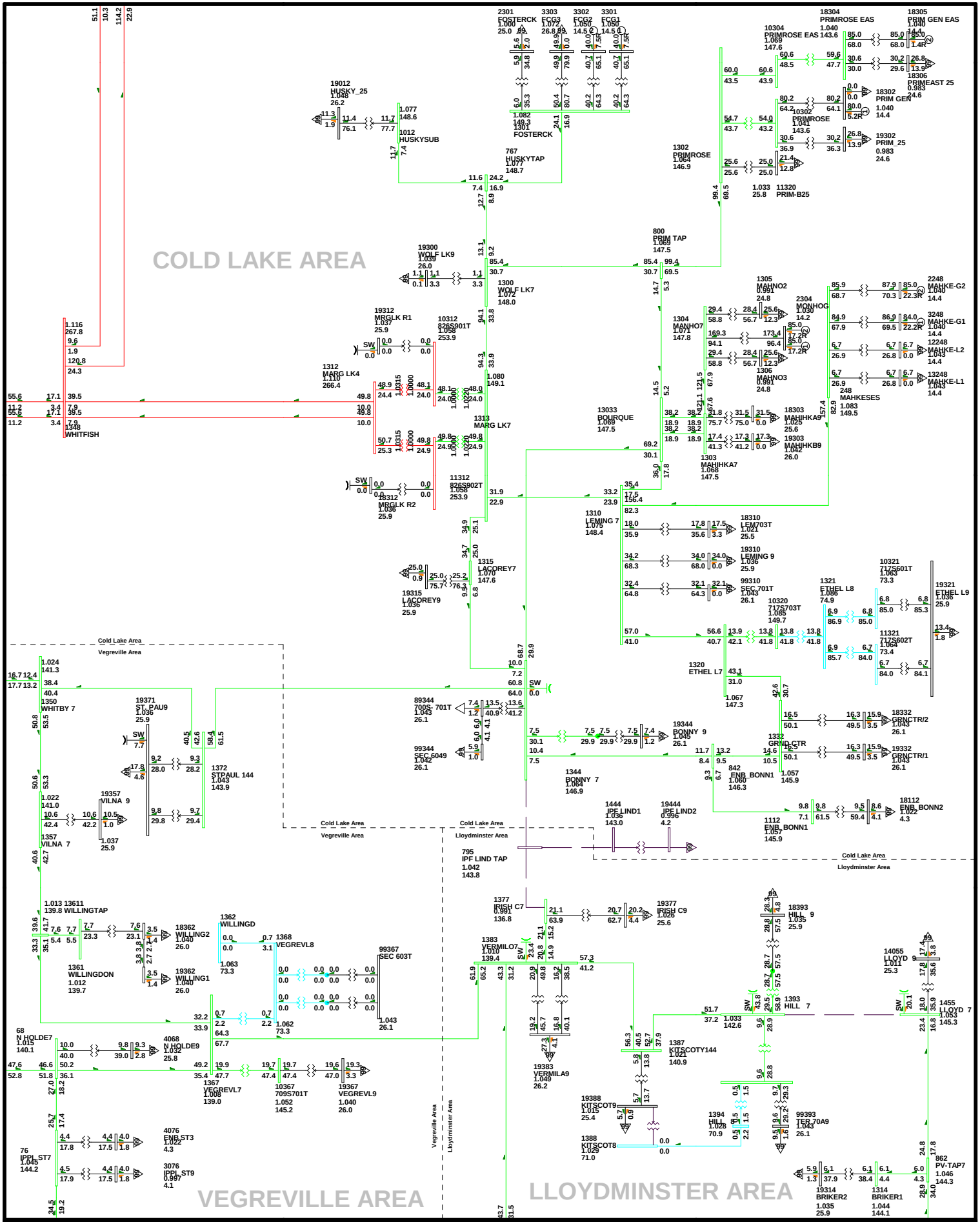


CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
MON, APR 12 2010 10:41
D1-00

2012WP-Alt 3 BR#5 ON-1.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

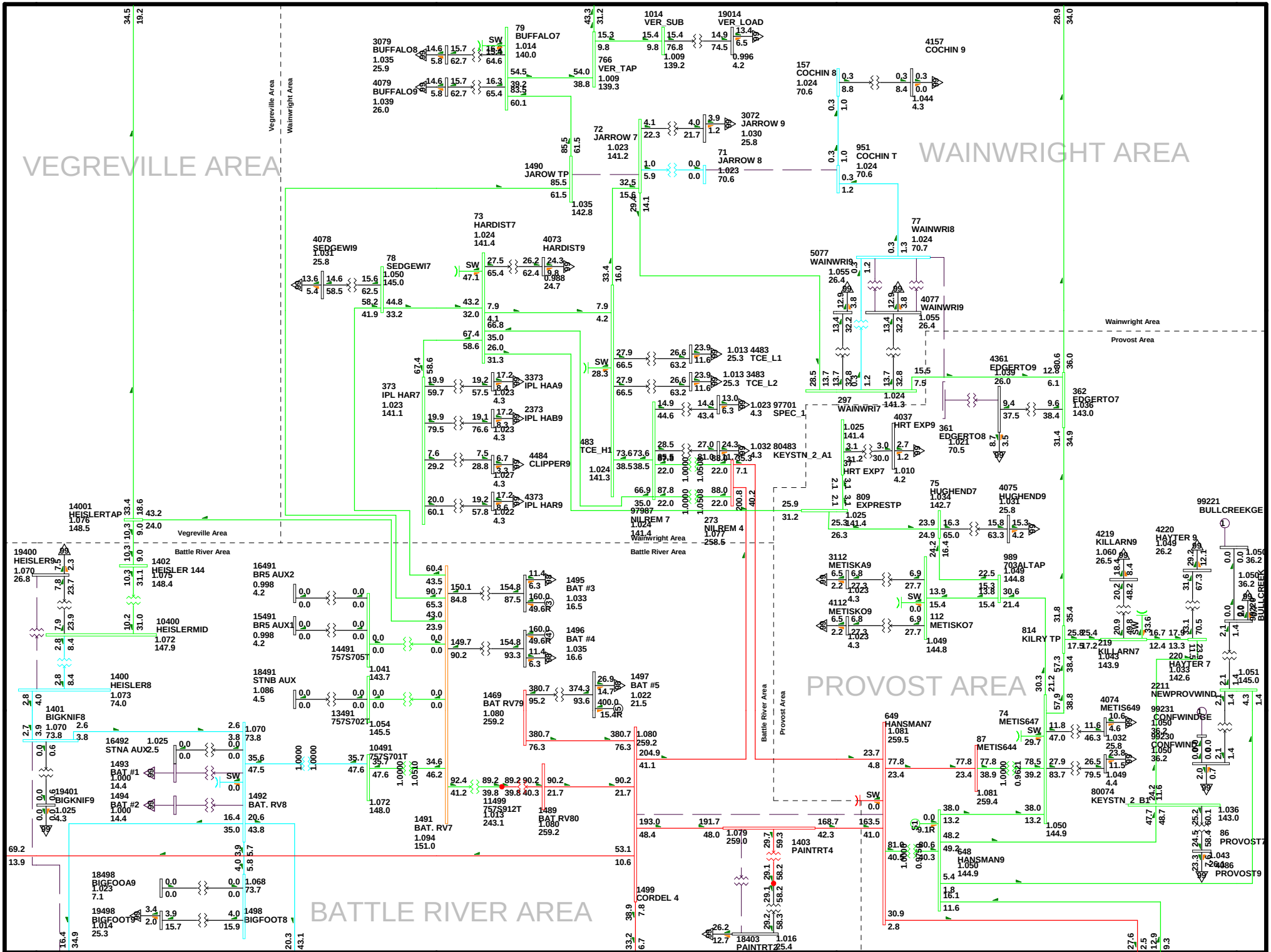

VEGREVILLE AREA
WAINWRIGHT AREA
PROVOST AREA
BATTLE RIVER AREA
Vegreville Area
Wainwright Area
Battle River Area
Provost Area
3079 BUFFALO8 1.041 26.0
4079 BUFFALO9 1.048 26.2
79 BUFFALO7 1.047 144.5
766 VER_TAP 1.044 144.1
1014 VER_SUB
19014 VER_LOAD
4157 COCHIN 9
157 COCHIN 8 1.027 70.8
951 COCHIN T 1.027 70.9
1047 4.4
3072 JARROW 9 1.032 25.8
72 JARROW 7 1.025 141.4
71 JARROW 8 1.025 70.7
1490 JAROW TP 61.3 44.1
1.060 146.3
4078 SEDGEWI9 1.031 25.8
78 SEDGEWI7 1.050 144.9
73 HARDIST7 1.025 141.4
4073 HARDIST9 0.988 24.7
77 WAINWRI8 1.027 70.9
5077 WAINWRI9 1.058 26.5
4077 WAINWRI9 1.058 26.5
297 WAINWRI7 1.027 141.7
4361 EDGERTO9 1.044 26.1
362 EDGERTO7 1.040 143.5
361 EDGERTO8 1.021 70.5
4037 HRT EXP9
HRT EXP7 1.010 4.2
373 IPL HAR7 1.023 141.2
3373 IPL HAA9 1.023 4.3
2373 IPL HAB9 1.023 4.3
4484 CLIPPER9 1.027 4.3
4373 IPL HAR9 1.023 4.3
1.013 4483 25.3 TCE_L1
1.013 3483 25.3 TCE_L2
483 TCE_H1 1.024 141.4
1.023 97701 SPEC_1 4.3
1.032 80483 KEYSTN_2_A1 4.3
97987 NIL REM 7 1.025 141.4
273 NIL REM 4 1.077 258.5
809 EXPRESTP 1.025 141.4
75 HUGHEND7 1.034 142.7
4075 HUGHEND9 1.032 25.8
14001 HEISLERTAP 1.079 148.9
19400 HEISLER9 1.072 26.8
1402 HEISLER 144 1.076 148.8
10400 HEISLERMID 1.074 148.2
1400 HEISLER8 1.075 74.2
1401 BIGKNIF8 1.071 73.9
19401 BIGKNIF9 1.026 4.3
16491 BR5 AUX2 0.998 4.2
15491 BR5 AUX1 0.998 4.2
14491 757S705T 1.041 143.7
18491 STNB AUX 1.086 4.5
13491 757S702T 1.054 145.5
16492 STNA AUX 1.026 2.5
10491 757S701T 1.073 148.1
1493 BAT #1 1.000 14.4
1494 BAT #2 1.000 14.4
1492 BAT. RV8 21.3
18498 BIGFOOA9 1.024 7.1
19498 BIGFOOT9 1.019 25.4
1498 BIGFOOT8 1.068 73.7
1491 BAT. RV7 1.094 151.0
1495 BAT #3 1.028 16.5
1496 BAT #4 1.030 16.5
1497 BAT #5 1.020 21.4
1469 BAT RV79 1.080 259.2
11499 757S912T 1.013 243.2
1489 BAT RV80 1.080 259.2
1499 CORDEL 4 1.080 259.2
1403 PAINTRT4 1.079 259.0
18403 PAINTRT 1.016 25.4
649 HANSMAN7 1.081 259.5
648 HANSMAN9 1.050 144.9
74 METIS647
87 METIS644 1.081 259.4
4074 METIS649 1.050 144.9
80074 KEYSTN_2_B1 1.049 4.4
3112 METISKA9
4112 METISKO9 1.023 4.3
112 METISKO7 1.049 144.8
989 703ALTAP 1.049 144.8
814 KILRY TP
219 KILLARN7 1.044 144.1
4219 KILLARN9 1.062 26.5
4220 HAYTER 9 1.050 26.2
220 HAYTER 7 1.034 142.7
2211 NEWPROVWIND 1.050 36.2
99231 CONFWINDGE 1.050 36.2
99230 CONFWIND2 1.050 36.2
99221 BULLCREEKGE
BULLCREEK
86 PROVOST7 1.036 143.0
4086 PROVOST9 1.043 143.0
CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
MON, APR 12 2010 10:41
D1-00
2012WP-Alt 3 BR#5 ON-1.b
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090V 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
MON, APR 12 2010 10:41
D1-20

2012WP-Alt 3 BR#5 ON-2.a

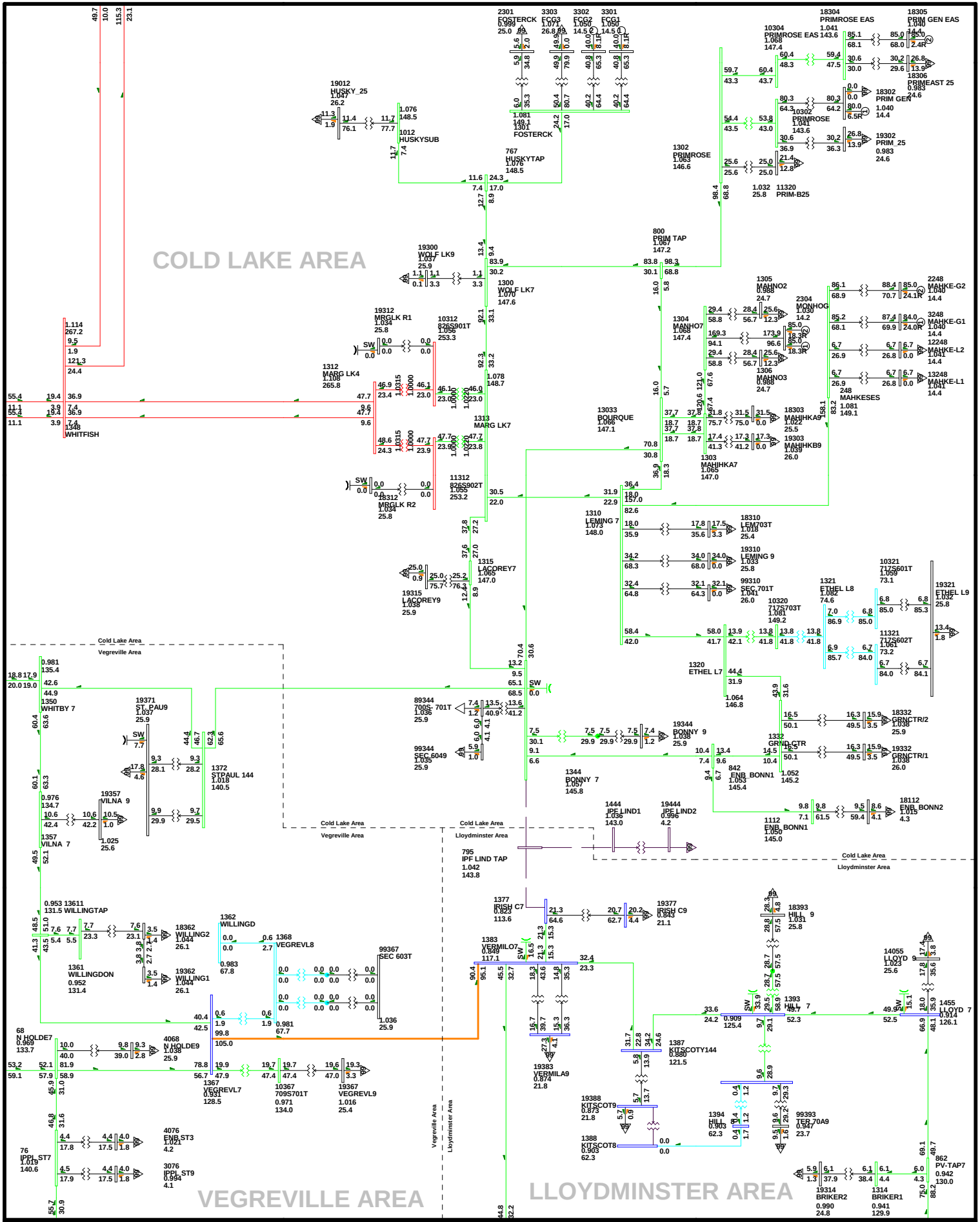
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
MON, APR 12 2010 10:41
D1-20

2012WP-Alt 3 BR#5 ON-2.b

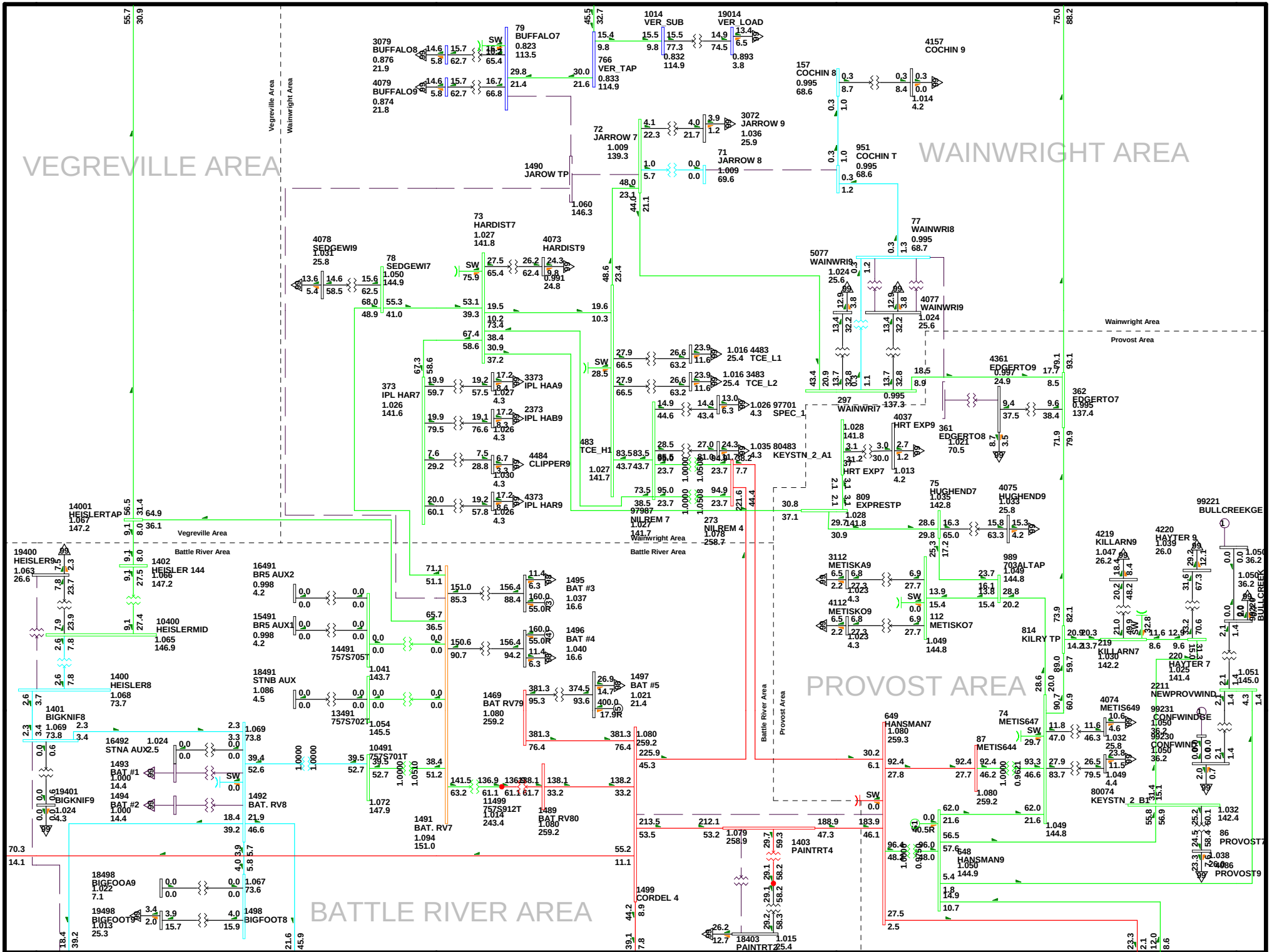
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090V 0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
MON, APR 12 2010 10:41
D1-21

2012WP-Alt 3 BR#5 ON-3.a

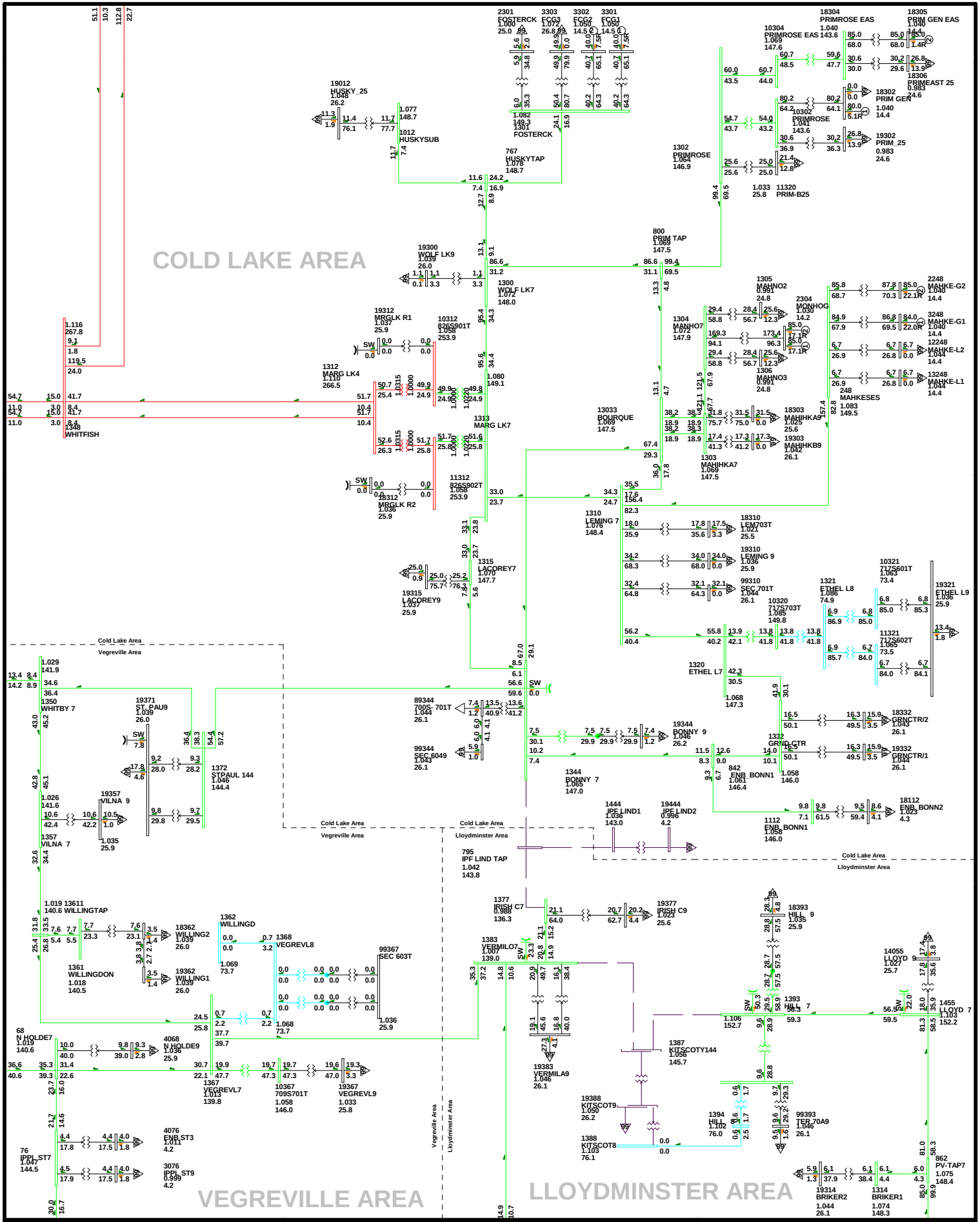
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
MON, APR 12 2010 10:41
D1-21

2012WP-Alt 3 BR#5 ON-3.b

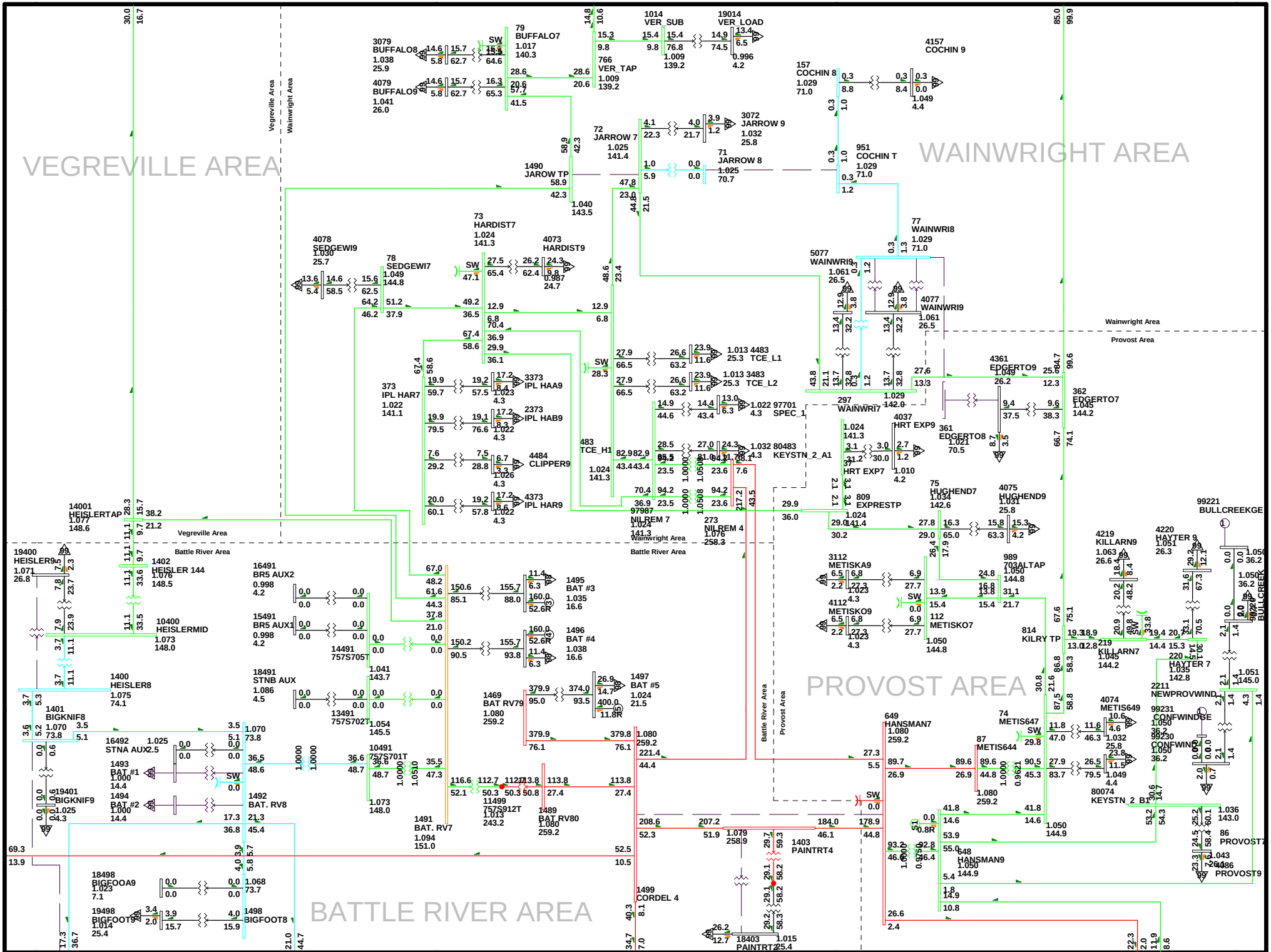
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090V 0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
MON, APR 12 2010 10:41
D1-22

2012WP-Alt 3 BR#5 ON-4.a

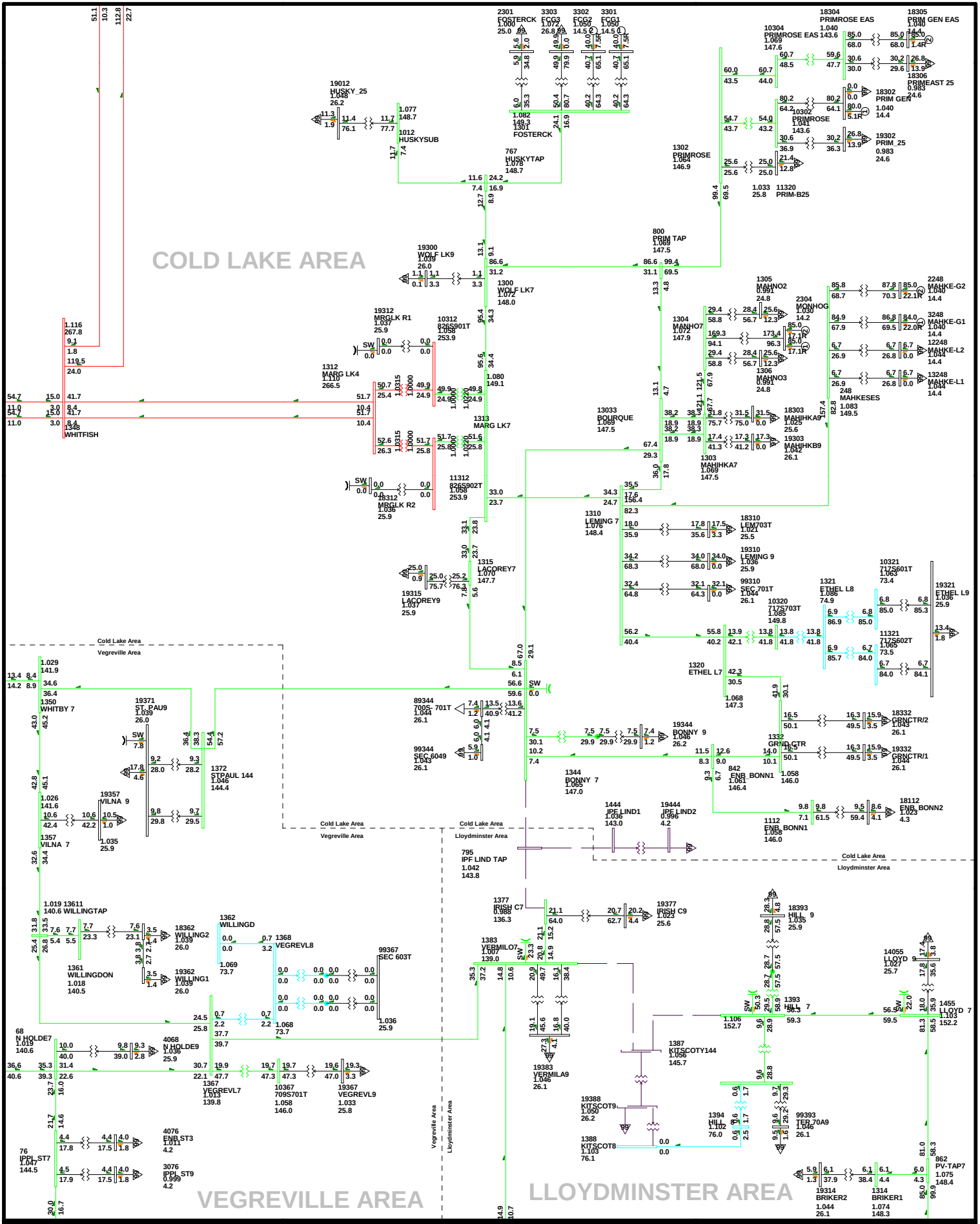
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
MON, APR 12 2010 10:41
D1-22

2012WP-Alt 3 BR#5 ON-4.b

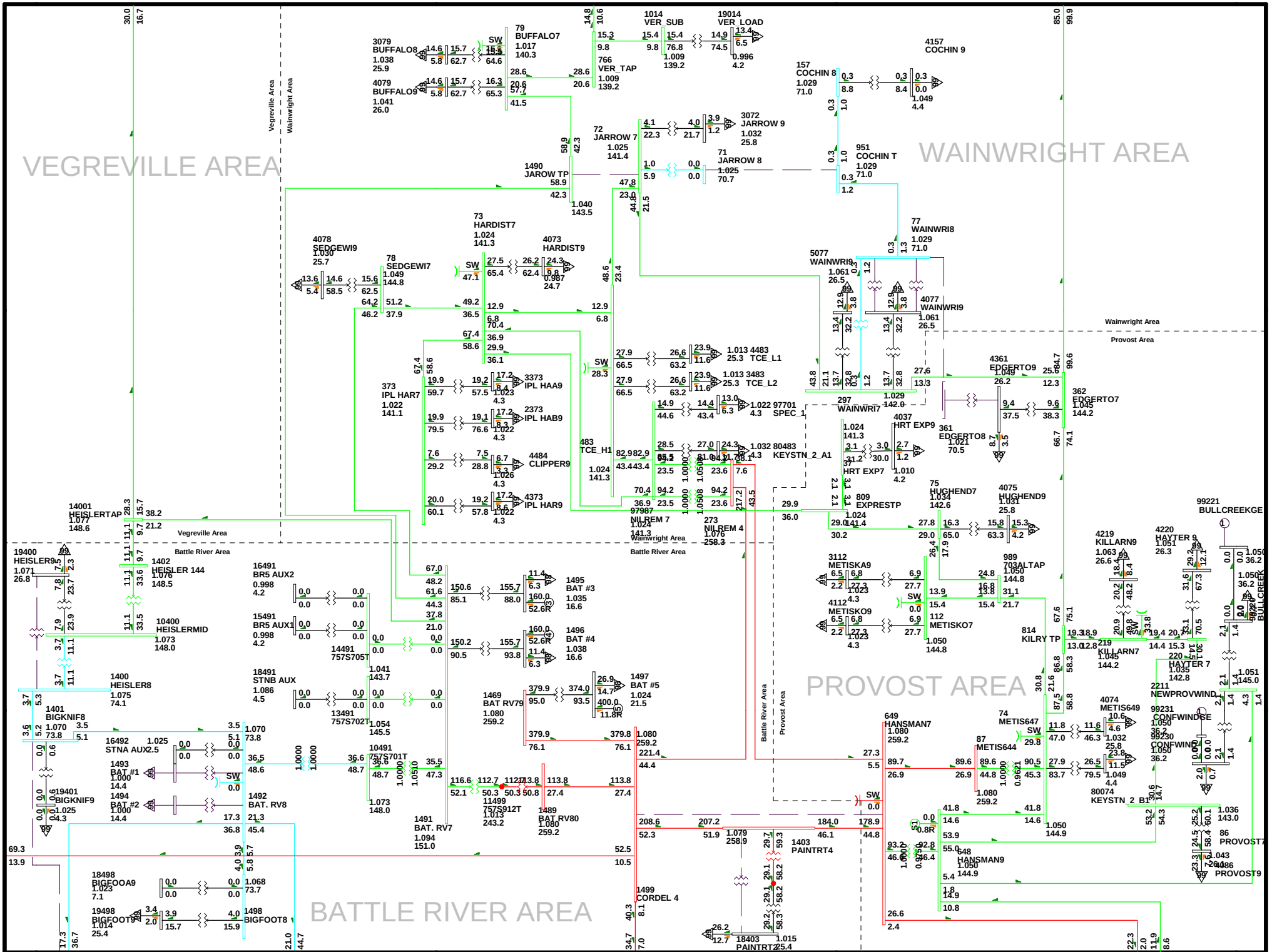
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090V 0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
MON, APR 12 2010 10:41
D1-23

2012WP-Alt 3 BR#5 ON-5.a

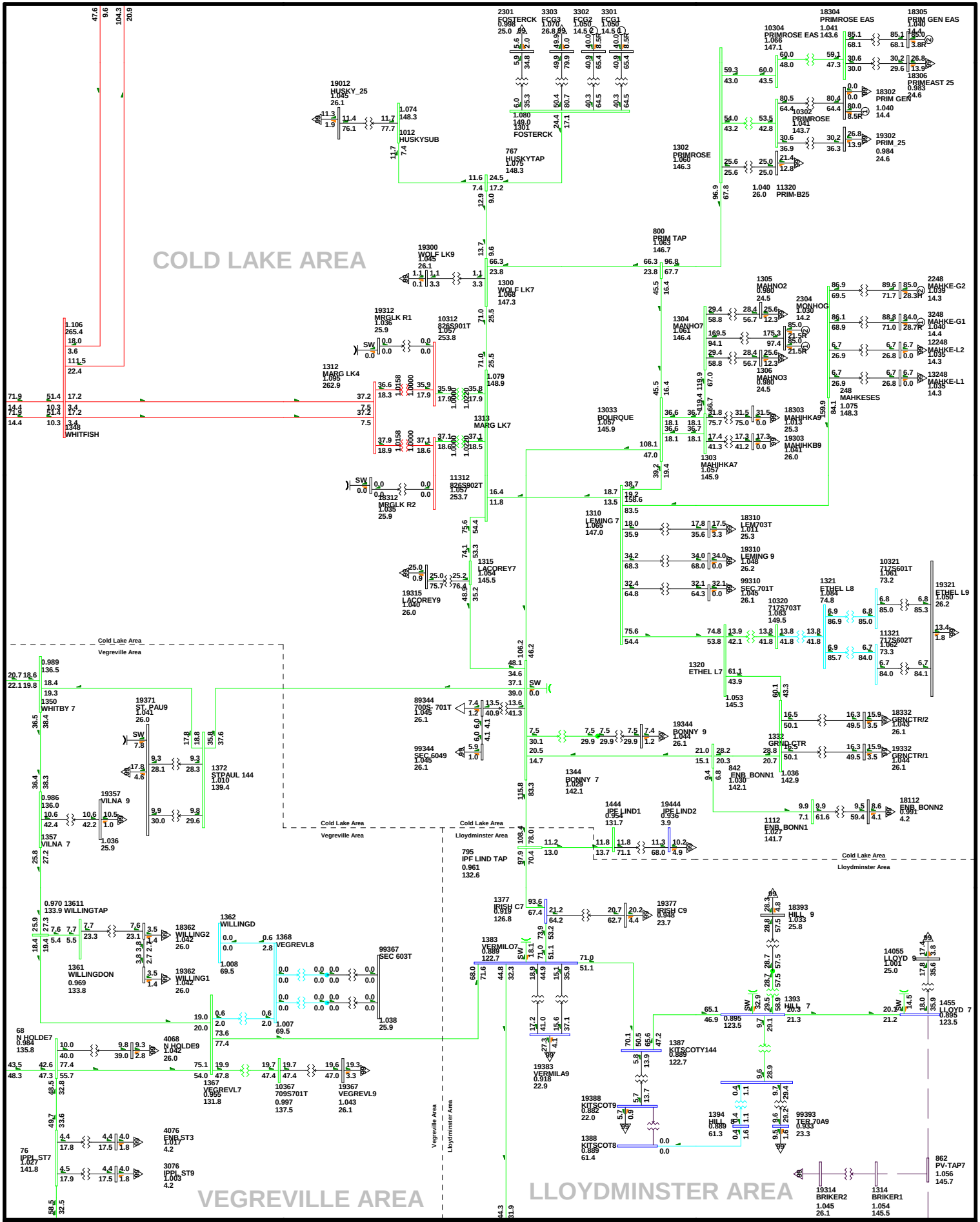
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
MON, APR 12 2010 10:42
D1-23

2012WP-Alt 3 BR#5 ON-5.b

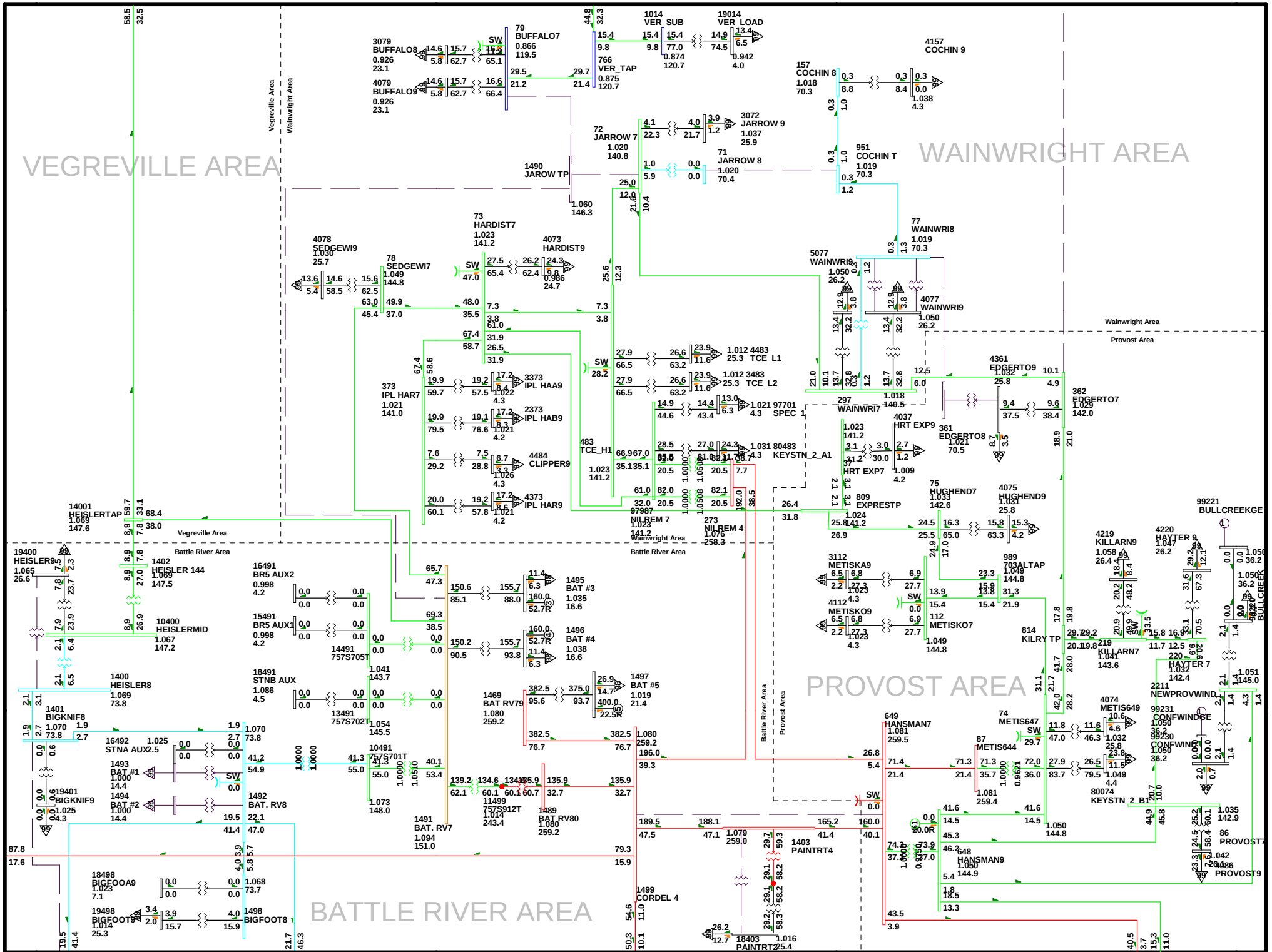
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090V0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
MON, APR 12 2010 10:42
D1-24

2012WP-Alt 3 BR#5 ON-6.a

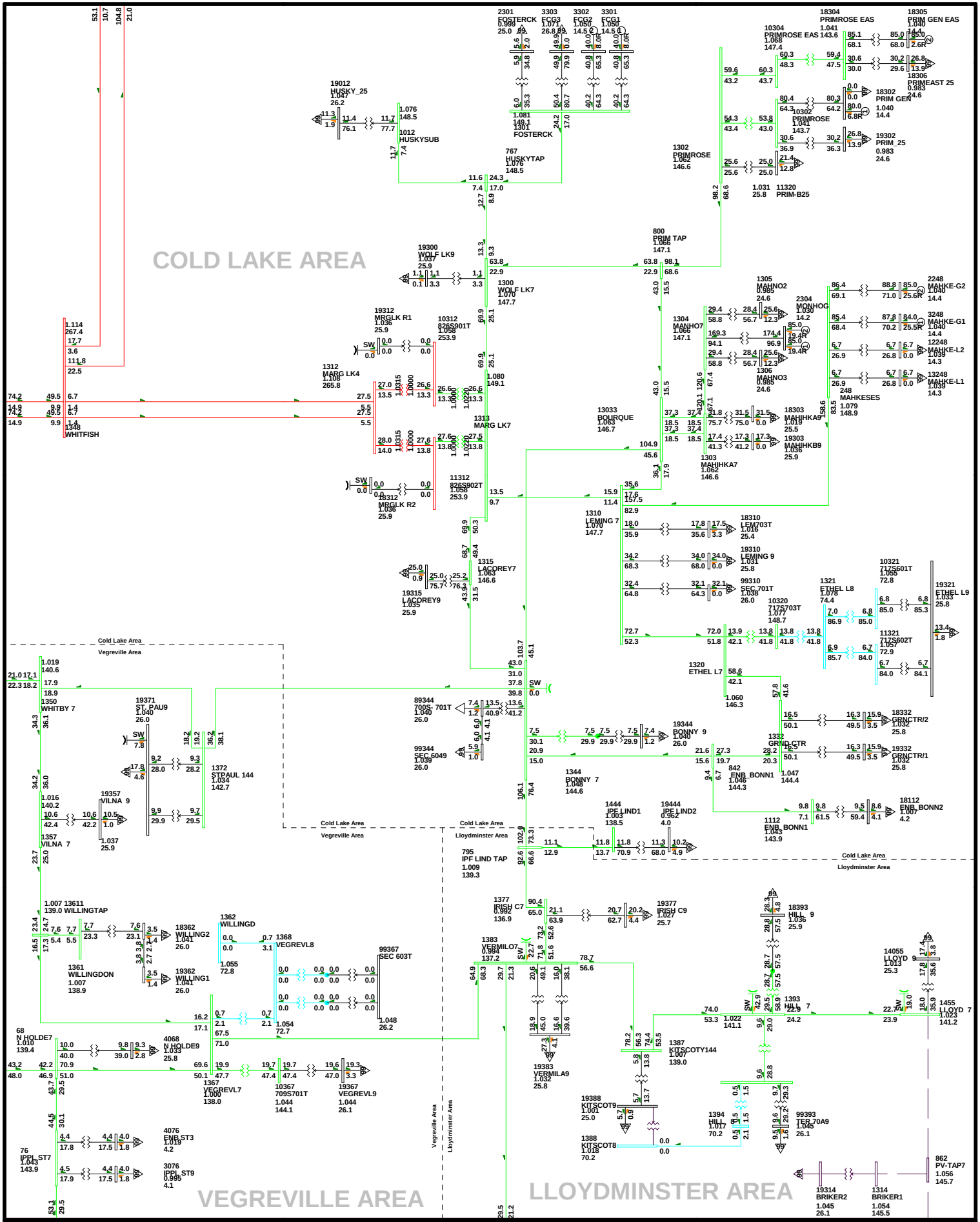
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
MON, APR 12 2010 10:42
D1-24

2012WP-Alt 3 BR#5 ON-6.b

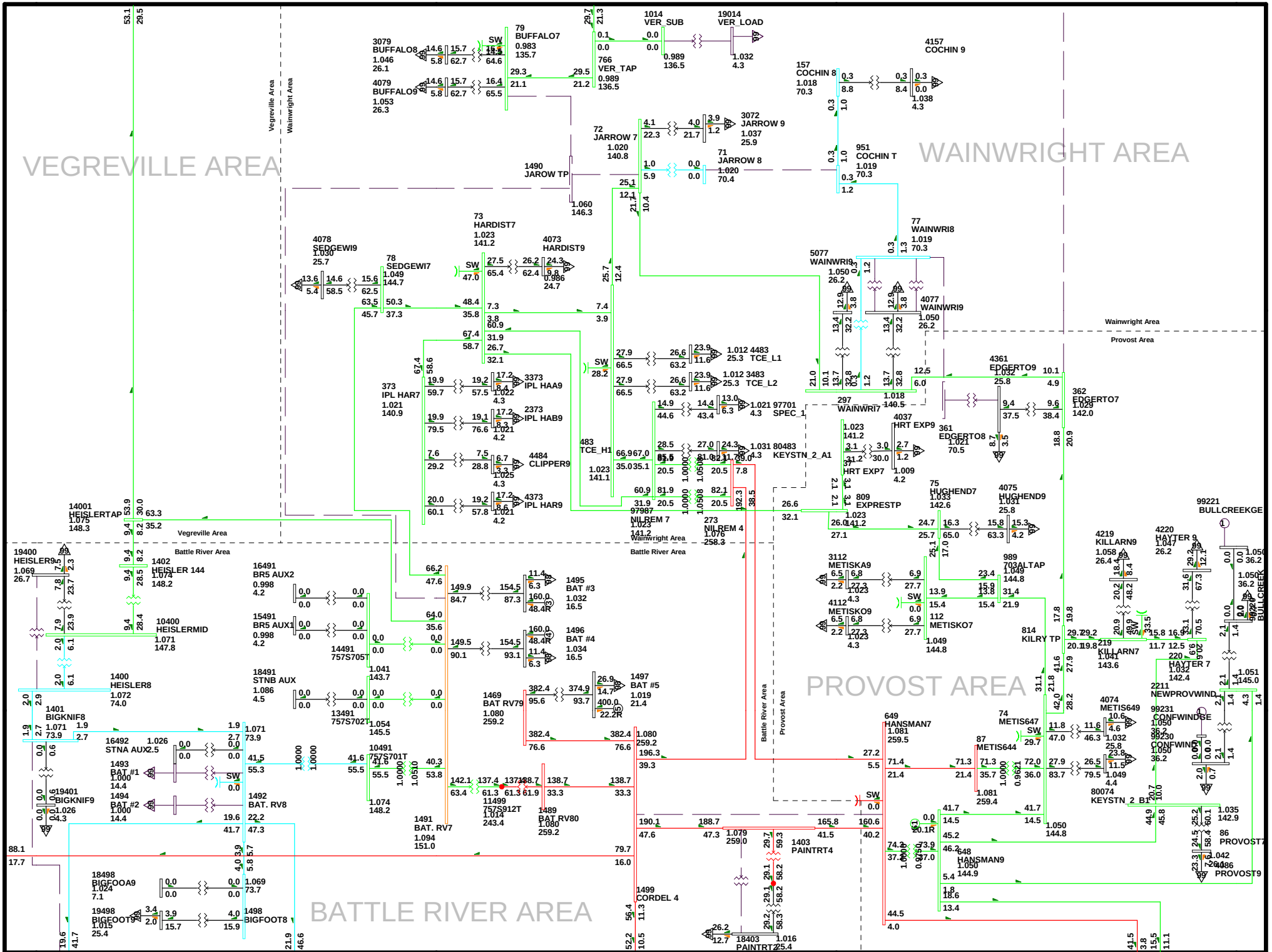
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090V 0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
MON, APR 12 2010 10:42
D1-24b

2012WP-Alt 3 BR#5 ON-7.a

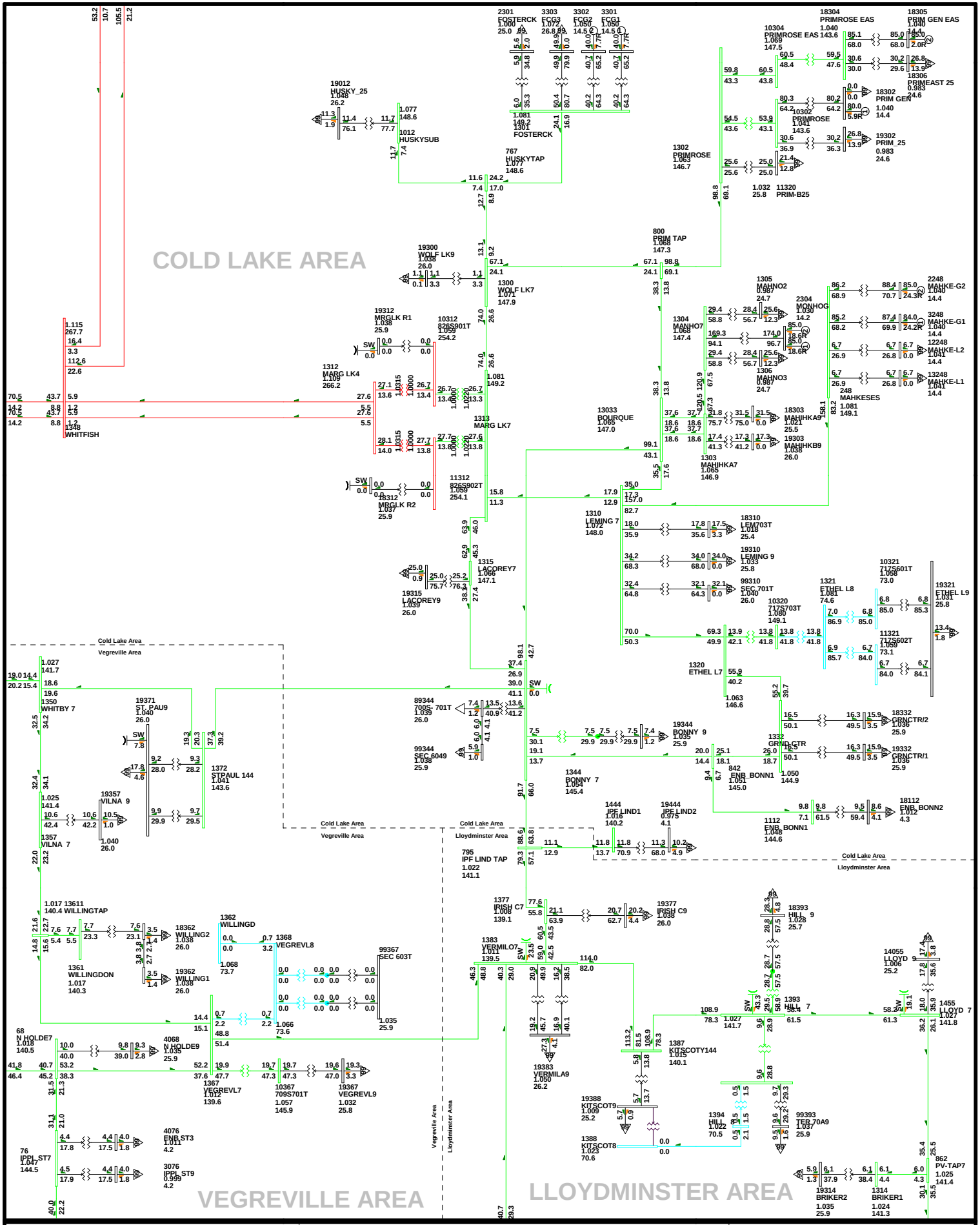
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
MON, APR 12 2010 10:42
D1-24b

2012WP-Alt 3 BR#5 ON-7.b

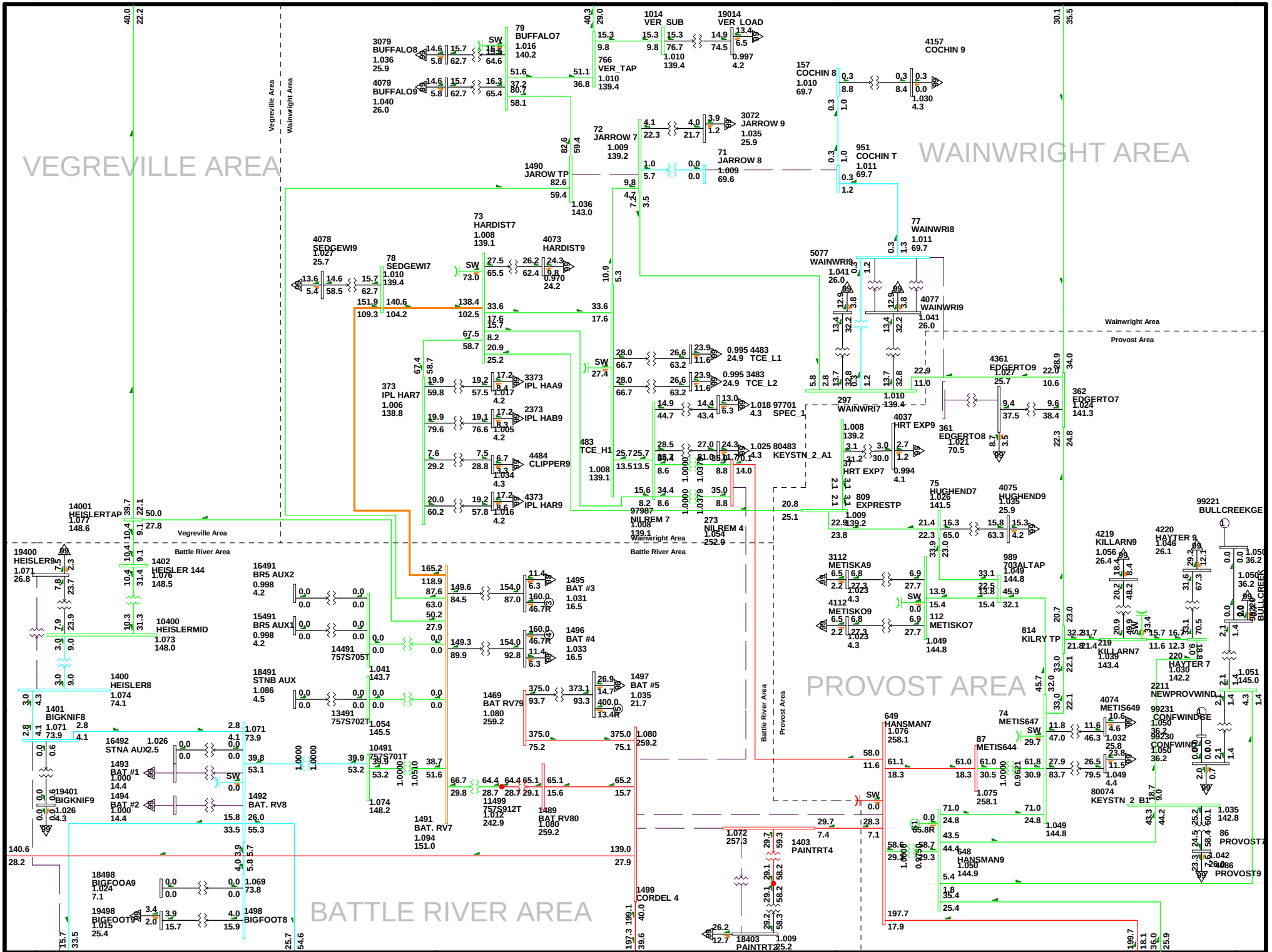
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.050V 0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000

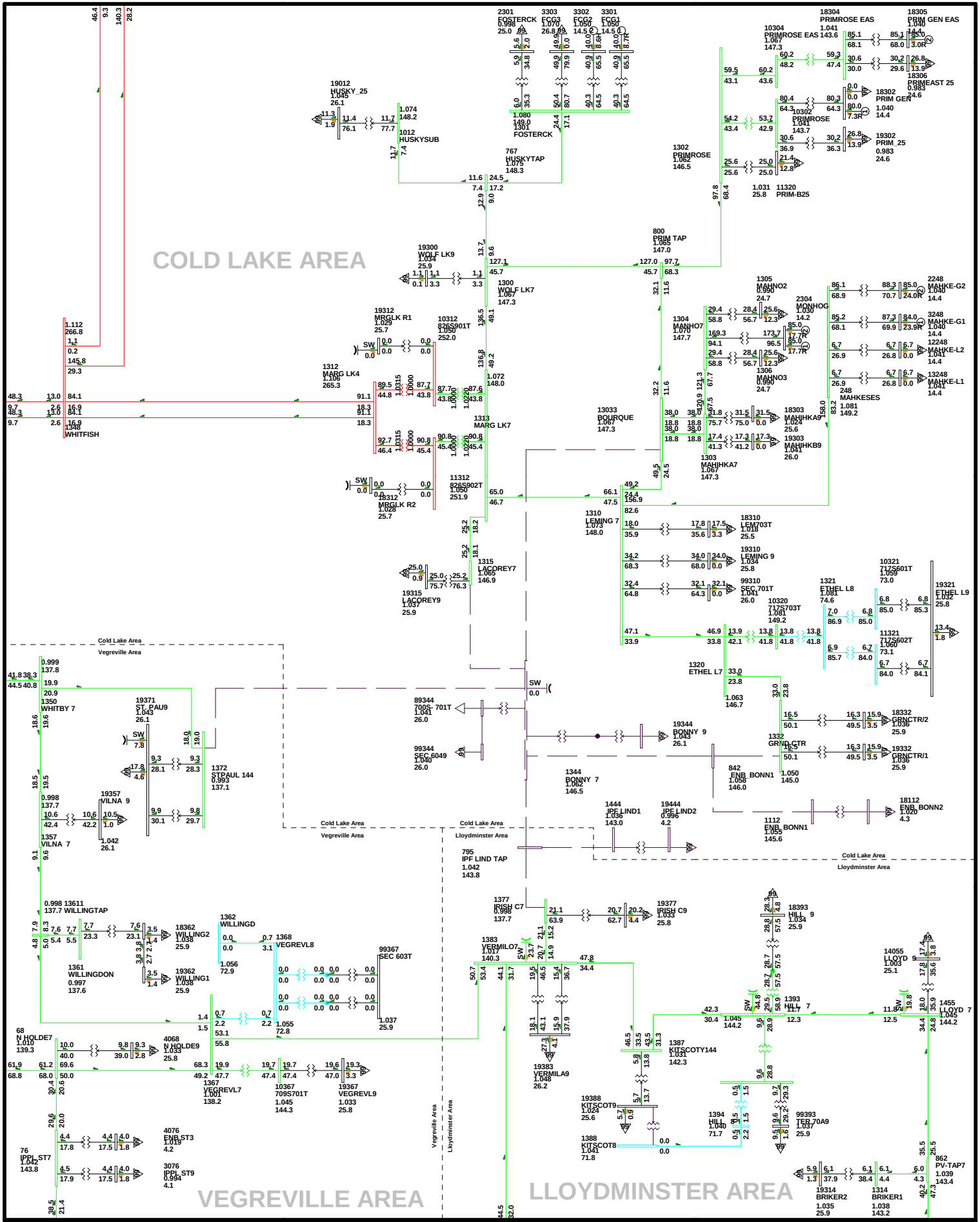


CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
MON, APR 12 2010 10:42
D1-26

2012WP-Alt 3 BR#5 ON-8.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

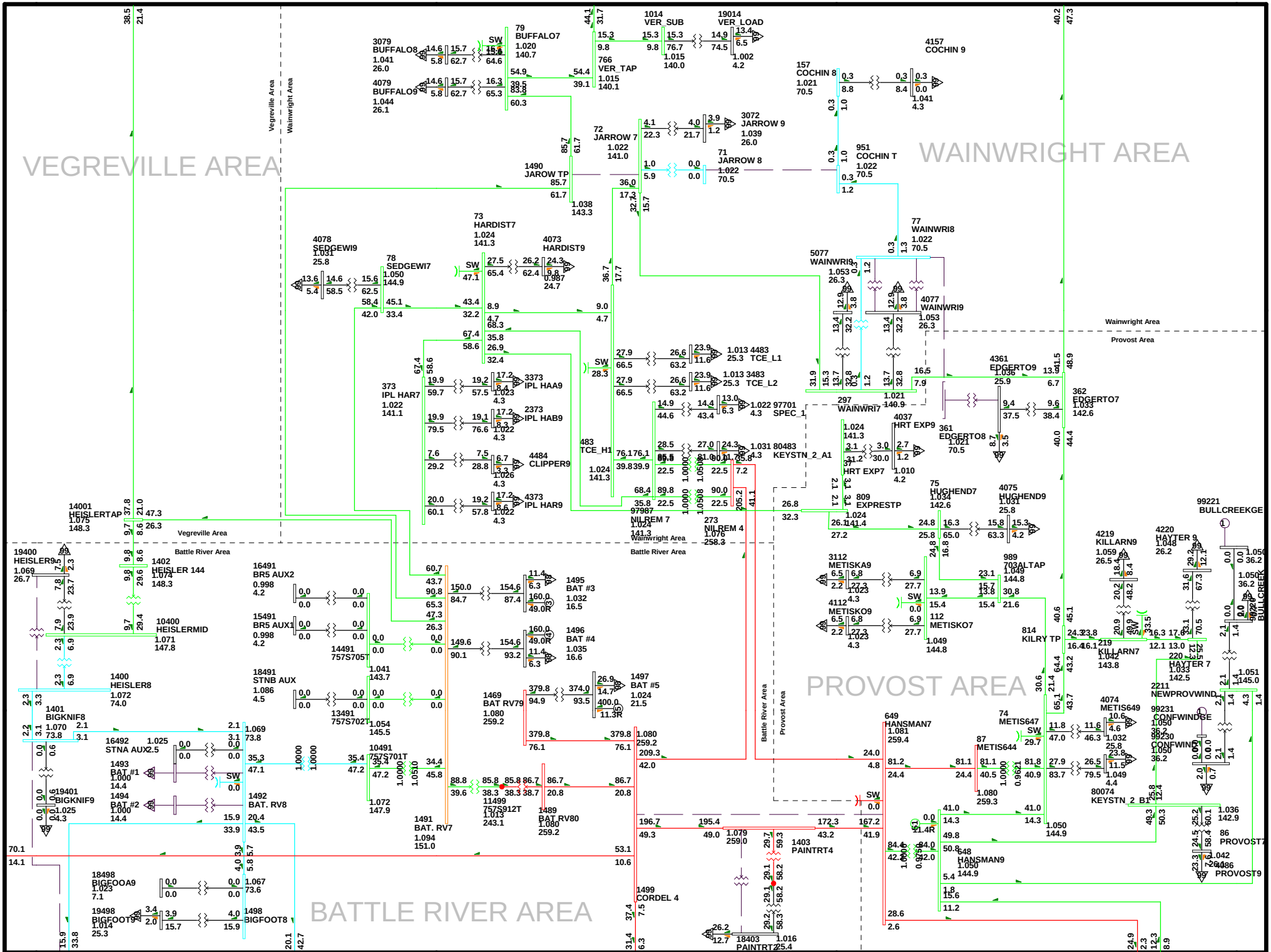

VEGREVILLE AREA
WAINWRIGHT AREA
PROVOST AREA
BATTLE RIVER AREA
Vegreville Area
Wainwright Area
Battle River Area
Provost Area
79 BUFFALO7 1.016 140.2
3079 BUFFALO8 1.036 25.9
4079 BUFFALO9 1.040 26.0
766 VER_TAP 1.010 139.4
1014 VER_SUB
19014 VER_LOAD
4157 COCHIN 9
157 COCHIN 8 1.010 69.7
951 COCHIN T 1.011 69.7
1030 4.3
72 JARROW 7 1.009 139.2
3072 JARROW 9 1.035 25.9
71 JARROW 8 1.009 69.6
1490 JAROW TP 82.6 59.4 1.036 143.0
77 WAINWRI8 1.011 69.7
5077 WAINWRI9 1.041 26.0
4077 WAINWRI9 1.041 26.0
297 WAINWRI7 1.010 139.4
4078 SEDGEWI9 1.027 25.7
78 SEDGEWI7 1.010 139.4
73 HARDIST7 1.008 139.1
4073 HARDIST9 0.970 24.2
4361 EDGERTO9 1.027 25.7
362 EDGERTO7 1.024 141.3
361 EDGERTO8 1.021 70.5
4037 HRT EXP9
HRT EXP7 1.008 139.2
0.994 4.1
373 IPL HAR7 1.006 138.8
3373 IPL HAA9 1.017 4.2
2373 IPL HAB9 1.005 4.2
4484 CLIPPER9 1.034 4.3
4373 IPL HAR9 1.016 4.2
483 TCE_H1 1.008 139.1
0.995 4483 24.9 TCE_L1
0.995 3483 24.9 TCE_L2
1.018 4.3 97701 SPEC_1
1.025 4.3 80483 KEYSTN_2_A1
97987 NIL REM 7 1.008 139.1
273 NIL REM 4 1.054 252.9
809 EXPRESTP 1.009 139.2
75 HUGHEND7 1.026 141.5
4075 HUGHEND9 1.035 25.9
3112 METISKA9 1.023 4.3
4112 METISKO9 1.023 4.3
112 METISKO7 1.049 144.8
989 703ALTAP 1.049 144.8
814 KILRY TP
4219 KILLARN9 1.056 26.4
219 KILLARN7 1.039 143.4
4220 HAYTER 9 1.046 26.1
220 HAYTER 7 1.030 142.2
99221 BULLCREEKGE
14001 HEISLERTAP 1.077 148.6
19400 HEISLER9 1.071 26.8
1402 HEISLER 144 1.076 148.5
10400 HEISLERMID 1.073 148.0
1400 HEISLER8 1.074 74.1
1401 BIGKNIF8 1.071 73.9
19401 BIGKNIF9 1.026 4.3
16491 BR5 AUX2 0.998 4.2
15491 BR5 AUX1 0.998 4.2
14491 757S705T 1.041 143.7
18491 STNB AUX 1.086 4.5
13491 757S702T 1.054 145.5
16492 STNA AUX 1.026 2.5
1493 BAT #1 1.000 14.4
1494 BAT #2 1.000 14.4
1492 BAT. RV8 1.071 73.9
10491 757S701T 1.074 148.2
1491 BAT. RV7 1.094 151.0
1495 BAT #3 1.031 16.5
1496 BAT #4 1.033 16.5
1497 BAT #5 1.035 21.7
1469 BAT RV79 1.080 259.2
11499 757S912T 1.012 242.9
1489 BAT RV80 1.080 259.2
1499 CORDEL 4 1.080 259.2
18498 BIGFOOA9 1.024 7.1
19498 BIGFOOT9 1.015 25.4
1498 BIGFOOT8 1.069 73.8
649 HANSMAN7 1.076 258.1
74 METIS647
87 METIS644 1.075 258.1
4074 METIS649 1.032 25.8
80074 KEYSTN_2_B1 1.049 4.4
648 HANSMAN9 1.050 144.9
1403 PAINTRT4 1.072 257.3
18403 PAINTRT2 1.009 25.2
2211 NEWPROVWIND 1.050 36.2
99231 CONFWINDGE 1.050 36.2
99230 CONFWIND 1.050 36.2
86 PROVOST7 1.035 142.8
1086 PROVOST9 1.042 142.6
CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
MON, APR 12 2010 10:42
D1-26
2012WP-Alt 3 BR#5 ON-8.b
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090V/0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
MON, APR 12 2010 10:42
D1-27

2012WP-Alt 3 BR#5 ON-9.a

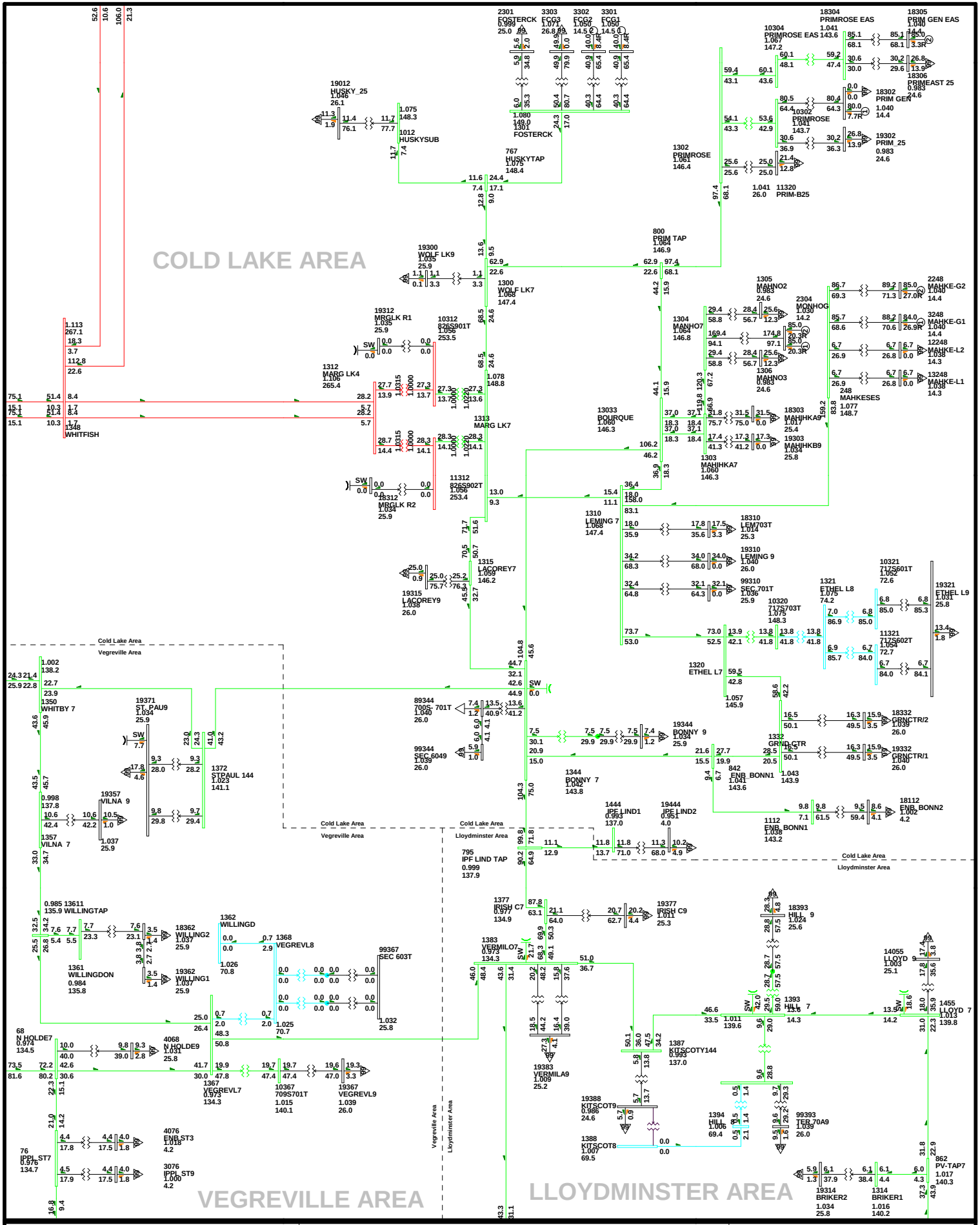
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
MON, APR 12 2010 10:42
D1-27

2012WP-Alt 3 BR#5 ON-9.b

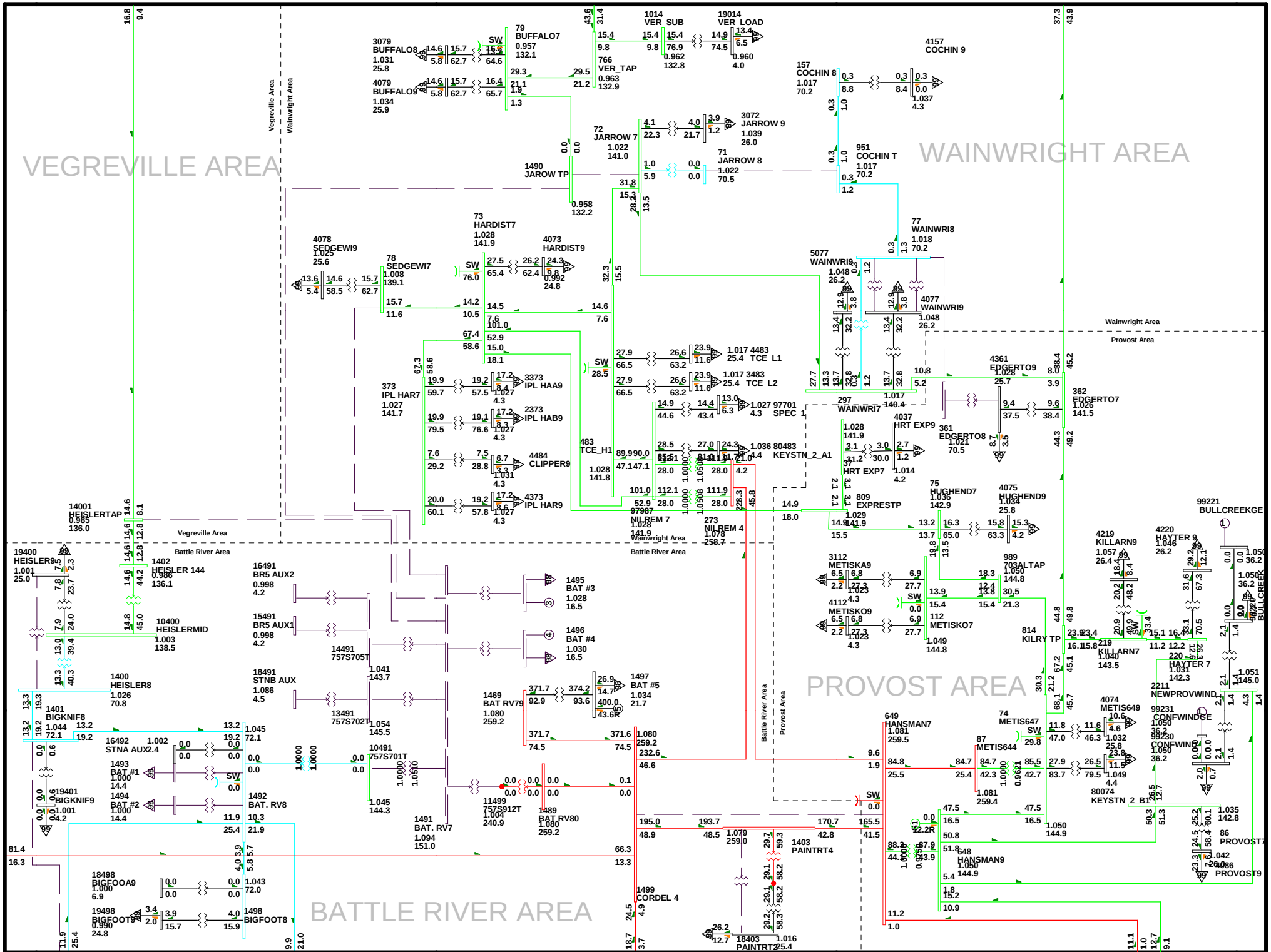
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090V 0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
MON, APR 12 2010 10:42
D1-28

2012WP-Alt 3 BR#5 ON-10.a

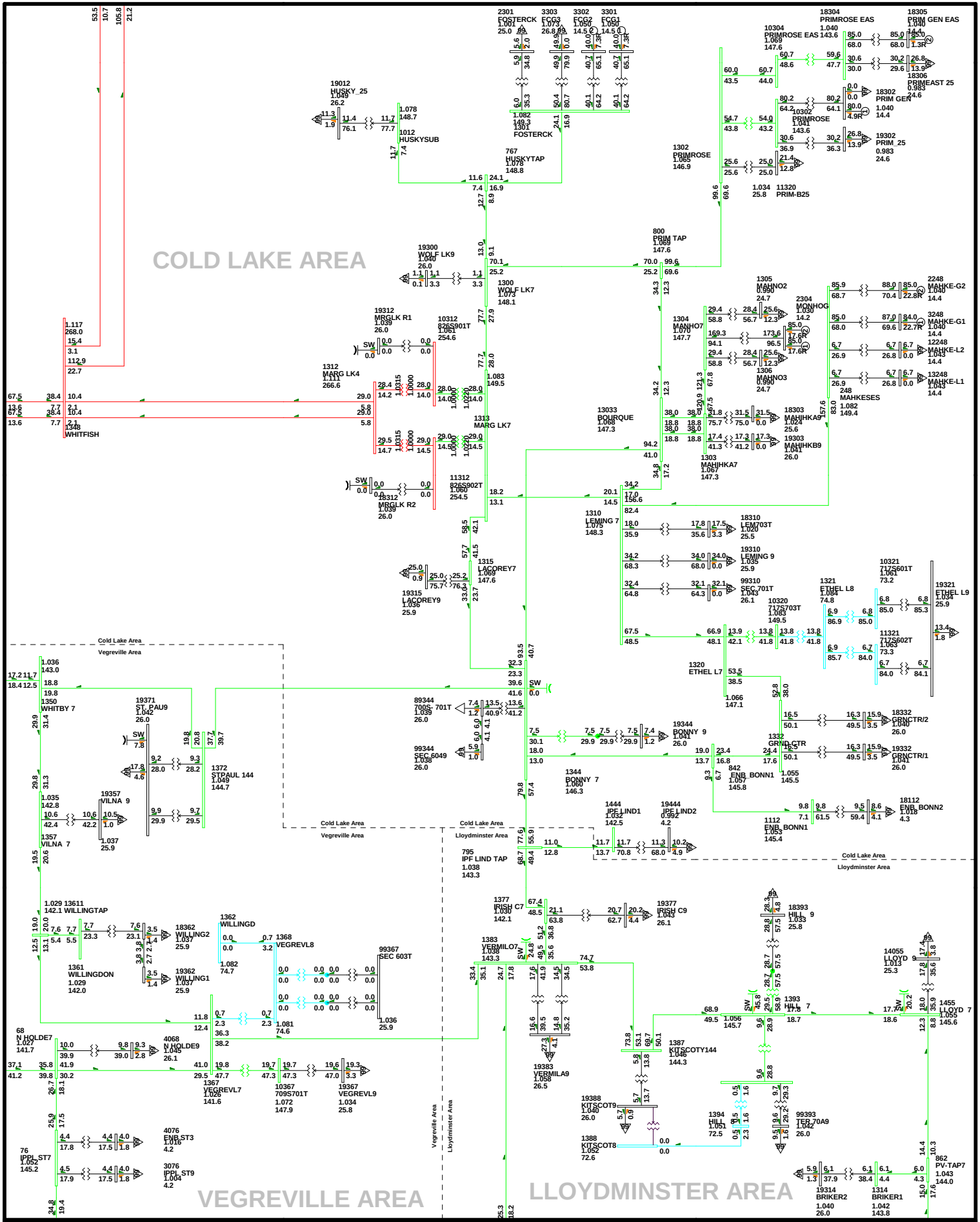
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
MON, APR 12 2010 10:42
D1-28

2012WP-Alt 3 BR#5 ON-10.b

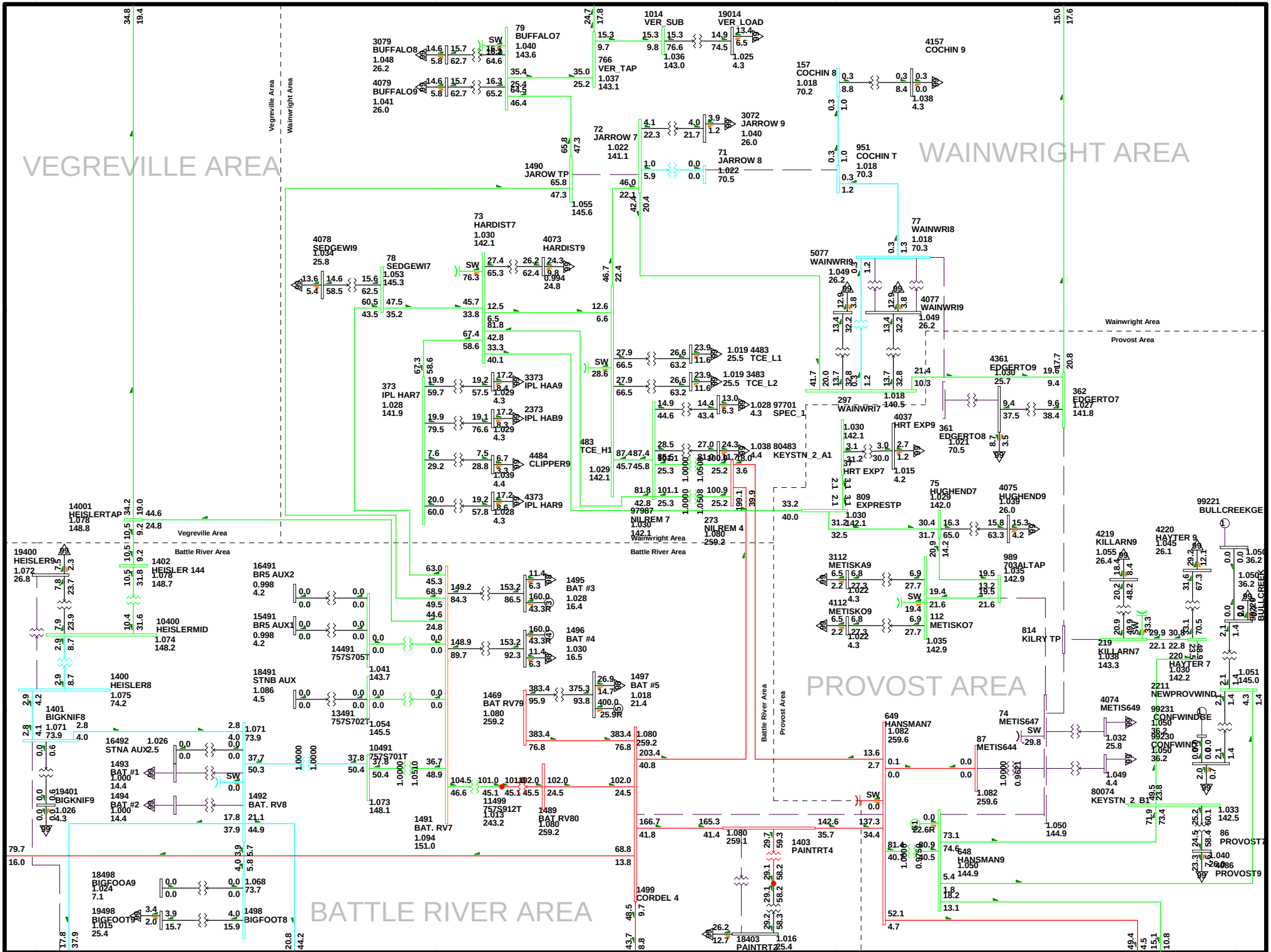
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090V 0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
MON, APR 12 2010 10:42
D1-29

2012WP-Alt 3 BR#5 ON-11.a

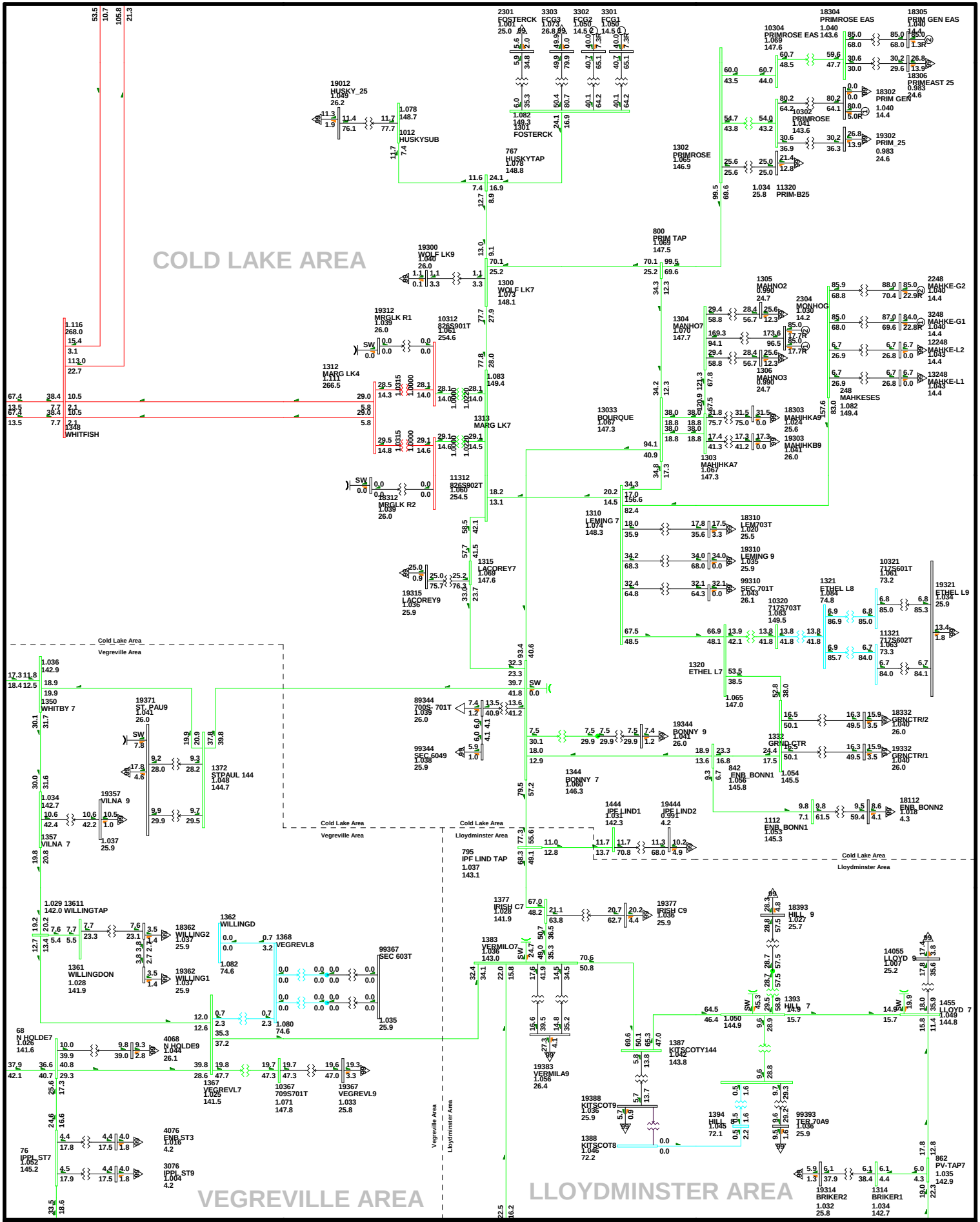
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
MON, APR 12 2010 10:42
D1-29

2012WP-Alt 3 BR#5 ON-11.b

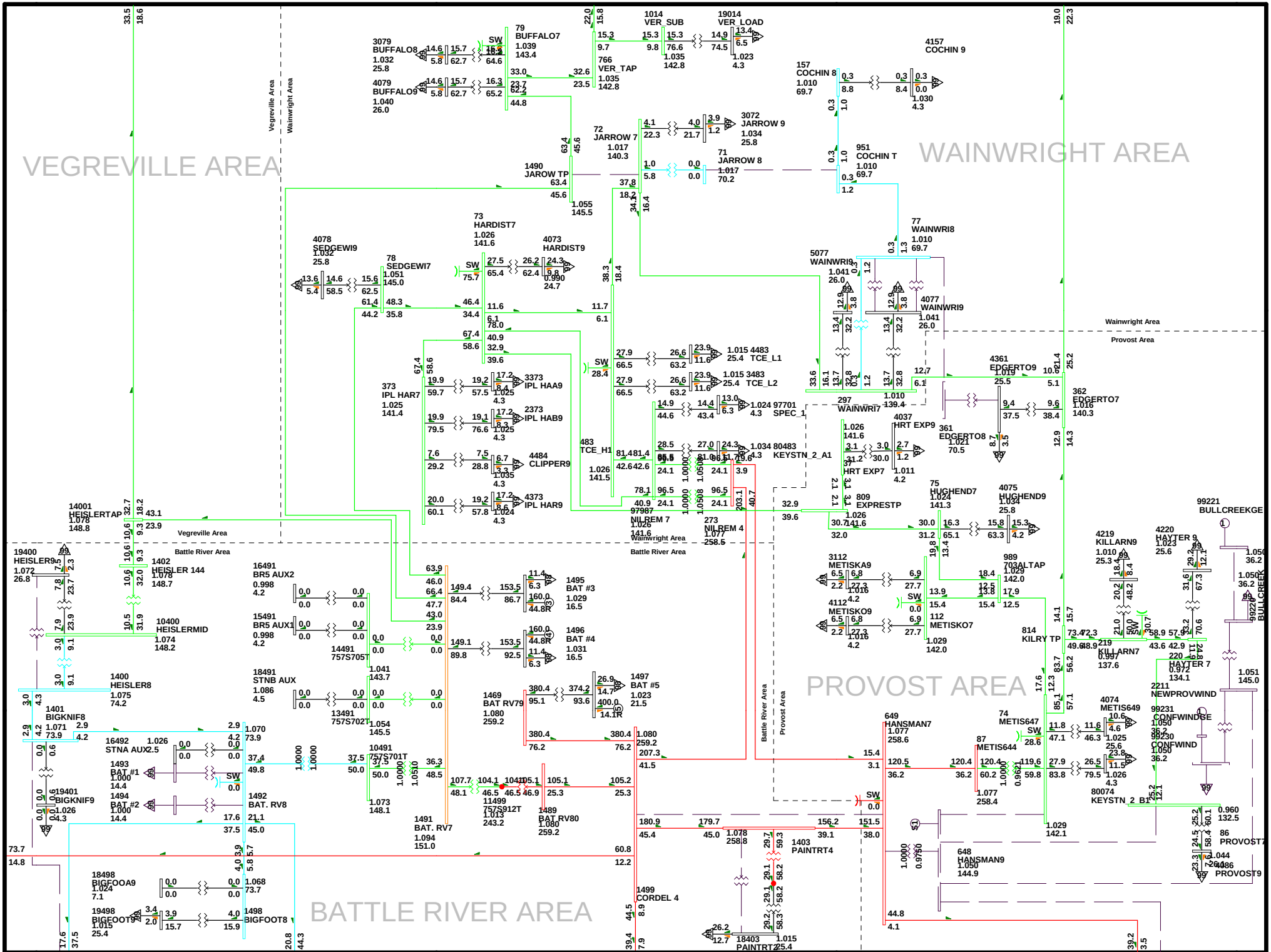
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090V 0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
MON, APR 12 2010 10:42
D1-30b

2012WP-Alt 3 BR#5 ON-12.a

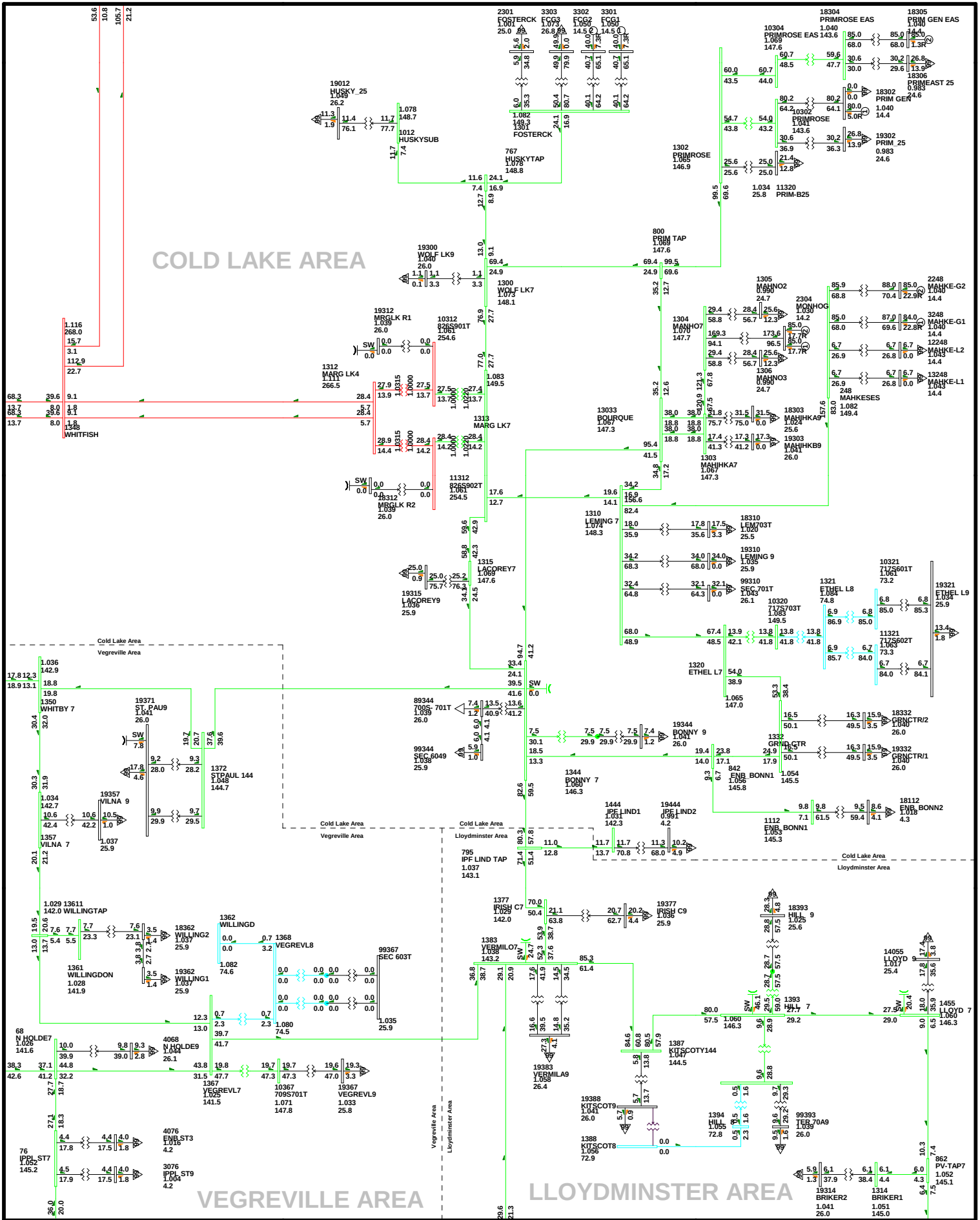
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
MON, APR 12 2010 10:42
D1-30b

2012WP-Alt 3 BR#5 ON-12.b

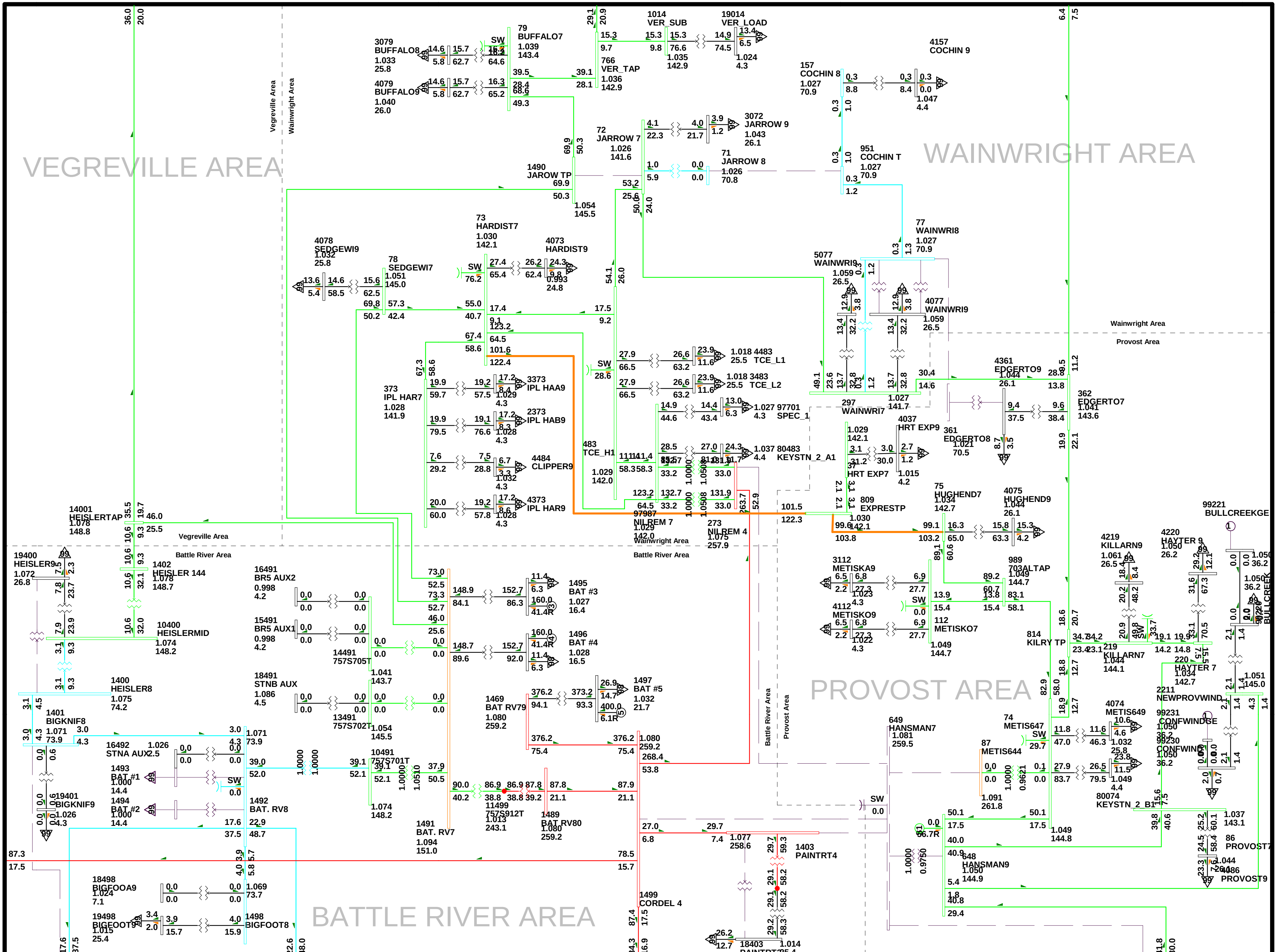
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090V/0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
MON, APR 12 2010 10:42
D1-31

2012WP-Alt 3 BR#5 ON-13.a

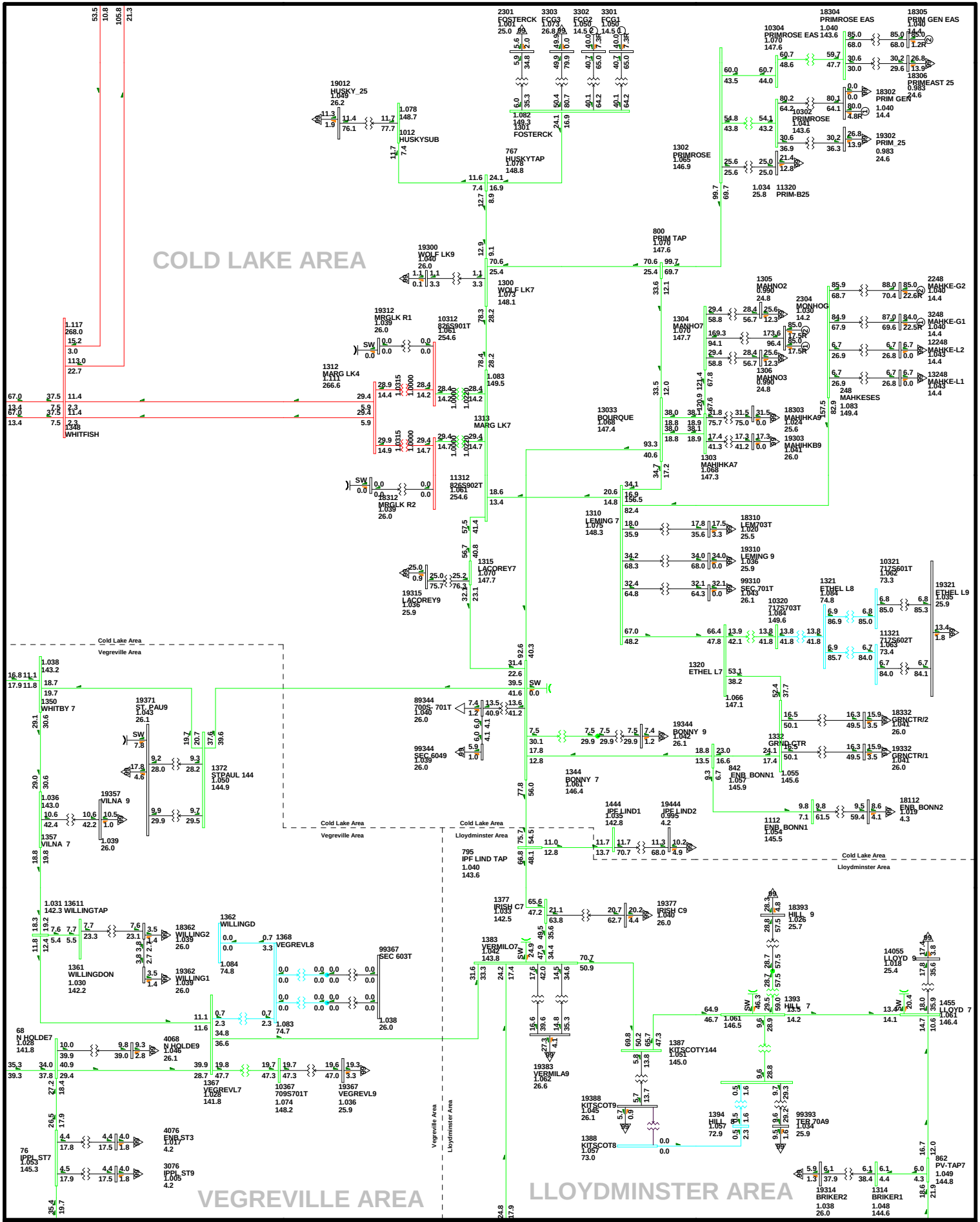
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
MON, APR 12 2010 10:43
D1-31

2012WP-Alt 3 BR#5 ON-13.b

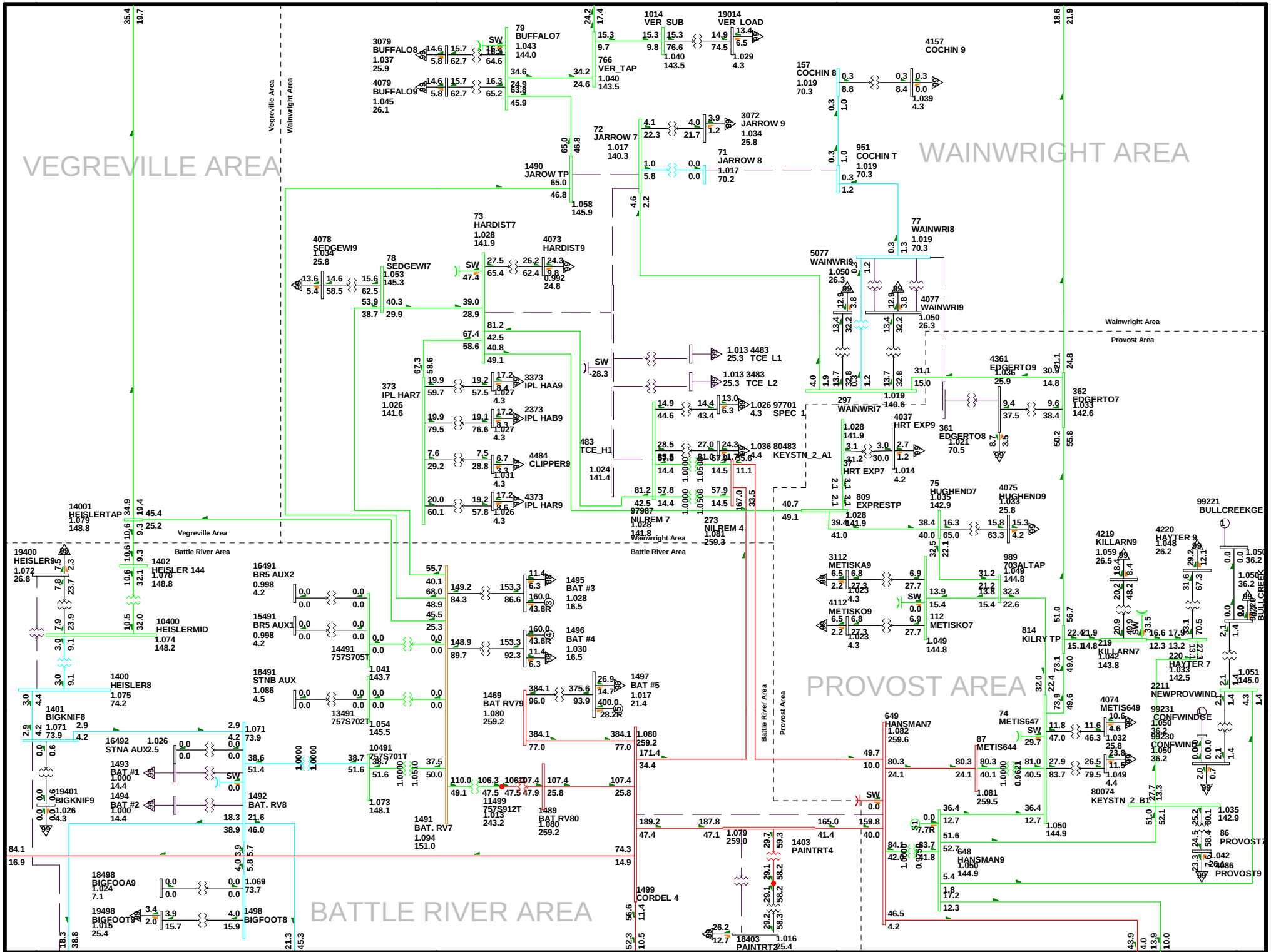
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
MON, APR 12 2010 10:43
D1-32

2012WP-Alt 3 BR#5 ON-14.a

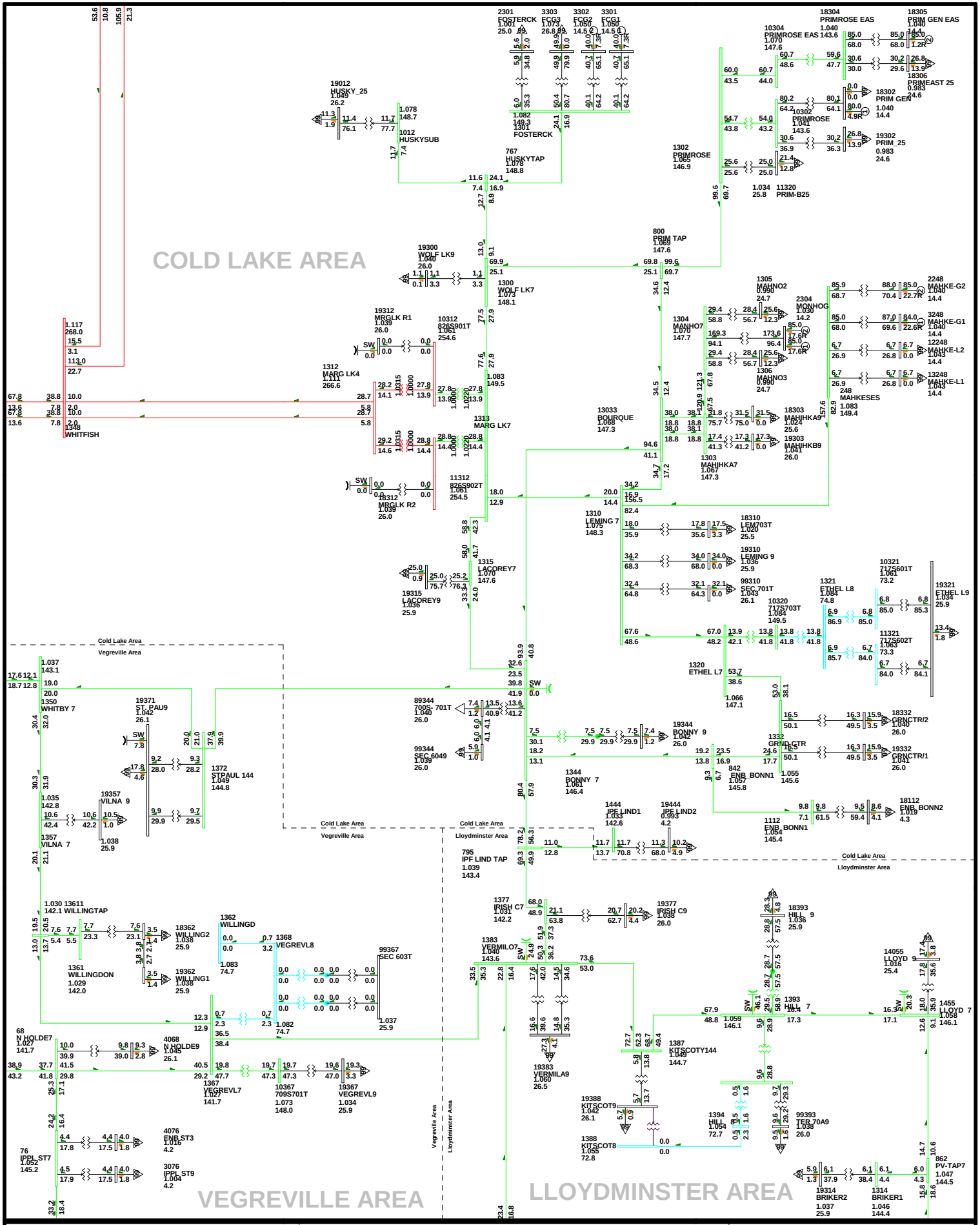
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
MON, APR 12 2010 10:43
D1-32

2012WP-Alt 3 BR#5 ON-14.b

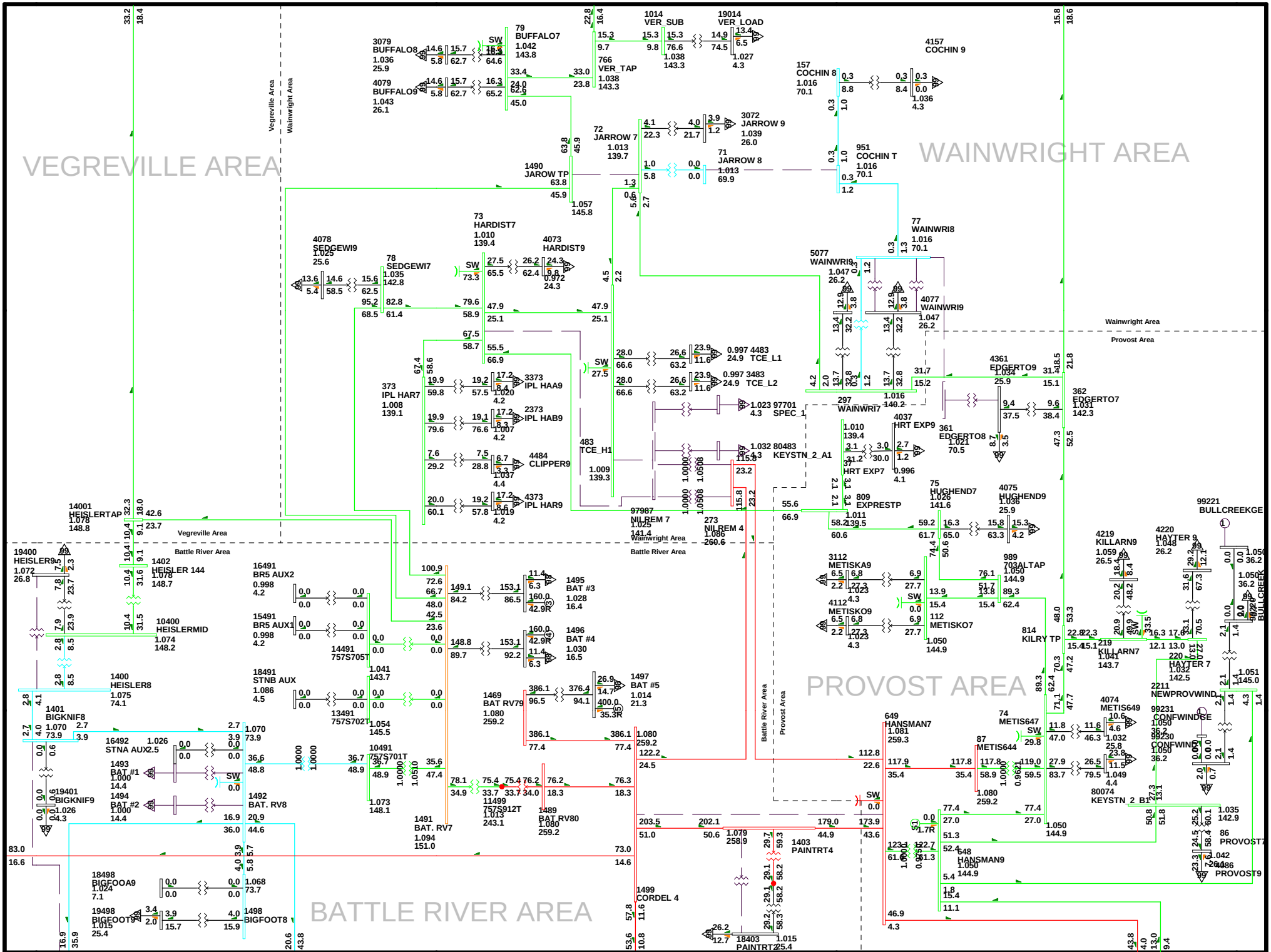
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090V 0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000

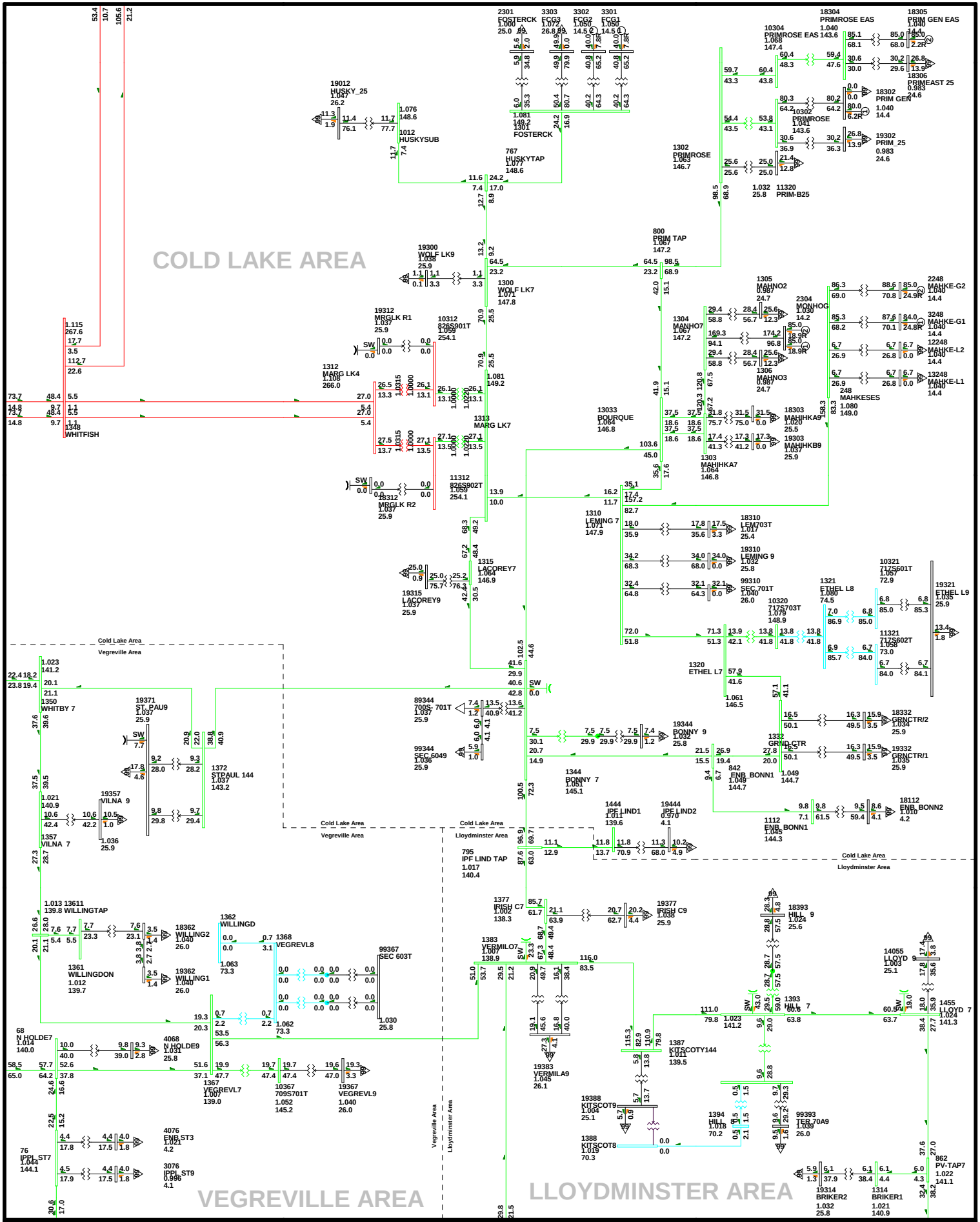


CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
MON, APR 12 2010 10:43
D1-33

2012WP-Alt 3 BR#5 ON-15.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

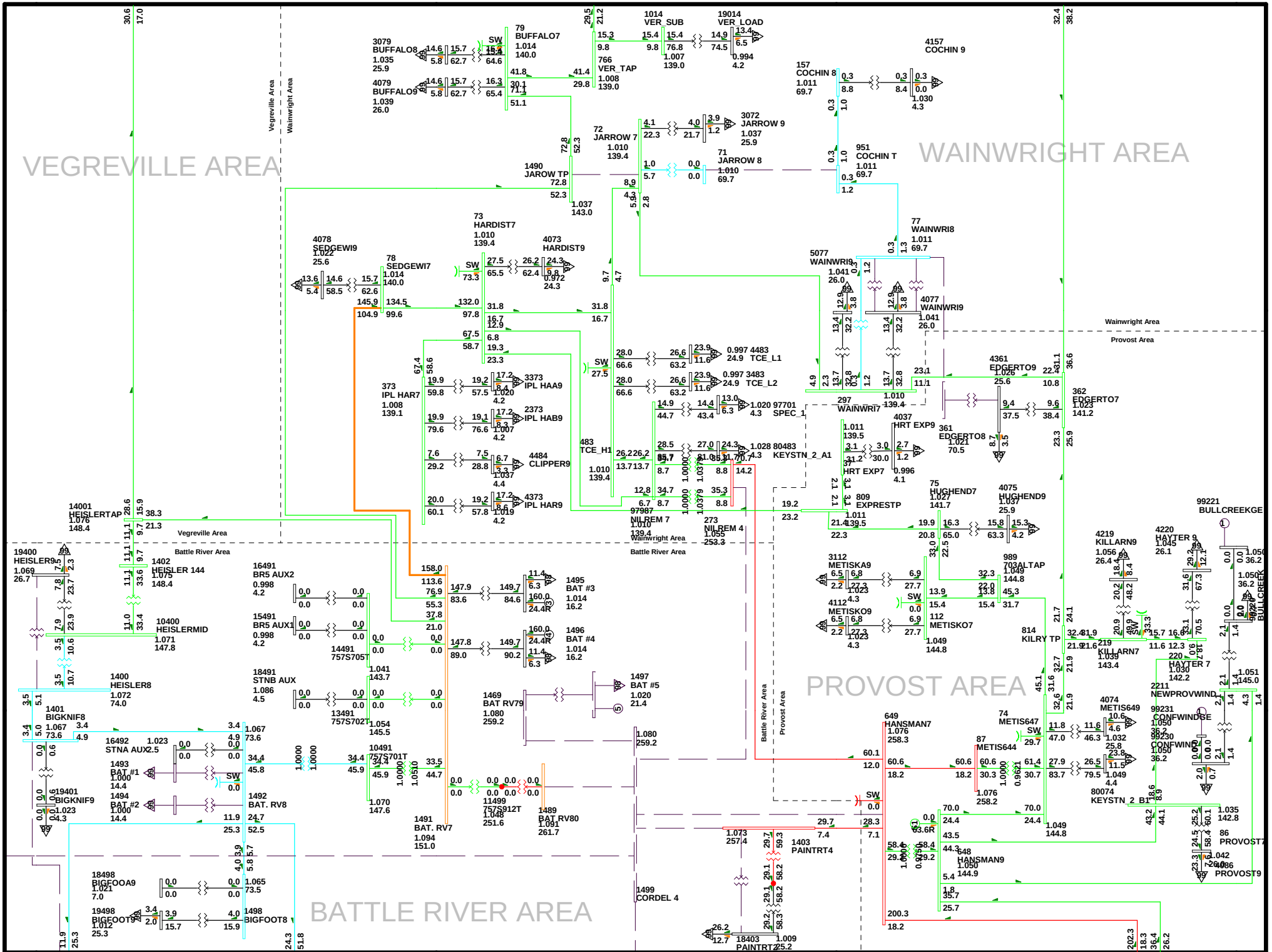

VEGREVILLE AREA
WAINWRIGHT AREA
PROVOST AREA
BATTLE RIVER AREA
Vegreville Area
Wainwright Area
Battle River Area
Provost Area
3079 BUFFALO8 1.036 25.9
4079 BUFFALO9 1.043 26.1
79 BUFFALO7 1.042 143.8
766 VER_TAP 1.038 143.3
1014 VER_SUB 1.038 143.3
19014 VER_LOAD 1.027 4.3
4157 COCHIN 9
157 COCHIN 8 1.016 70.1
951 COCHIN T 1.016 70.1
1.036 4.3
72 JARROW 7 1.013 139.7
3072 JARROW 9 1.039 26.0
71 JAROW 8 1.013 69.9
1490 JAROW TP 63.8 45.9
1.057 145.8
73 HARDIST7 1.010 139.4
4073 HARDIST9 0.972 24.3
4078 SEDGEWI9 1.025 25.6
78 SEDGEWI7 1.035 142.8
77 WAINWRI8 1.016 70.1
5077 WAINWRI9 1.047 26.2
4077 WAINWRI9 1.047 26.2
4361 EDGERTO9 1.034 25.9
362 EDGERTO7 1.031 142.3
361 EDGERTO8 1.021 70.5
4037 HRT EXP9
HRT EXP7 1.010 139.4
0.996 4.1
297 WAINWRI7 1.016 140.2
0.997 4483 24.9 TCE_L1
0.997 3483 24.9 TCE_L2
1.023 97701 4.3 SPEC_1
1.032 80483 4.3 KEYSTN_2_A1
483 TCE_H1 1.009 139.3
373 IPL HAR7 1.008 139.1
3373 IPL HAA9 1.020 4.2
2373 IPL HAB9 1.007 4.2
4484 CLIPPER9 1.037 4.4
4373 IPL HAR9 1.019 4.2
97987 NIL REM 7 1.025 141.4
273 NIL REM 4 1.086 260.6
809 EXPRESTP 1.011 139.5
75 HUGHEND7 1.026 141.6
4075 HUGHEND9 1.036 25.9
989 703ALTAP 1.050 144.9
3112 METISKA9 1.023 4.3
4112 METISKO9 1.023 4.3
112 METISKO7 1.050 144.9
814 KILRY TP
14001 HEISLERTAP 1.078 148.8
1402 HEISLER 144 1.076 148.7
10400 HEISLERMID 1.074 148.2
19400 HEISLER9 1.072 26.8
1400 HEISLER8 1.075 74.1
1401 BIGKNIF8 1.070 73.9
19401 BIGKNIF9 1.026 4.3
16491 BR5 AUX2 0.998 4.2
15491 BR5 AUX1 0.998 4.2
14491 757S705T 1.041 143.7
18491 STNB AUX 1.086 4.5
13491 757S702T 1.054 145.5
16492 STNA AUX 1.026 2.5
1493 BAT #1 1.000 14.4
1494 BAT #2 1.000 14.4
1492 BAT. RV8 20.9
10491 757S701T 1.073 148.1
1491 BAT. RV7 1.094 151.0
1495 BAT #3 1.028 16.4
1496 BAT #4 1.030 16.5
1497 BAT #5 1.014 21.3
1469 BAT RV79 1.080 259.2
11499 757S912T 1.013 243.1
1489 BAT RV80 1.080 259.2
1499 CORDEL 4
1403 PAINTRT4
18403 PAINTRT2 1.015 25.4
649 HANSMAN7 1.081 259.3
648 HANSMAN9 1.050 144.9
74 METIS647
87 METIS644 1.080 259.2
4074 METIS649 1.032 25.8
80074 KEYSTN_2_B1 1.049 4.4
4219 KILLARN9 1.059 26.5
219 KILLARN7 1.041 143.7
4220 HAYTER 9 1.048 26.2
220 HAYTER 7 1.032 142.5
2211 NEWPROVWIND 1.050 36.2
99231 CONFWINDGE 1.050 36.2
99230 CONFWIND 1.050 36.2
99221 BULLCREEKGE 1.050 36.2
BULLCREEK
18498 BIGFOOA9 1.024 7.1
19498 BIGFOOT9 1.015 25.4
1498 BIGFOOT8 1.068 73.7
86 PROVOST7 1.035 142.9
1486 PROVOST9 1.042
SW
CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
MON, APR 12 2010 10:43
D1-33
2012WP-Alt 3 BR#5 ON-15.b
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090V0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000

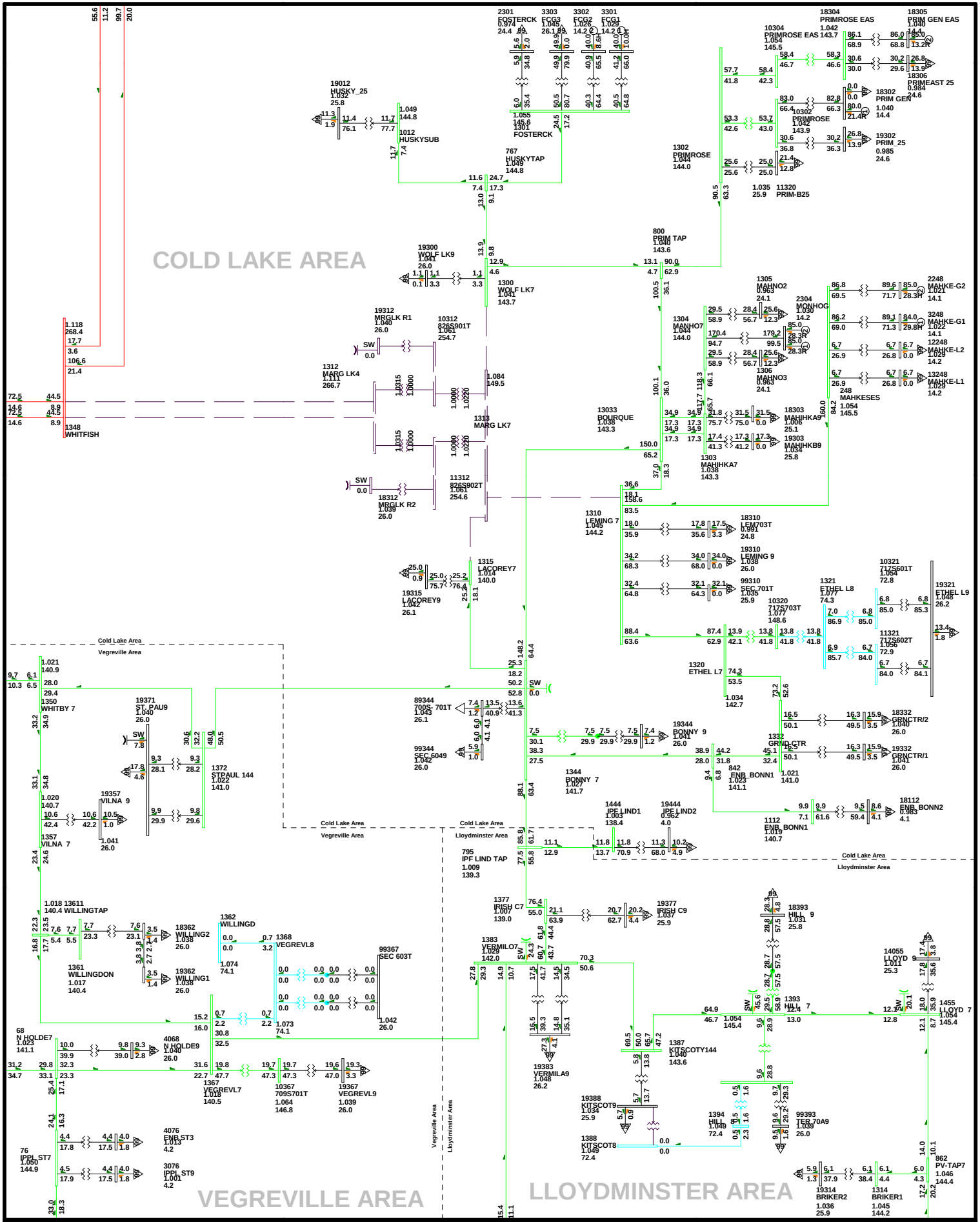


CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
MON, APR 12 2010 10:43
D1-34

2012WP-Alt 3 BR#5 ON-16.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

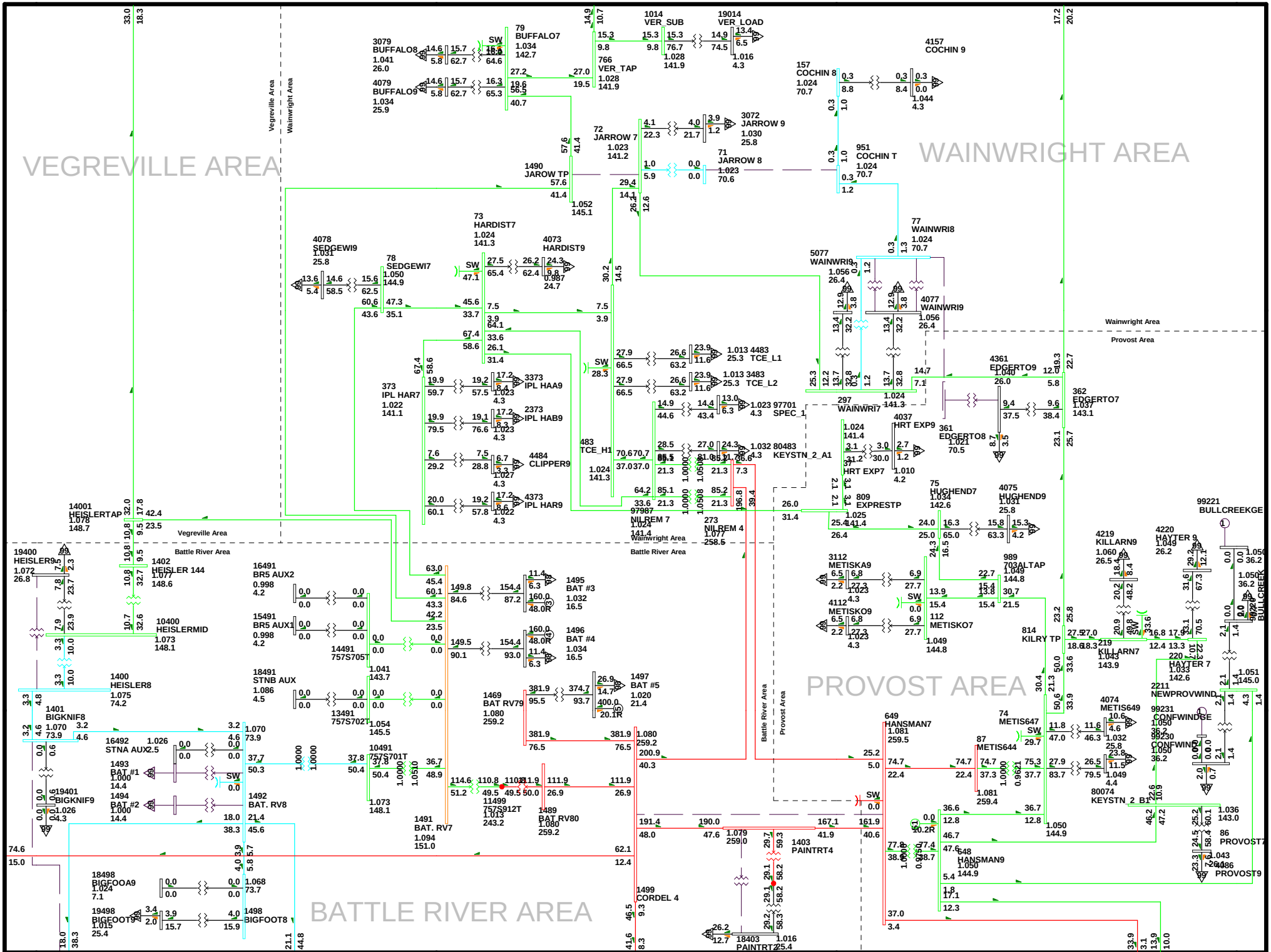

VEGREVILLE AREA
WAINWRIGHT AREA
PROVOST AREA
BATTLE RIVER AREA
Vegreville Area
Wainwright Area
Battle River Area
Provost Area
3079 BUFFALO8 1.035 25.9
4079 BUFFALO9 1.039 26.0
79 BUFFALO7 1.014 140.0
766 VER_TAP 1.008 139.0
1014 VER_SUB
19014 VER_LOAD
4157 COCHIN 9
157 COCHIN 8 1.011 69.7
951 COCHIN T 1.011 69.7
1030 4.3
72 JARROW 7 1.010 139.4
3072 JAROW 9 1.037 25.9
71 JARROW 8 1.010 69.7
1490 JAROW TP 72.8 52.3 1.037 143.0
73 HARDIST7 1.010 139.4
4073 HARDIST9 0.972 24.3
4078 SEDGEWI9 1.022 25.6
78 SEDGEWI7 1.014 140.0
77 WAINWRI8 1.011 69.7
5077 WAINWRI9 1.041 26.0
4077 WAINWRI9 1.041 26.0
297 WAINWRI7 1.010 139.4
4361 EDGERTO9 1.026 25.6
362 EDGERTO7 1.023 141.2
361 EDGERTO8 1.021 70.5
4037 HRT EXP9
HRT EXP7 0.996 4.1
373 IPL HAR7 1.008 139.1
3373 IPL HAA9 1.020 4.2
2373 IPL HAB9 1.007 4.2
4484 CLIPPER9 1.037 4.4
4373 IPL HAR9 1.019 4.2
0.997 4483 24.9 TCE_L1
0.997 3483 24.9 TCE_L2
1.020 97701 4.3 SPEC_1
1.028 80483 4.3 KEYSTN_2_A1
483 TCE_H1 1.010 139.4
97987 NIL REM 7 1.010 139.4
273 NIL REM 4 1.055 253.3
809 EXPRESTP 1.011 139.5
75 HUGHEND7 1.027 141.7
4075 HUGHEND9 1.037 25.9
3112 METISKA9 1.023 4.3
4112 METISKO9 1.023 4.3
112 METISKO7 1.049 144.8
989 703ALTAP 1.049 144.8
814 KILRY TP
4219 KILLARN9 1.056 26.4
219 KILLARN7 1.039 143.4
4220 HAYTER 9 1.045 26.1
220 HAYTER 7 1.030 142.2
99221 BULLCREEKGE
BULLCREEK
14001 HEISLERTAP 1.076 148.4
19400 HEISLER9 1.069 26.7
1402 HEISLER 144 1.075 148.4
10400 HEISLERMID 1.071 147.8
1400 HEISLER8 1.072 74.0
1401 BIGKNIF8 1.067 73.6
19401 BIGKNIF9 1.023 4.3
16491 BR5 AUX2 0.998 4.2
15491 BR5 AUX1 0.998 4.2
14491 757S705T 1.041 143.7
18491 STNB AUX 1.086 4.5
13491 757S702T 1.054 145.5
16492 STNA AUX 1.023 2.5
1493 BAT #1 1.000 14.4
1494 BAT #2 1.000 14.4
1492 BAT. RV8 24.7 52.5
10491 757S701T 1.070 147.6
1491 BAT. RV7 1.094 151.0
1495 BAT #3 1.014 16.2
1496 BAT #4 1.014 16.2
1497 BAT #5 1.020 21.4
1469 BAT RV79 1.080 259.2
1080 259.2
11499 757S912T 1.048 251.6
1489 BAT RV80 1.091 261.7
1499 CORDEL 4
18498 BIGFOOA9 1.021 7.0
19498 BIGFOOT9 1.012 25.3
1498 BIGFOOT8
649 HANSMAN7 1.076 258.3
74 METIS647
87 METIS644 1.076 258.2
4074 METIS649 1.050 99231 CONFWINDGE
99230 CONFWIND 1.050 36.2
80074 KEYSTN_2_B1 1.049 4.4
1403 PAINTRT4 1.073 257.4
648 HANSMAN9 1.050 144.9
18403 PAINTRT 1.009 25.2
2211 NEWPROVWIND 1.030 142.2
86 PROVOST7 1.035 142.8
PROVOST9 1.042 1.086
CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
MON, APR 12 2010 10:43
D1-34
2012WP-Alt 3 BR#5 ON-16.b
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090V 0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
MON, APR 12 2010 10:43
D1-35

2012WP-Alt 3 BR#5 ON-17.a

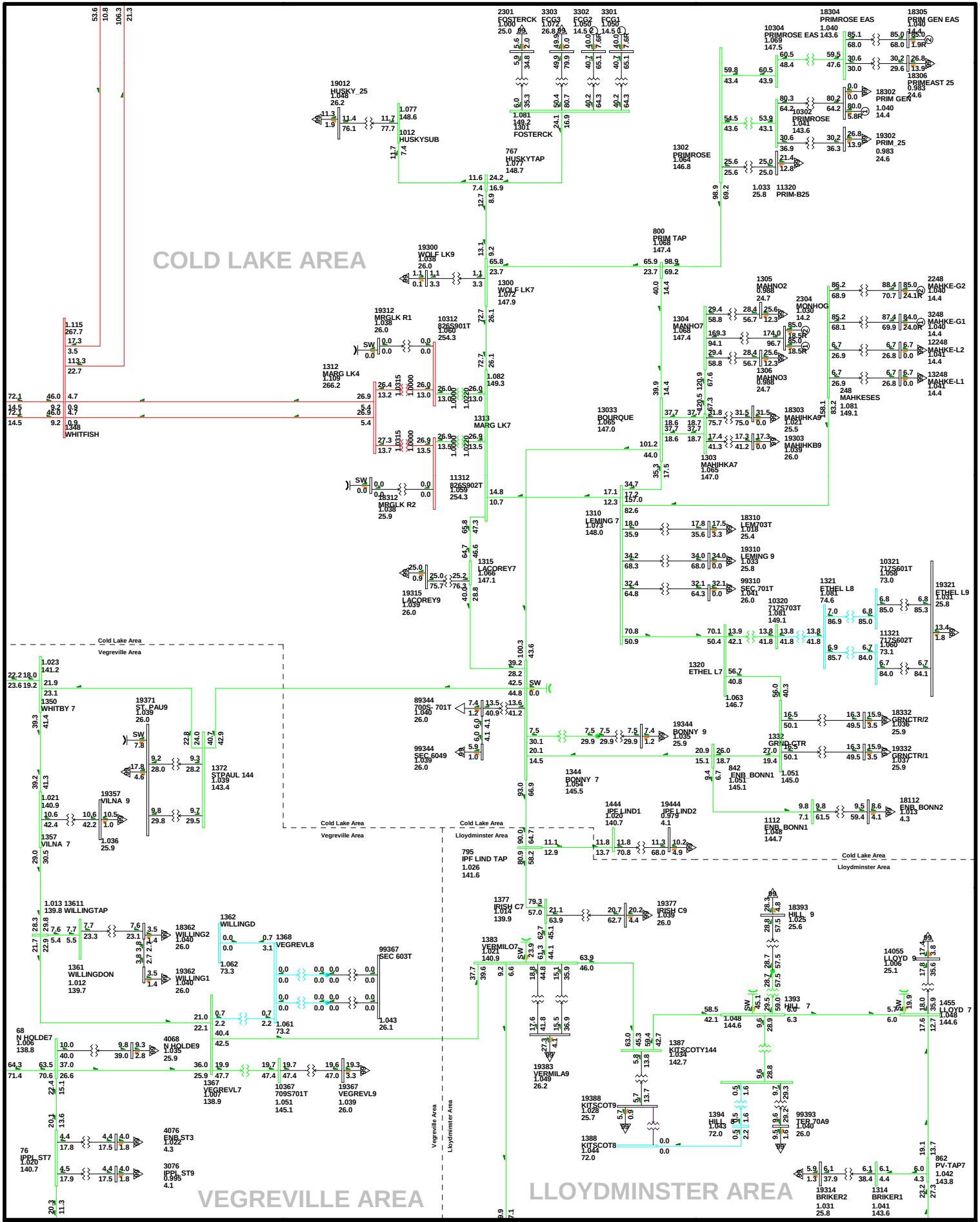
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
MON, APR 12 2010 10:43
D1-35

2012WP-Alt 3 BR#5 ON-17.b

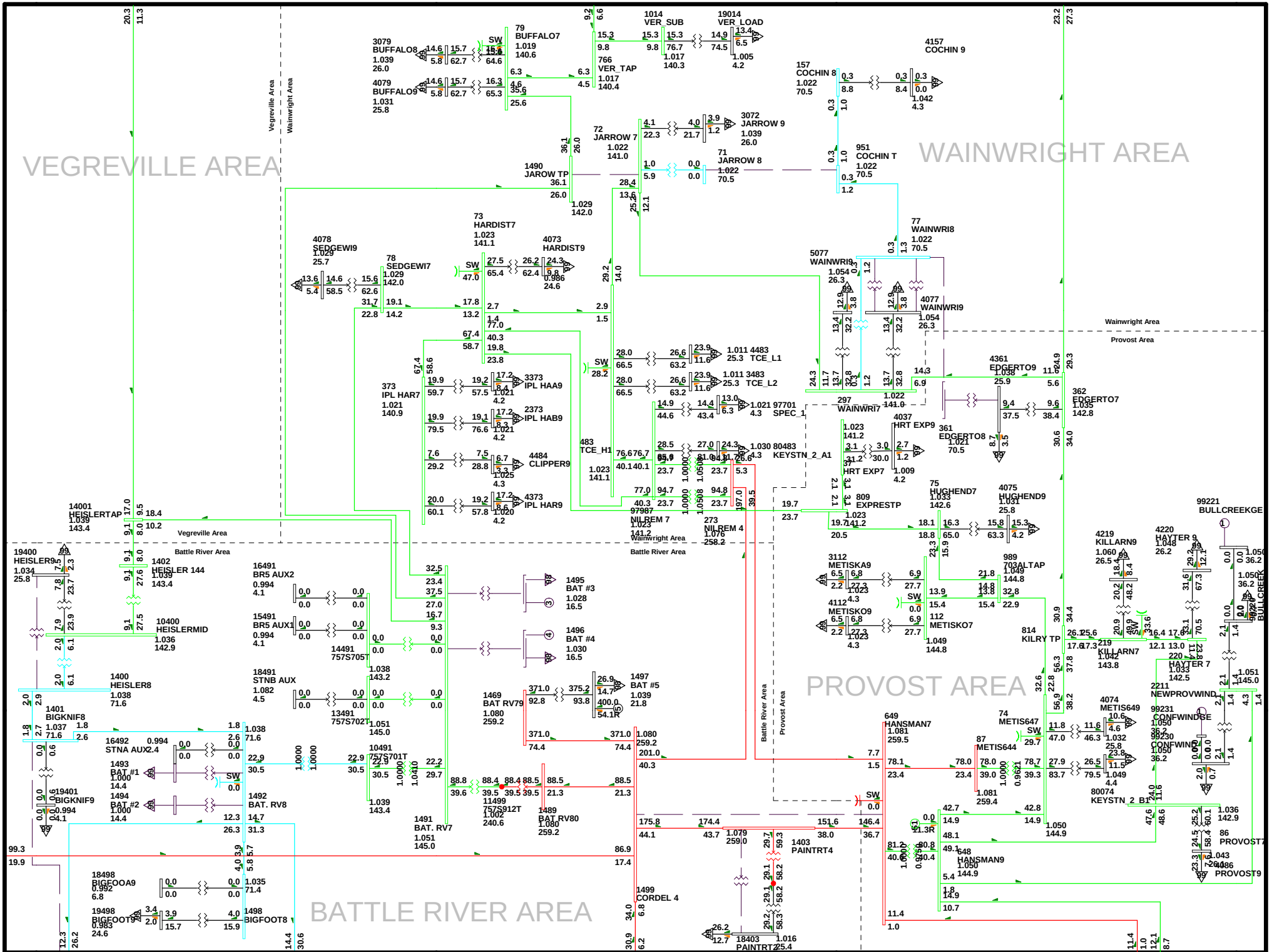
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090V 0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000

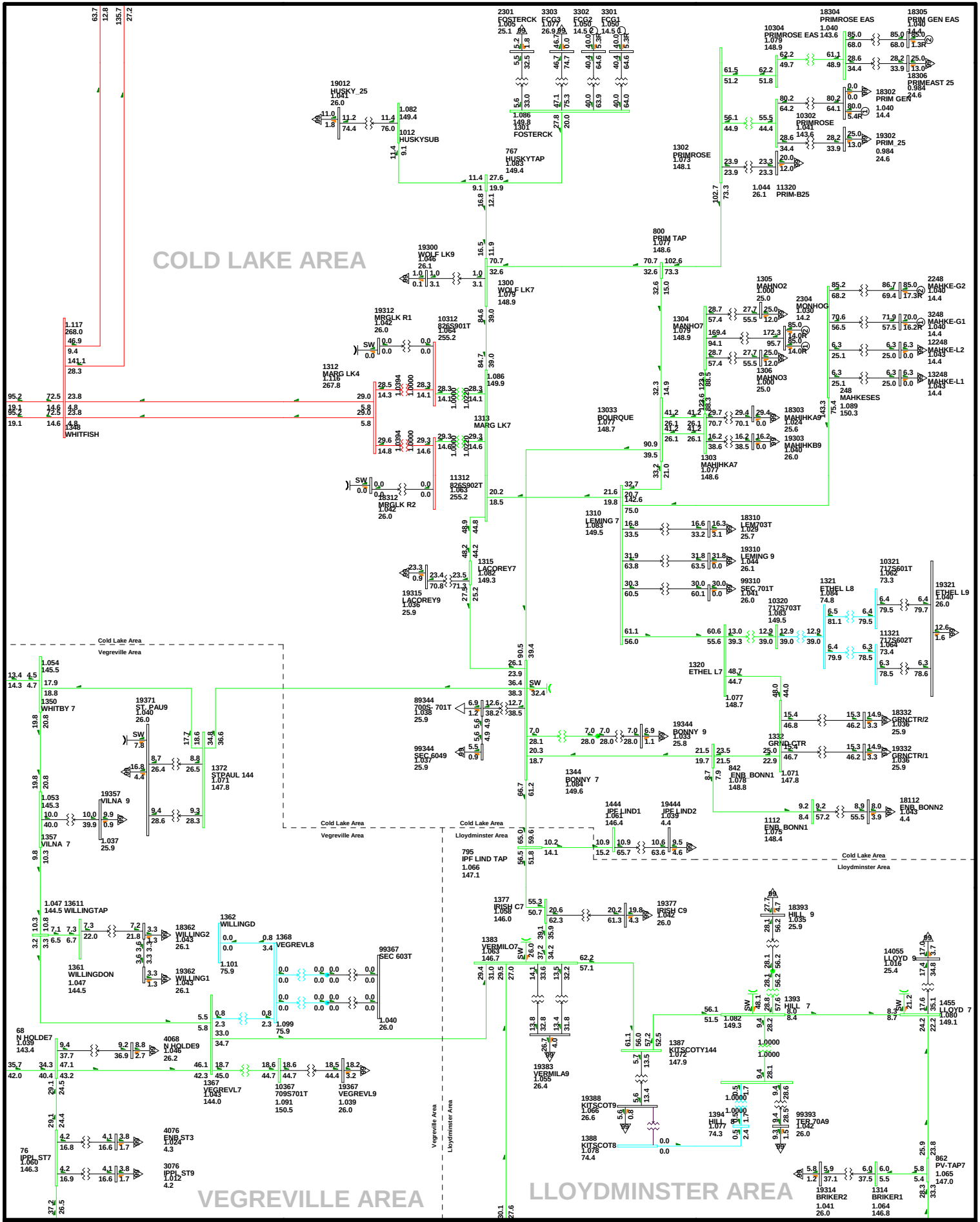


CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
MON, APR 12 2010 10:43
D1-36

2012WP-Alt 3 BR#5 ON-18.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

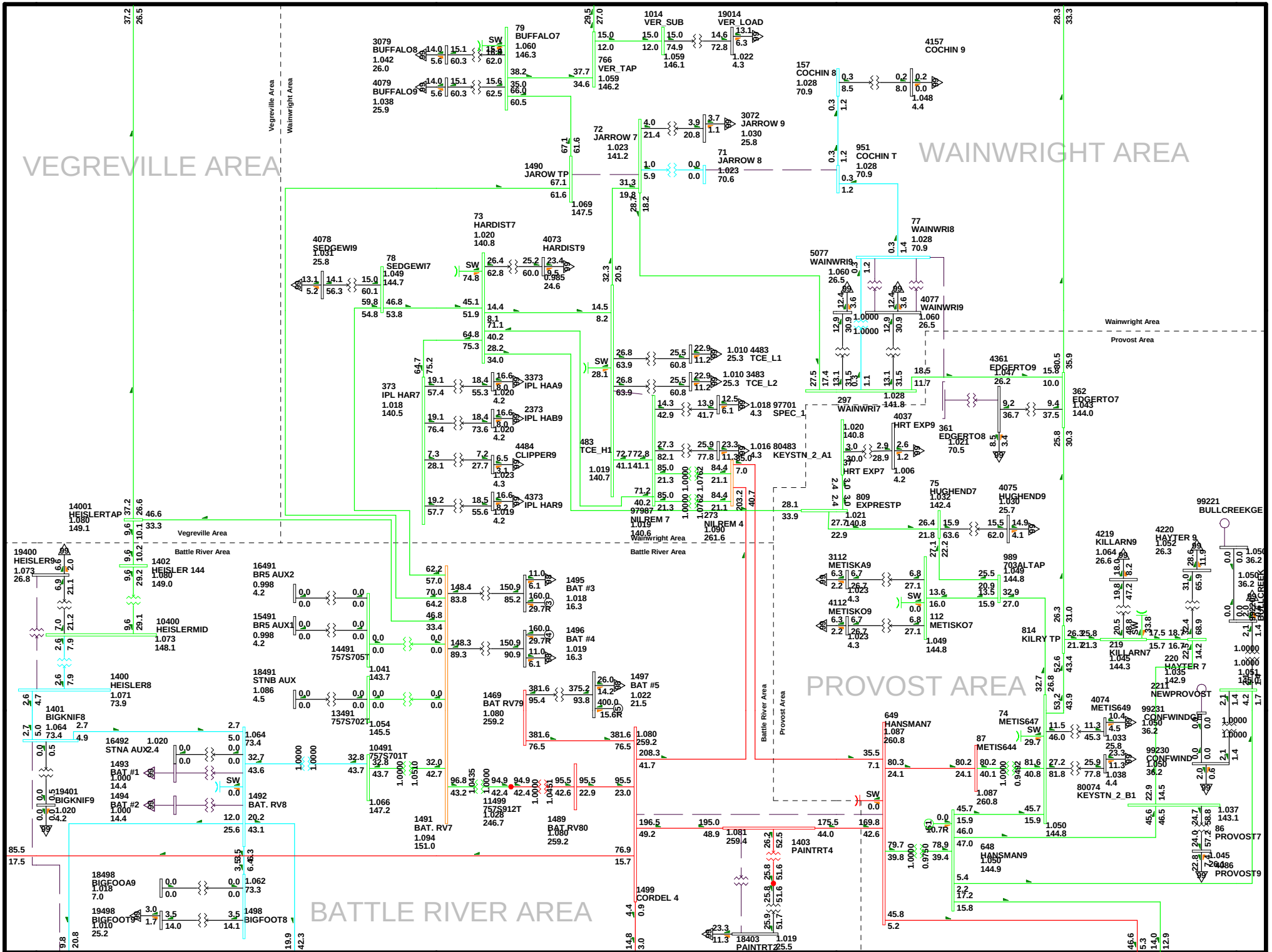

VEGREVILLE AREA
WAINWRIGHT AREA
PROVOST AREA
BATTLE RIVER AREA
Vegreville Area
Wainwright Area
Battle River Area
Provost Area
3079 BUFFALO8 1.039 26.0
4079 BUFFALO9 1.031 25.8
79 BUFFALO7 1.019 140.6
766 VER_TAP 1.017 140.4
1014 VER_SUB 1.017 140.3
19014 VER_LOAD 1.005 4.2
4157 COCHIN 9
157 COCHIN 8 1.022 70.5
951 COCHIN T 1.022 70.5
1.042 4.3
72 JARROW 7 1.022 141.0
3072 JARROW 9 1.039 26.0
71 JARROW 8 1.022 70.5
1490 JAROW TP 36.1 26.0
1.029 142.0
73 HARDIST7 1.023 141.1
4073 HARDIST9 0.986 24.6
4078 SEDGEWI9 1.029 25.7
78 SEDGEWI7 1.029 142.0
77 WAINWRI8 1.022 70.5
5077 WAINWRI9 1.054 26.3
4077 WAINWRI9 1.054 26.3
297 WAINWRI7 1.022 141.0
4361 EDGERTO9 1.038 25.9
362 EDGERTO7 1.035 142.8
361 EDGERTO8 1.021 70.5
4037 HRT EXP9
HRT EXP7 1.009 4.2
373 IPL HAR7 1.021 140.9
3373 IPL HAA9 1.021 4.2
2373 IPL HAB9 1.021 4.2
4484 CLIPPER9 1.025 4.3
4373 IPL HAR9 1.020 4.2
1.011 4483 25.3 TCE_L1
1.011 3483 25.3 TCE_L2
483 TCE_H1 1.023 141.1
1.021 97701 4.3 SPEC_1
1.030 80483 4.3 KEYSTN_2_A1
97987 NIL REM 7 1.022 141.2
273 NIL REM 4 1.076 258.2
809 EXPRESTP 1.023 141.2
75 HUGHEND7 1.033 142.6
4075 HUGHEND9 1.031 25.8
989 703ALTAP 1.049 144.8
3112 METISKA9 1.023 4.3
4112 METISKO9 1.023 4.3
112 METISKO7 1.049 144.8
814 KILRY TP
4219 KILLARN9 1.060 26.5
219 KILLARN7 1.042 143.8
4220 HAYTER 9 1.048 26.2
220 HAYTER 7 1.033 142.5
99221 BULLCREEKGE
BULLCREEK
2211 NEWPROVWIND
99231 CONFWINDGE 1.050 36.2
99230 CONFWIND2 1.050 36.2
4074 METIS649 1.032 4.4
80074 KEYSTN_2_B1 1.049 4.4
74 METIS647 1.049 144.9
87 METIS644 1.081 259.4
649 HANSMAN7 1.081 259.5
648 HANSMAN9 1.050 144.9
1403 PAINTRT4 1.079 259.0
18403 PAINTRT2 1.016 25.4
1499 CORDEL 4 1.080 259.2 201.0
1497 BAT #5 1.039 21.8
1496 BAT #4 1.030 16.5
1495 BAT #3 1.028 16.5
1469 BAT RV79 1.080 259.2
1491 BAT. RV7 1.051 145.0
1492 BAT. RV8 1.038 71.6
1493 BAT #1 1.000 14.4
1494 BAT #2 1.000 14.4
1489 BAT RV80 1.080 259.2
11499 757S912T 1.002 240.6
10491 757S701T 1.039 143.4
14491 757S705T 1.038 143.2
13491 757S702T 1.051 145.0
16491 BR5 AUX2 0.994 4.1
15491 BR5 AUX1 0.994 4.1
18491 STNB AUX 1.082 4.5
16492 STNA AUX2 0.994 4.1
14001 HEISLERTAP 1.039 143.4
1402 HEISLER 144 1.039 143.4
10400 HEISLERMID 1.036 142.9
19400 HEISLER9 1.034 25.8
1400 HEISLER8 1.038 71.6
1401 BIGKNIF8 1.037 71.6
19401 BIGKNIF9 0.994 4.1
18498 BIGFOOA9 0.992 6.8
19498 BIGFOOT9 0.983 24.6
1498 BIGFOOT8 1.035 71.4
1403 PAINTRT4
1036 142.9
86 PROVOST7
1043 144.6
1486 PROVOST9
SW
CENTRAL AREA STUDY
2012 WINTER PEAK BASE CASE REVISION 7.2.1 *LOAD CHANGE IN P
MON, APR 12 2010 10:43
D1-36
2012WP-Alt 3 BR#5 ON-18.b
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090V0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 09 2010 11:14
D1-00

2012SP-Alt 3 BR#5 ON-1.a

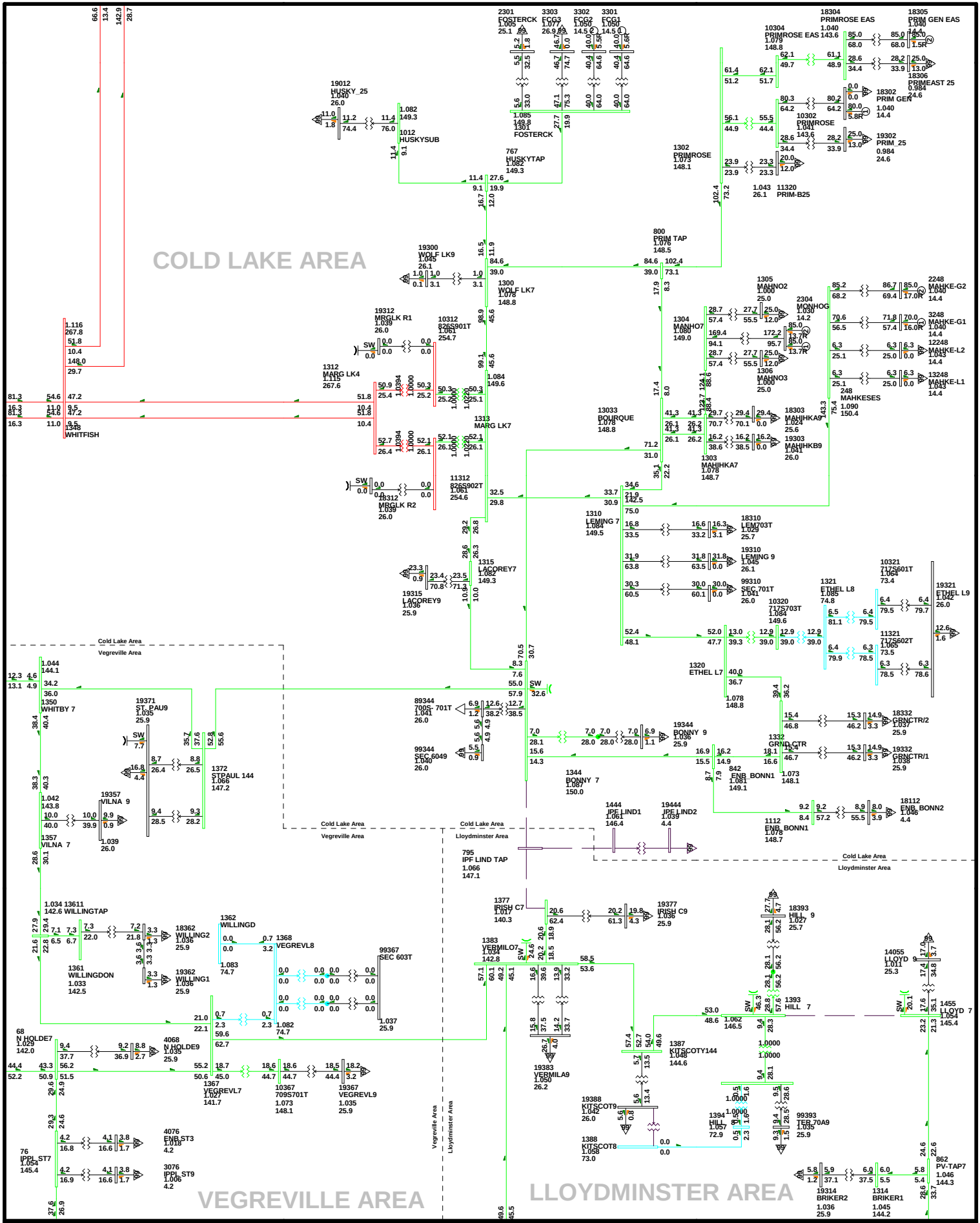
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 09 2010 11:14
D1-00

2012SP-Alt 3 BR#5 ON-1.b

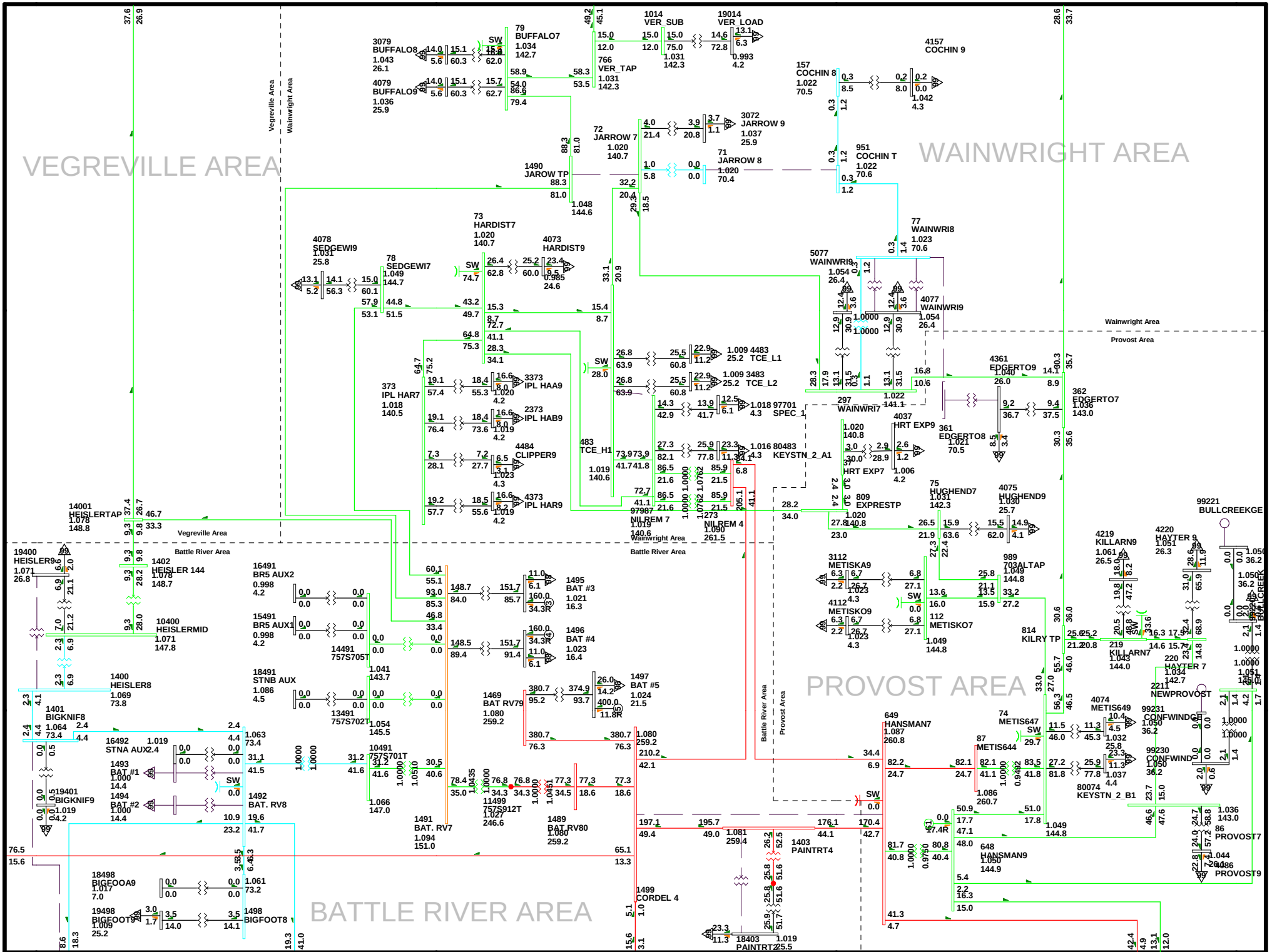
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
MON, APR 12 2010 10:39
D1-20

2012SP-Alt 3 BR#5 ON-2.a

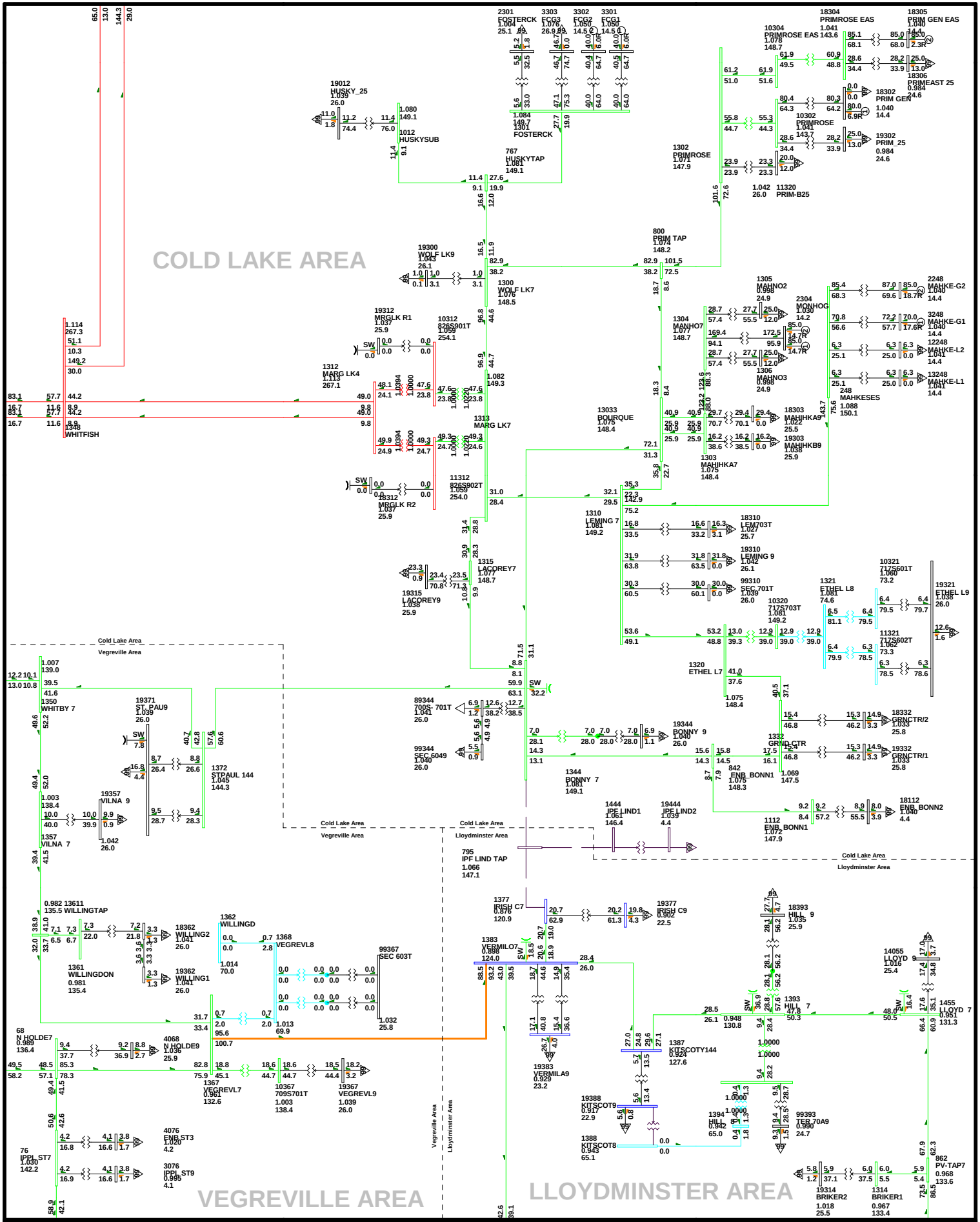
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
MON, APR 12 2010 10:39
D1-20

2012SP-Alt 3 BR#5 ON-2.b

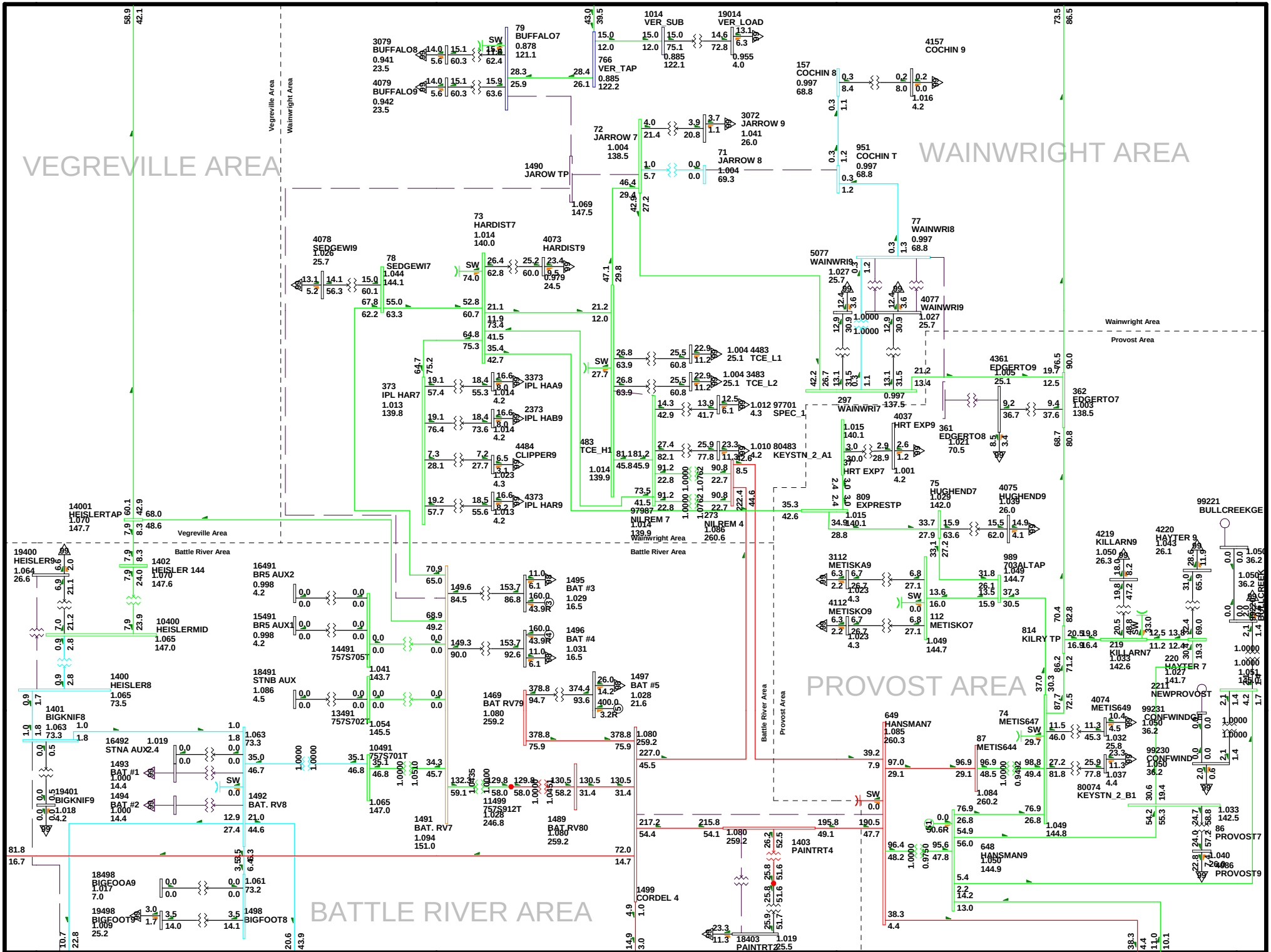
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

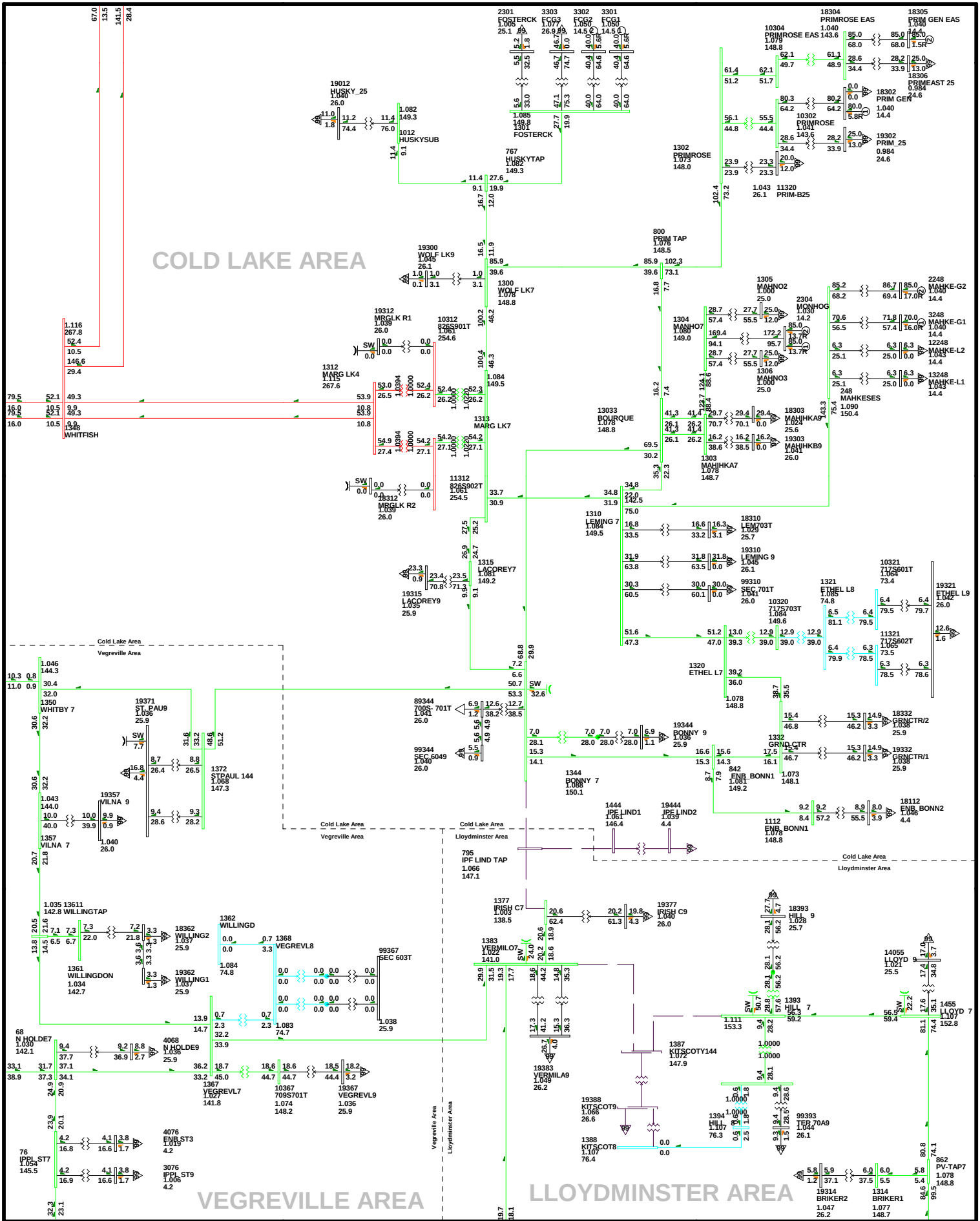


CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 09 2010 11:14
D1-21

2012SP-Alt 3 BR#5 ON-3.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

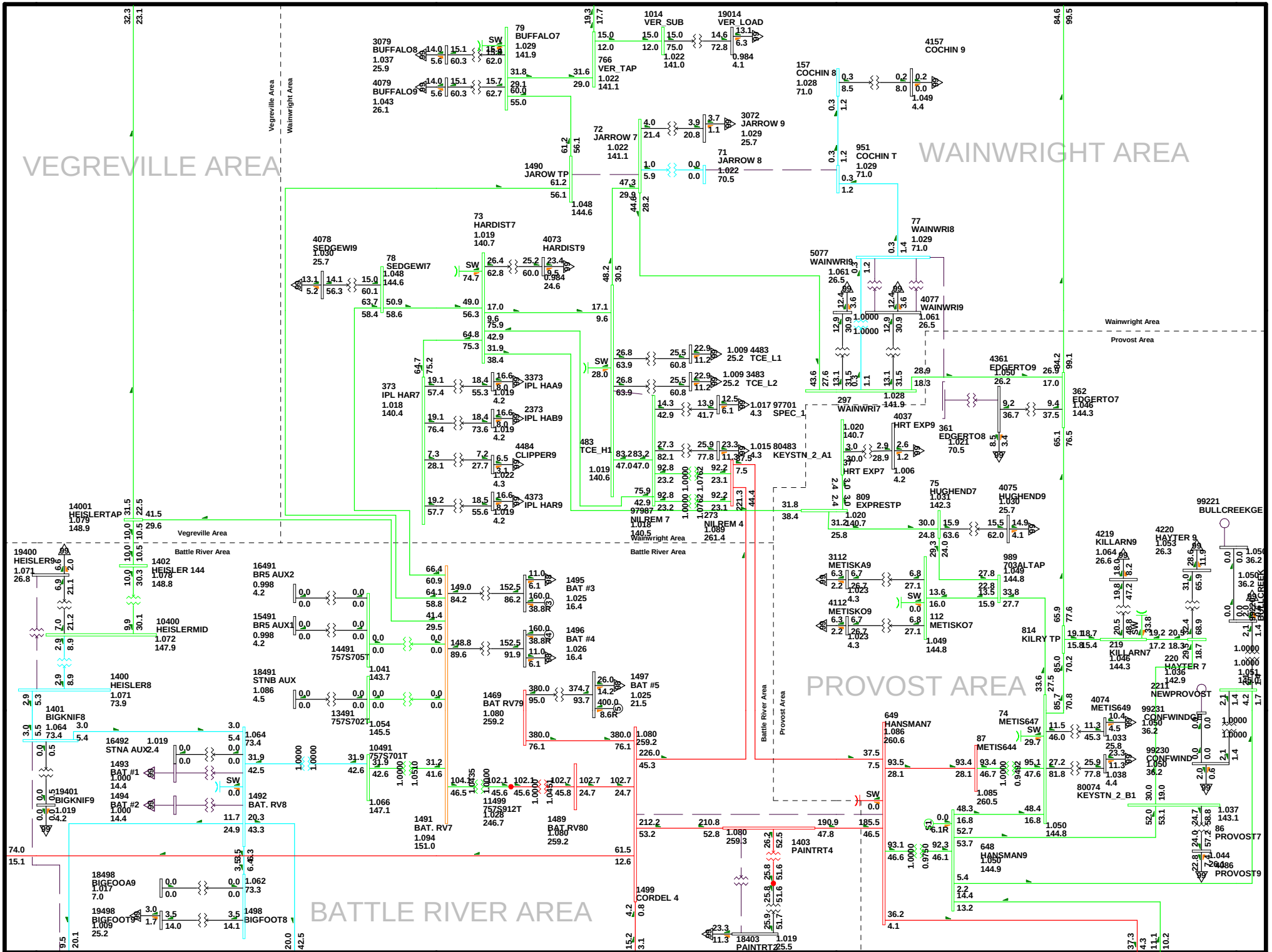

VEGREVILLE AREA
WAINWRIGHT AREA
PROVOST AREA
BATTLE RIVER AREA
Vegreville Area
Wainwright Area
Battle River Area
Provost Area
3079 BUFFALO8 0.941 23.5
4079 BUFFALO9 0.942 23.5
79 BUFFALO7 0.878 121.1
766 VER_TAP 0.885 122.2
1014 VER_SUB 0.885 122.1
19014 VER_LOAD 0.955 4.0
4157 COCHIN 9
157 COCHIN 8 0.997 68.8
1.016 4.2
951 COCHIN T 0.997 68.8
72 JARROW 7 1.004 138.5
3072 JARROW 9 1.041 26.0
71 JARROW 8 1.004 69.3
1490 JAROW TP 1.069 147.5
77 WAINWRI8 0.997 68.8
5077 WAINWRI9 1.027 25.7
4077 WAINWRI9 1.027 25.7
297 WAINWRI7 0.997 137.5
4078 SEDGEWI9 1.026 25.7
78 SEDGEWI7 1.044 144.1
73 HARDIST7 1.014 140.0
4073 HARDIST9 0.979 24.5
373 IPL HAR7 1.013 139.8
3373 IPL HAA9 1.014 4.2
2373 IPL HAB9 1.014 4.2
4484 CLIPPER9 1.023 4.3
4373 IPL HAR9 1.013 4.2
483 TCE_H1 1.014 139.9
1.004 4483 25.1 TCE_L1
1.004 3483 25.1 TCE_L2
1.012 97701 4.3 SPEC_1
1.010 80483 4.2 KEYSTN_2_A1
4037 HRT EXP9 1.021 70.5
HRT EXP7 1.001 4.2
4361 EDGERTO9 1.005 25.1
362 EDGERTO7 1.003 138.5
361 EDGERTO8 1.021 70.5
809 EXPRESTP 1.015 140.1
75 HUGHEND7 1.029 142.0
4075 HUGHEND9 1.039 26.0
97987 NIL REM 7 1.014 139.9
1273 NIL REM 4 1.086 260.6
14001 HEISLERTAP 1.070 147.7
19400 HEISLER9 1.064 26.6
1402 HEISLER 144 1.070 147.6
10400 HEISLERMID 1.065 147.0
1400 HEISLER8 1.065 73.5
1401 BIGKNIF8 1.063 73.3
19401 BIGKNIF9 1.018 4.2
16491 BR5 AUX2 0.998 4.2
15491 BR5 AUX1 0.998 4.2
18491 STNB AUX 1.086 4.5
16492 STNA AUX 2.4
14491 757S705T 1.041 143.7
13491 757S702T 1.054 145.5
10491 757S701T 1.065 147.0
11499 757S912T 1.028 246.8
1495 BAT #3 1.029 16.5
1496 BAT #4 1.031 16.5
1497 BAT #5 1.028 21.6
1469 BAT RV79 1.080 259.2
1493 BAT #1 1.000 14.4
1494 BAT #2 1.000 14.4
1492 BAT. RV8 1.094 151.0
1491 BAT. RV7 1.094 151.0
1489 BAT.RV80 1.080 259.2
1499 CORDEL 4
1403 PAINTRT4
18403 PAINTRT2 1.019 25.5
18498 BIGEOOA9 1.017 7.0
19498 BIGFOOT9 1.009 25.2
1498 BIGFOOT8 1.061 73.2
649 HANSMAN7 1.085 260.3
74 METIS647
87 METIS644
1.084 260.2
648 HANSMAN9 1.050 144.9
3112 METISKA9
4112 METISKO9
112 METISKO7 1.049 144.7
989 703ALTAP 1.049 144.7
814 KILRY TP
4074 METIS649
80074 KEYSTN_2_B1
4219 KILLARN9 1.050 26.3
219 KILLARN7 1.033 142.6
4220 HAYTER 9 1.043 26.1
220 HAYTER 7 1.027 141.7
2211 NEWPROVOST
99231 CONFWINDG1 1.050 36.2
99230 CONFWIND1 1.050 36.2
99221 BULLCREEKGE
99222 BULLCREEK 1.050 36.2
86 PROVOST7 1.033 142.5
PROVOST9 1.040 144.6
CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 09 2010 11:14
D1-21
2012SP-Alt 3 BR#5 ON-3.b
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
MON, APR 12 2010 10:38
D1-22

2012SP-Alt 3 BR#5 ON-4.a

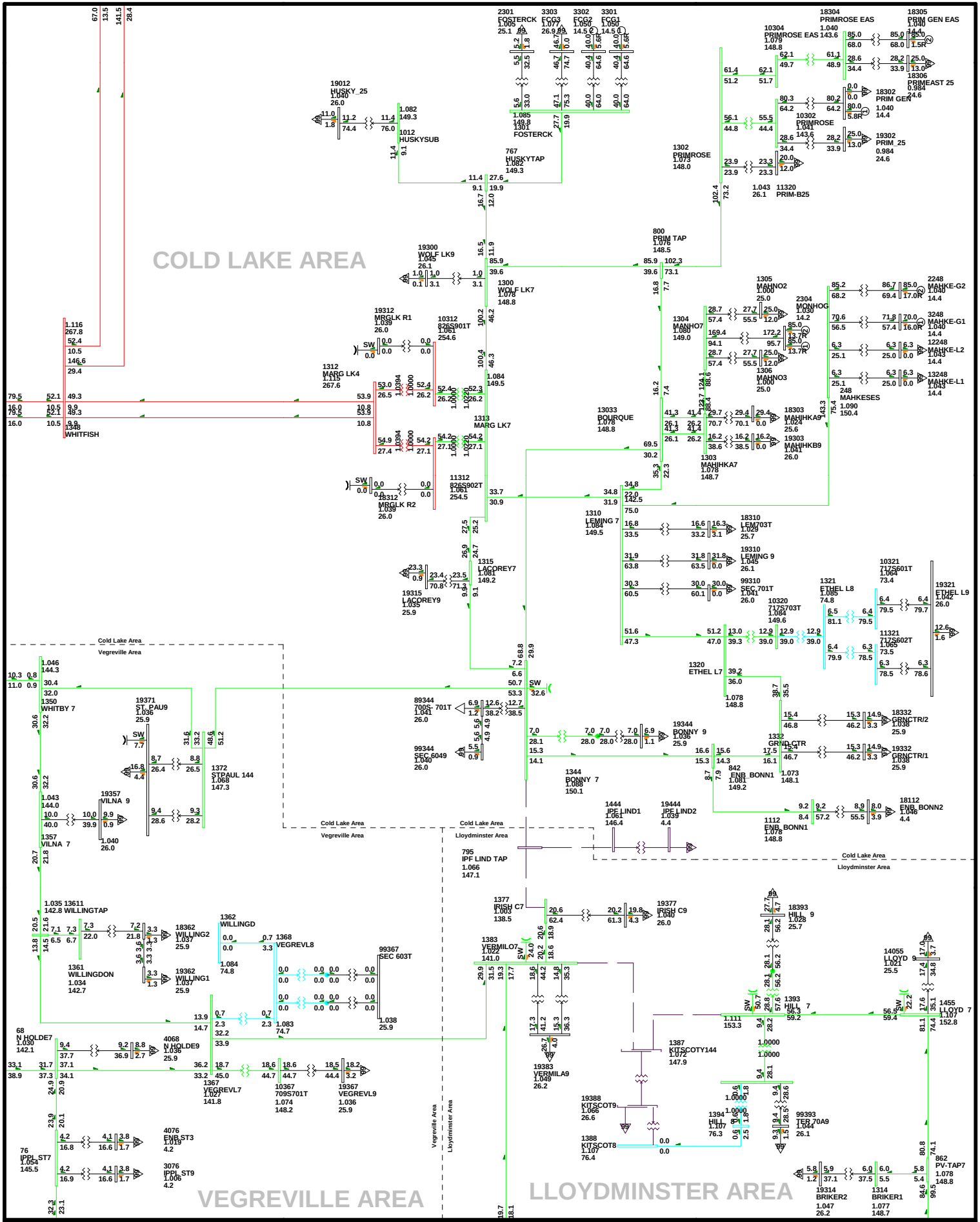
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
MON, APR 12 2010 10:38
D1-22

2012SP-Alt 3 BR#5 ON-4.b

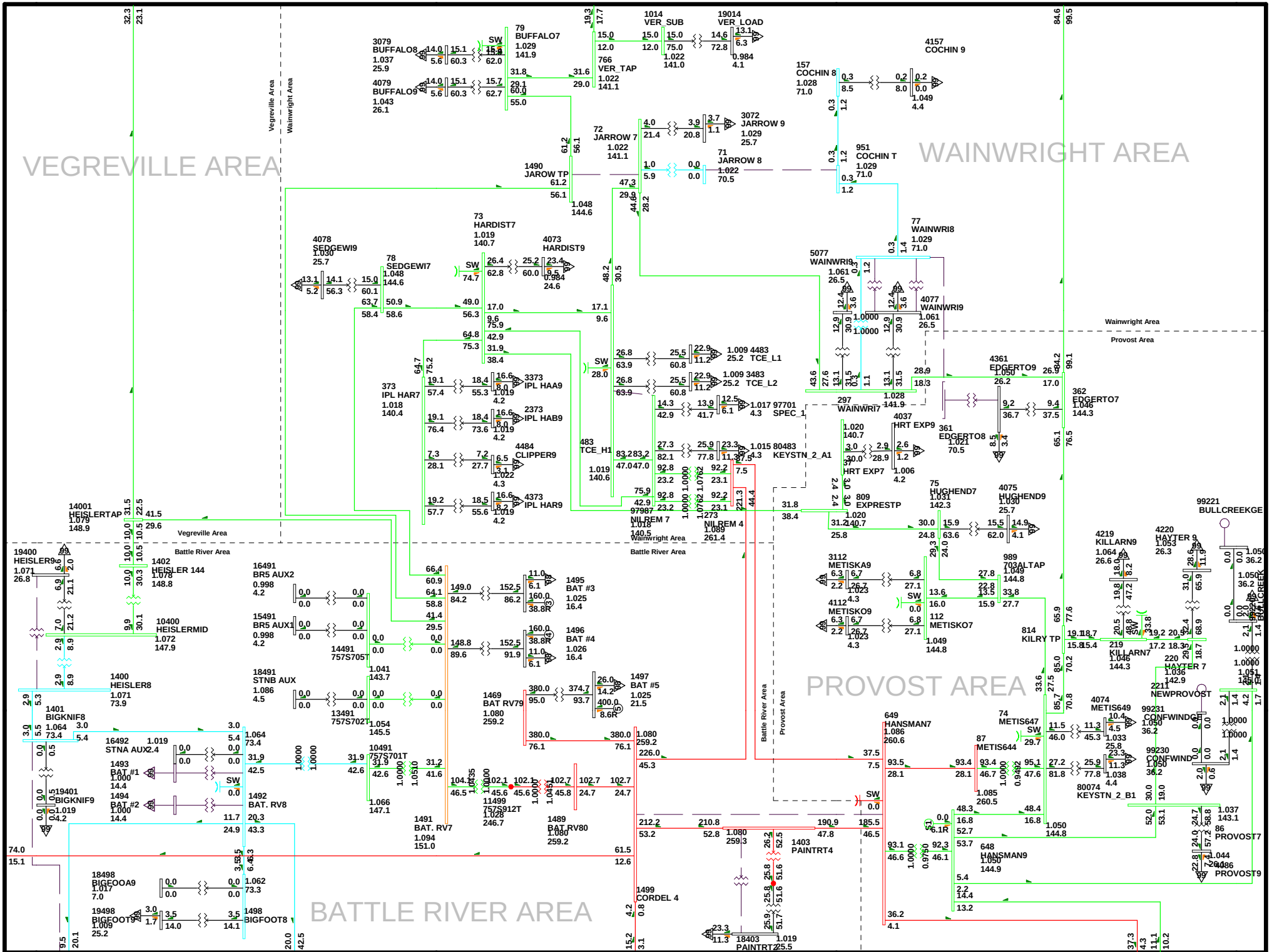
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 09 2010 11:14
D1-23

2012SP-Alt 3 BR#5 ON-5.a

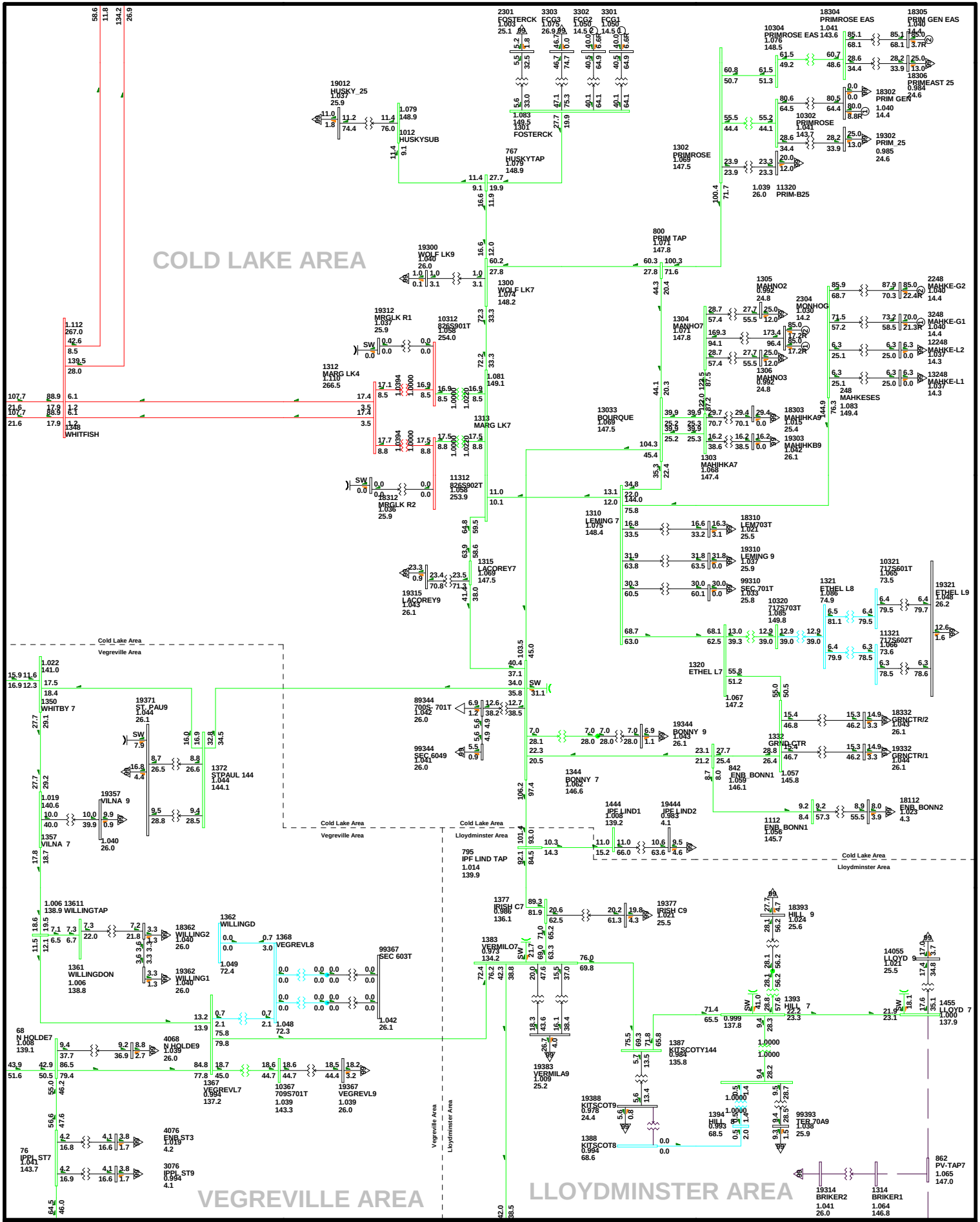
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 09 2010 11:14
D1-23

2012SP-Alt 3 BR#5 ON-5.b

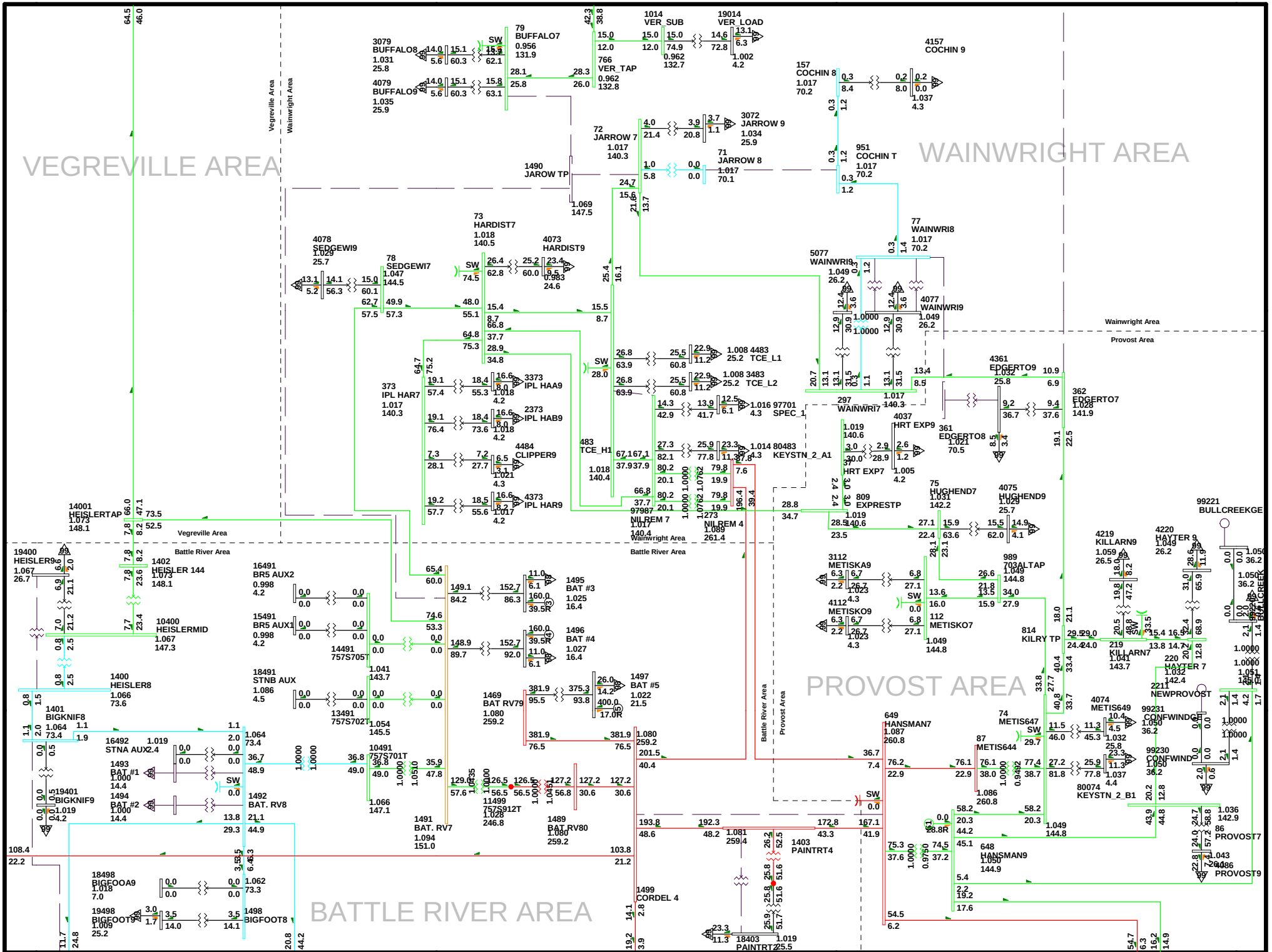
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 09 2010 11:14
D1-24

2012SP-Alt 3 BR#5 ON-6.a

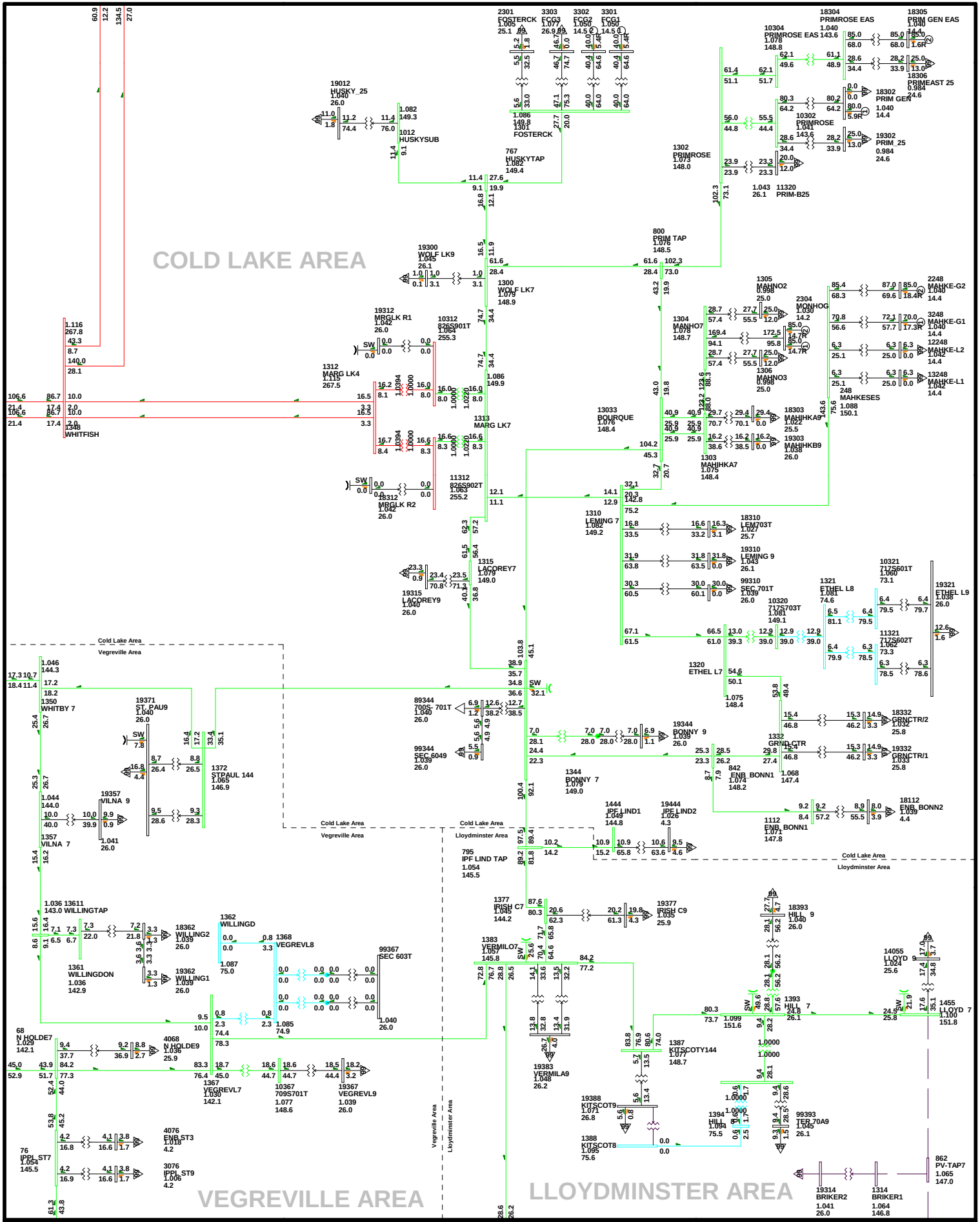
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 09 2010 11:14
D1-24

2012SP-Alt 3 BR#5 ON-6.b

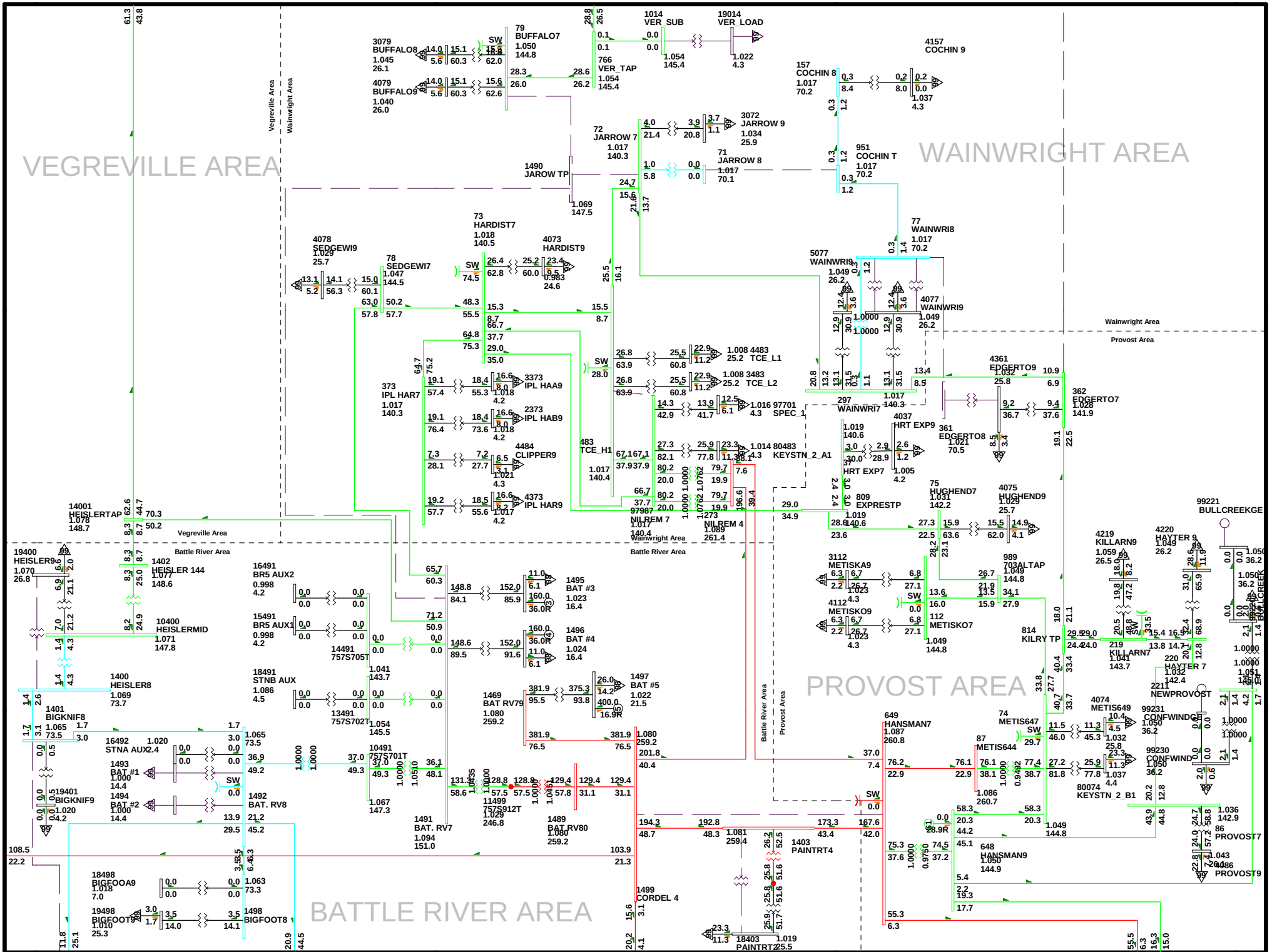
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 09 2010 11:14
D1-24b

2012SP-Alt 3 BR#5 ON-7.a

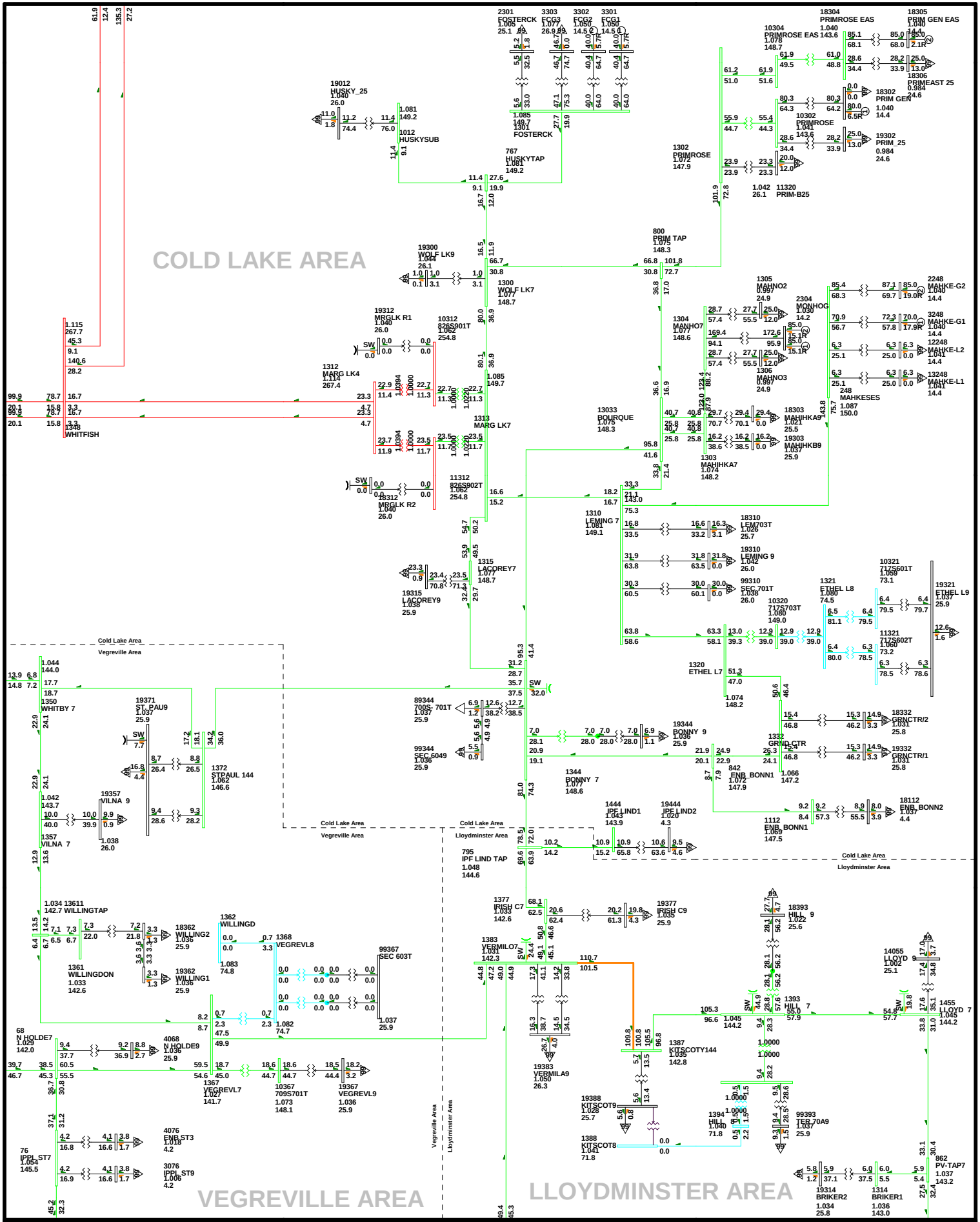
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 09 2010 11:14
D1-24b

2012SP-Alt 3 BR#5 ON-7.b

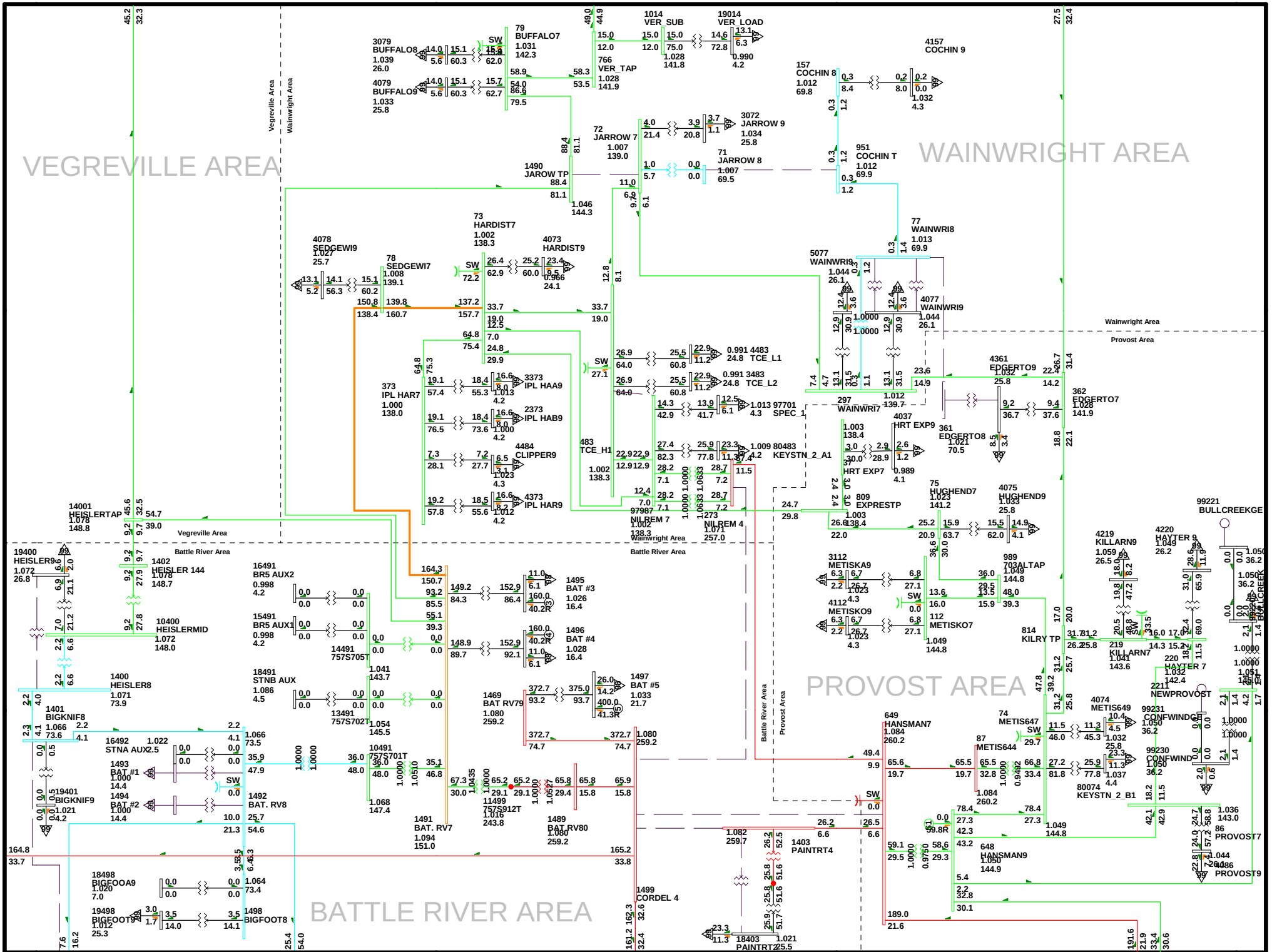
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 09 2010 11:15
D1-26

2012SP-Alt 3 BR#5 ON-8.a

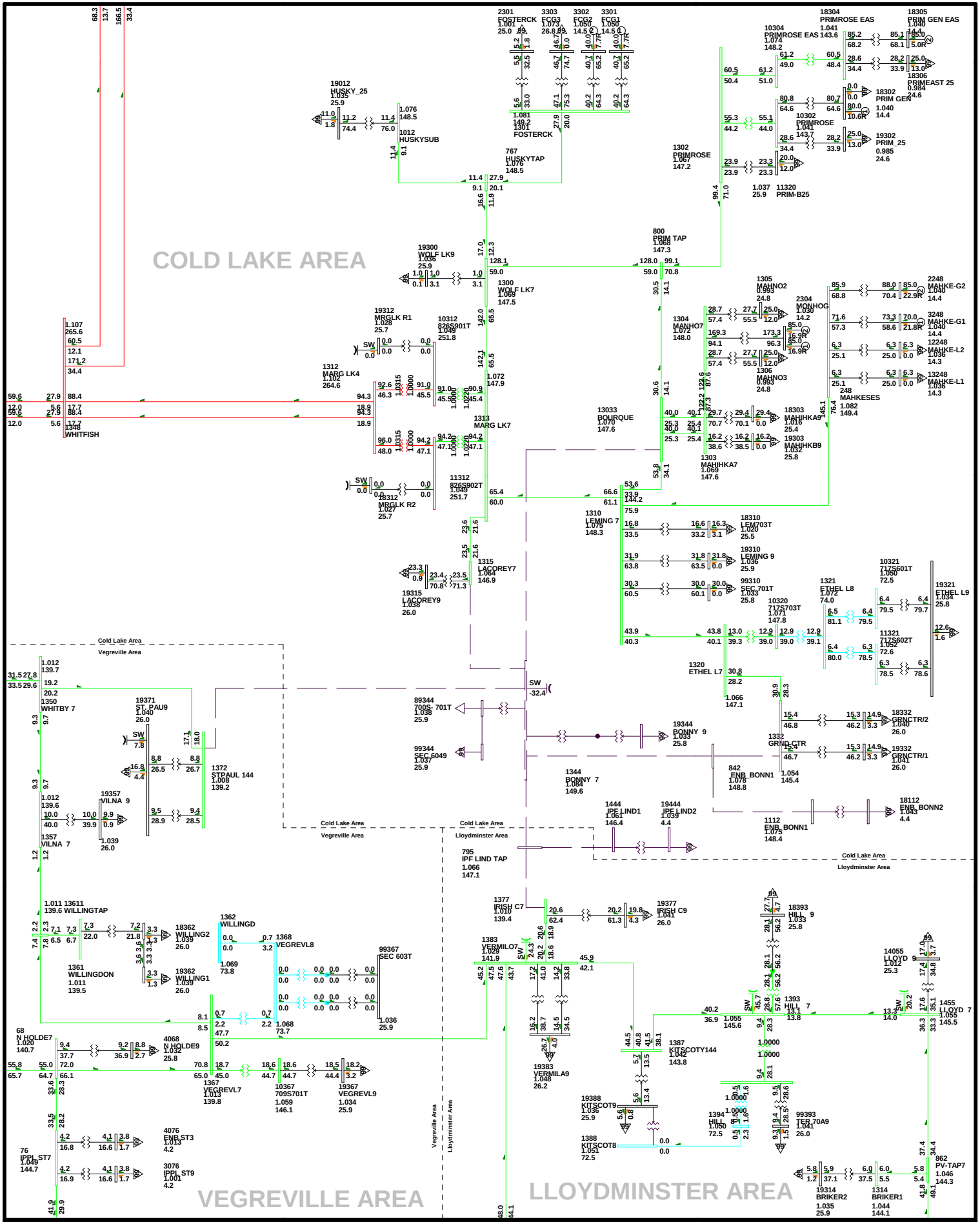
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 09 2010 11:15
D1-26

2012SP-Alt 3 BR#5 ON-8.b

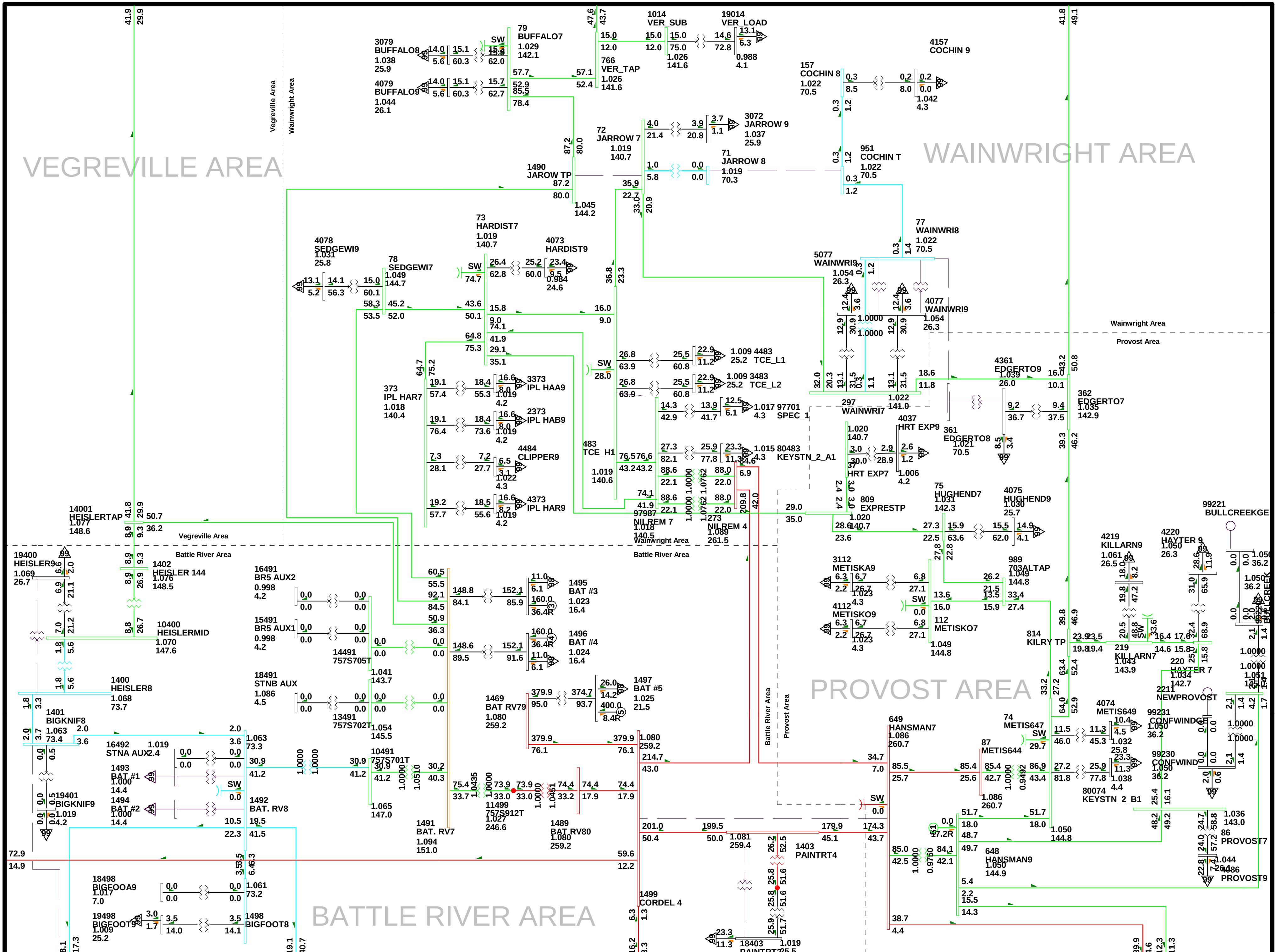
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 09 2010 11:15
D1-27

2012SP-Alt 3 BR#5 ON-9.a

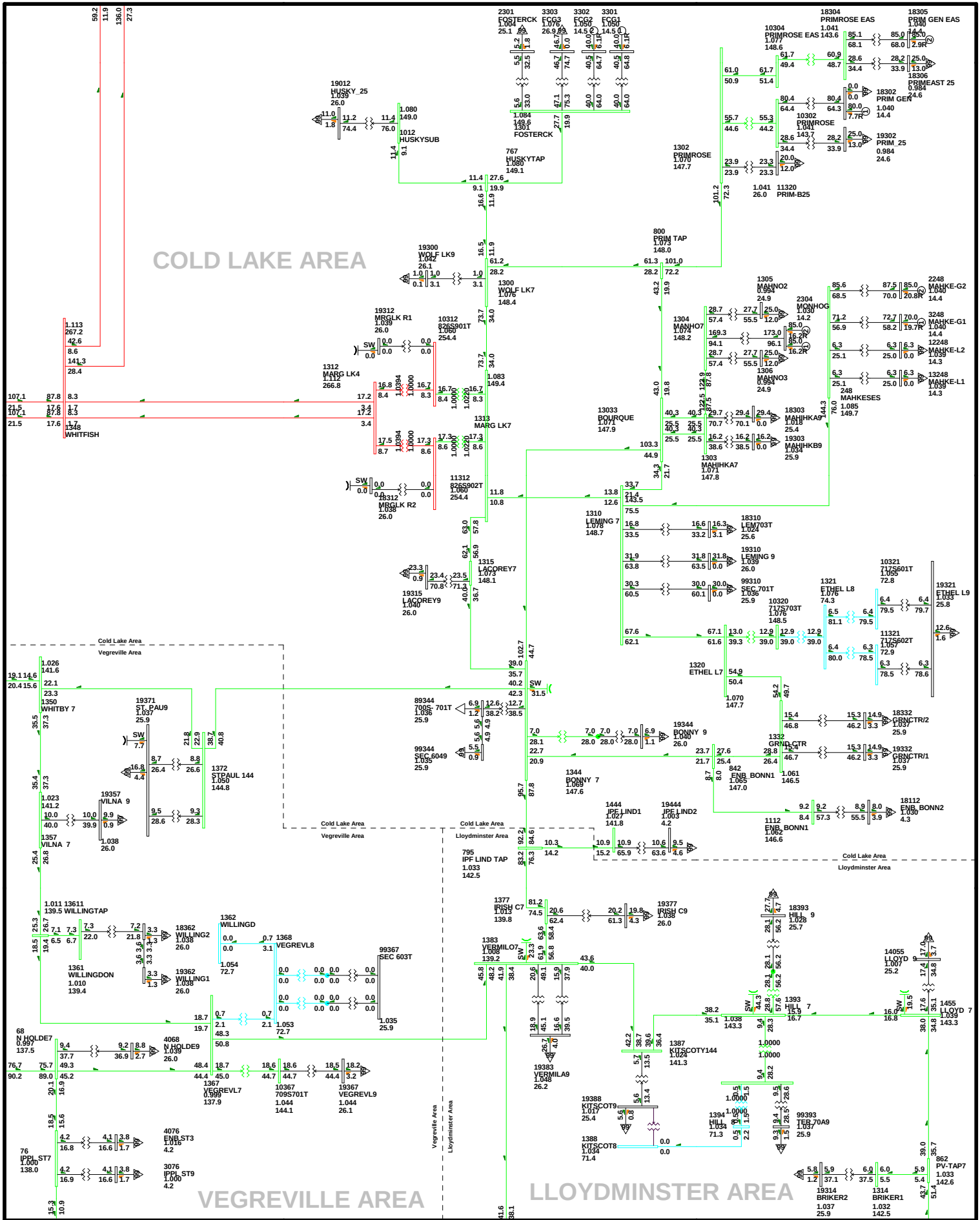
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 09 2010 11:15
D1-27

2012SP-Alt 3 BR#5 ON-9.b

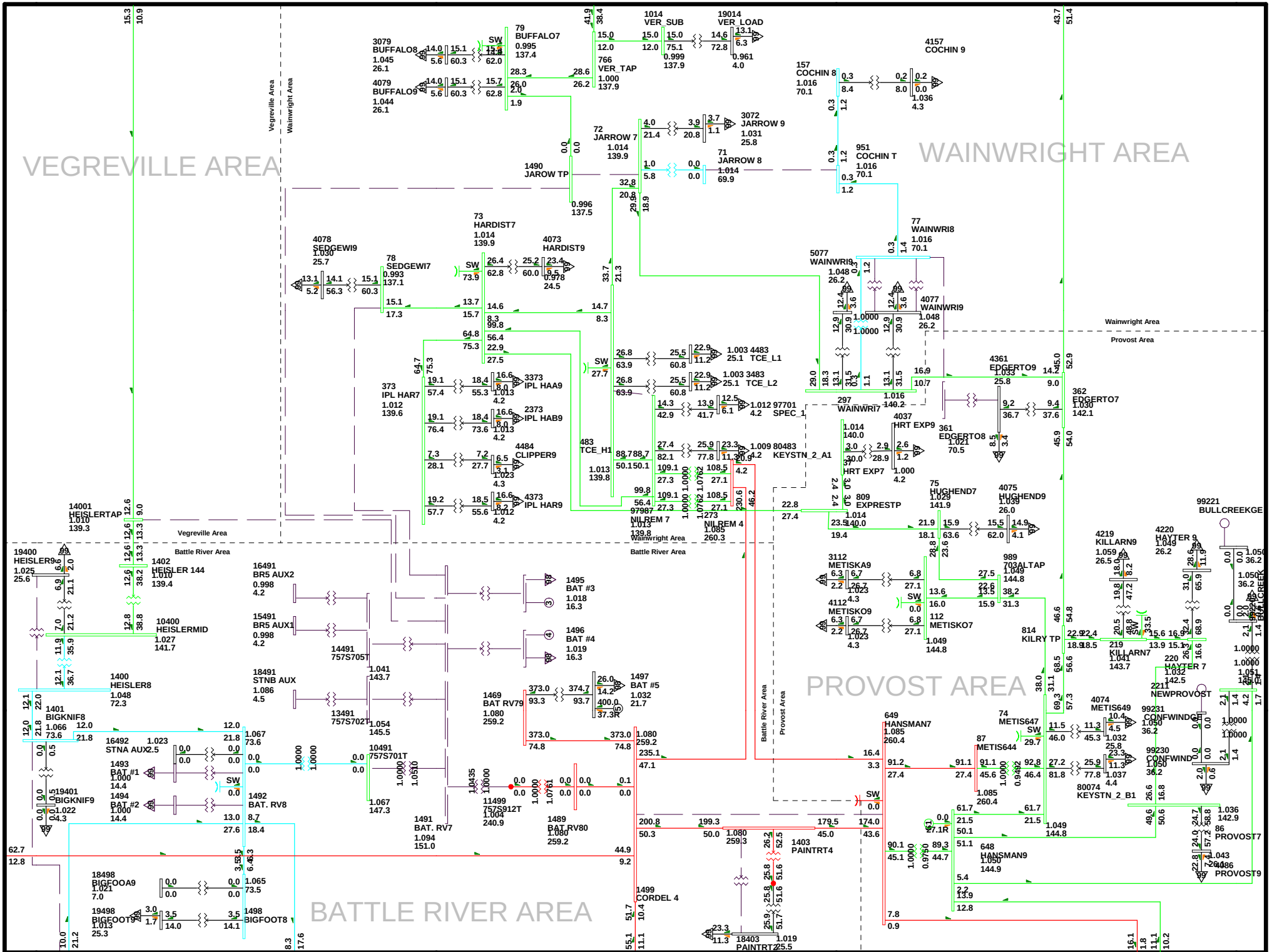
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

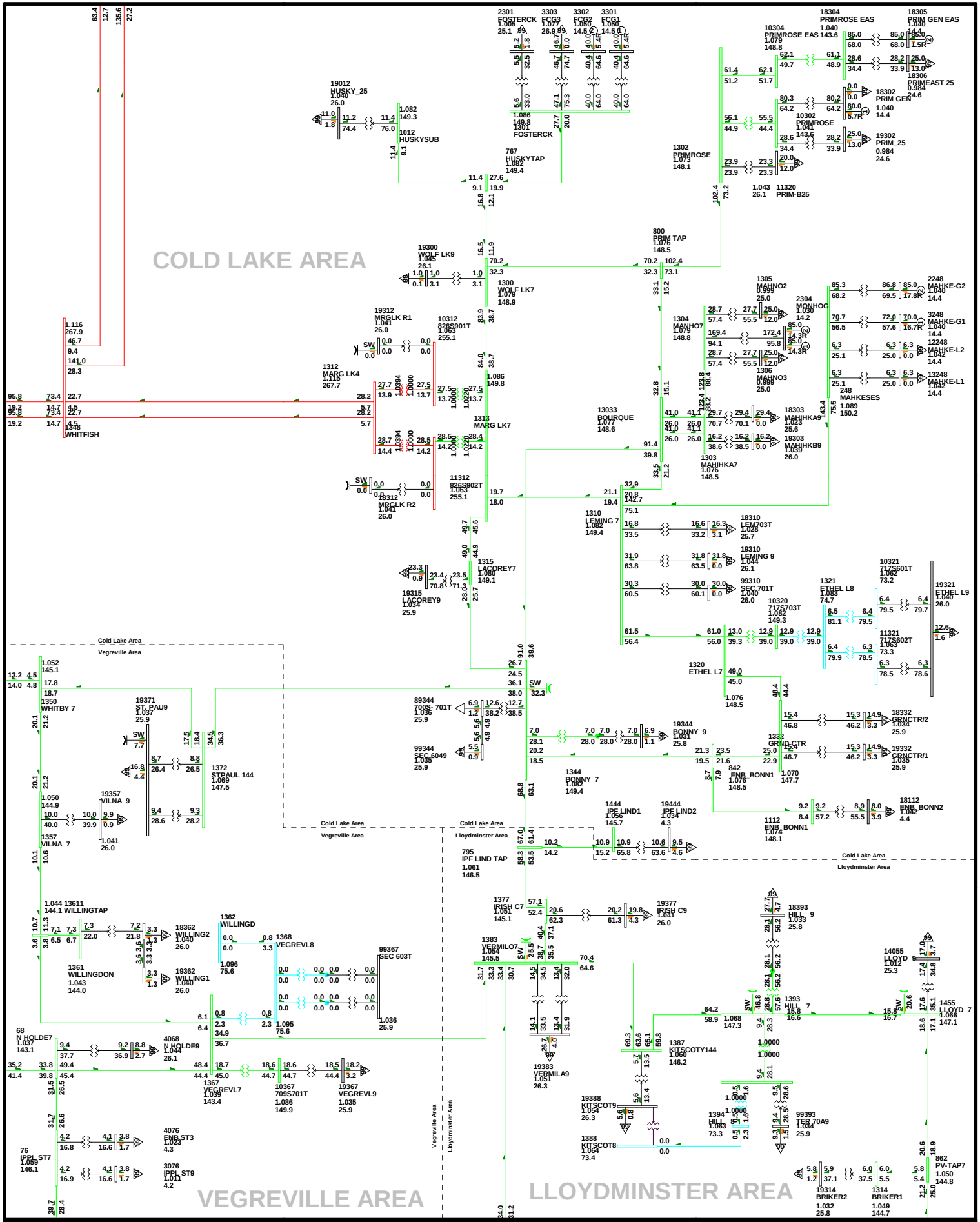


CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
MON, APR 12 2010 9:43

2012SP-Alt 3 BR#5 ON-10.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

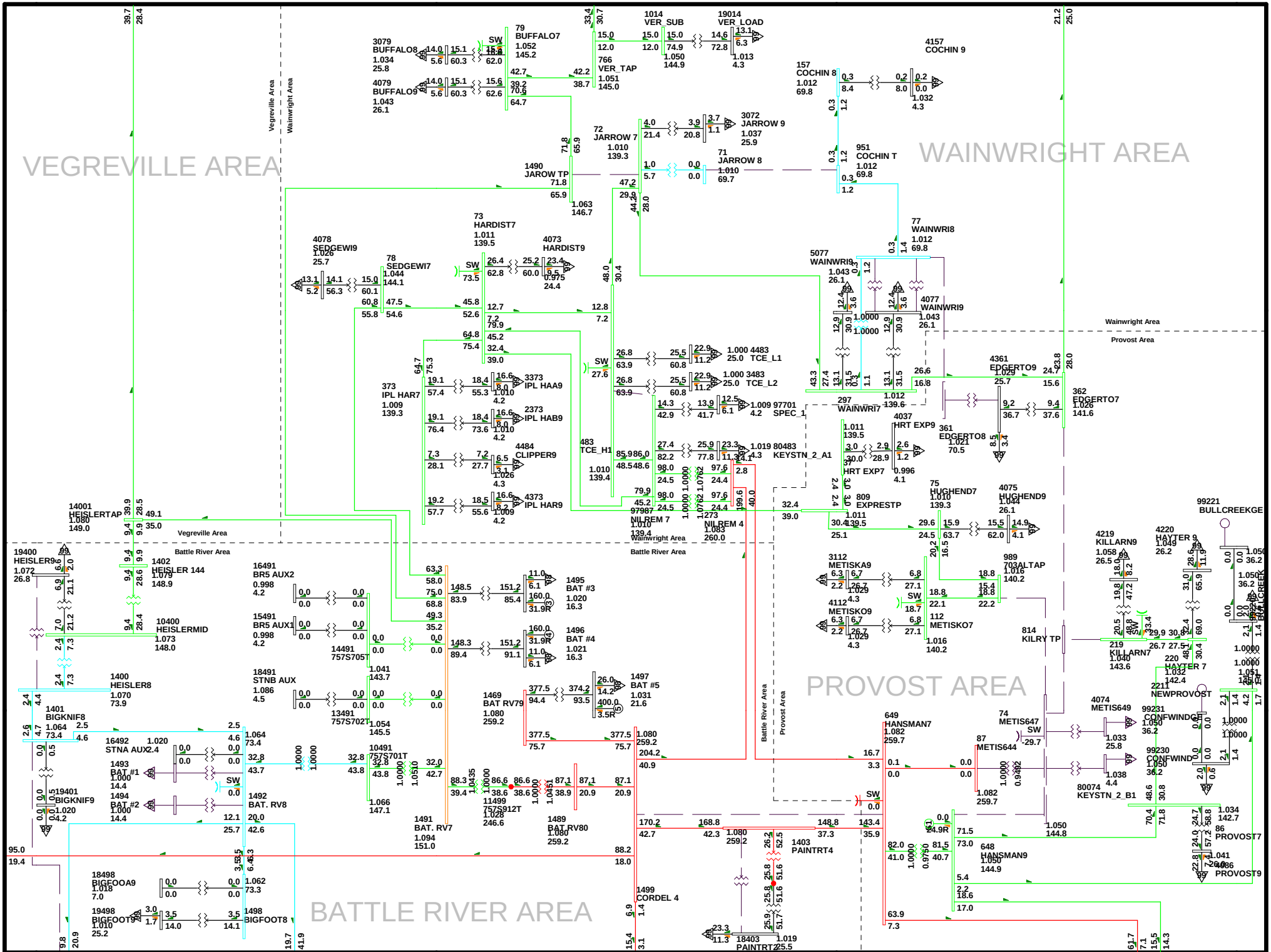

VEGREVILLE AREA
WAINWRIGHT AREA
PROVOST AREA
BATTLE RIVER AREA
Vegreville Area
Wainwright Area
Battle River Area
Provost Area
3079 BUFFALO8 1.045 26.1
4079 BUFFALO9 1.044 26.1
79 BUFFALO7 0.995 137.4
766 VER_TAP 1.000 137.9
1014 VER_SUB
19014 VER_LOAD
4157 COCHIN 9
157 COCHIN 8 1.016 70.1
951 COCHIN T 1.016 70.1
72 JARROW 7 1.014 139.9
3072 JARROW 9 1.031 25.8
71 JARROW 8 1.014 69.9
1490 JAROW TP
0.996 137.5
4078 SEDGEWI9 1.030 25.7
78 SEDGEWI7 0.993 137.1
73 HARDIST7 1.014 139.9
4073 HARDIST9 0.978 24.5
77 WAINWRI8 1.016 70.1
5077 WAINWRI9 1.048 26.2
4077 WAINWRI9 1.048 26.2
4361 EDGERTO9 1.033 25.8
362 EDGERTO7 1.030 142.1
361 EDGERTO8 1.021 70.5
373 IPL HAR7 1.012 139.6
3373 IPL HAA9
2373 IPL HAB9
4484 CLIPPER9
4373 IPL HAR9
483 TCE_H1 1.013 139.8
1.003 4483 25.1 TCE_L1
1.003 3483 25.1 TCE_L2
1.012 97701 SPEC_1
297 WAINWRI7 1.016 140.2
4037 HRT EXP9 1.014 140.0
HRT EXP7 1.000 4.2
1.009 80483 KEYSTN_2_A1
97987 NIL REM 7 1.013 139.8
1273 NIL REM 4 1.085 260.3
809 EXPRESTP 1.014 140.0
75 HUGHEND7 1.029 141.9
4075 HUGHEND9 1.039 26.0
14001 HEISLERTAP 1.010 139.3
19400 HEISLER9 1.025 25.6
1402 HEISLER 144 1.010 139.4
10400 HEISLERMID 1.027 141.7
1400 HEISLER8 1.048 72.3
1401 BIGKNIF8 1.066 73.6
19401 BIGKNIF9 1.022 14.3
16491 BR5 AUX2 0.998 4.2
15491 BR5 AUX1 0.998 4.2
18491 STNB AUX 1.086 4.5
16492 STNA AUX 2.5
1493 BAT #1 1.000 14.4
1494 BAT #2 1.000 14.4
1492 BAT. RV8 8.7
1495 BAT #3 1.018 16.3
1496 BAT #4 1.019 16.3
1497 BAT #5 1.032 21.7
1469 BAT RV79 1.080 259.2
14491 757S705T 1.041 143.7
13491 757S702T 1.054 145.5
10491 757S701T 1.067 147.3
11499 757S912T 1.004 240.9
1491 BAT. RV7 1.094 151.0
1489 BAT.RV80 1.080 259.2
1499 CORDEL 4
1403 PAINTRT4
18403 PAINTRT2 1.019 25.5
18498 BIGFOOA9 1.021 7.0
19498 BIGFOOT9 1.013 25.3
1498 BIGFOOT8 1.013 14.1
3112 METISKA9 1.023 4.3
4112 METISKO9 1.023 4.3
112 METISKO7 1.049 144.8
989 703ALTAP 1.049 144.8
814 KILRY TP
649 HANSMAN7 1.085 260.4
74 METIS647
87 METIS644 1.085 260.4
648 HANSMAN9 1.050 144.9
4074 METIS649 1.032 25.8
80074 KEYSTN_2_B1
4219 KILLARN9 1.059 26.5
219 KILLARN7 1.041 143.7
4220 HAYTER 9 1.049 26.2
220 HAYTER 7 1.032 142.5
2211 NEWPROVOST
99231 CONFWINDG 1.050 36.2
99230 CONFWIND 1.050 36.2
99221 BULLCREEKGE
99220 BULLCREEK
86 PROVOST7 1.036 142.9
4086 PROVOST9 1.043 26.1
CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
MON, APR 12 2010 9:44
2012SP-Alt 3 BR#5 ON-10.b
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 09 2010 11:15
D1-29

2012SP-Alt 3 BR#5 ON-11.a

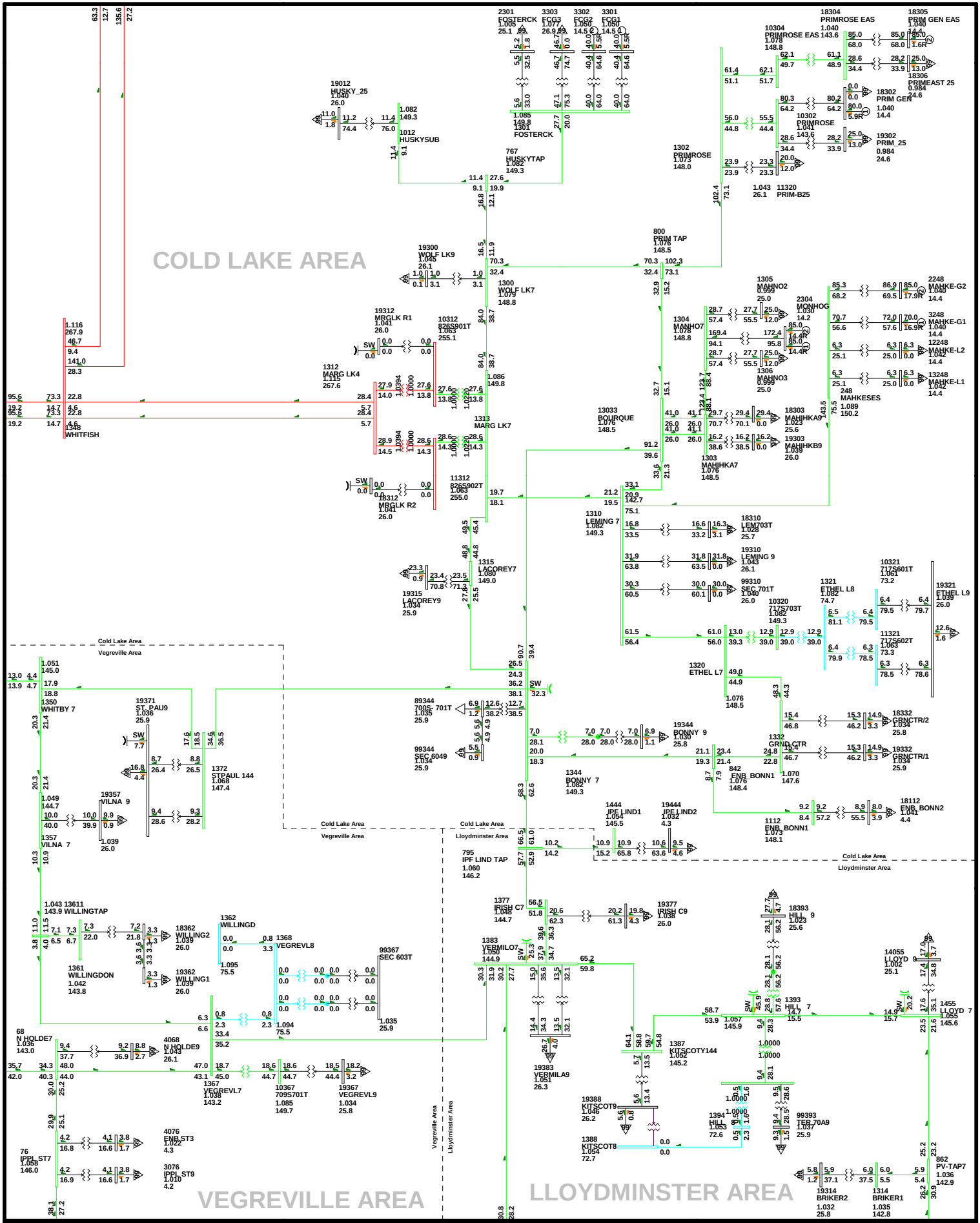
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 09 2010 11:15
D1-29

2012SP-Alt 3 BR#5 ON-11.b

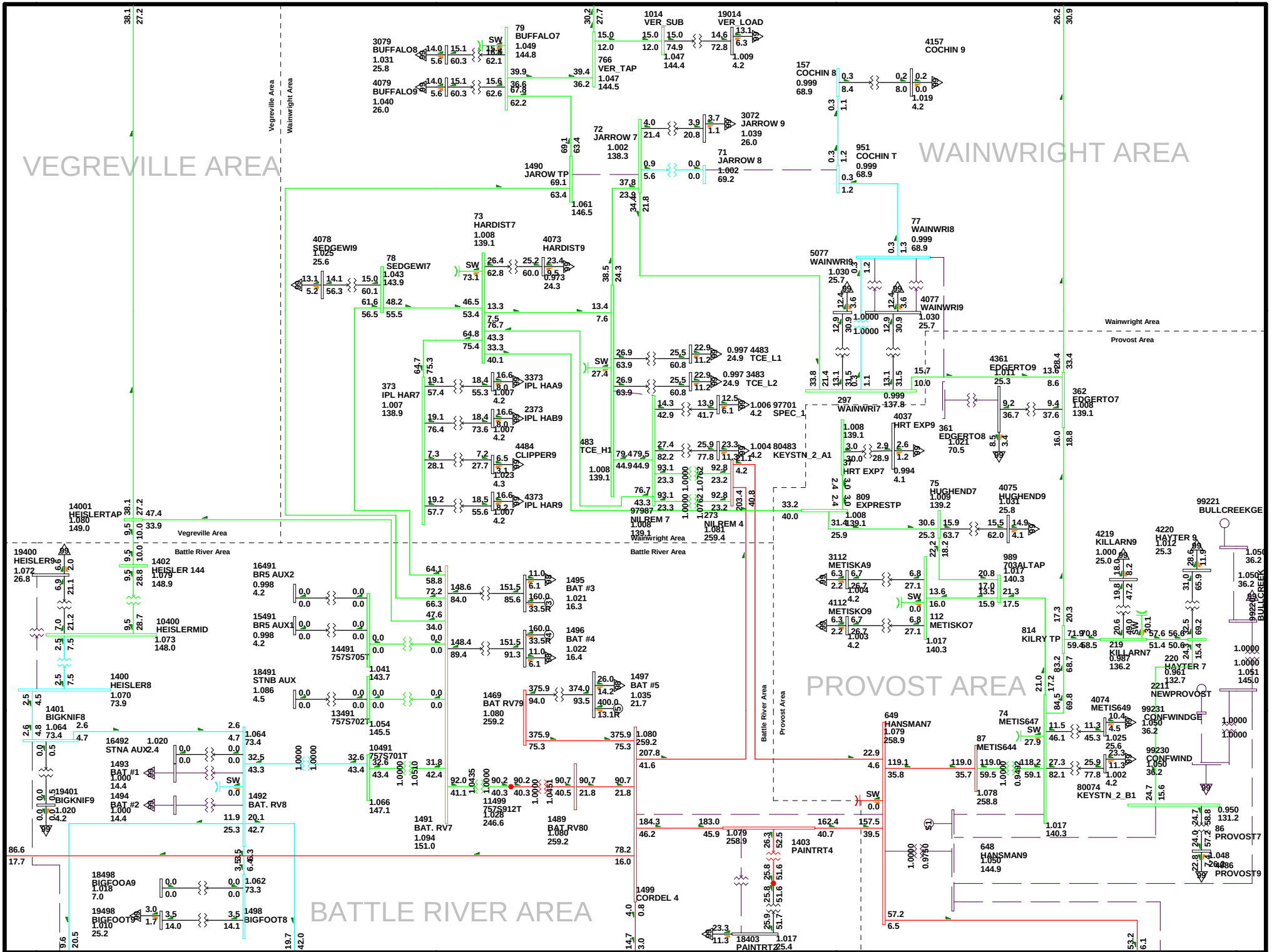
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
MON, APR 12 2010 9:40

2012SP-Alt 3 BR#5 ON-12.a

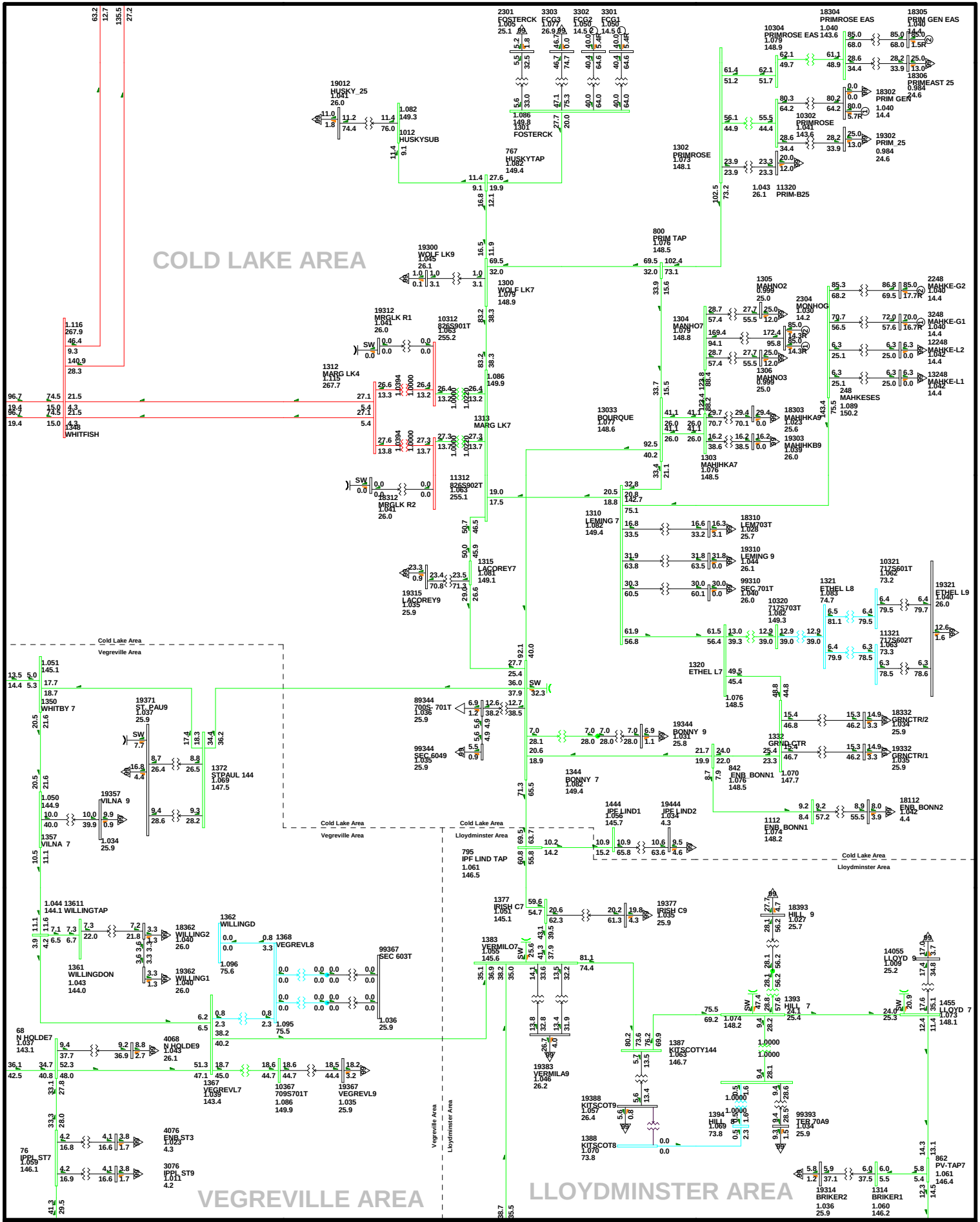
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
MON, APR 12 2010 9:33

2012SP-Alt 3 BR#5 ON-12.b

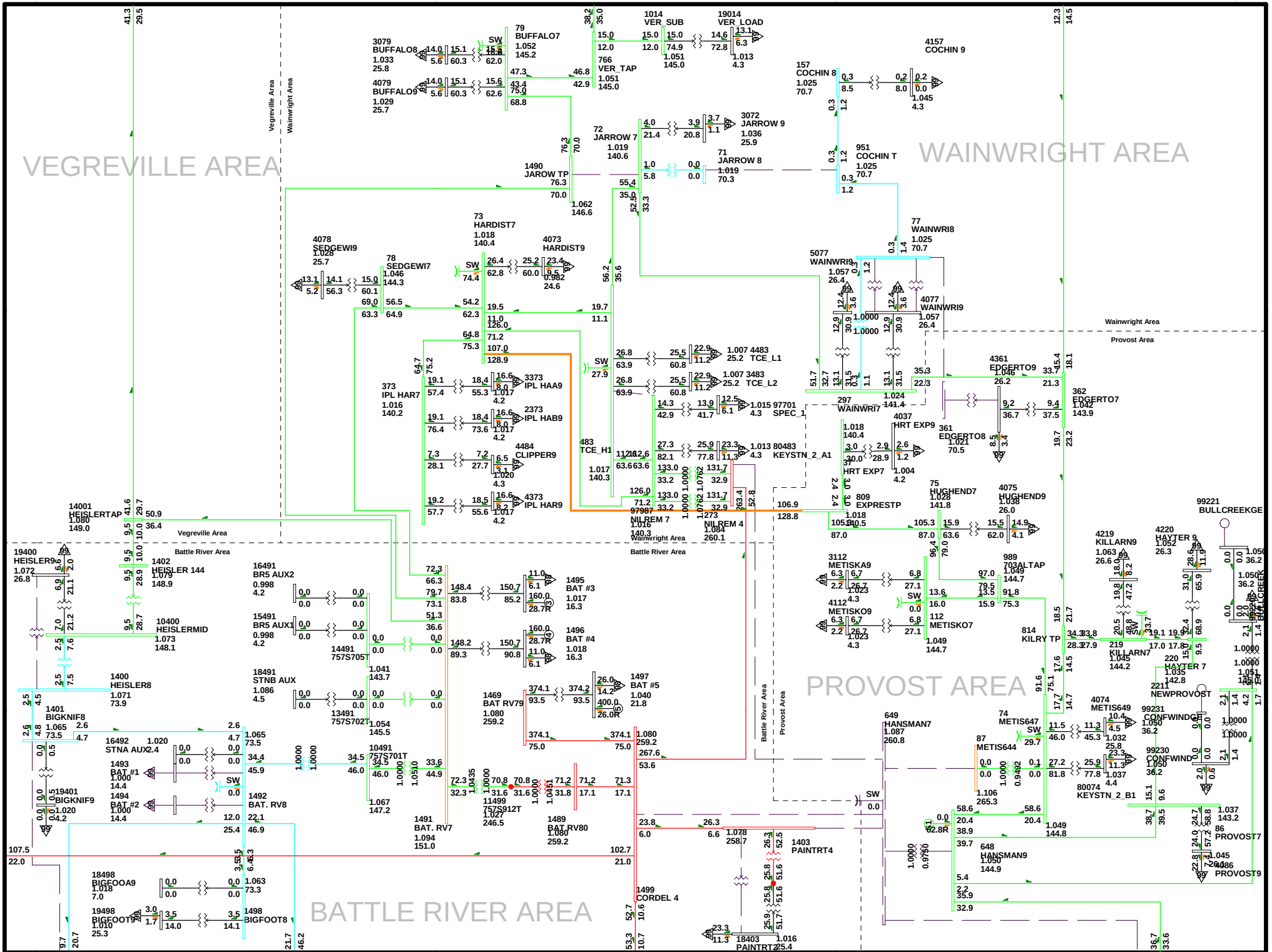
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 09 2010 11:15
D1-31

2012SP-Alt 3 BR#5 ON-13.a

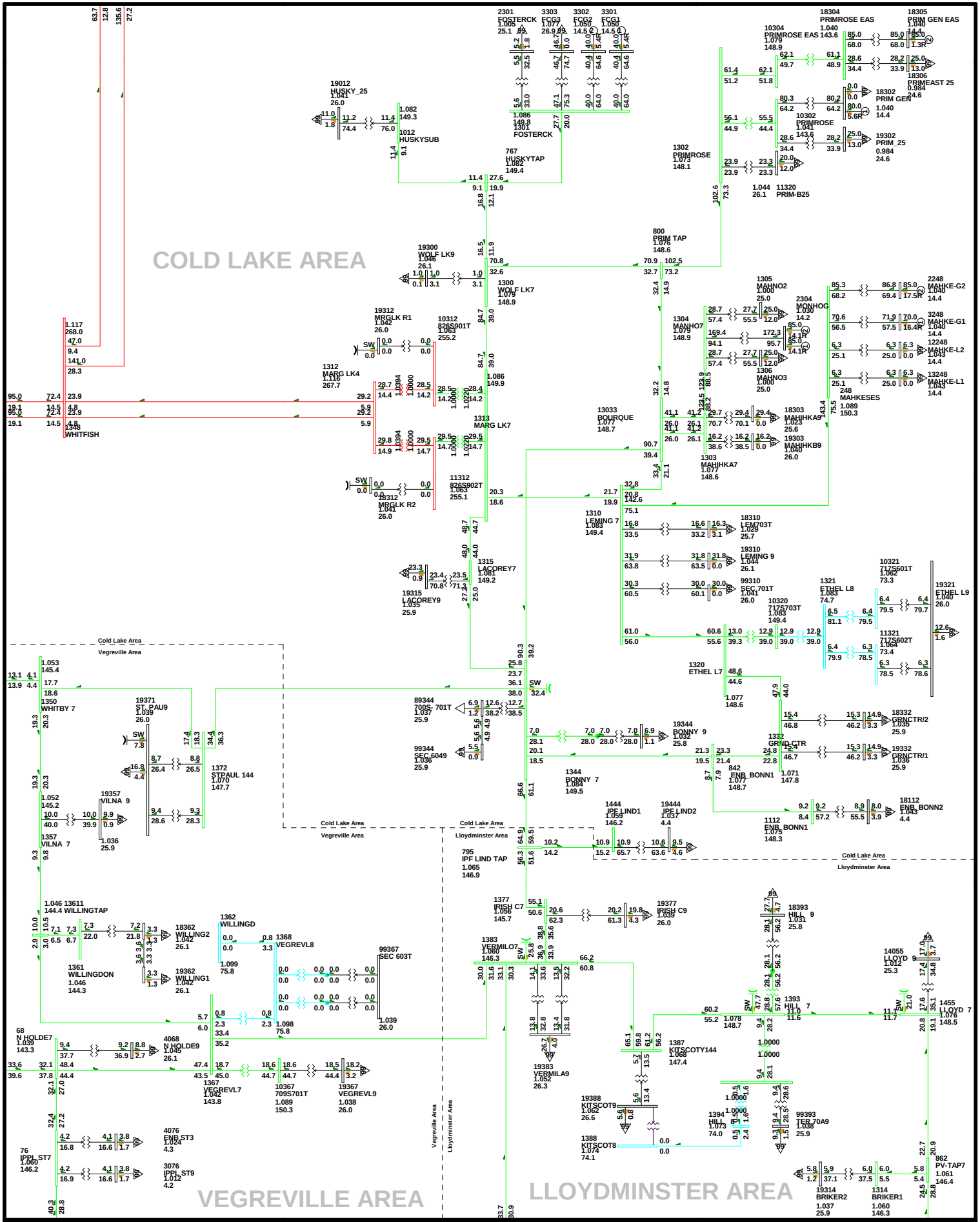
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 09 2010 11:15
D1-31

2012SP-Alt 3 BR#5 ON-13.b

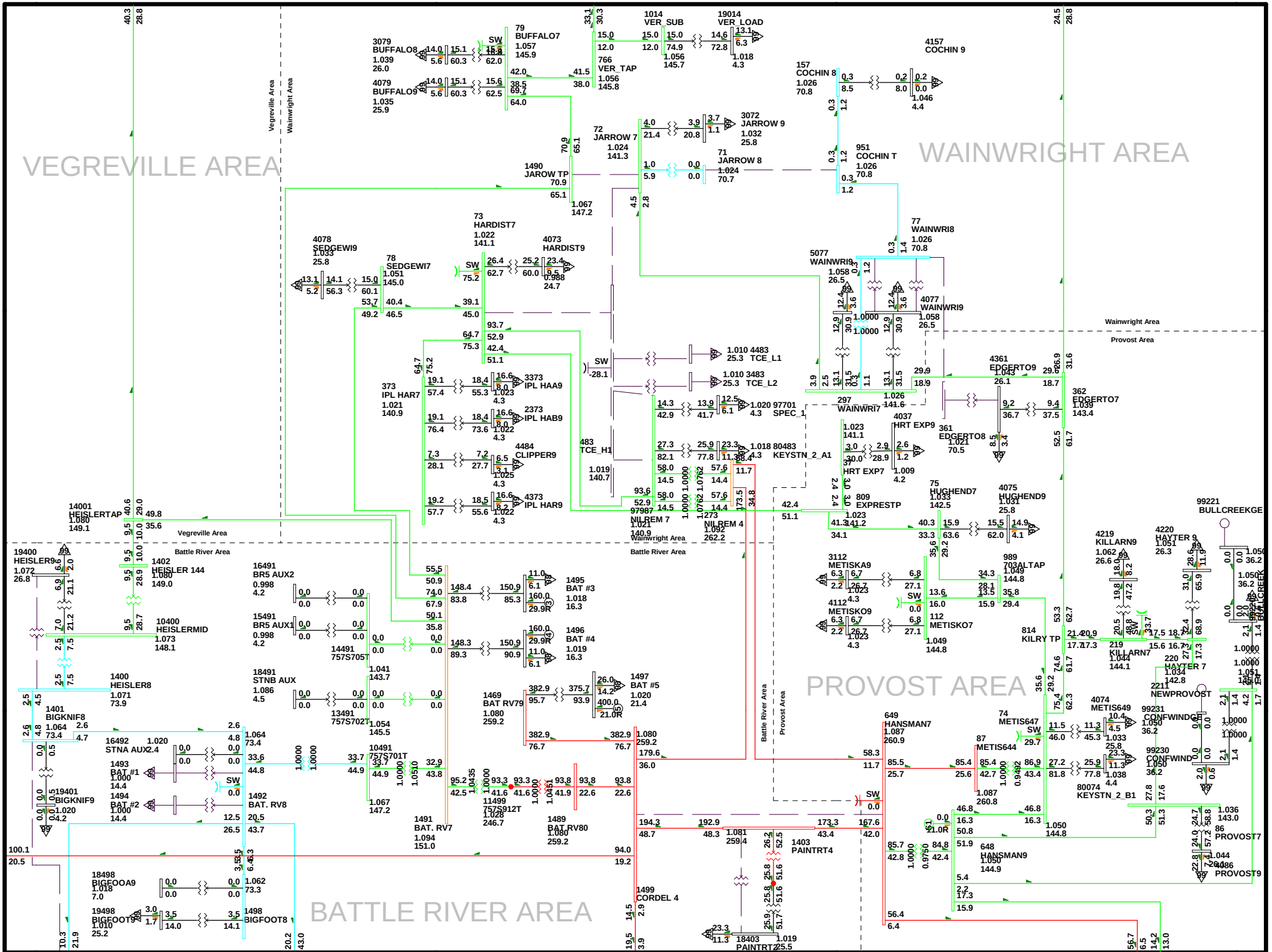
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 09 2010 11:15
D1-32

2012SP-Alt 3 BR#5 ON-14.a

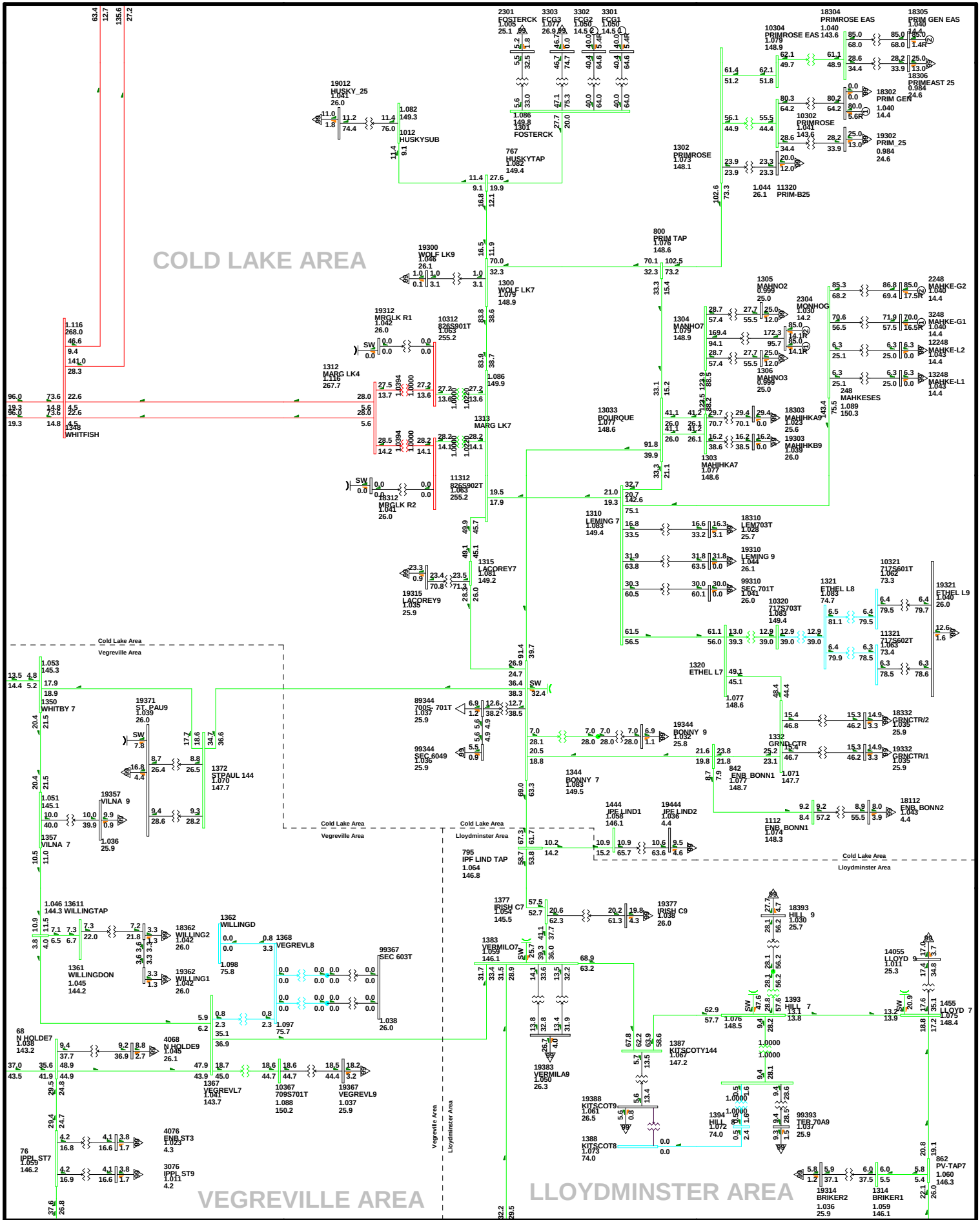
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 09 2010 11:15
D1-32

2012SP-Alt 3 BR#5 ON-14.b

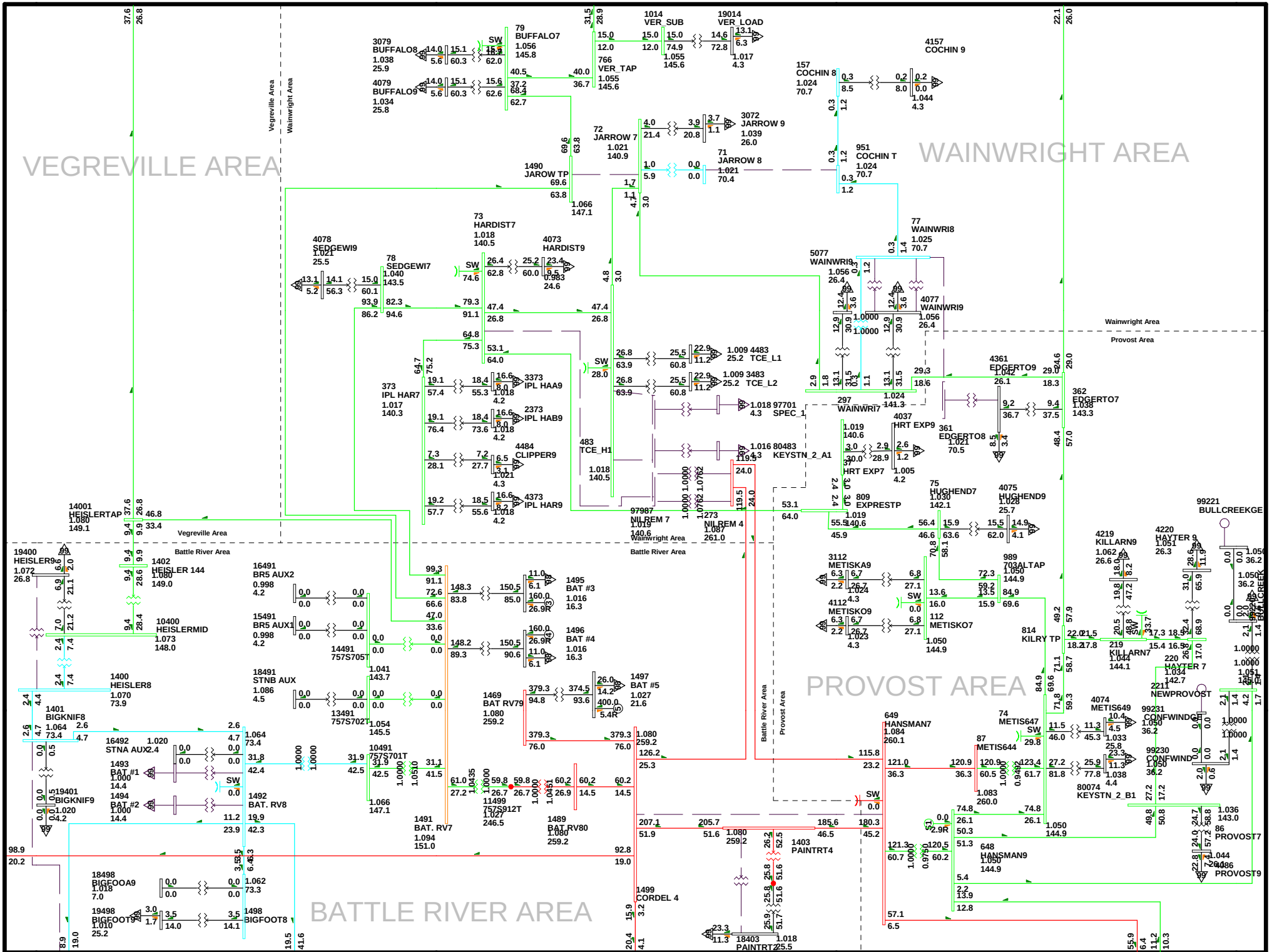
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 09 2010 11:58
D1-33

2012SP-Alt 3 BR#5 ON-15.a

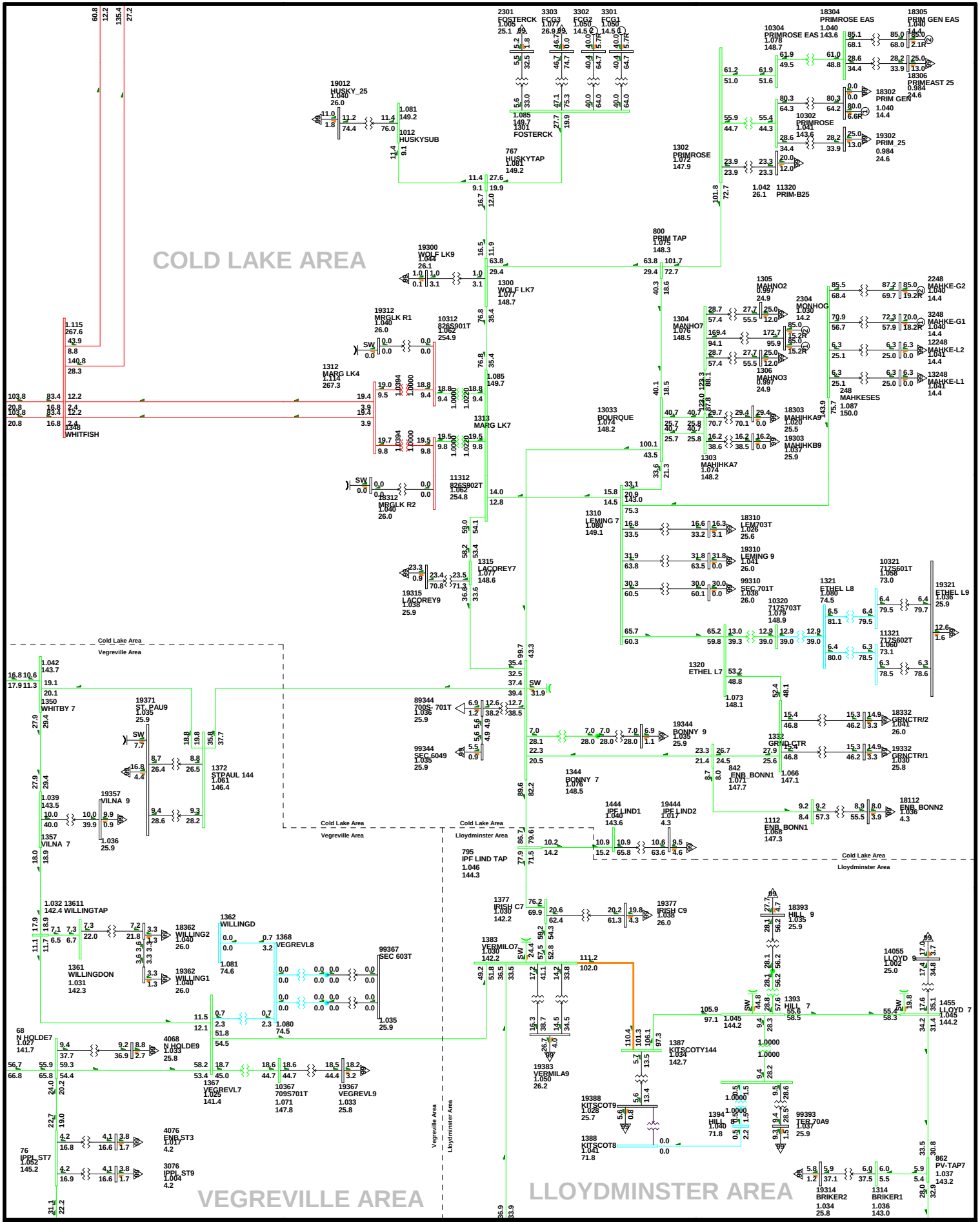
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 09 2010 11:58
D1-33

2012SP-Alt 3 BR#5 ON-15.b

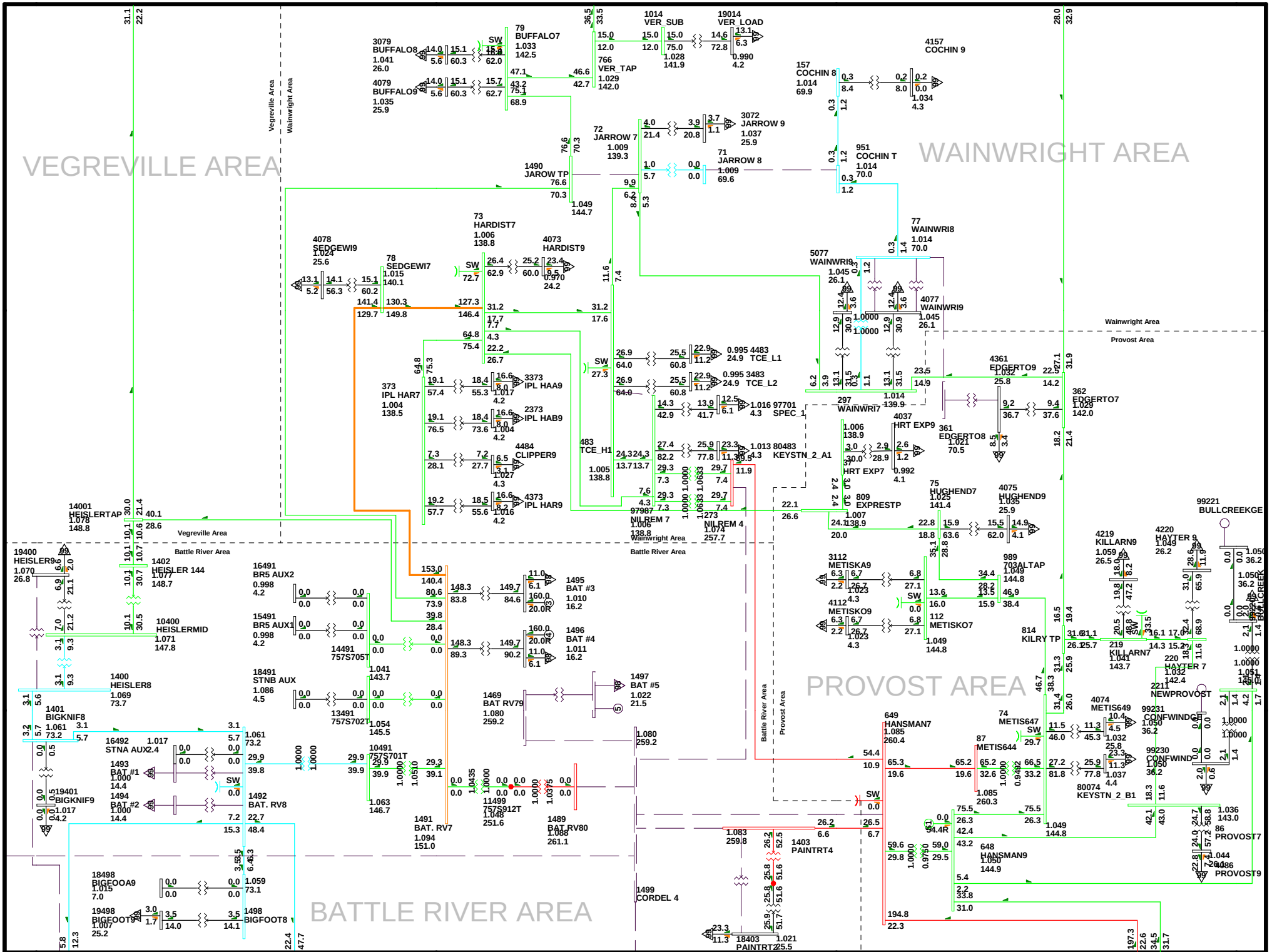
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

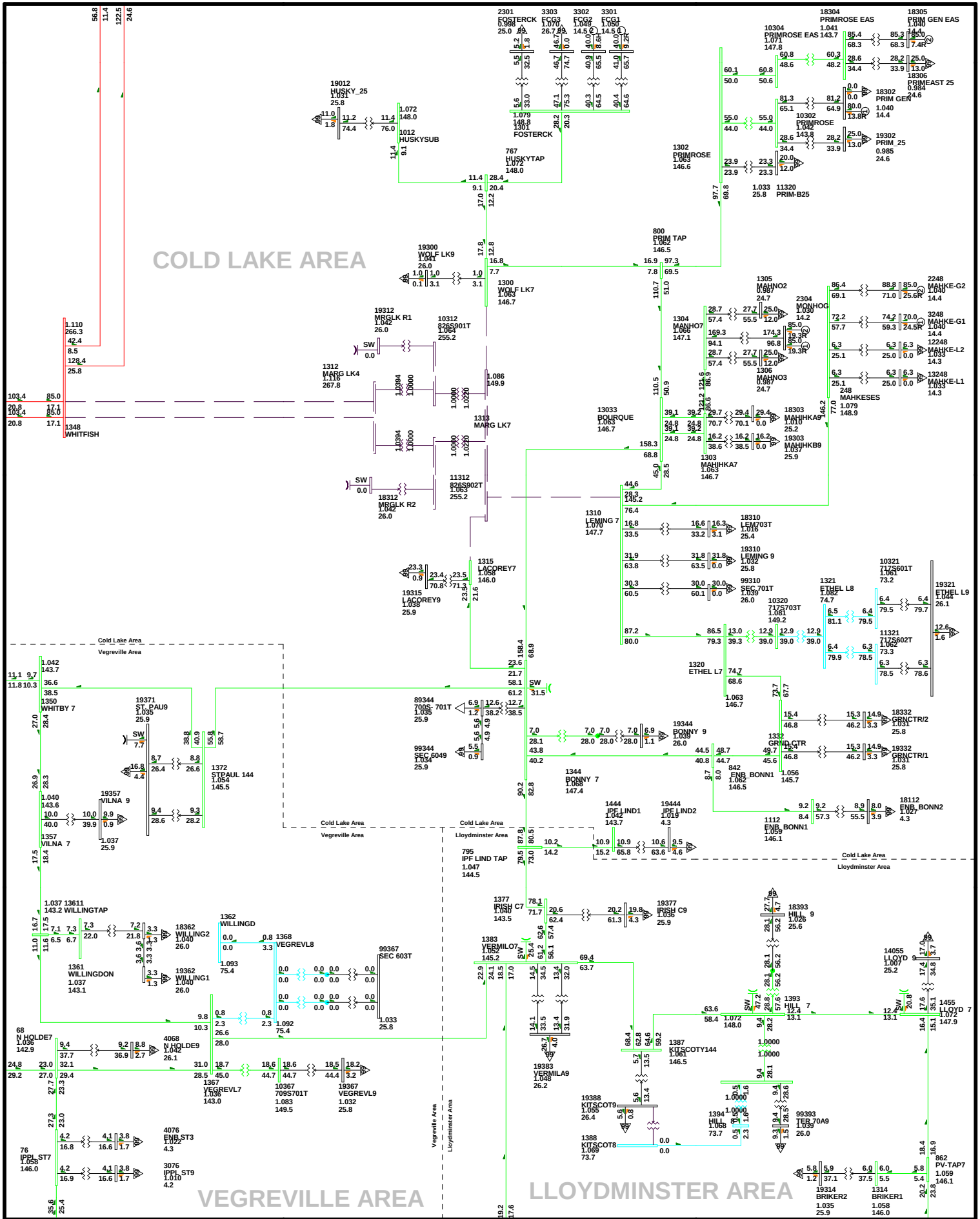


CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 09 2010 11:15
D1-34

2012SP-Alt 3 BR#5 ON-16.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

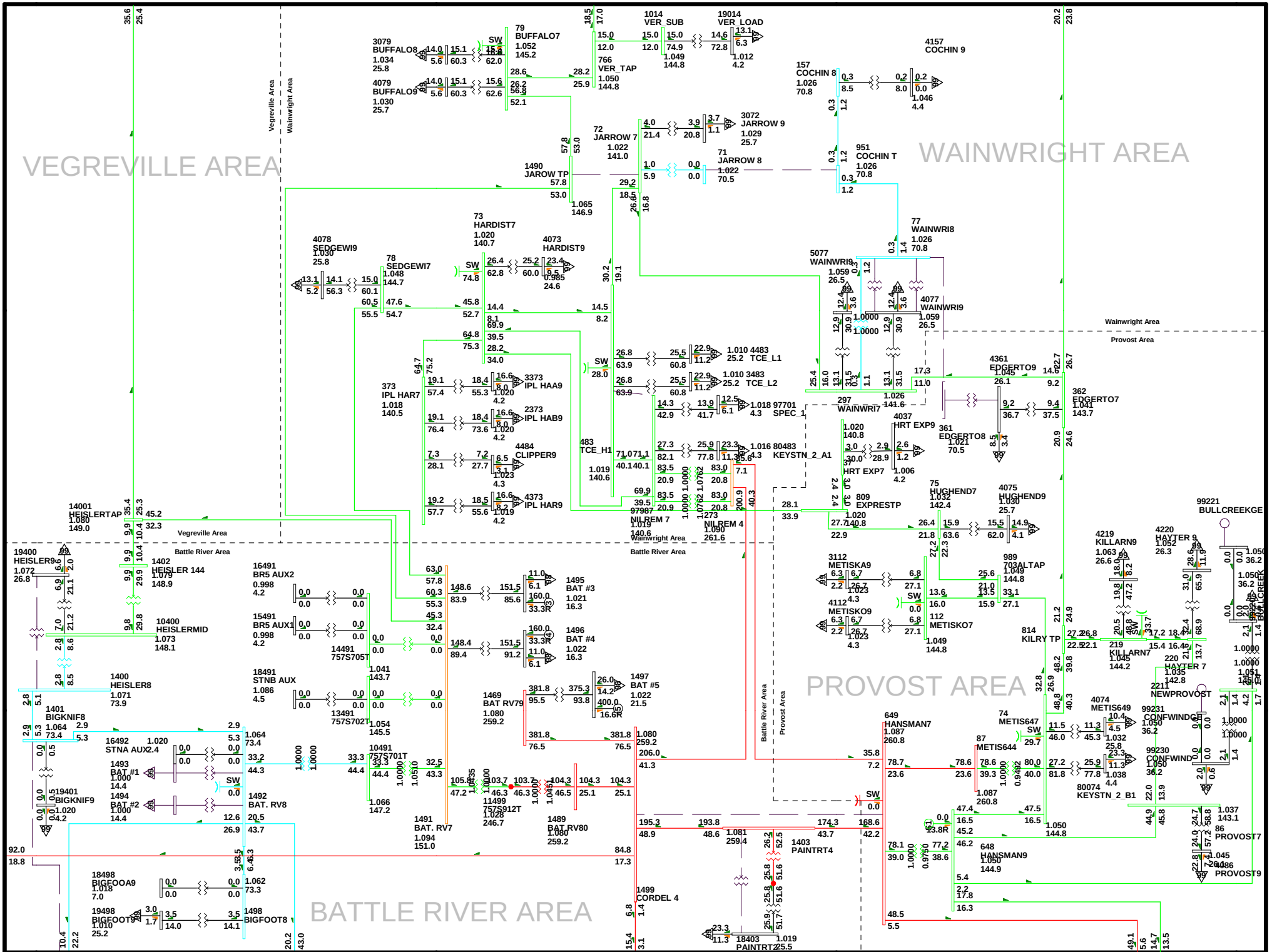

VEGREVILLE AREA
WAINWRIGHT AREA
PROVOST AREA
BATTLE RIVER AREA
Vegreville Area
Wainwright Area
Battle River Area
Provost Area
79 BUFFALO7 1.033 142.5
3079 BUFFALO8 1.041 26.0
4079 BUFFALO9 1.035 25.9
1014 VER_SUB
19014 VER_LOAD
766 VER_TAP 1.029 142.0
1.028 141.9
0.990 4.2
4157 COCHIN 9
157 COCHIN 8 1.014 69.9
1.034 4.3
72 JAROW 7 1.009 139.3
3072 JAROW 9 1.037 25.9
71 JAROW 8 1.009 69.6
1490 JAROW TP 76.6 70.3 1.049 144.7
951 COCHIN T 1.014 70.0
77 WAINWRI8 1.014 70.0
5077 WAINWRI9 1.045 26.1
4077 WAINWRI9 1.045 26.1
297 WAINWRI7 1.014 139.9
4078 SEDGEWI9 1.024 25.6
78 SEDGEWI7 1.015 140.1
73 HARDIST7 1.006 138.8
4073 HARDIST9 0.970 24.2
373 IPL HAR7 1.004 138.5
3373 IPL HAA9 1.017 4.2
2373 IPL HAB9 1.004 4.2
4484 CLIPPER9 1.027 4.3
4373 IPL HAR9 1.016 4.2
483 TCE_H1 1.005 138.8
0.995 4483 24.9 TCE_L1
0.995 3483 24.9 TCE_L2
1.016 97701 SPEC_1 4.3
1.013 80483 KEYSTN_2_A1 4.3
97987 NIL REM 7 1.006 138.8
1273 NIL REM 4 1.074 257.7
4037 HRT EXP9 1.006 138.9
HRT EXP7 1.007 138.9
0.992 4.1
809 EXPRESTP 1.007 138.9
4361 EDGERTO9 1.032 25.8
362 EDGERTO7 1.029 142.0
361 EDGERTO8 1.021 70.5
75 HUGHEND7 1.025 141.4
4075 HUGHEND9 1.035 25.9
14001 HEISLERTAP 1.078 148.8
19400 HEISLER9 1.070 26.8
1402 HEISLER 144 1.077 148.7
10400 HEISLERMID 1.071 147.8
1400 HEISLER8 1.069 73.7
1401 BIGKNIF8 1.061 73.2
19401 BIGKNIF9 1.017 4.2
16491 BR5 AUX2 0.998 4.2
15491 BR5 AUX1 0.998 4.2
14491 757S705T 1.041 143.7
18491 STNB AUX 1.086 4.5
13491 757S702T 1.054 145.5
16492 STNA AUX 1.017 2.4
1493 BAT #1 1.000 14.4
1494 BAT #2 1.000 14.4
1492 BAT. RV8 22.7 48.4
10491 757S701T 1.063 146.7
1491 BAT. RV7 1.094 151.0
1495 BAT #3 1.010 16.2
1496 BAT #4 1.011 16.2
1497 BAT #5 1.022 21.5
1469 BAT RV79 1.080 259.2
1080 259.2
11499 757S912T 1.048 251.6
1489 BAT RV80 1.088 261.1
1499 CORDEL 4
1403 PAINTRT4
18403 PAINTRT 1.021 25.5
18498 BIGEOOA9 1.015 7.0
19498 BIGFOOT9 1.007 25.2
1498 BIGFOOT8 1.059 73.1
649 HANSMAN7 1.085 260.4
74 METIS647
87 METIS644
1.085 260.3
648 HANSMAN9 1.050 144.9
3112 METISKA9
4112 METISKO9
112 METISKO7 1.049 144.8
814 KILRY TP
989 703ALTAP 1.049 144.8
4074 METIS649 1.050 36.2
80074 KEYSTN_2_B1
4219 KILLARN9 1.059 26.5
219 KILLARN7 1.041 143.7
4220 HAYTER 9 1.049 26.2
220 HAYTER 7 1.032 142.4
2211 NEWPROVOST
99231 CONFWINDGE 1.050 36.2
99230 CONFWIND 1.050 36.2
99221 BULLCREEKGE
86 PROVOST7 1.036 143.0
86 PROVOST9 1.044 144.6
CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 09 2010 11:16
D1-34
2012SP-Alt 3 BR#5 ON-16.b
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 09 2010 11:16
D1-35

2012SP-Alt 3 BR#5 ON-17.a

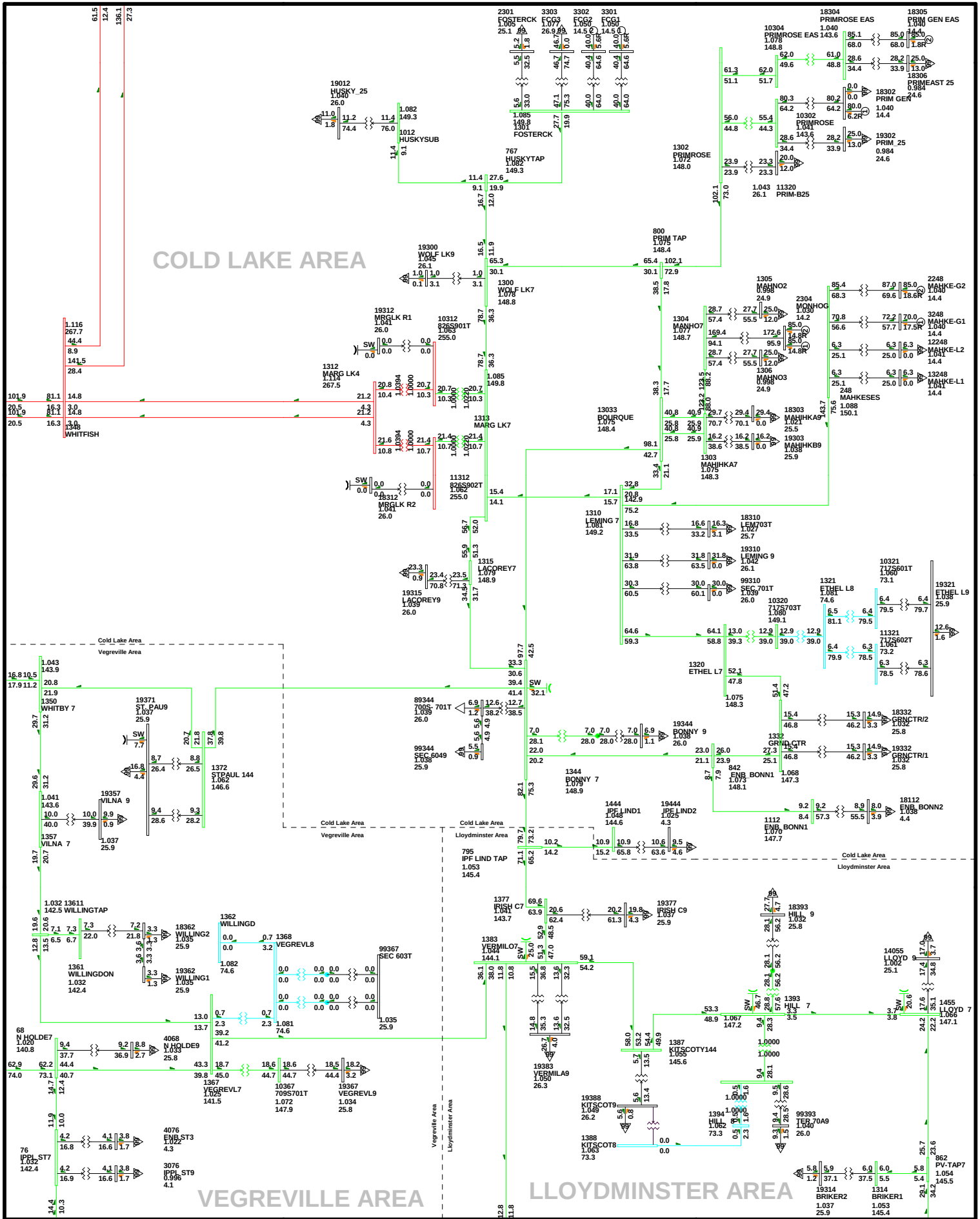
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 09 2010 11:16
D1-35

2012SP-Alt 3 BR#5 ON-17.b

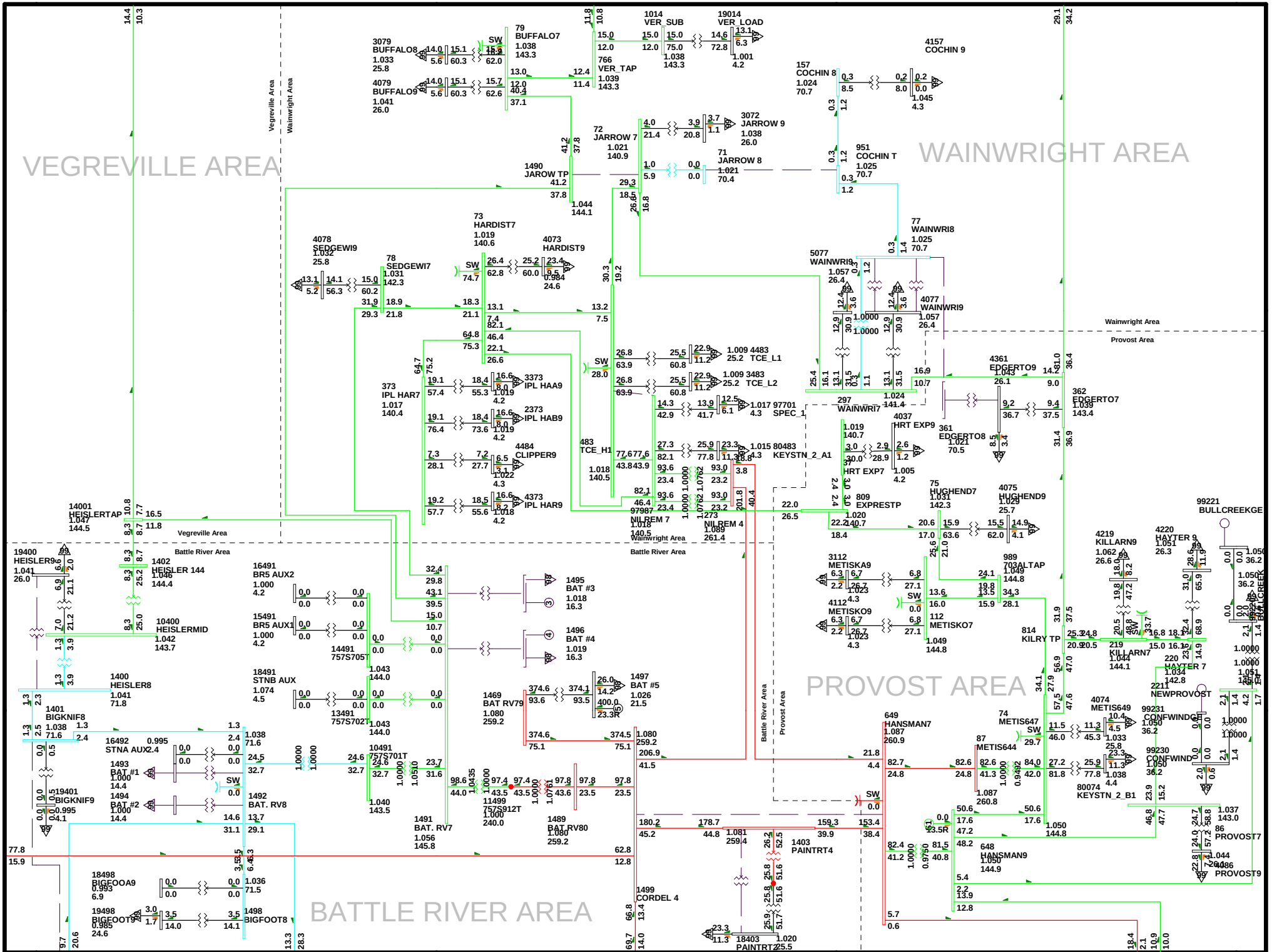
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 09 2010 11:16
D1-36

2012SP-Alt 3 BR#5 ON-18.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2012 SUMMER PEAK BASE CASE REVISION 7.2.1
FRI, APR 09 2010 11:16
D1-36

2012SP-Alt 3 BR#5 ON-18.b

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

2017 Power Flow Plots

Alternatives 1, 2 & 3
Battle River Unit # 5 OFF

Case Summary Page	2017 Alt 1 WP	
Contingency Number	**Fig #**	**Description**
D1-00	2017WP-Alt 1-1.a	Base Case
D1-00	2017WP-Alt 1-1.b	Base Case
D1-01	2017WP-Alt 1-2.a	Bonnyville 700S to Bourque 970S (7L146)
D1-01	2017WP-Alt 1-2.b	Bonnyville 700S to Bourque 970S (7L146)
D1-02	2017WP-Alt 1-3.a	Marguerite Lake 826S to Wolf Lake 822S (7L87)
D1-02	2017WP-Alt 1-3.b	Marguerite Lake 826S to Wolf Lake 822S (7L87)
D1-03	2017WP-Alt 1-4.a	Leming Lake 715S to Ethel Lake 717S (7L66)
D1-03	2017WP-Alt 1-4.b	Leming Lake 715S to Ethel Lake 717S (7L66)
D1-04	2017WP-Alt 1-5.a	Bonnyville 700S to Irish Creek 706S (7L53)
D1-04	2017WP-Alt 1-5.b	Bonnyville 700S to Irish Creek 706S (7L53)
D1-05	2017WP-Alt 1-6.a	Vermilion 710S to Hill 751S (7L14) Kitscoty 705S Tap
D1-05	2017WP-Alt 1-6.b	Vermilion 710S to Hill 751S (7L14) Kitscoty 705S Tap
D1-06	2017WP-Alt 1-7.a	Marguerite Lake 826S to LaCorey 721S (7L89)
D1-06	2017WP-Alt 1-7.b	Marguerite Lake 826S to LaCorey 721S (7L89)
D1-07	2017WP-Alt 1-8.a	Hill 751S to Loydminster 716S (7L42)
D1-07	2017WP-Alt 1-8.b	Hill 751S to Loydminster 716S (7L42)
D1-08	2017WP-Alt 1-9.a	Edgerton 899S to Lloydminster 716S (7L749) Briker 880S Tap
D1-08	2017WP-Alt 1-9.b	Edgerton 899S to Lloydminster 716S (7L749) Briker 880S Tap
D1-09	2017WP-Alt 1-10.a	Battle River 757S to Buffalo Creek 526S (7L50) Jarrow 252S Tap
D1-09	2017WP-Alt 1-10.b	Battle River 757S to Buffalo Creek 526S (7L50) Jarrow 252S Tap
D1-10	2017WP-Alt 1-11.a	Battle River 757S to Strome 223S (7L701) Heisler 764S Tap
D1-10	2017WP-Alt 1-11.b	Battle River 757S to Strome 223S (7L701) Heisler 764S Tap
D1-11	2017WP-Alt 1-12.a	Metiskow 648S to Killarney 267S (7L749)
D1-11	2017WP-Alt 1-12.b	Metiskow 648S to Killarney 267S (7L749)
D1-12	2017WP-Alt 1-13.a	Hansman Lake 650S to Provost 545S (715L)
D1-12	2017WP-Alt 1-13.b	Hansman Lake 650S to Provost 545S (715L)
D1-14	2017WP-Alt 1-14.a	Cordel 755S to Nevis 766S (9L20)
D1-14	2017WP-Alt 1-14.b	Cordel 755S to Nevis 766S (9L20)
D1-15	2017WP-Alt 1-15.a	Battle River 144/72 kV Transformer 701T
D1-15	2017WP-Alt 1-15.b	Battle River 144/72 kV Transformer 701T
D1-16	2017WP-Alt 1-16.a	Edgerton 899S to Killarney Lake 267S (749L)
D1-16	2017WP-Alt 1-16.b	Edgerton 899S to Killarney Lake 267S (749L)

Case Summary Page	2017 Alt 1 SP	
Contingency Number	**Fig #**	**Description**
D1-00	2017SP-Alt 1-1.a	Base Case
D1-00	2017SP-Alt 1-1.b	Base Case
D1-01	2017SP-Alt 1-2.a	Bonnyville 700S to Bourque 970S (7L146)
D1-01	2017SP-Alt 1-2.b	Bonnyville 700S to Bourque 970S (7L146)
D1-02	2017SP-Alt 1-3.a	Marguerite Lake 826S to Wolf Lake 822S (7L87)
D1-02	2017SP-Alt 1-3.b	Marguerite Lake 826S to Wolf Lake 822S (7L87)
D1-03	2017SP-Alt 1-4.a	Leming Lake 715S to Ethel Lake 717S (7L66)
D1-03	2017SP-Alt 1-4.b	Leming Lake 715S to Ethel Lake 717S (7L66)
D1-04	2017SP-Alt 1-5.a	Bonnyville 700S to Irish Creek 706S (7L53)
D1-04	2017SP-Alt 1-5.b	Bonnyville 700S to Irish Creek 706S (7L53)
D1-05	2017SP-Alt 1-6.a	Vermilion 710S to Hill 751S (7L14) Kitscoty 705S Tap
D1-05	2017SP-Alt 1-6.b	Vermilion 710S to Hill 751S (7L14) Kitscoty 705S Tap
D1-06	2017SP-Alt 1-7.a	Marguerite Lake 826S to LaCorey 721S (7L89)
D1-06	2017SP-Alt 1-7.b	Marguerite Lake 826S to LaCorey 721S (7L89)
D1-07	2017SP-Alt 1-8.a	Hill 751S to Loydminster 716S (7L42)
D1-07	2017SP-Alt 1-8.b	Hill 751S to Loydminster 716S (7L42)
D1-08	2017SP-Alt 1-9.a	Edgerton 899S to Lloydminster 716S (7L749) Briker 880S Tap
D1-08	2017SP-Alt 1-9.b	Edgerton 899S to Lloydminster 716S (7L749) Briker 880S Tap
D1-09	2017SP-Alt 1-10.a	Battle River 757S to Buffalo Creek 526S (7L50) Jarrow 252S Tap
D1-09	2017SP-Alt 1-10.b	Battle River 757S to Buffalo Creek 526S (7L50) Jarrow 252S Tap
D1-10	2017SP-Alt 1-11.a	Battle River 757S to Strome 223S (7L701) Heisler 764S Tap
D1-10	2017SP-Alt 1-11.b	Battle River 757S to Strome 223S (7L701) Heisler 764S Tap
D1-11	2017SP-Alt 1-12.a	Metiskow 648S to Killarney 267S (7L749)
D1-11	2017SP-Alt 1-12.b	Metiskow 648S to Killarney 267S (7L749)
D1-12	2017SP-Alt 1-13.a	Hansman Lake 650S to Provost 545S (715L)
D1-12	2017SP-Alt 1-13.b	Hansman Lake 650S to Provost 545S (715L)
D1-14	2017SP-Alt 1-14.a	Cordel 755S to Nevis 766S (9L20)
D1-14	2017SP-Alt 1-14.b	Cordel 755S to Nevis 766S (9L20)
D1-15	2017SP-Alt 1-15.a	Battle River 144/72 kV Transformer 701T
D1-15	2017SP-Alt 1-15.b	Battle River 144/72 kV Transformer 701T
D1-16	2017SP-Alt 1-16.a	Edgerton 899S to Killarney Lake 267S (749L)
D1-16	2017SP-Alt 1-16.b	Edgerton 899S to Killarney Lake 267S (749L)

Case Summary Page	2017 Alt 1 SL	
Contingency Number	**Fig #**	**Description**
D1-00	2017SL-Alt 1-1.a	Base Case
D1-00	2017SL-Alt 1-1.b	Base Case
D1-08	2017SL-Alt 1-2.a	Edgerton 899S to Lloydminster 716S (7L749) Briker 880S Tap
D1-08	2017SL-Alt 1-2.b	Edgerton 899S to Lloydminster 716S (7L749) Briker 880S Tap
D1-11	2017SL-Alt 1-3.a	Metiskow 648S to Killarney 267S (7L749)
D1-11	2017SL-Alt 1-3.b	Metiskow 648S to Killarney 267S (7L749)
D1-12	2017SL-Alt 1-4.a	Hansman Lake 650S to Provost 545S (715L)
D1-12	2017SL-Alt 1-4.b	Hansman Lake 650S to Provost 545S (715L)
D1-13	2017SL-Alt 1-5.a	Killarney Lake 267S to Hayter 277S (748L)
D1-13	2017SL-Alt 1-5.b	Killarney Lake 267S to Hayter 277S (748L)
D1-16	2017SL-Alt 1-6.a	Edgerton 899S to Killarney Lake 267S (749L)
D1-16	2017SL-Alt 1-6.b	Edgerton 899S to Killarney Lake 267S (749L)

Case Summary Page	2017 Alt 2 WP	
Contingency Number	**Fig #**	**Description**
D1-00	2017WP-Alt 2-1.a	Base Case
D1-00	2017WP-Alt 2-1.b	Base Case
D1-01	2017WP-Alt 2-2.a	Bonnyville 700S to Bourque 970S (7L146)
D1-01	2017WP-Alt 2-2.b	Bonnyville 700S to Bourque 970S (7L146)
D1-02	2017WP-Alt 2-3.a	Marguerite Lake 826S to Wolf Lake 822S (7L87)
D1-02	2017WP-Alt 2-3.b	Marguerite Lake 826S to Wolf Lake 822S (7L87)
D1-03	2017WP-Alt 2-4.a	Leming Lake 715S to Ethel Lake 717S (7L66)
D1-03	2017WP-Alt 2-4.b	Leming Lake 715S to Ethel Lake 717S (7L66)
D1-05	2017WP-Alt 2-5.a	Vermilion 710S to Hill 751S (7L14) Kitscoty 705S Tap
D1-05	2017WP-Alt 2-5.b	Vermilion 710S to Hill 751S (7L14) Kitscoty 705S Tap
D1-06	2017WP-Alt 2-6.a	Marguerite Lake 826S to LaCorey 721S (7L89)
D1-06	2017WP-Alt 2-6.b	Marguerite Lake 826S to LaCorey 721S (7L89)
D1-07	2017WP-Alt 2-7.a	Hill 751S to Loydminster 716S (7L42)
D1-07	2017WP-Alt 2-7.b	Hill 751S to Loydminster 716S (7L42)
D1-08	2017WP-Alt 2-8.a	Edgerton 899S to Lloydminster 716S (7L749) Briker 880S Tap
D1-08	2017WP-Alt 2-8.b	Edgerton 899S to Lloydminster 716S (7L749) Briker 880S Tap
D1-09	2017WP-Alt 2-9.a	Battle River 757S to Buffalo Creek 526S (7L50) Jarrow 252S Tap
D1-09	2017WP-Alt 2-9.b	Battle River 757S to Buffalo Creek 526S (7L50) Jarrow 252S Tap
D1-10	2017WP-Alt 2-10.a	Battle River 757S to Strome 223S (7L701) Heisler 764S Tap
D1-10	2017WP-Alt 2-10.b	Battle River 757S to Strome 223S (7L701) Heisler 764S Tap
D1-11	2017WP-Alt 2-11.a	Metiskow 648S to Killarney 267S (7L749)
D1-11	2017WP-Alt 2-11.b	Metiskow 648S to Killarney 267S (7L749)
D1-12	2017WP-Alt 2-12.a	Hansman Lake 650S to Provost 545S (715L)
D1-12	2017WP-Alt 2-12.b	Hansman Lake 650S to Provost 545S (715L)
D1-14	2017WP-Alt 2-13.a	Cordel 755S to Nevis 766S (9L20)
D1-14	2017WP-Alt 2-13.b	Cordel 755S to Nevis 766S (9L20)
D1-15	2017WP-Alt 2-14.a	Battle River 144/72 kV Transformer 701T
D1-15	2017WP-Alt 2-14.b	Battle River 144/72 kV Transformer 701T
D1-16	2017WP-Alt 2-15.a	Edgerton 899S to Killarney Lake 267S (749L)
D1-16	2017WP-Alt 2-15.b	Edgerton 899S to Killarney Lake 267S (749L)
D1-17	2017WP-Alt 2-16.a	Vermilion 240/144 kV Transformer
D1-17	2017WP-Alt 2-16.b	Vermilion 240/144 kV Transformer

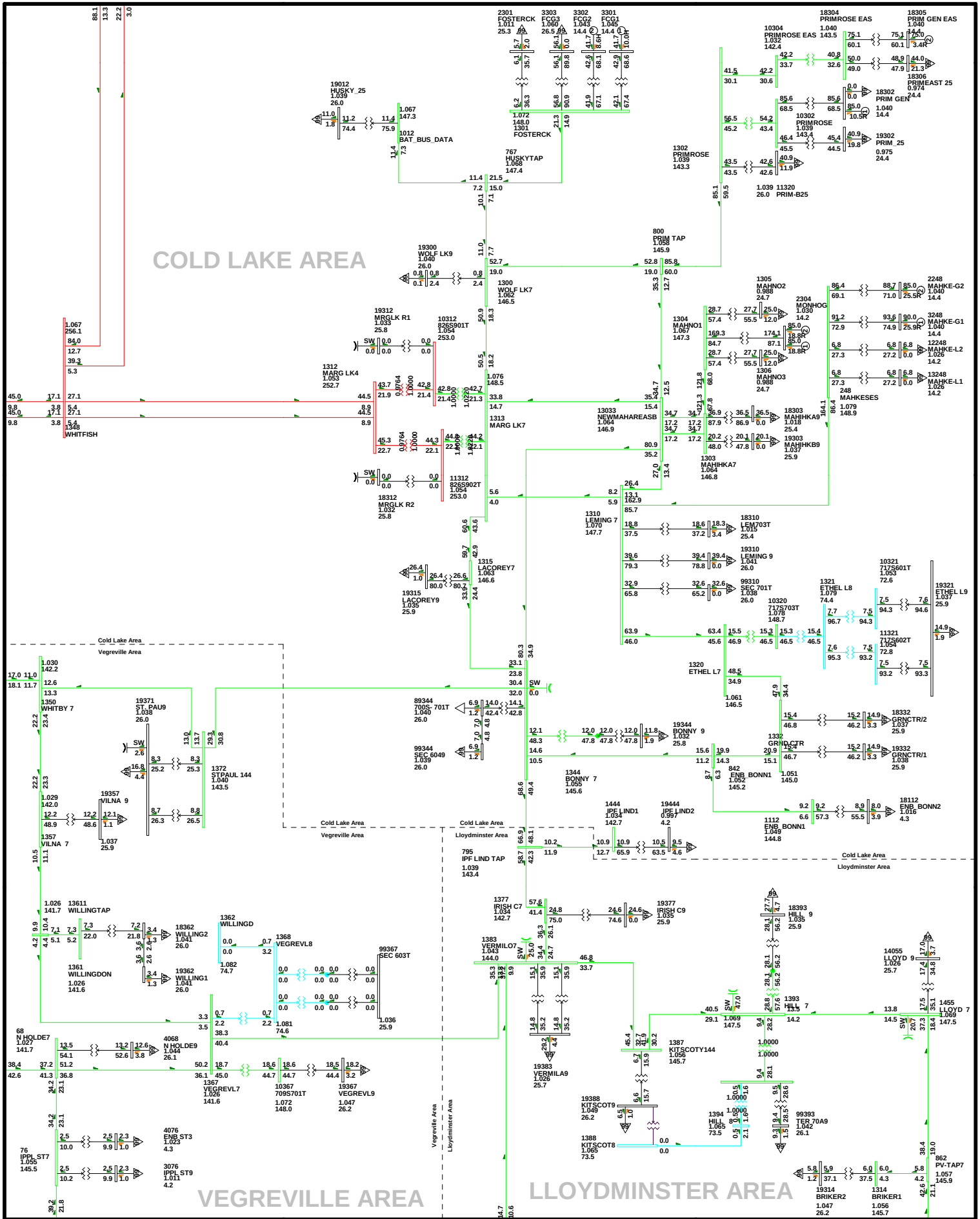
Case Summary Page	2017 Alt 2 SP	
Contingency Number	**Fig #**	**Description**
D1-00	2017SP-Alt 2-1.a	Base Case
D1-00	2017SP-Alt 2-1.b	Base Case
D1-01	2017SP-Alt 2-2.a	Bonnyville 700S to Bourque 970S (7L146)
D1-01	2017SP-Alt 2-2.b	Bonnyville 700S to Bourque 970S (7L146)
D1-02	2017SP-Alt 2-3.a	Marguerite Lake 826S to Wolf Lake 822S (7L87)
D1-02	2017SP-Alt 2-3.b	Marguerite Lake 826S to Wolf Lake 822S (7L87)
D1-03	2017SP-Alt 2-4.a	Leming Lake 715S to Ethel Lake 717S (7L66)
D1-03	2017SP-Alt 2-4.b	Leming Lake 715S to Ethel Lake 717S (7L66)
D1-05	2017SP-Alt 2-5.a	Vermilion 710S to Hill 751S (7L14) Kitscoty 705S Tap
D1-05	2017SP-Alt 2-5.b	Vermilion 710S to Hill 751S (7L14) Kitscoty 705S Tap
D1-06	2017SP-Alt 2-6.a	Marguerite Lake 826S to LaCorey 721S (7L89)
D1-06	2017SP-Alt 2-6.b	Marguerite Lake 826S to LaCorey 721S (7L89)
D1-07	2017SP-Alt 2-7.a	Hill 751S to Loydminster 716S (7L42)
D1-07	2017SP-Alt 2-7.b	Hill 751S to Loydminster 716S (7L42)
D1-08	2017SP-Alt 2-8.a	Edgerton 899S to Lloydminster 716S (7L749) Briker 880S Tap
D1-08	2017SP-Alt 2-8.b	Edgerton 899S to Lloydminster 716S (7L749) Briker 880S Tap
D1-09	2017SP-Alt 2-9.a	Battle River 757S to Buffalo Creek 526S (7L50) Jarrow 252S Tap
D1-09	2017SP-Alt 2-9.b	Battle River 757S to Buffalo Creek 526S (7L50) Jarrow 252S Tap
D1-10	2017SP-Alt 2-10.a	Battle River 757S to Strome 223S (7L701) Heisler 764S Tap
D1-10	2017SP-Alt 2-10.b	Battle River 757S to Strome 223S (7L701) Heisler 764S Tap
D1-11	2017SP-Alt 2-11.a	Metiskow 648S to Killarney 267S (7L749)
D1-11	2017SP-Alt 2-11.b	Metiskow 648S to Killarney 267S (7L749)
D1-12	2017SP-Alt 2-12.a	Hansman Lake 650S to Provost 545S (715L)
D1-12	2017SP-Alt 2-12.b	Hansman Lake 650S to Provost 545S (715L)
D1-14	2017SP-Alt 2-13.a	Cordel 755S to Nevis 766S (9L20)
D1-14	2017SP-Alt 2-13.b	Cordel 755S to Nevis 766S (9L20)
D1-15	2017SP-Alt 2-14.a	Battle River 144/72 kV Transformer 701T
D1-15	2017SP-Alt 2-14.b	Battle River 144/72 kV Transformer 701T
D1-16	2017SP-Alt 2-15.a	Edgerton 899S to Killarney Lake 267S (749L)
D1-16	2017SP-Alt 2-15.b	Edgerton 899S to Killarney Lake 267S (749L)
D1-17	2017SP-Alt 2-16.a	Vermilion 240/144 kV Transformer
D1-17	2017SP-Alt 2-16.b	Vermilion 240/144 kV Transformer

Case Summary Page 2017 Alt 2 SL		
Contingency Number	**Fig #**	**Description**
D1-00	2017SL-Alt 2-1.a	Base Case
D1-00	2017SL-Alt 2-1.b	Base Case
D1-08	2017SL-Alt 2-2.a	Edgerton 899S to Lloydminster 716S (7L749) Briker 880S Tap
D1-08	2017SL-Alt 2-2.b	Edgerton 899S to Lloydminster 716S (7L749) Briker 880S Tap
D1-11	2017SL-Alt 2-3.a	Metiskow 648S to Killarney 267S (7L749)
D1-11	2017SL-Alt 2-3.b	Metiskow 648S to Killarney 267S (7L749)
D1-12	2017SL-Alt 2-4.a	Hansman Lake 650S to Provost 545S (715L)
D1-12	2017SL-Alt 2-4.b	Hansman Lake 650S to Provost 545S (715L)
D1-13	2017SL-Alt 2-5.a	Killarney Lake 267S to Hayter 277S (748L)
D1-13	2017SL-Alt 2-5.b	Killarney Lake 267S to Hayter 277S (748L)
D1-16	2017SL-Alt 2-6.a	Edgerton 899S to Killarney Lake 267S (749L)
D1-16	2017SL-Alt 2-6.b	Edgerton 899S to Killarney Lake 267S (749L)

Case Summary Page	2017 Alt 3 WP	
Contingency Number	**Fig #**	**Description**
D1-00	2017WP-Alt 3-1.a	Base Case
D1-00	2017WP-Alt 3-1.b	Base Case
D1-01	2017WP-Alt 3-2.a	Bonnyville 700S to Bourque 970S (7L146)
D1-01	2017WP-Alt 3-2.b	Bonnyville 700S to Bourque 970S (7L146)
D1-02	2017WP-Alt 3-3.a	Marguerite Lake 826S to Wolf Lake 822S (7L87)
D1-02	2017WP-Alt 3-3.b	Marguerite Lake 826S to Wolf Lake 822S (7L87)
D1-03	2017WP-Alt 3-4.a	Leming Lake 715S to Ethel Lake 717S (7L66)
D1-03	2017WP-Alt 3-4.b	Leming Lake 715S to Ethel Lake 717S (7L66)
D1-04	2017WP-Alt 3-5.a	Bonnyville 700S to Irish Creek 706S (7L53)
D1-04	2017WP-Alt 3-5.b	Bonnyville 700S to Irish Creek 706S (7L53)
D1-05	2017WP-Alt 3-6.a	Vermilion 710S to Hill 751S (7L14) Kitscoty 705S Tap
D1-05	2017WP-Alt 3-6.b	Vermilion 710S to Hill 751S (7L14) Kitscoty 705S Tap
D1-06	2017WP-Alt 3-7.a	Marguerite Lake 826S to LaCorey 721S (7L89)
D1-06	2017WP-Alt 3-7.b	Marguerite Lake 826S to LaCorey 721S (7L89)
D1-07	2017WP-Alt 3-8.a	Hill 751S to Loydminster 716S (7L42)
D1-07	2017WP-Alt 3-8.b	Hill 751S to Loydminster 716S (7L42)
D1-09	2017WP-Alt 3-9.a	Battle River 757S to Buffalo Creek 526S (7L50) Jarrow 252S Tap
D1-09	2017WP-Alt 3-9.b	Battle River 757S to Buffalo Creek 526S (7L50) Jarrow 252S Tap
D1-10	2017WP-Alt 3-10.a	Battle River 757S to Strome 223S (7L701) Heisler 764S Tap
D1-10	2017WP-Alt 3-10.b	Battle River 757S to Strome 223S (7L701) Heisler 764S Tap
D1-11b	2017WP-Alt 3-11.a	Metiskow 648S to Edgerton 899S Killarney TP (7L749)
D1-11b	2017WP-Alt 3-11.b	Metiskow 648S to Edgerton 899S Killarney TP (7L749)
D1-14	2017WP-Alt 3-12.a	Cordel 755S to Nevis 766S (9L20)
D1-14	2017WP-Alt 3-12.b	Cordel 755S to Nevis 766S (9L20)
D1-15	2017WP-Alt 3-13.a	Battle River 144/72 kV Transformer 701T
D1-15	2017WP-Alt 3-13.b	Battle River 144/72 kV Transformer 701T
D1-18	2017WP-Alt 3-14.a	Loydminster to Wind Farm
D1-18	2017WP-Alt 3-14.b	Loydminster to Wind Farm
D1-19	2017WP-Alt 3-15.a	Hansman Lake 650S to Wind Farm
D1-19	2017WP-Alt 3-15.b	Hansman Lake 650S to Wind Farm

Case Summary Page	2017 Alt 3 SP	
Contingency Number	**Fig #**	**Description**
D1-00	2017SP-Alt 3-1.a	Base Case
D1-00	2017SP-Alt 3-1.b	Base Case
D1-01	2017SP-Alt 3-2.a	Bonnyville 700S to Bourque 970S (7L146)
D1-01	2017SP-Alt 3-2.b	Bonnyville 700S to Bourque 970S (7L146)
D1-02	2017SP-Alt 3-3.a	Marguerite Lake 826S to Wolf Lake 822S (7L87)
D1-02	2017SP-Alt 3-3.b	Marguerite Lake 826S to Wolf Lake 822S (7L87)
D1-03	2017SP-Alt 3-4.a	Leming Lake 715S to Ethel Lake 717S (7L66)
D1-03	2017SP-Alt 3-4.b	Leming Lake 715S to Ethel Lake 717S (7L66)
D1-04	2017SP-Alt 3-5.a	Bonnyville 700S to Irish Creek 706S (7L53)
D1-04	2017SP-Alt 3-5.b	Bonnyville 700S to Irish Creek 706S (7L53)
D1-05	2017SP-Alt 3-6.a	Vermilion 710S to Hill 751S (7L14) Kitscoty 705S Tap
D1-05	2017SP-Alt 3-6.b	Vermilion 710S to Hill 751S (7L14) Kitscoty 705S Tap
D1-06	2017SP-Alt 3-7.a	Marguerite Lake 826S to LaCorey 721S (7L89)
D1-06	2017SP-Alt 3-7.b	Marguerite Lake 826S to LaCorey 721S (7L89)
D1-07	2017SP-Alt 3-8.a	Hill 751S to Loydminster 716S (7L42)
D1-07	2017SP-Alt 3-8.b	Hill 751S to Loydminster 716S (7L42)
D1-09	2017SP-Alt 3-9.a	Battle River 757S to Buffalo Creek 526S (7L50) Jarrow 252S Tap
D1-09	2017SP-Alt 3-9.b	Battle River 757S to Buffalo Creek 526S (7L50) Jarrow 252S Tap
D1-10	2017SP-Alt 3-10.a	Battle River 757S to Strome 223S (7L701) Heisler 764S Tap
D1-10	2017SP-Alt 3-10.b	Battle River 757S to Strome 223S (7L701) Heisler 764S Tap
D1-11b	2017SP-Alt 3-11.a	Metiskow 648S to Edgerton 899S Killarney TP (7L749)
D1-11b	2017SP-Alt 3-11.b	Metiskow 648S to Edgerton 899S Killarney TP (7L749)
D1-14	2017SP-Alt 3-12.a	Cordel 755S to Nevis 766S (9L20)
D1-14	2017SP-Alt 3-12.b	Cordel 755S to Nevis 766S (9L20)
D1-15	2017SP-Alt 3-13.a	Battle River 144/72 kV Transformer 701T
D1-15	2017SP-Alt 3-13.b	Battle River 144/72 kV Transformer 701T
D1-18	2017SP-Alt 3-14.a	Loydminster to Wind Farm
D1-18	2017SP-Alt 3-14.b	Loydminster to Wind Farm
D1-19	2017SP-Alt 3-15.a	Hansman Lake 650S to Wind Farm
D1-19	2017SP-Alt 3-15.b	Hansman Lake 650S to Wind Farm

Case Summary Page 2017 Alt 3 SL		
Contingency Number	**Fig #**	**Description**
D1-00	2017SL-Alt 3-1.a	Base Case
D1-00	2017SL-Alt 3-1.b	Base Case
D1-11b	2017SL-Alt 3-2.a	Metiskow 648S to Edgerton 899S Killarney TP (7L749)
D1-11b	2017SL-Alt 3-2.b	Metiskow 648S to Edgerton 899S Killarney TP (7L749)
D1-13	2017SL-Alt 3-3.a	Killarney Lake 267S to Hayter 277S (748L)
D1-13	2017SL-Alt 3-3.b	Killarney Lake 267S to Hayter 277S (748L)



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 30 2010 13:00
D1-00

2017WP-Alt 1-1.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
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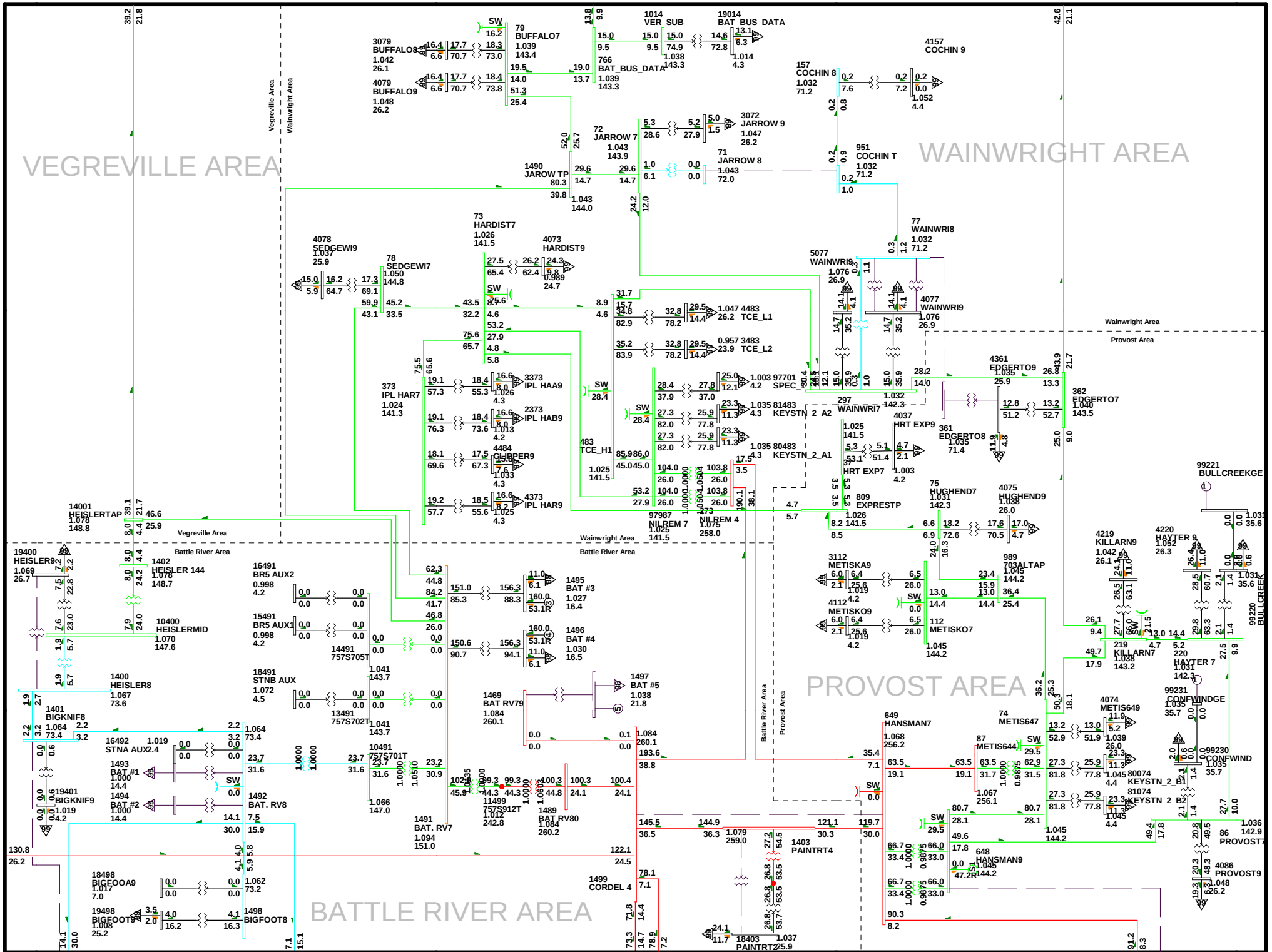
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000


VEGREVILLE AREA
WAINWRIGHT AREA
PROVOST AREA
BATTLE RIVER AREA
Vegreville Area
Wainwright Area
Provost Area
Battle River Area
79 BUFFALO7 1.039 143.4
3079 BUFFALO8 1.042 26.1
4079 BUFFALO9 1.048 26.2
766 BAT_BUS_DATA 1.039 143.3
1014 VER_SUB
19014 BAT_BUS_DATA
1.038 143.3
1.014 4.3
4157 COCHIN 9
157 COCHIN 8 1.032 71.2
1.052 4.4
951 COCHIN T 1.032 71.2
72 JARROW 7 1.043 143.9
3072 JARROW 9 1.047 26.2
71 JARROW 8 1.043 72.0
1490 JAROW TP 80.3 1.043 144.0
73 HARDIST7 1.026 141.5
4073 HARDIST9
4078 SEDGEWI9 1.037 25.9
78 SEDGEWI7 1.050 144.8
77 WAINWRI8 1.032 71.2
5077 WAINWRI9 1.076 26.9
4077 WAINWRI9 1.076 26.9
373 IPL HAR7 1.024 141.3
3373 IPL HAA9
2373 IPL HAB9
4484 GLOBER9
4373 IPL HAR9
1.033 4.3
1.025 4.3
483 TCE_H1 1.025 141.5
1.047 4483 TCE_L1 26.2
0.957 3483 TCE_L2 23.9
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1.035 80483 KEYSTN_2_A1 4.3
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HRT EXP7 1.003 4.2
4361 EDGERTO9 1.035 25.9
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362 EDGERTO7 1.040 143.5
809 EXPRESTP 1.026 141.5
97987 NIL REM 7 1.025 141.5
NIL REM 4 1.075 258.0
75 HUGHEND7 1.031 142.3
4075 HUGHEND9 1.038 26.0
3112 METISKA9 1.019 4.2
4112 METISKO9 1.019 4.2
989 703ALTAP 1.045 144.2
112 METISKO7 1.045 144.2
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4219 KILLARN9 1.042 26.1
4220 HAYTER 9 1.052 26.3
219 KILLARN7 1.038 143.2
220 HAYTER 7 1.031 142.3
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99230 CONFWIND 1.035 35.7
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19400 HEISLER9 1.069 26.7
1400 HEISLER8 1.067 73.6
1401 BIGKNIF8 1.064 73.4
19401 BIGKNIF9 1.019 4.2
16491 BR5 AUX2 0.998 4.2
15491 BR5 AUX1 0.998 4.2
14491 757S705T 1.041 143.7
18491 STNB AUX 1.072 4.5
13491 757S702T 1.041 143.7
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1492 BAT. RV8 7.5 15.9
1491 BAT. RV7 1.094 151.0
1495 BAT #3 1.027 16.4
1496 BAT #4 1.030 16.5
1497 BAT #5 1.038 21.8
1469 BAT RV79 1.084 260.1
11499 757S912T 1.012 242.8
1489 BAT RV80 1.084 260.2
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18403 PAINTRT4 1.037 25.9
649 HANSMAN7 1.068 256.2
1067 256.1
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74 METIS647
4074 METIS649
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81074 KEYSTN_2_B2
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648 HANSMAN9 1.045 144.2
47.2R
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19498 BIGFOOT9 1.008 25.2
1498 BIGFOOT8 1.062 73.2
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86 PROVOST7 1.036 142.9
130.8 26.2
CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 30 2010 13:00
D1-00
2017WP-Alt 1-1.b
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
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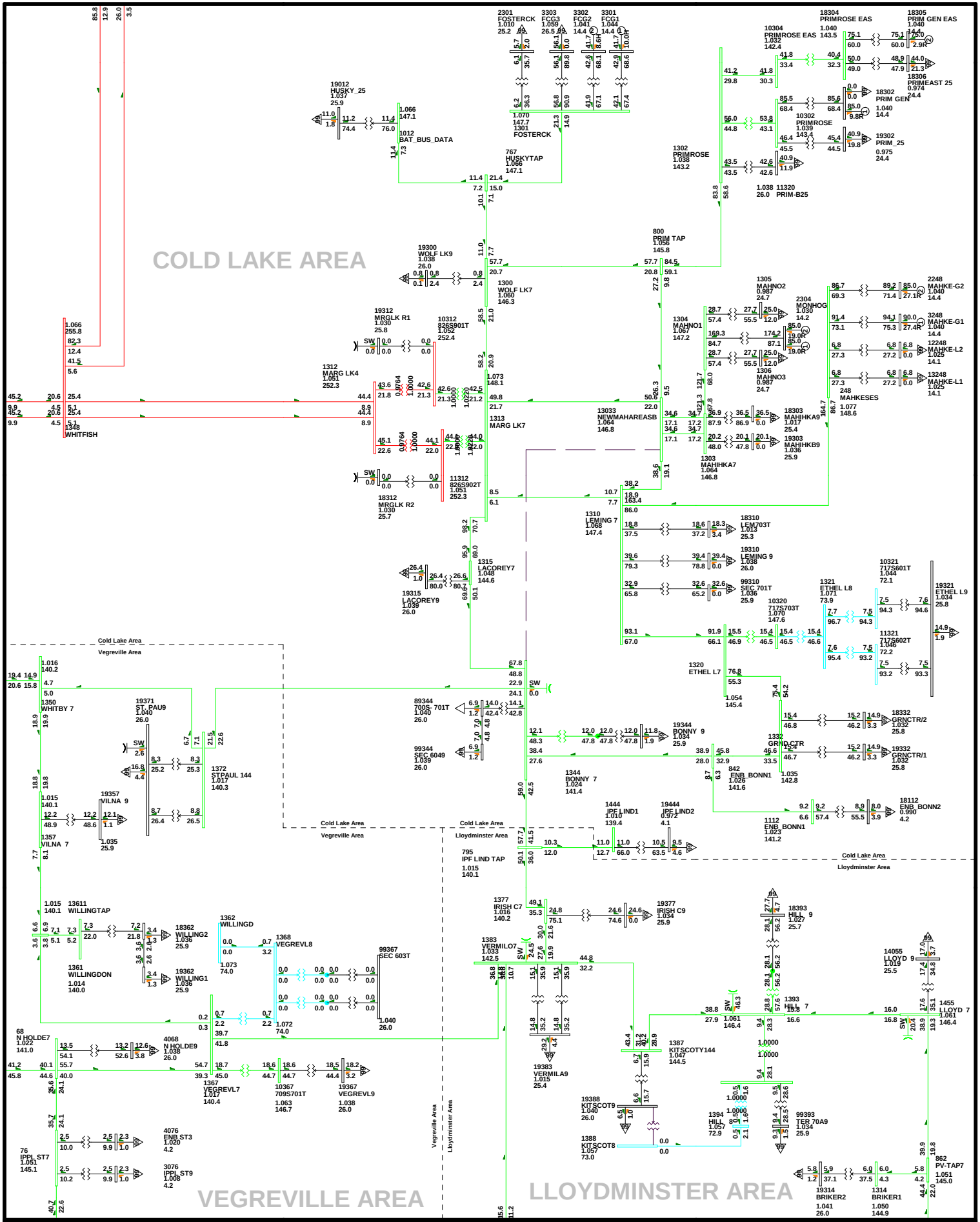
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 30 2010 13:00
D1-01

2017WP-Alt 1-2.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
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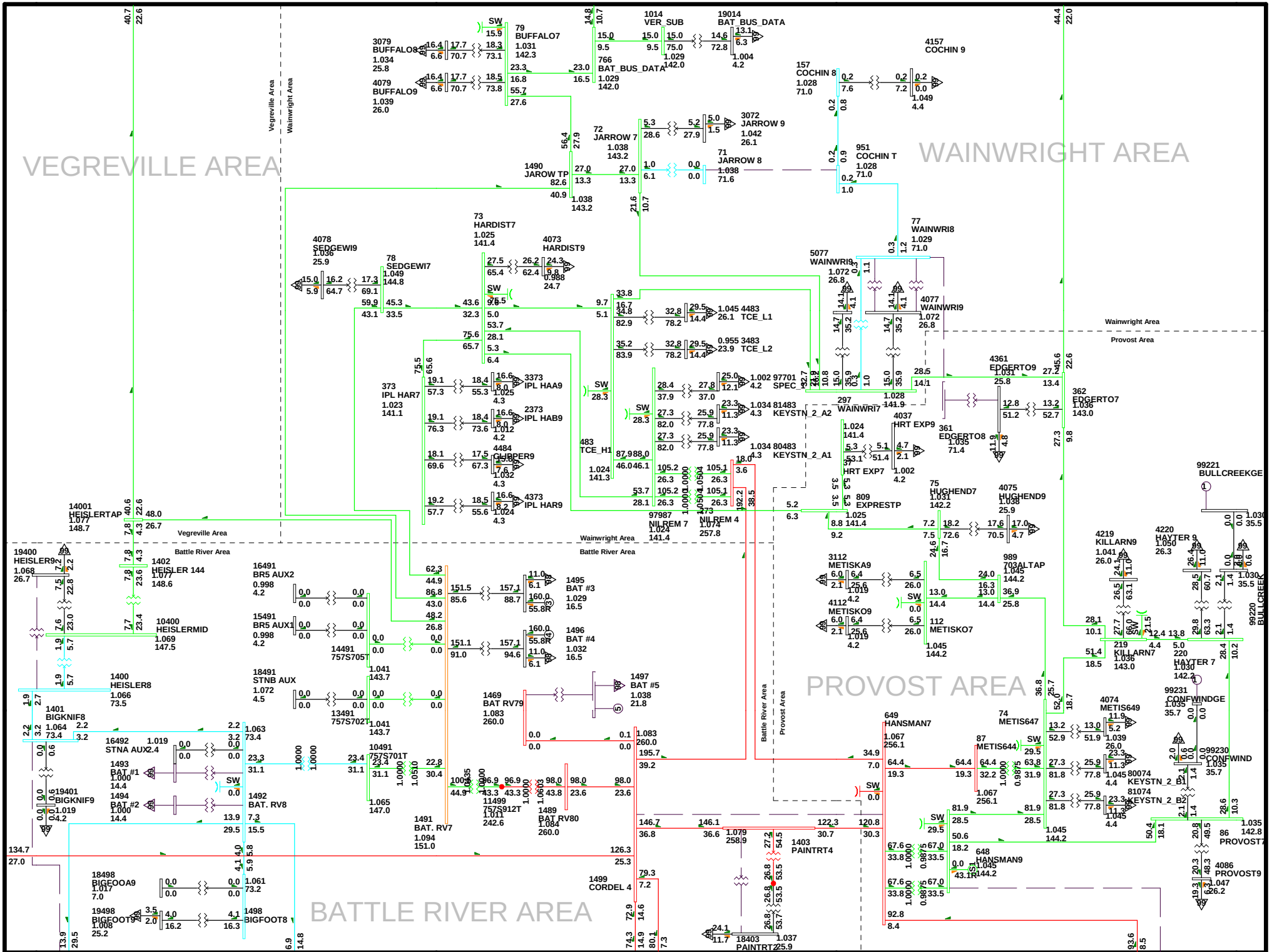

CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 30 2010 13:00
D1-01

2017WP-Alt 1-2.b

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
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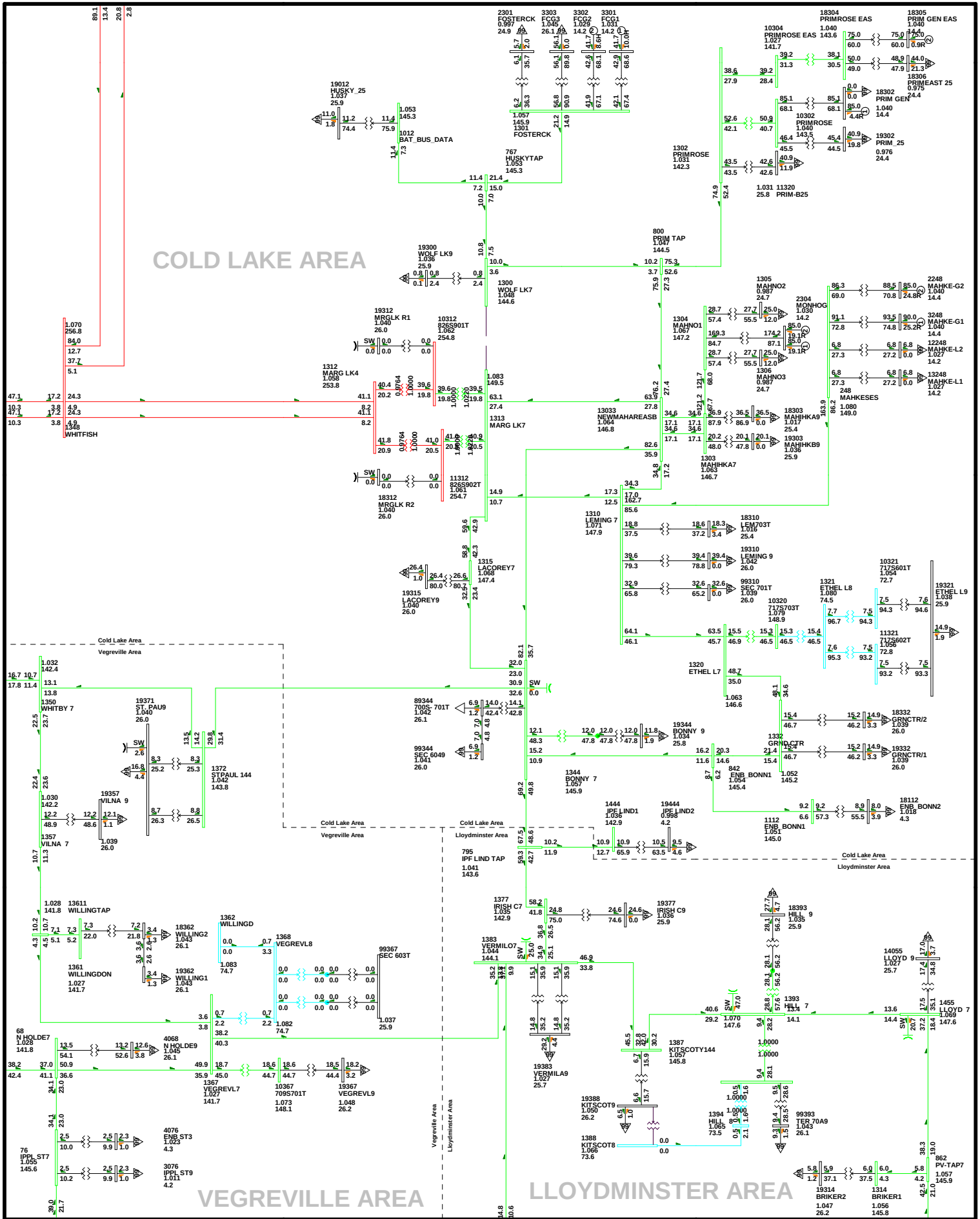
1.090OV0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 30 2010 13:00
D1-02

2017WP-Alt 1-3.a

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Branch - MVA/% OF RATE B
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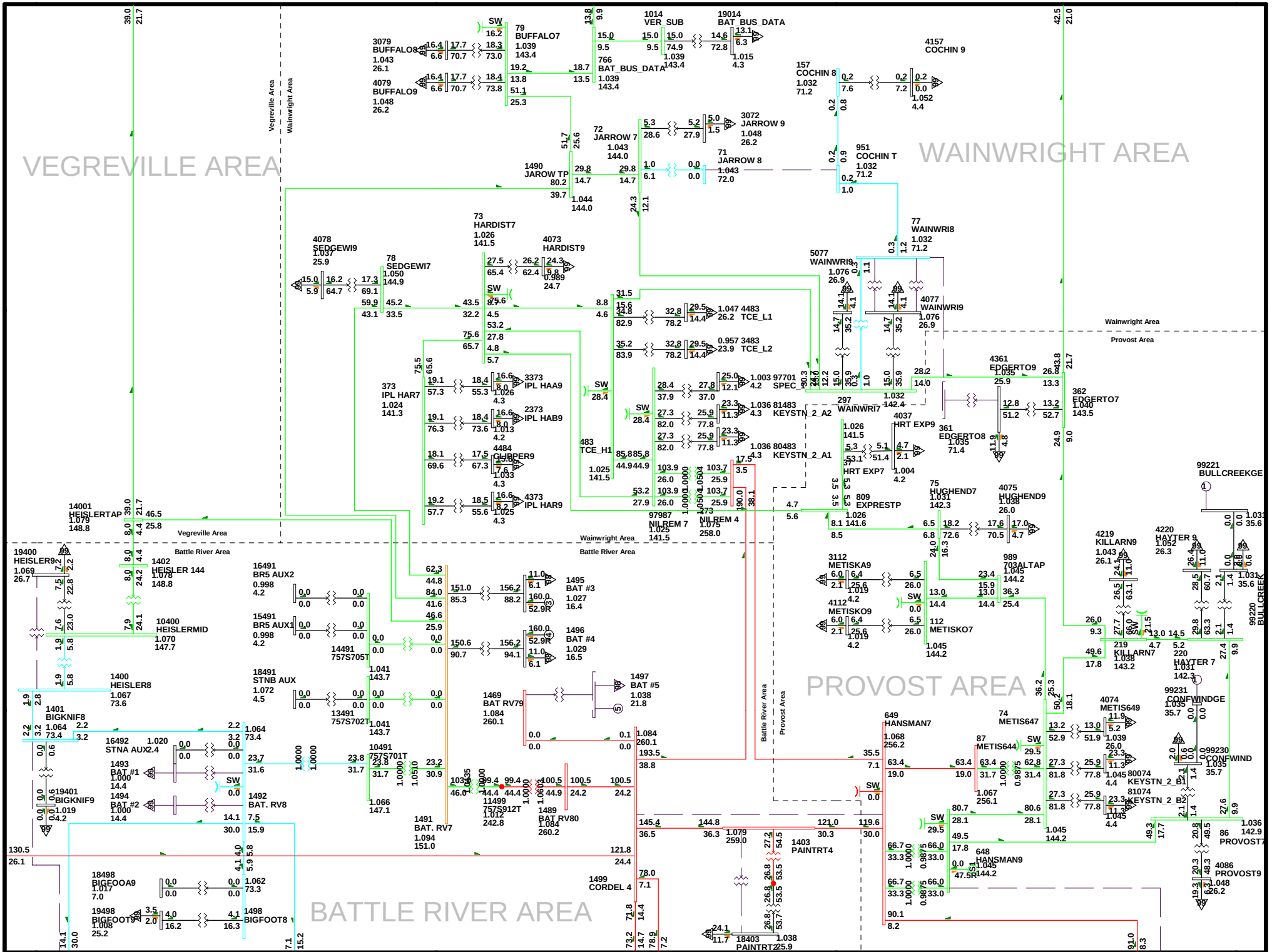
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 30 2010 13:00
D1-02

2017WP-Alt 1-3.b

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
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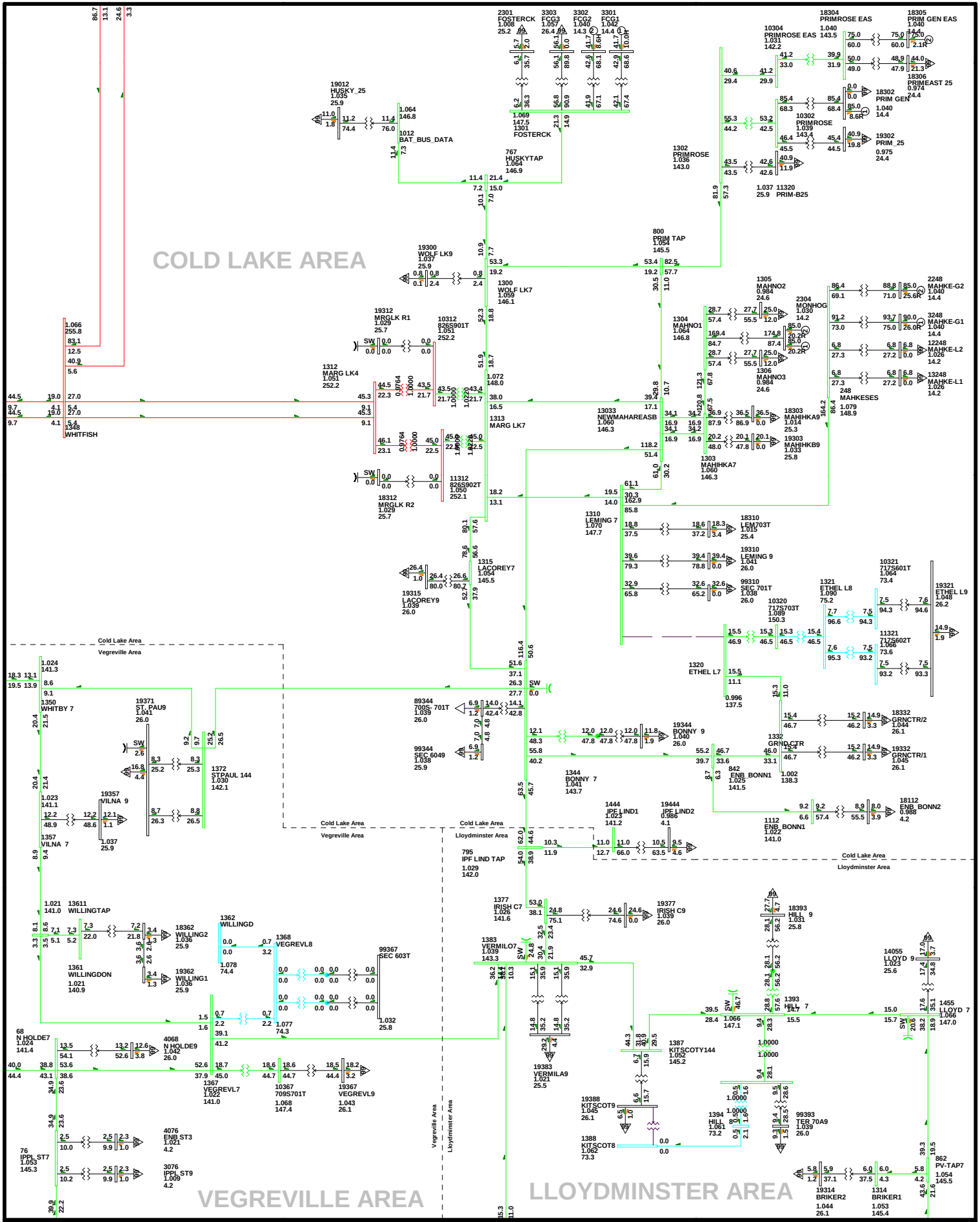

CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 30 2010 13:00
D1-03

2017WP-Alt 1-4.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
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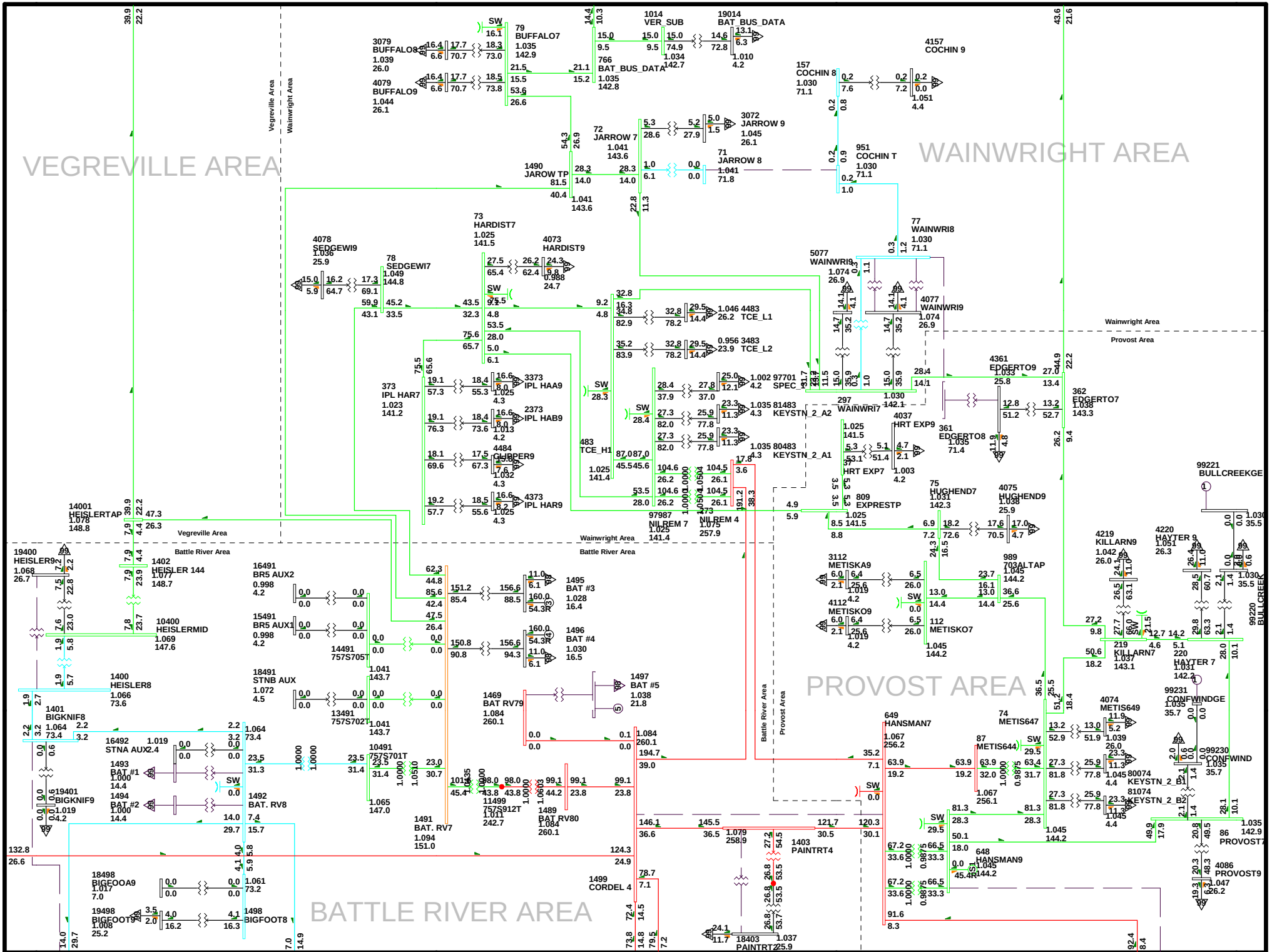
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000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WAINWRIGHT AREA
PROVOST AREA
BATTLE RIVER AREA
Vegreville Area
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Battle River Area
Provost Area
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4079 BUFFALO9 1.044 26.1
79 BUFFALO7 1.035 142.9
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1014 VER_SUB
19014 BAT_BUS_DATA
4157 COCHIN 9
157 COCHIN 8 1.030 71.1
951 COCHIN T 1.030 71.1
1051 4.4
72 JARROW 7 1.041 143.6
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71 JARROW 8 1.041 71.8
1490 JAROW TP 81.5 40.4 1.041 143.6
73 HARDIST7 1.025 141.5
4073 HARDIST9
4078 SEDGEWI9 1.036 25.9
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77 WAINWRI8 1.030 71.1
5077 WAINWRI9 1.074 26.9
4077 WAINWRI9 1.074 26.9
4361 EDGERTO9 1.033 25.8
362 EDGERTO7 1.038 143.3
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297 WAINWRI7 1.030 142.1
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HRT EXP7 1.003 4.2
373 IPL HAR7 1.023 141.2
3373 IPL HAA9 1.025 4.3
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4484 GLOBER9 1.032 4.3
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0.956 3483 TCE_L2 23.9
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1.035 80483 KEYSTN_2_A1 4.3
97987 NIL REM 7 1.025 141.4
NIL REM 4 1.075 257.9
809 EXPRESTP 1.025 141.5
75 HUGHEND7 1.031 142.3
4075 HUGHEND9 1.038 25.9
3112 METISKA9 1.019 4.2
4112 METISKO9 1.019 4.2
112 METISKO7 1.045 144.2
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14001 HEISLERTAP 1.078 148.8
1402 HEISLER 144 1.077 148.7
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1400 HEISLER8 1.066 73.6
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15491 BR5 AUX1 0.998 4.2
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13491 757S702T 1.041 143.7
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1493 BAT #1 1.000 14.4
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1492 BAT. RV8 7.4
10491 757S701T 1.065 147.0
1491 BAT. RV7 1.094 151.0
1495 BAT #3 1.028 16.4
1496 BAT #4 1.030 16.5
1497 BAT #5 1.038 21.8
1469 BAT RV79 1.084 260.1
1489 BAT RV80 1.084 260.1
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18498 BIGEOOA9 1.017 7.0
19498 BIGFOOT9 1.008 25.2
1498 BIGFOOT8 1.061 73.2
1499 CORDEL 4 1.079 258.9
1403 PAINTRT4
18403 PAINTRT2 1.037 25.9
649 HANSMAN7 1.067 256.2
74 METIS647
87 METIS644 1.067 256.1
4074 METIS649 1.045 144.2
80074 KEYSTN_2_B1 1.045 4.4
81074 KEYSTN_2_B2 1.045 4.4
648 HANSMAN9 1.045 144.2
4086 PROVOST9 1.047 26.2
86 PROVOST7 1.035 142.9
99221 BULLCREEKGE
99220 BULLCREEK
4219 KILLARN9 1.042 26.0
219 KILLARN7 1.037 143.1
4220 HAYTER 9 1.051 26.3
220 HAYTER 7 1.031 142.2
99231 CONFWINDGE 1.035 35.7
99230 CONFWIND 1.035 35.7
CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 30 2010 13:00
D1-03
2017WP-Alt 1-4.b
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
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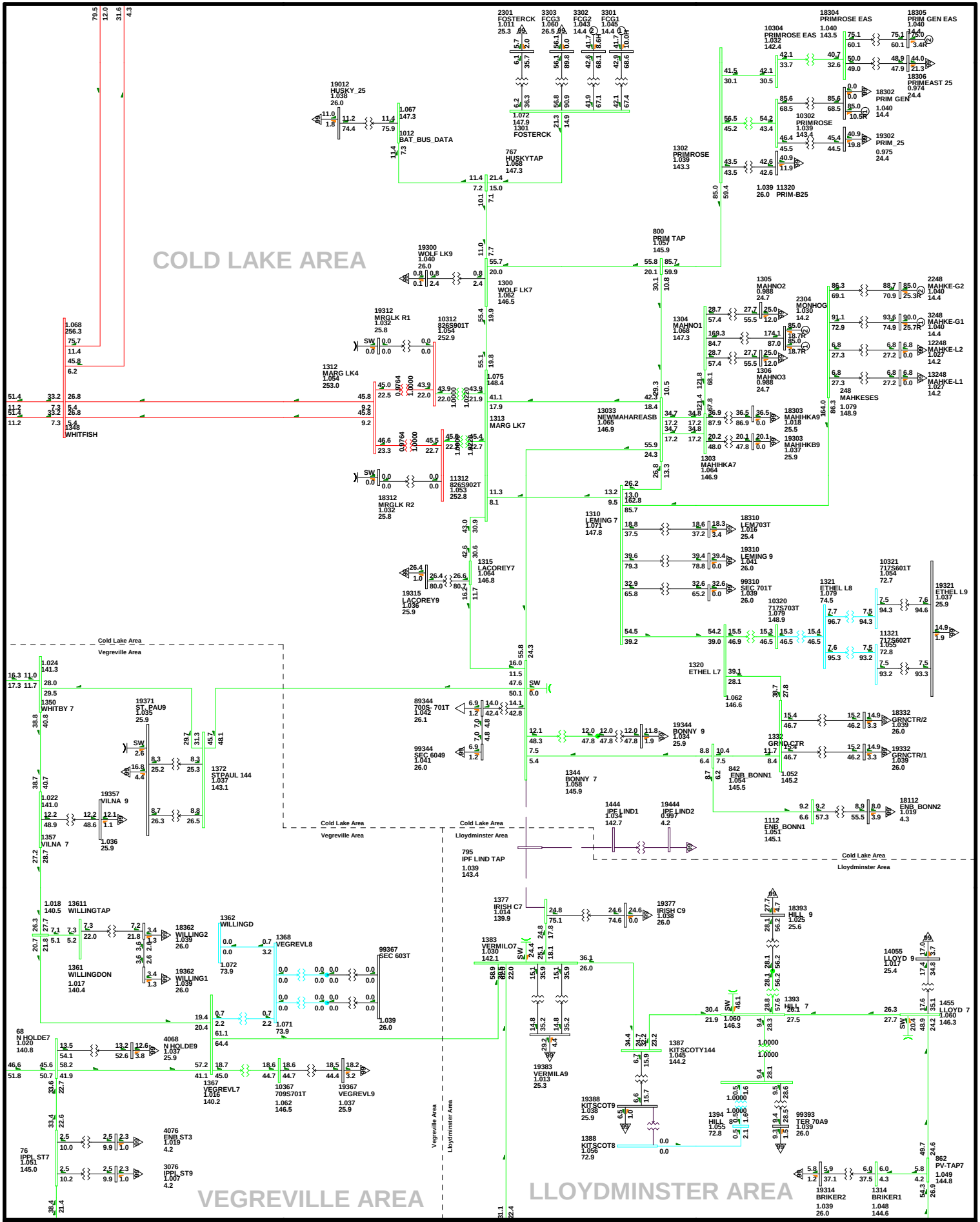
1.090OV0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 30 2010 13:00
D1-04

2017WP-Alt 1-5.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
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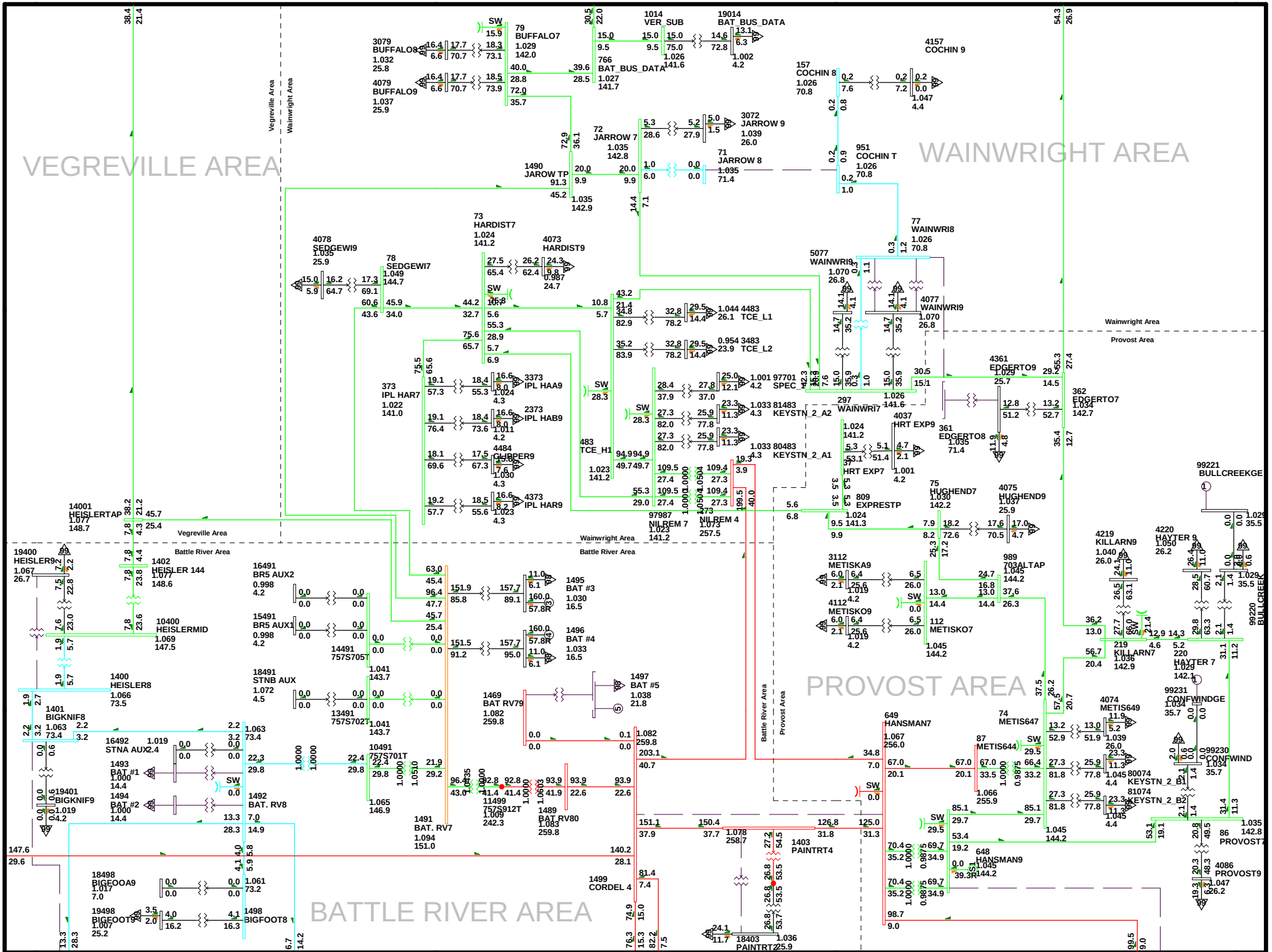

CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 30 2010 13:00
D1-04

2017WP-Alt 1-5.b

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
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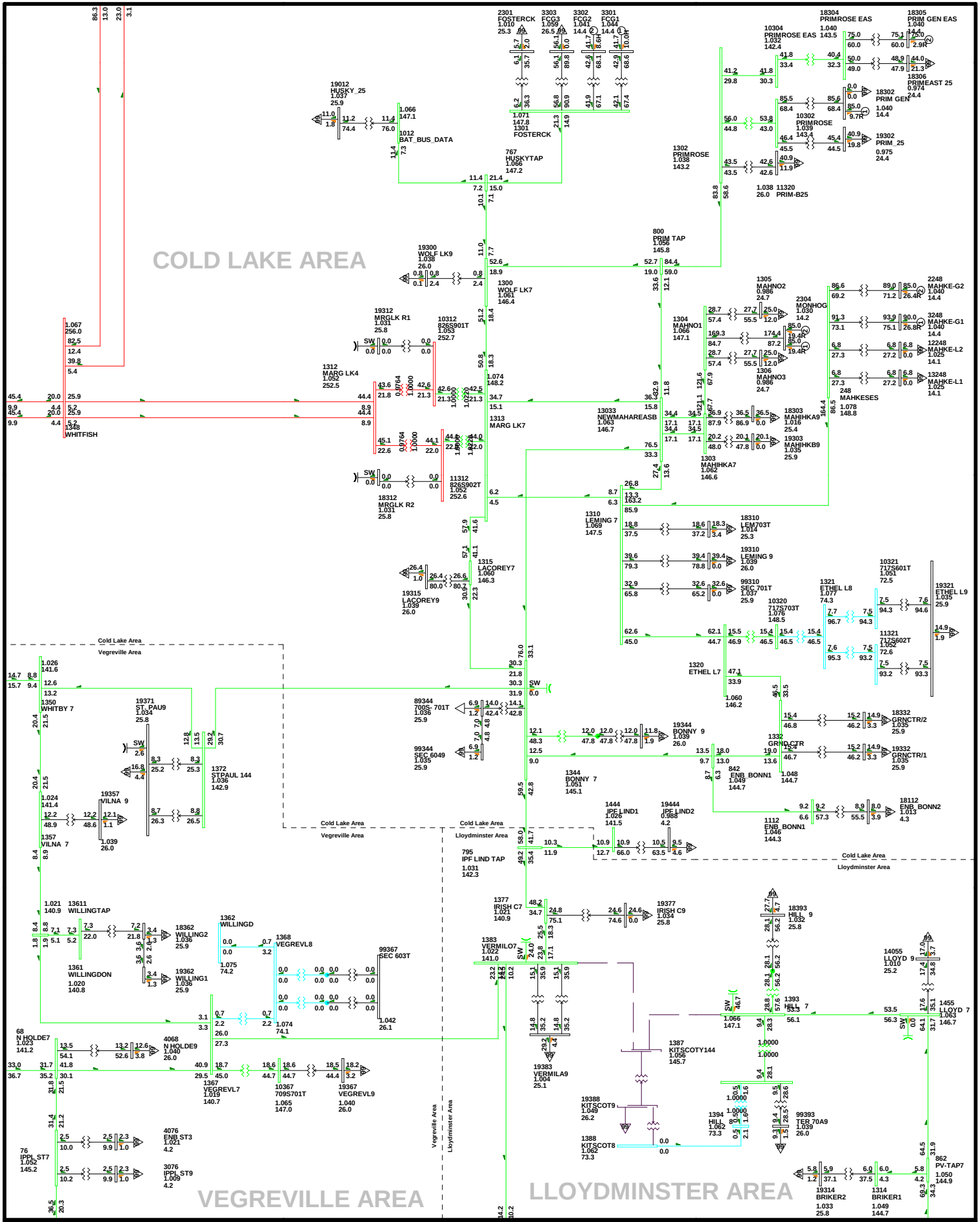
1.090OV0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 30 2010 13:00
D1-05

2017WP-Alt 1-6.a

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Branch - MVA/% OF RATE B
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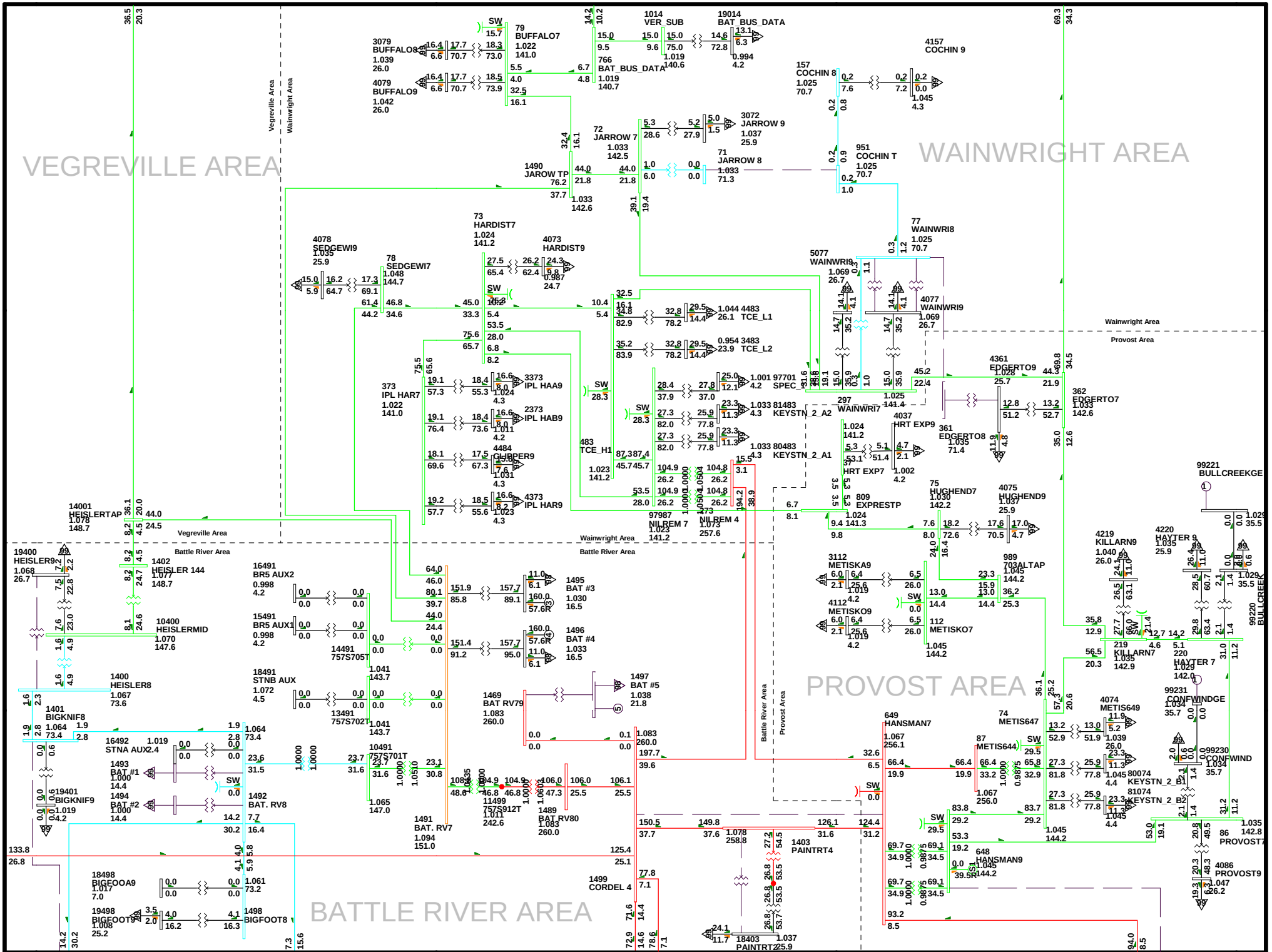

CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 30 2010 13:01
D1-05

2017WP-Alt 1-6.b

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Branch - MVA/% OF RATE B
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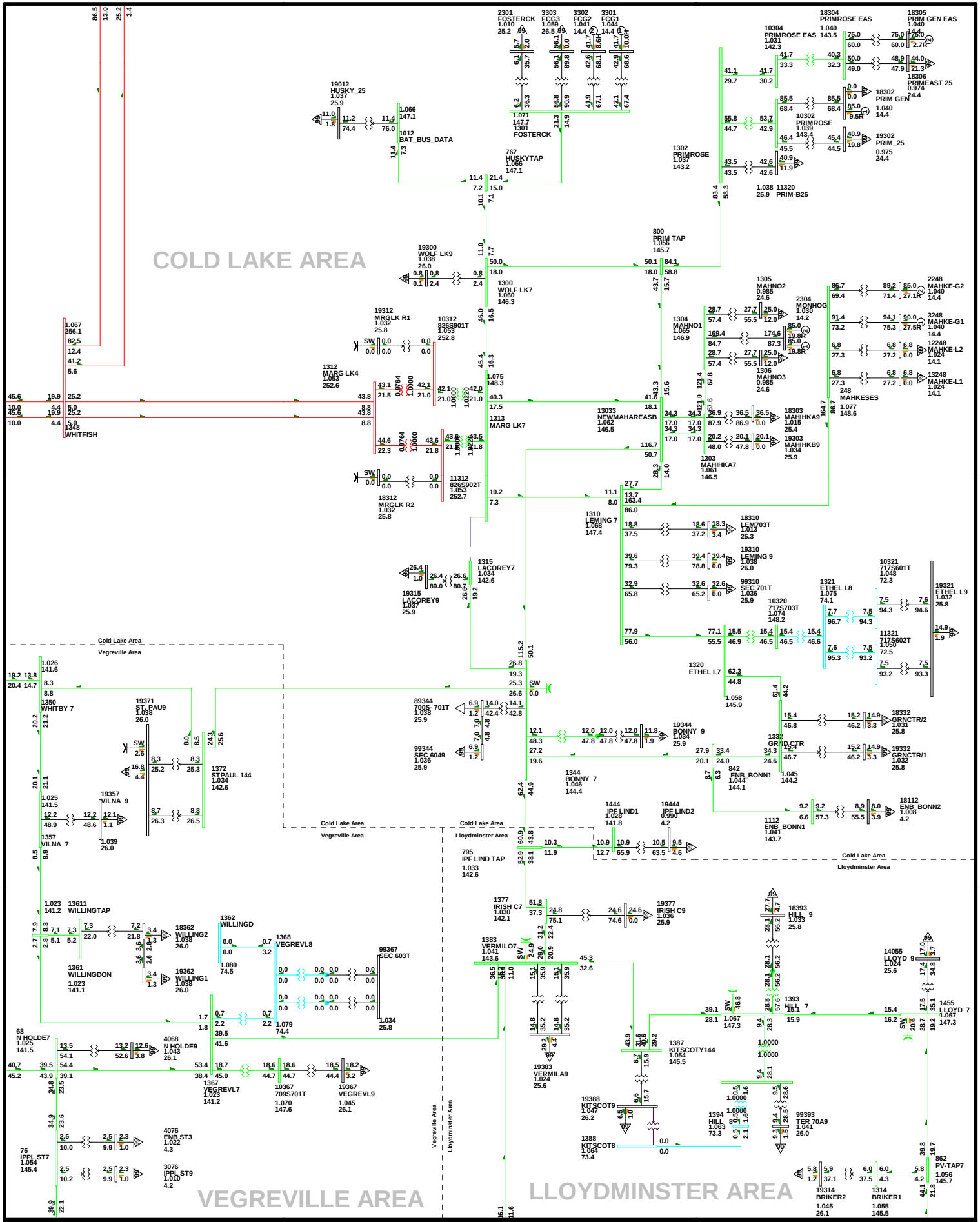

CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 30 2010 13:01
D1-06

2017WP-Alt 1-7.a

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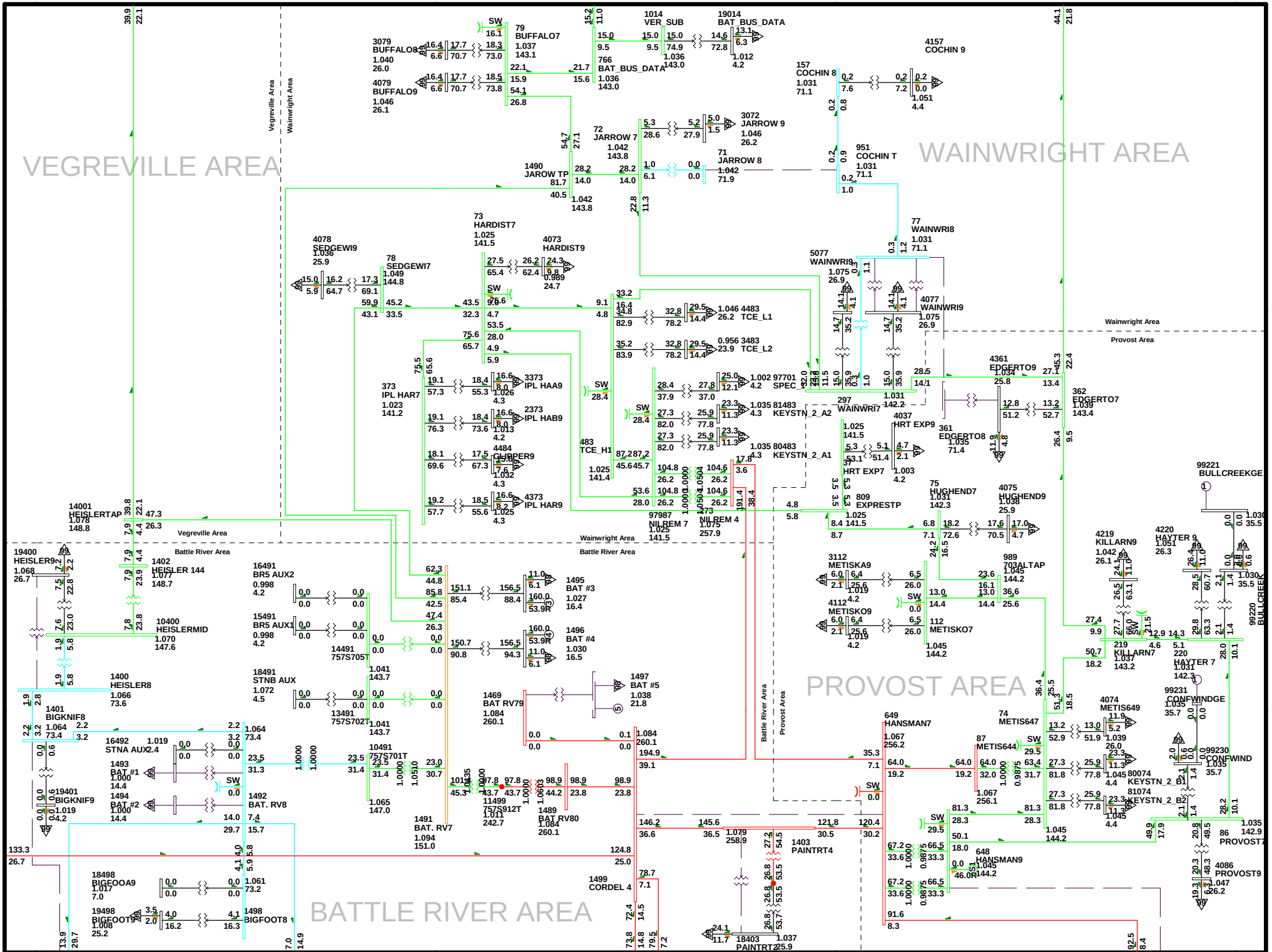
VEGREVILLE AREA
WAINWRIGHT AREA
PROVOST AREA
BATTLE RIVER AREA
Vegreville Area
Wainwright Area
Battle River Area
Provost Area
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3079 BUFFALO8 1.040 26.0
4079 BUFFALO9 1.046 26.1
1014 VER_SUB
19014 BAT_BUS_DATA
766 BAT_BUS_DATA 1.036 143.0
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157 COCHIN 8 1.031 71.1
951 COCHIN T 1.031 71.1
1.051 4.4
72 JARROW 7 1.042 143.8
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71 JARROW 8 1.042 71.9
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73 HARDIST7 1.025 141.5
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4078 SEDGEWI9 1.036 25.9
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3373 IPL HAA9
2373 IPL HAB9
4484 GLOBER9
4373 IPL HAR9
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0.956 3483 TCE_L2
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1.035 80483 KEYSTN_2_A1
297 WAINWRI7 1.031 142.2
4037 HRT EXP9
HRT EXP7 1.003 4.2
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4361 EDGERTO9 1.034 25.8
362 EDGERTO7 1.039 143.4
97987 NIL REM 7 1.025 141.5
97273 NIL REM 4 1.075 257.9
809 EXPRESTP 1.025 141.5
75 HUGHEND7 1.031 142.3
4075 HUGHEND9 1.038 25.9
989 703ALTAP 1.045 144.2
3112 METISKA9 1.019 4.2
4112 METISKO9 1.019 4.2
112 METISKO7 1.045 144.2
99221 BULLCREEKGE 1.030 35.5
99220 BULLCREEK
4219 KILLARN9 1.042 26.1
4220 HAYTER 9 1.051 26.3
219 KILLARN7 1.037 143.2
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99230 CONFWIND 1.035 35.7
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19400 HEISLER9 1.068 26.7
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10400 HEISLERMID 1.070 147.6
1400 HEISLER8 1.066 73.6
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19401 BIGKNIF9 1.019 4.2
16491 BR5 AUX2 0.998 4.2
15491 BR5 AUX1 0.998 4.2
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18491 STNB AUX 1.072 4.5
13491 757S702T 1.041 143.7
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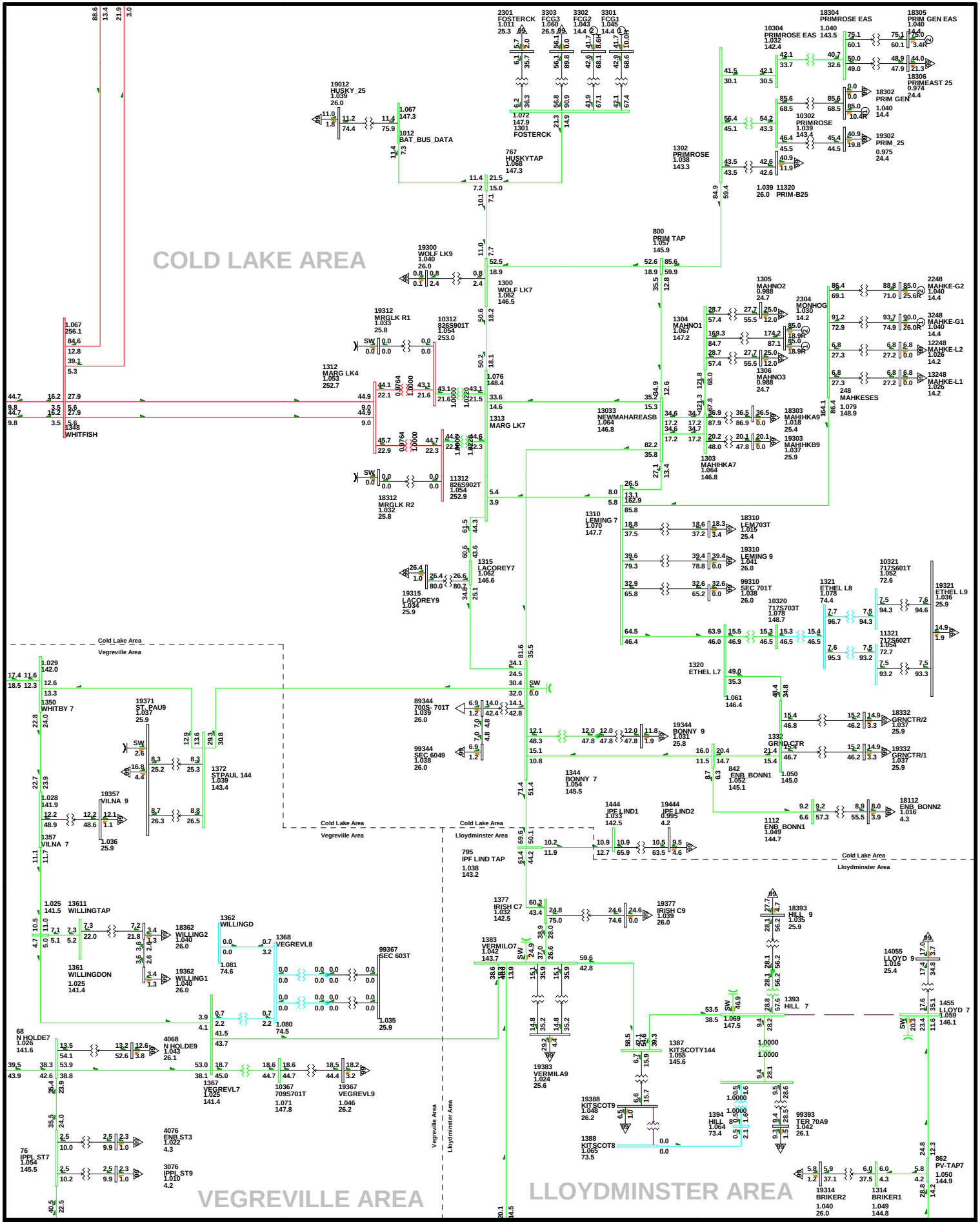
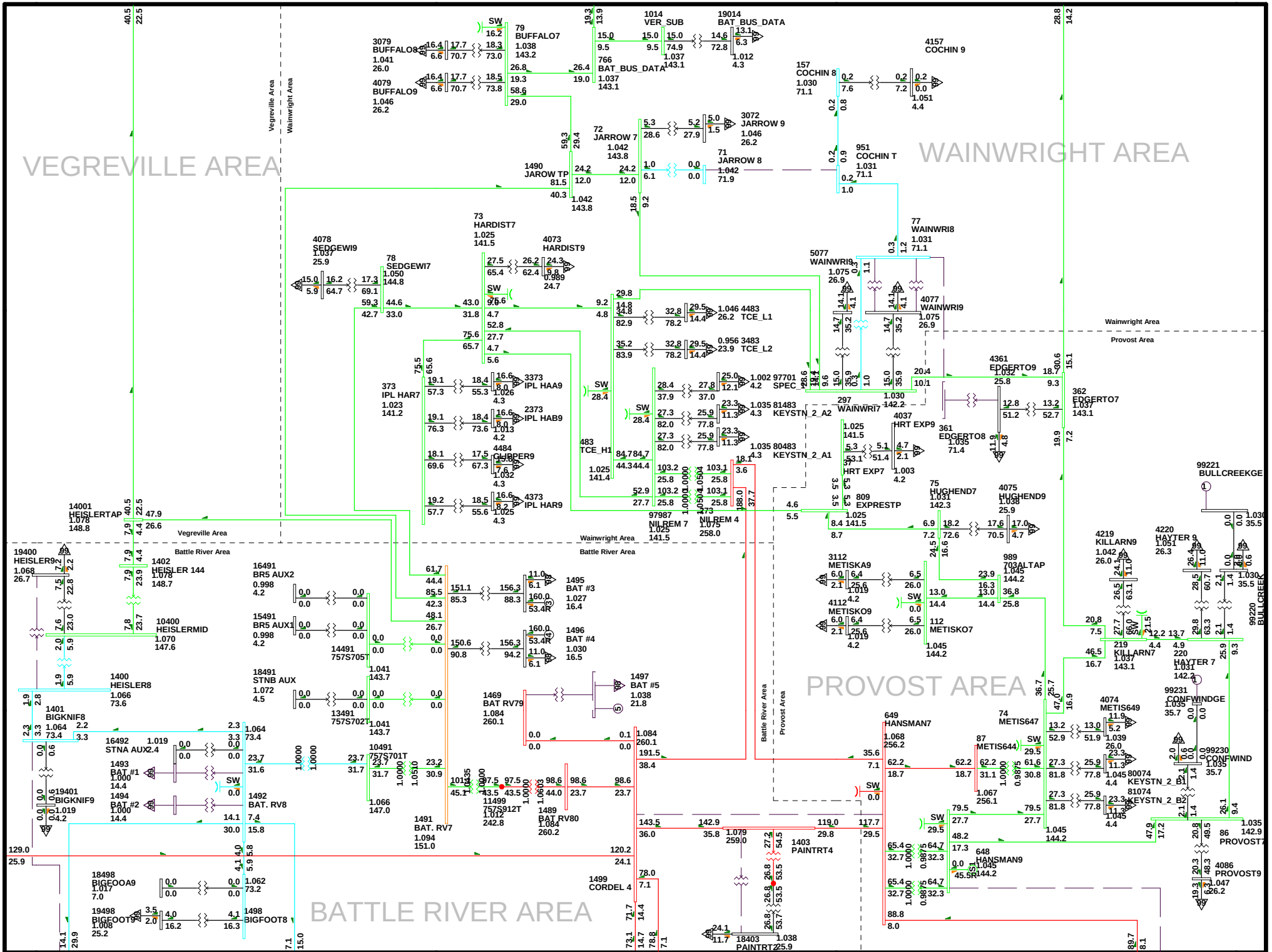
1491 BAT. RV7 1.094 151.0
1495 BAT #3 1.027 16.4
1496 BAT #4 1.030 16.5
1497 BAT #5 1.038 21.8
1469 BAT RV79 1.084 260.1
11499 757S912T 1.011 242.7
1489 BAT RV80 1.084 260.1
1499 CORDEL 4
1403 PAINTRT4
18403 PAINTRT4 1.037 25.9
649 HANSMAN7 1.067 256.2
1067 256.1
74 METIS647
87 METIS644
4074 METIS649
80074 KEYSTN_2_B1
81074 KEYSTN_2_B2
1.045 4.4
648 HANSMAN9 1.045 144.2
18498 BIGEOOA9 1.017 7.0
19498 BIGFOOT9 1.008 25.2
1498 BIGFOOT8 1.061 73.2
4086 PROVOST9 1.047 26.2
86 PROVOST7 1.035 142.9
CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 30 2010 13:01
D1-06
2017WP-Alt 1-7.b
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 30 2010 13:01
D1-07

2017WP-Alt 1-8.a

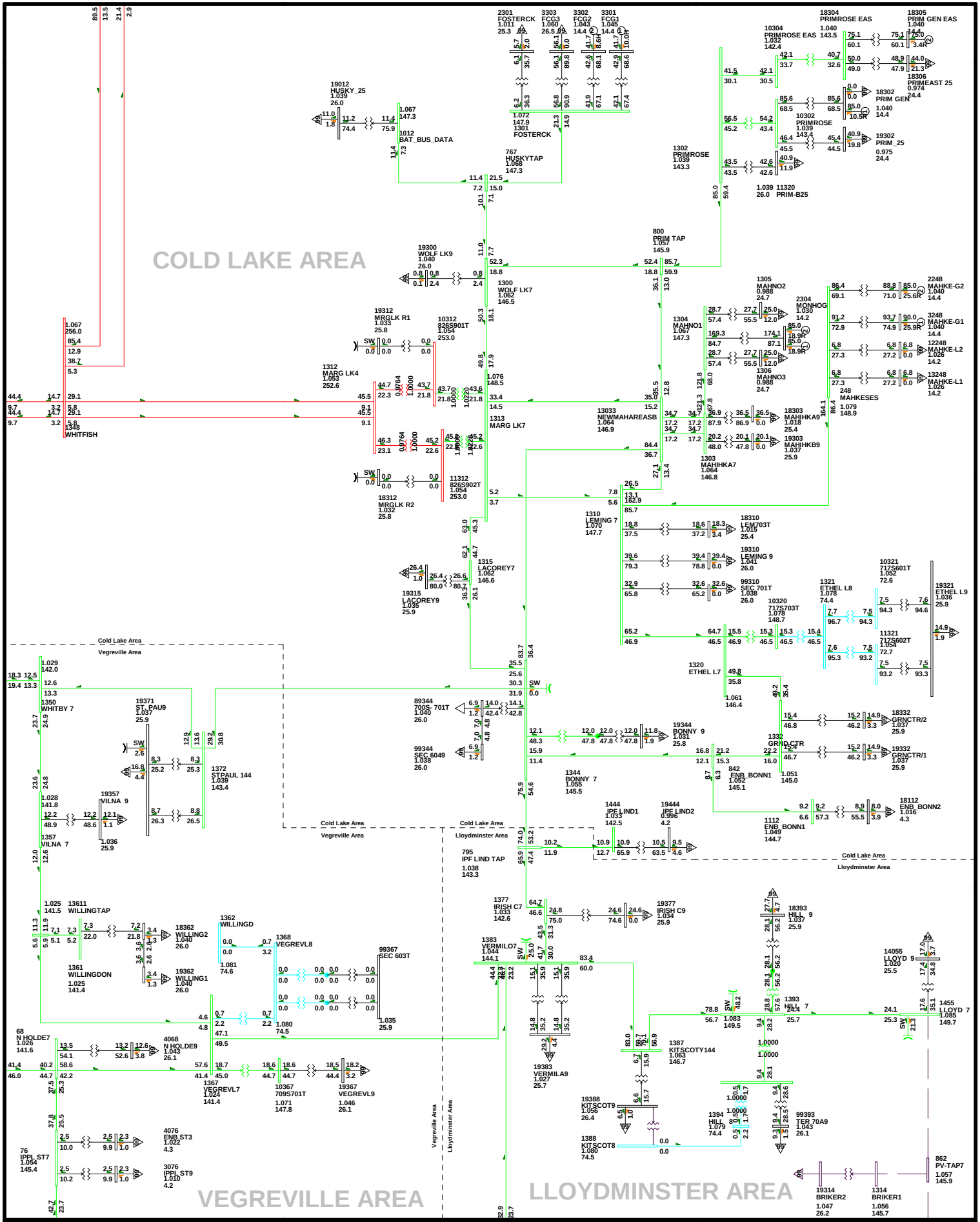
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 30 2010 13:01
D1-07

2017WP-Alt 1-8.b

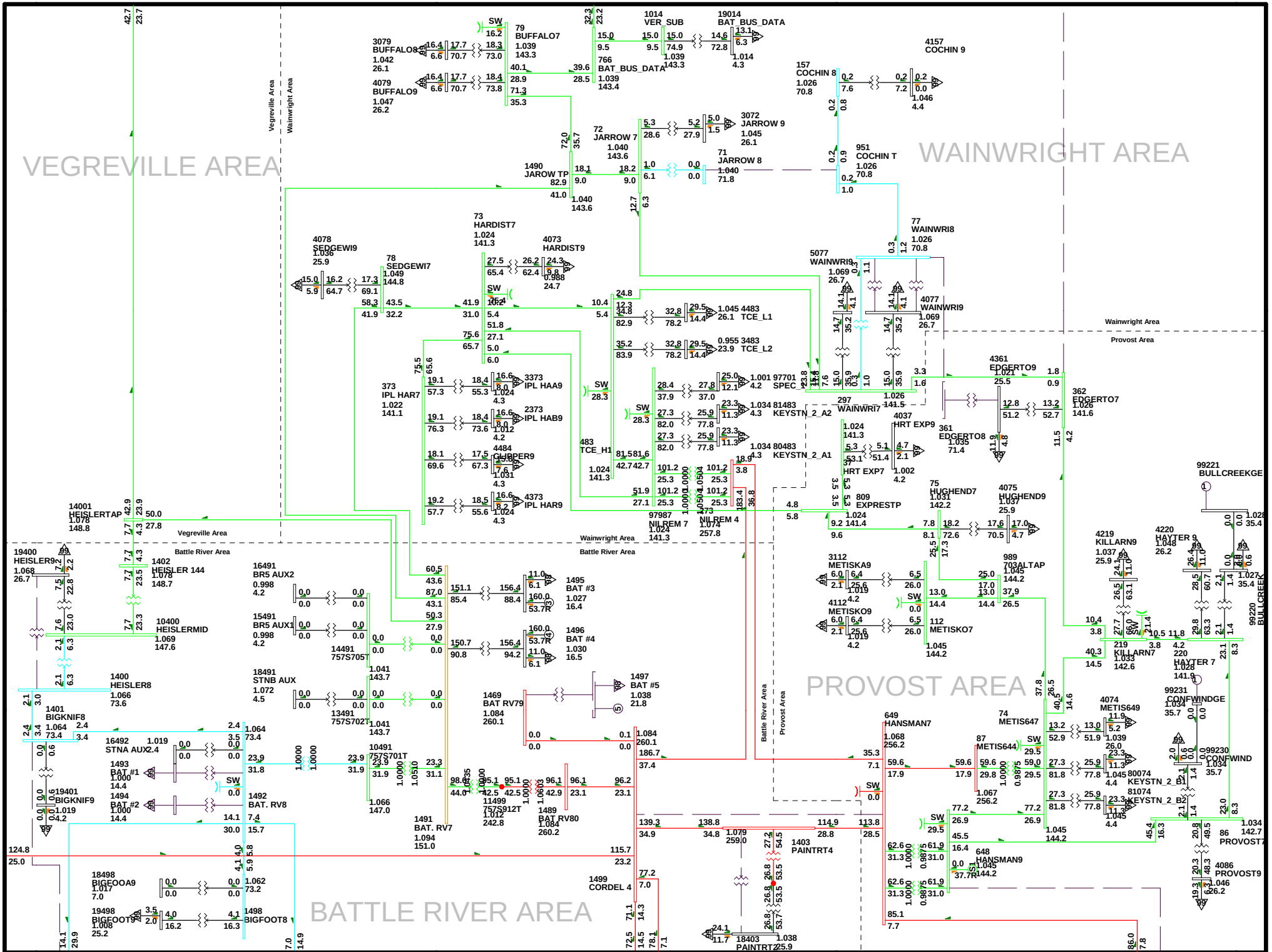
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000

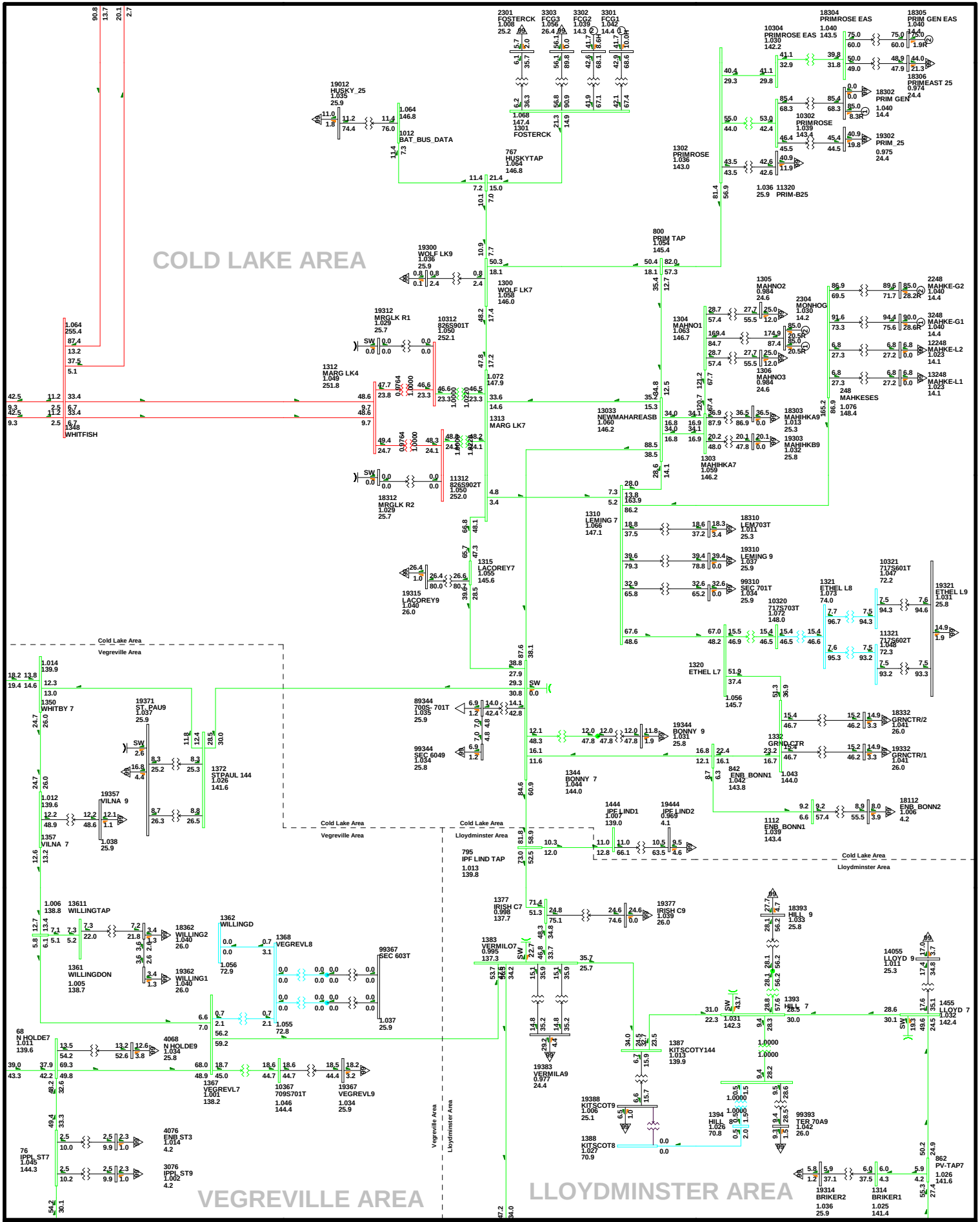


CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 30 2010 13:01
D1-08

2017WP-Alt 1-9.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

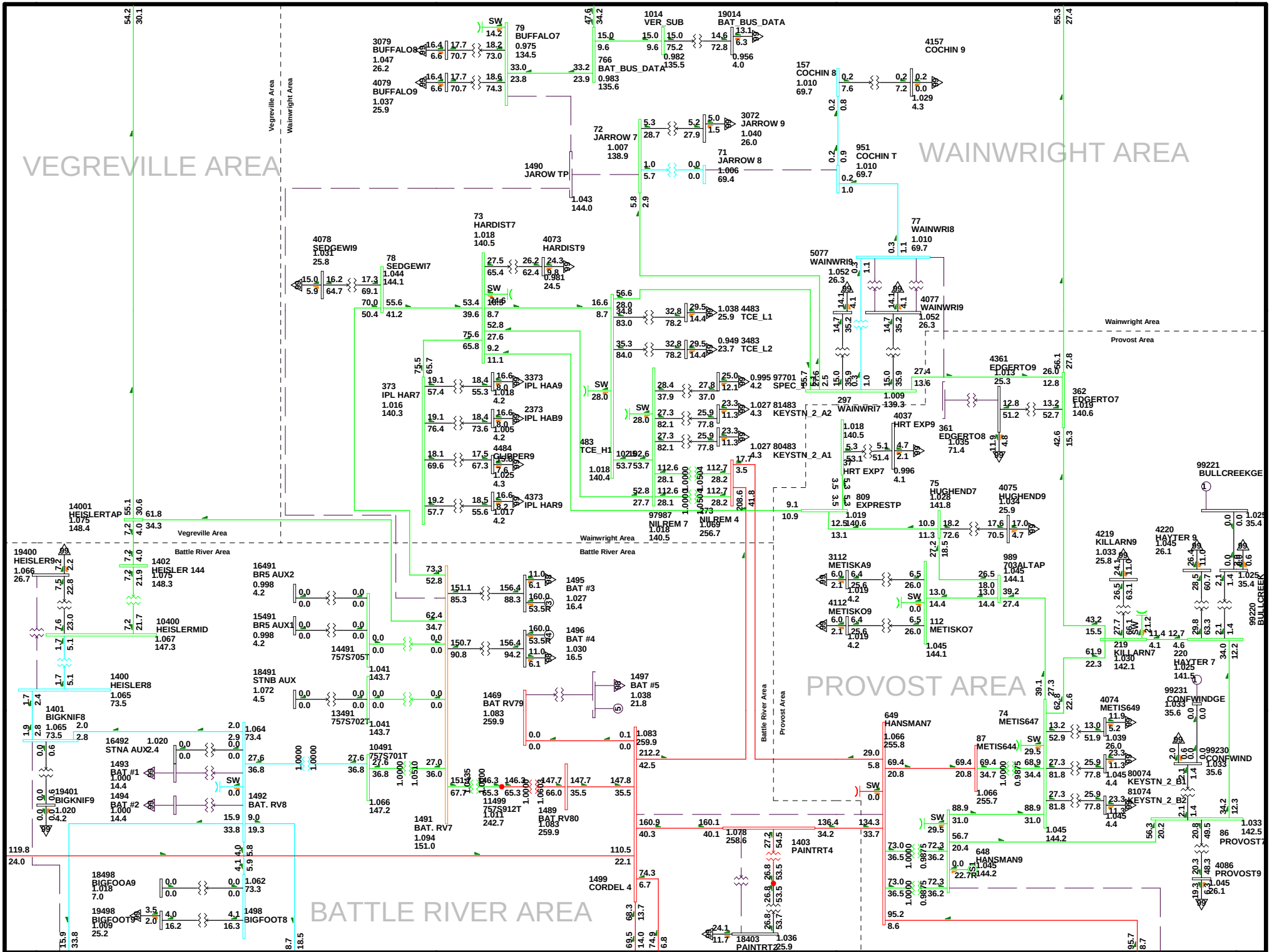

VEGREVILLE AREA
WAINWRIGHT AREA
PROVOST AREA
BATTLE RIVER AREA
Vegreville Area
Wainwright Area
Battle River Area
Provost Area
3079 BUFFALO8 1.042 26.1
4079 BUFFALO9 1.047 26.2
79 BUFFALO7 1.039 143.3
766 BAT_BUS_DATA 1.039 143.4
1014 VER_SUB
19014 BAT_BUS_DATA
4157 COCHIN 9
157 COCHIN 8 1.026 70.8
951 COCHIN T 1.026 70.8
1046 4.4
72 JARROW 7 1.040 143.6
3072 JARROW 9 1.045 26.1
71 JARROW 8 1.040 71.8
1490 JAROW TP 82.9 41.0 1.040 143.6
77 WAINWRI8 1.026 70.8
5077 WAINWRI9 1.069 26.7
4077 WAINWRI9 1.069 26.7
73 HARDIST7 1.024 141.3
4073 HARDIST9
4078 SEDGEWI9 1.036 25.9
78 SEDGEWI7 1.049 144.8
373 IPL HAR7 1.022 141.1
3373 IPL HAA9 1.024 4.3
2373 IPL HAB9 1.012 4.2
4484 GLOBER9 1.031 4.3
4373 IPL HAR9 1.024 4.3
483 TCE_H1 1.024 141.3
1045 4483 TCE_L1 26.1
0.955 3483 TCE_L2 23.9
1.001 97701 SPEC_P 4.2
1.034 81483 KEYSTN_2_A2 4.3
1.034 80483 KEYSTN_2_A1 4.3
97987 NIL REM 7 1.024 141.3
273 NIL REM 4 1.074 257.8
297 WAINWRI7 1.026 141.5
4037 HRT EXP9 1.035 71.4
HRT EXP7 1.002 4.2
361 EDGERTO8 1.035 71.4
4361 EDGERTO9 1.021 25.5
362 EDGERTO7 1.026 141.6
809 EXPRESTP 1.024 9.2 141.4
75 HUGHEND7 1.031 142.2
4075 HUGHEND9 1.037 25.9
3112 METISKA9 1.019 4.2
4112 METISKO9 1.019 4.2
989 703ALTAP 1.045 144.2
112 METISKO7 1.045 144.2
14001 HEISLERTAP 1.078 148.8
1402 HEISLER 144 1.076 148.7
10400 HEISLERMID 1.069 147.6
19400 HEISLER9 1.068 26.7
1400 HEISLER8 1.066 73.6
1401 BIGKNIF8 1.064 73.4
19401 BIGKNIF9 1.019 4.2
16491 BR5 AUX2 0.998 4.2
15491 BR5 AUX1 0.998 4.2
14491 757S705T 1.041 143.7
18491 STNB AUX 1.072 4.5
13491 757S702T 1.041 143.7
16492 STNA AUX 1.019 2.4
10491 757S701T 1.066 147.0
1493 BAT #1 1.000 14.4
1494 BAT #2 1.000 14.4
1492 BAT. RV8 7.4 15.7
1491 BAT. RV7 1.094 151.0
1495 BAT #3 1.027 16.4
1496 BAT #4 1.030 16.5
1497 BAT #5 1.038 21.8
1469 BAT RV79 1.084 260.1
11499 757S912T 1.012 242.8
1489 BAT RV80 1.084 260.2
1499 CORDEL 4
1403 PAINTRT4
18403 PAINTRT4 1.038 25.9
18498 BIGEOOA9 1.017 7.0
19498 BIGFOOT9 1.008 25.2
1498 BIGFOOT8 1.062 73.2
649 HANSMAN7 1.068 256.2
87 METIS644
74 METIS647
4074 METIS649 1.039 26.0
80074 KEYSTN_2_B1 1.045 4.4
81074 KEYSTN_2_B2 1.045 4.4
648 HANSMAN9 1.045 144.2
4086 PROVOST9 1.046 26.2
86 PROVOST7 1.034 142.7
99230 CONFWIND 1.034 35.7
99231 CONFWINDGE 1.034 35.7
99221 BULLCREEKGE
99220 BULLCREEK
4219 KILLARN9 1.037 25.9
219 KILLARN7 1.033 142.6
4220 HAYTER 9 1.048 26.2
220 HAYTER 7 1.028 141.9
CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 30 2010 13:01
D1-08
2017WP-Alt 1-9.b
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 30 2010 13:01
D1-09

2017WP-Alt 1-10.a

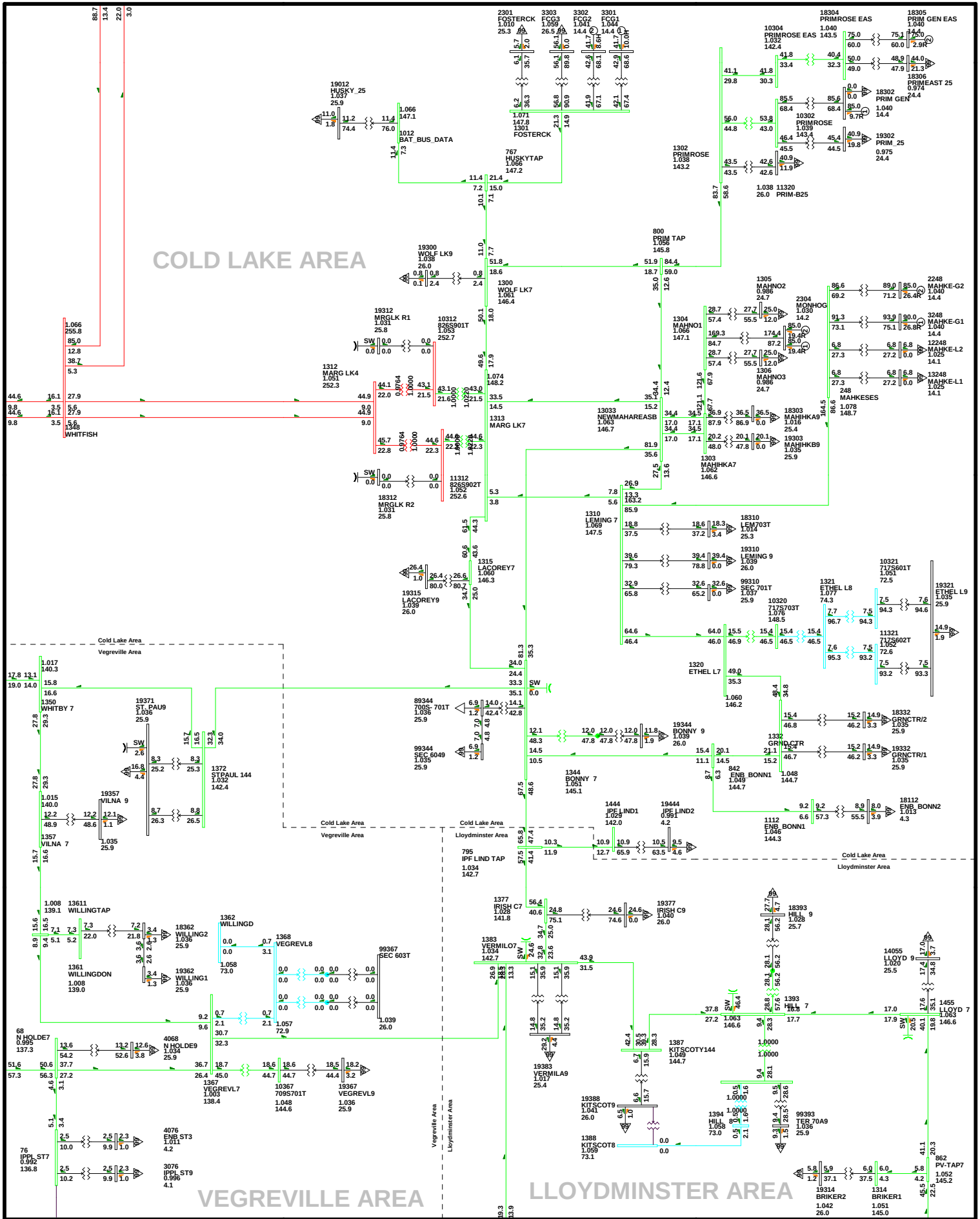
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 30 2010 13:01
D1-09

2017WP-Alt 1-10.b

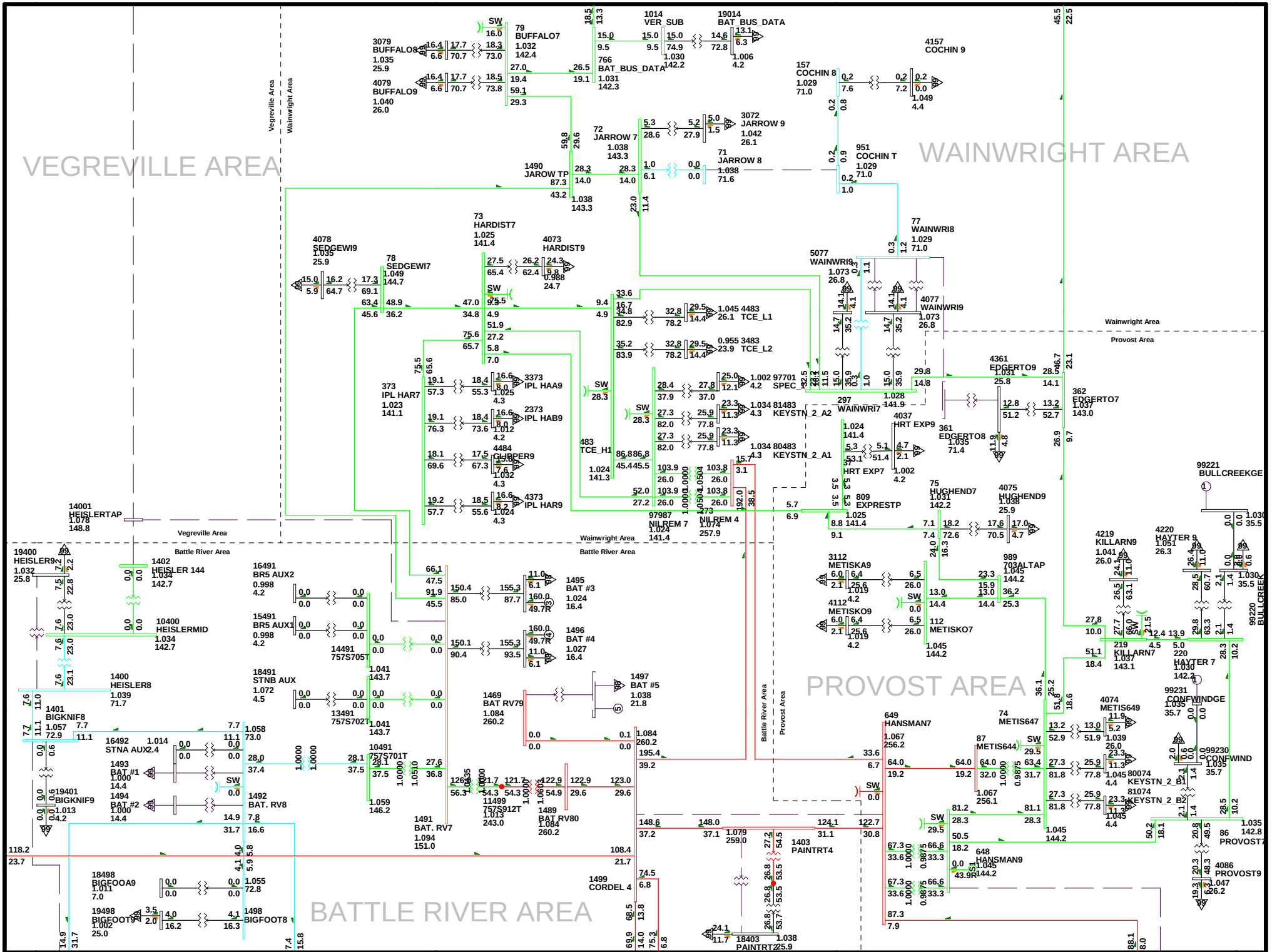
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 30 2010 13:01
D1-10

2017WP-Alt 1-11.a

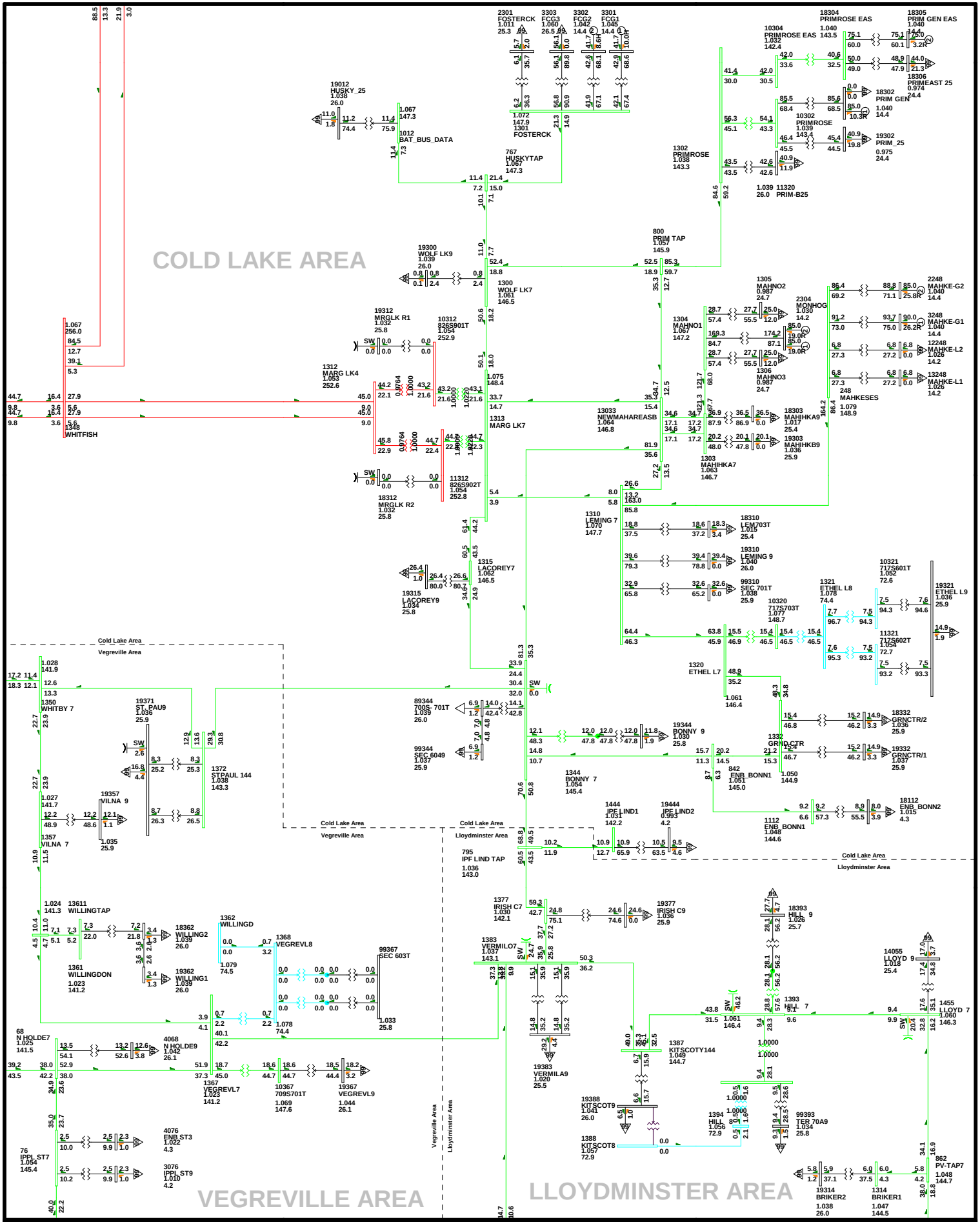
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 30 2010 13:01
D1-10

2017WP-Alt 1-11.b

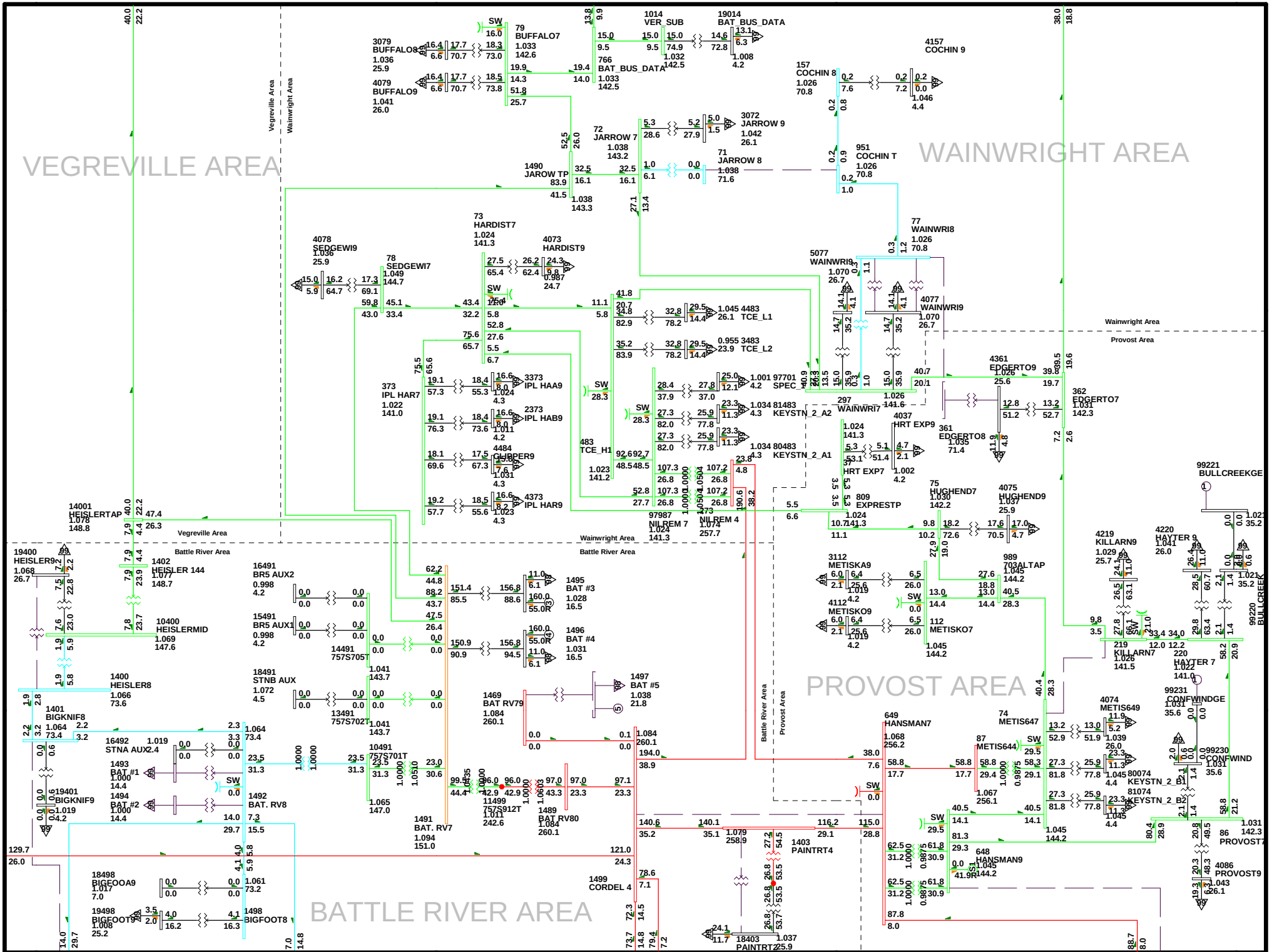
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 30 2010 13:01
D1-11

2017WP-Alt 1-12.a

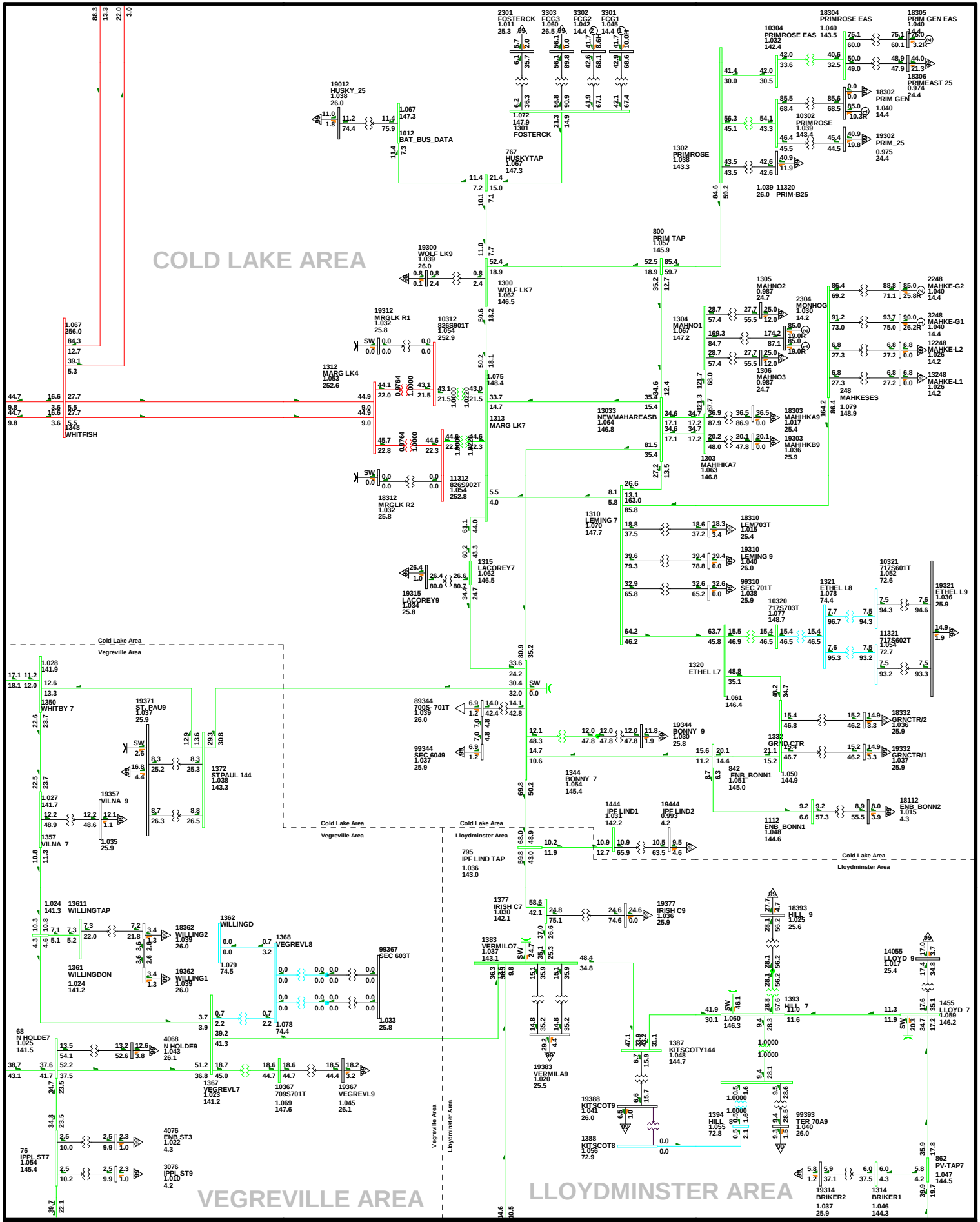
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 30 2010 13:01
D1-11

2017WP-Alt 1-12.b

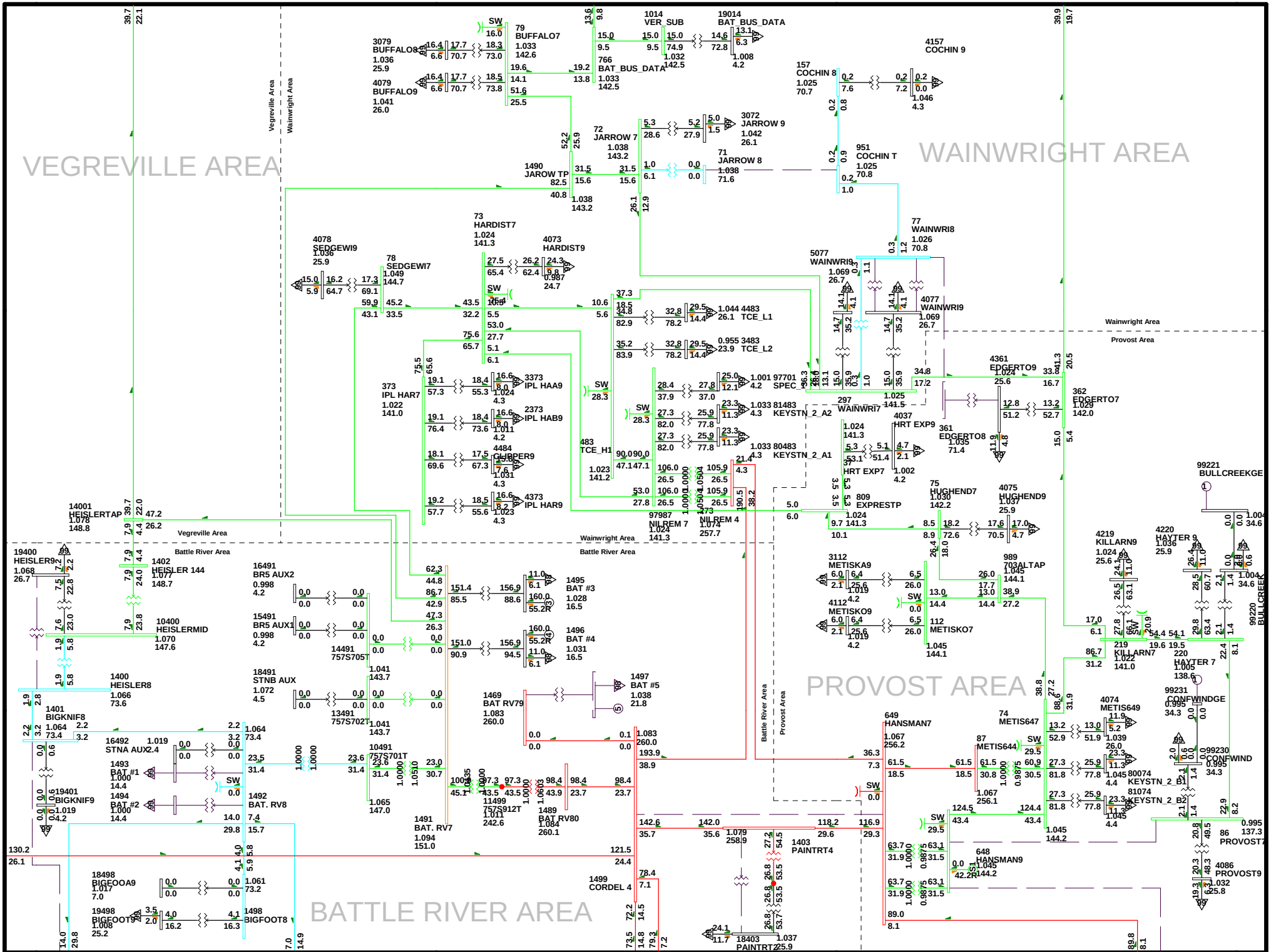
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000

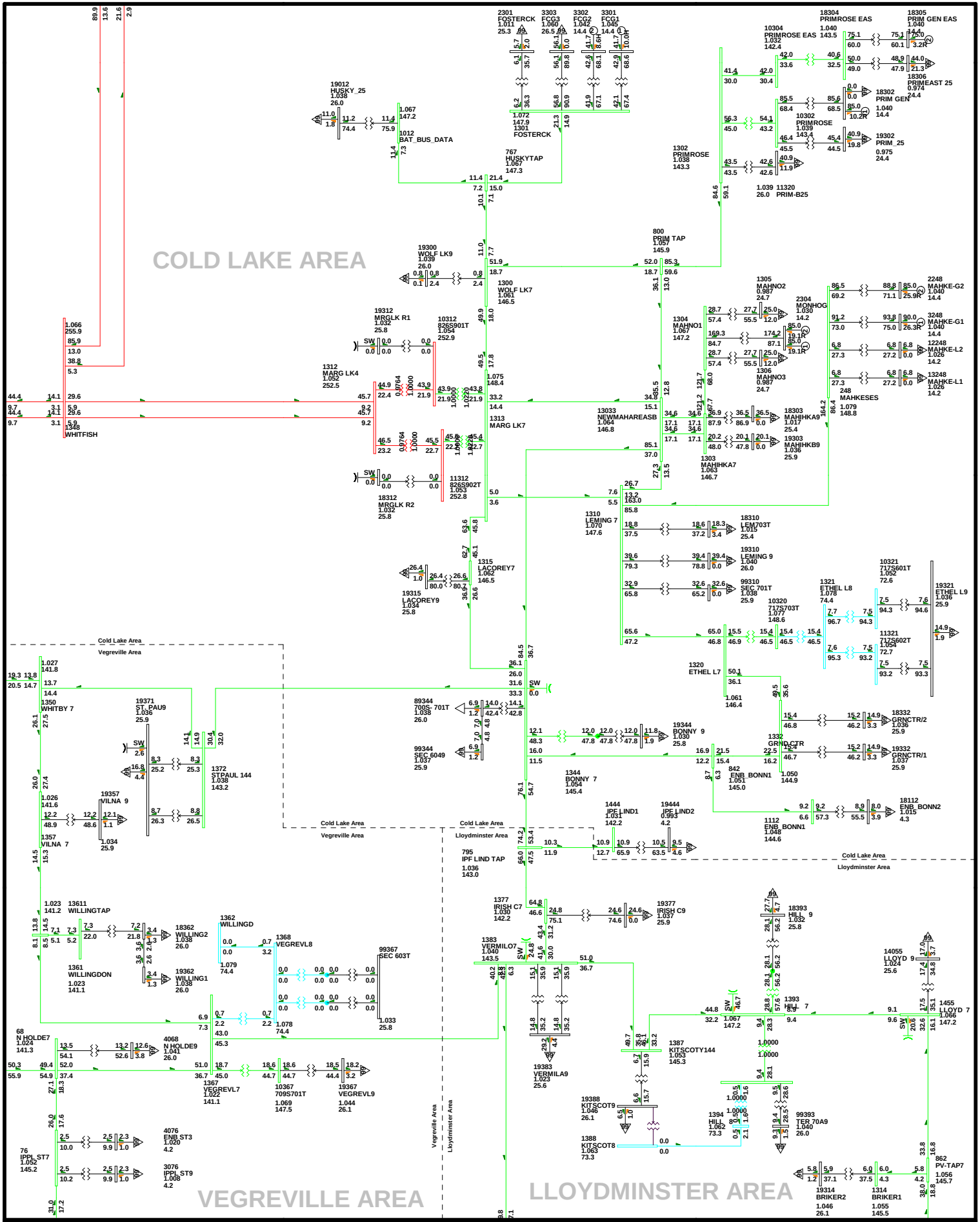


CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 30 2010 13:01
D1-12

2017WP-Alt 1-13.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

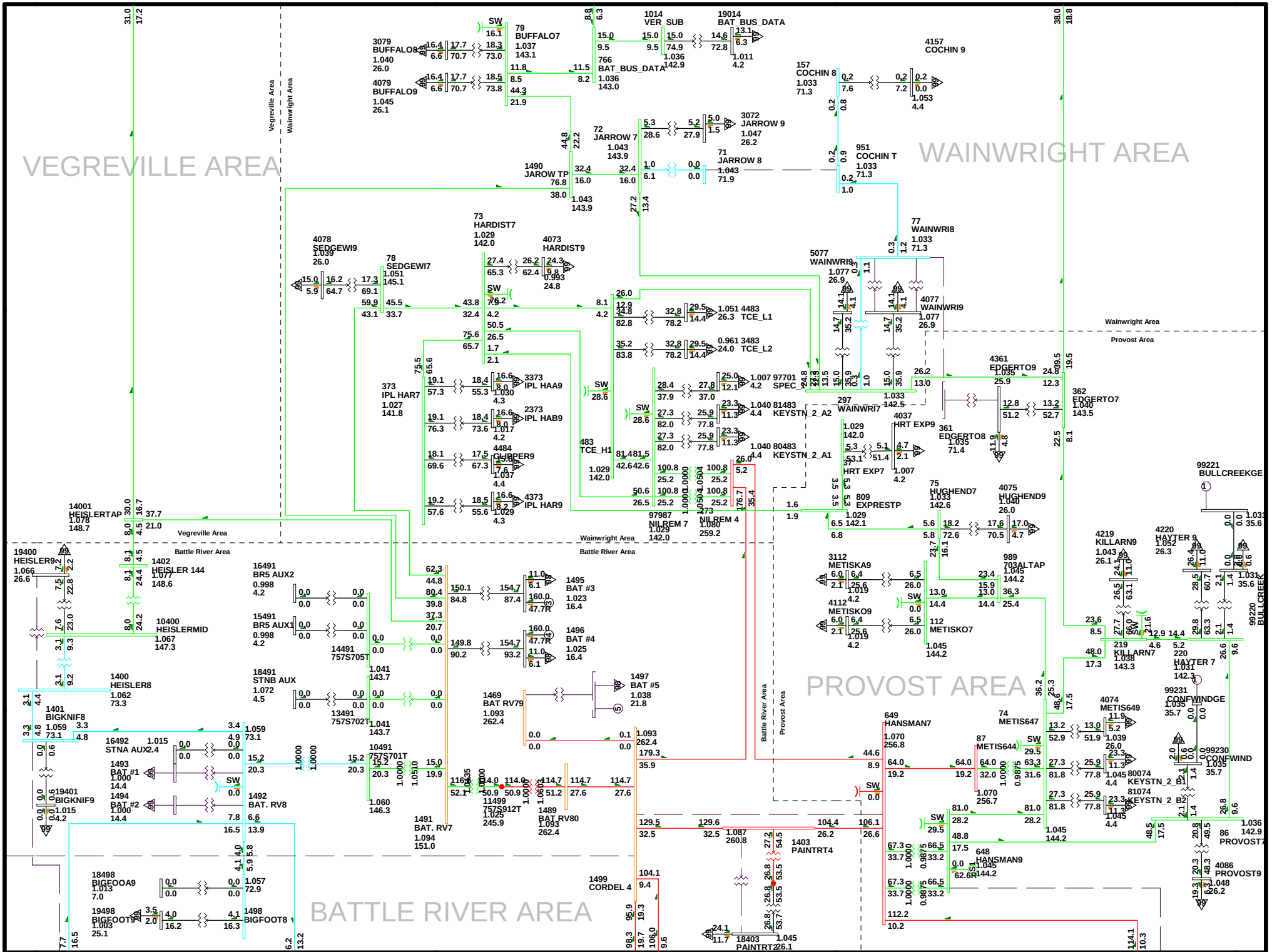

VEGREVILLE AREA
WAINWRIGHT AREA
PROVOST AREA
BATTLE RIVER AREA
Vegreville Area
Wainwright Area
Battle River Area
Provost Area
3079 BUFFALO8 1.036 25.9
4079 BUFFALO9 1.041 26.0
79 BUFFALO7 1.033 142.6
766 BAT_BUS_DATA 1.033 142.5
1014 VER_SUB 1.032 142.5
19014 BAT_BUS_DATA 1.008 4.2
4157 COCHIN 9
157 COCHIN 8 1.025 70.7
1046 4.3
951 COCHIN T 1.025 70.8
72 JARROW 7 1.038 143.2
3072 JARROW 9 1.042 26.1
71 JARROW 8 1.038 71.6
1490 JAROW TP 1.038 143.2
73 HARDIST7 1.024 141.3
4073 HARDIST9 0.987 24.7
4078 SEDGEWI9 1.036 25.9
78 SEDGEWI7 1.049 144.7
77 WAINWRI8 1.026 70.8
5077 WAINWRI9 1.069 26.7
4077 WAINWRI9 1.069 26.7
373 IPL HAR7 1.022 141.0
3373 IPL HAA9 1.024 4.3
2373 IPL HAB9 1.011 4.2
4484 GLOBER9 1.031 4.3
4373 IPL HAR9 1.023 4.3
1.044 4483 TCE_L1 26.1
0.955 3483 TCE_L2 23.9
483 TCE_H1 1.023 141.2
1.001 97701 SPEC_E 4.2
1.033 81483 KEYSTN_2_A2 4.3
1.033 80483 KEYSTN_2_A1 4.3
97987 NIL REM 7 1.024 141.3
273 NIL REM 4 1.074 257.7
297 WAINWRI7 1.025 141.5
4037 HRT EXP9 1.035 71.4
HRT EXP7 1.002 4.2
361 EDGERTO8 1.035 71.4
4361 EDGERTO9 1.024 25.6
362 EDGERTO7 1.029 142.0
809 EXPRESTP 1.024 141.3
75 HUGHEND7 1.030 142.2
4075 HUGHEND9 1.037 25.9
989 703ALTAP 1.045 144.1
3112 METISKA9 1.019 4.2
4112 METISKO9 1.019 4.2
112 METISKO7 1.045 144.1
14001 HEISLERTAP 1.078 148.8
19400 HEISLER9 1.068 26.7
1402 HEISLER 144 1.077 148.7
10400 HEISLERMID 1.070 147.6
1400 HEISLER8 1.066 73.6
1401 BIGKNIF8 1.064 73.4
19401 BIGKNIF9 1.019 4.2
16491 BR5 AUX2 0.998 4.2
15491 BR5 AUX1 0.998 4.2
14491 757S705T 1.041 143.7
18491 STNB AUX 1.072 4.5
13491 757S702T 1.041 143.7
16492 STNA AUX 1.019 2.4
10491 757S701T 1.065 147.0
1493 BAT #1 1.000 14.4
1494 BAT #2 1.000 14.4
1492 BAT. RV8 7.4
1491 BAT. RV7 1.094 151.0
1495 BAT #3 1.028 16.5
1496 BAT #4 1.031 16.5
1497 BAT #5 1.038 21.8
1469 BAT RV79 1.083 260.0
11499 757S912T 1.011 242.6
1489 BAT RV80 1.084 260.1
18498 BIGEOOA9 1.017 7.0
19498 BIGFOOT9 1.008 25.2
1498 BIGFOOT8 16.3
1499 CORDEL 4
1403 PAINTRT4
18403 PAINTRT3 1.037 25.9
649 HANSMAN7 1.067 256.2
74 METIS647
87 METIS644 1.067 256.1
4074 METIS649 1.045 4.4
80074 KEYSTN_2_B1 1.045 4.4
81074 KEYSTN_2_B2 1.045 4.4
648 HANSMAN9 1.045 144.2
99221 BULLCREEKGE
4219 KILLARN9 1.024 25.6
219 KILLARN7 1.022 141.0
4220 HAYTER 9 1.036 25.9
220 HAYTER 7 1.005 138.6
99231 CONFWINDGE 0.995 34.3
99230 CONFWIND 0.995 34.3
99220 BULLCREEK
4086 PROVOST9 1.032 25.8
86 PROVOST7 0.995 137.3
CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 30 2010 13:01
D1-12
2017WP-Alt 1-13.b
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 30 2010 13:01
D1-14

2017WP-Alt 1-14.a

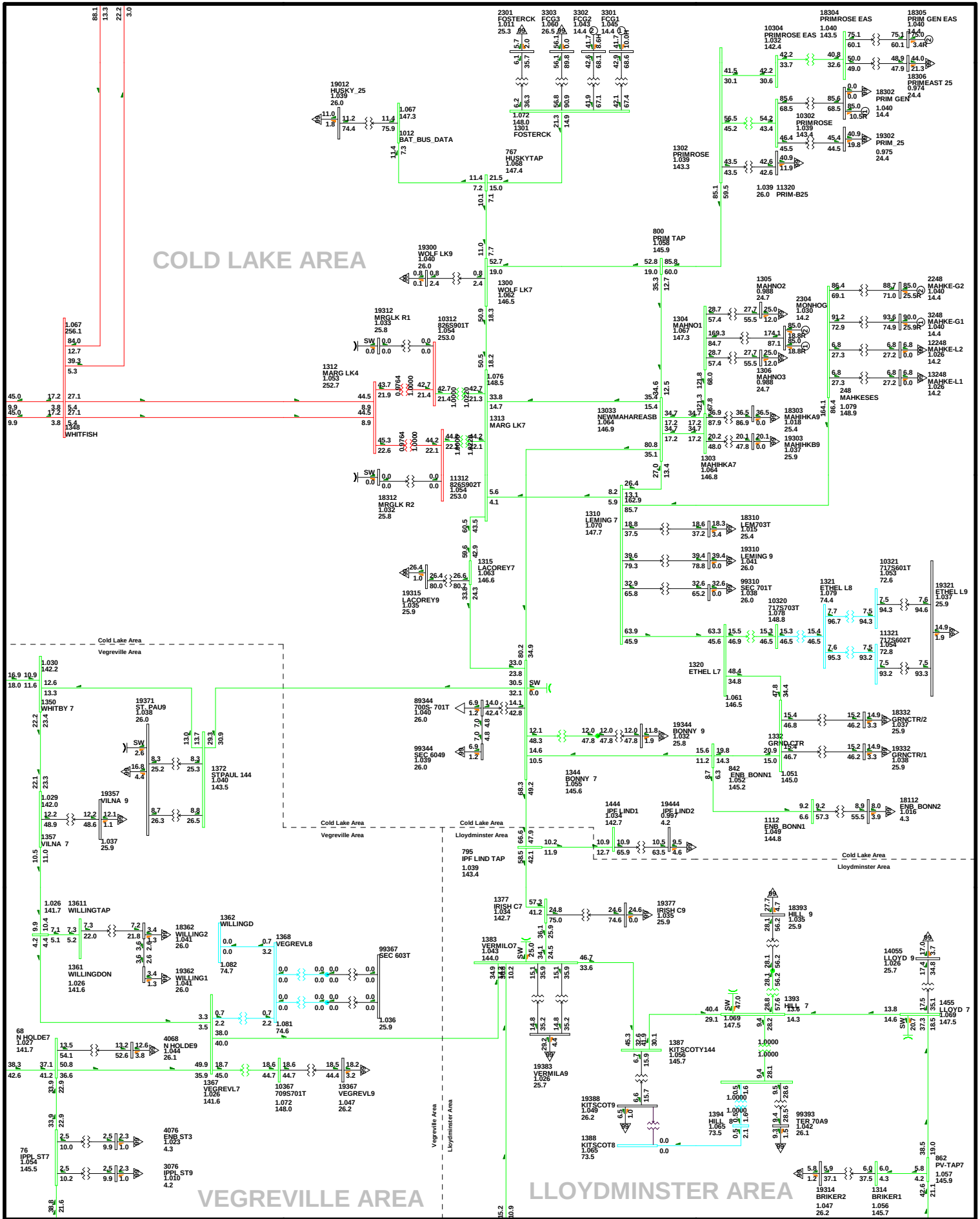
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 30 2010 13:02
D1-14

2017WP-Alt 1-14.b

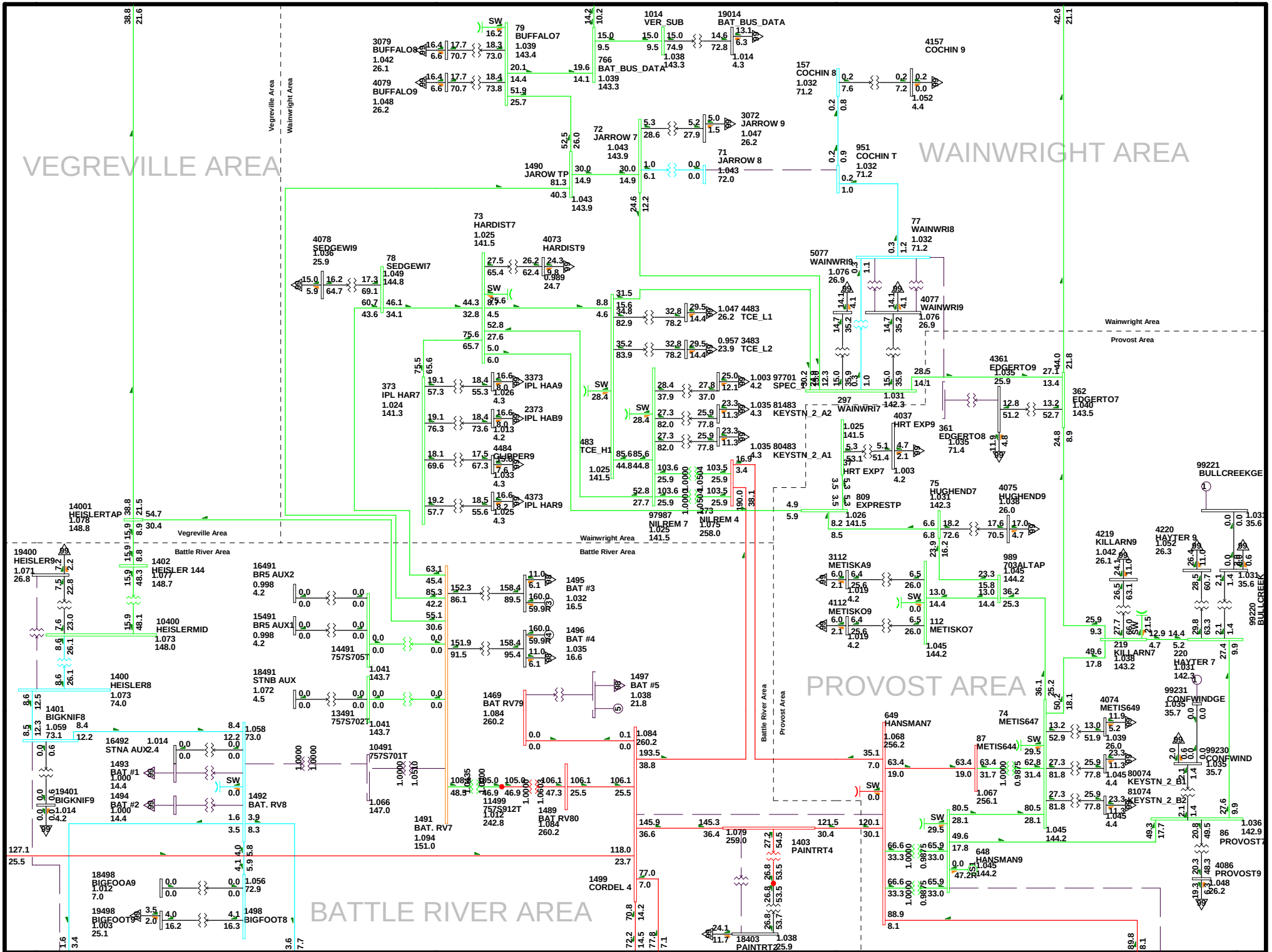
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 30 2010 13:02
D1-15

2017WP-Alt 1-15.a

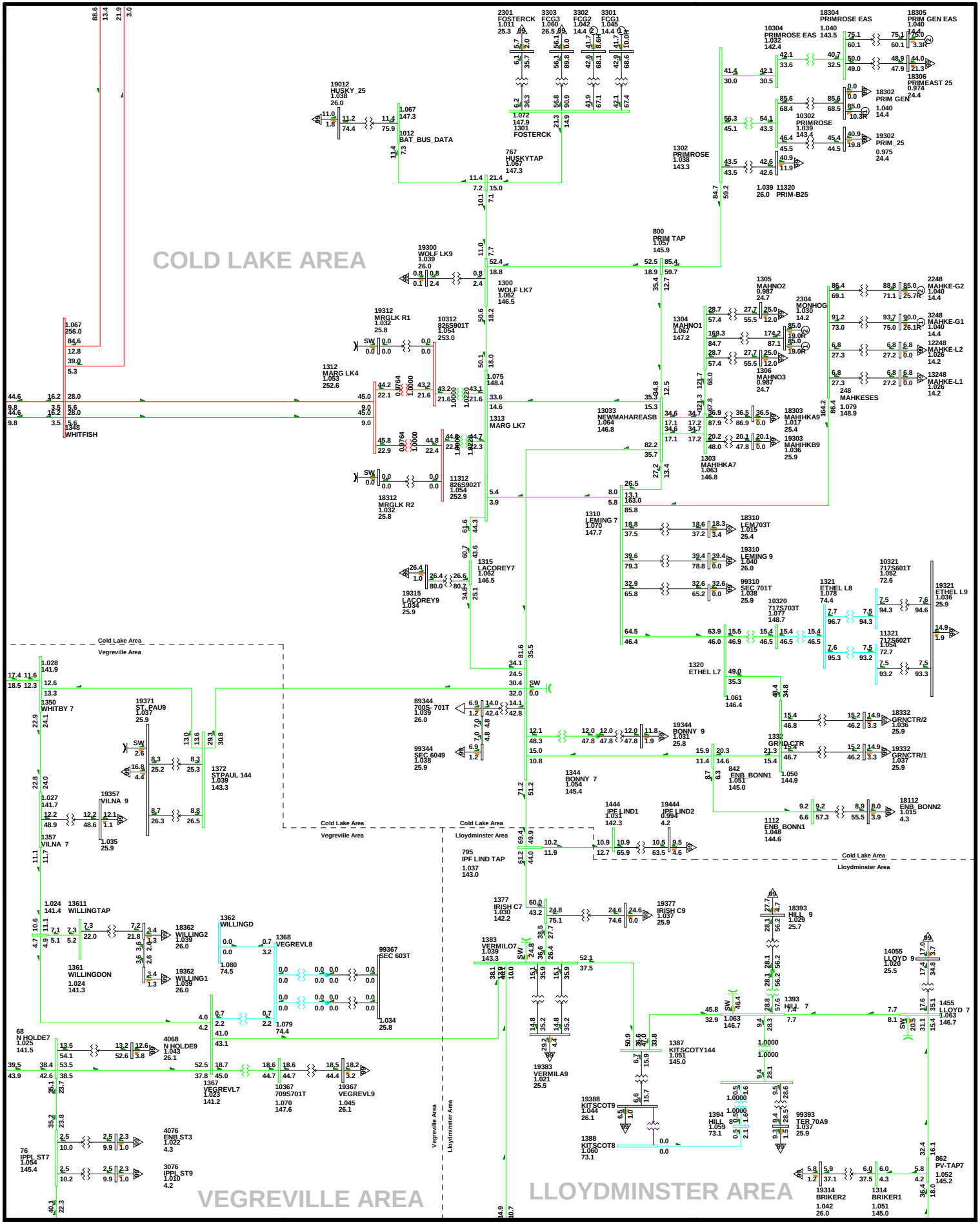
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 30 2010 13:02
D1-15

2017WP-Alt 1-15.b

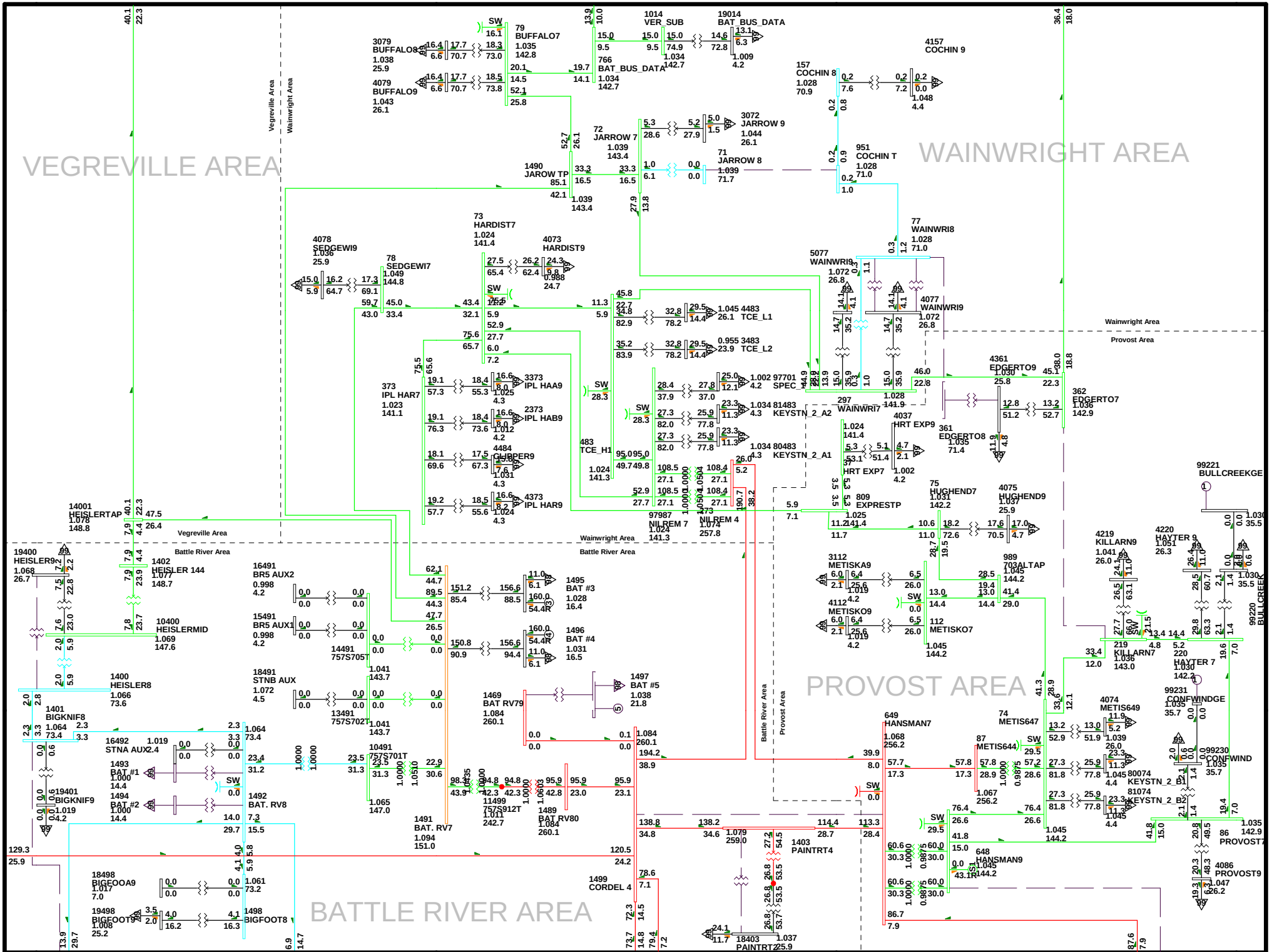
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 30 2010 13:02
D1-16

2017WP-Alt 1-16.a

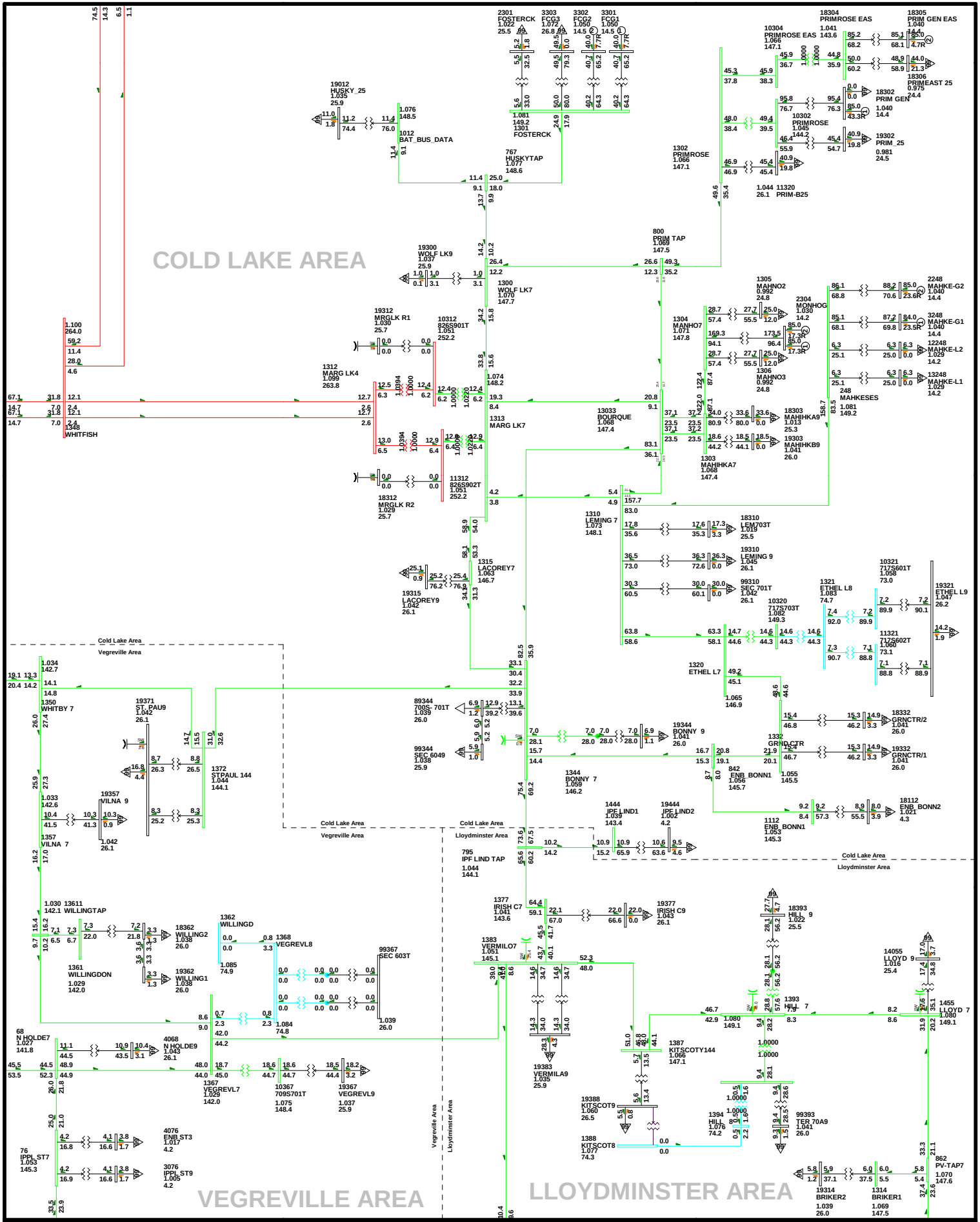
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 30 2010 13:02
D1-16

2017WP-Alt 1-16.b

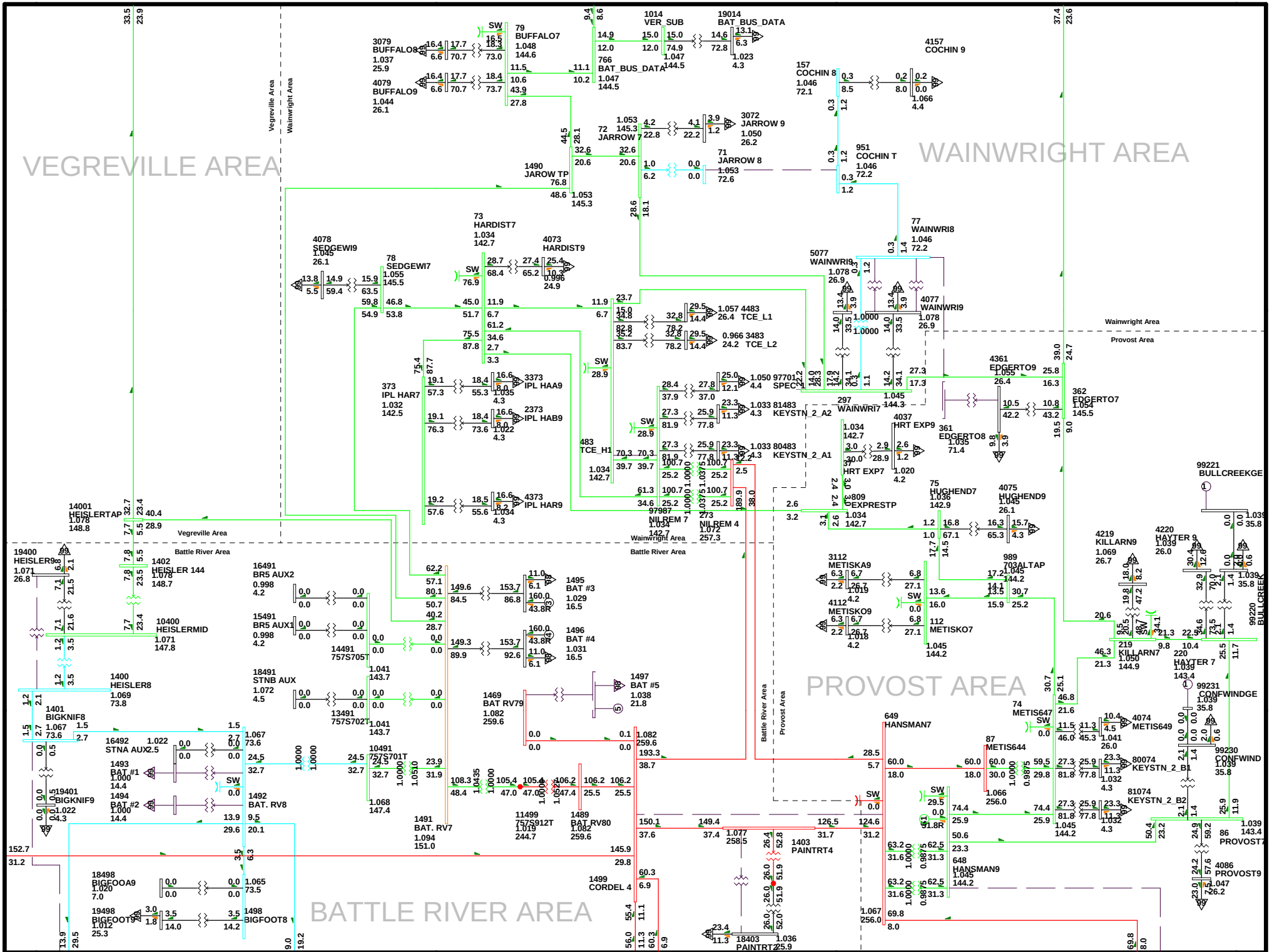
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
THU, APR 08 2010 14:46
D1-00

2017SP-Alt 1-1.a

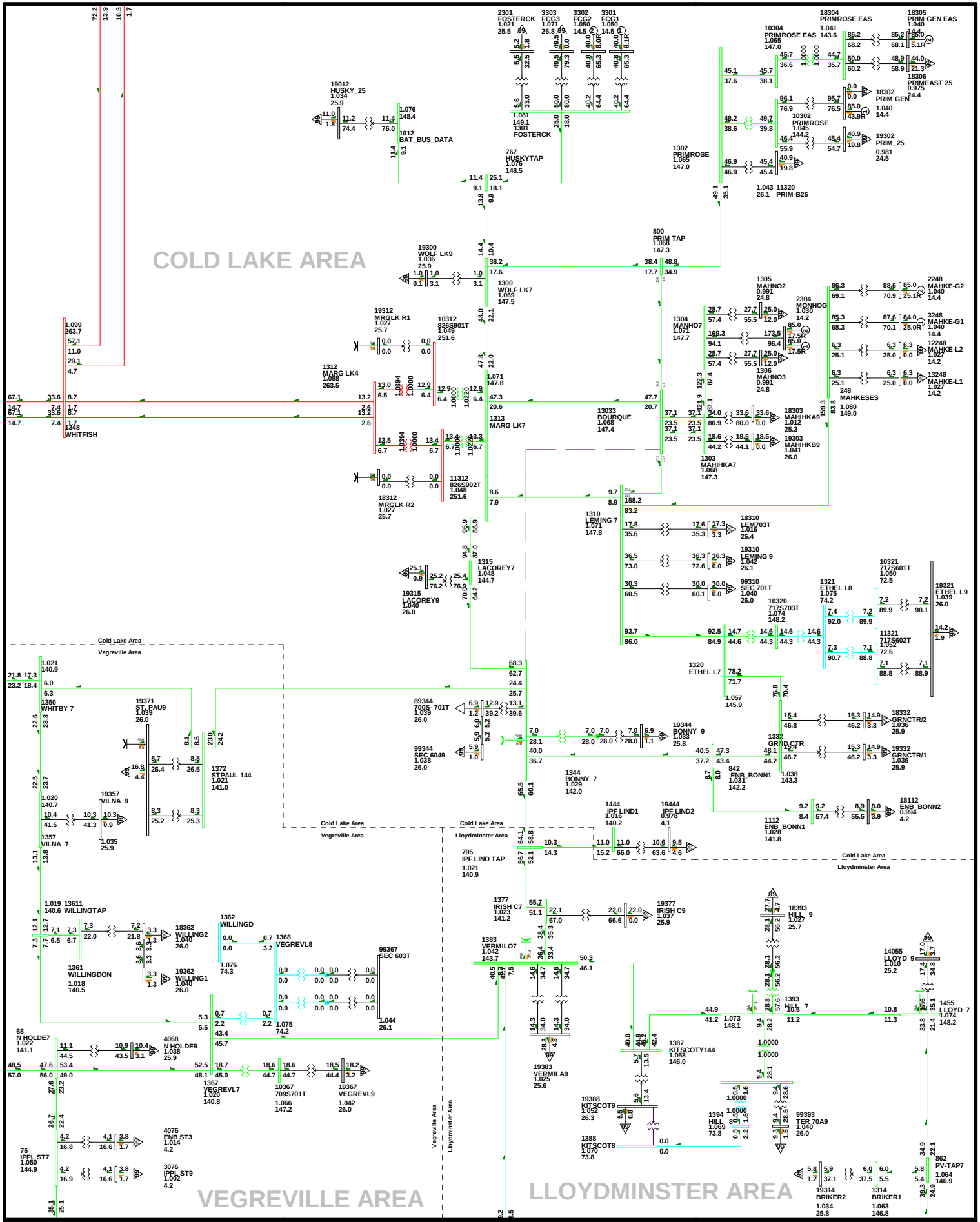
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
THU, APR 08 2010 14:46
D1-00

2017SP-Alt 1-1.b

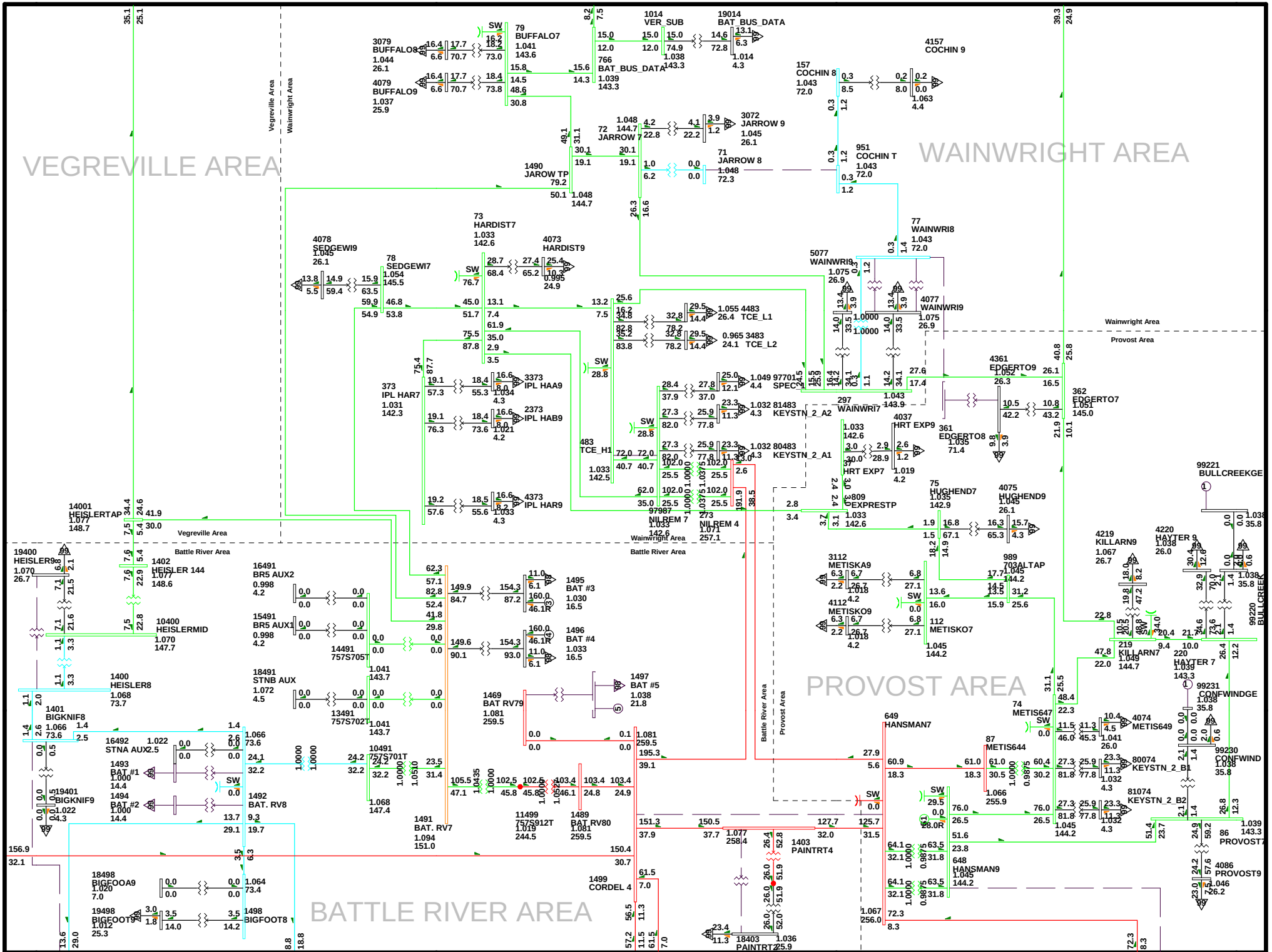
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
THU, APR 08 2010 14:46
D1-01

2017SP-Alt 1-2.a

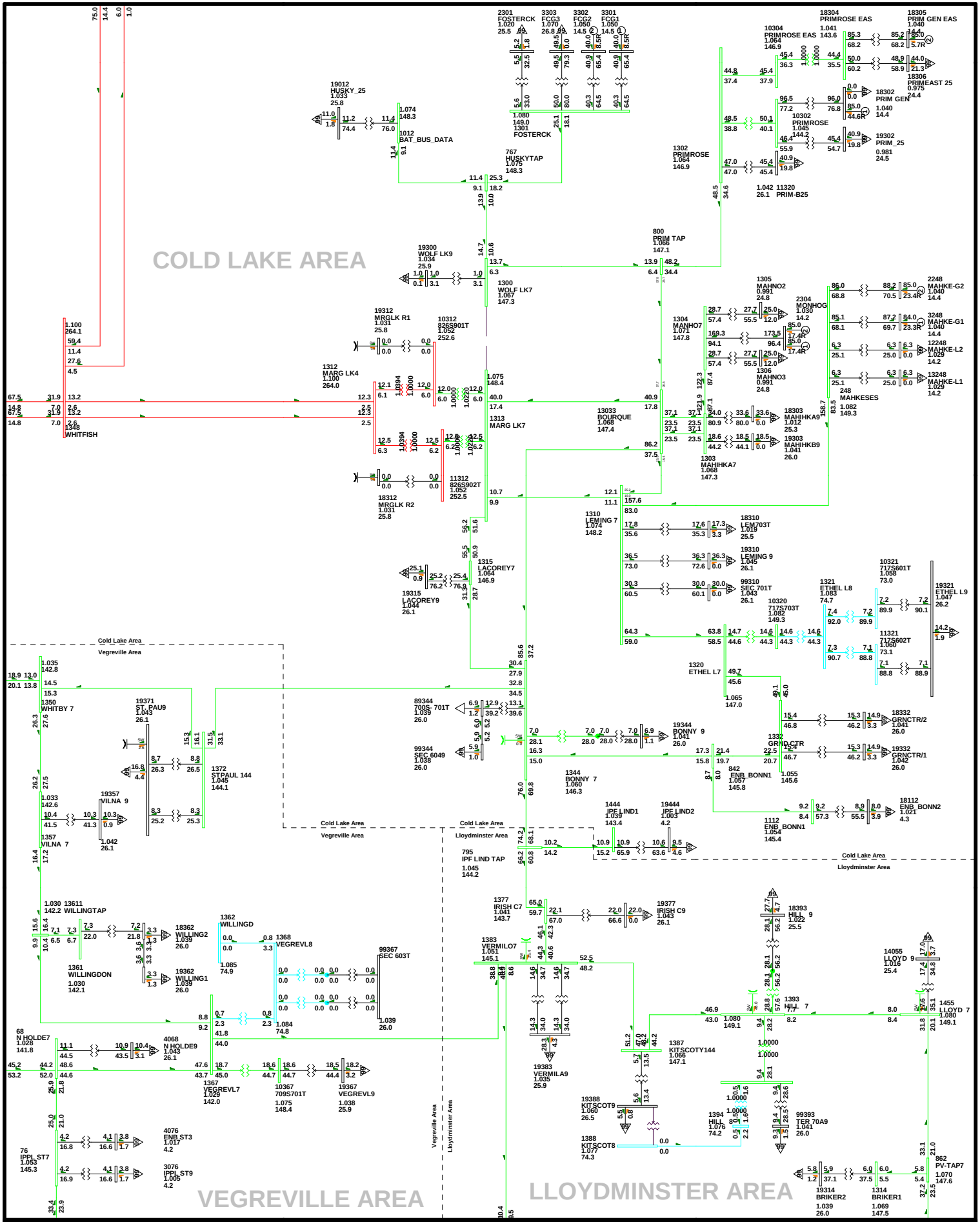
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
THU, APR 08 2010 14:46
D1-01

2017SP-Alt 1-2.b

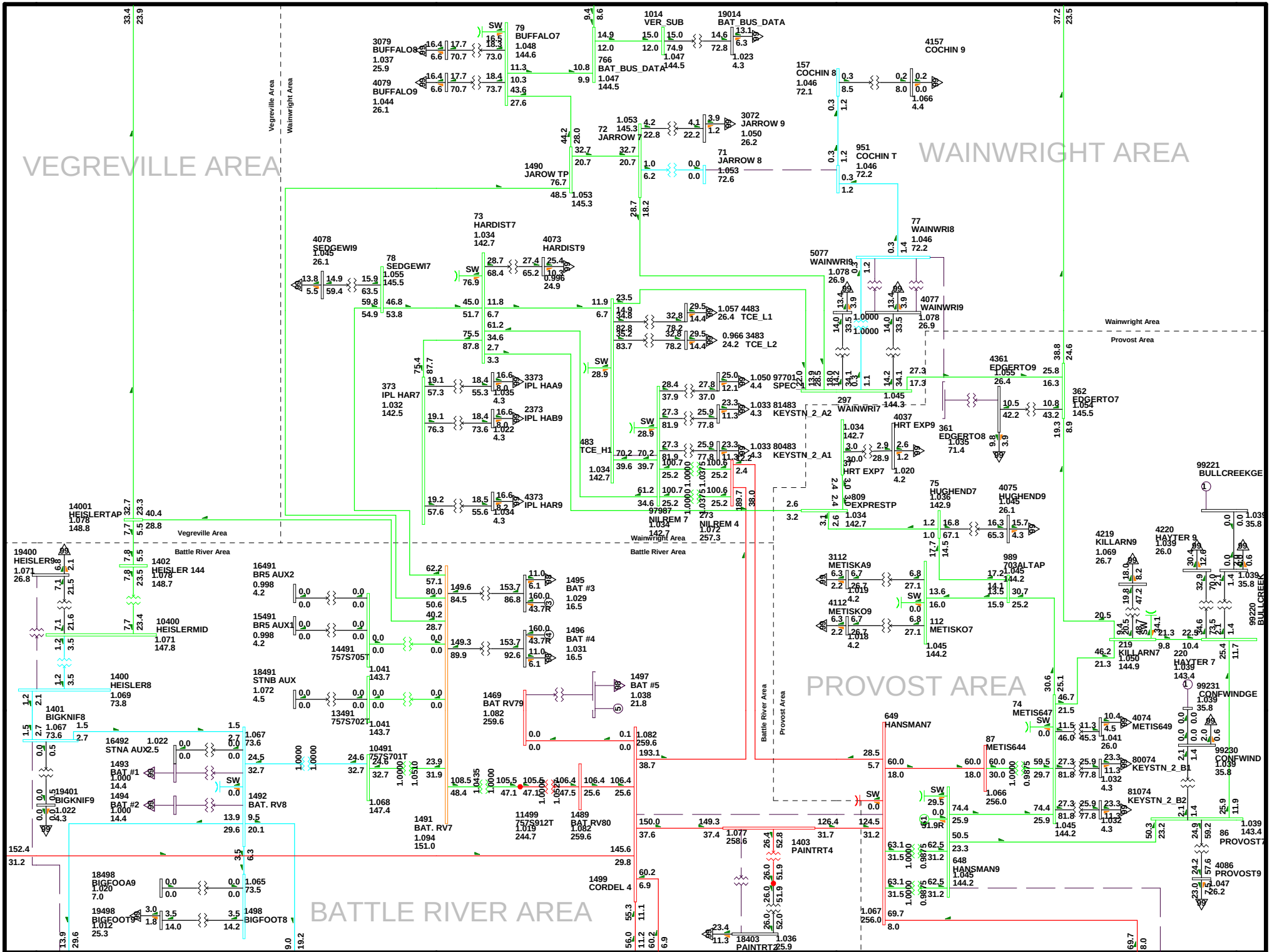
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
THU, APR 08 2010 14:46
D1-02

2017SP-Alt 1-3.a

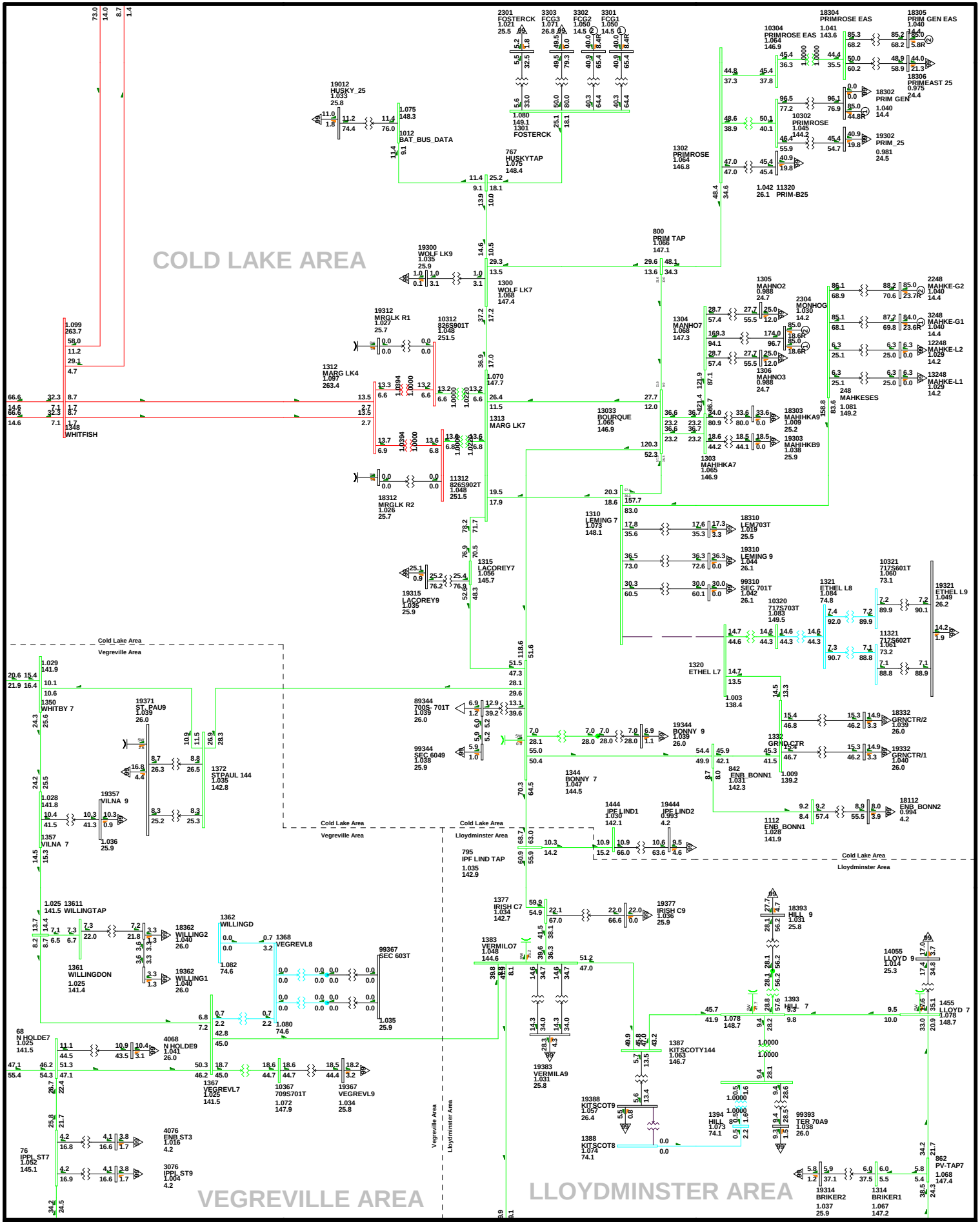
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
THU, APR 08 2010 14:46
D1-02

2017SP-Alt 1-3.b

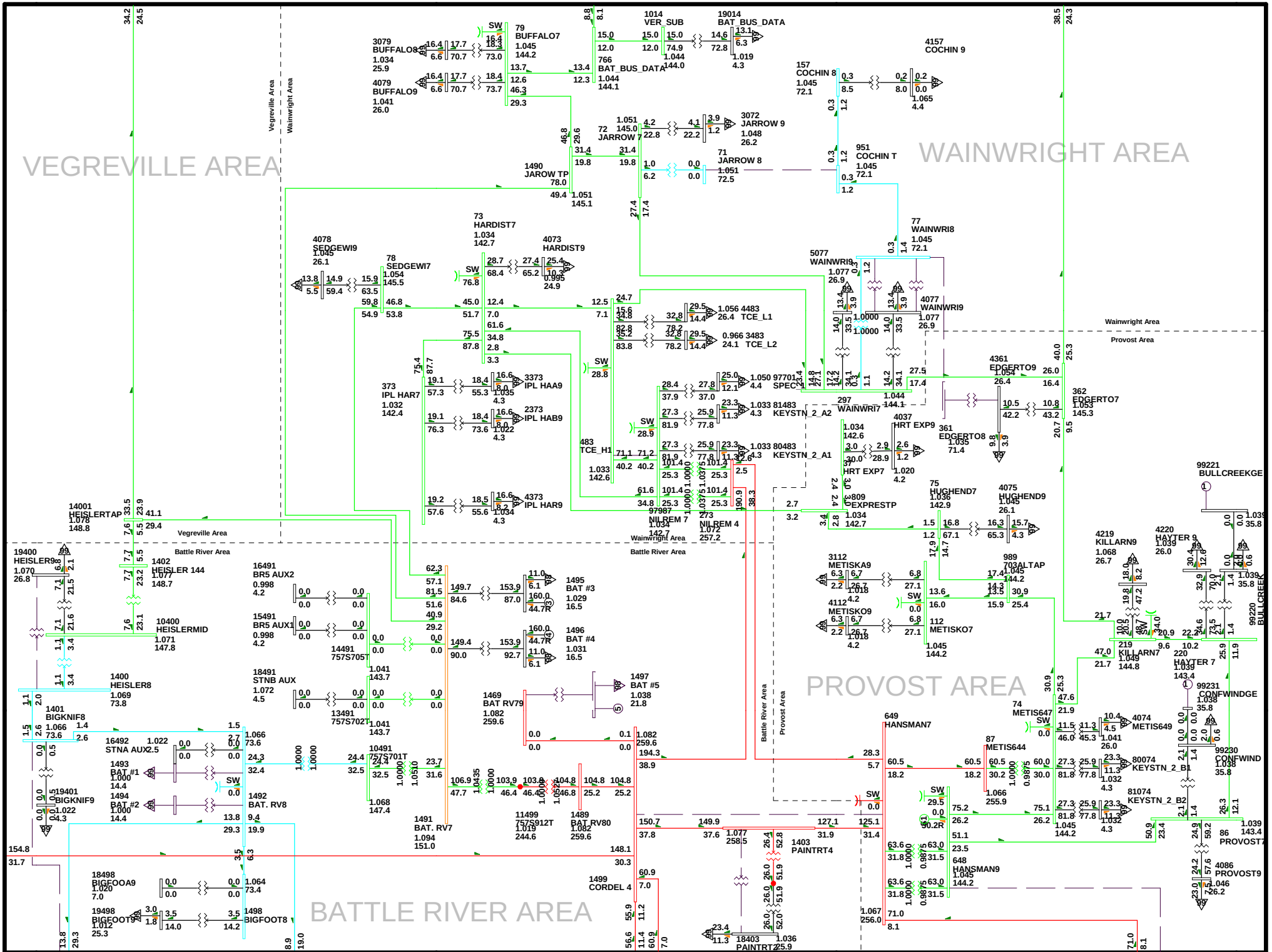
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
THU, APR 08 2010 14:46
D1-03

2017SP-Alt 1-4.a

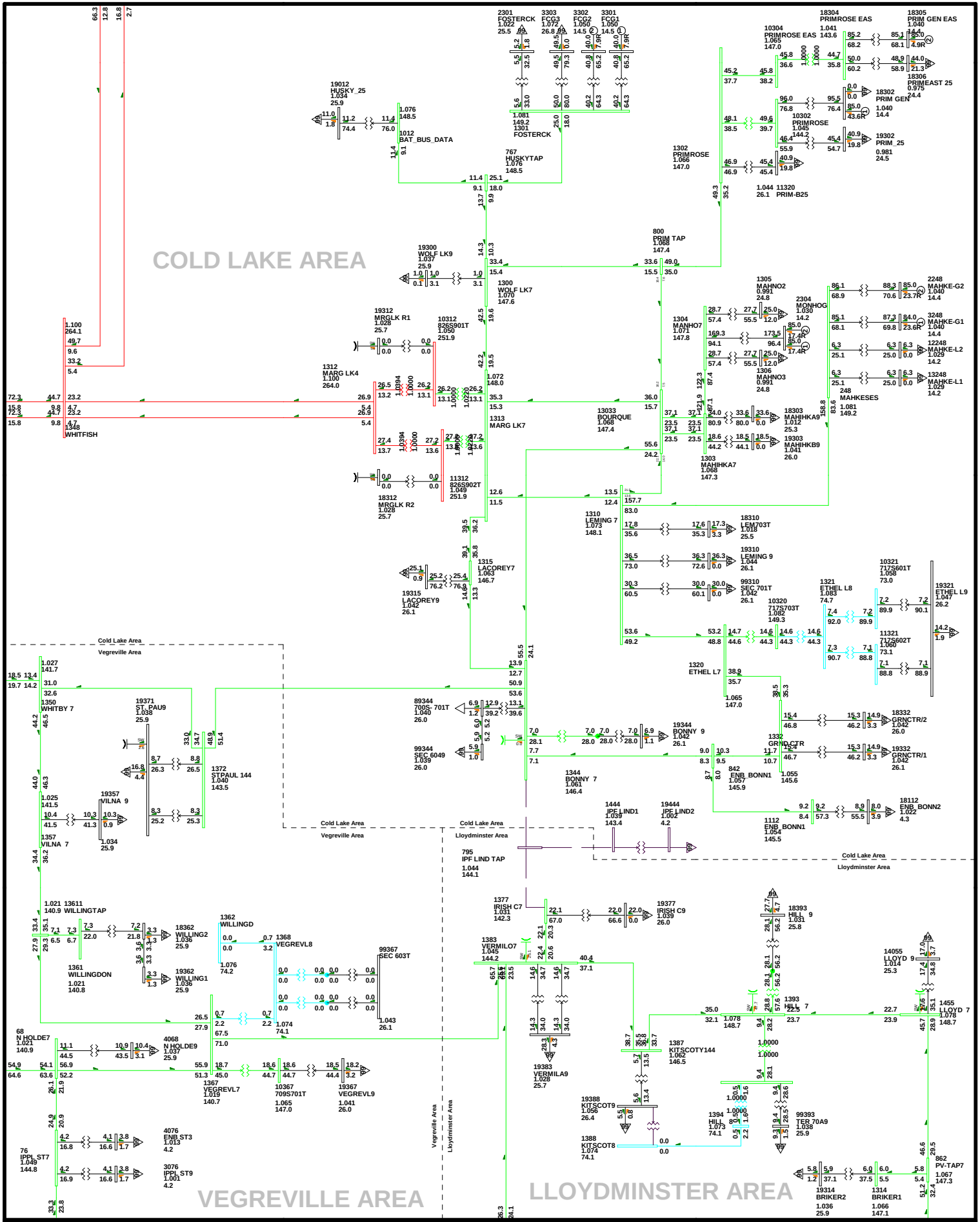
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
THU, APR 08 2010 14:46
D1-03

2017SP-Alt 1-4.b

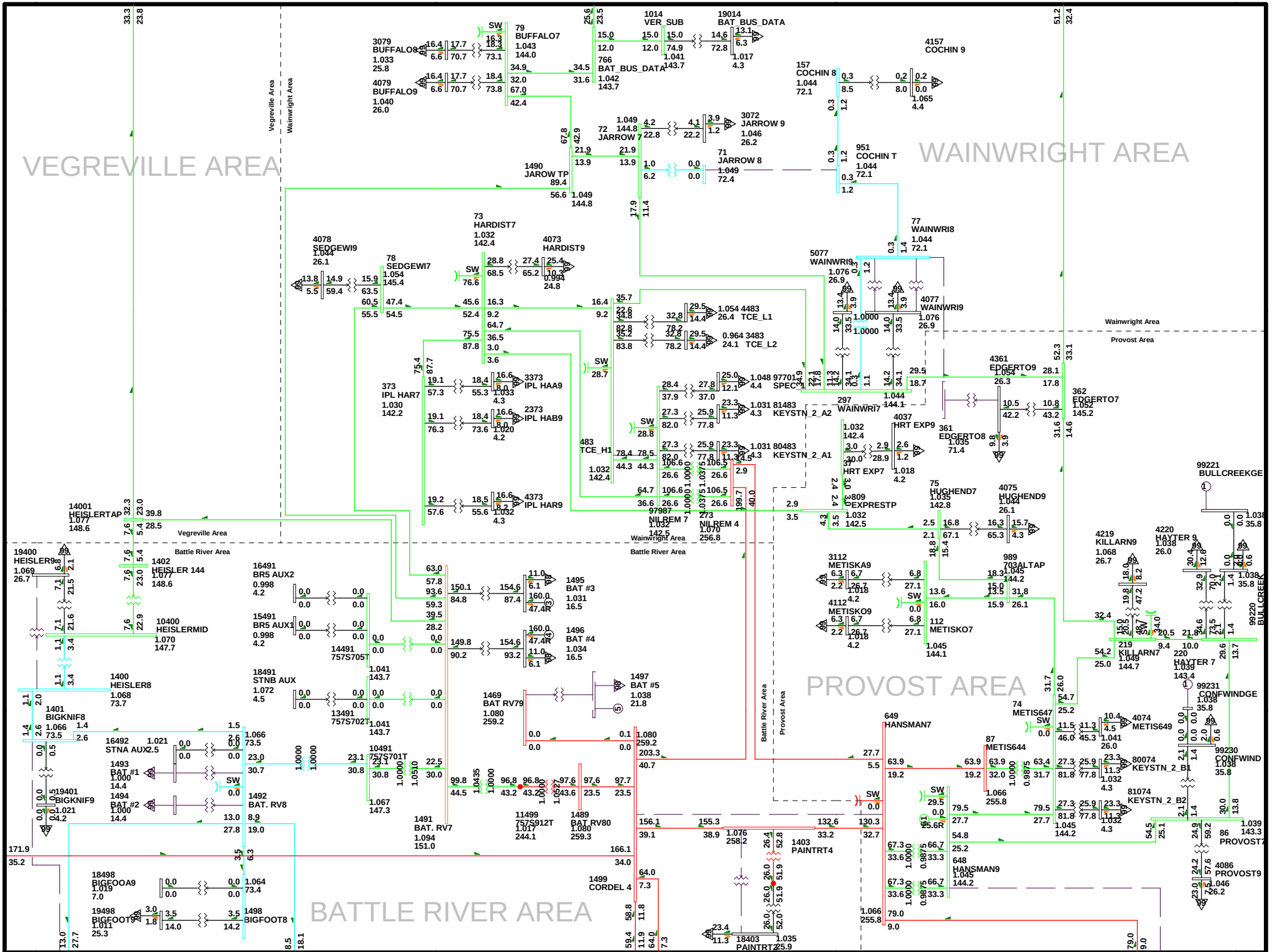
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
THU, APR 08 2010 14:46
D1-04

2017SP-Alt 1-5.a

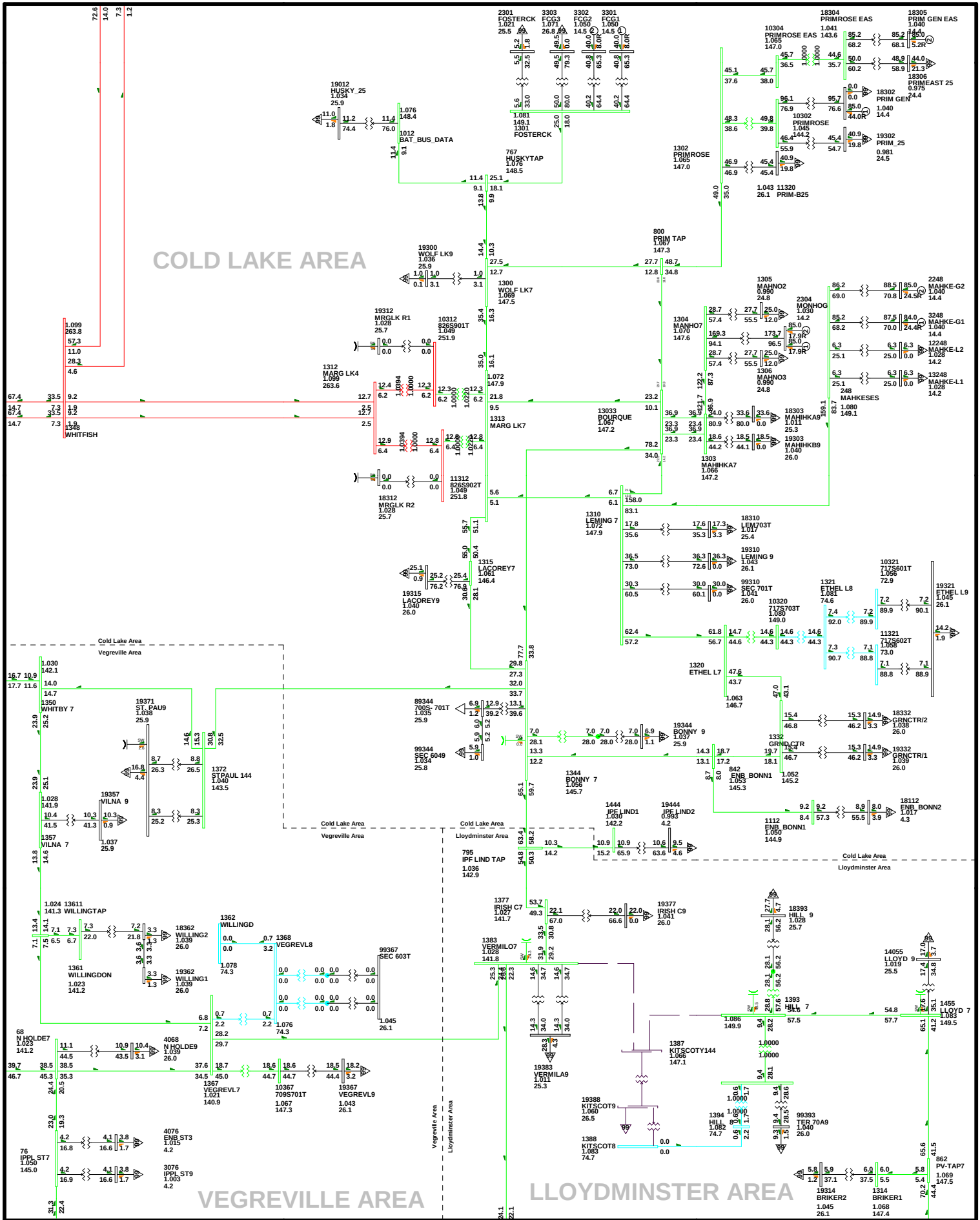
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
THU, APR 08 2010 14:46
D1-04

2017SP-Alt 1-5.b

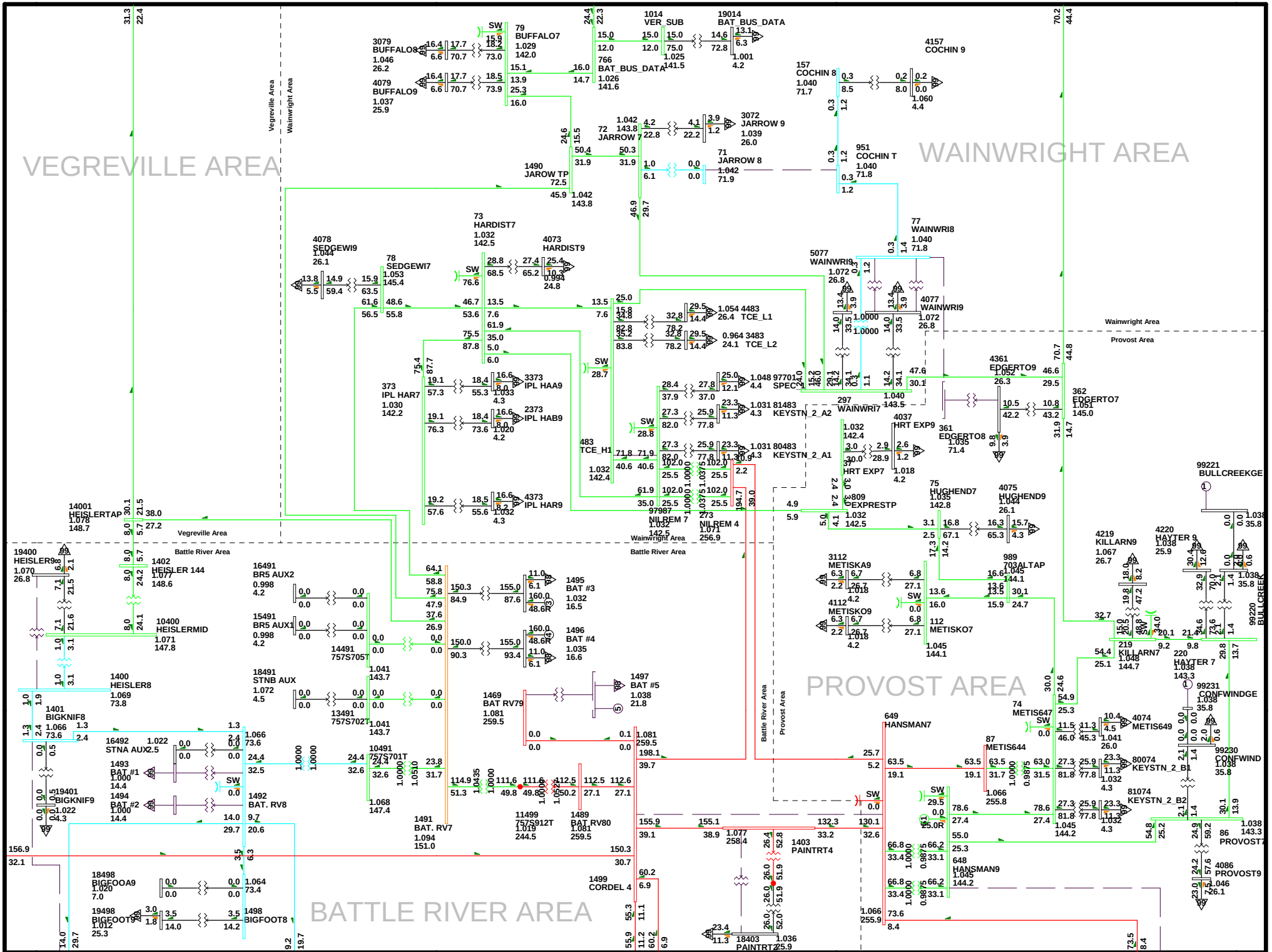
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 13:30

2017SP-Alt 1-6.a

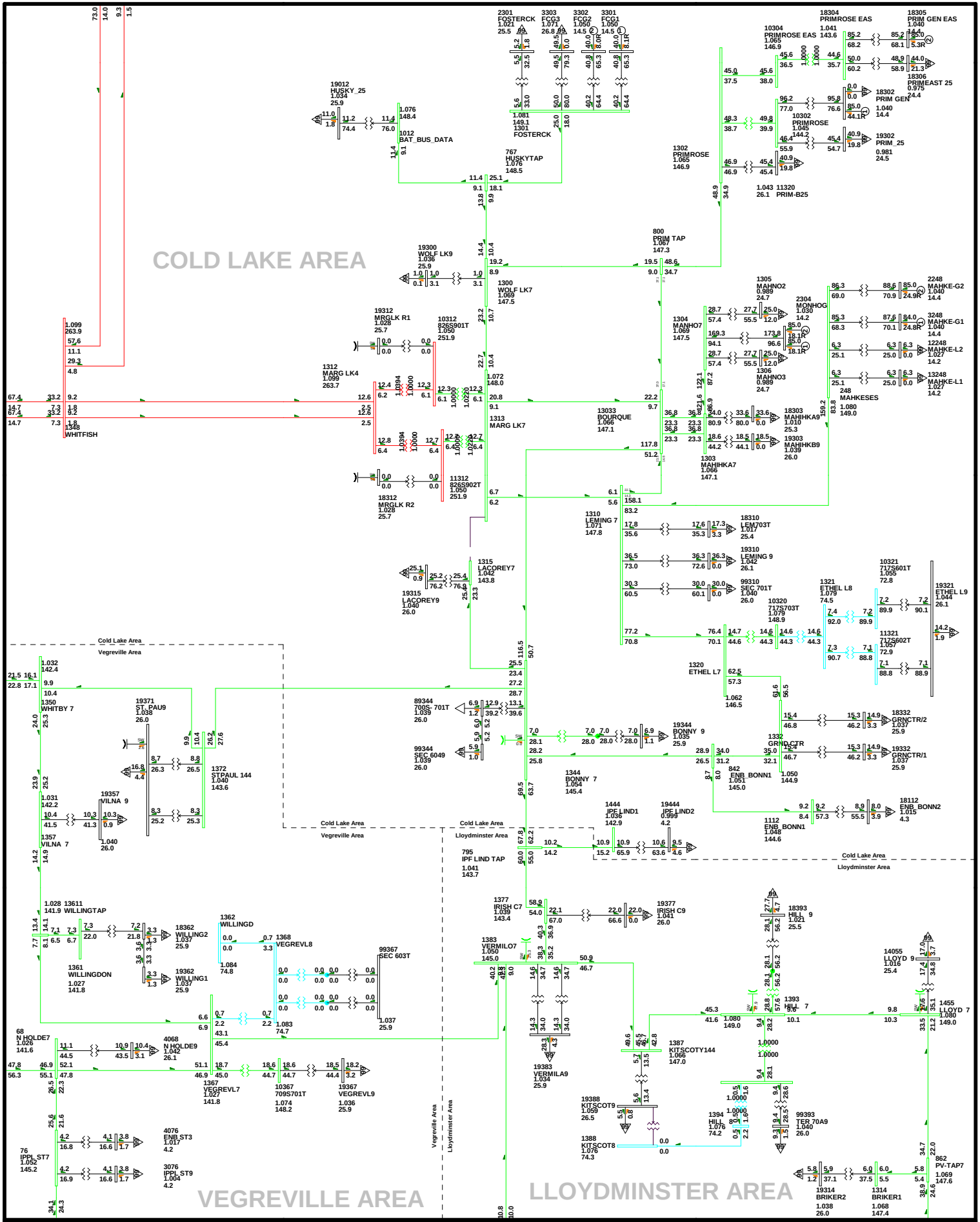
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 13:31

2017SP-Alt 1-6.b

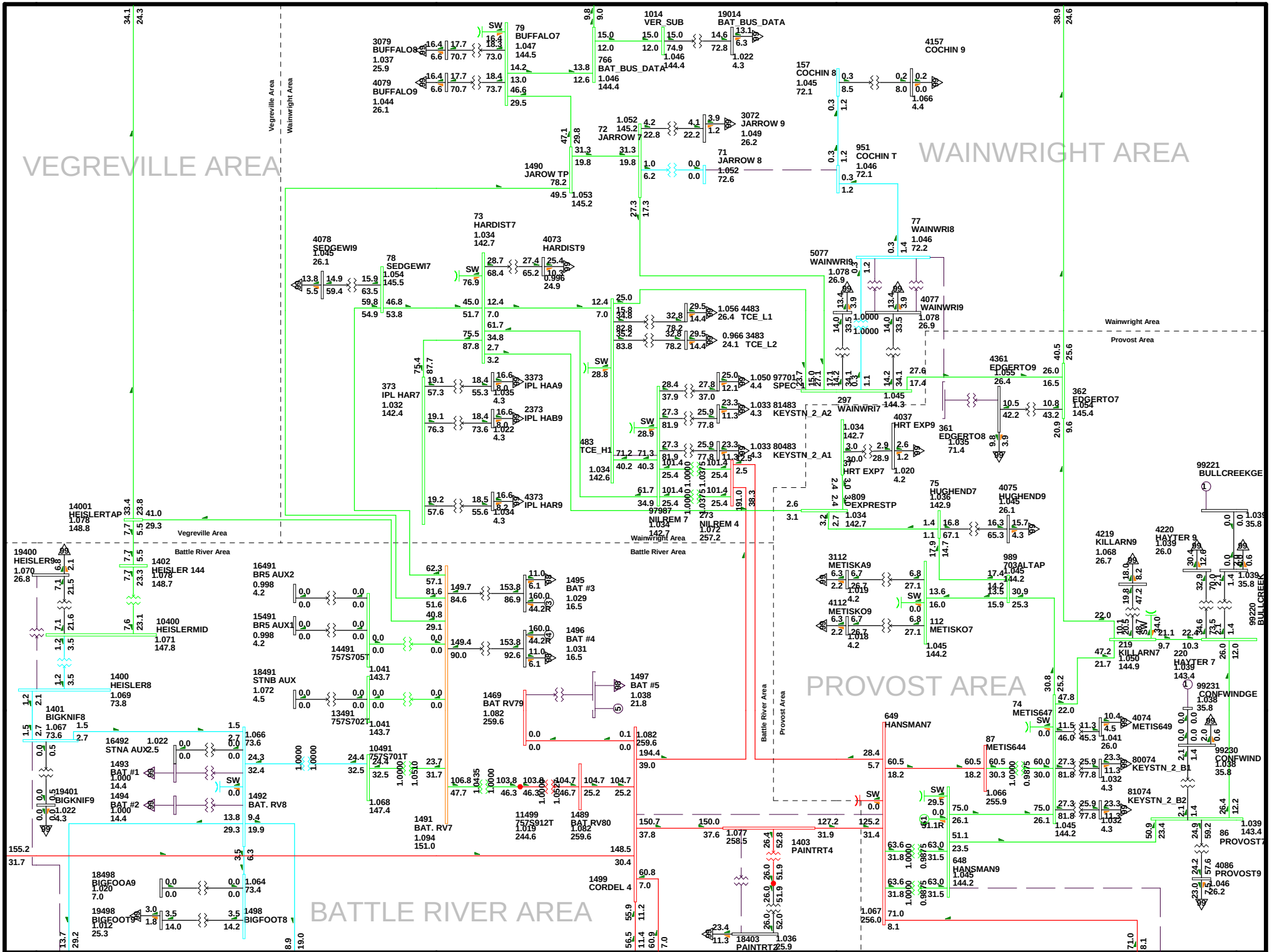
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
THU, APR 08 2010 14:47
D1-06

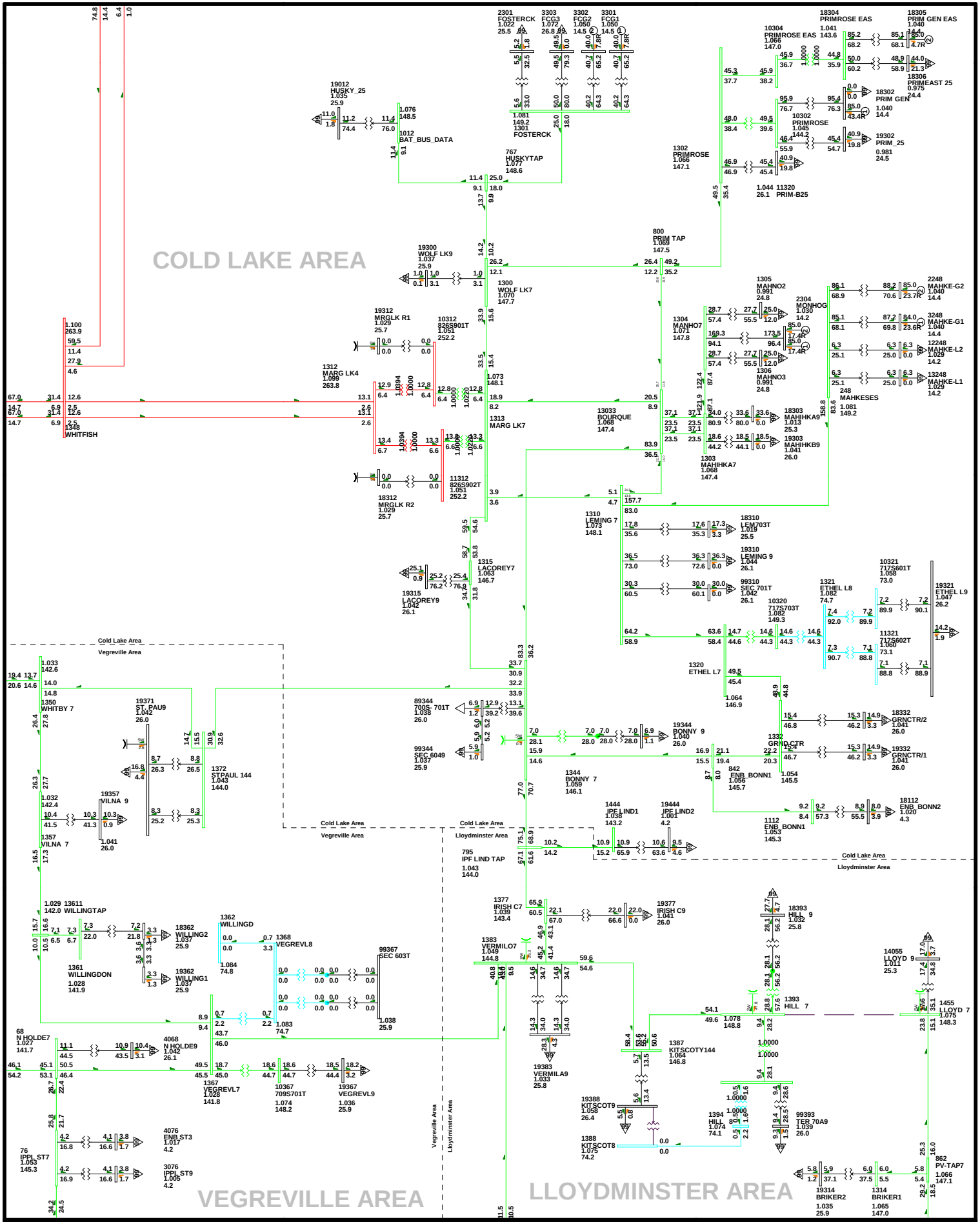
2017SP-Alt 1-7.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
THU, APR 08 2010 14:47
D1-06

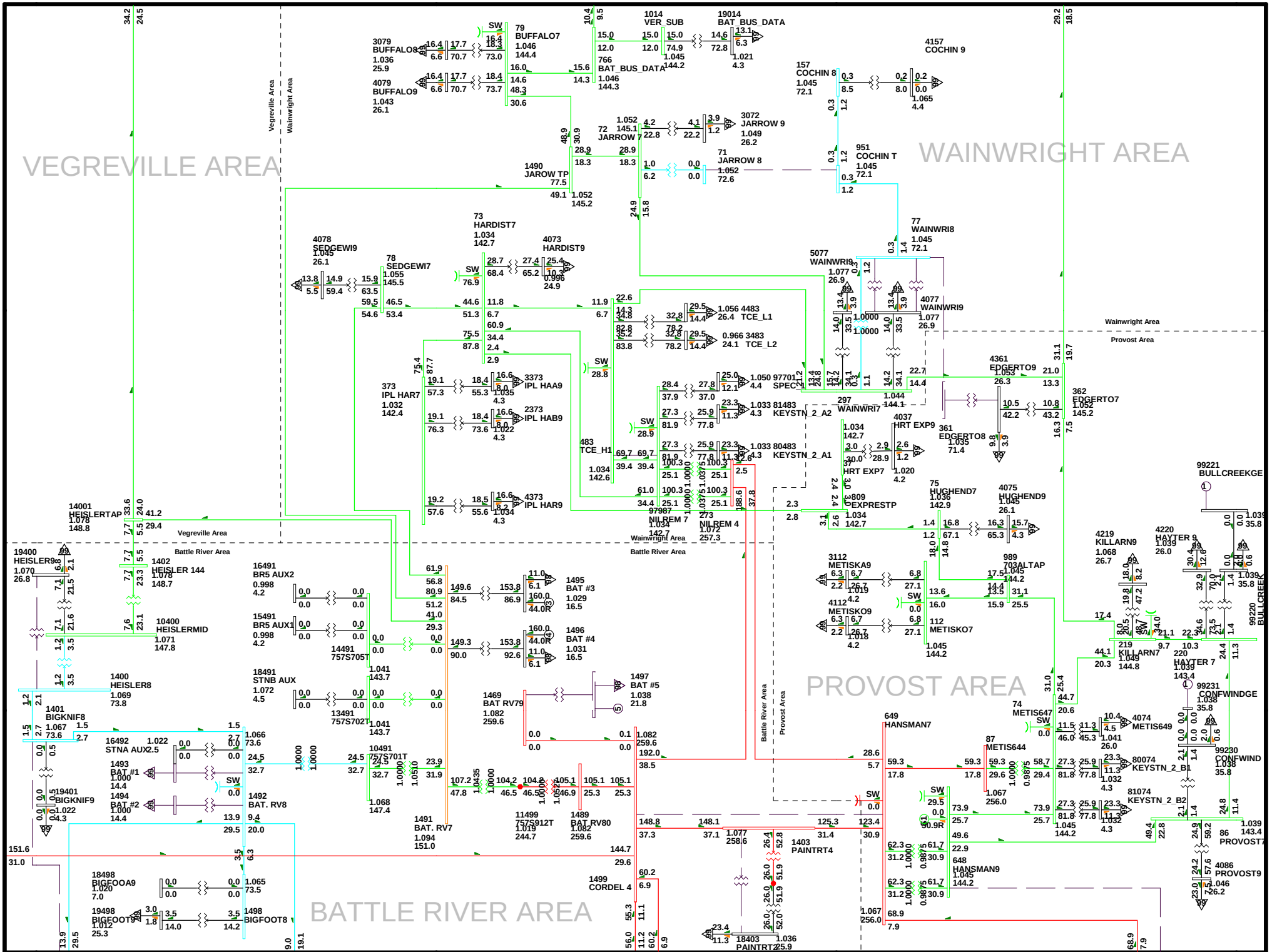
2017SP-Alt 1-7.b



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
THU, APR 08 2010 14:47
D1-07

2017SP-Alt 1-8.a

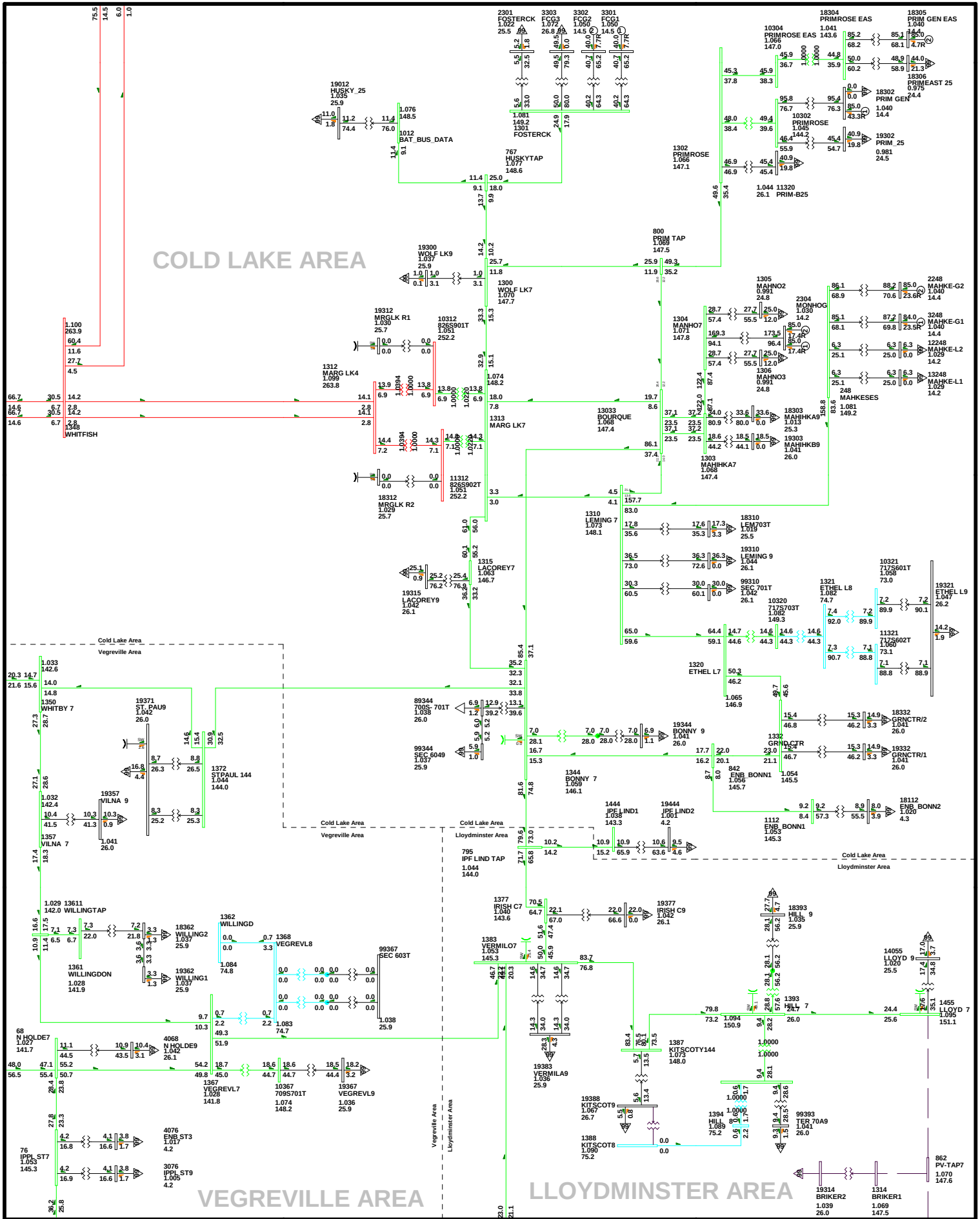
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
THU, APR 08 2010 14:47
D1-07

2017SP-Alt 1-8.b

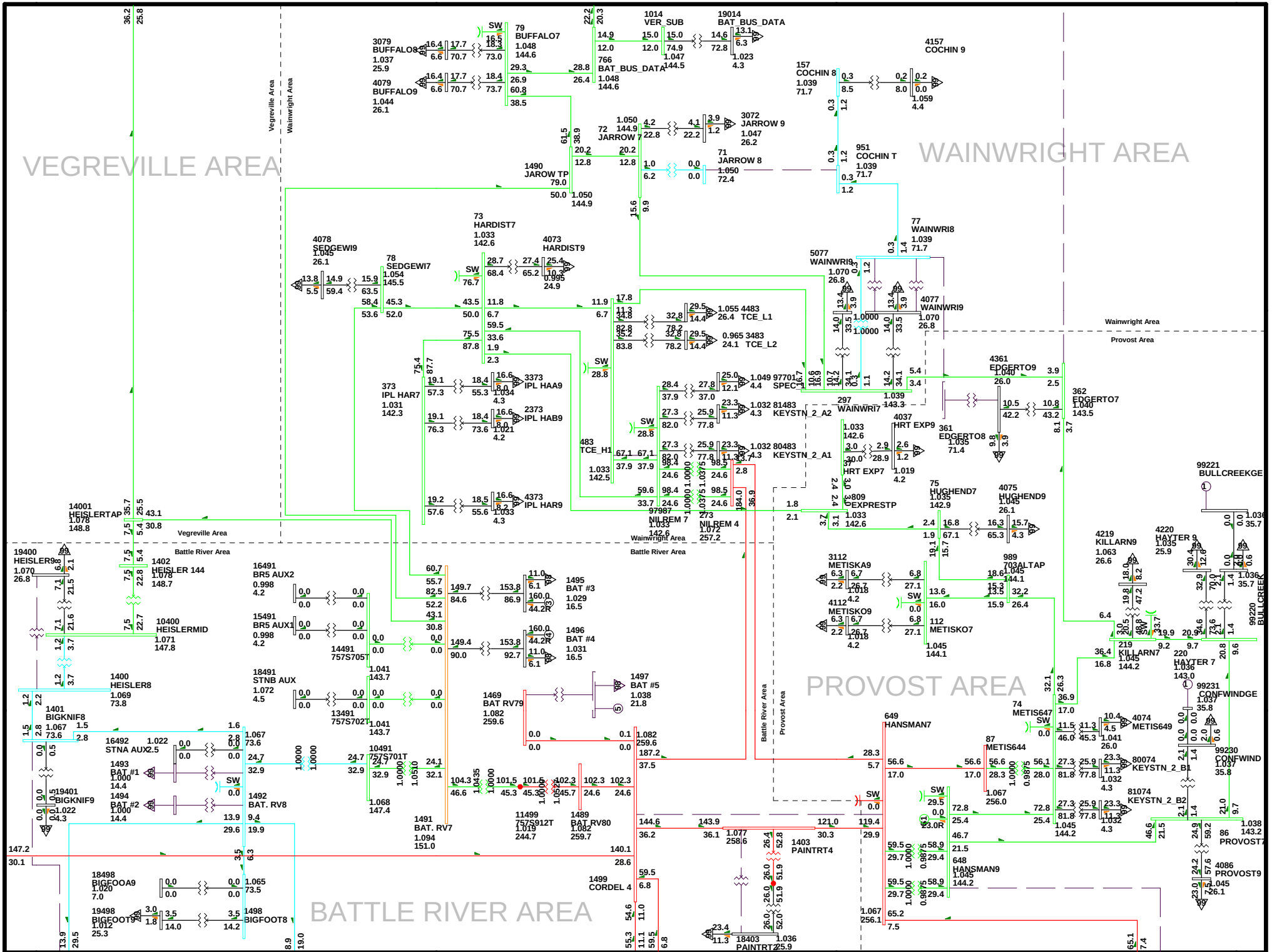
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
THU, APR 08 2010 14:47
D1-08

2017SP-Alt 1-9.a

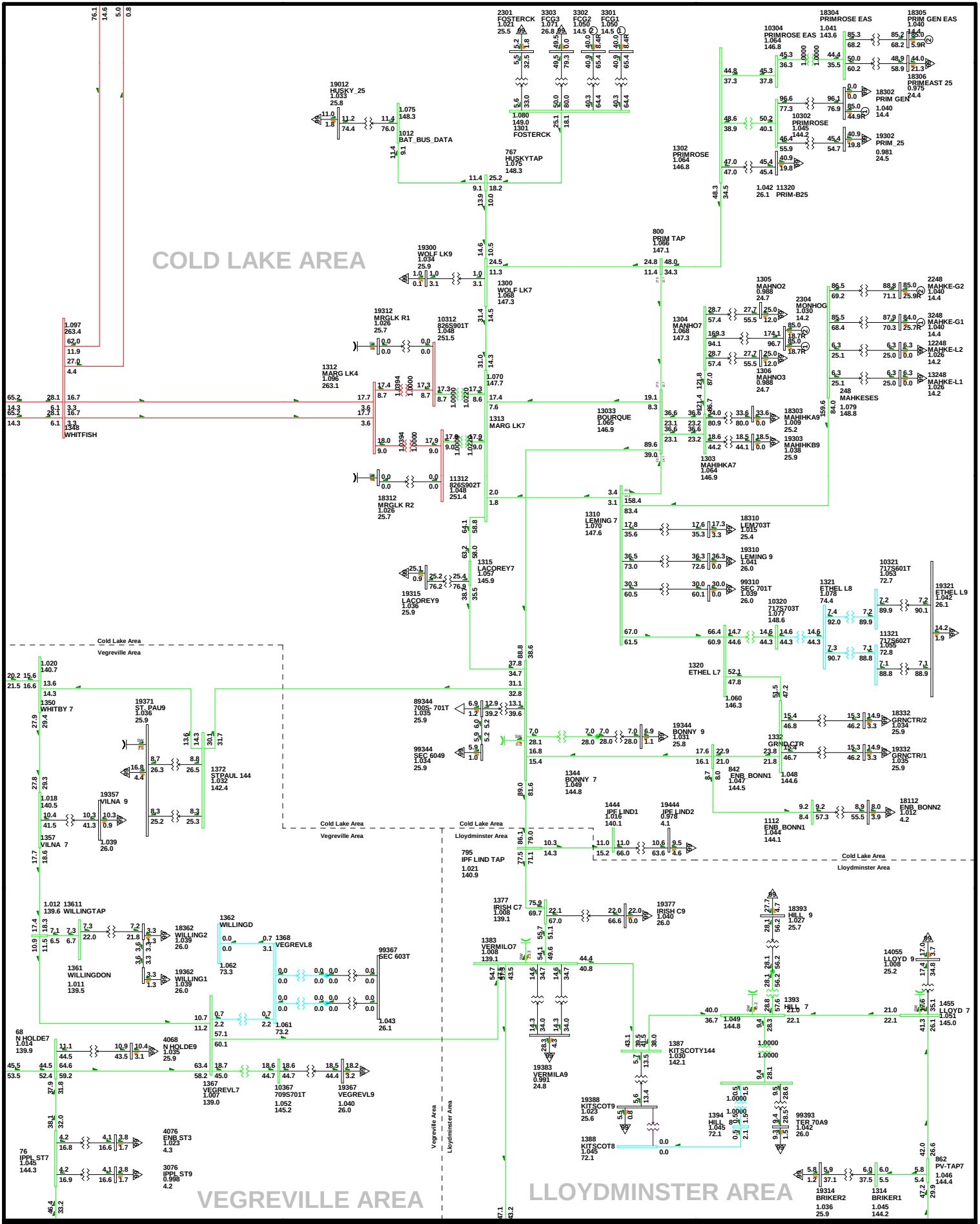
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
THU, APR 08 2010 14:47
D1-08

2017SP-Alt 1-9.b

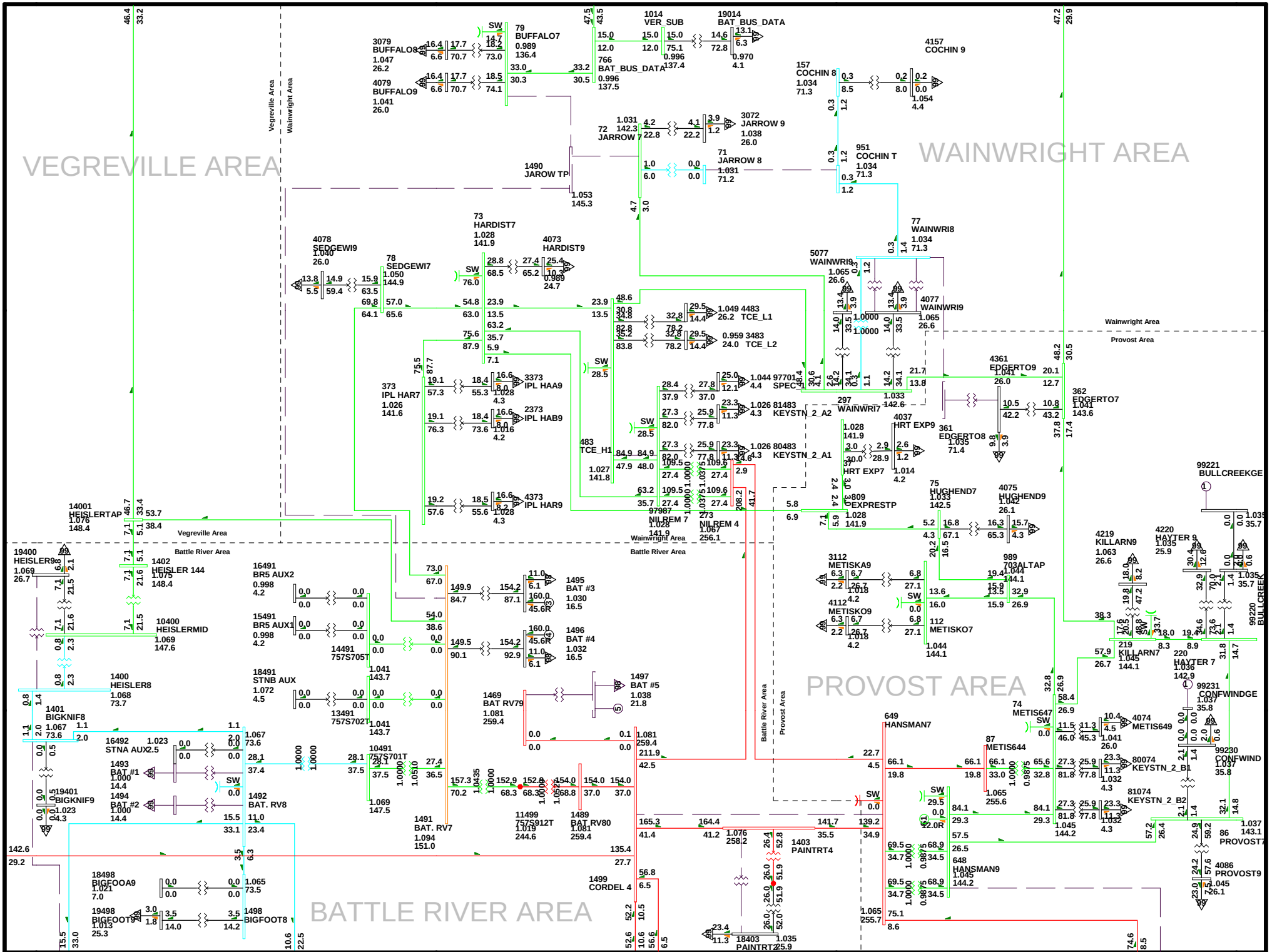
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
THU, APR 08 2010 14:47
D1-09

2017SP-Alt 1-10.a

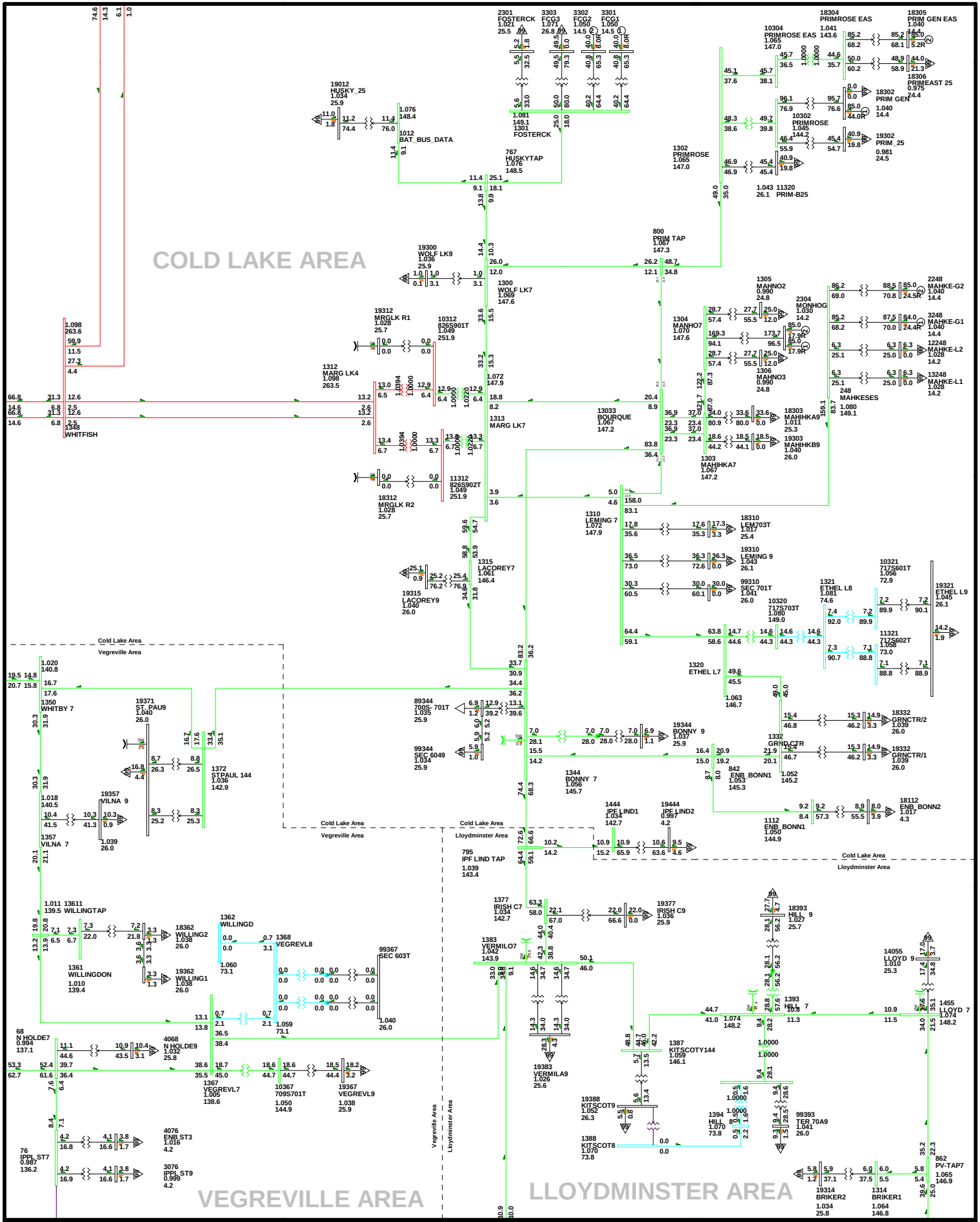
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
THU, APR 08 2010 14:47
D1-09

2017SP-Alt 1-10.b

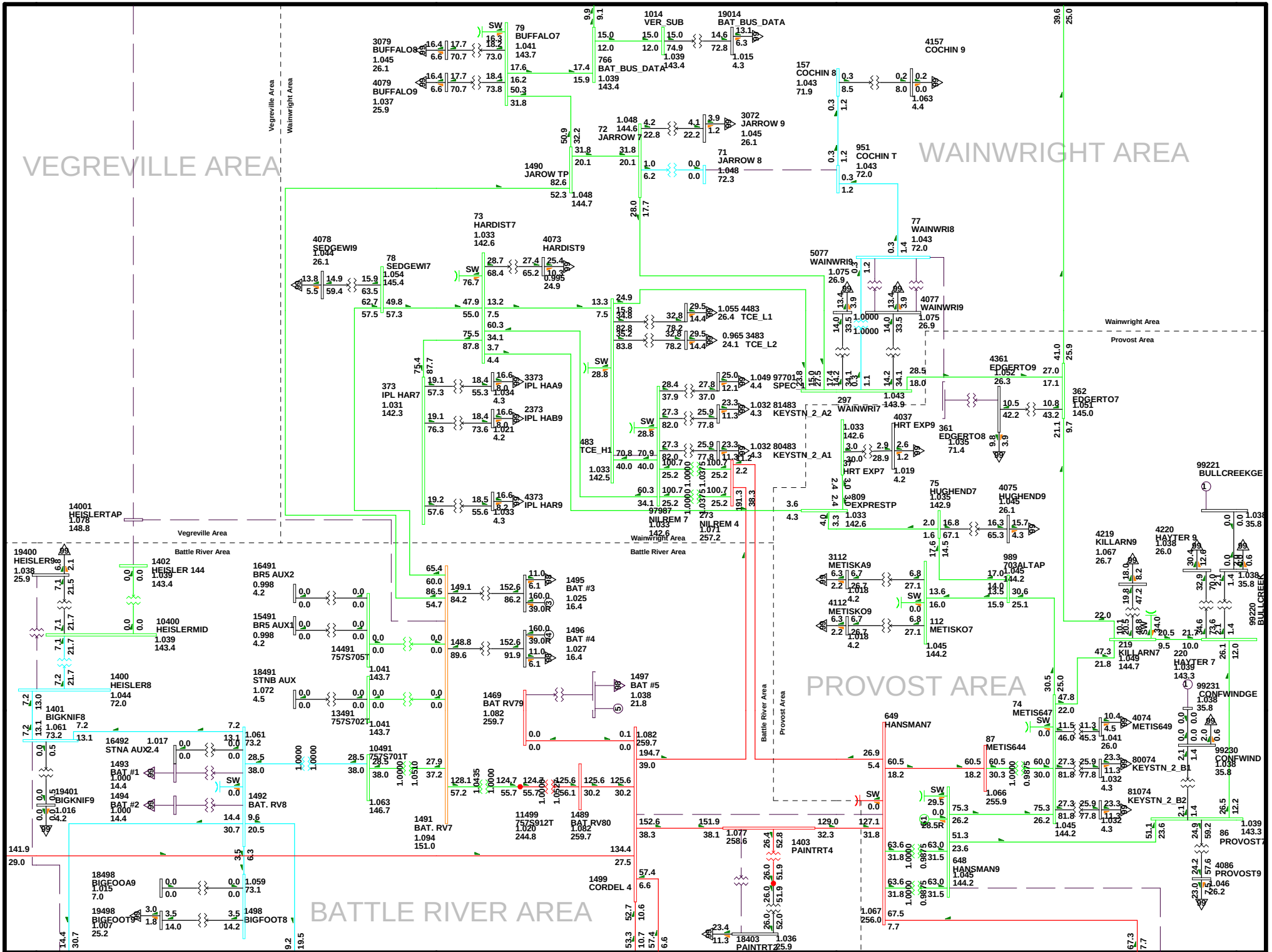
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
THU, APR 08 2010 14:47
D1-10

2017SP-Alt 1-11.a

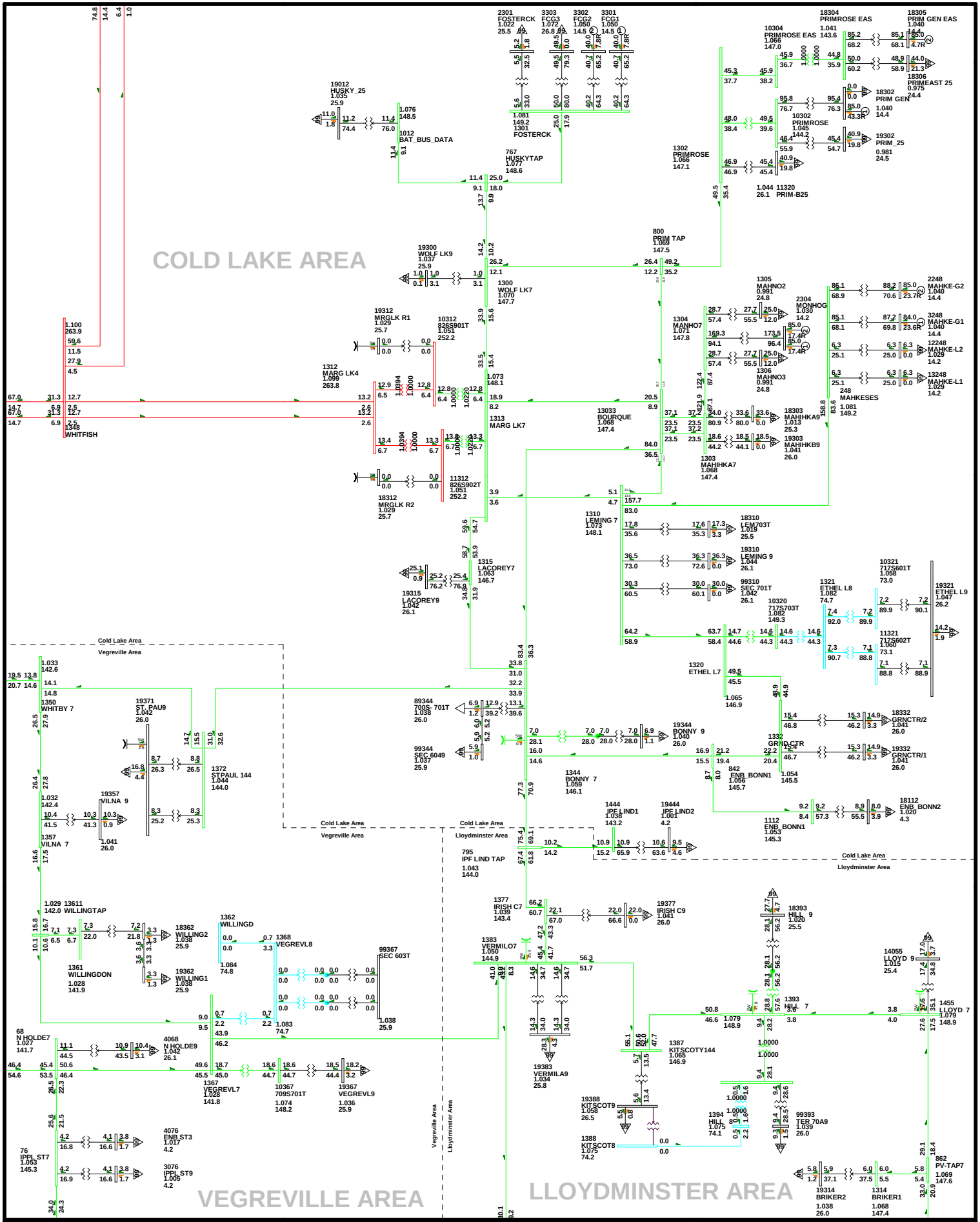
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
THU, APR 08 2010 14:47
D1-10

2017SP-Alt 1-11.b

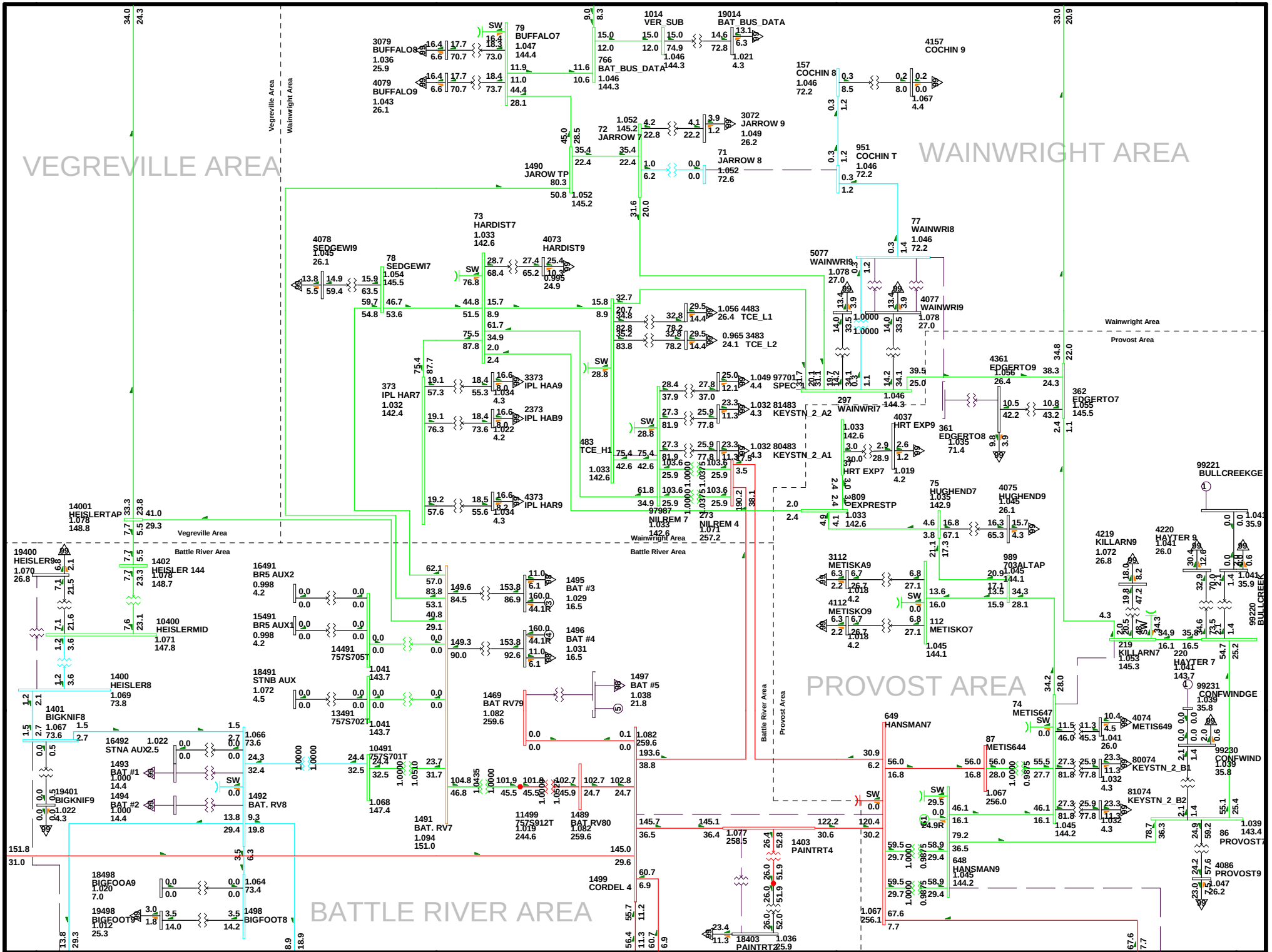
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
THU, APR 08 2010 14:47
D1-11

2017SP-Alt 1-12.a

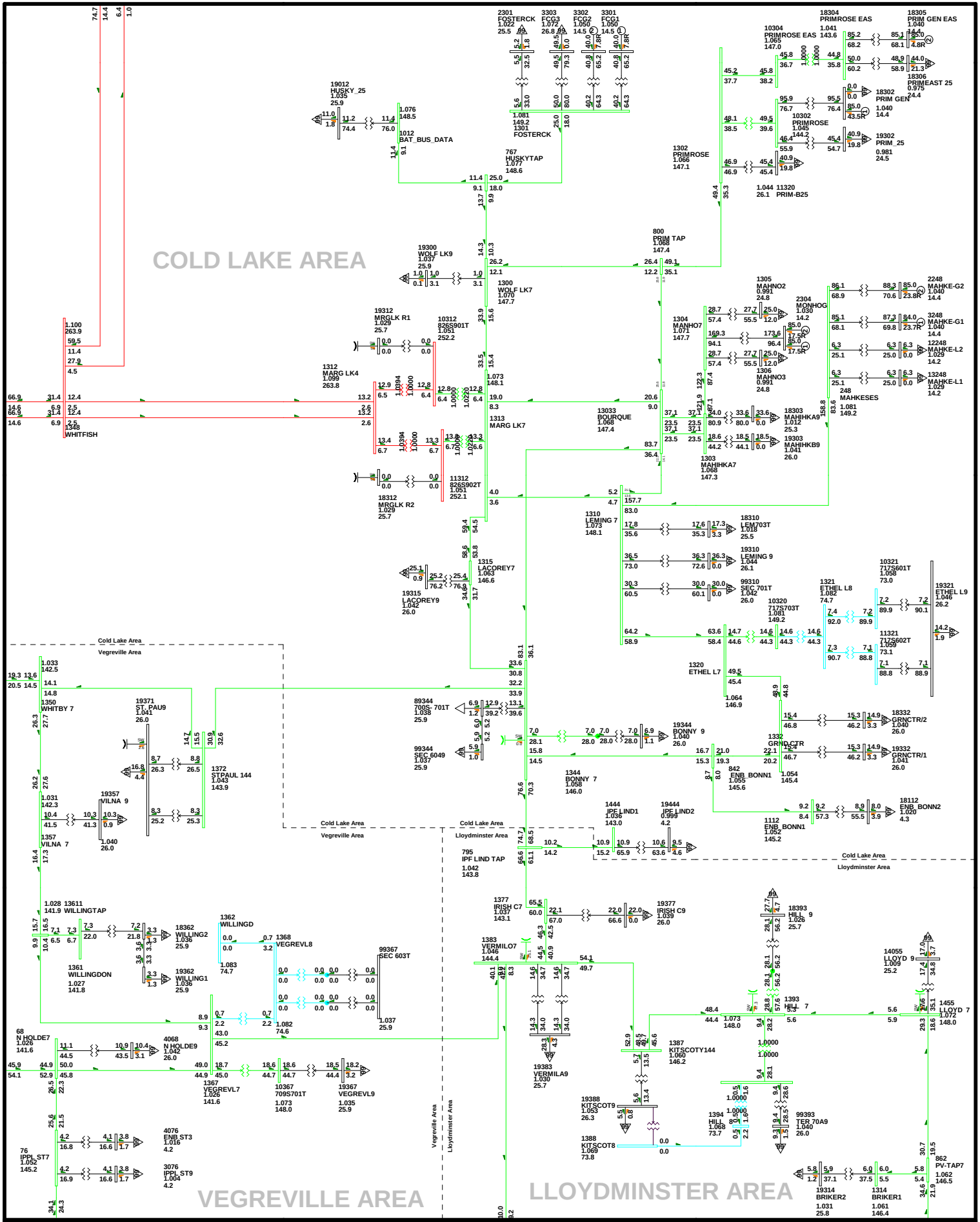
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
THU, APR 08 2010 14:47
D1-11

2017SP-Alt 1-12.b

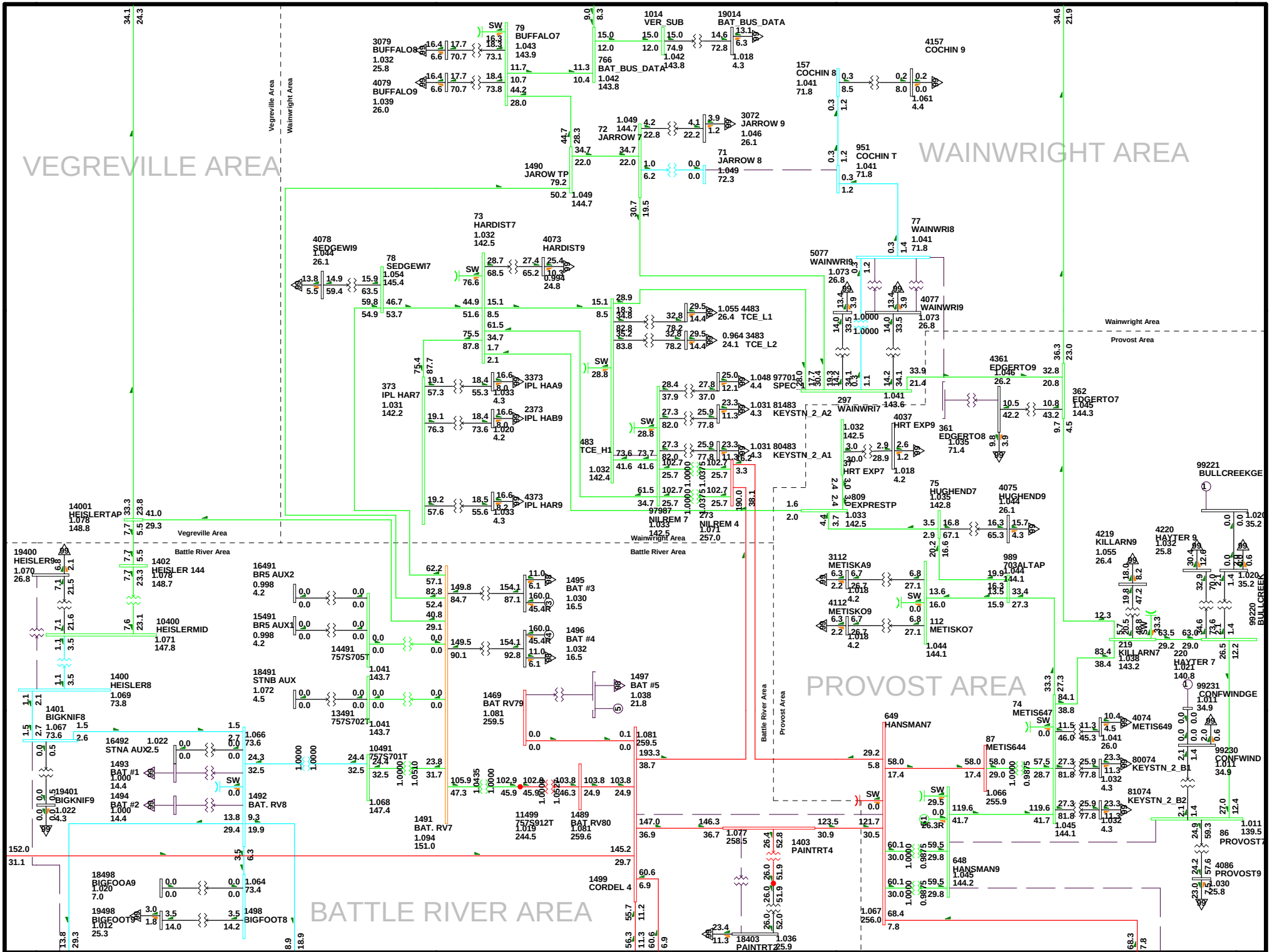
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
THU, APR 08 2010 14:47
D1-12

2017SP-Alt 1-13.a

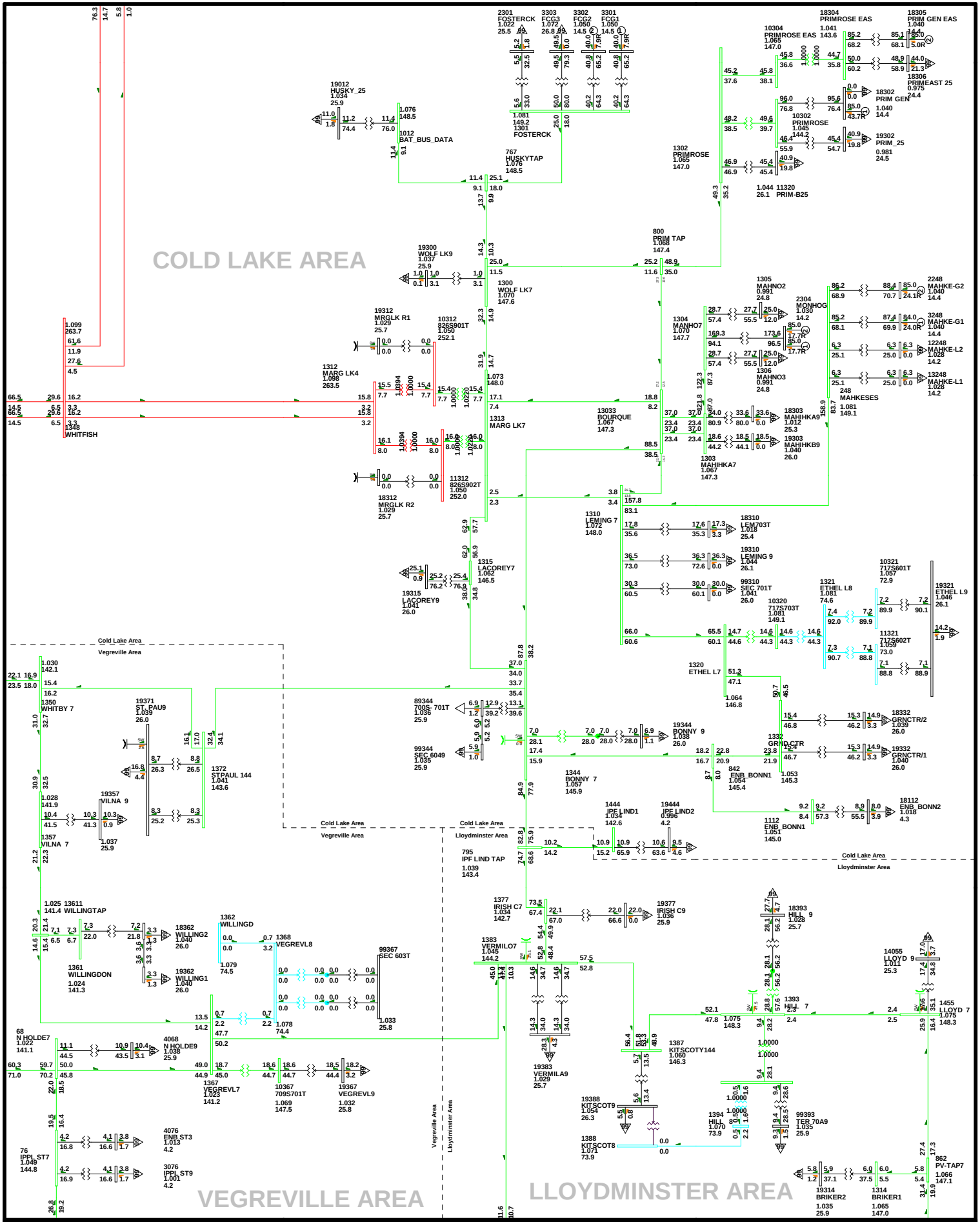
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
THU, APR 08 2010 14:47
D1-12

2017SP-Alt 1-13.b

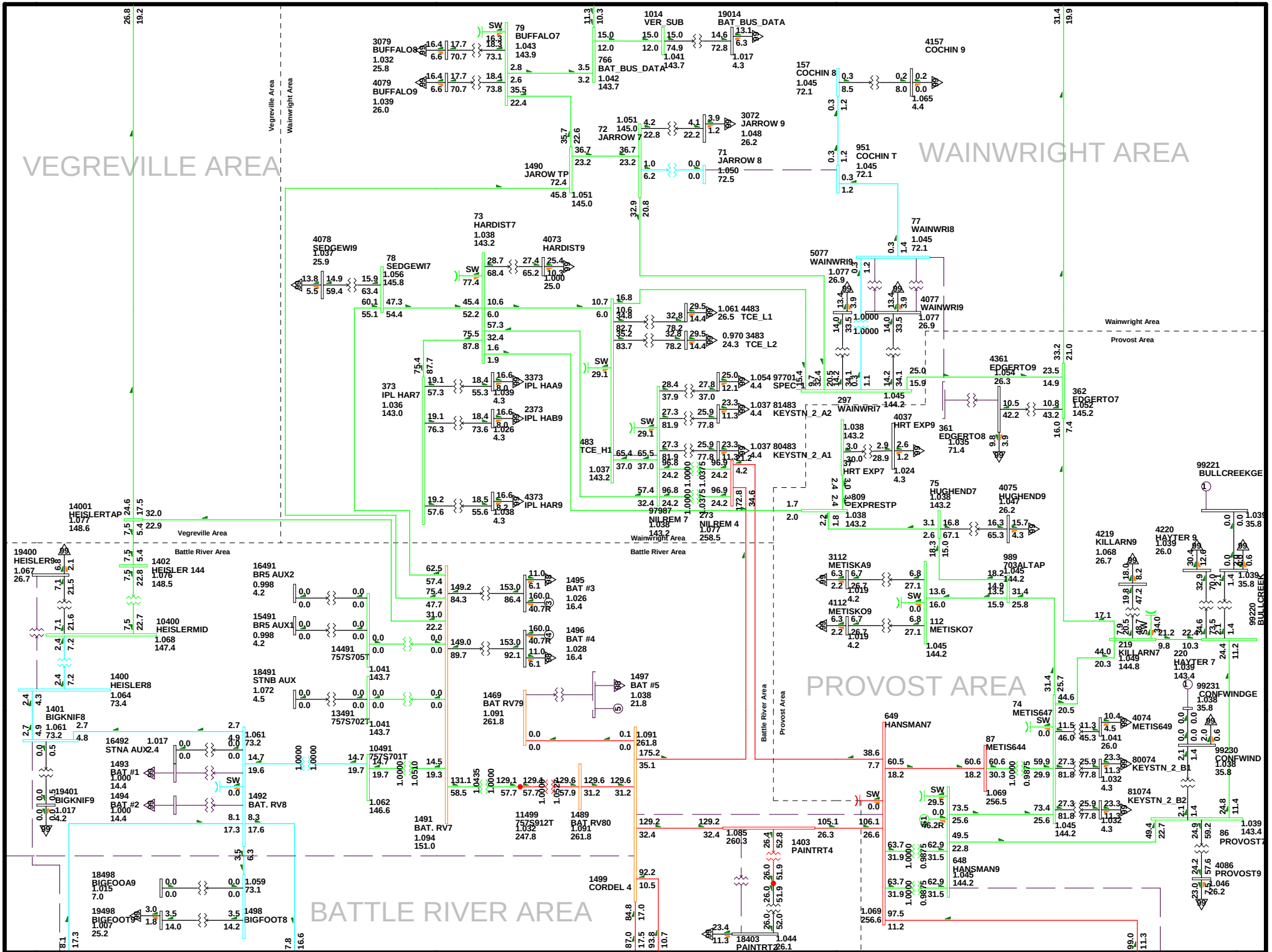
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

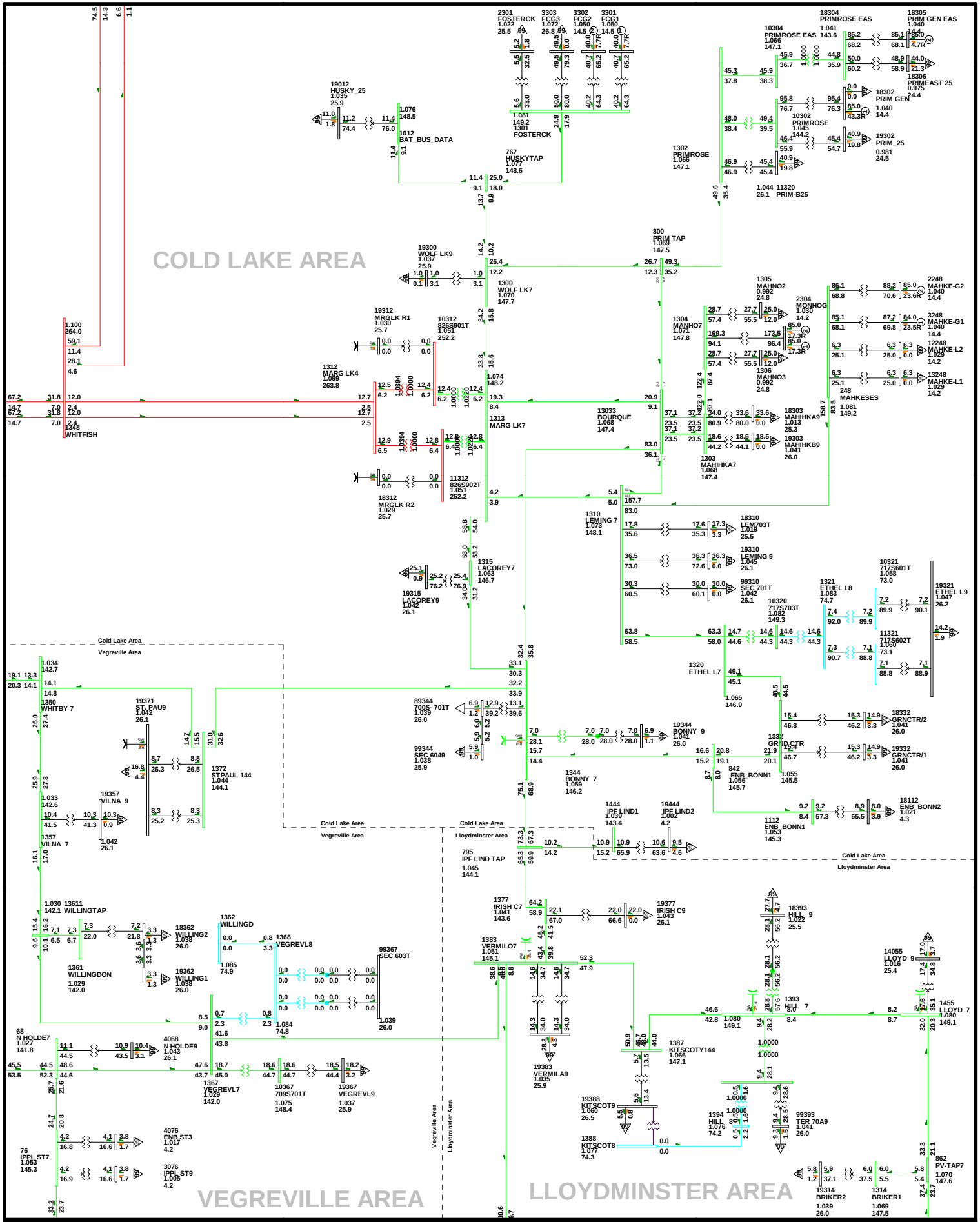


CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
THU, APR 08 2010 14:47
D1-14

2017SP-Alt 1-14.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

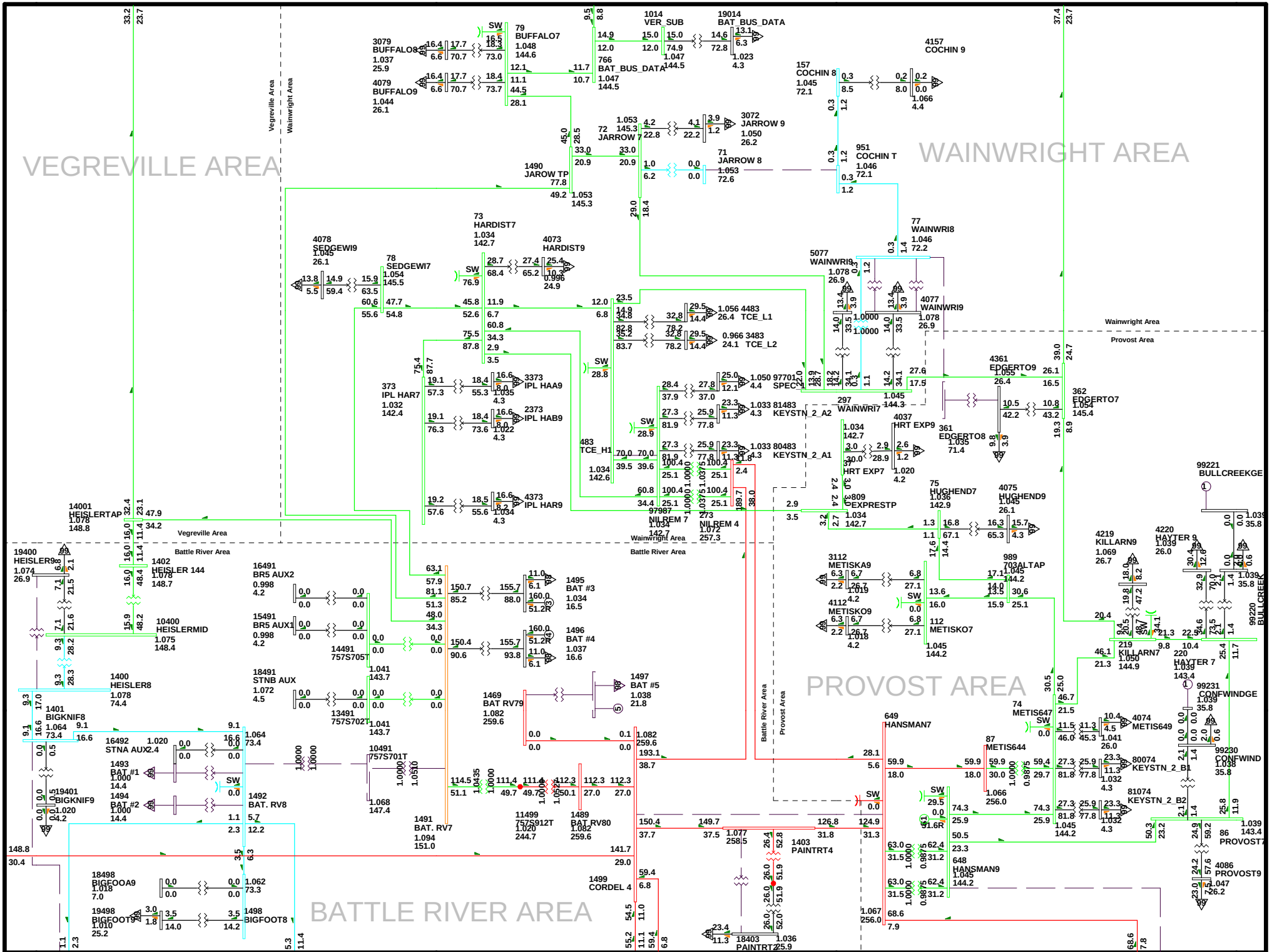

VEGREVILLE AREA
WAINWRIGHT AREA
PROVOST AREA
BATTLE RIVER AREA
Vegreville Area
Wainwright Area
Battle River Area
Provost Area
79 BUFFALO7 1.043 143.9
3079 BUFFALO8 1.032 25.8
4079 BUFFALO9 1.039 26.0
1014 VER_SUB
19014 BAT_BUS_DATA
766 BAT_BUS_DATA 1.042 143.7
4157 COCHIN 9
157 COCHIN 8 1.045 72.1
951 COCHIN T 1.045 72.1
3072 JARROW 9 1.048 26.2
72 JARROW 7 1.051 145.0
71 JARROW 8 1.050 72.5
1490 JAROW TP 72.4
77 WAINWRI8 1.045 72.1
5077 WAINWRI9 1.077 26.9
4077 WAINWRI9 1.077 26.9
297 WAINWRI7
4078 SEDGEWI9 1.037 25.9
78 SEDGEWI7 1.056 145.8
73 HARDIST7 1.038 143.2
4073 HARDIST9 1.000 25.0
373 IPL HAR7 1.036 143.0
3373 IPL HAA9
2373 IPL HAB9
4373 IPL HAR9
483 TCE_H1 1.037 143.2
1.061 4483 26.5 TCE_L1
0.970 3483 24.3 TCE_L2
1.054 97701 SPEC_1
1.037 81483 KEYSTN_2_A2
1.037 80483 KEYSTN_2_A1
97987 NIL REM 7 1.038 143.2
273 NIL REM 4 1.077 258.5
4037 HRT EXP9
HRT EXP7 1.038 143.2
1.024 4.3
4361 EDGERTO9 1.054 26.3
362 EDGERTO7 1.052 145.2
361 EDGERTO8 1.035 71.4
75 HUGHEND7 1.038 143.2
4075 HUGHEND9 1.047 26.2
809 EXPRESTP 1.038 143.2
3112 METISKA9 1.019 4.2
4112 METISKO9 1.019 4.2
989 703ALTAP 1.045 144.2
112 METISKO7 1.045 144.2
14001 HEISLERTAP 1.077 148.6
19400 HEISLER9 1.067 26.7
1402 HEISLER 144 1.076 148.5
10400 HEISLERMID 1.068 147.4
1400 HEISLER8 1.064 73.4
1401 BIGKNIF8 1.061 73.2
19401 BIGKNIF9 1.017 4.2
16491 BR5 AUX2 0.998 4.2
15491 BR5 AUX1 0.998 4.2
14491 757S705T
18491 STNB AUX 1.072 4.5
13491 757S702T
16492 STNA AUX 1.017 2.4
10491 757S701T
1493 BAT #1 1.000 14.4
1494 BAT #2 1.000 14.4
1492 BAT. RV8
1491 BAT. RV7 1.094 151.0
1469 BAT RV79 1.091 261.8
1495 BAT #3 1.026 16.4
1496 BAT #4 1.028 16.4
1497 BAT #5 1.038 21.8
11499 757S912T 1.032 247.8
1489 BAT RV80 1.091 261.8
1499 CORDEL 4
1403 PAINTRT4
18403 PAINTRT2 1.044 26.1
18498 BIGEOOA9 1.015 7.0
19498 BIGFOOT9 1.007 25.2
1498 BIGFOOT8 1.059 73.1
649 HANSMAN7
648 HANSMAN9 1.045 144.2
74 METIS647
87 METIS644 1.069 256.5
4074 METIS649 1.041 26.0
80074 KEYSTN_2_B1 1.032 4.3
81074 KEYSTN_2_B2 1.032 4.3
99221 BULLCREEKGE
99220 BULLCREEK
4219 KILLARN9 1.068 26.7
219 KILLARN7 1.049 144.8
4220 HAYTER 9 1.039 26.0
220 HAYTER 7 1.039 143.4
99231 CONFWINDGE 1.038 35.8
99230 CONFWIND 1.038 35.8
86 PROVOST7 1.039 143.4
4086 PROVOST9 1.046 26.2
CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
THU, APR 08 2010 14:47
D1-14
2017SP-Alt 1-14.b
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
THU, APR 08 2010 14:48
D1-15

2017SP-Alt 1-15.a

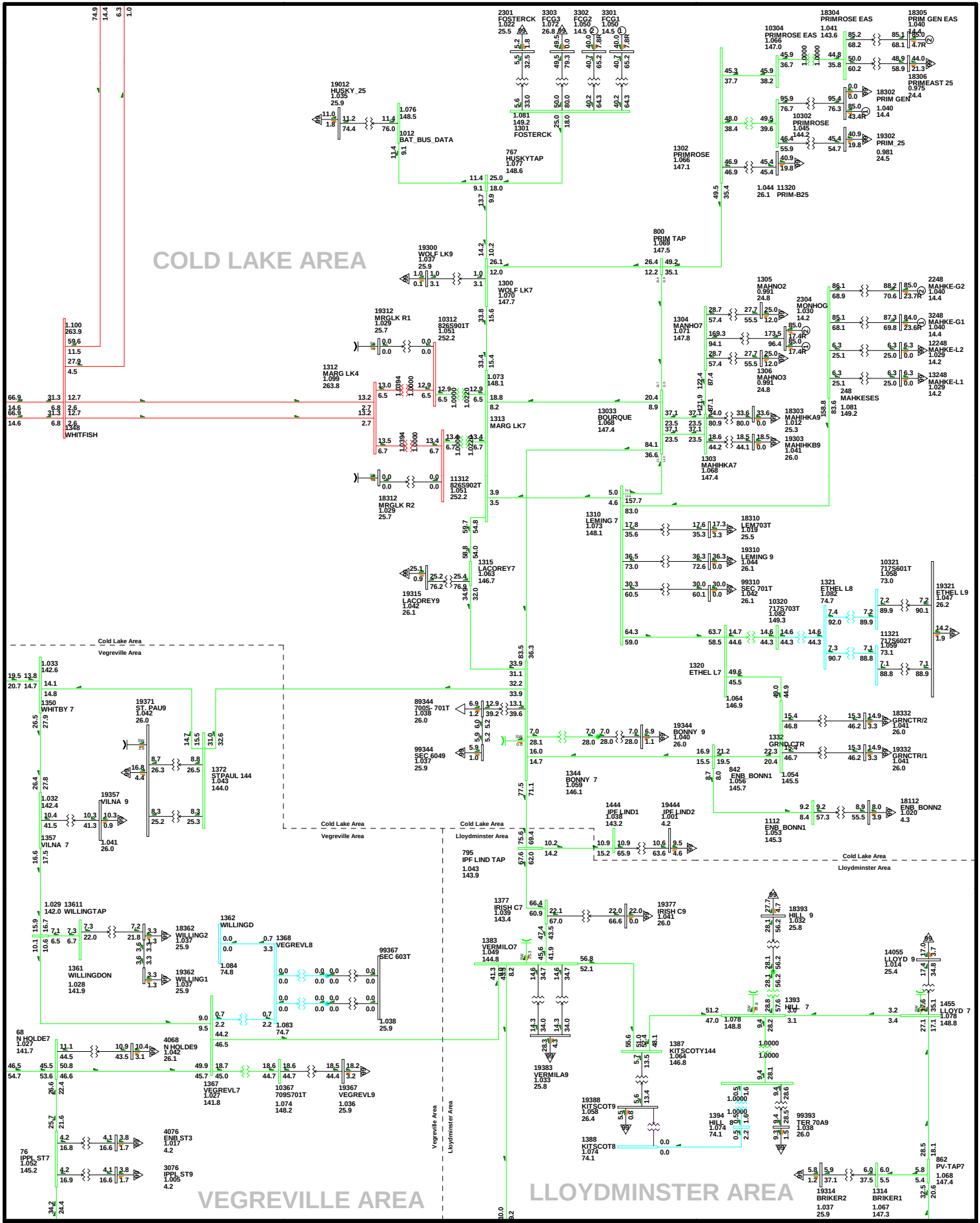
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
THU, APR 08 2010 14:48
D1-15

2017SP-Alt 1-15.b

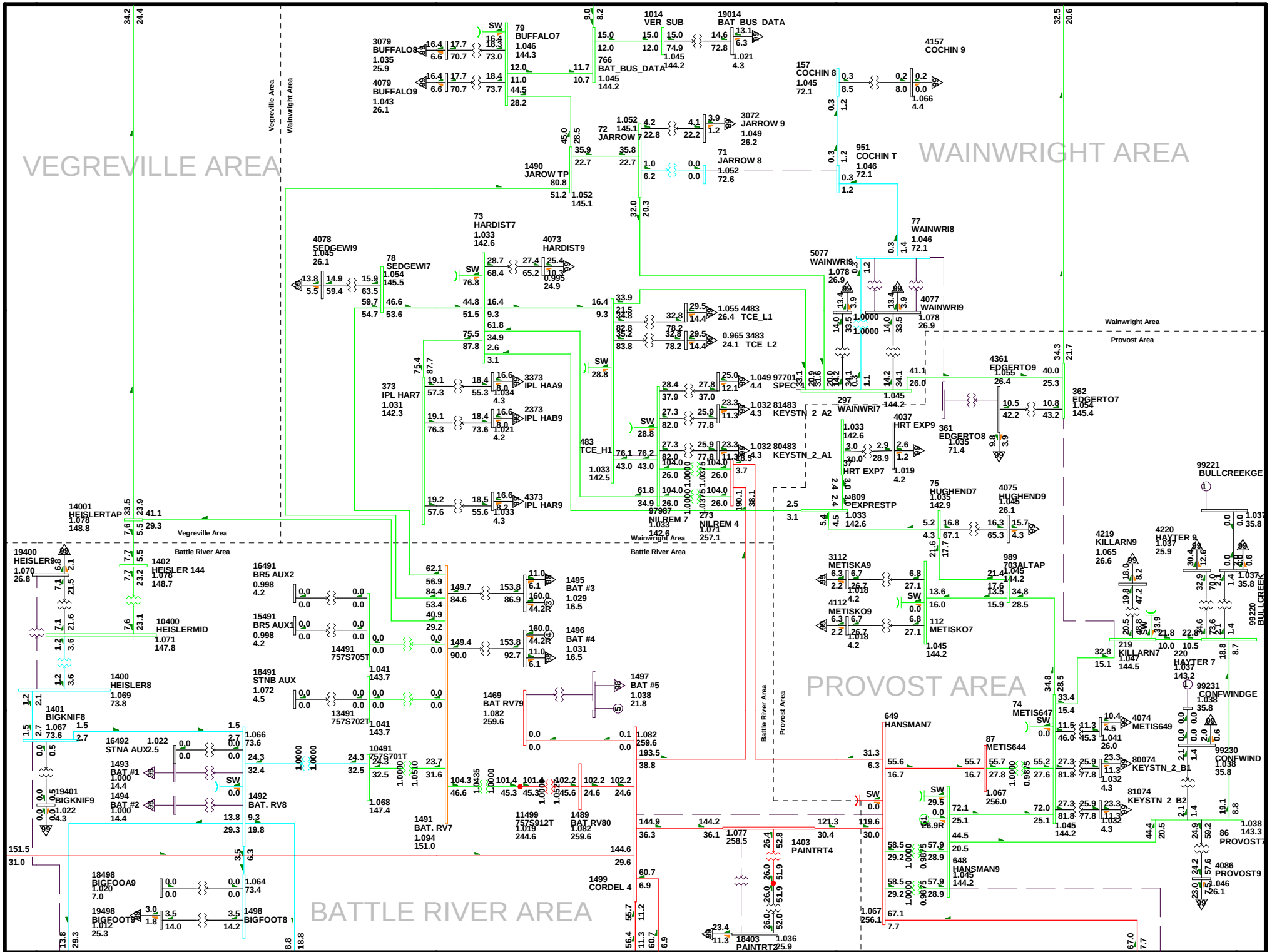
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
THU, APR 08 2010 16:04
D1-16

2017SP-Alt 1-16.a

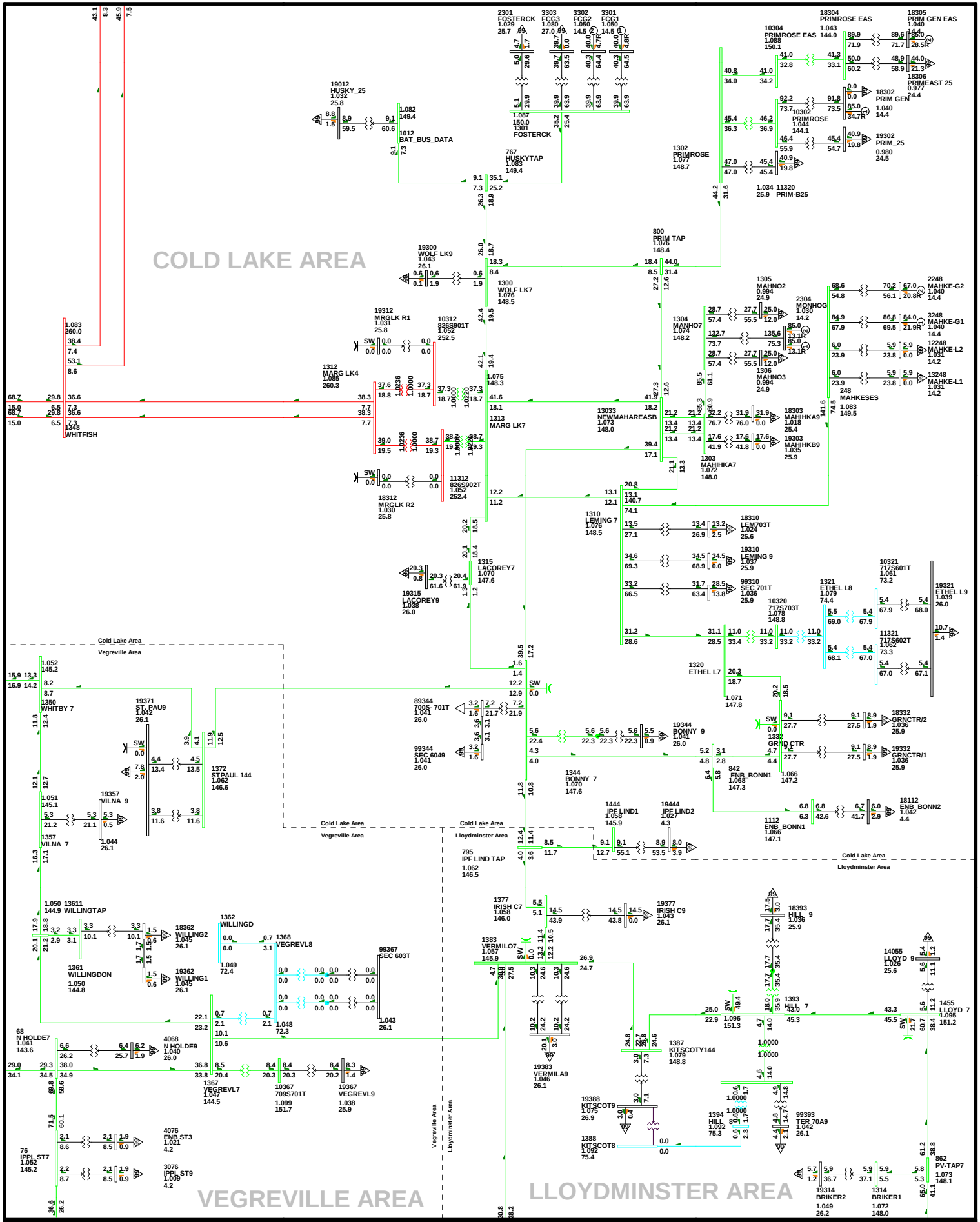
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
THU, APR 08 2010 16:04
D1-16

2017SP-Alt 1-16.b

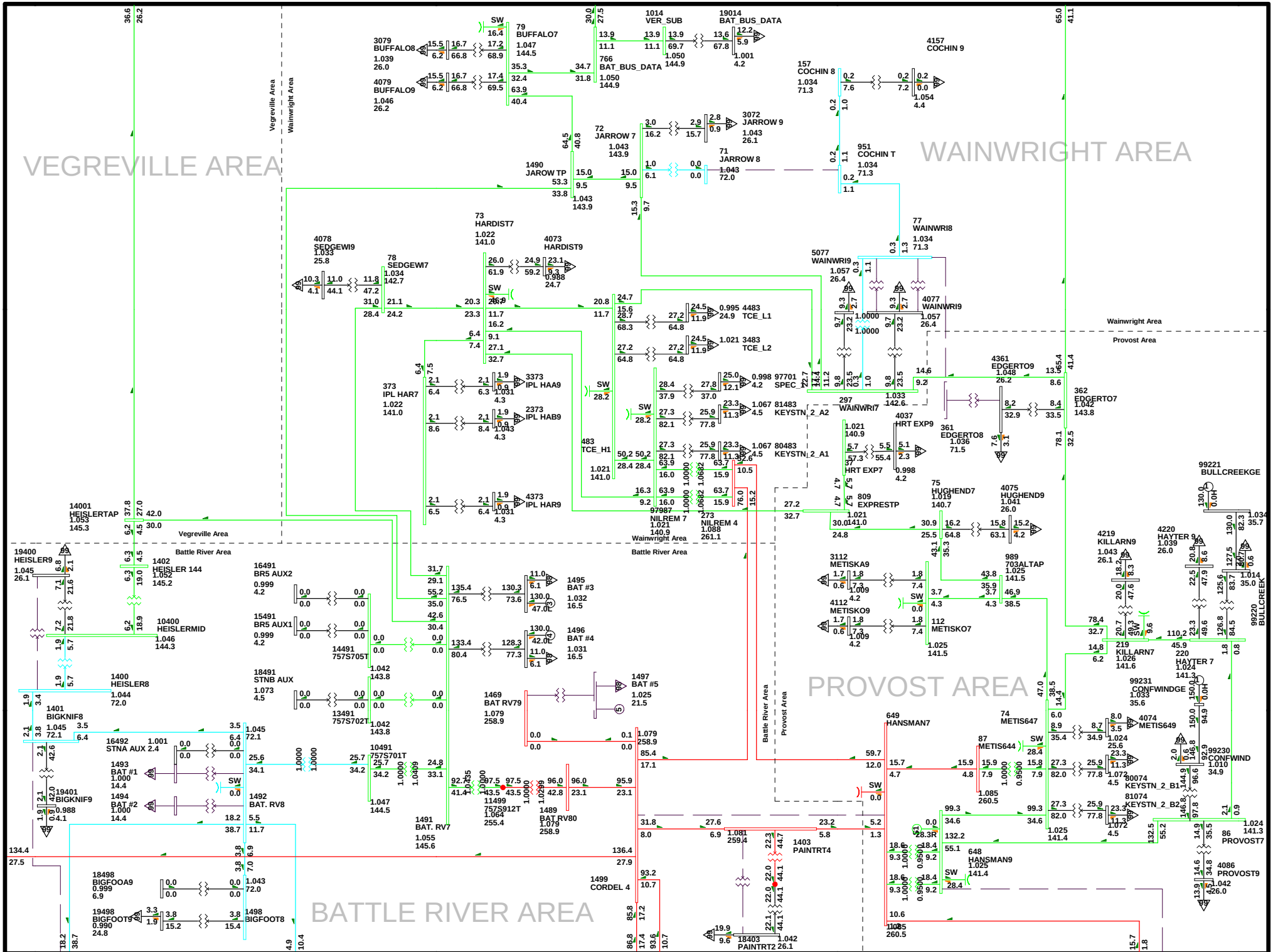
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER LIGHT BASE CASE REVISION 7.2
FRI, APR 30 2010 13:05
D1-00

2017SL-Alt 1-1.a

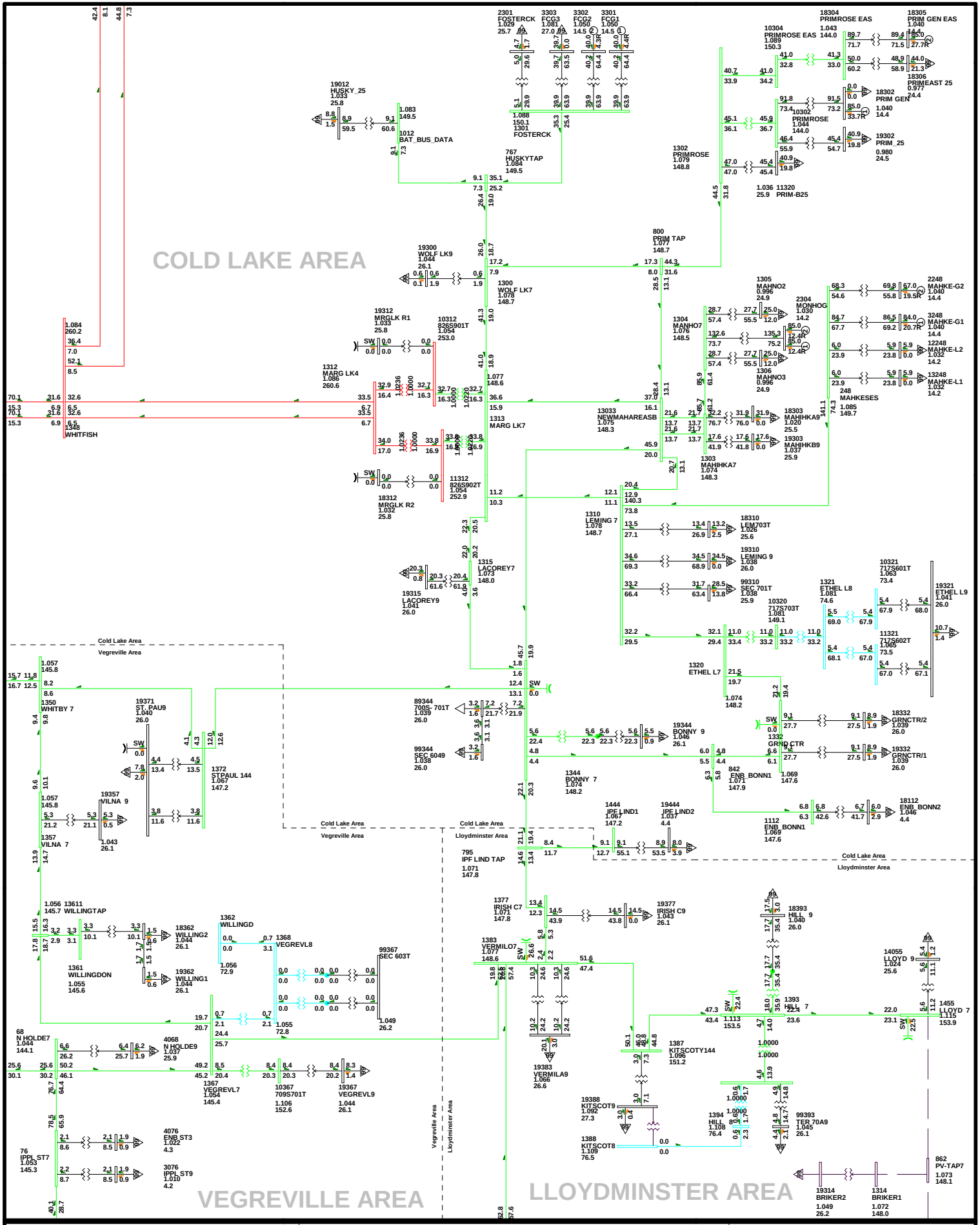
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER LIGHT BASE CASE REVISION 7.2
FRI, APR 30 2010 13:05
D1-00

2017SL-Alt 1-1.b

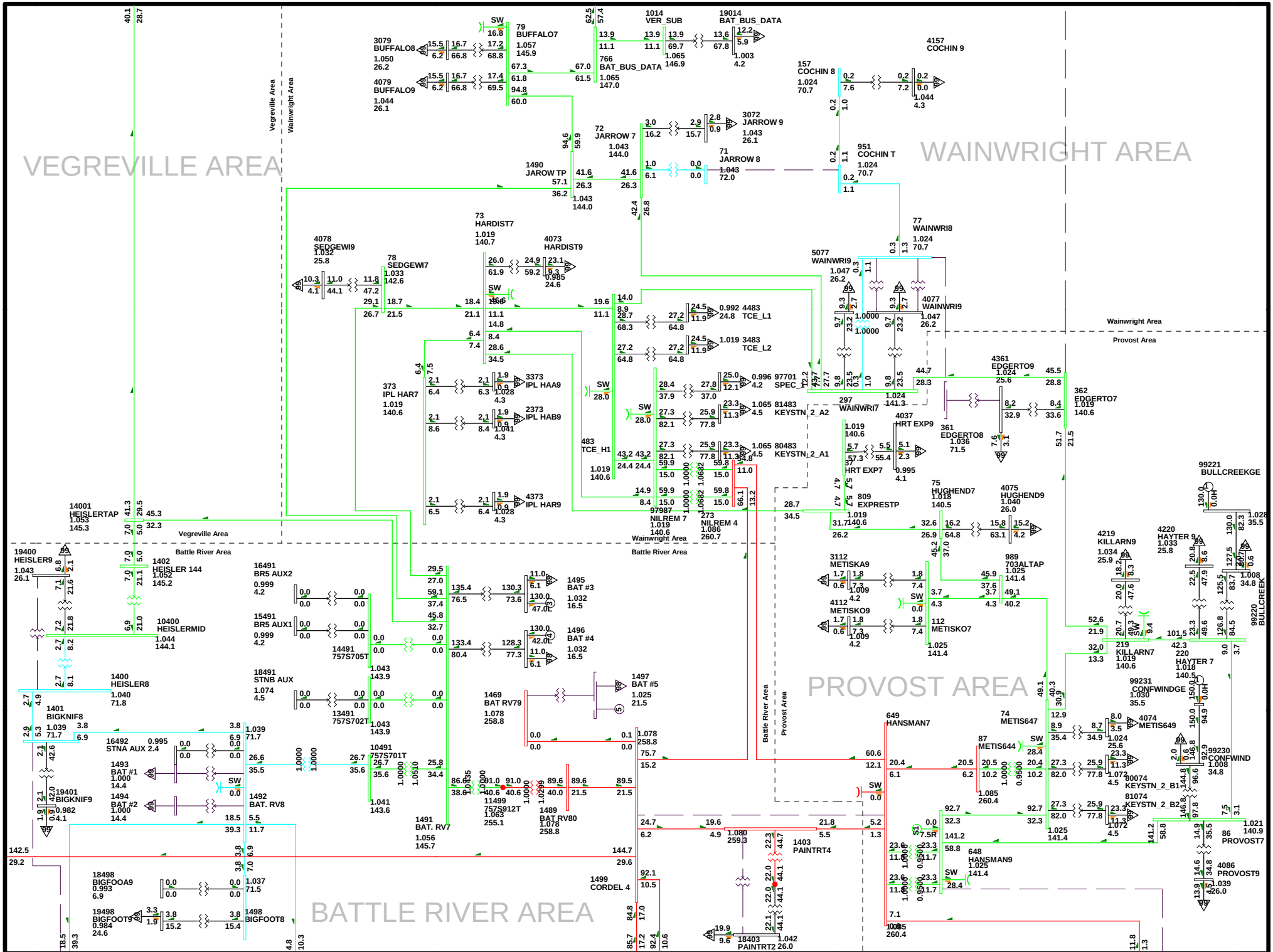
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000<=35.000<=69.000<=138.000<=240.000



CENTRAL AREA STUDY
2017 SUMMER LIGHT BASE CASE REVISION 7.2
FRI, APR 30 2010 13:05
D1-08

2017SL-Alt 1-2.a

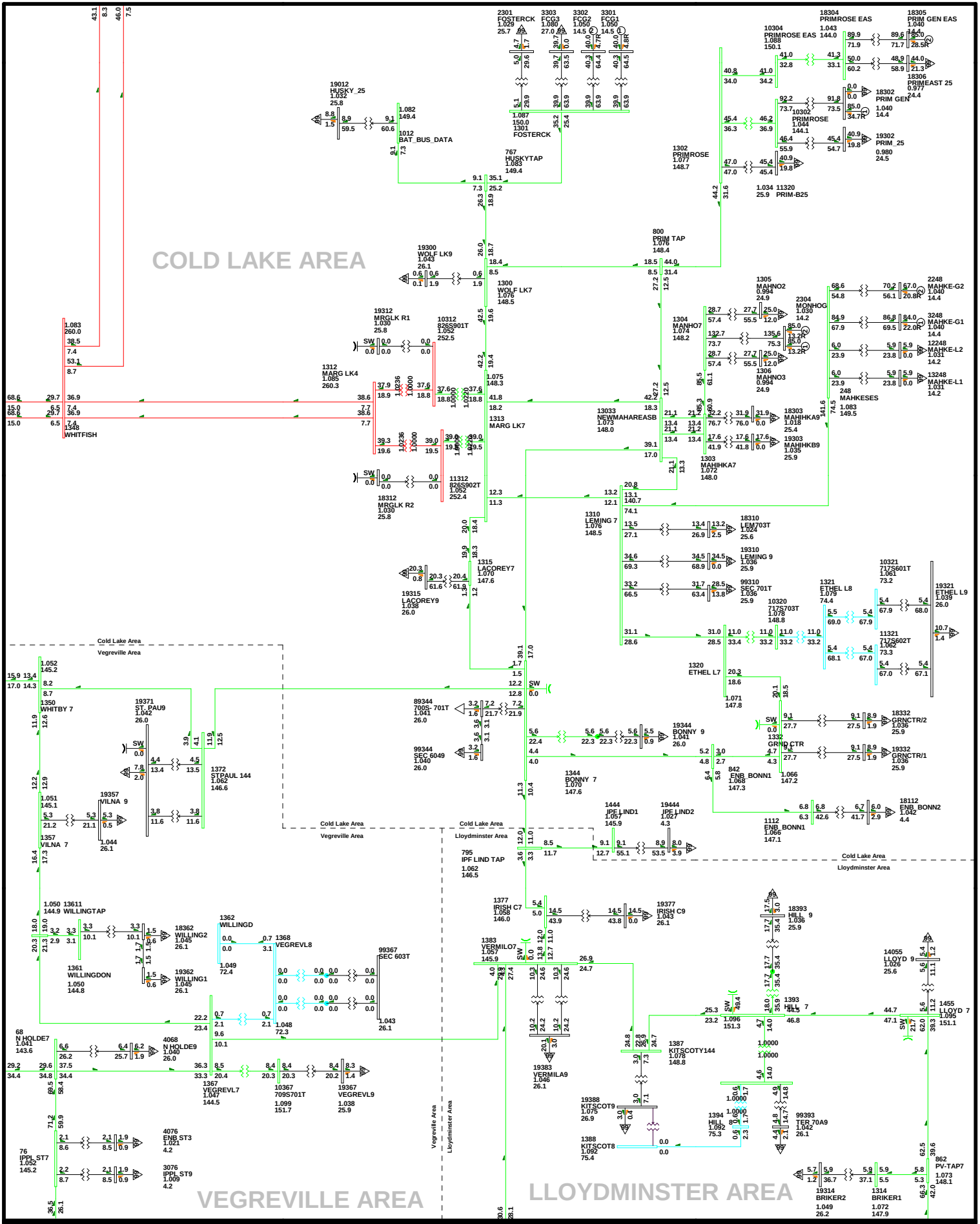
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER LIGHT BASE CASE REVISION 7.2
FRI, APR 30 2010 13:05
D1-08

2017SL-Alt 1-2.b

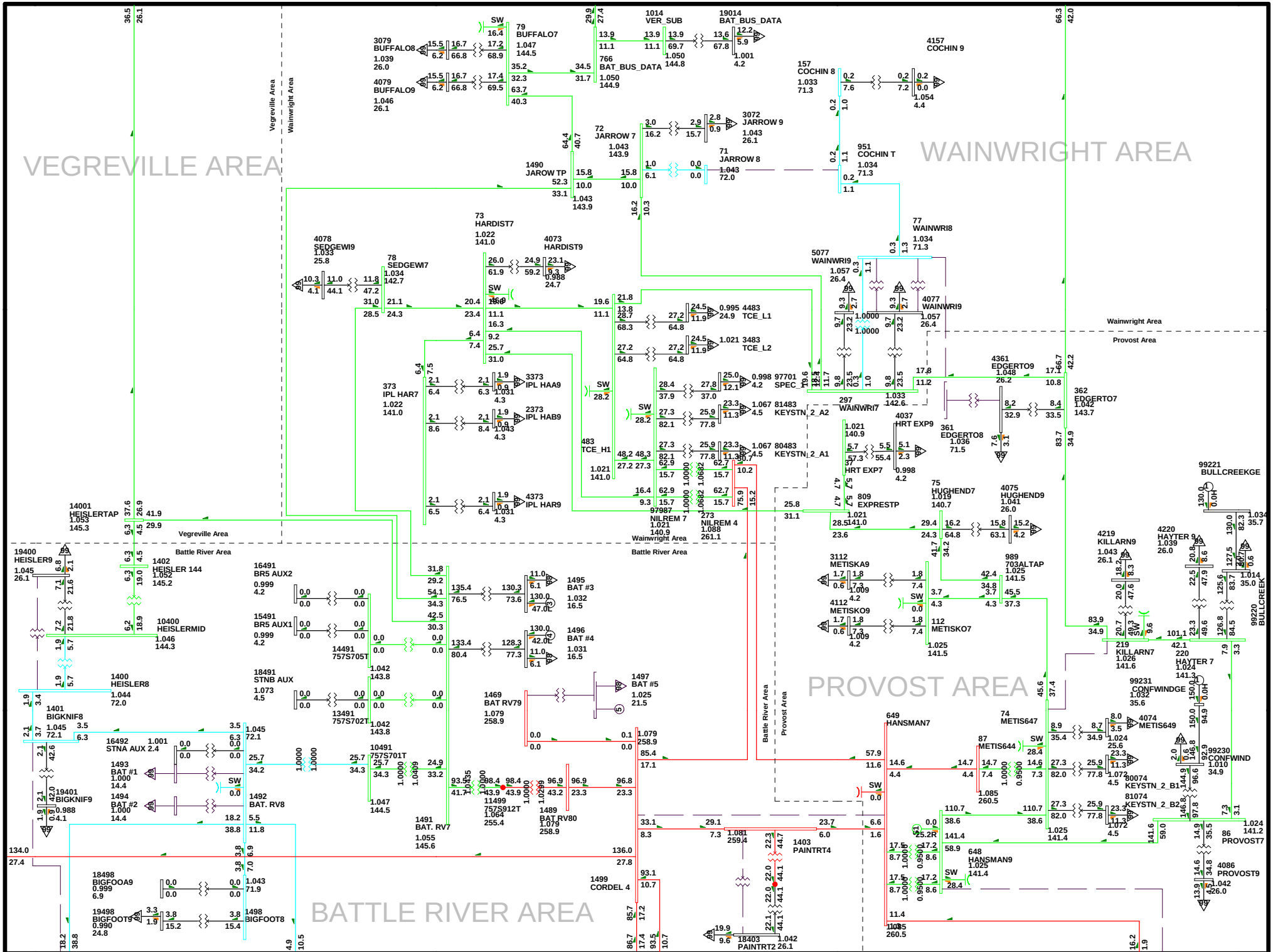
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000<=35.000<=69.000<=138.000<=240.000



CENTRAL AREA STUDY
2017 SUMMER LIGHT BASE CASE REVISION 7.2
FRI, APR 30 2010 13:05
D1-11

2017SL-Alt 1-3.a

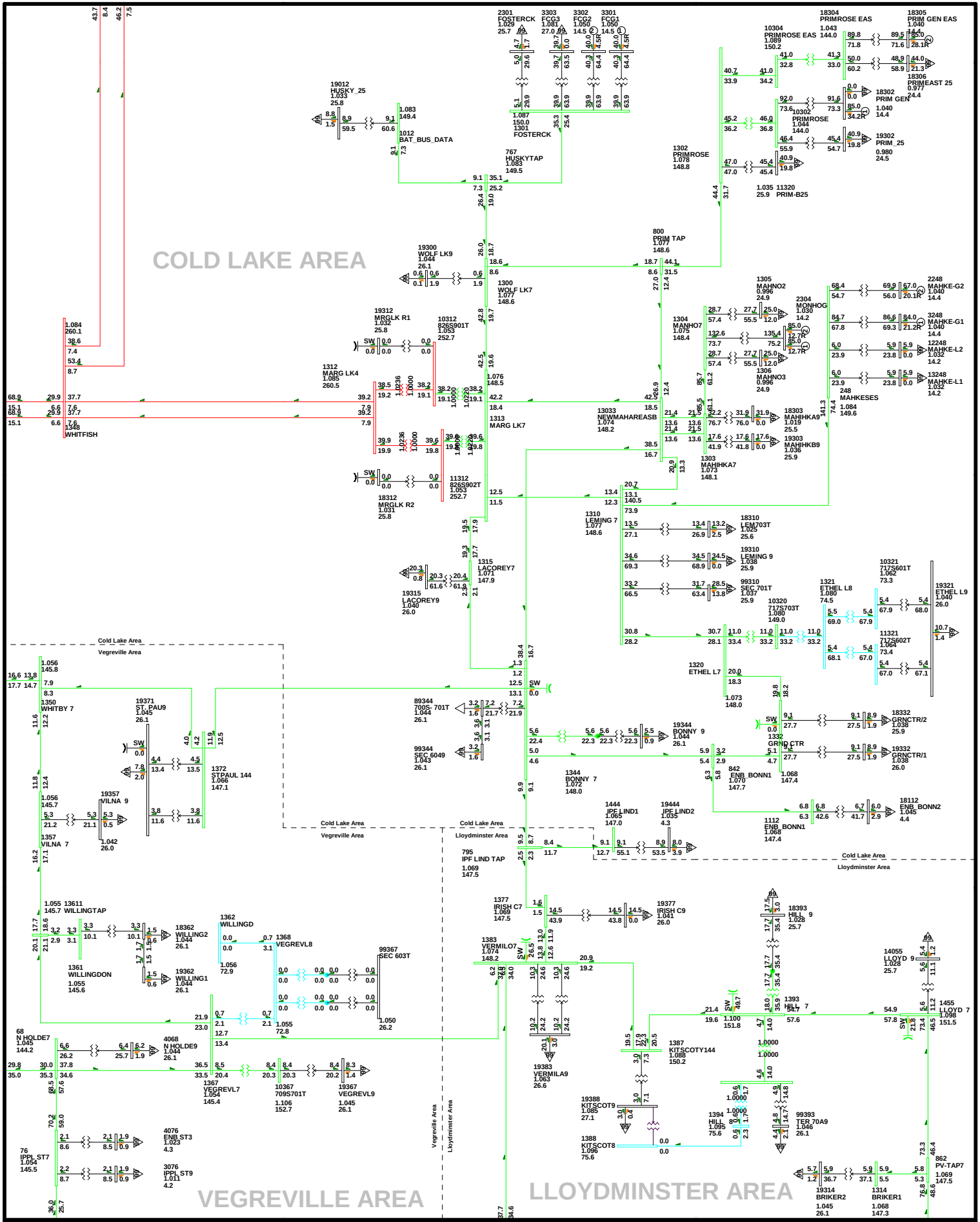
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER LIGHT BASE CASE REVISION 7.2
FRI, APR 30 2010 13:05
D1-11

2017SL-Alt 1-3.b

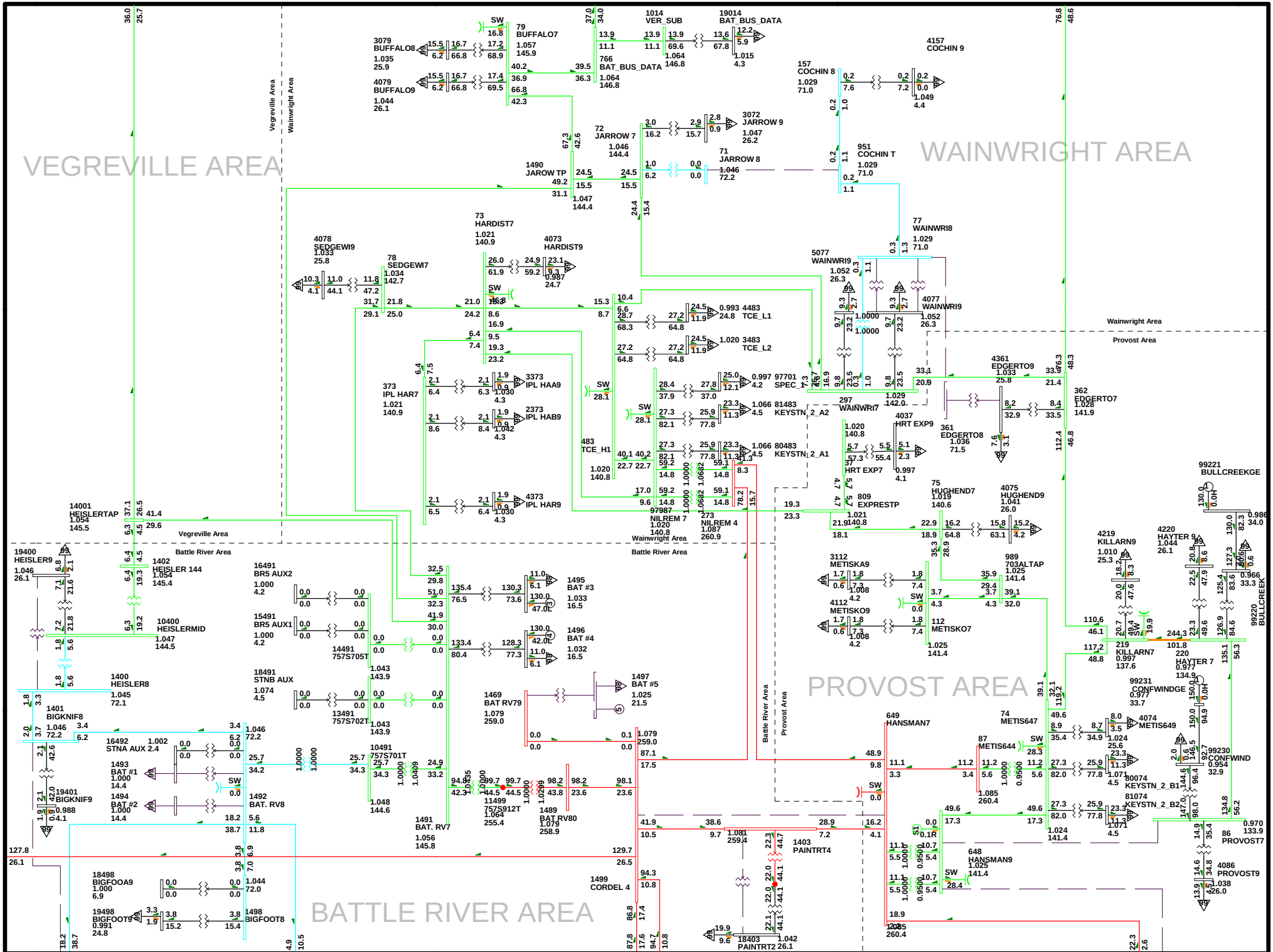
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000<=35.000<=69.000<=138.000<=240.000

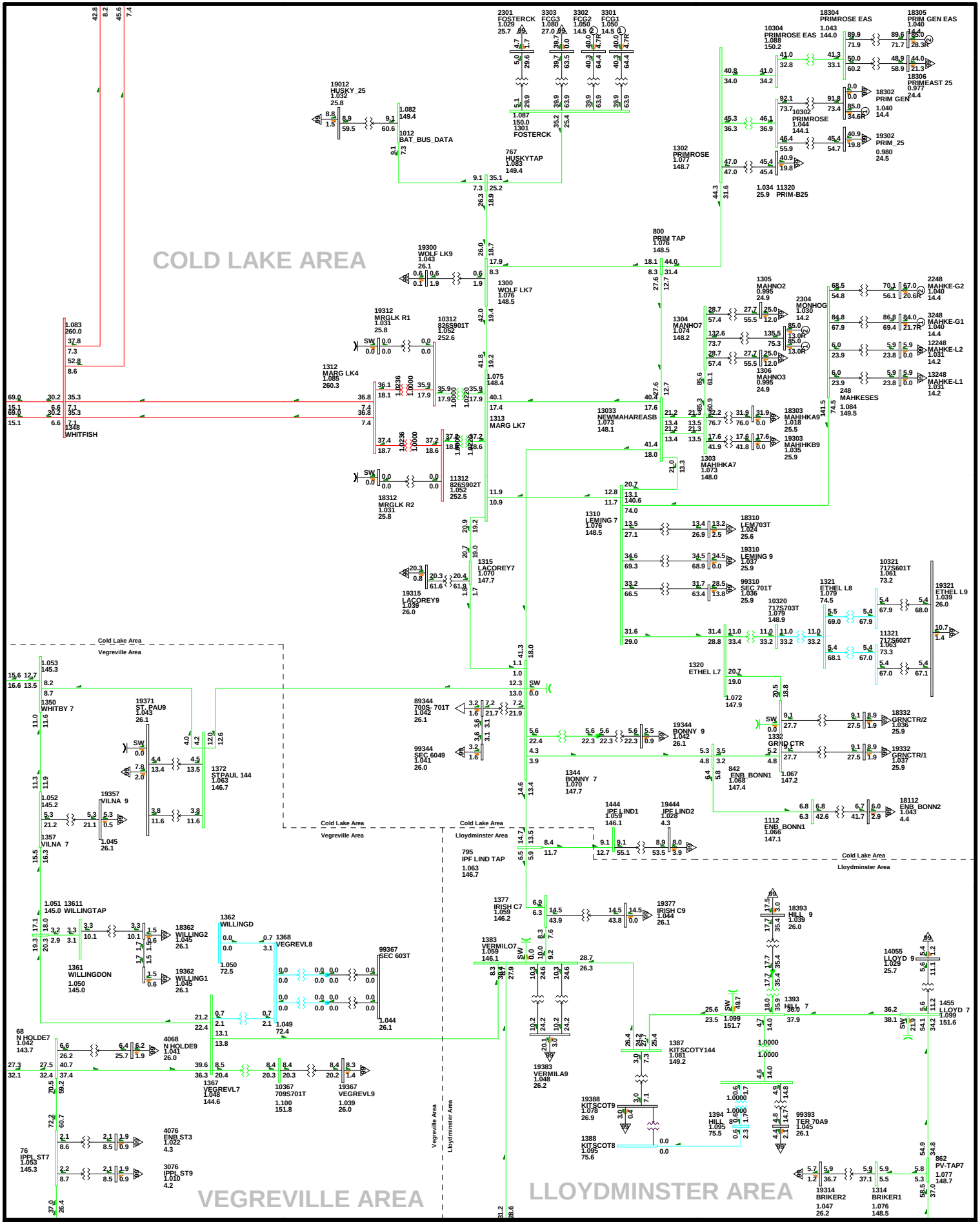


CENTRAL AREA STUDY
2017 SUMMER LIGHT BASE CASE REVISION 7.2
FRI, APR 30 2010 13:05
D1-12

2017SL-Alt 1-4.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

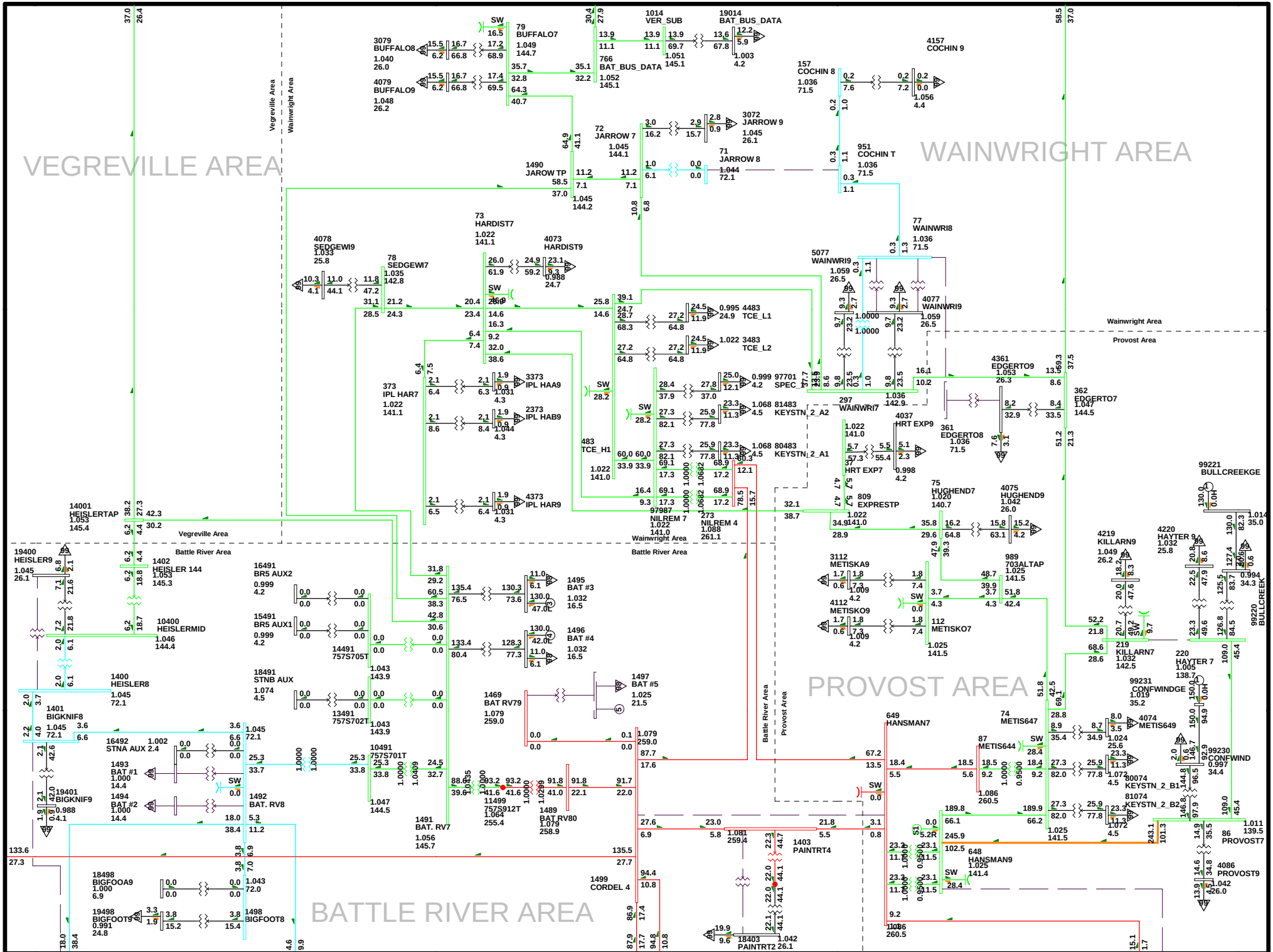

VEGREVILLE AREA
WAINWRIGHT AREA
PROVOST AREA
BATTLE RIVER AREA
Vegreville Area
Wainwright Area
Battle River Area
Provost Area
79 BUFFALO7
3079 BUFFALO8
4079 BUFFALO9
766 BAT_BUS_DATA
1014 VER_SUB
19014 BAT_BUS_DATA
4157 COCHIN 9
157 COCHIN 8
951 COCHIN T
72 JAROW 7
3072 JAROW 9
71 JARROW 8
1490 JAROW TP
73 HARDIST7
4073 HARDIST9
4078 SEDGEWI9
78 SEDGEWI7
77 WAINWRI8
5077 WAINWRI9
4077 WAINWRI9
4483 TCE_L1
3483 TCE_L2
373 IPL HAR7
3373 IPL HAA9
2373 IPL HAB9
4373 IPL HAR9
483 TCE_H1
97701 SPEC_1_3
81483 KEYSTN_2_A2
80483 KEYSTN_2_A1
297 WAINWRI7
4037 HRT EXP9
HRT EXP7
361 EDGERTO8
4361 EDGERTO9
362 EDGERTO7
809 EXPRESTP
75 HUGHEND7
4075 HUGHEND9
14001 HEISLERTAP
1402 HEISLER 144
10400 HEISLERMID
19400 HEISLER9
1400 HEISLER8
1401 BIGKNIF8
19401 BIGKNIF9
16492 STNA AUX 2.4
1493 BAT #1
1494 BAT #2
1492 BAT. RV8
18498 BIGFOOA9
19498 BIGFOOT9
1498 BIGFOOT8
16491 BR5 AUX2
15491 BR5 AUX1
18491 STNB AUX
14491 757S705T
13491 757S702T
10491 757S701T
11499 757S912T
1495 BAT #3
1496 BAT #4
1497 BAT #5
1469 BAT RV79
1489 BAT RV80
1491 BAT. RV7
1499 CORDEL 4
18403 PAINTRT2
1403 PAINTRT4
97987 NILREM 7
273 NILREM 4
3112 METISKA9
4112 METISKO9
112 METISKO7
989 703ALTAP
74 METIS647
87 METIS644
649 HANSMAN7
648 HANSMAN9
4074 METIS649
80074 KEYSTN_2_B1
81074 KEYSTN_2_B2
99230 CONFWIND
99231 CONFWINDGE
4086 PROVOST9
86 PROVOST7
99221 BULLCREEKGE
99220 BULLCREEK
4219 KILLARN9
219 KILLARN7
4220 HAYTER 9
220 HAYTER 7
CENTRAL AREA STUDY
2017 SUMMER LIGHT BASE CASE REVISION 7.2
FRI, APR 30 2010 13:06
D1-12
2017SL-Alt 1-4.b
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000<=35.000<=69.000<=138.000<=240.000



CENTRAL AREA STUDY
2017 SUMMER LIGHT BASE CASE REVISION 7.2
FRI, APR 30 2010 13:06
D1-13

2017SL-Alt 1-5.a

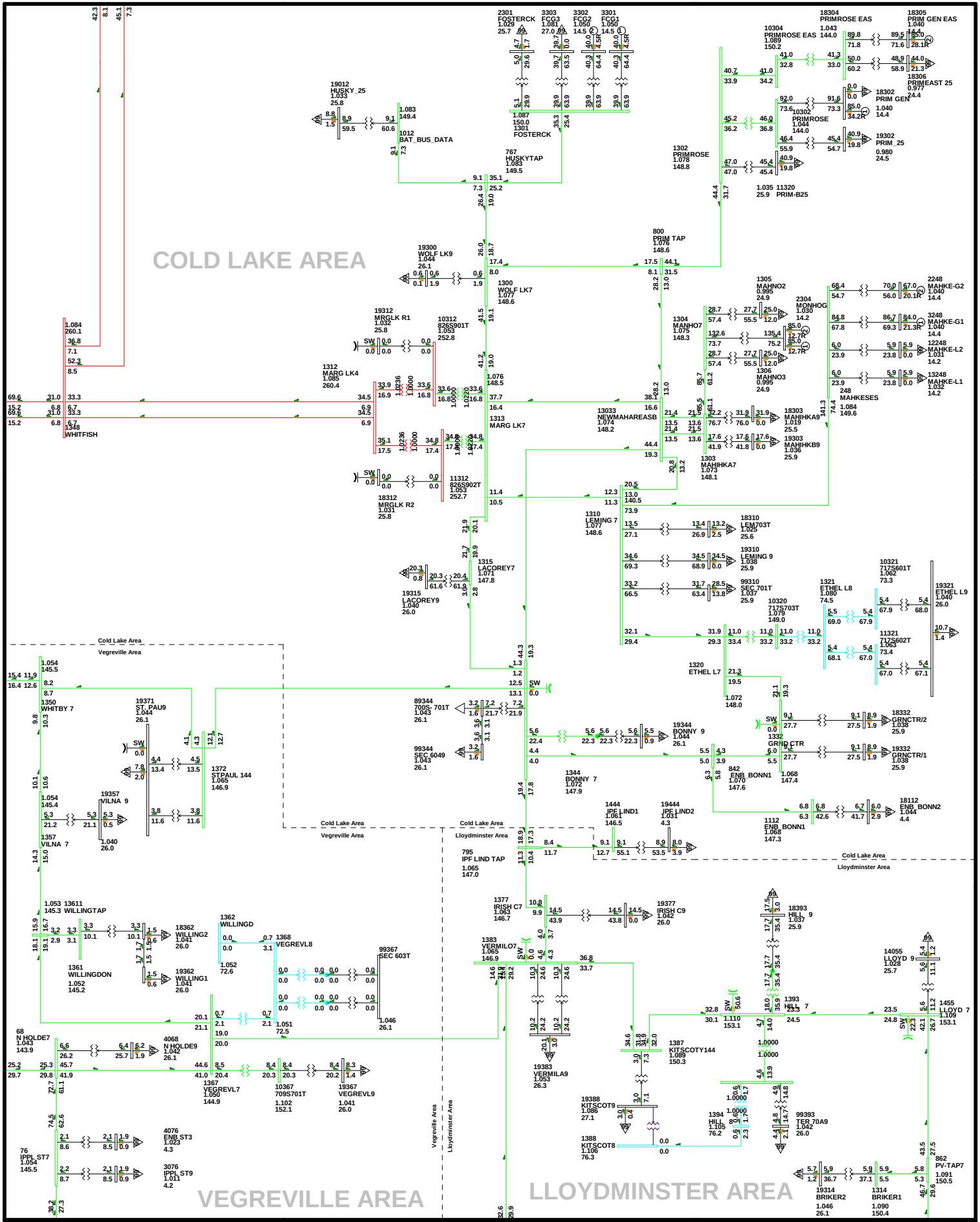
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER LIGHT BASE CASE REVISION 7.2
FRI, APR 30 2010 13:06
D1-13

2017SL-Alt 1-5.b

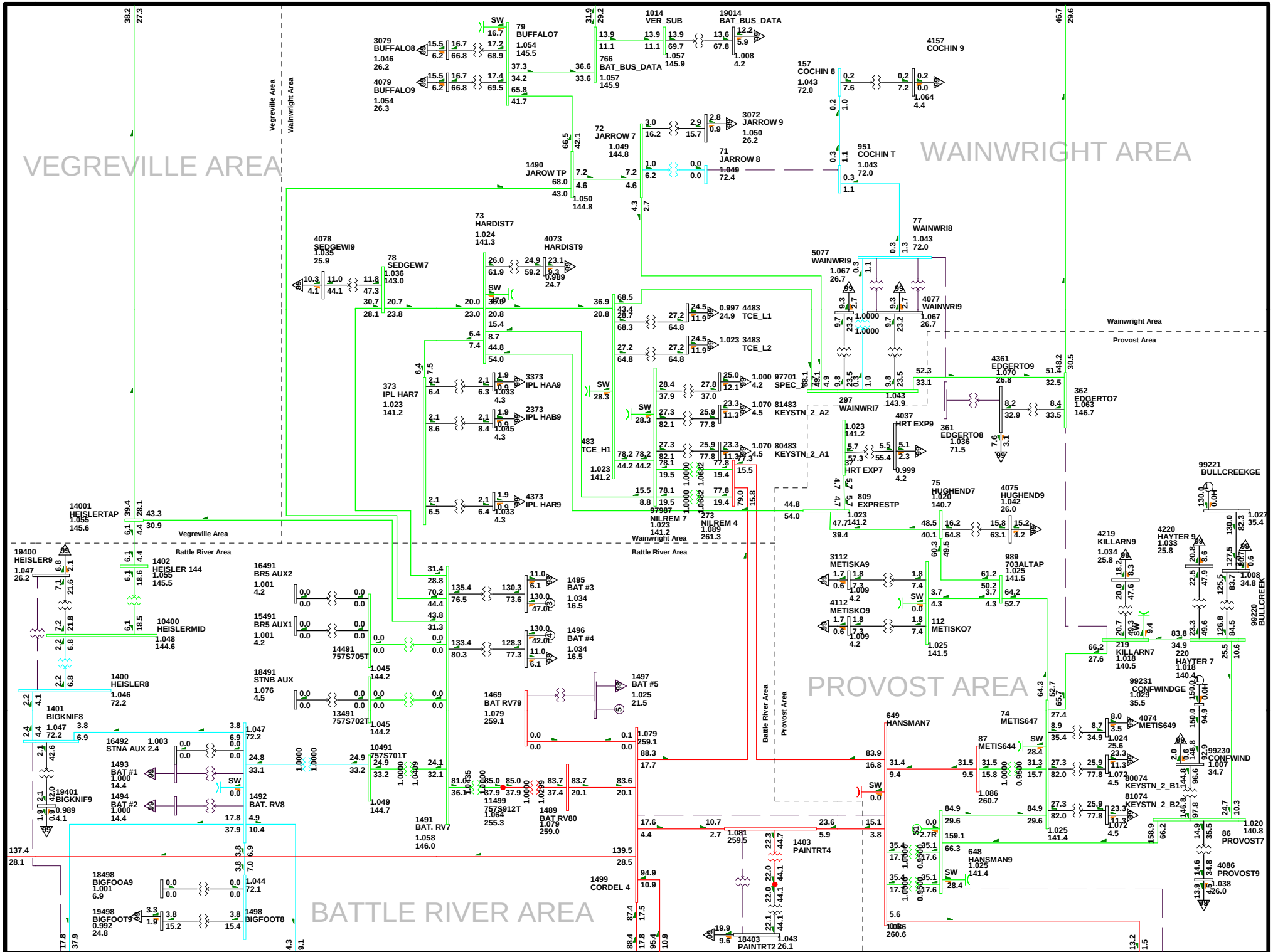
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000<=35.000<=69.000<=138.000<=240.000



CENTRAL AREA STUDY
2017 SUMMER LIGHT BASE CASE REVISION 7.2
FRI, APR 30 2010 13:06
D1-16

2017SL-Alt 1-6.a

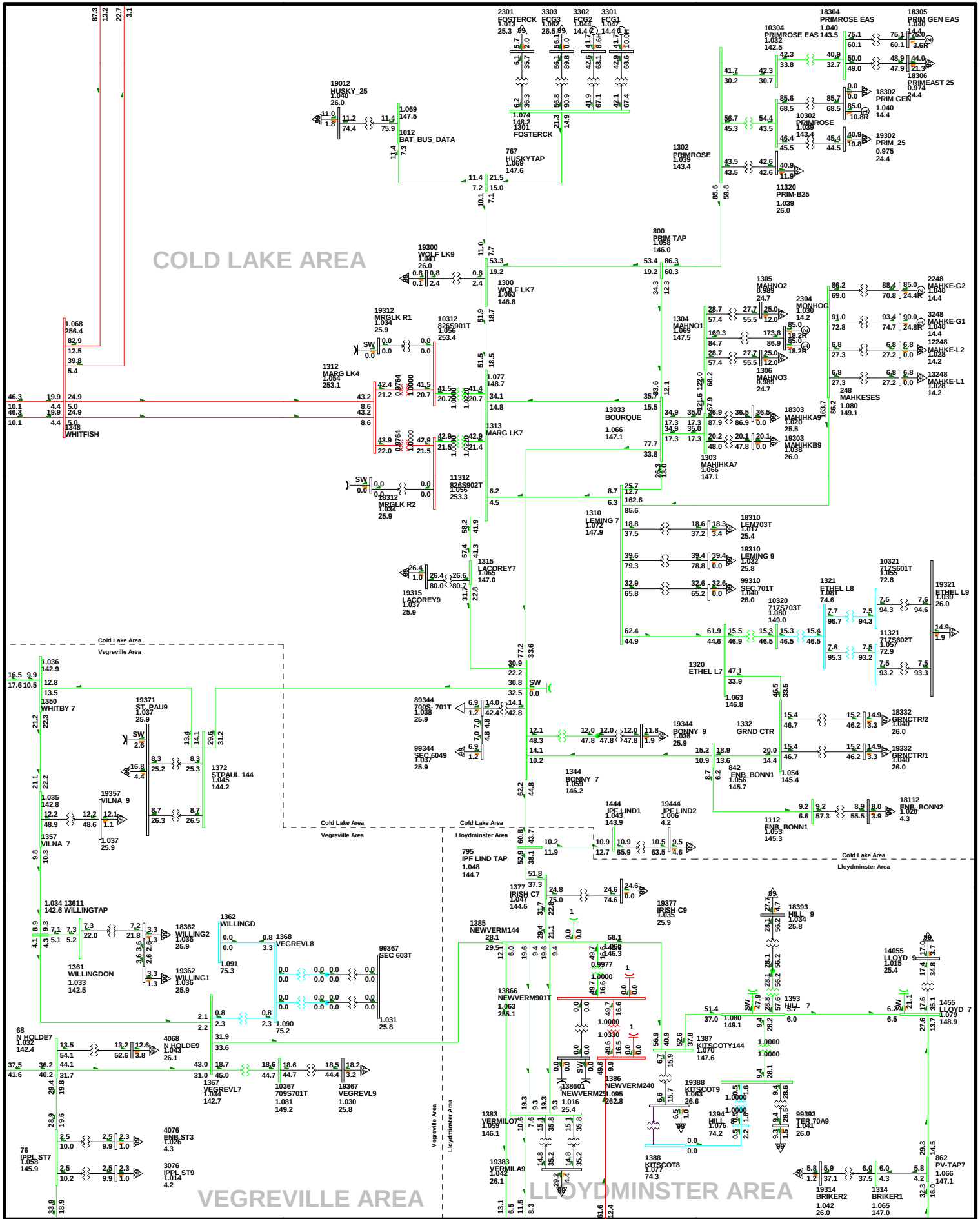
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER LIGHT BASE CASE REVISION 7.2
FRI, APR 30 2010 13:06
D1-16

2017SL-Alt 1-6.b

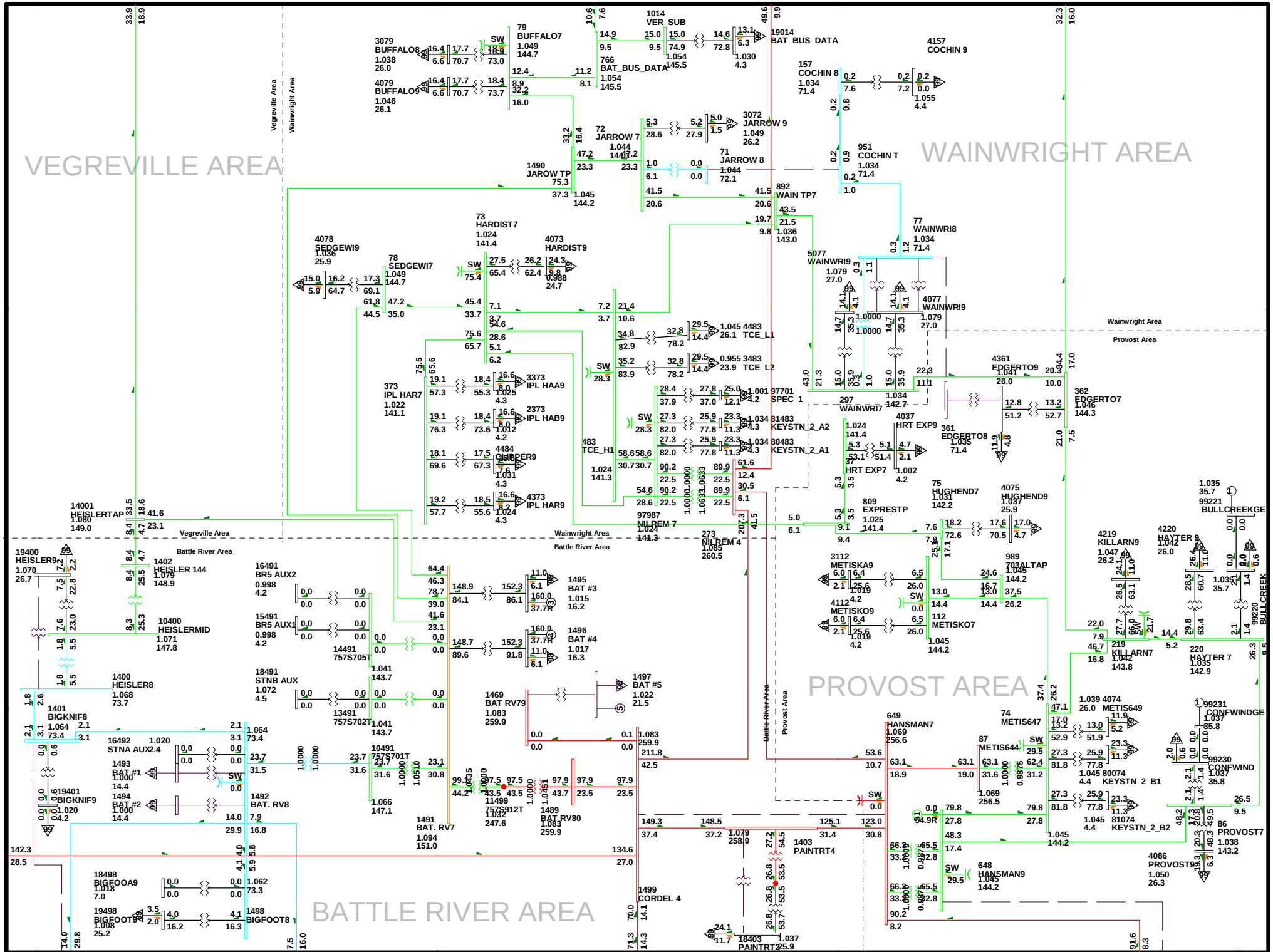
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000<=35.000<=69.000<=138.000<=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
THU, APR 08 2010 16:22
D1-00

2017WP-Alt 2-1.a

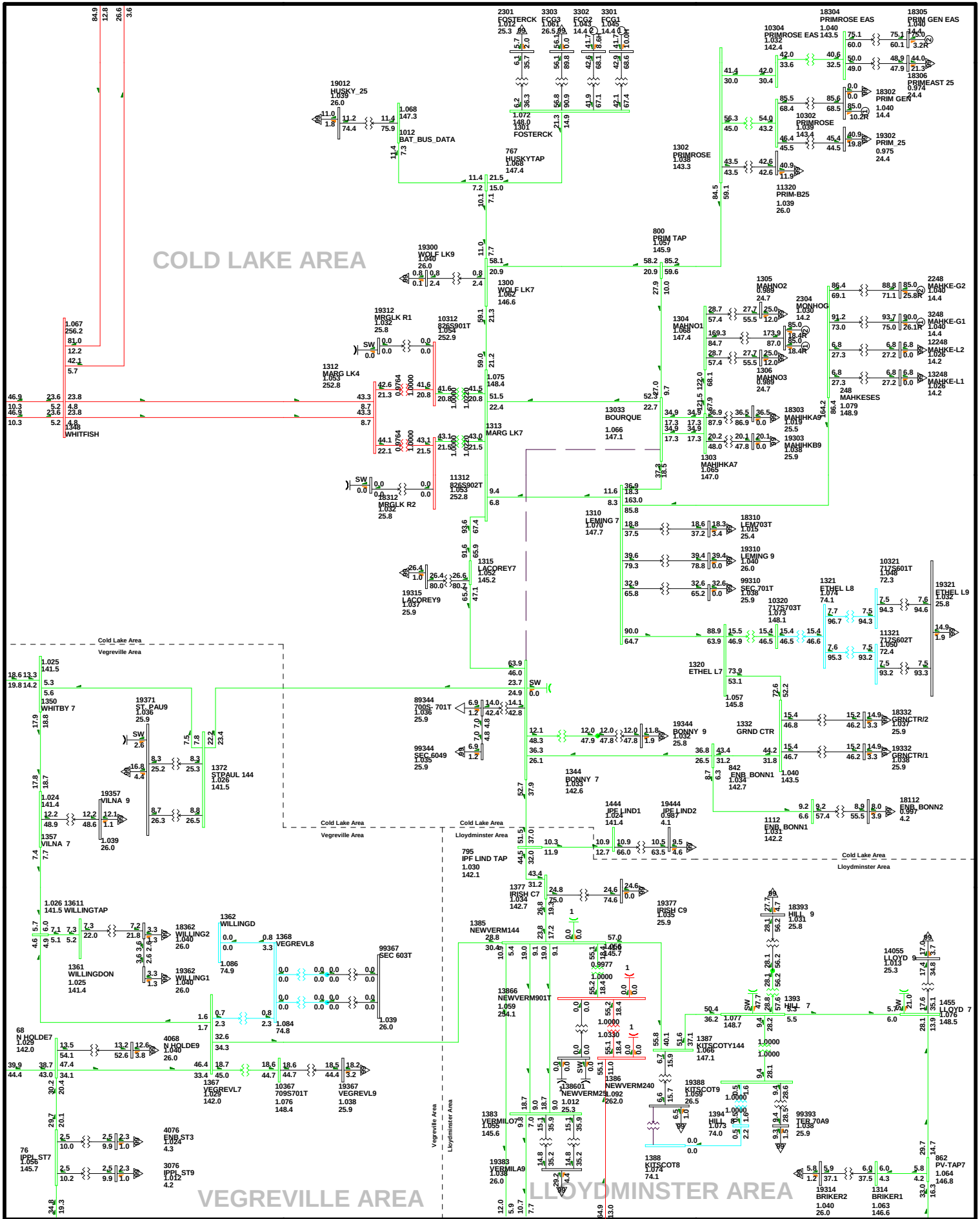
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
THU, APR 08 2010 16:22
D1-00

2017WP-Alt 2-1.b

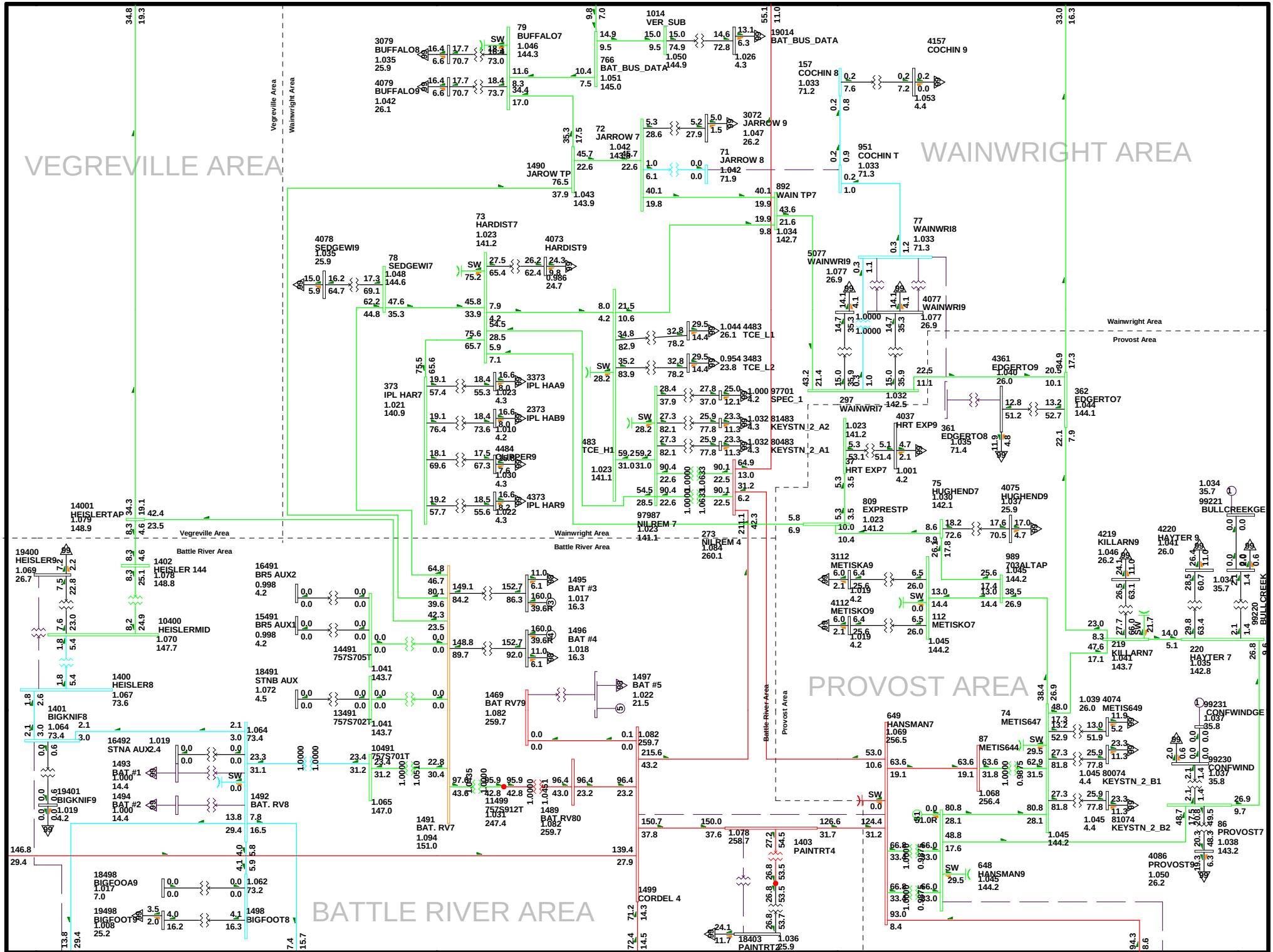
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
THU, APR 08 2010 16:22
D1-01

2017WP-Alt 2-2.a

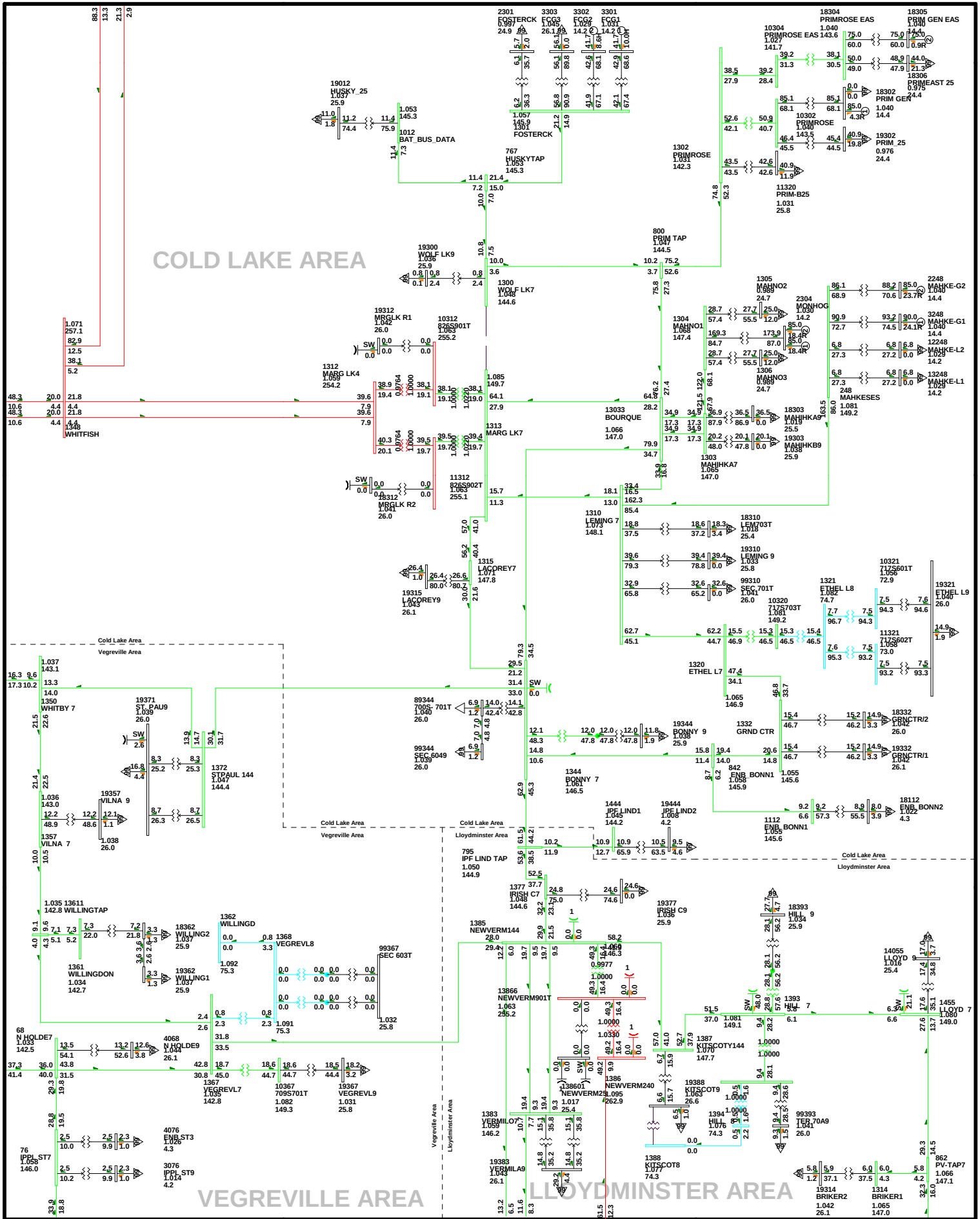
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
THU, APR 08 2010 16:22
D1-01

2017WP-Alt 2-2.b

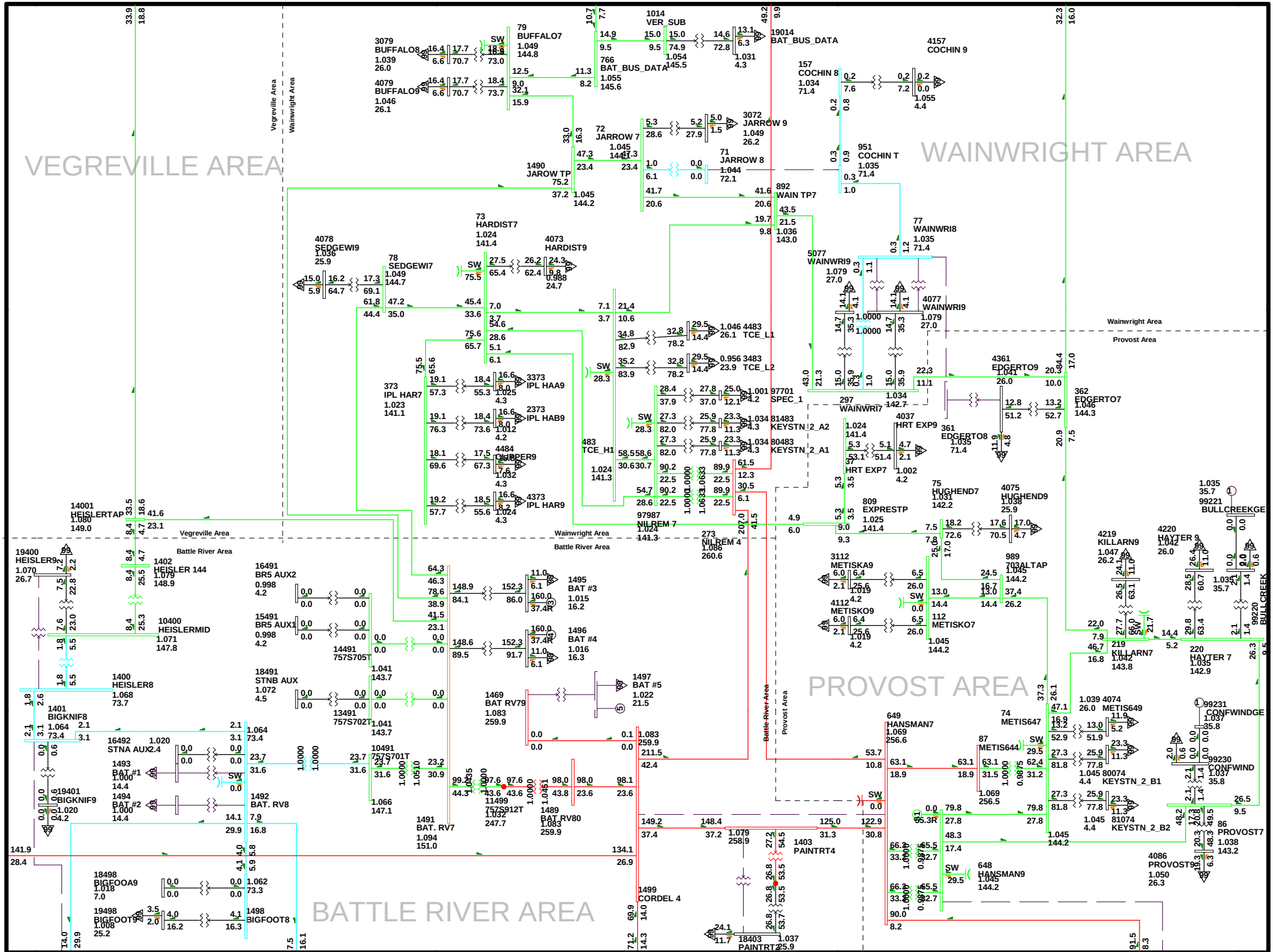
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

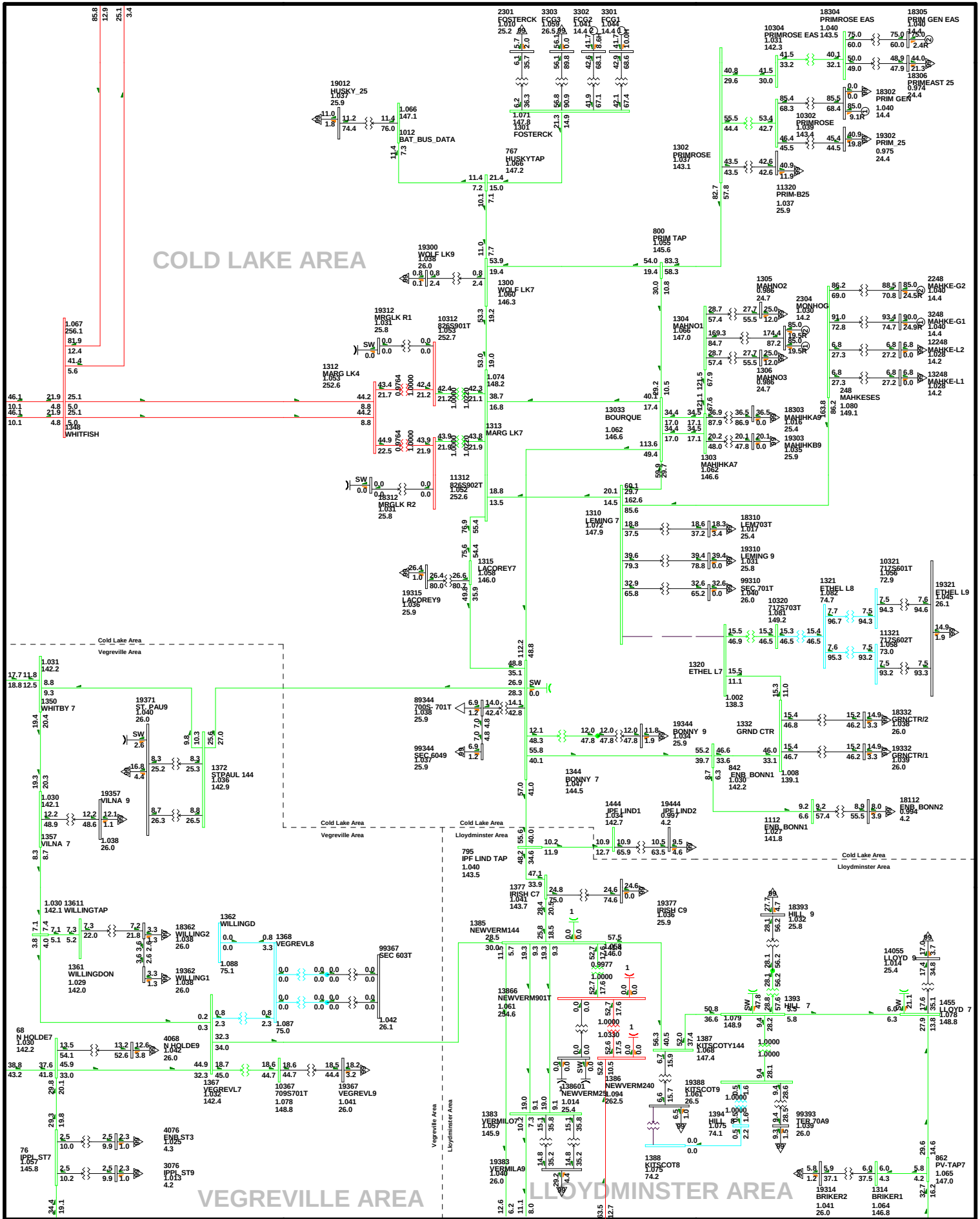


CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
THU, APR 08 2010 16:22
D1-02

2017WP-Alt 2-3.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

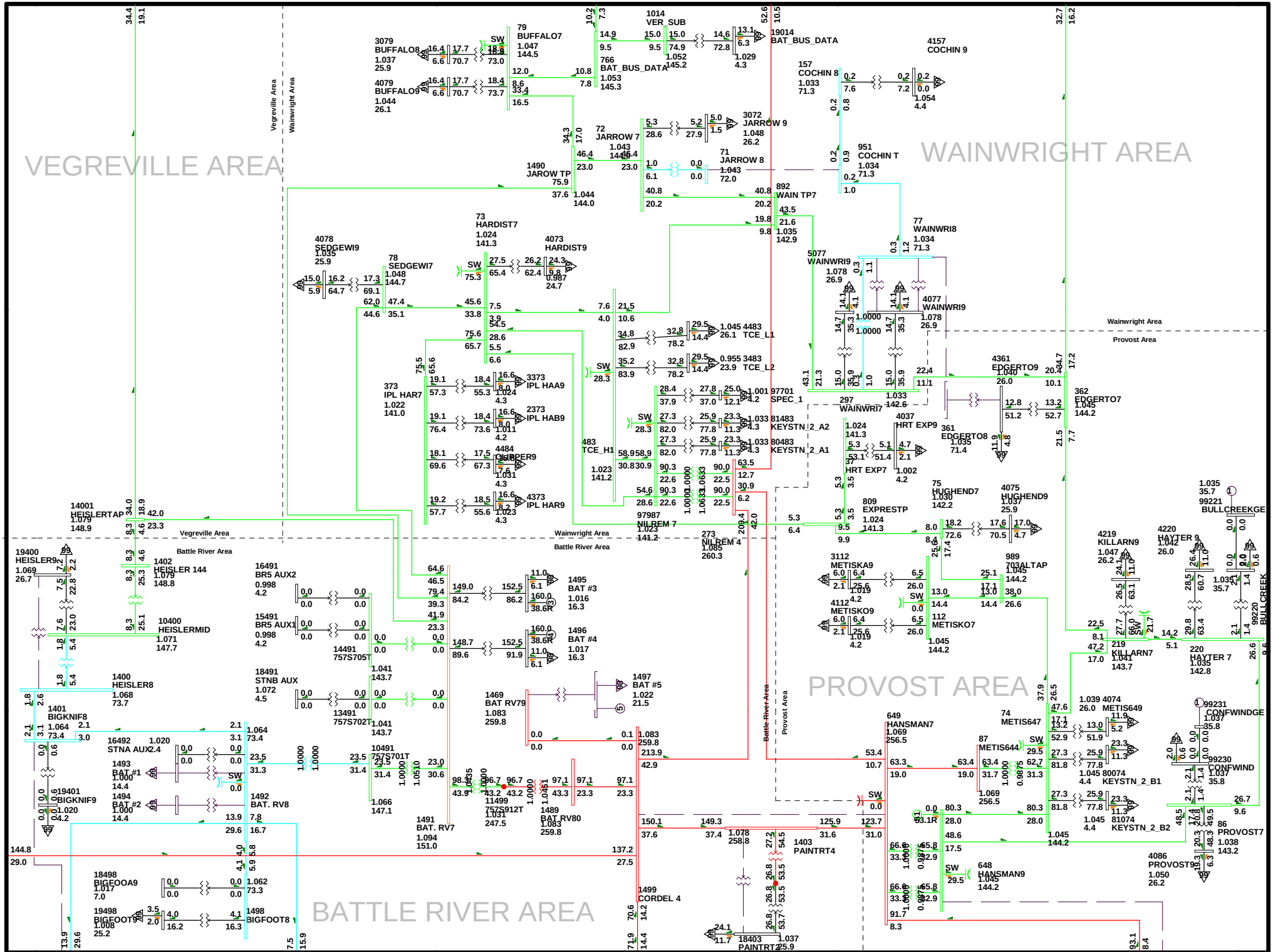

VEGREVILLE AREA
WAINWRIGHT AREA
PROVOST AREA
BATTLE RIVER AREA
Vegreville Area
Wainwright Area
Battle River Area
Provost Area
3079 BUFFALO8
4079 BUFFALO9
79 BUFFALO7
1014 VER_SUB
19014 BAT_BUS_DATA
766 BAT_BUS_DATA
4157 COCHIN 9
157 COCHIN 8
951 COCHIN T
72 JARROW 7
3072 JARROW 9
71 JARROW 8
1490 JAROW TP
892 WAIN TP7
77 WAINWRI8
5077 WAINWRI9
4077 WAINWRI9
73 HARDIST7
4073 HARDIST9
4078 SEDGEWI9
78 SEDGEWI7
373 IPL HAR7
3373 IPL HAA9
2373 IPL HAB9
4484 QUIPPER9
4373 IPL HAR9
483 TCE_H1
1046 4483 TCE_L1
0.956 3483 TCE_L2
97701 SPEC_1
81483 KEYSTN_2_A2
80483 KEYSTN_2_A1
297 WAINWRI7
4037 HRT EXP9
HRT EXP7
361 EDGERTO8
4361 EDGERTO9
362 EDGERTO7
75 HUGHEND7
4075 HUGHEND9
809 EXPRESTP
97987 NIL REM 7
273 NIL REM 4
14001 HEISLERTAP
1402 HEISLER 144
10400 HEISLERMID
19400 HEISLER9
1400 HEISLER8
1401 BIGKNIF8
19401 BIGKNIF9
16491 BR5 AUX2
15491 BR5 AUX1
14491 757S705T
18491 STNB AUX
13491 757S702T
16492 STNA AUX
10491 757S701T
1493 BAT #1
1494 BAT #2
1492 BAT. RV8
1491 BAT. RV7
11499 757S912T
1469 BAT RV79
1495 BAT #3
1496 BAT #4
1497 BAT #5
1489 BAT RV80
1403 PAINTRT4
18403 PAINTRT2
1499 CORDEL 4
18498 BIGEOOA9
19498 BIGFOOT9
1498 BIGFOOT8
3112 METISKA9
4112 METISKO9
112 METISKO7
989 703ALTAP
74 METIS647
87 METIS644
649 HANSMAN7
648 HANSMAN9
4086 PROVOST9
86 PROVOST7
4219 KILLARN9
219 KILLARN7
4220 HAYTER 9
220 HAYTER 7
99220 BULLCREEK
99221 BULLCREEKGE
99230 CONFWIND
99231 CONFWINDGE
4074 METIS649
80074 KEYSTN_2_B1
81074 KEYSTN_2_B2
CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
THU, APR 08 2010 16:23
D1-02
2017WP-Alt 2-3.b
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
THU, APR 08 2010 16:23
D1-03

2017WP-Alt 2-4.a

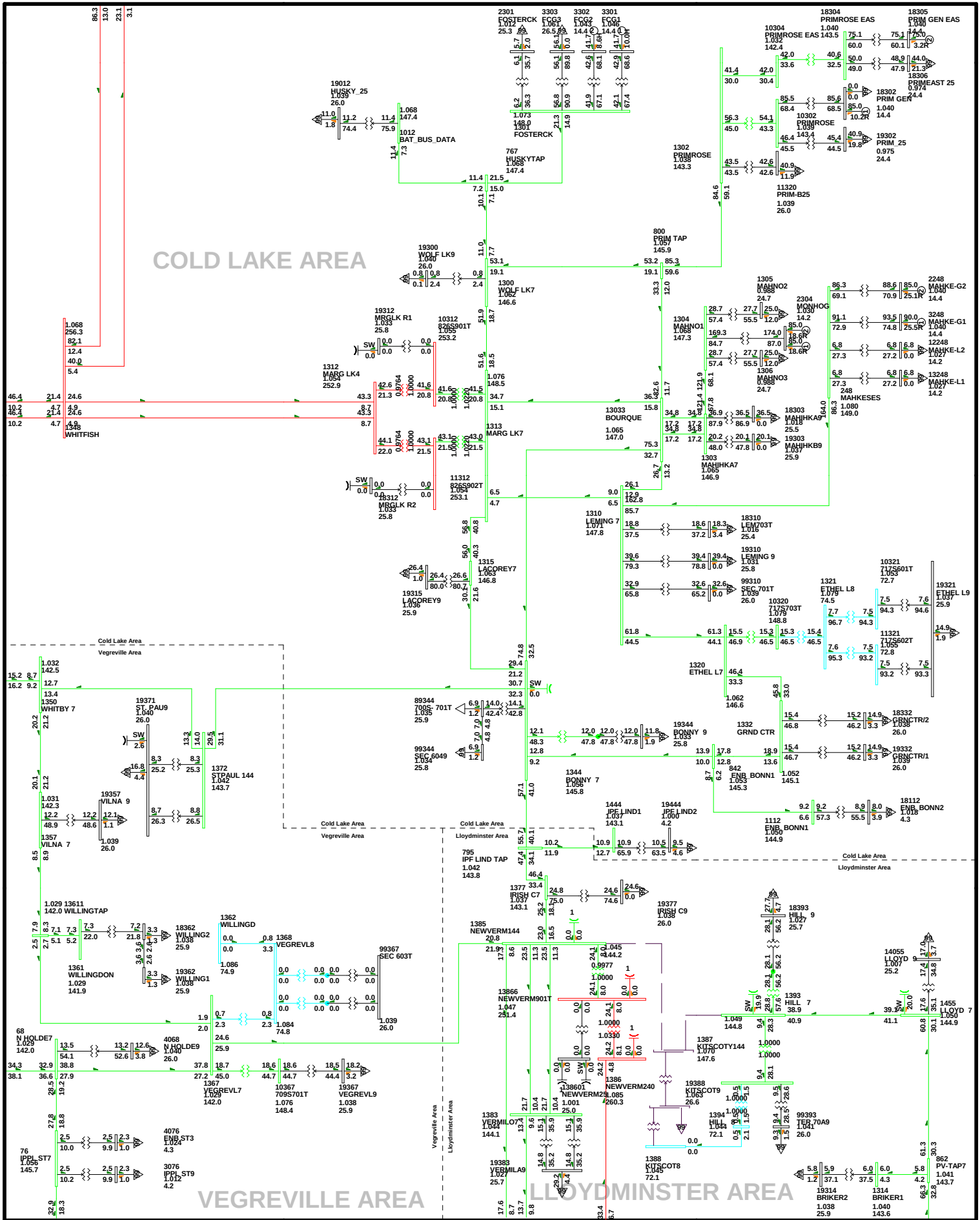
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
THU, APR 08 2010 16:23
D1-03

2017WP-Alt 2-4.b

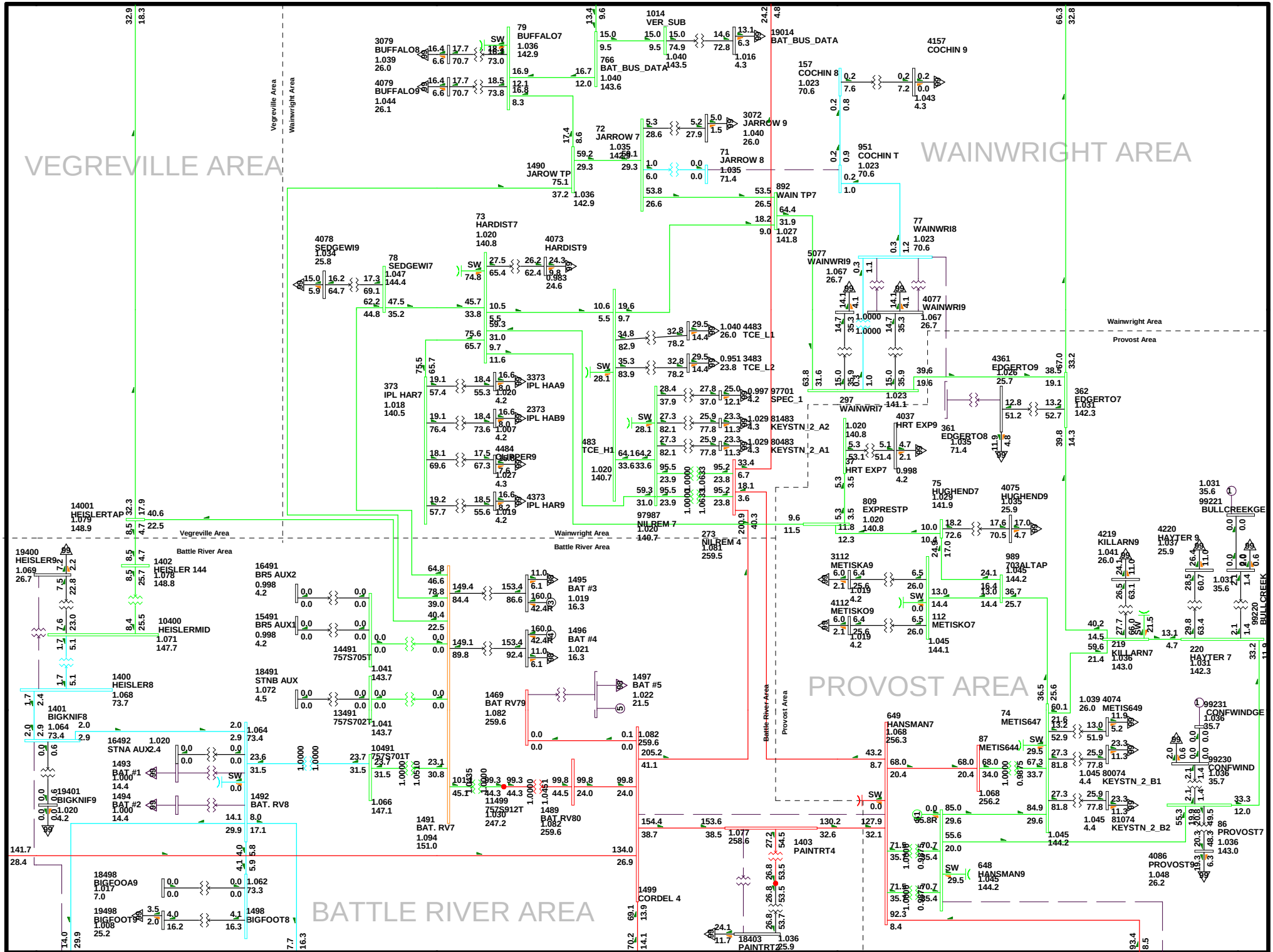
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 13:41

2017WP-Alt 2-5.a

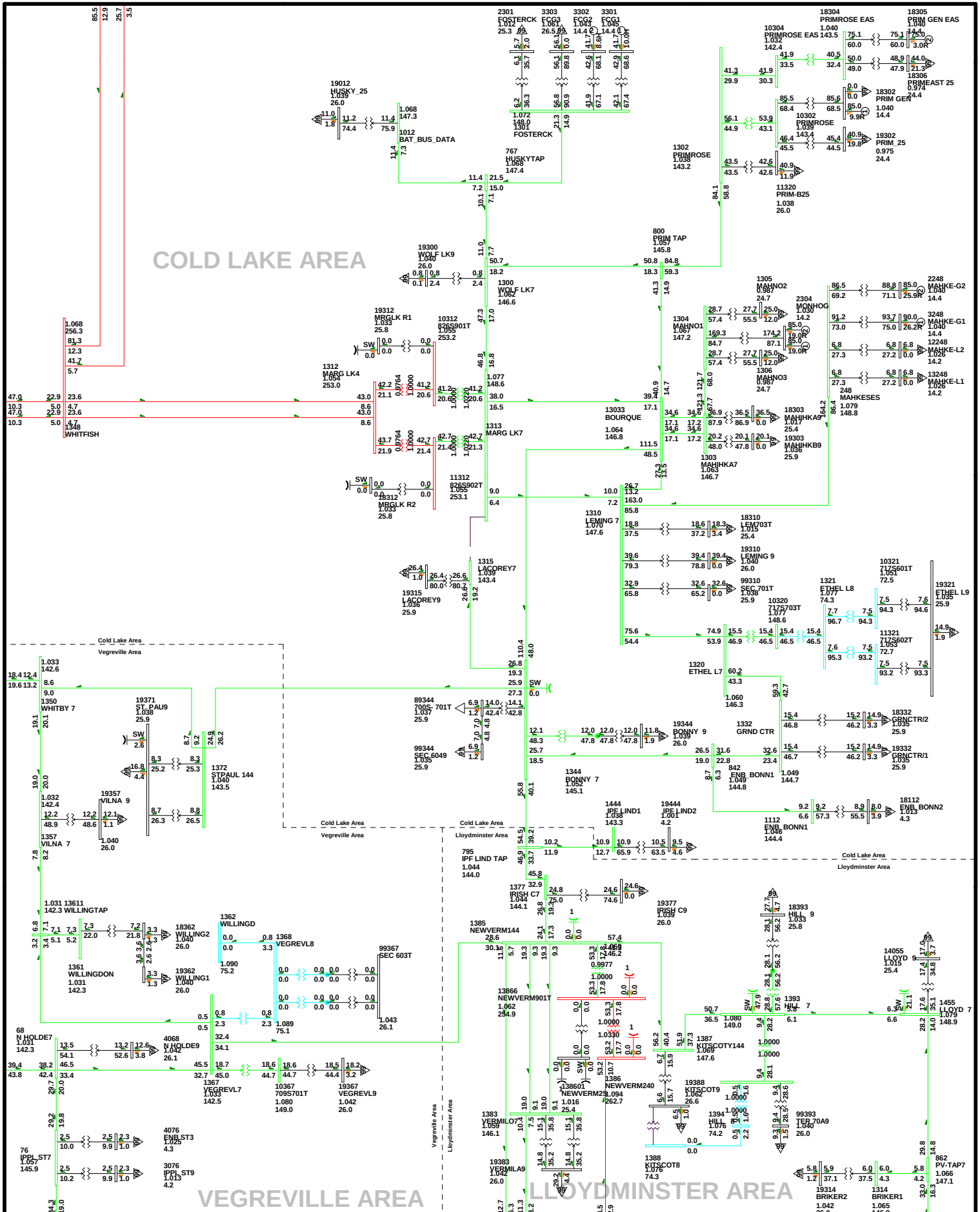
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 13:41

2017WP-Alt 2-5.b

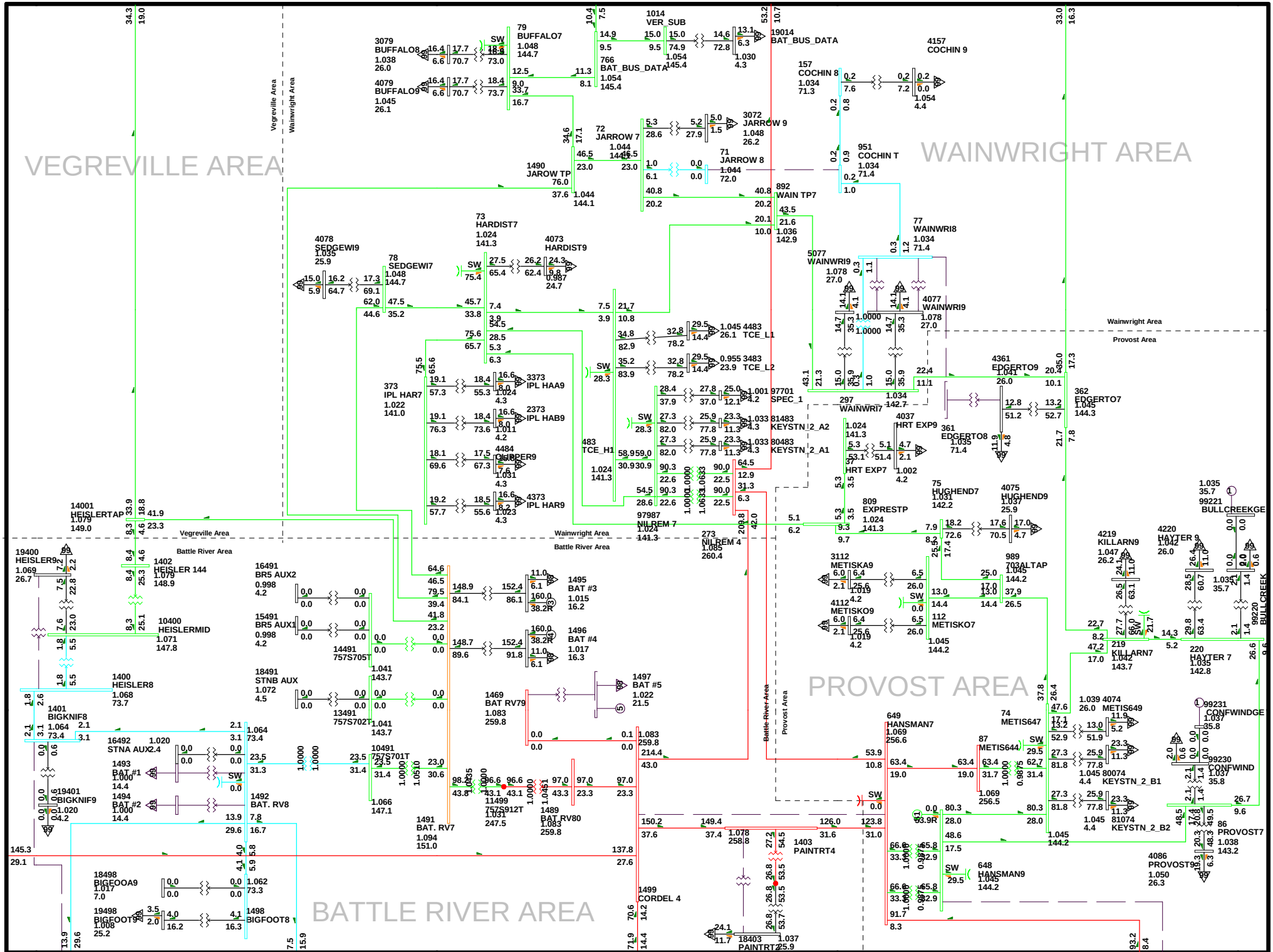
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
THU, APR 08 2010 16:23
D1-06

2017WP-Alt 2-6.a

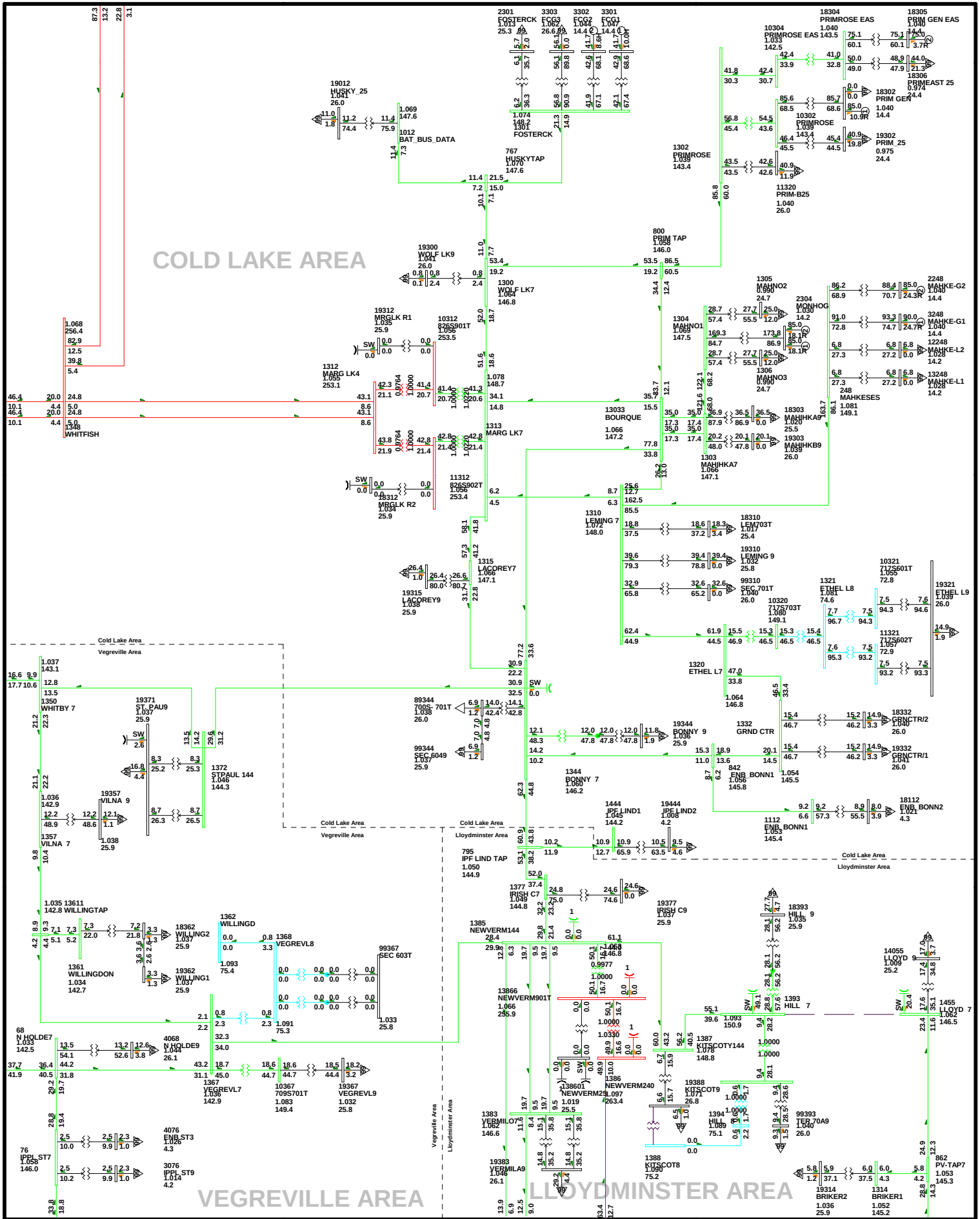
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
THU, APR 08 2010 16:23
D1-06

2017WP-Alt 2-6.b

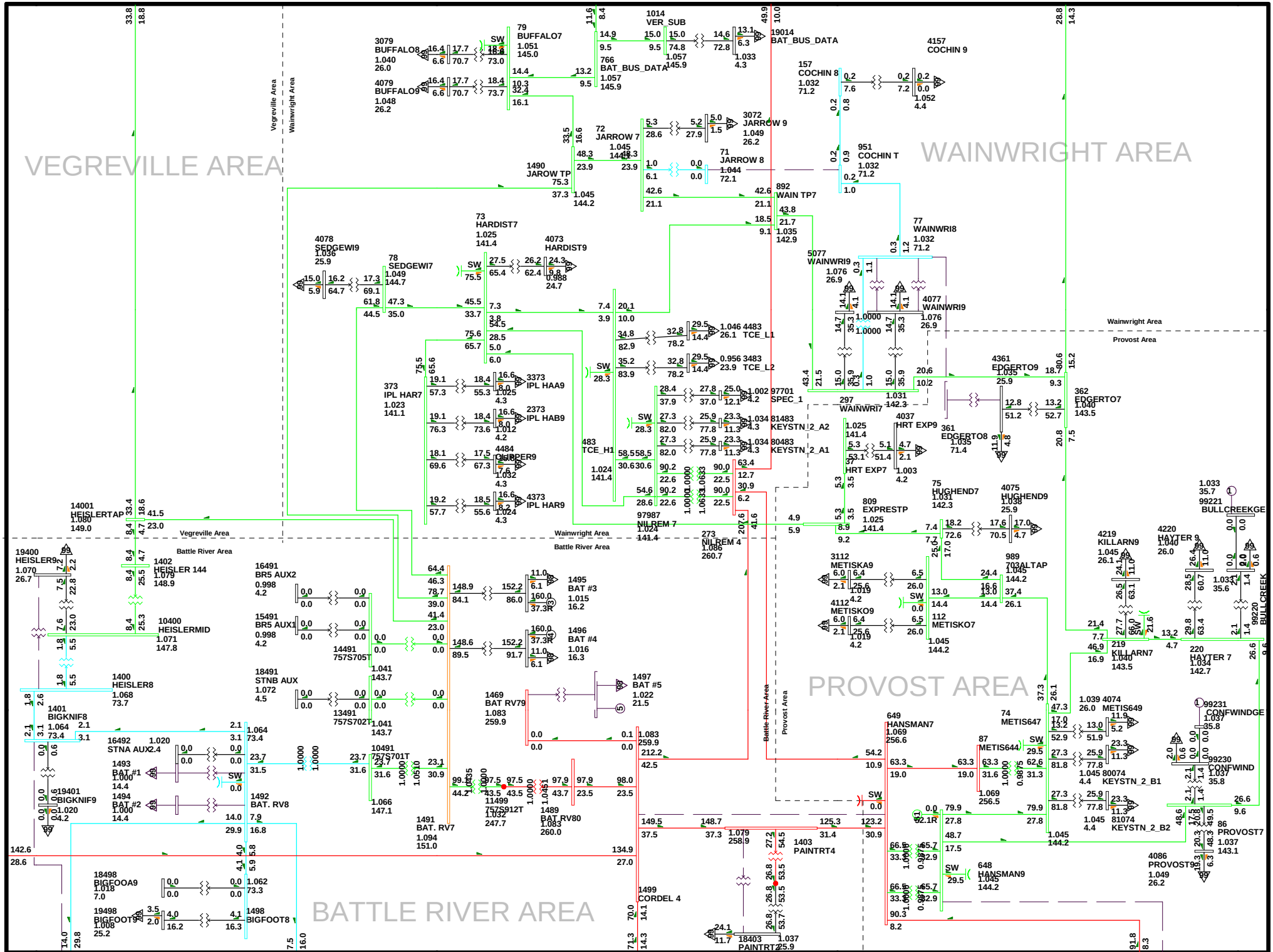
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
THU, APR 08 2010 16:23
D1-07

2017WP-Alt 2-7.a

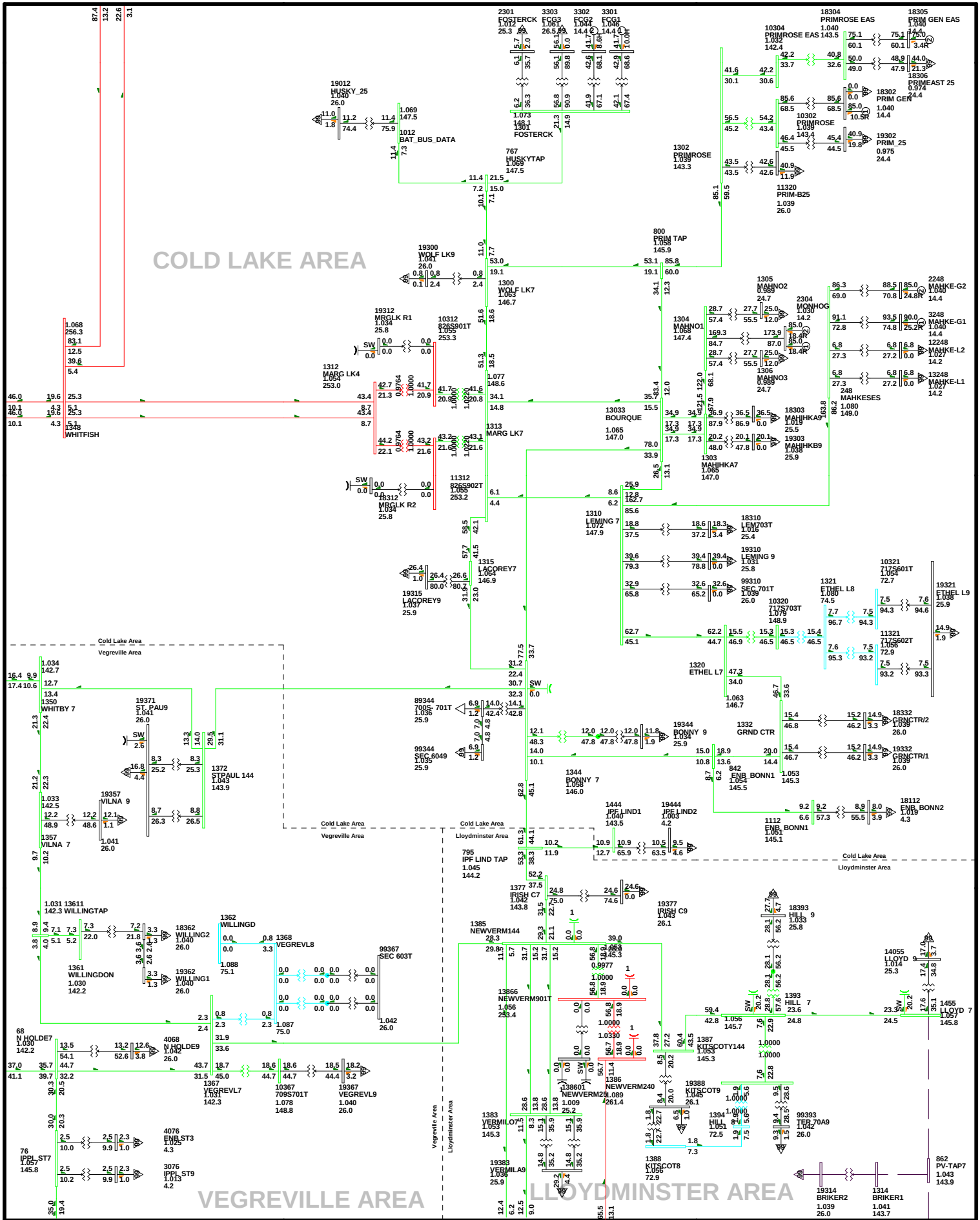
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
THU, APR 08 2010 16:23
D1-07

2017WP-Alt 2-7.b

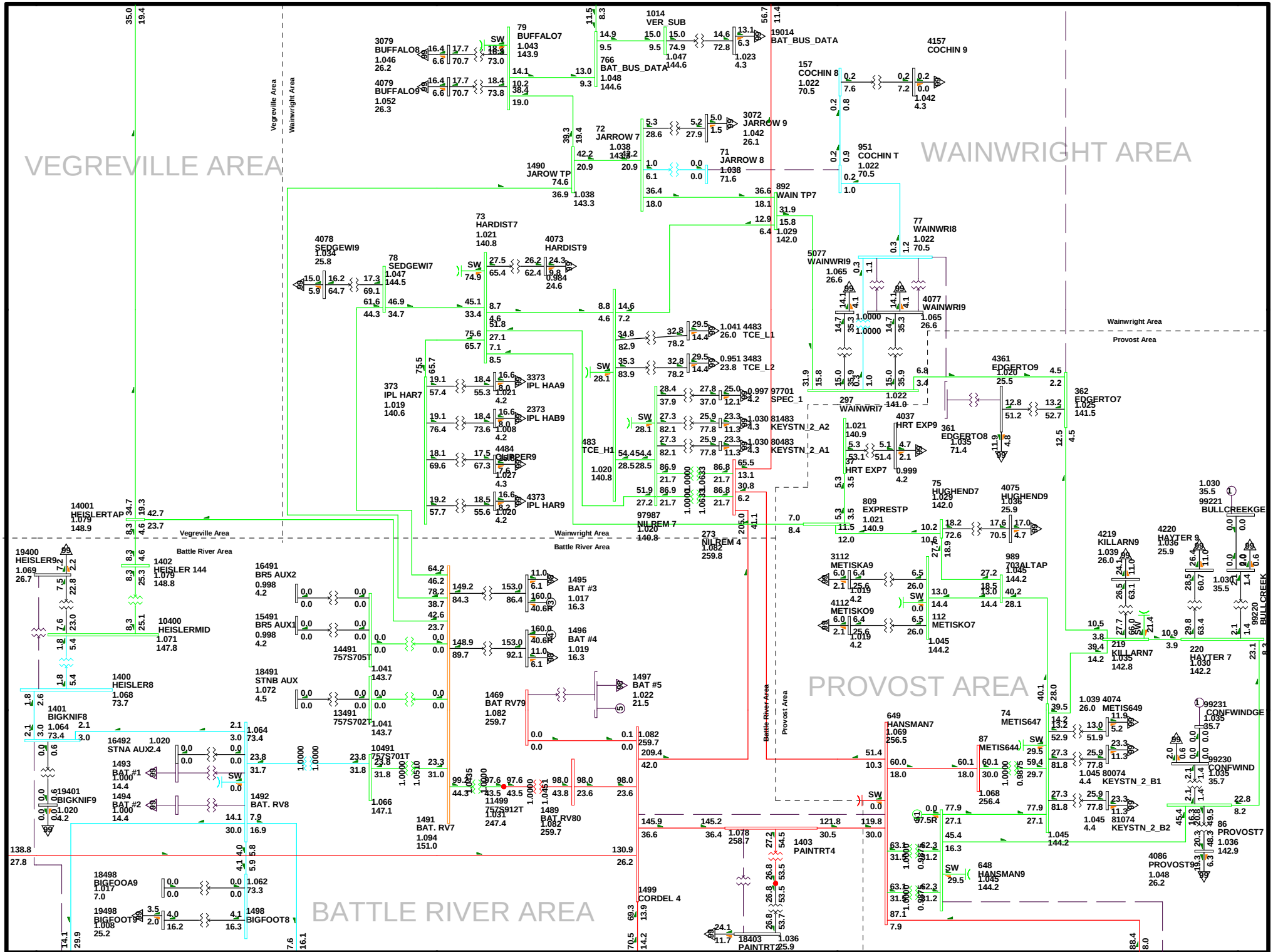
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 13:43

2017WP-Alt 2-8.a

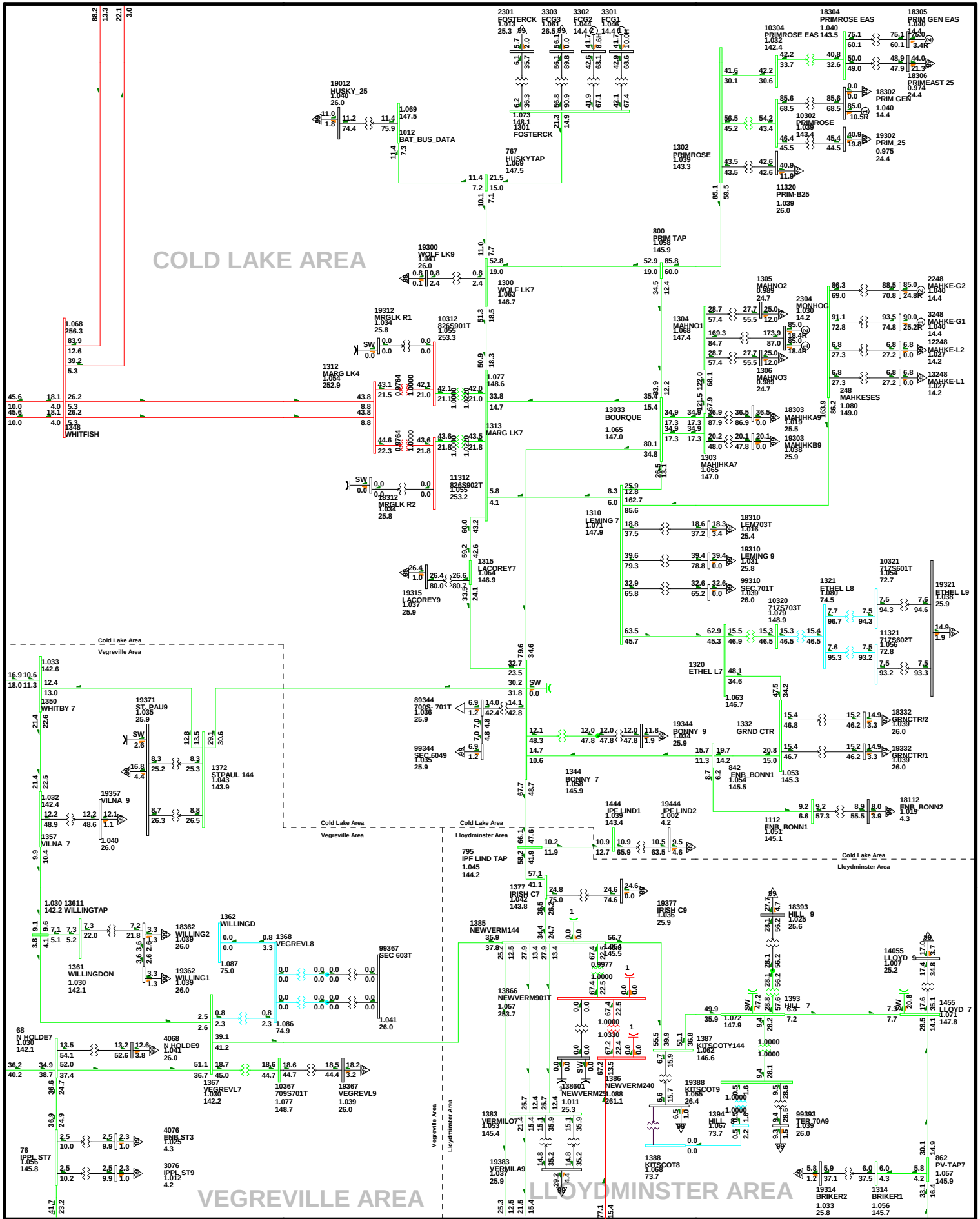
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 13:43

2017WP-Alt 2-8.b

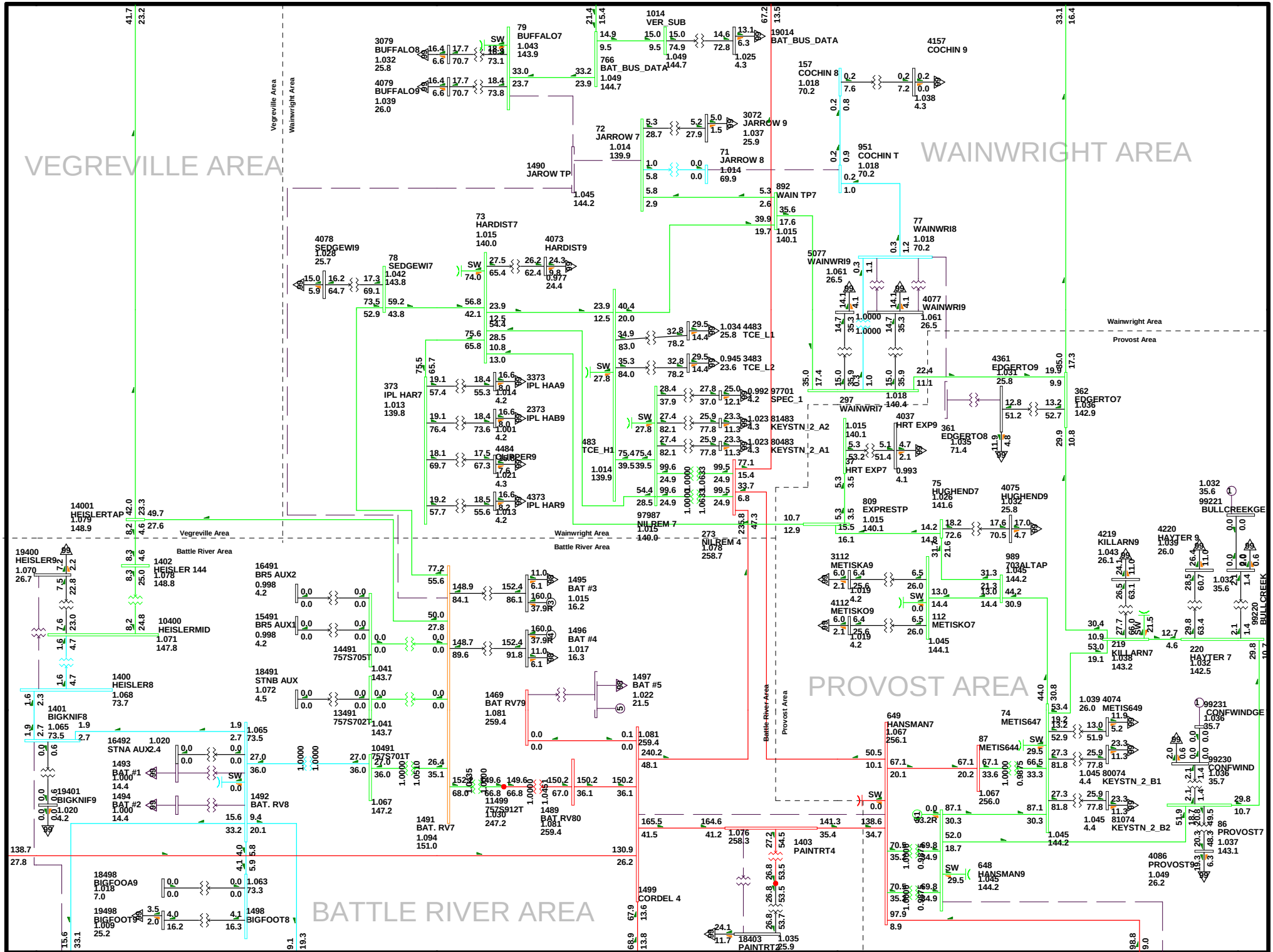
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
THU, APR 08 2010 16:23
D1-09

2017WP-Alt 2-9.a

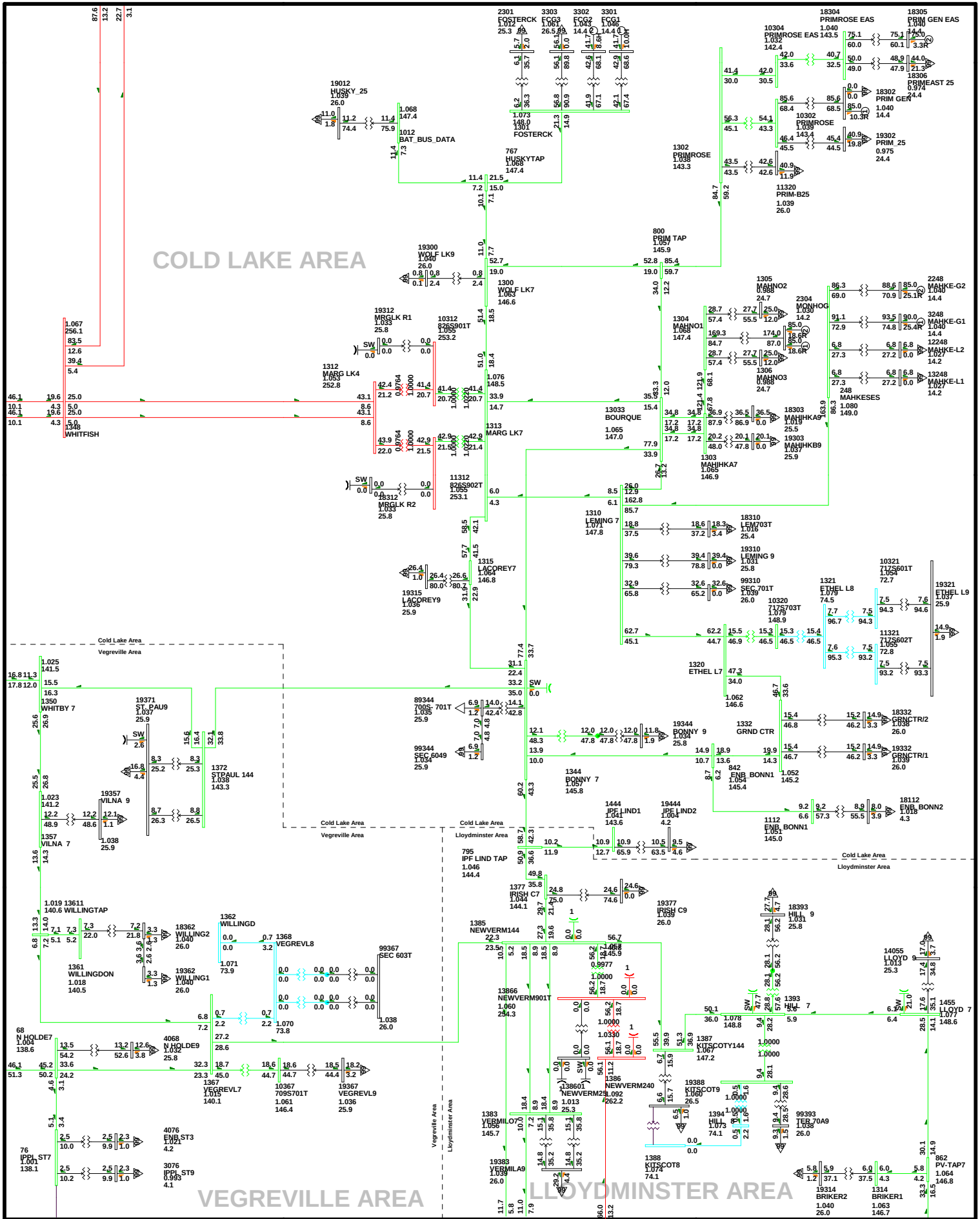
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
THU, APR 08 2010 16:23
D1-09

2017WP-Alt 2-9.b

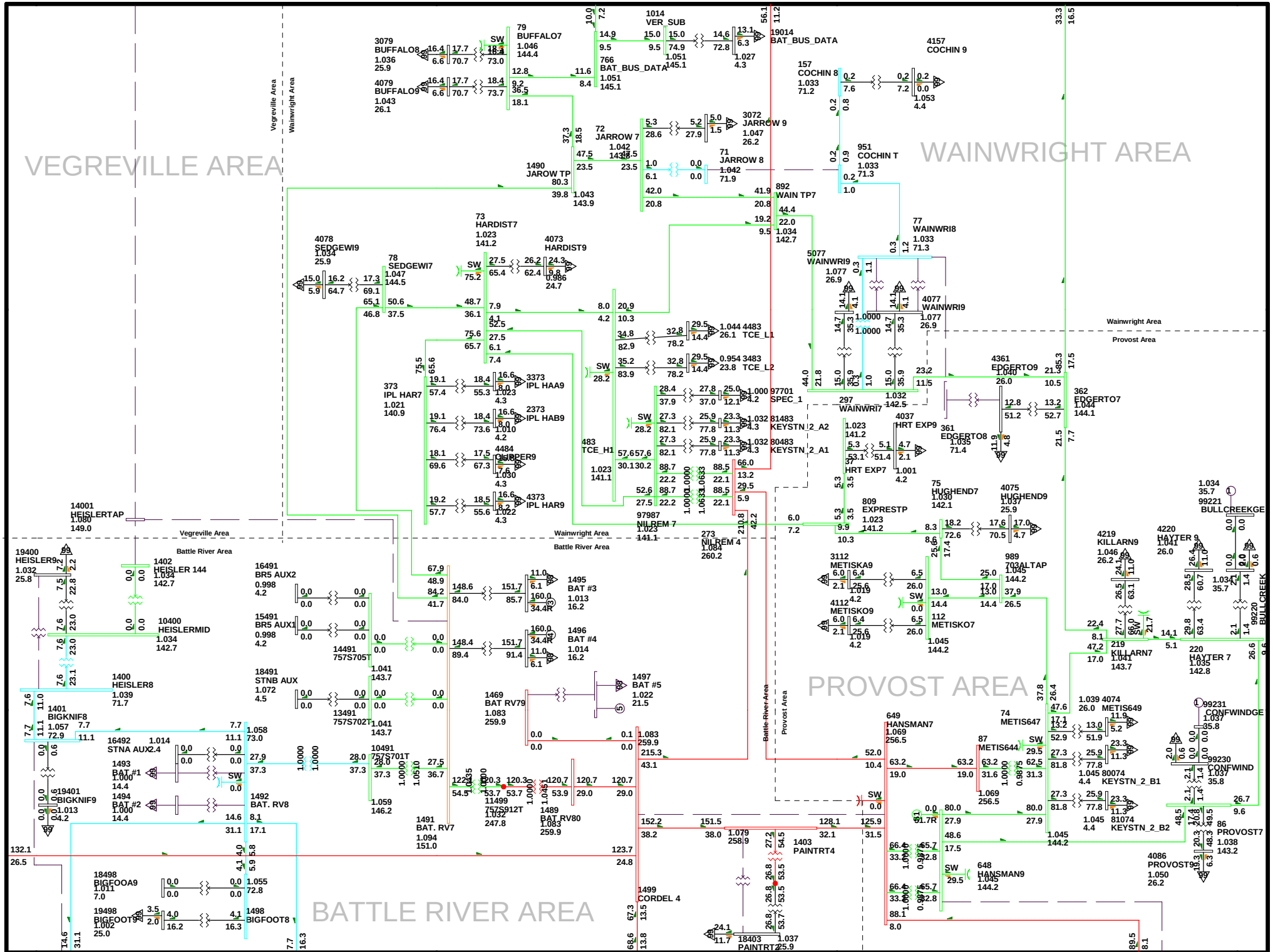
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
THU, APR 08 2010 16:24
D1-10

2017WP-Alt 2-10.a

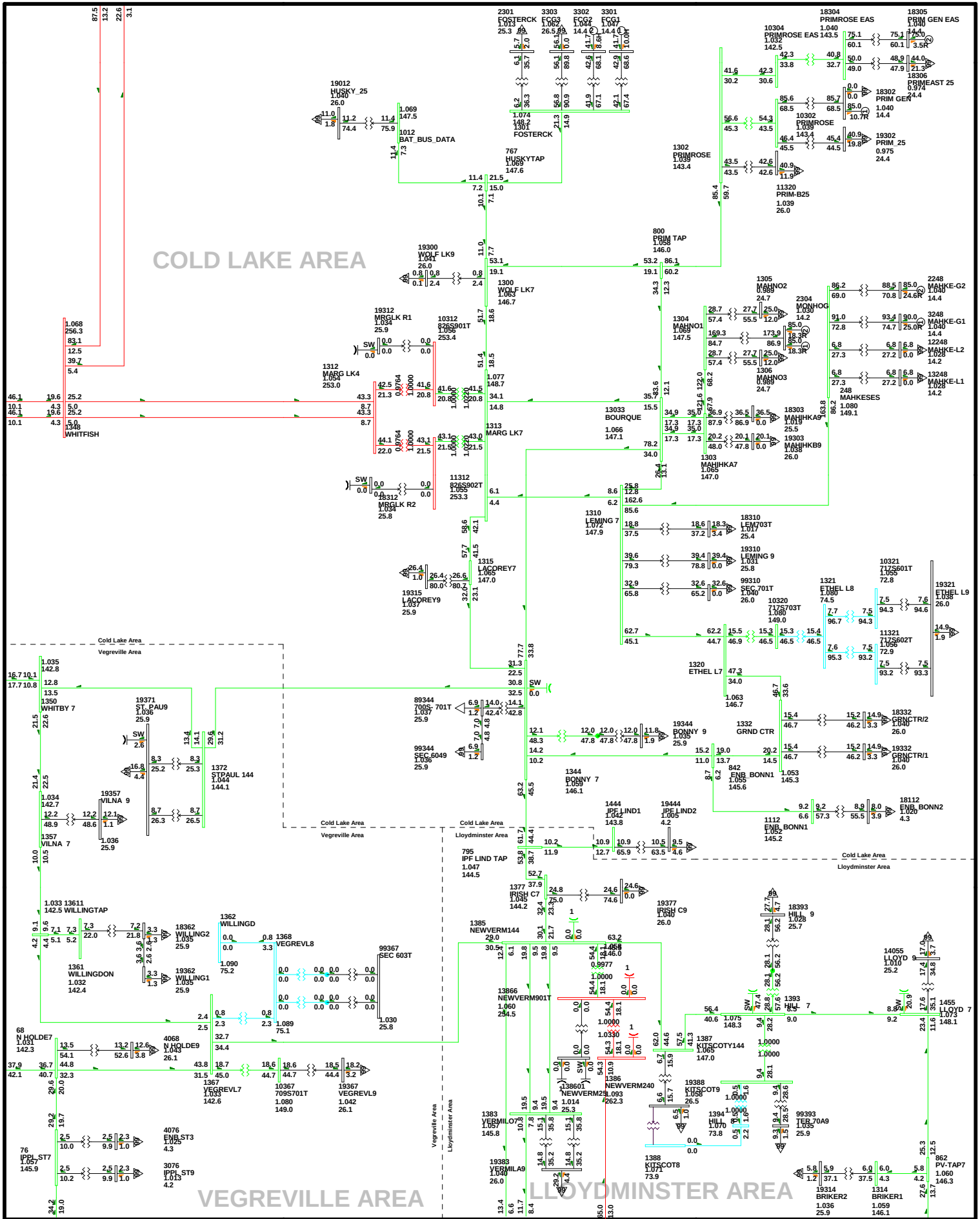
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
THU, APR 08 2010 16:24
D1-10

2017WP-Alt 2-10.b

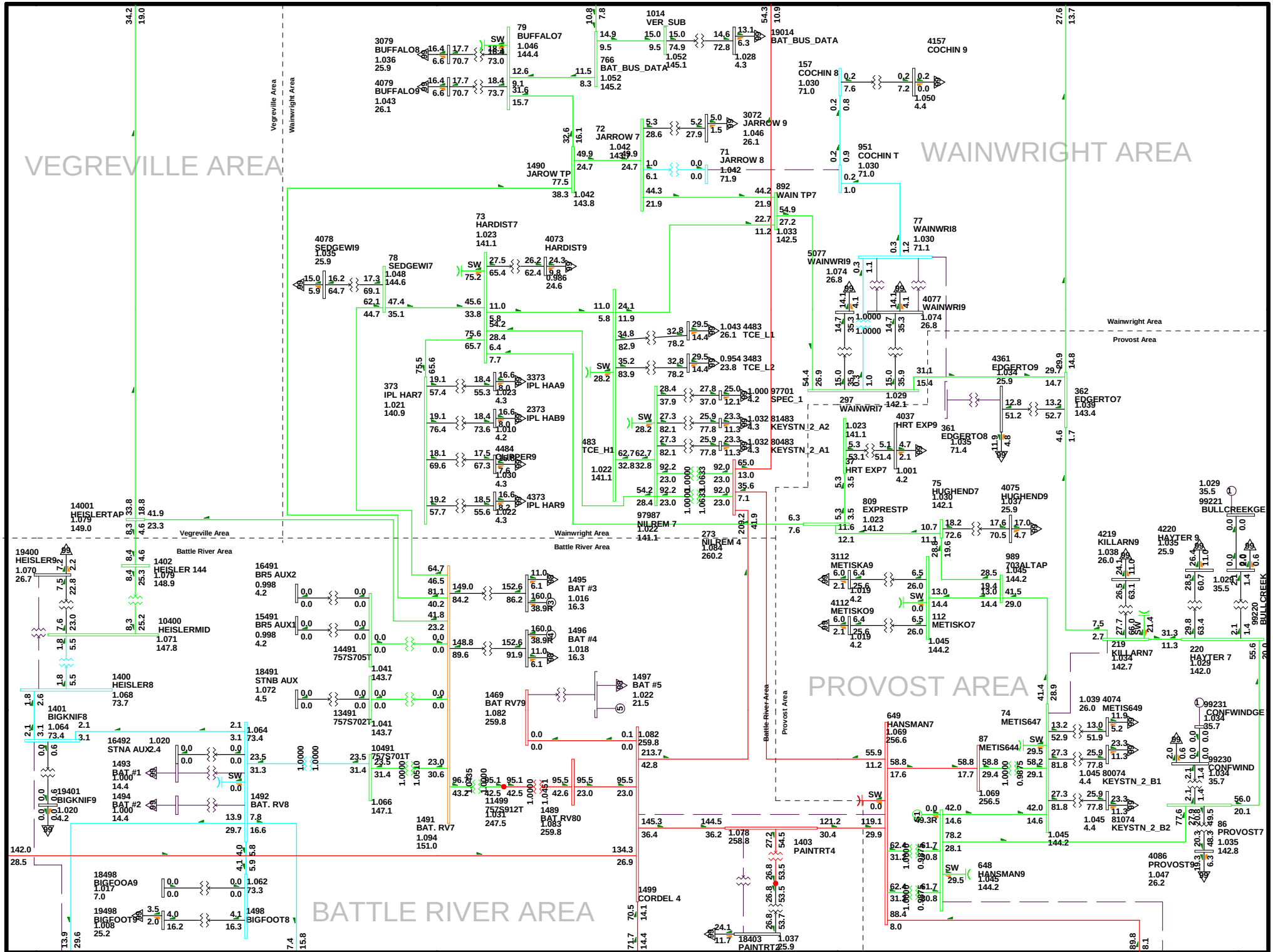
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
THU, APR 08 2010 16:24
D1-11

2017WP-Alt 2-11.a

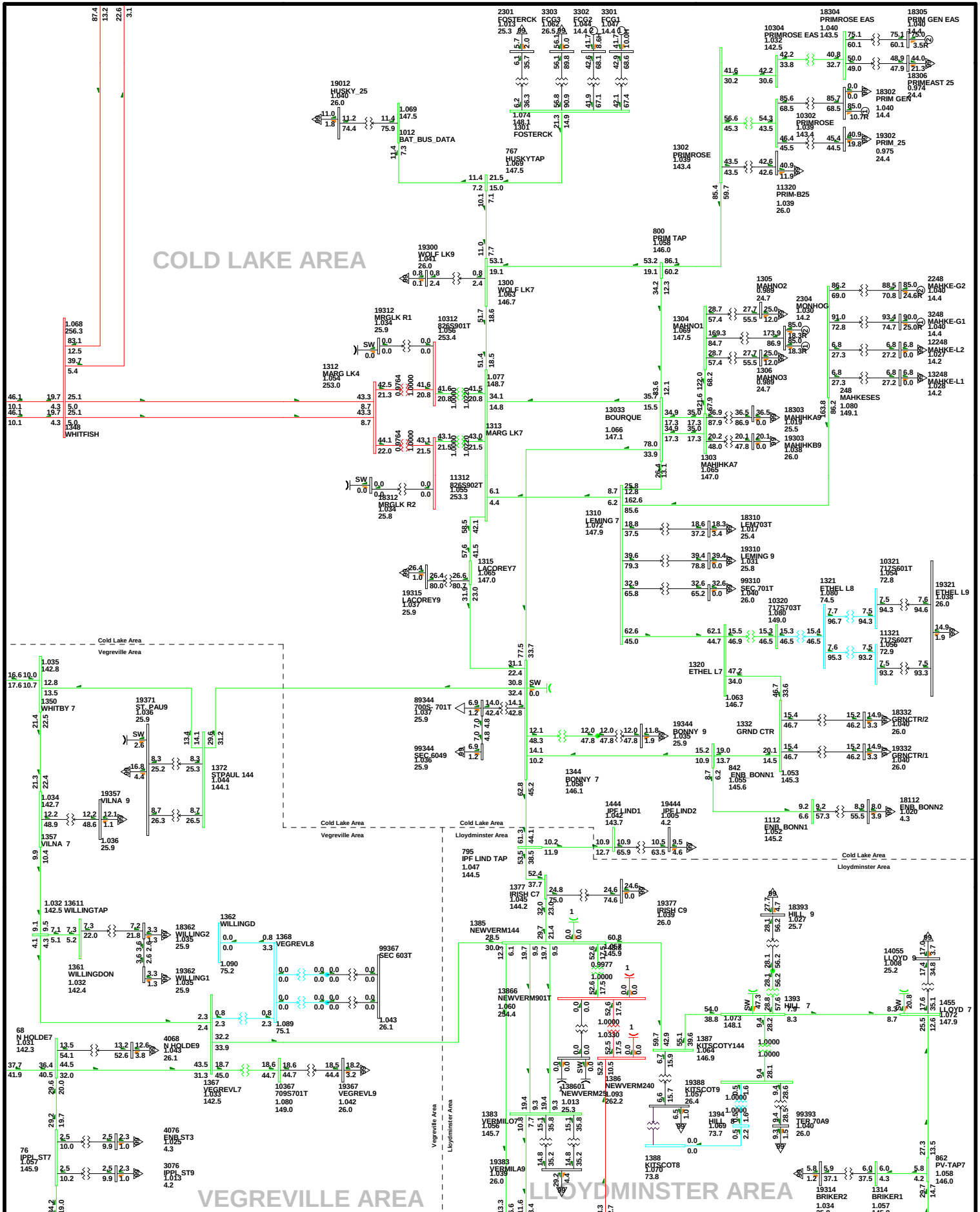
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
THU, APR 08 2010 16:24
D1-11

2017WP-Alt 2-11.b

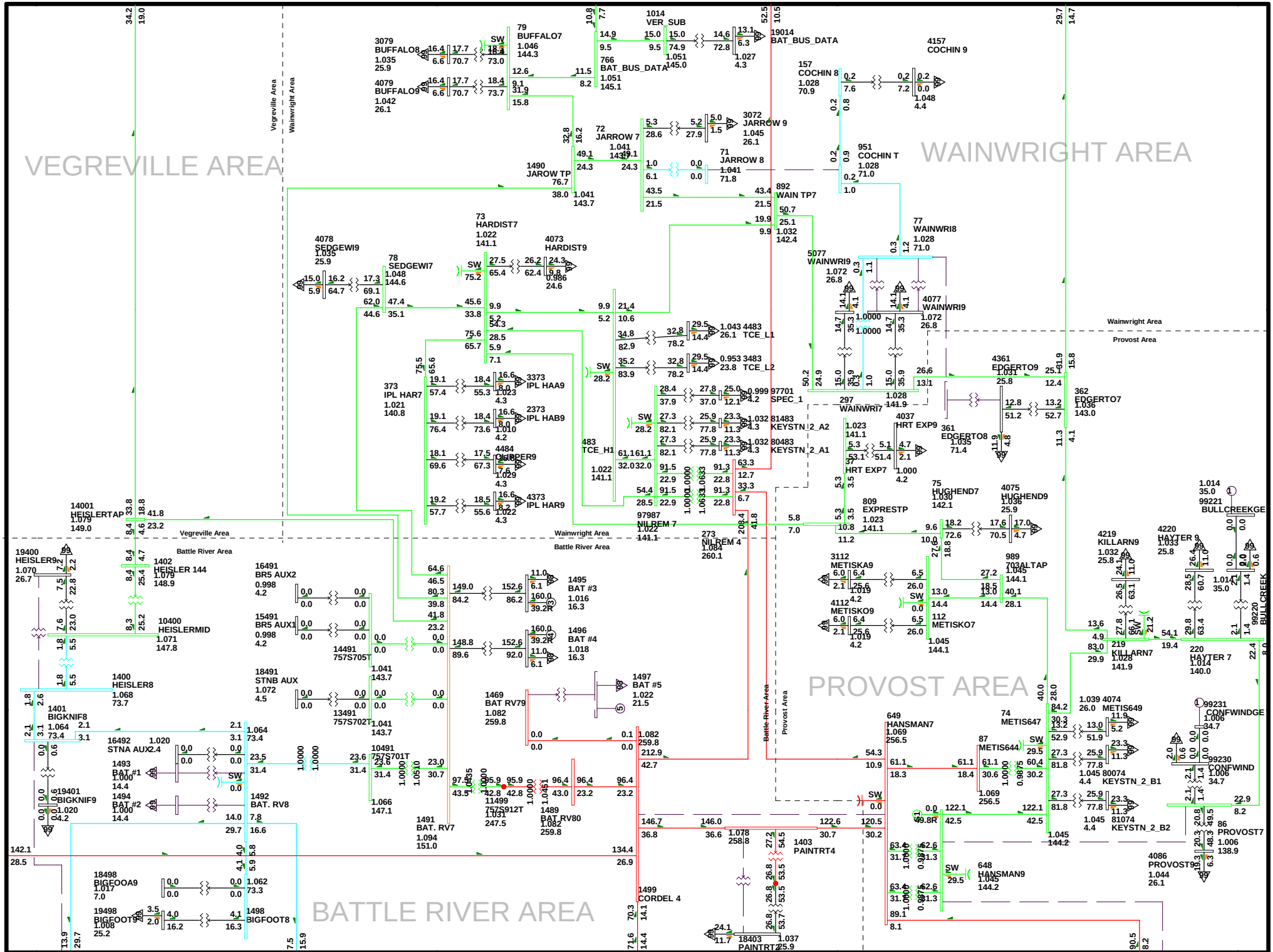
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
THU, APR 08 2010 16:24
D1-12

2017WP-Alt 2-12.a

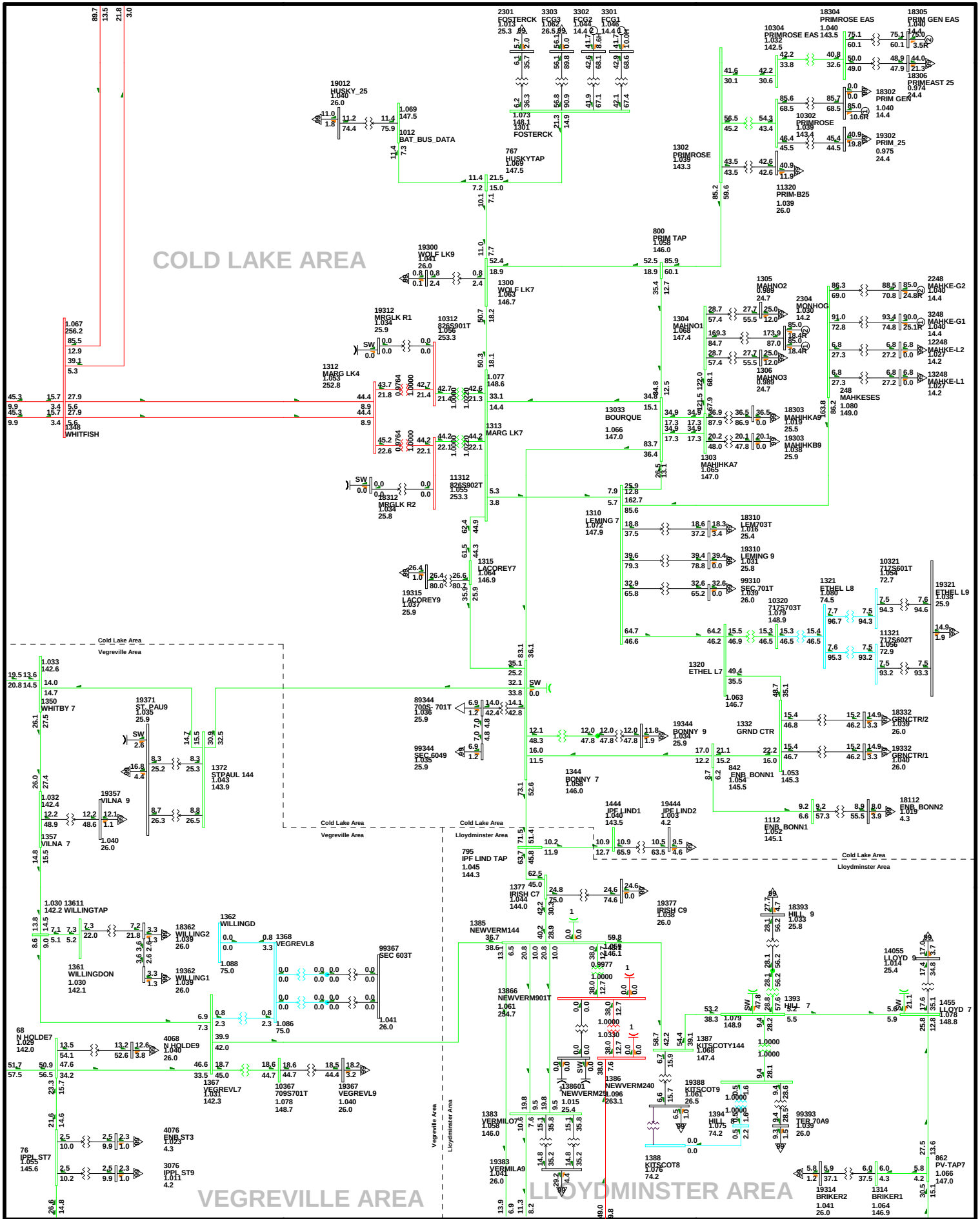
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
THU, APR 08 2010 16:24
D1-12

2017WP-Alt 2-12.b

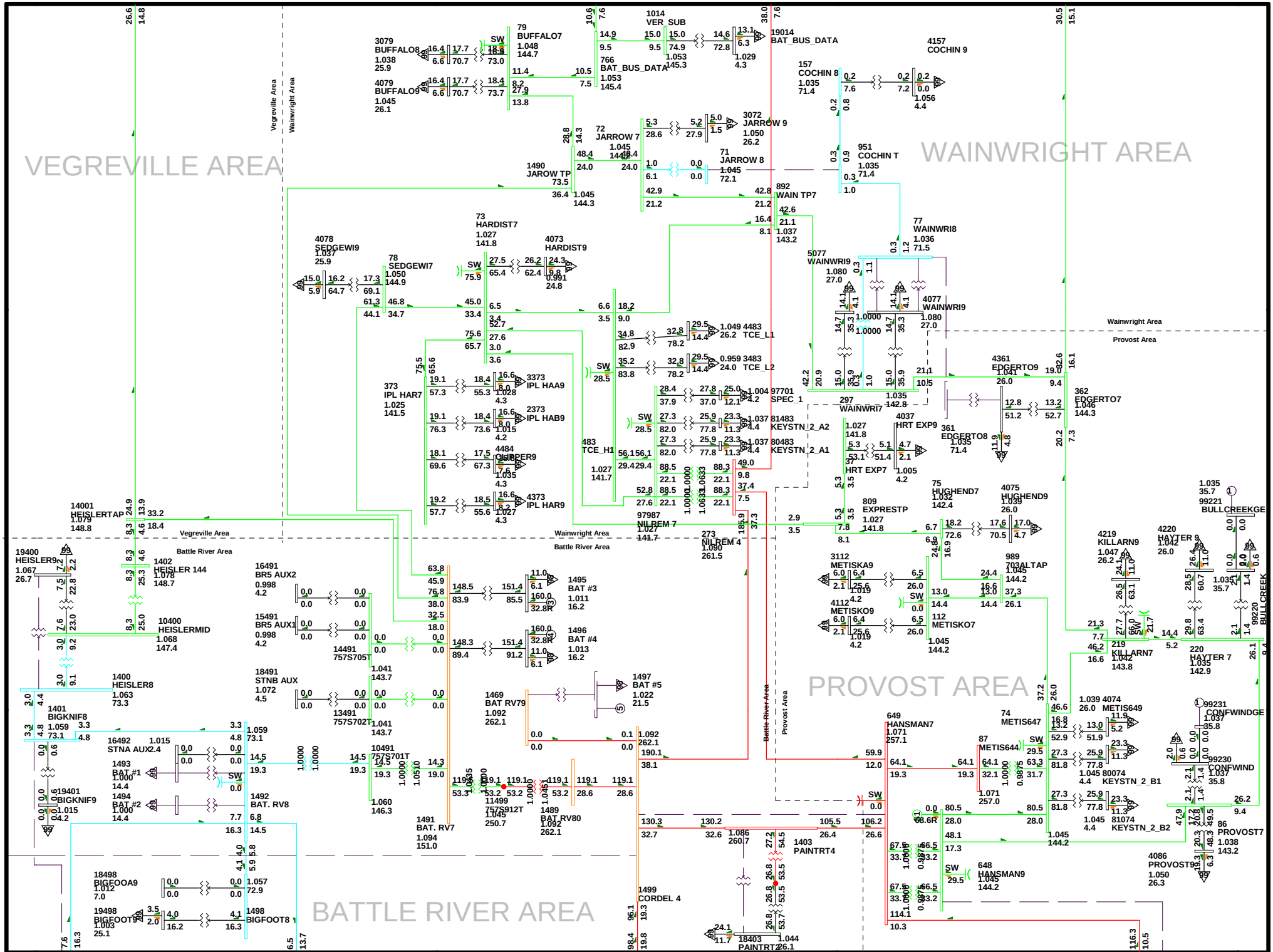
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
THU, APR 08 2010 16:24
D1-14

2017WP-Alt 2-13.a

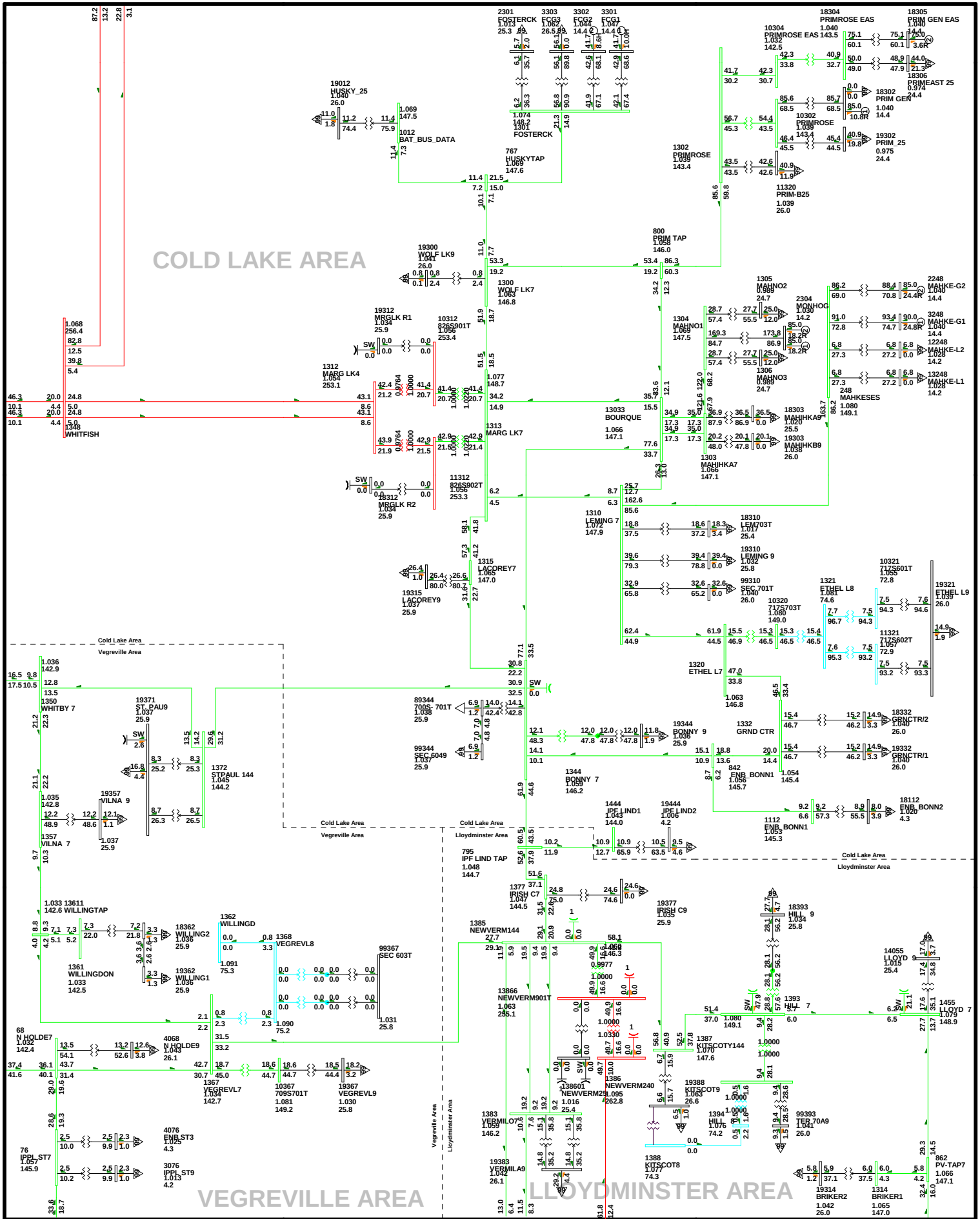
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
THU, APR 08 2010 16:24
D1-14

2017WP-Alt 2-13.b

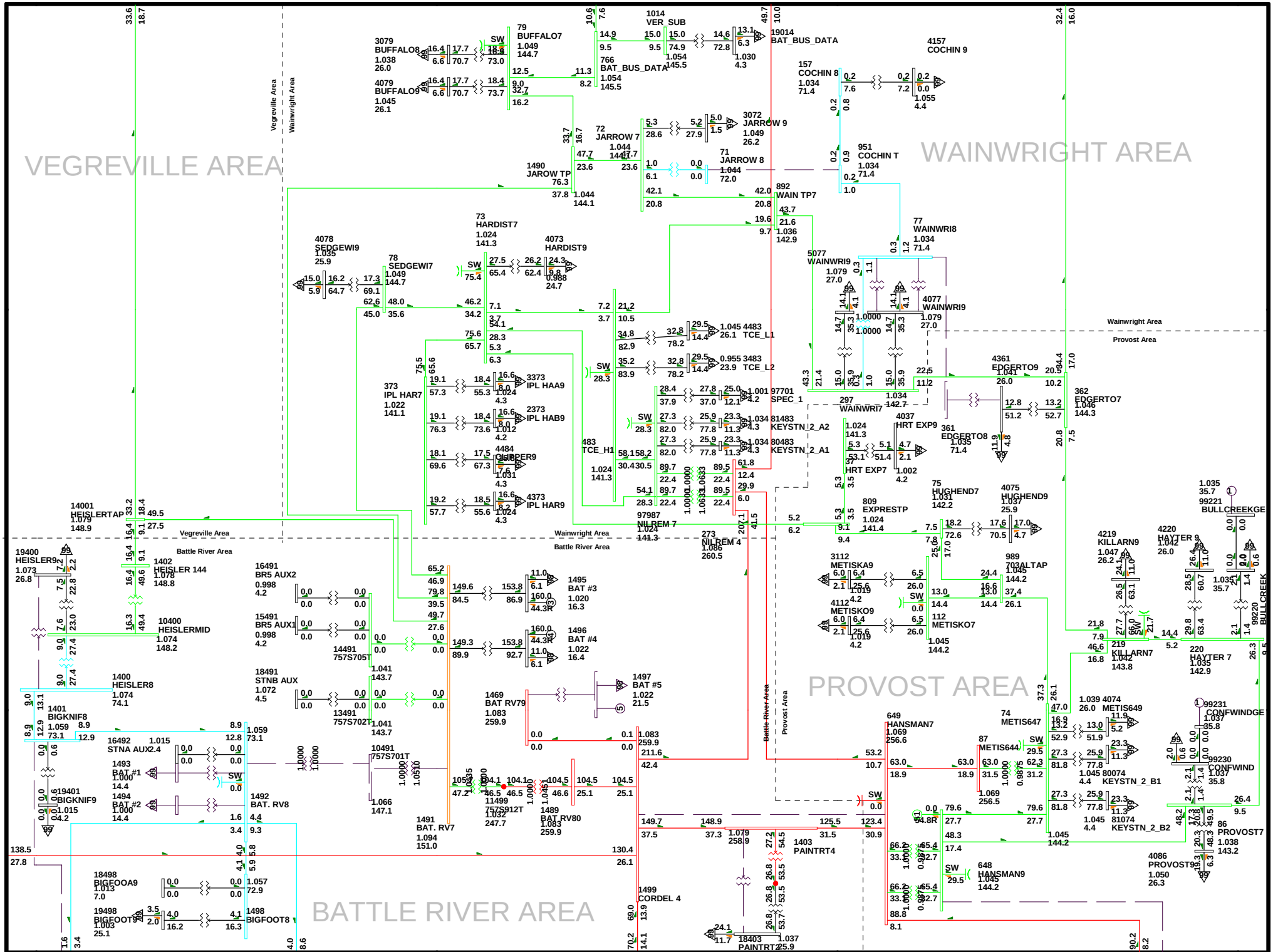
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
THU, APR 08 2010 16:24
D1-15

2017WP-Alt 2-14.a

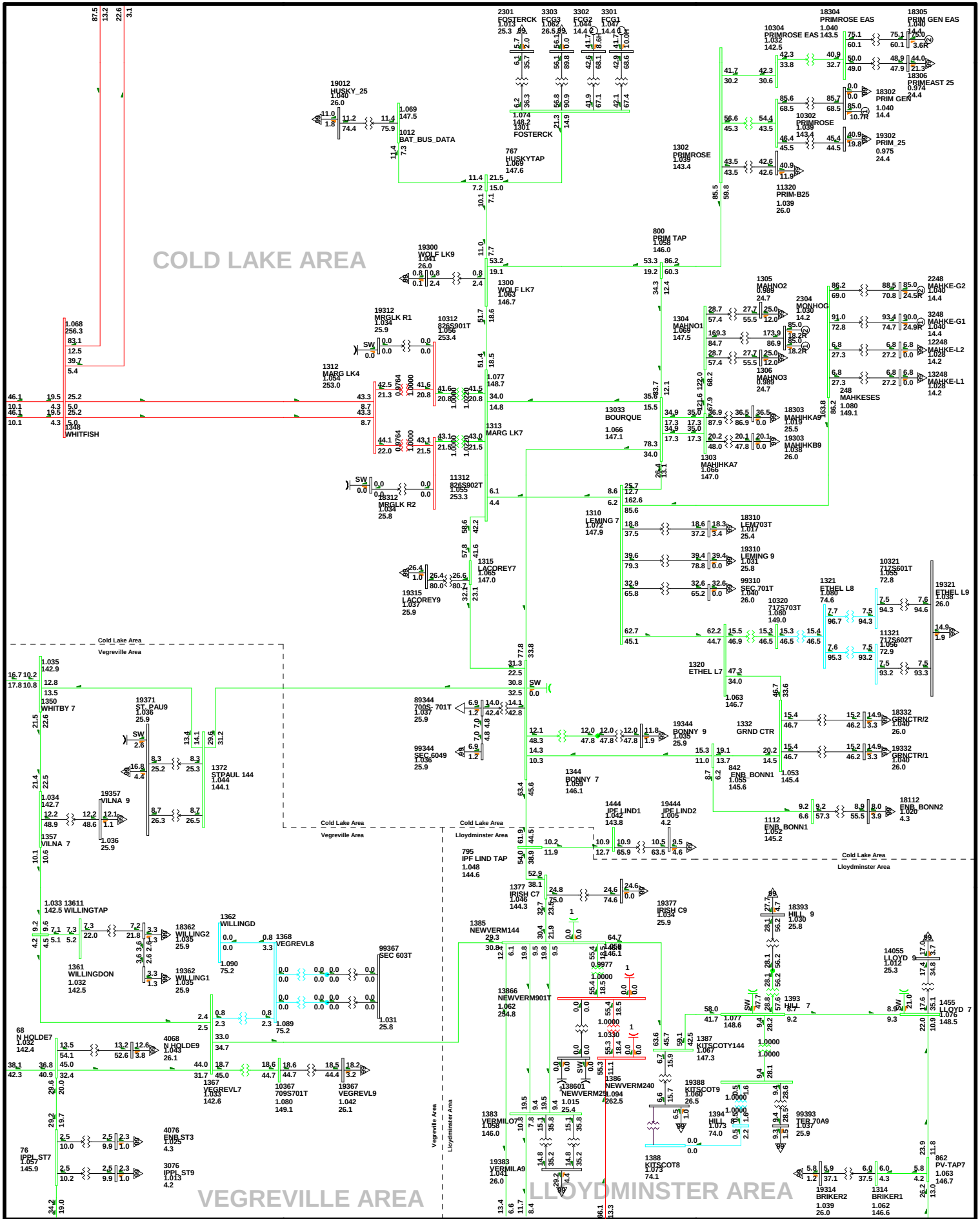
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
THU, APR 08 2010 16:24
D1-15

2017WP-Alt 2-14.b

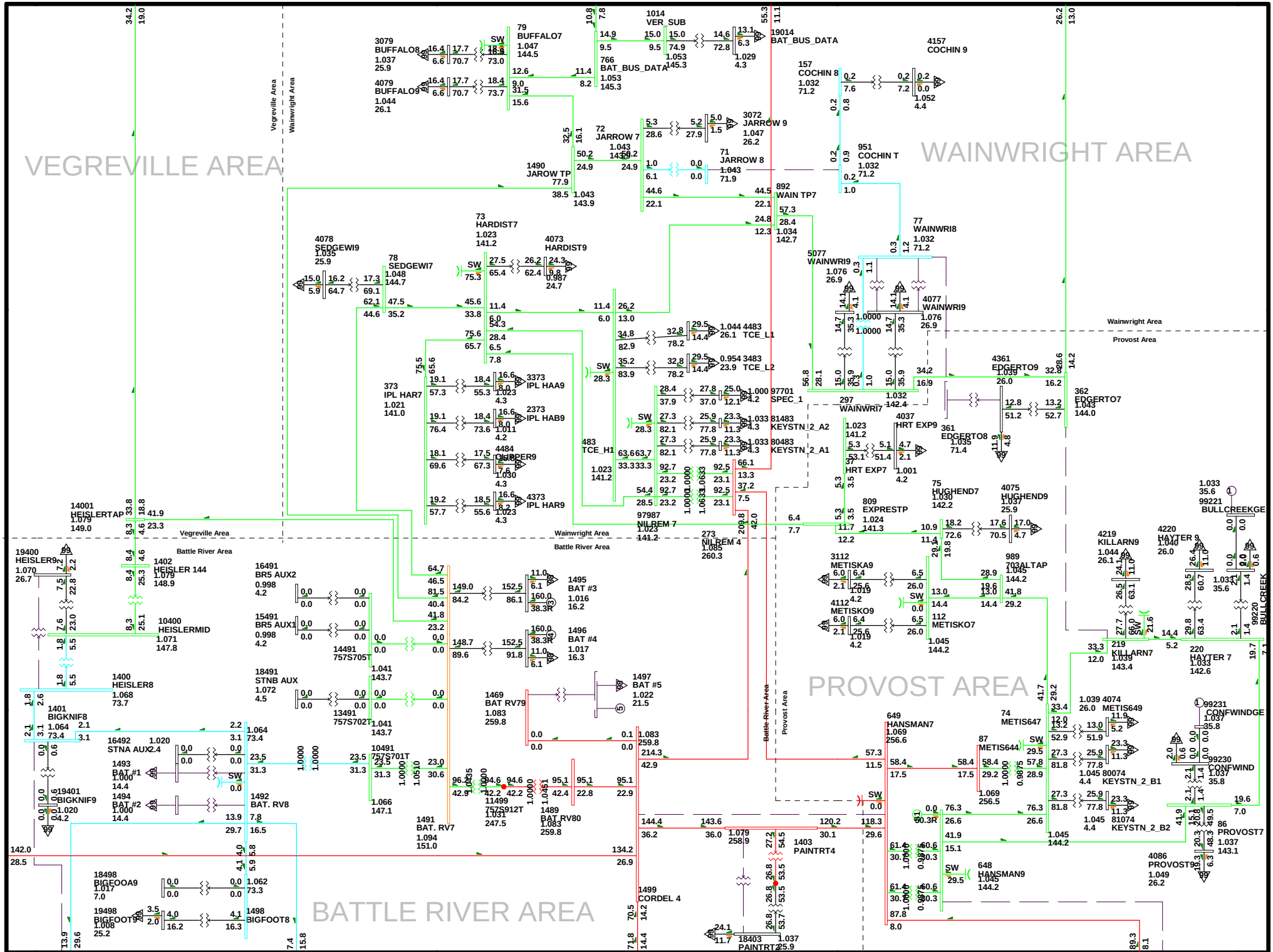
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
THU, APR 08 2010 16:24
D1-16

2017WP-Alt 2-15.a

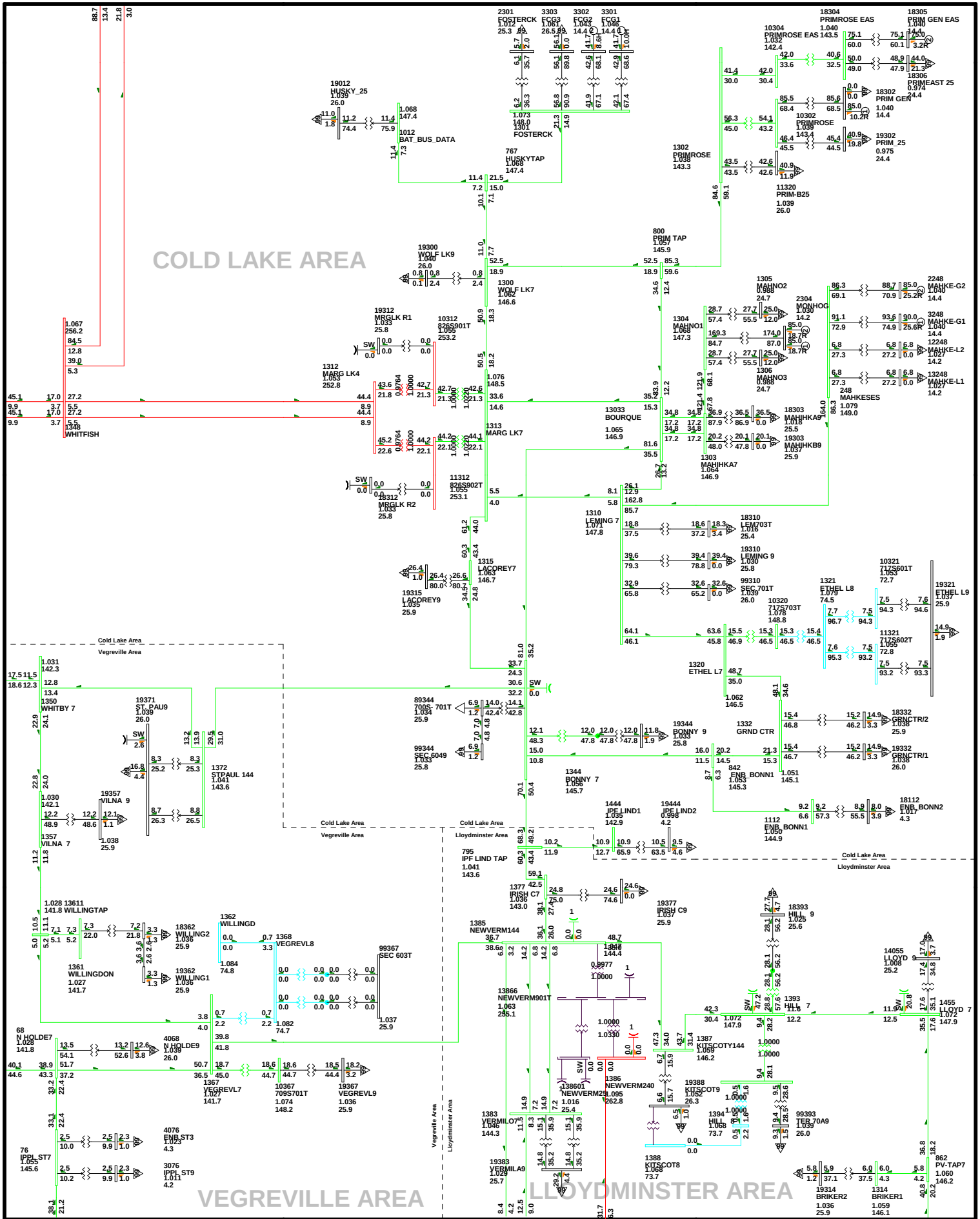
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
THU, APR 08 2010 16:24
D1-16

2017WP-Alt 2-15.b

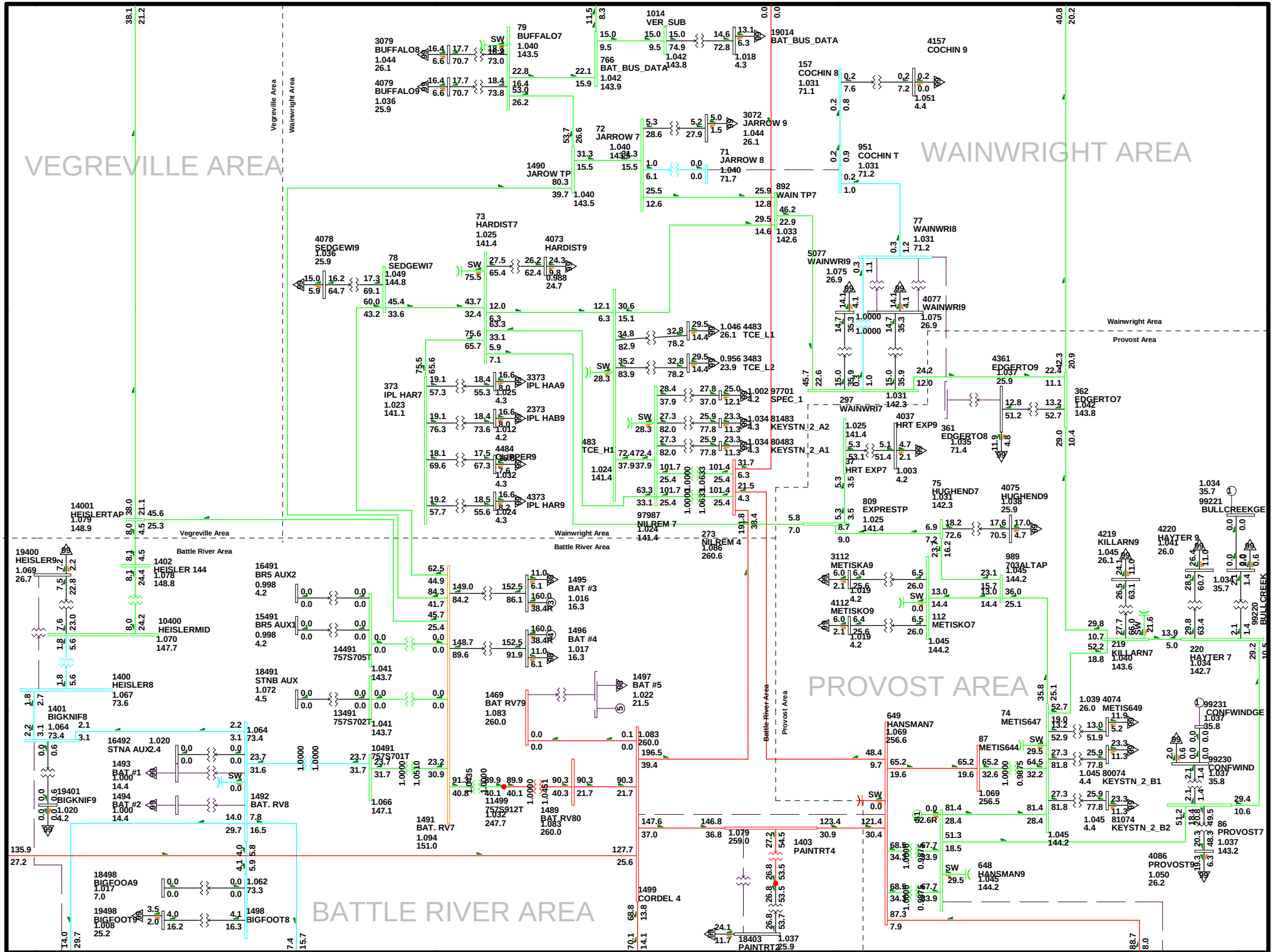
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
THU, APR 08 2010 16:24
D1-17

2017WP-Alt 2-16.a

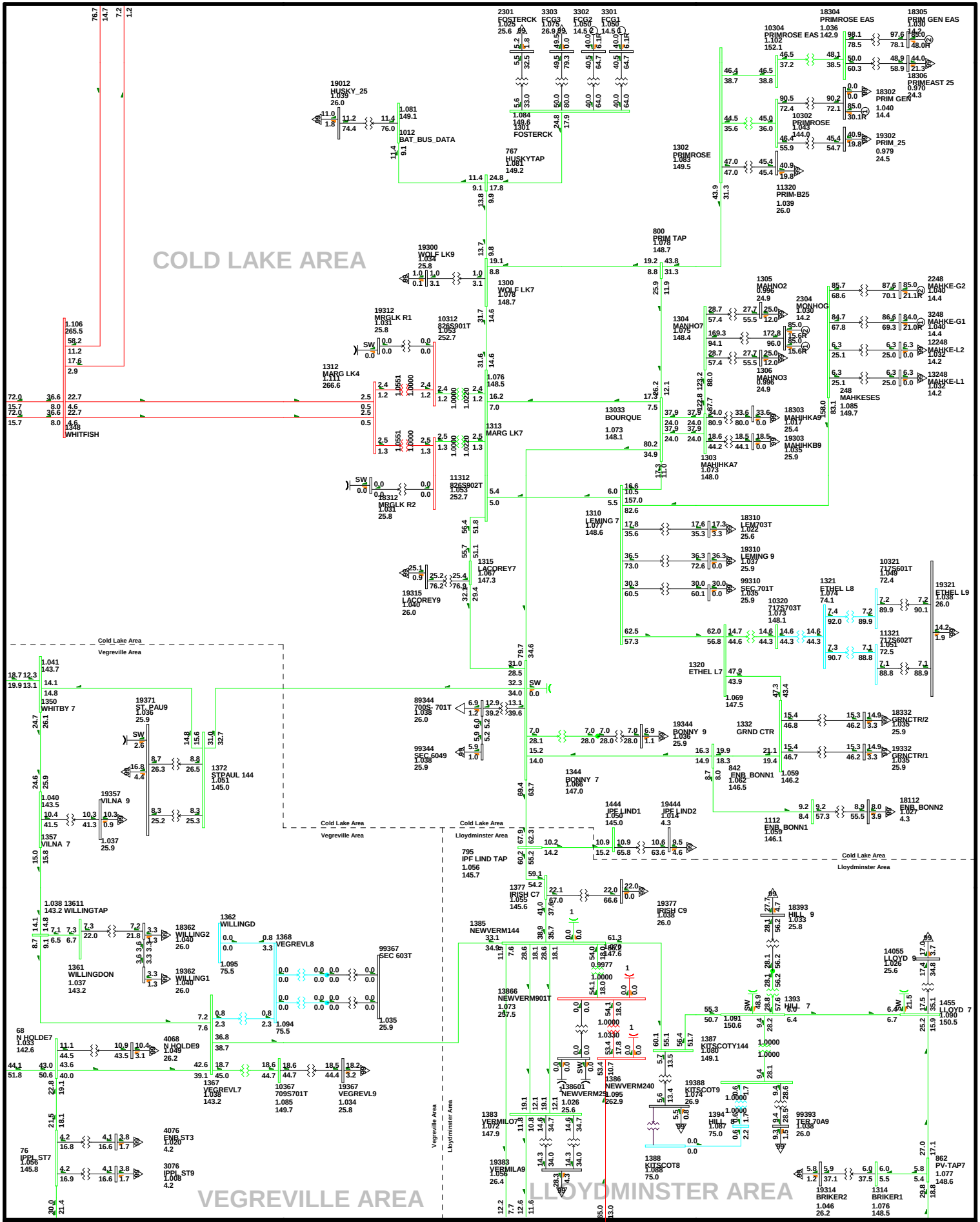
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
THU, APR 08 2010 16:24
D1-17

2017WP-Alt 2-16.b

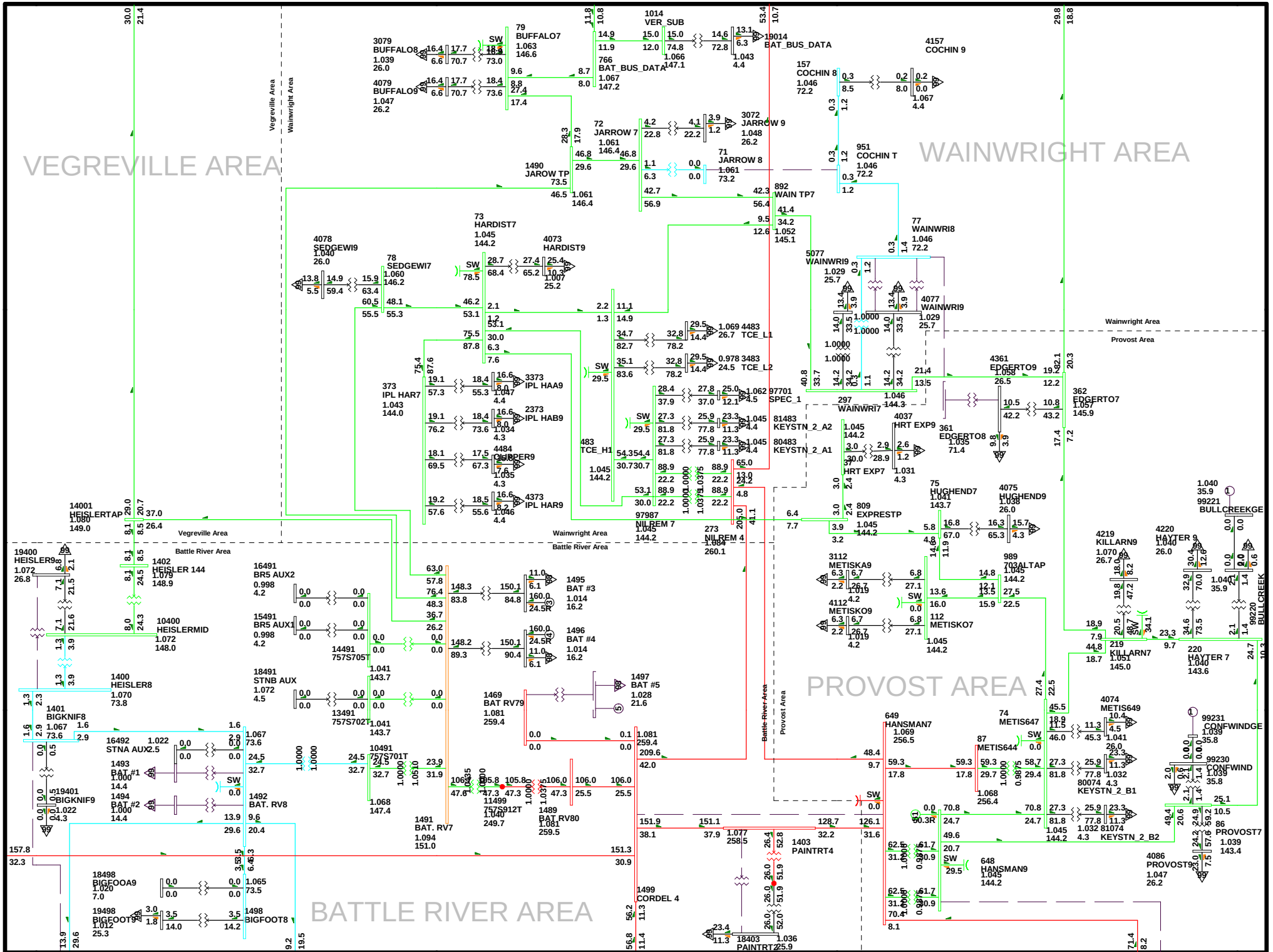
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

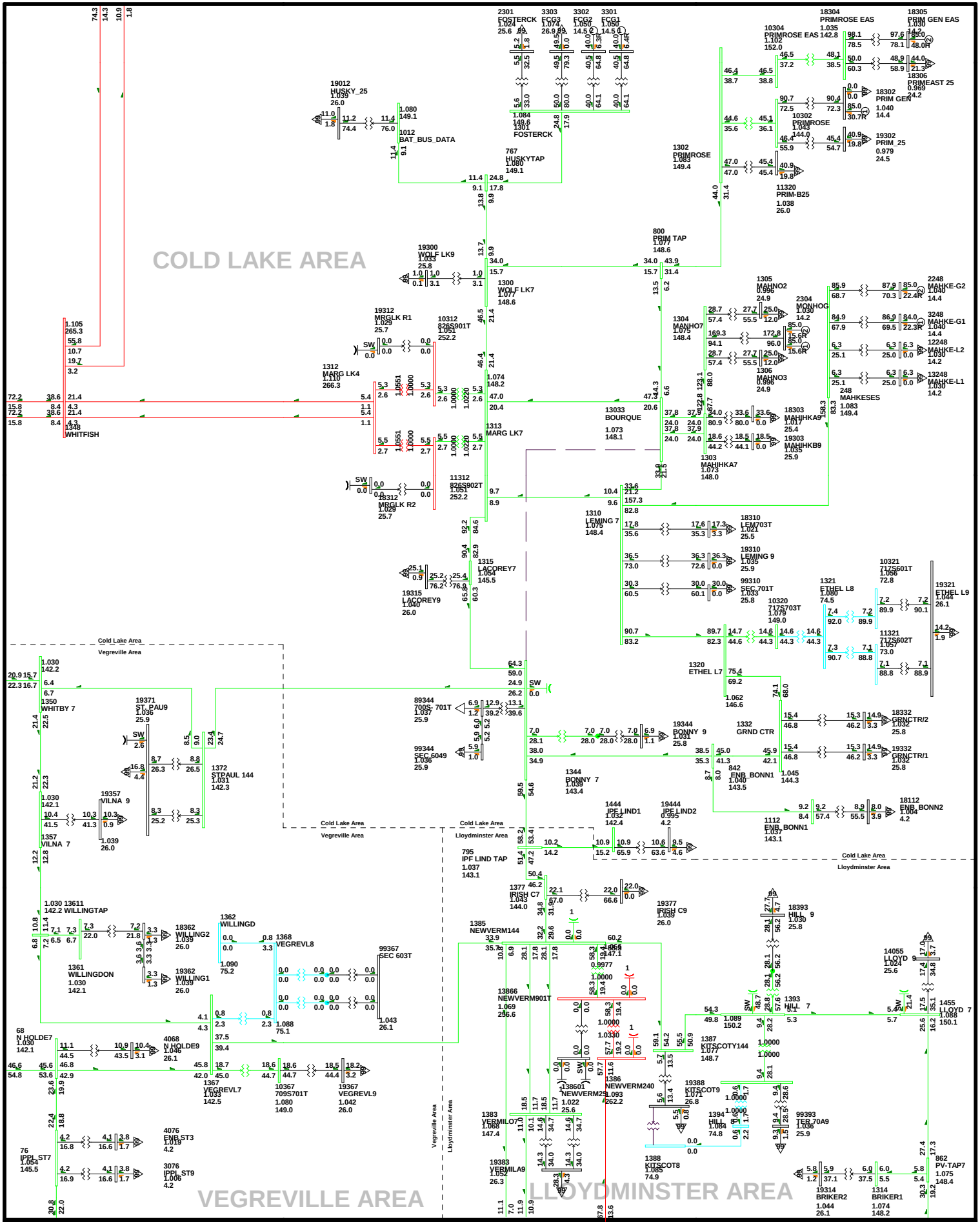


CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
THU, APR 08 2010 16:29
D1-00

2017SP-Alt 2-1.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

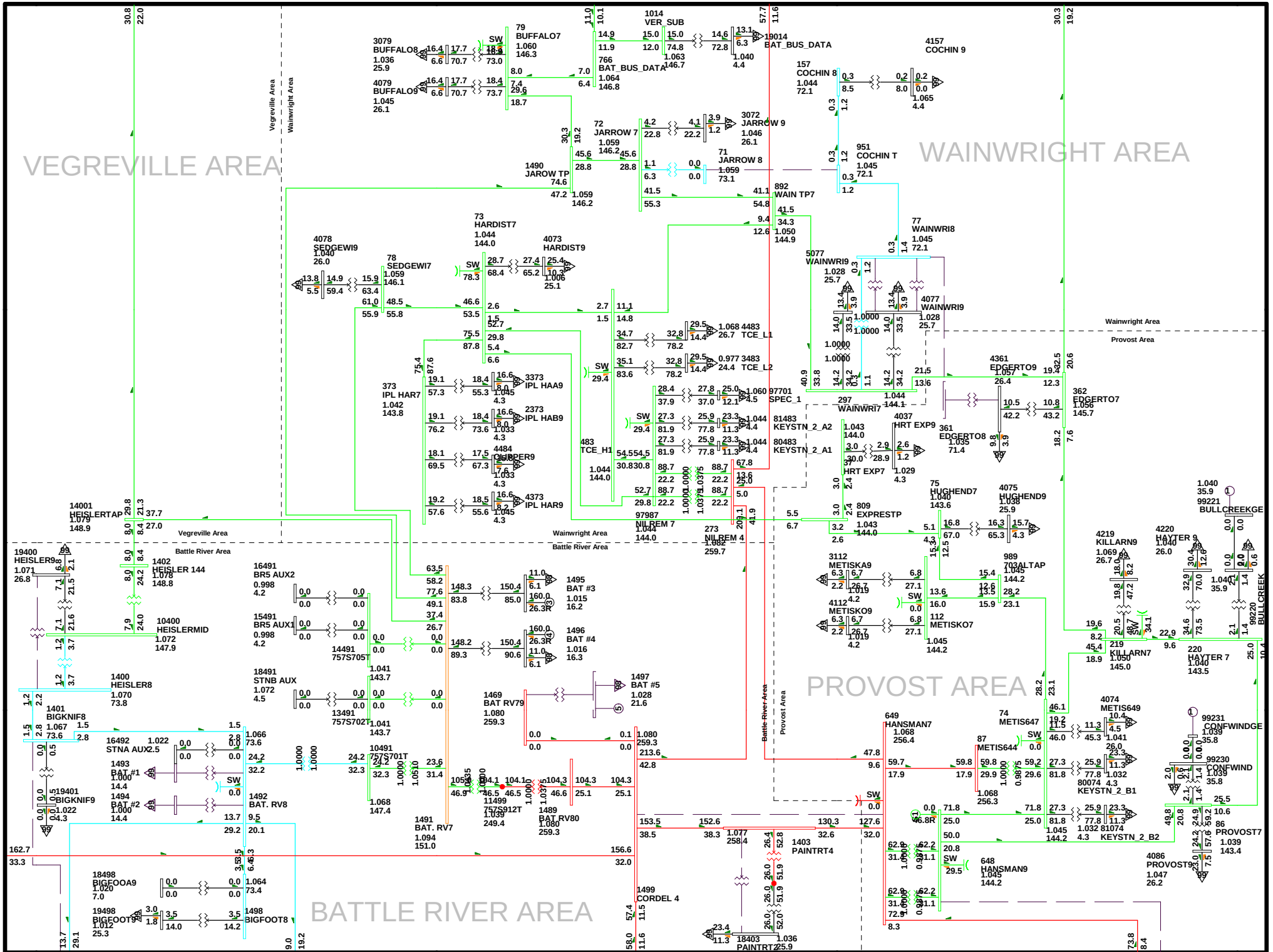

VEGREVILLE AREA
WAINWRIGHT AREA
PROVOST AREA
BATTLE RIVER AREA
Vegreville Area
Wainwright Area
Battle River Area
Provost Area
79 BUFFALO7 1.063 146.6
3079 BUFFALO8 1.039 26.0
4079 BUFFALO9 1.047 26.2
1014 VER_SUB
766 BAT_BUS_DATA 1.067 147.2
19014 BAT_BUS_DATA
4157 COCHIN 9
157 COCHIN 8 1.046 72.2
951 COCHIN T 1.046 72.2
72 JARROW 7 1.061 146.4
3072 JARROW 9 1.048 26.2
71 JARROW 8 1.061 73.2
1490 JAROW TP 73.5
892 WAIN TP7
73 HARDIST7 1.045 144.2
4073 HARDIST9
4078 SEDGEWI9 1.040 26.0
78 SEDGEWI7 1.060 146.2
77 WAINWRI8 1.046 72.2
5077 WAINWRI9 1.029 25.7
4077 WAINWRI9 1.029 25.7
4361 EDGERTO9 1.058
362 EDGERTO7 1.057 145.9
361 EDGERTO8 1.035 71.4
297 WAINWRI7 1.046 144.3
4037 HRT EXP9
HRT EXP7 1.031 4.3
1.069 4483 TCE_L1
0.978 3483 TCE_L2
1.062 97701 SPEC_1
81483 KEYSTN_2_A2
80483 KEYSTN_2_A1
483 TCE_H1 1.045 144.2
373 IPL HAR7 1.043 144.0
3373 IPL HAA9
2373 IPL HAB9
4484 OLDPER9 1.035 4.3
4373 IPL HAR9
97987 NILREM 7 1.045 144.2
273 NILREM 4 1.084 260.1
809 EXPRESTP 1.045 144.2
75 HUGHEND7 1.041 143.7
4075 HUGHEND9 1.038 26.0
3112 METISKA9
4112 METISKO9
112 METISKO7 1.045 144.2
989 703ALTAP 1.045 144.2
14001 HEISLERTAP 1.080 149.0
19400 HEISLER9 1.072 26.8
1402 HEISLER 144 1.079 148.9
10400 HEISLERMID 1.072 148.0
1400 HEISLER8 1.070 73.8
1401 BIGKNIF8 1.067 73.6
19401 BIGKNIF9 1.022 4.3
16491 BR5 AUX2 0.998 4.2
15491 BR5 AUX1 0.998 4.2
14491 757S705T 1.041 143.7
18491 STNB AUX 1.072 4.5
13491 757S702T 1.041 143.7
16492 STNA AUX 1.022 2.5
10491 757S701T 1.068 147.4
1493 BAT #1 1.000 14.4
1494 BAT #2 1.000 14.4
1492 BAT. RV8 9.6 20.4
1491 BAT. RV7 1.094 151.0
1495 BAT #3 1.014 16.2
1496 BAT #4 1.014 16.2
1497 BAT #5 1.028 21.6
1469 BAT RV79 1.081 259.4
11499 757S912T 1.040 249.7
1489 BAT RV80 1.081 259.5
1403 PAINTRT4
1499 CORDEL 4
18403 PAINTRT2 1.036 25.9
18498 BIGFOOA9 1.020 7.0
19498 BIGFOOT9 1.012 25.3
1498 BIGFOOT8 1.012 14.2
649 HANSMAN7 1.069 256.5
74 METIS647
87 METIS644 1.068 256.4
4074 METIS649 1.041 26.0
80074 KEYSTN_2_B1 1.032 4.3
81074 KEYSTN_2_B2 1.032 4.3
648 HANSMAN9 1.045 144.2
4086 PROVOST9 1.047 26.2
99231 CONFWINDGE 1.039 35.8
99230 CONFWIND 1.039 35.8
86 PROVOST7 1.039 143.4
99221 BULLCREEKGE 1.040 35.9
99220 BULLCREEK 1.040 35.9
4219 KILLARN9 1.070 26.7
219 KILLARN7 1.051 145.0
4220 HAYTER 9 1.040 26.0
220 HAYTER 7 1.040 143.6
CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
THU, APR 08 2010 16:29
D1-00
2017SP-Alt 2-1.b
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
THU, APR 08 2010 16:29
D1-01

2017SP-Alt 2-2.a

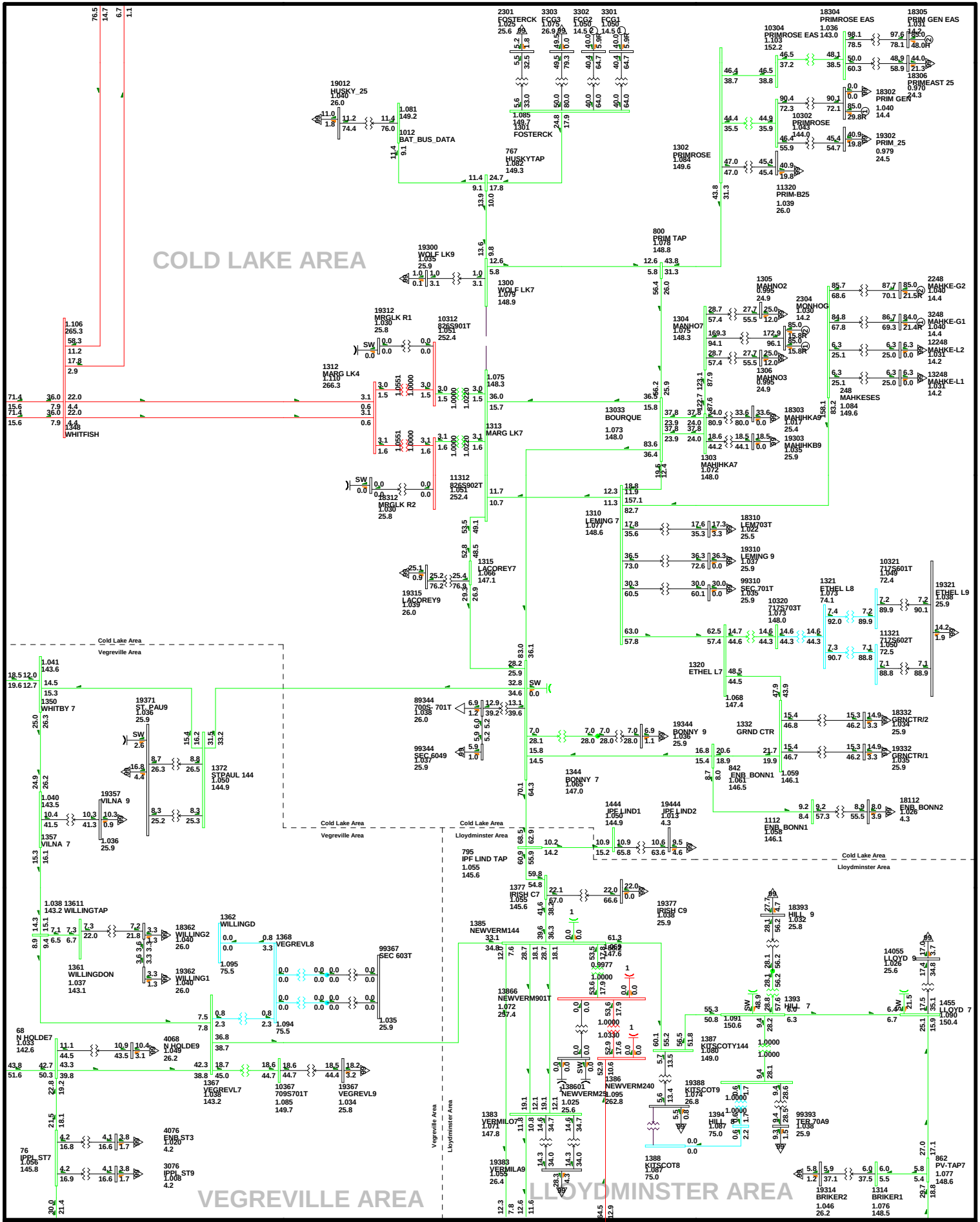
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
THU, APR 08 2010 16:29
D1-01

2017SP-Alt 2-2.b

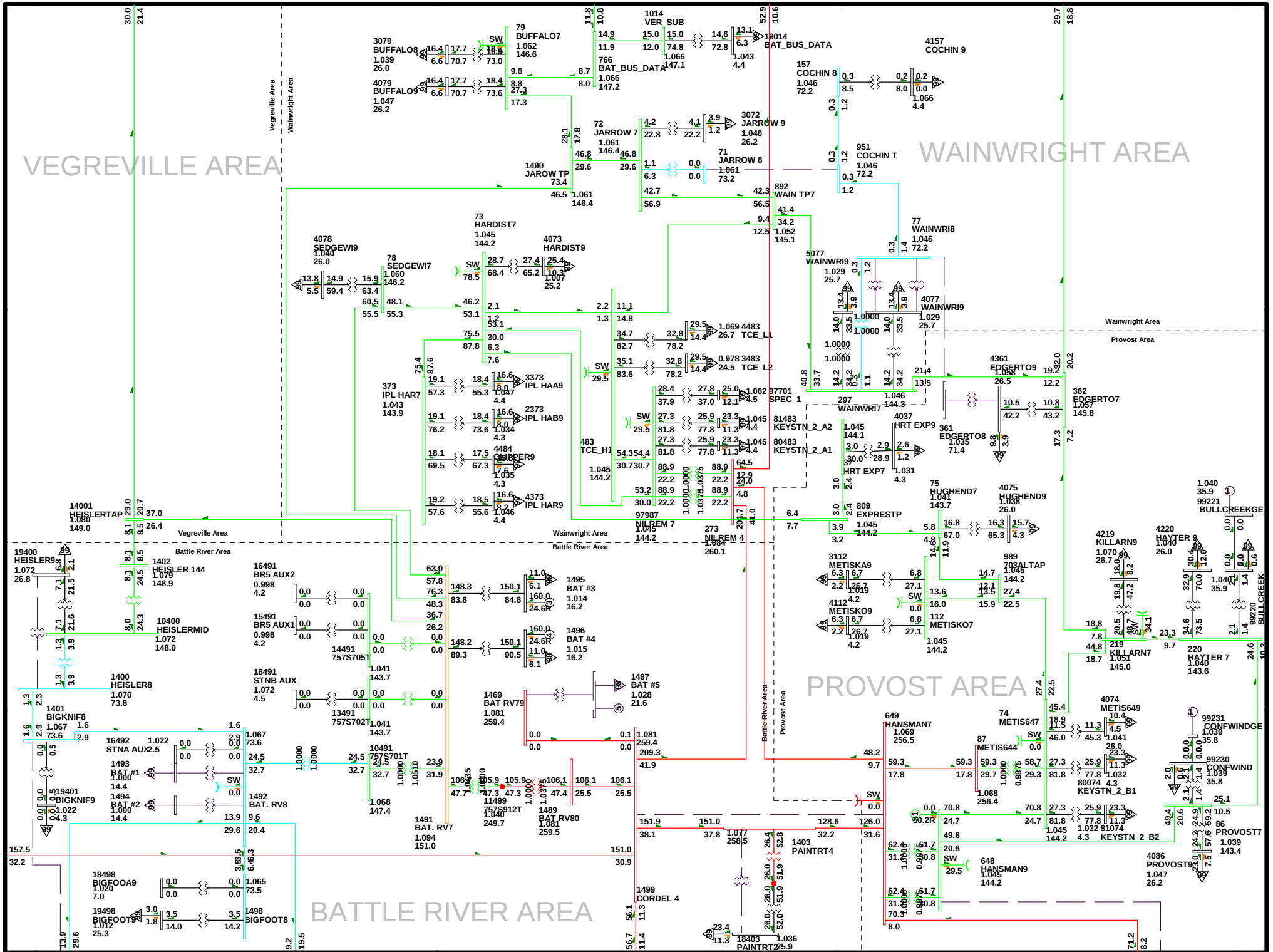
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
THU, APR 08 2010 16:29
D1-02

2017SP-Alt 2-3.a

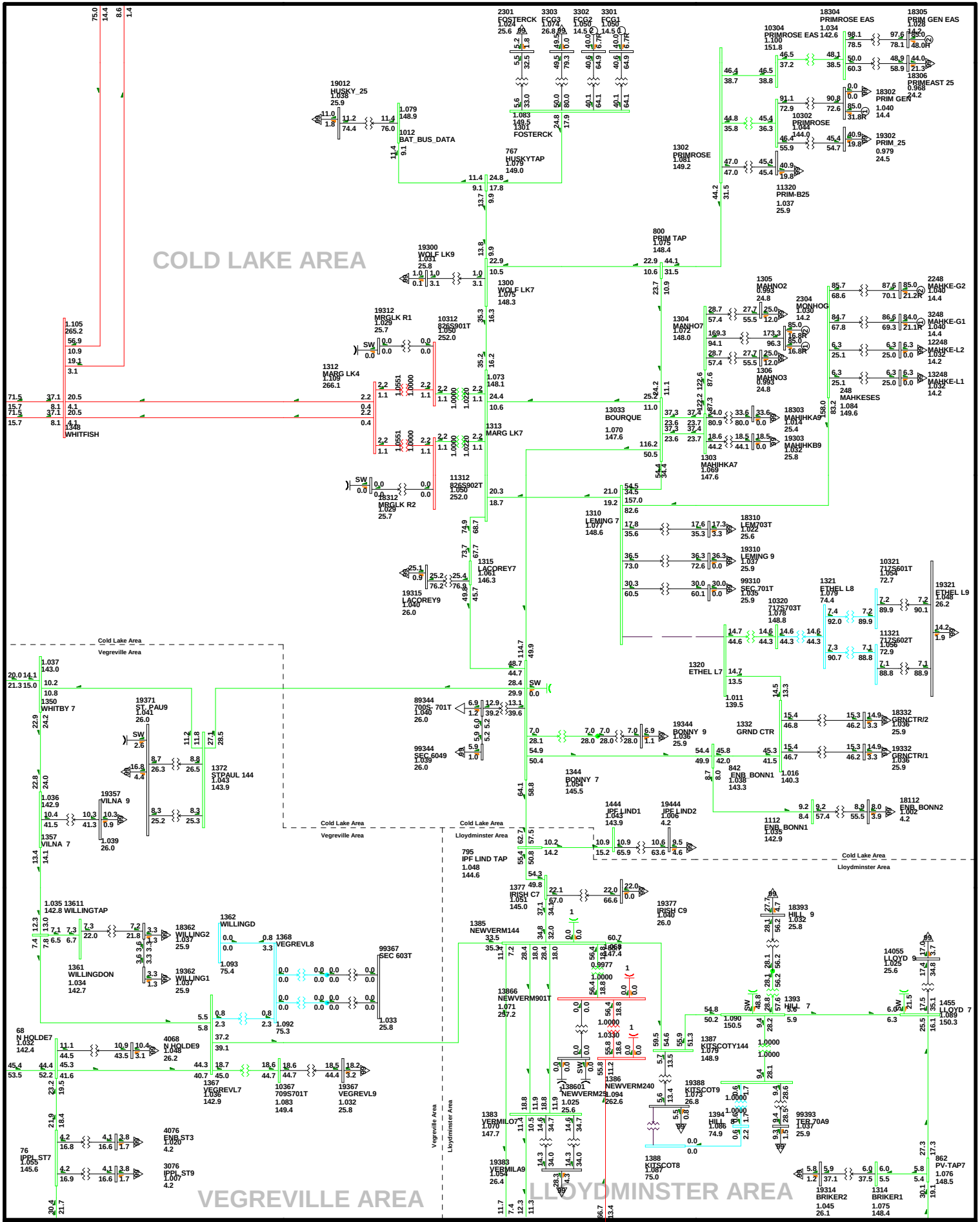
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
THU, APR 08 2010 16:29
D1-02

2017SP-Alt 2-3.b

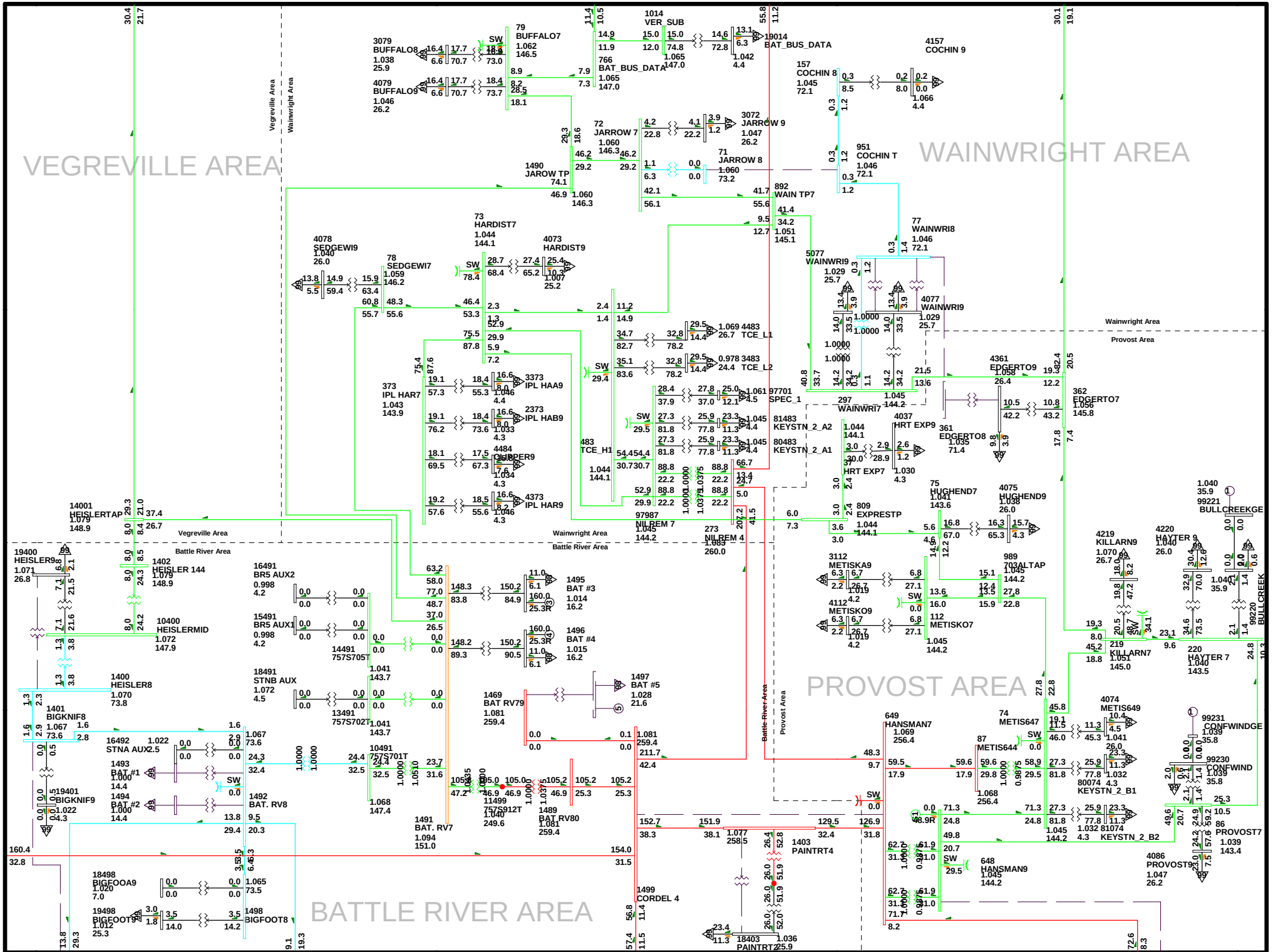
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
THU, APR 08 2010 16:29
D1-03

2017SP-Alt 2-4.a

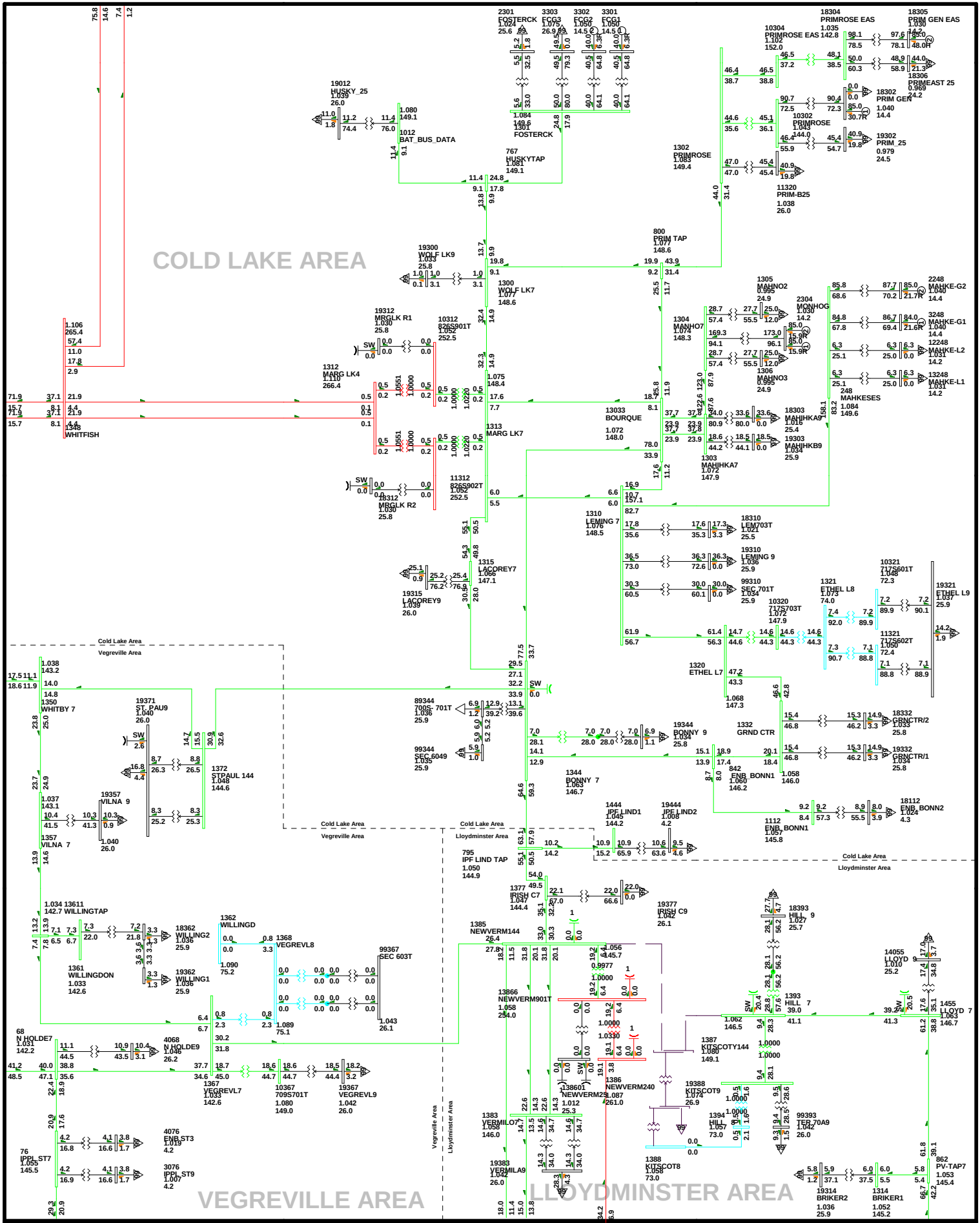
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
THU, APR 08 2010 16:29
D1-03

2017SP-Alt 2-4.b

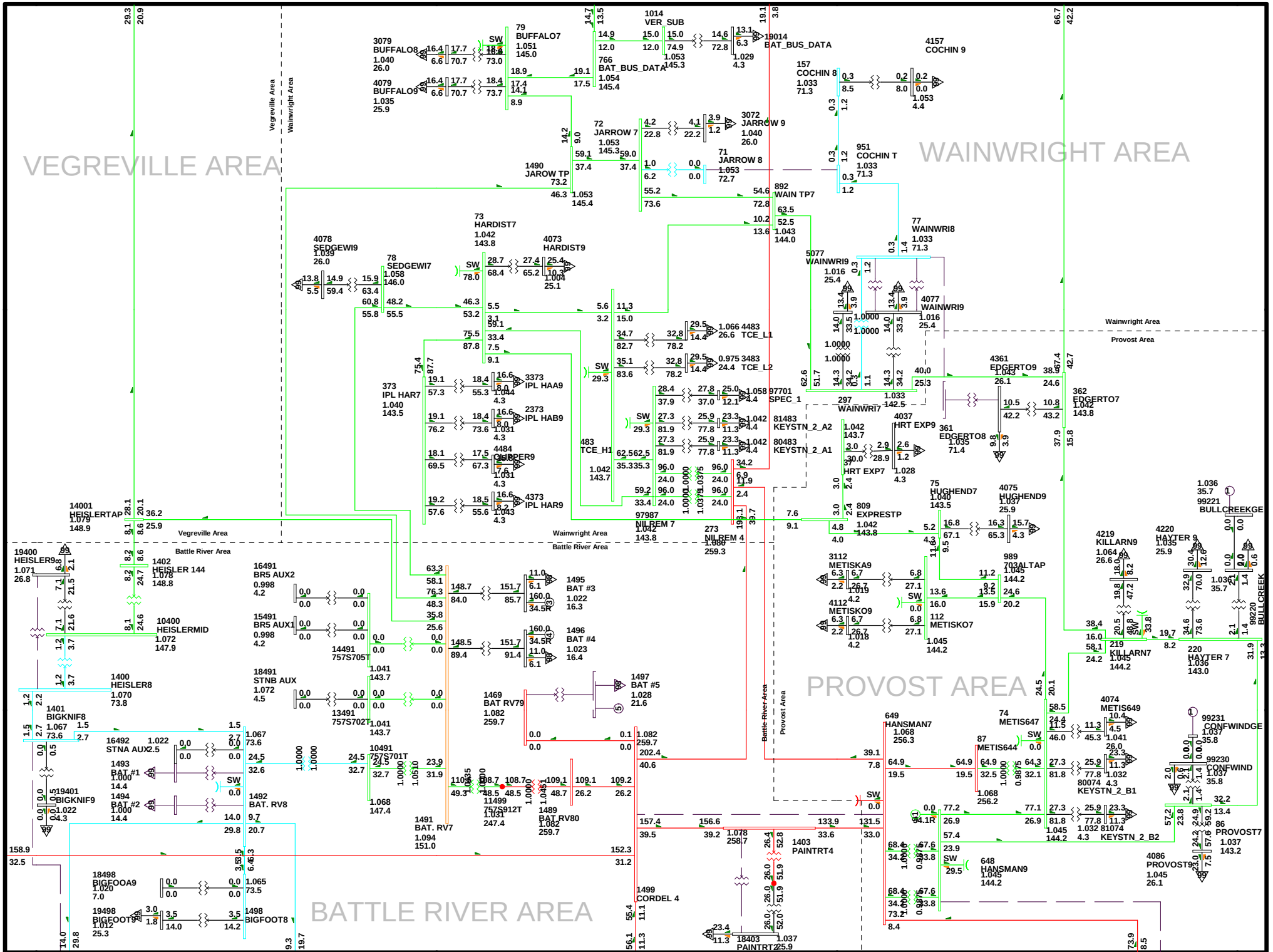
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 13:46

2017SP-Alt 2-5.a

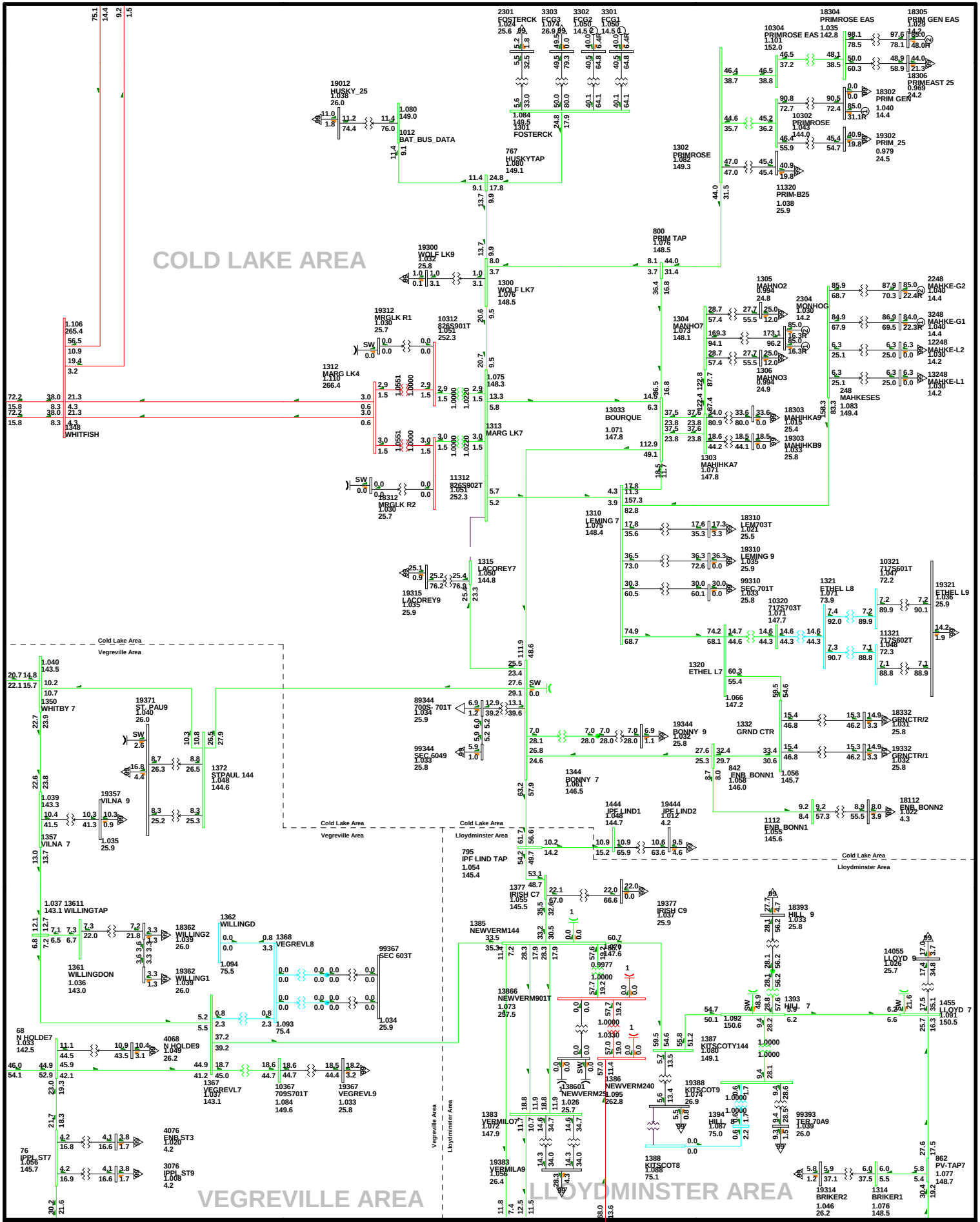
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 13:46

2017SP-Alt 2-5.b

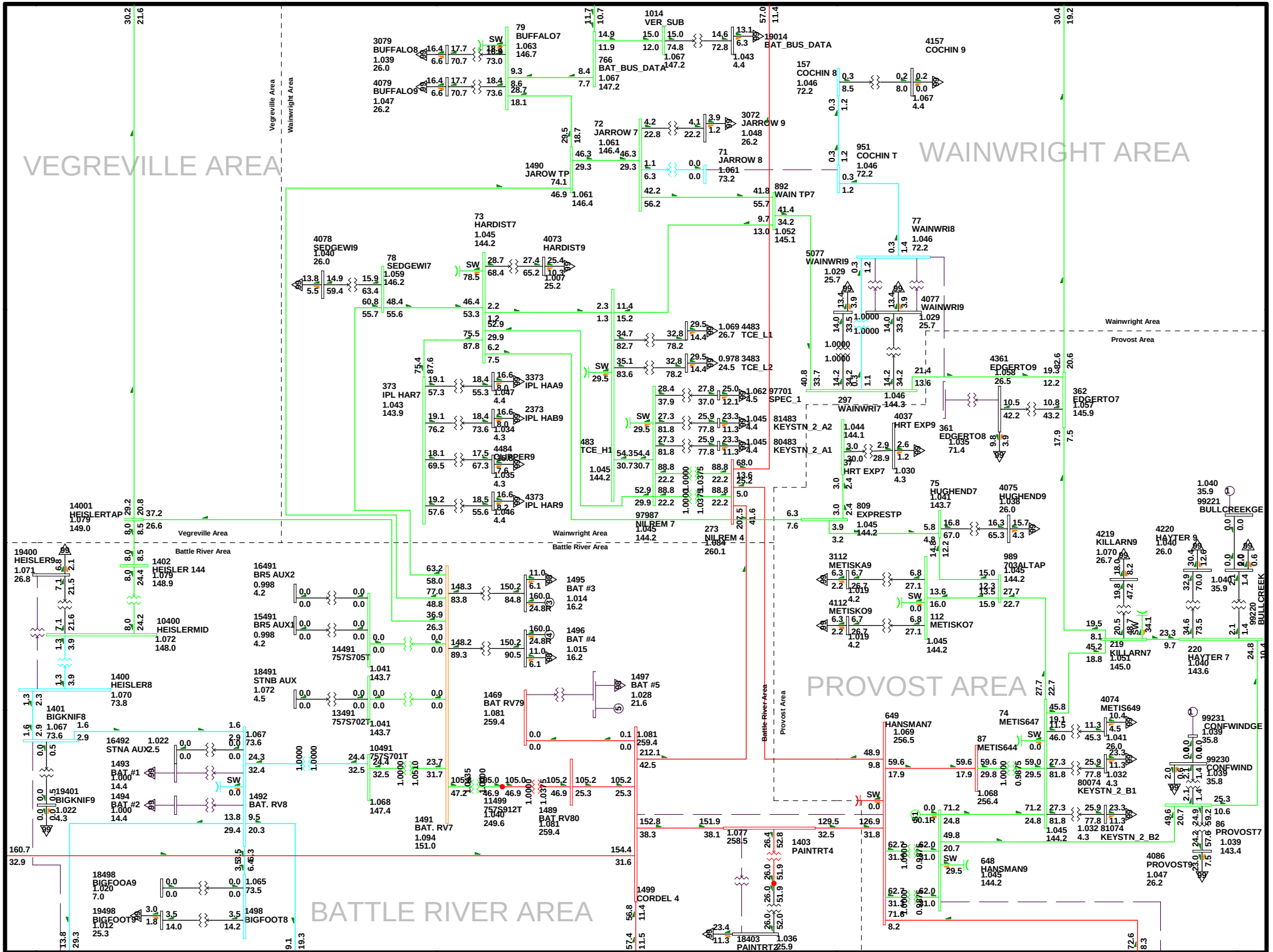
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
THU, APR 08 2010 16:30
D1-06

2017SP-Alt 2-6.a

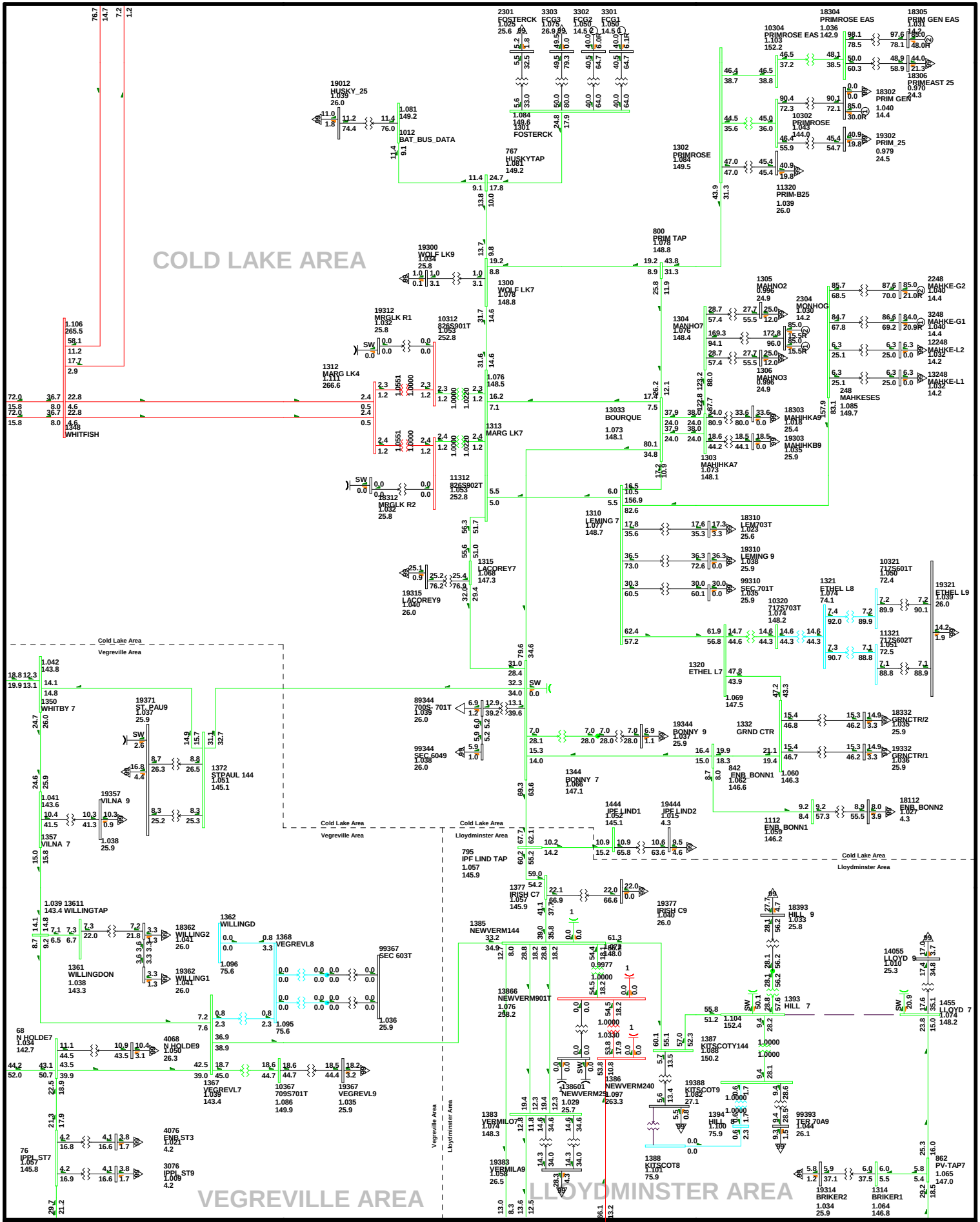
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
THU, APR 08 2010 16:30
D1-06

2017SP-Alt 2-6.b

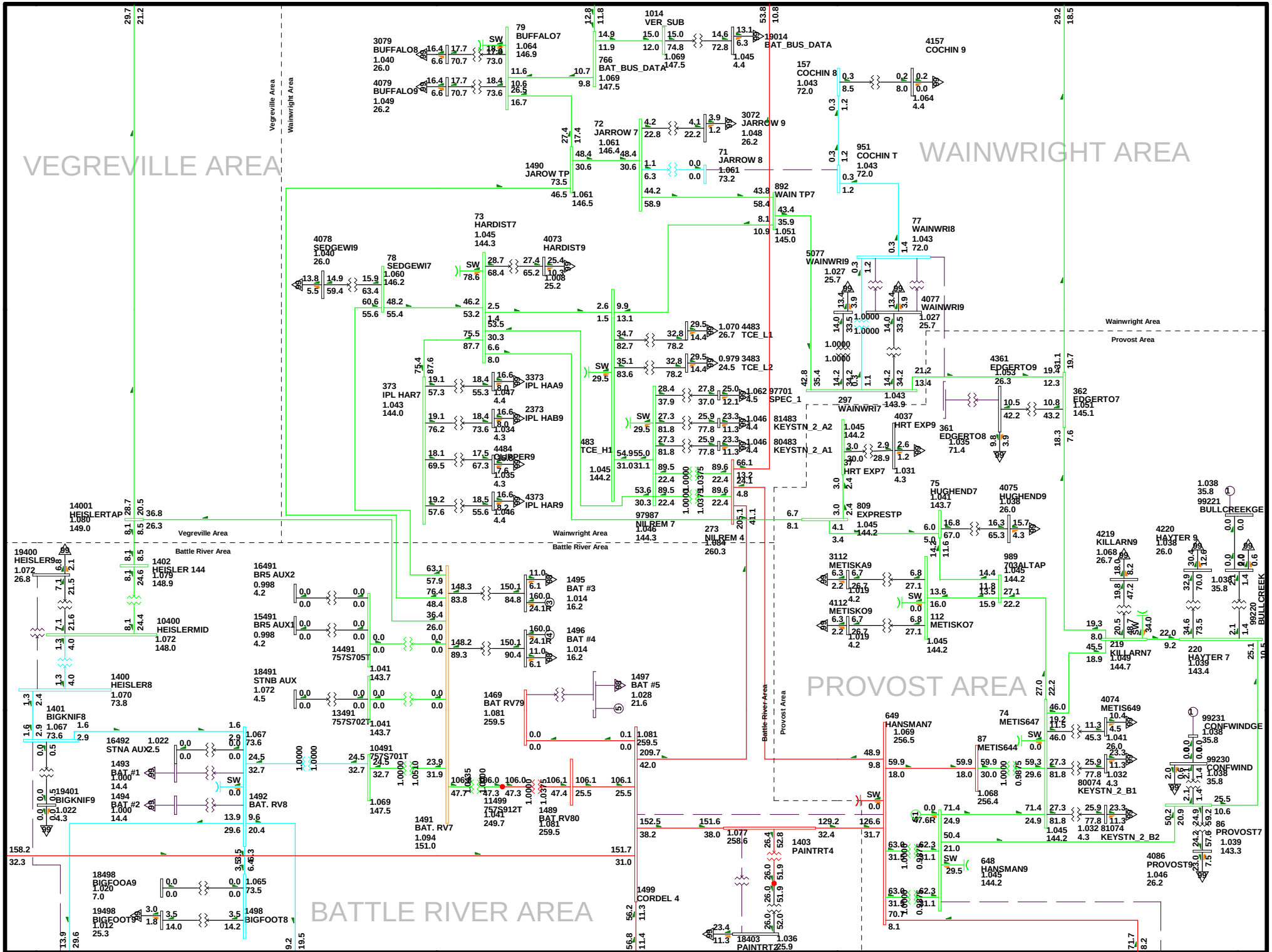
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
THU, APR 08 2010 16:30
D1-07

2017SP-Alt 2-7.a

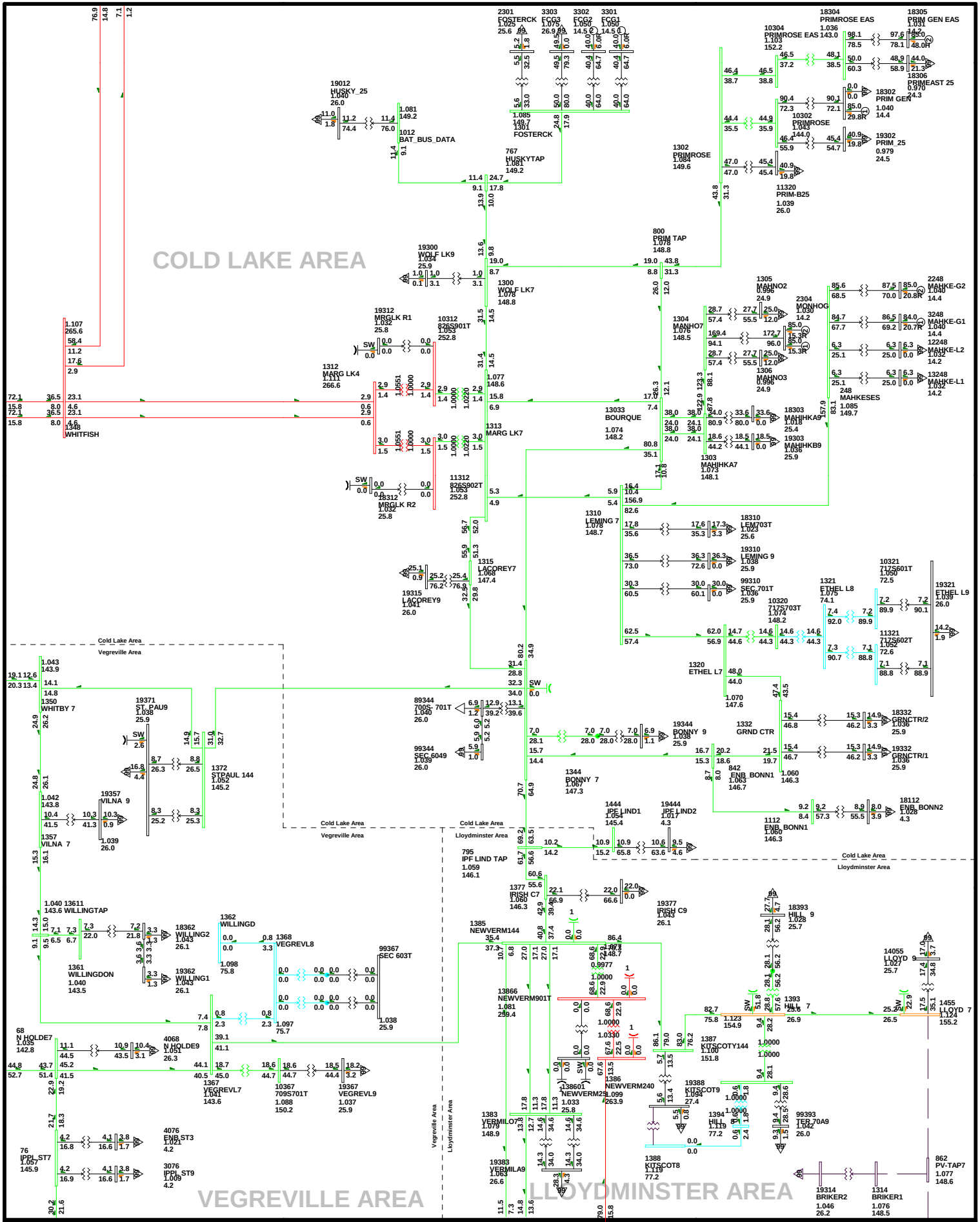
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
THU, APR 08 2010 16:30
D1-07

2017SP-Alt 2-7.b

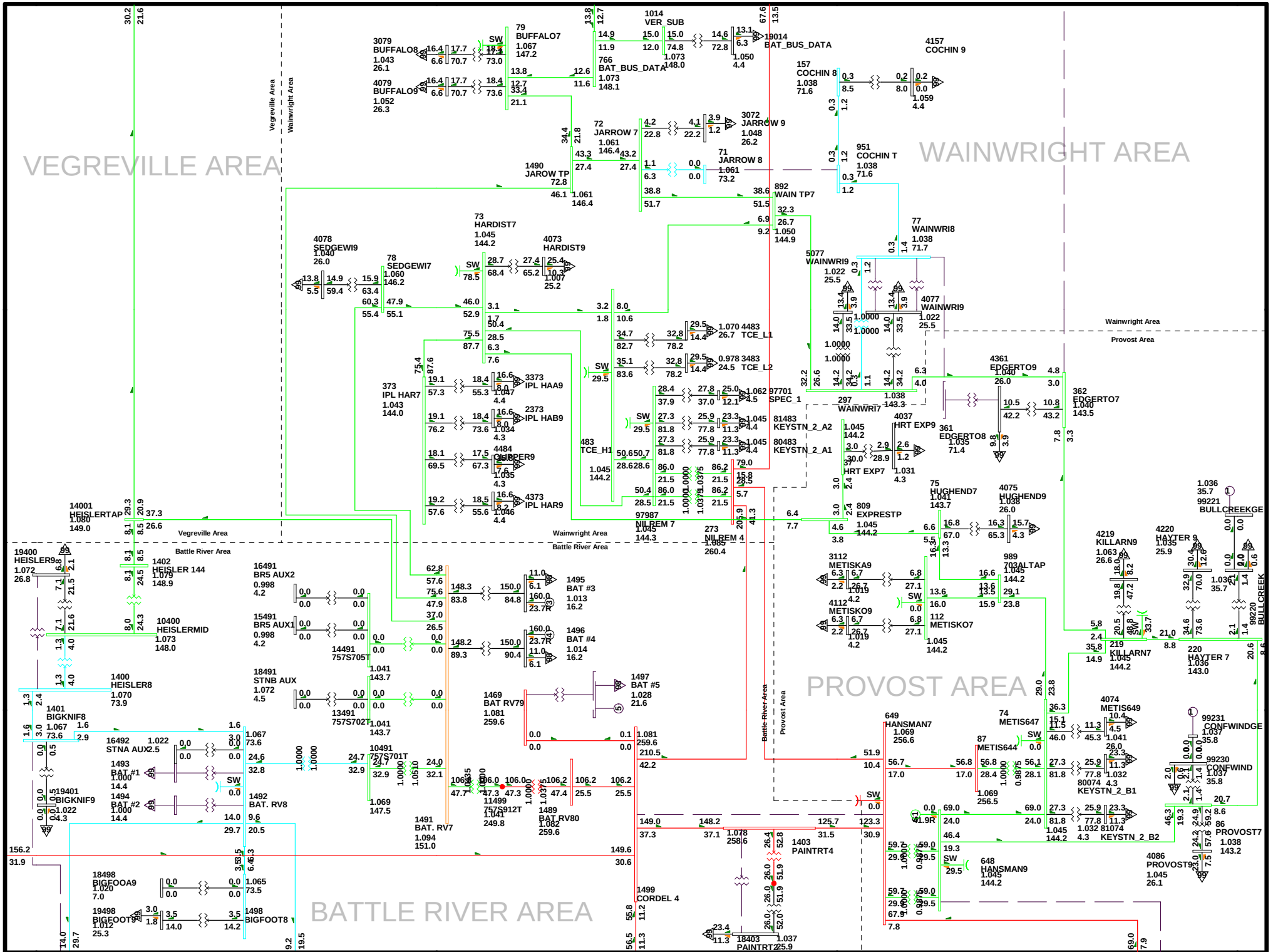
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
THU, APR 08 2010 16:30
D1-08

2017SP-Alt 2-8.a

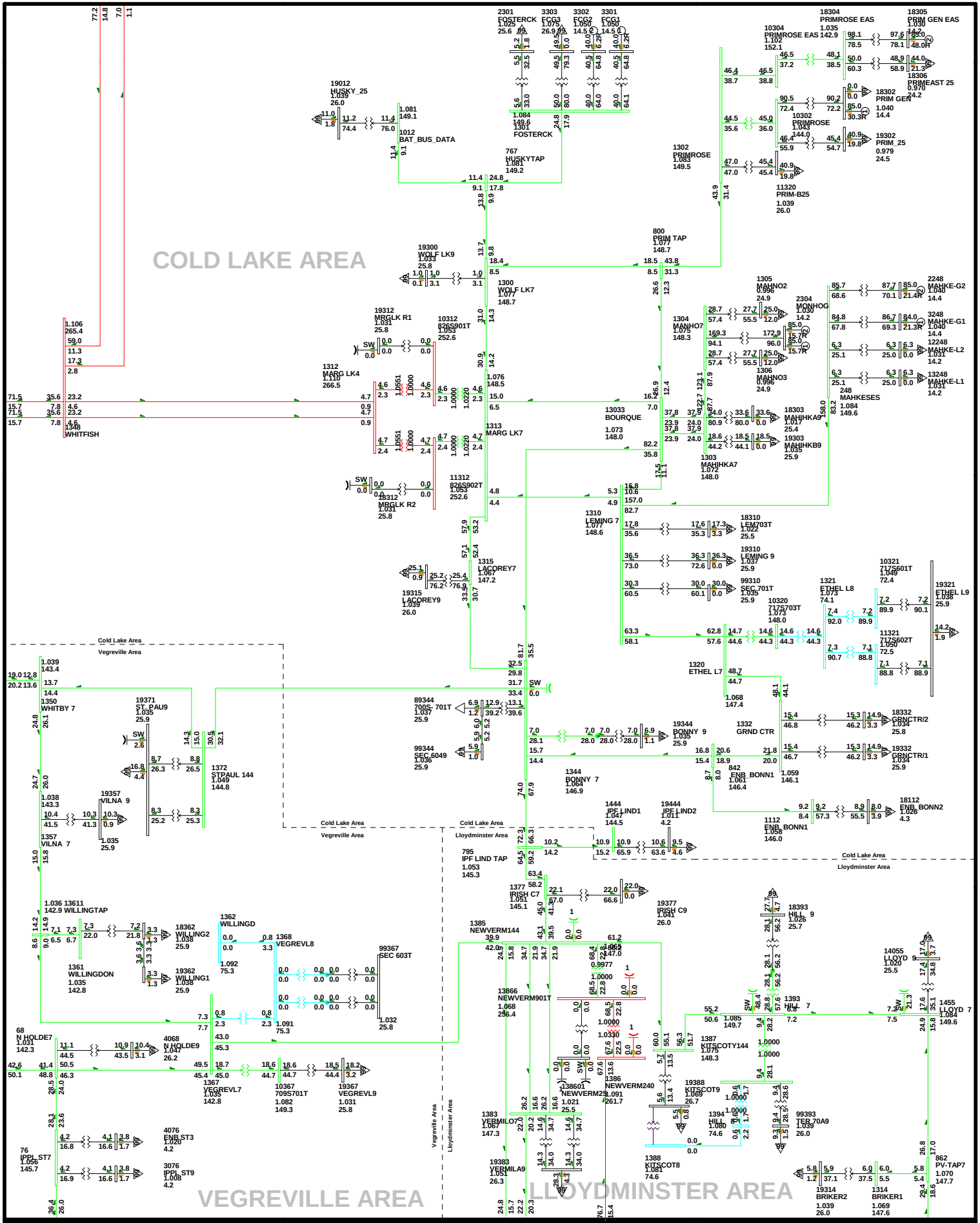
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
THU, APR 08 2010 16:30
D1-08

2017SP-Alt 2-8.b

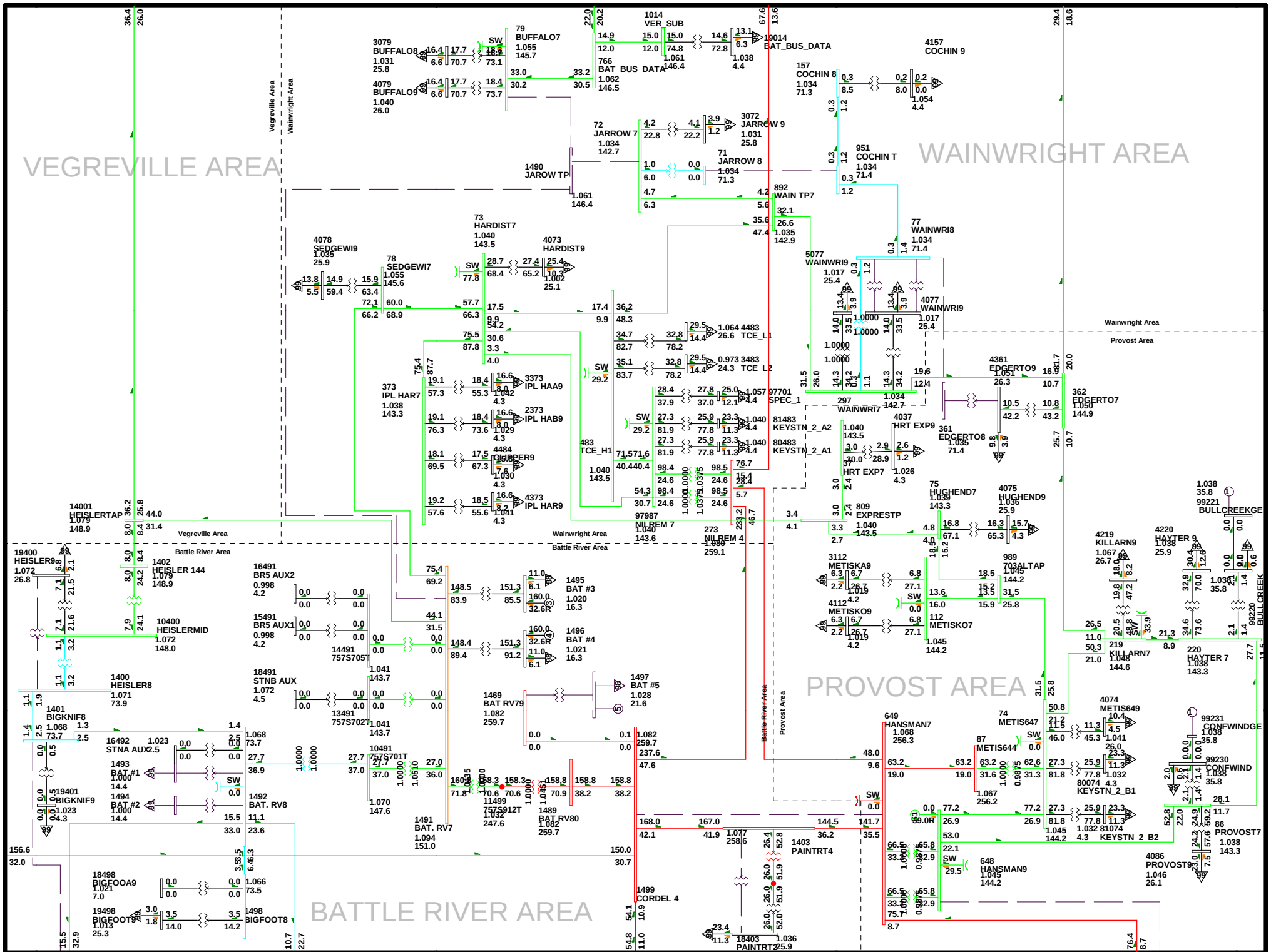
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
THU, APR 08 2010 16:30
D1-09

2017SP-Alt 2-9.a

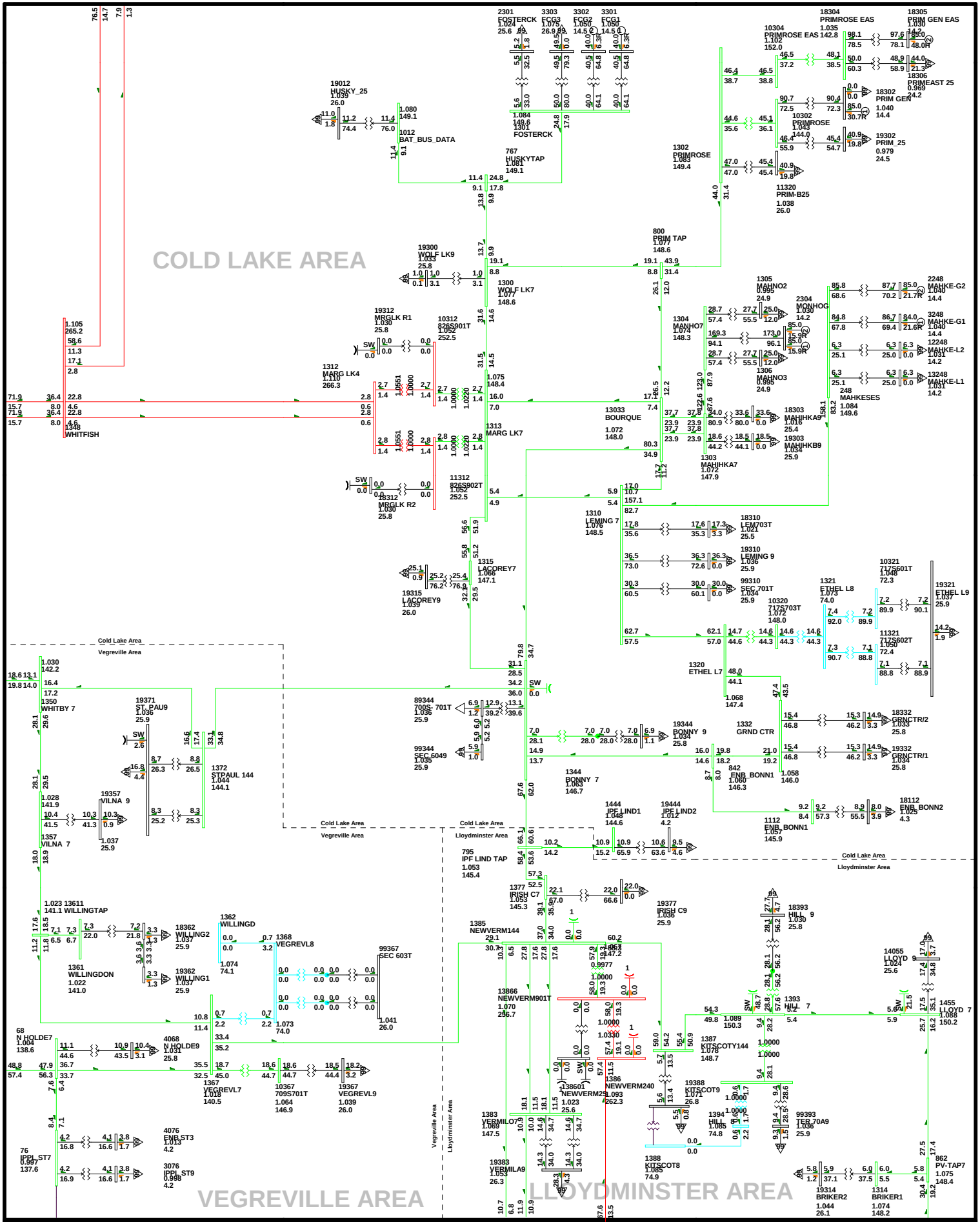
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
THU, APR 08 2010 16:30
D1-09

2017SP-Alt 2-9.b

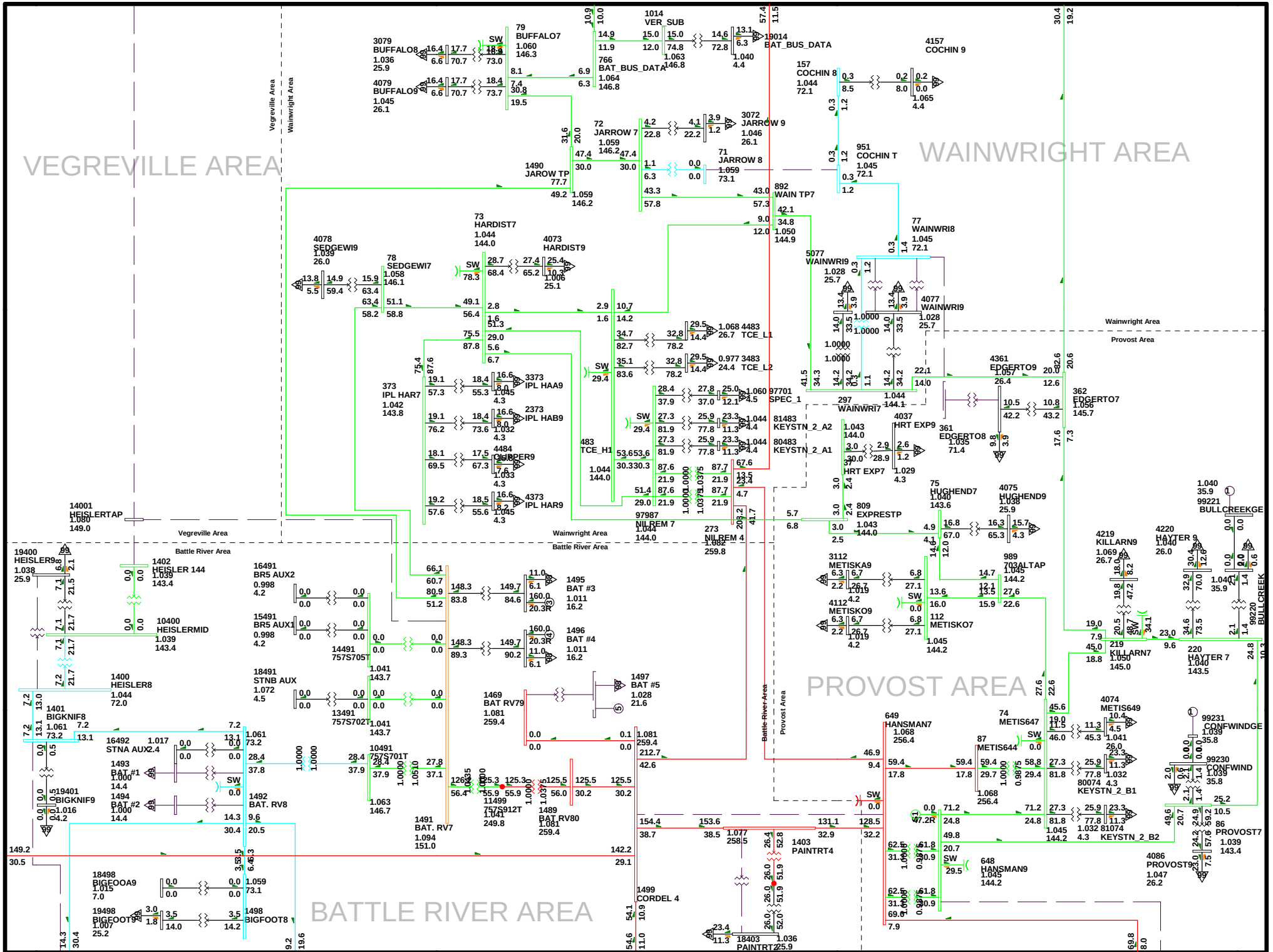
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
THU, APR 08 2010 16:30
D1-10

2017SP-Alt 2-10.a

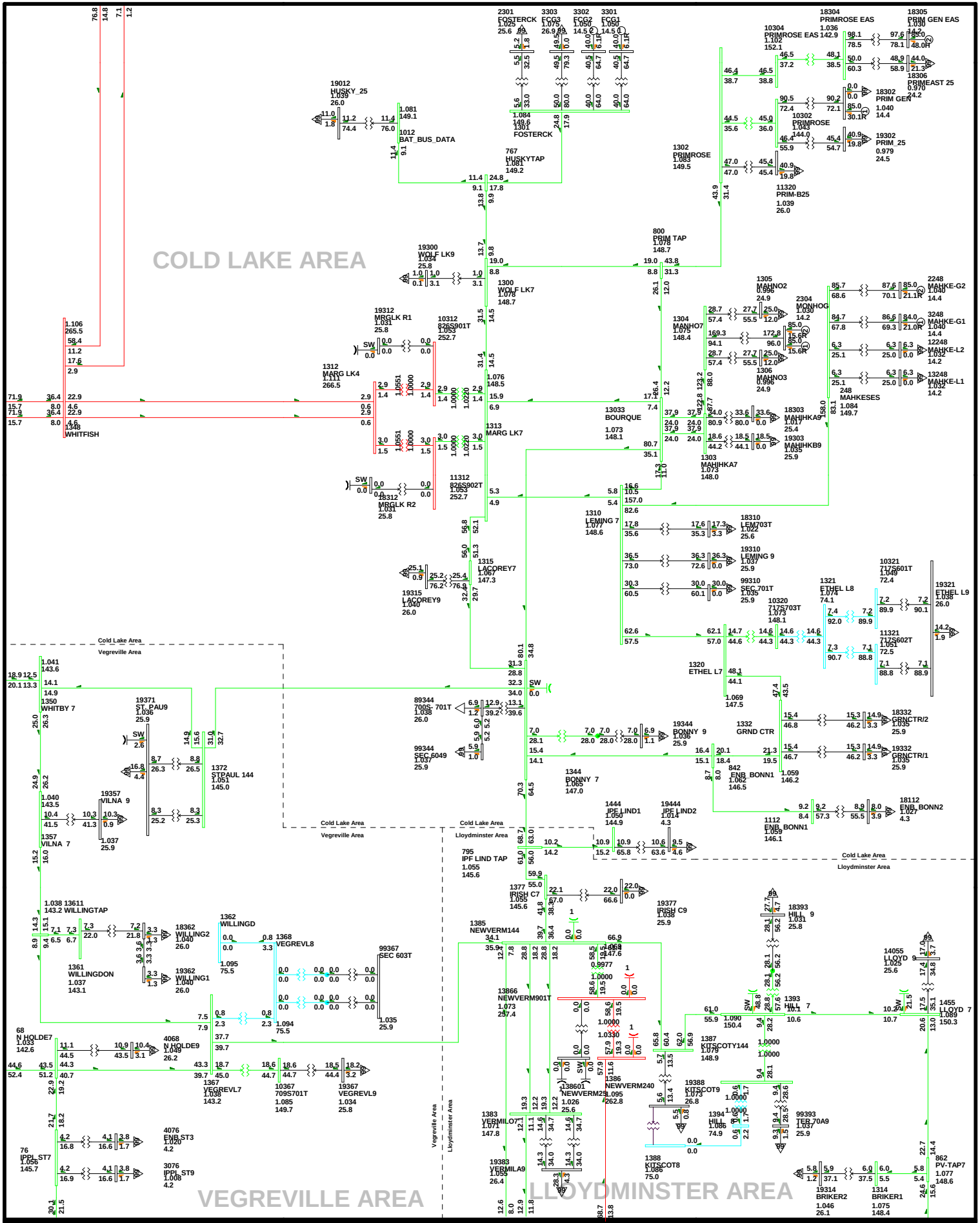
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
THU, APR 08 2010 16:30
D1-10

2017SP-Alt 2-10.b

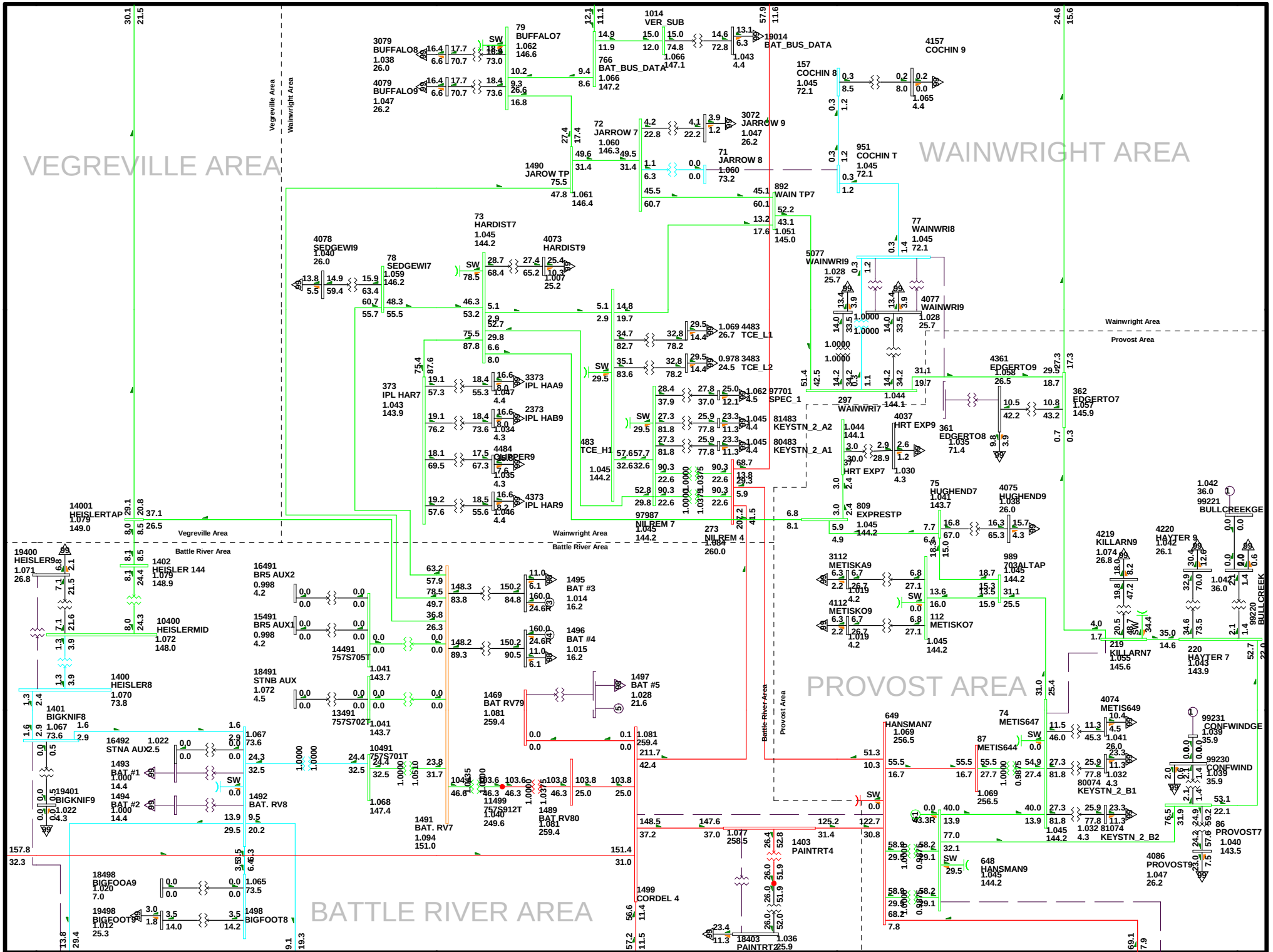
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
THU, APR 08 2010 16:30
D1-11

2017SP-Alt 2-11.a

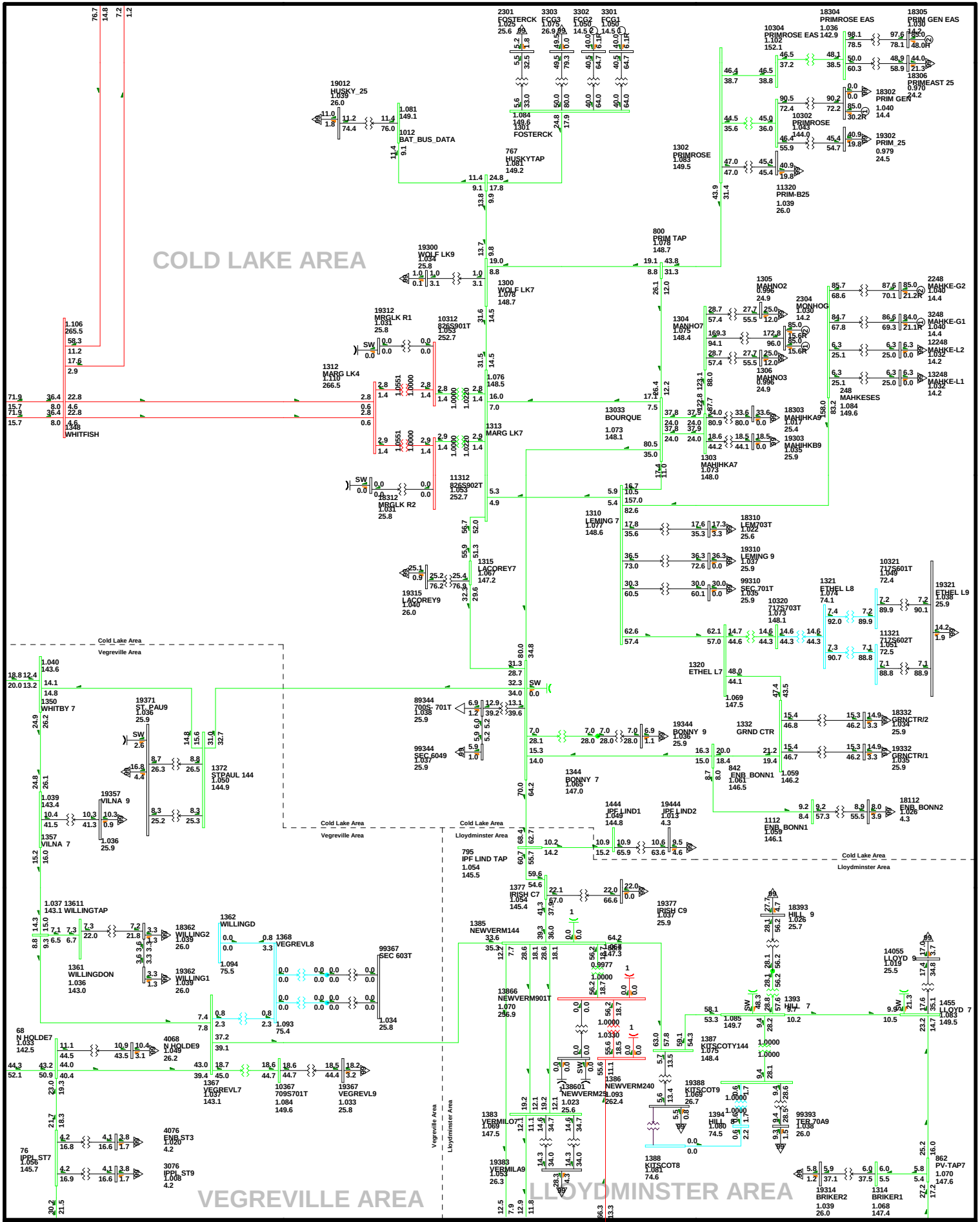
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
THU, APR 08 2010 16:30
D1-11

2017SP-Alt 2-11.b

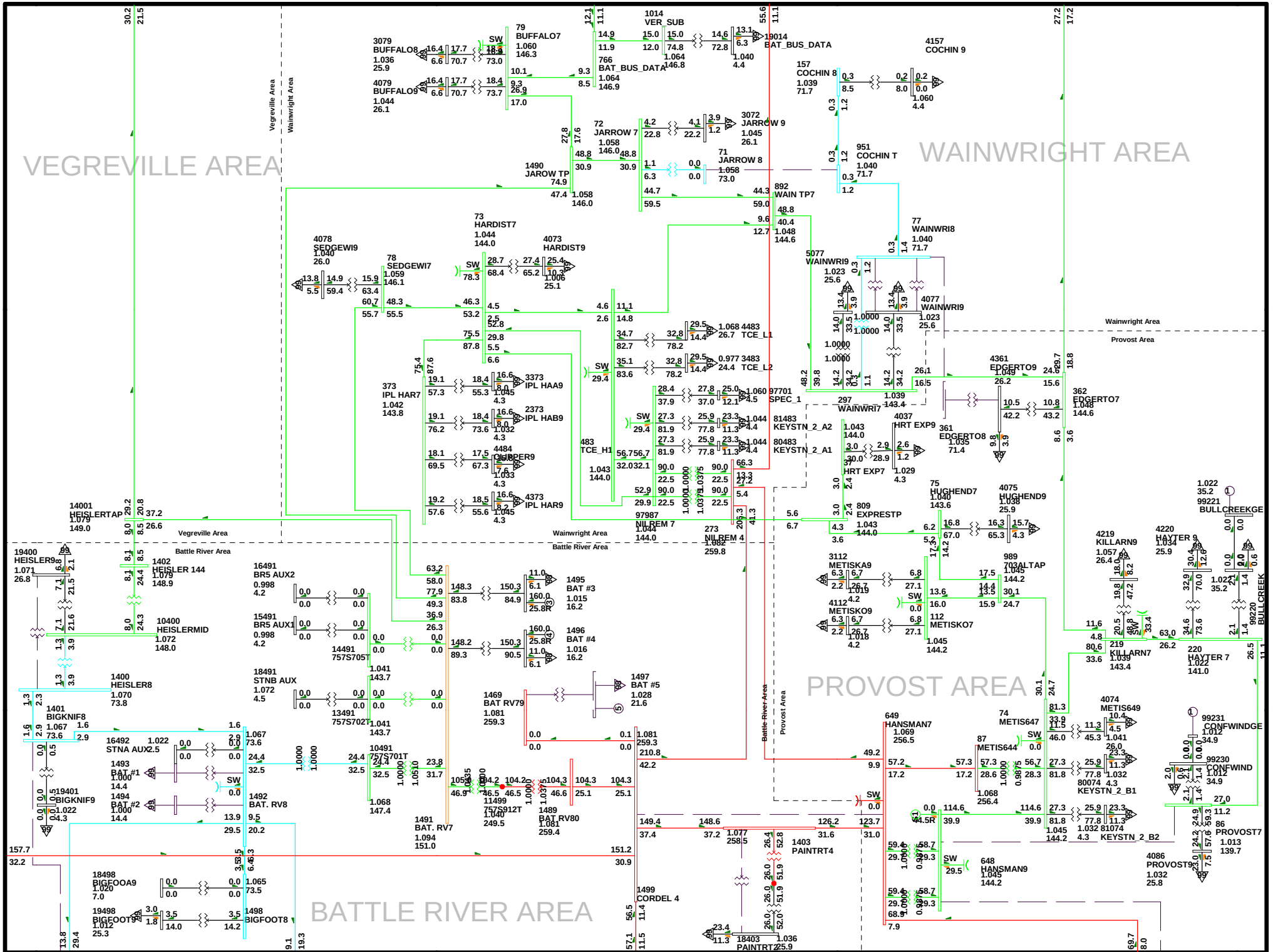
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
THU, APR 08 2010 16:30
D1-12

2017SP-Alt 2-12.a

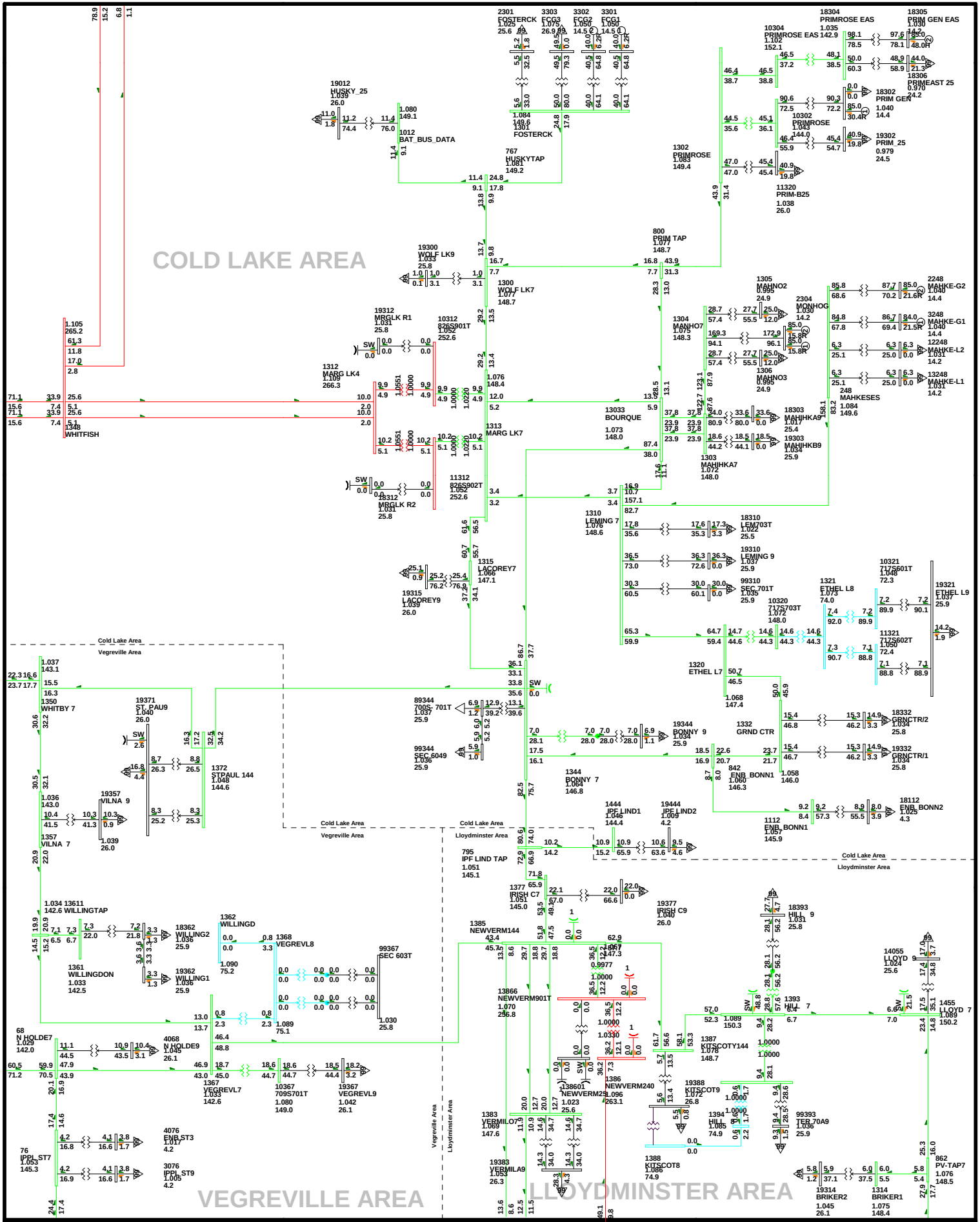
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
THU, APR 08 2010 16:30
D1-12

2017SP-Alt 2-12.b

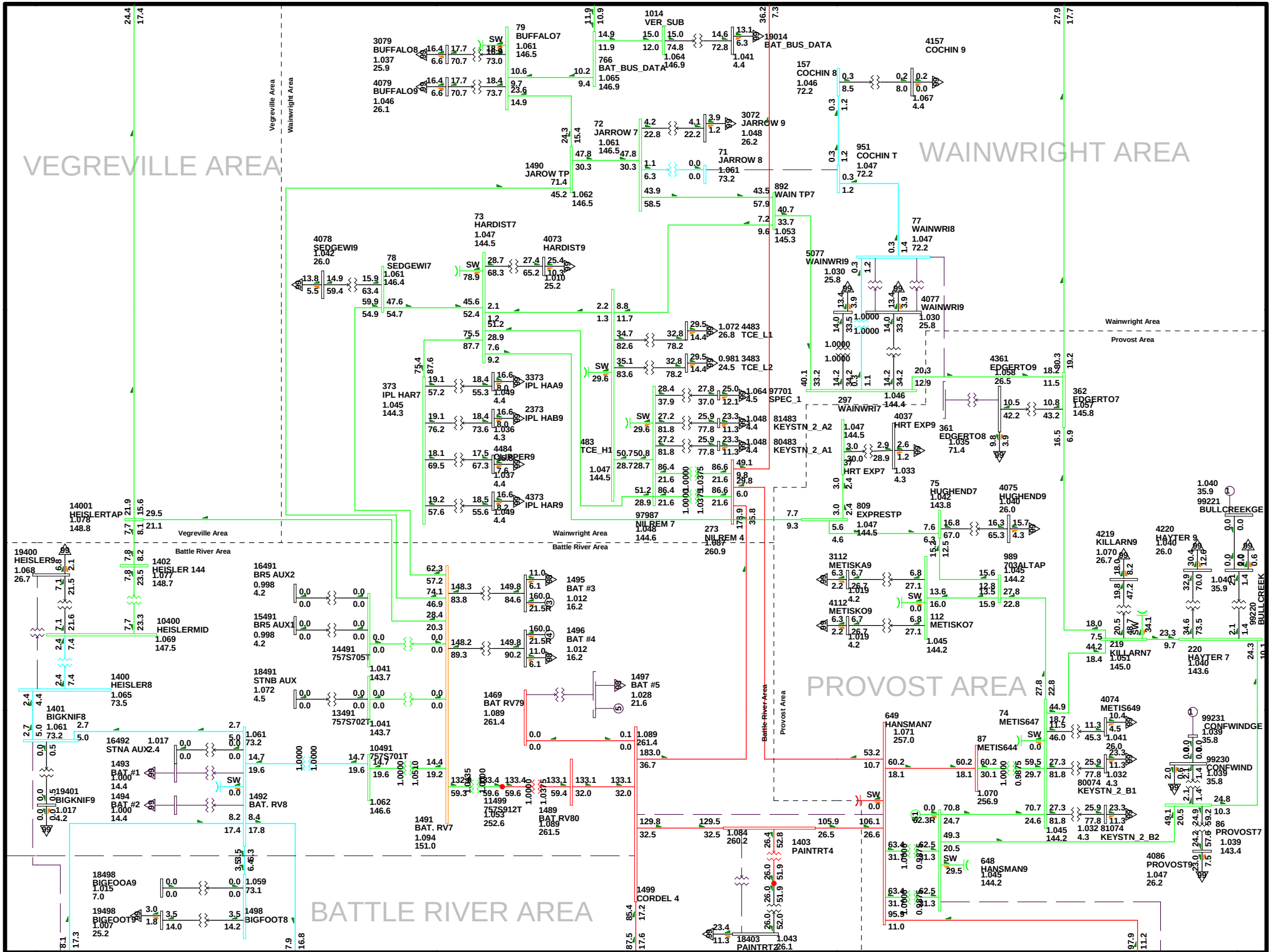
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000

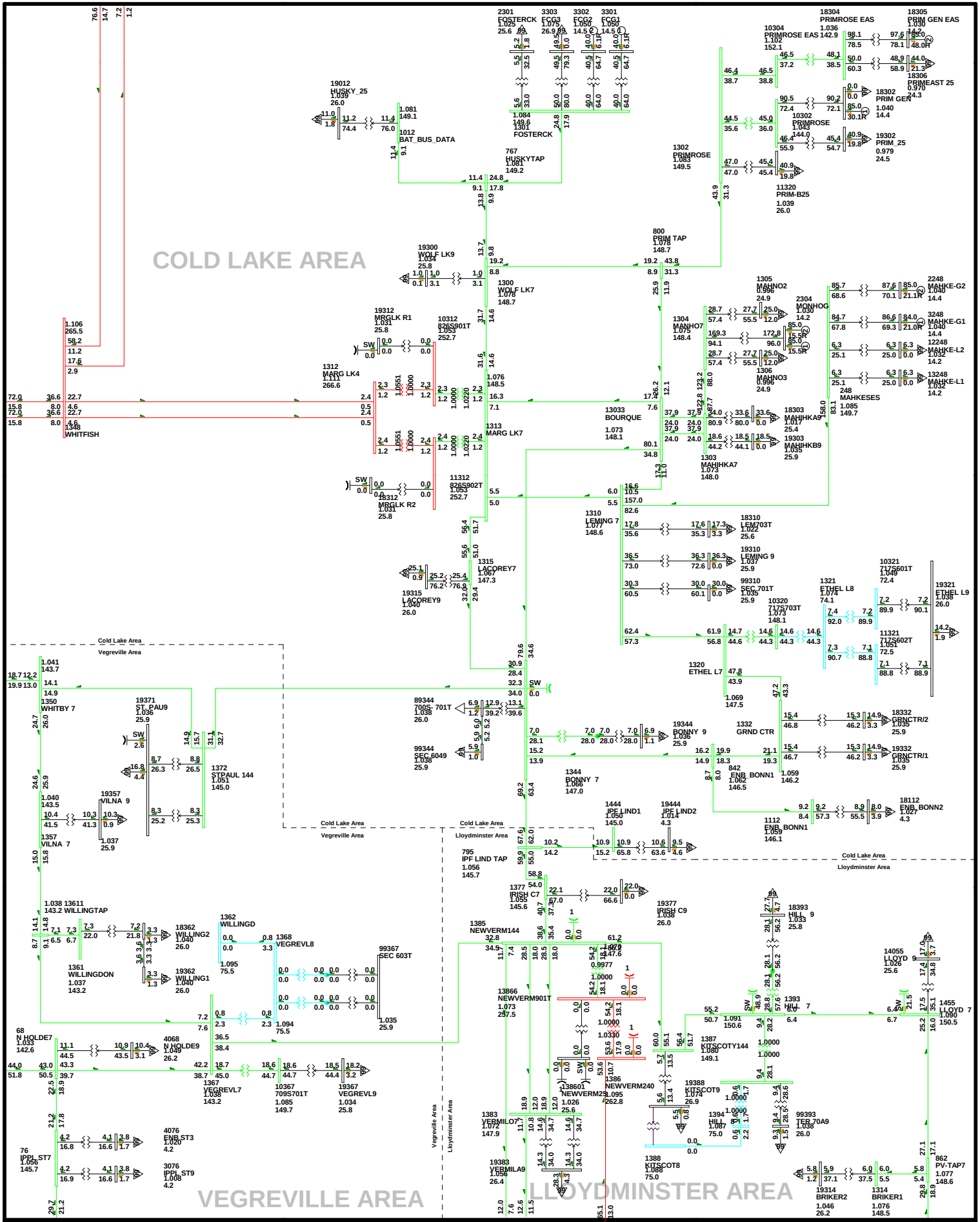


CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
THU, APR 08 2010 16:30
D1-14

2017SP-Alt 2-13.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

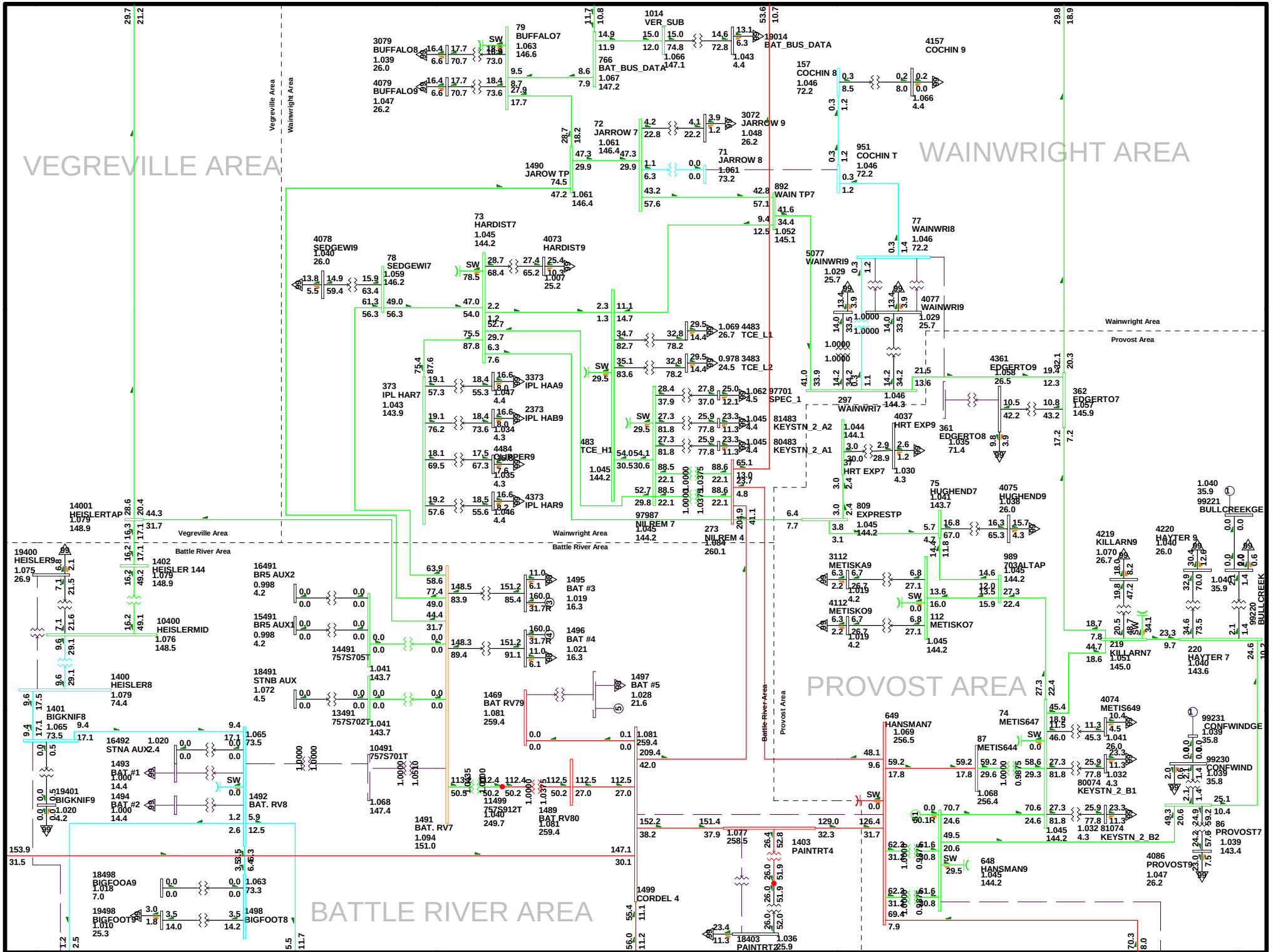

VEGREVILLE AREA
WAINWRIGHT AREA
PROVOST AREA
BATTLE RIVER AREA
Vegreville Area
Wainwright Area
Battle River Area
Provost Area
3079 BUFFALO8 1.037 25.9
4079 BUFFALO9 1.046 26.1
79 BUFFALO7 1.061 146.5
766 BAT_BUS_DATA 1.065 146.9
1014 VER_SUB
19014 BAT_BUS_DATA 1.041 4.4
4157 COCHIN 9
157 COCHIN 8 1.046 72.2
1.067 4.4
72 JARROW 7 1.061 146.5
3072 JARROW 9 1.048 26.2
71 JARROW 8 1.061 73.2
1490 JAROW TP 71.4 1.062 146.5
951 COCHIN T 1.047 72.2
892 WAIN TP7
77 WAINWRI8 1.047 72.2
73 HARDIST7 1.047 144.5
4073 HARDIST9 1.010 25.2
4078 SEDGEWI9 1.042 26.0
78 SEDGEWI7 1.061 146.4
5077 WAINWRI9 1.030 25.8
4077 WAINWRI9 1.030 25.8
373 IPL HAR7 1.045 144.3
3373 IPL HAA9 1.049 4.4
2373 IPL HAB9 1.036 4.3
4484 QUIPPER9 1.037 4.4
4373 IPL HAR9 1.049 4.4
483 TCE_H1 1.047 144.5
1.072 4483 TCE_L1 26.8
0.981 3483 TCE_L2 24.5
97701 SPEC_1 1.064 4.5
81483 KEYSTN_2_A2 1.048 4.4
80483 KEYSTN_2_A1 1.048 4.4
4037 HRT EXP9
HRT EXP7 1.033 4.3
361 EDGERTO8 1.035 71.4
4361 EDGERTO9 1.058
362 EDGERTO7 1.057 145.8
297 WAINWRI7 1.046 144.4
14001 HEISLERTAP 1.078 148.8
19400 HEISLER9 1.068 26.7
1402 HEISLER 144 1.077 148.7
10400 HEISLERMID 1.069 147.5
1400 HEISLER8 1.065 73.5
1401 BIGKNIF8 1.061 73.2
19401 BIGKNIF9 1.017 4.2
16491 BR5 AUX2 0.998 4.2
15491 BR5 AUX1 0.998 4.2
14491 757S705T 1.041 143.7
18491 STNB AUX 1.072 4.5
13491 757S702T 1.041 143.7
16492 STNA AUX 2.4 1.017
1493 BAT #1 1.000 14.4
1494 BAT #2 1.000 14.4
1492 BAT. RV8 8.4
10491 757S701T 14.7 1.062 146.6
1491 BAT. RV7 1.094 151.0
1495 BAT #3 1.012 16.2
1496 BAT #4 1.012 16.2
1497 BAT #5 1.028 21.6
1469 BAT RV79 1.089 261.4
11499 757S912T 1.053 252.6
1489 BAT RV80 1.089 261.5
1499 CORDEL 4
18403 PAINTRT2 1.043 26.1
1403 PAINTRT4
18498 BIGEOOA9 1.015 7.0
19498 BIGFOOT9 1.007 25.2
1498 BIGFOOT8 1.007 14.2
273 NILREM 4 1.087 260.9
97987 NILREM 7 1.048 144.6
809 EXPRESTP 1.047 144.5
75 HUGHEND7 1.042 143.8
4075 HUGHEND9 1.040 26.0
3112 METISKA9
4112 METISKO9
112 METISKO7 1.045 144.2
989 703ALTAP 1.045 144.2
649 HANSMAN7 1.071 257.0
648 HANSMAN9 1.045 144.2
74 METIS647
87 METIS644 1.070 256.9
4074 METIS649 1.041 26.0
80074 KEYSTN_2_B1 4.3
81074 KEYSTN_2_B2 1.032 4.3
4086 PROVOST9 1.047 26.2
86 PROVOST7 1.039 143.4
99231 CONFWINDGE 1.039 35.8
99230 CONFWIND 1.039 35.8
4219 KILLARN9 1.070 26.7
219 KILLARN7 1.051 145.0
4220 HAYTER 9 1.040 26.0
220 HAYTER 7 1.040 143.6
1.040 35.9 99221 BULLCREEKGE
99220 BULLCREEK
CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
THU, APR 08 2010 16:30
D1-14
2017SP-Alt 2-13.b
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
THU, APR 08 2010 16:30
D1-15

2017SP-Alt 2-14.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000


VEGREVILLE AREA
WAINWRIGHT AREA
PROVOST AREA
BATTLE RIVER AREA
Vegreville Area
Wainwright Area
Battle River Area
Provost Area
3079 BUFFALO8 1.039 26.0
4079 BUFFALO9 1.047 26.2
79 BUFFALO7 1.063 146.6
1014 VER_SUB
766 BAT_BUS_DATA 1.067 147.2
19014 BAT_BUS_DATA
4157 COCHIN 9
157 COCHIN 8 1.046 72.2
951 COCHIN T 1.046 72.2
1066 4.4
72 JAROW 7 1.061 146.4
3072 JARROW 9 1.048 26.2
71 JARROW 8 1.061 73.2
1490 JAROW TP 74.5 1.061 146.4
892 WAIN TP7
77 WAINWRI8 1.046 72.2
5077 WAINWRI9 1.029 25.7
4077 WAINWRI9 1.029 25.7
297 WAINWRI7 1.046 144.3
4078 SEDGEWI9 1.040 26.0
78 SEDGEWI7 1.059 146.2
73 HARDIST7 1.045 144.2
4073 HARDIST9 1.007 25.2
373 IPL HAR7 1.043 143.9
3373 IPL HAA9 1.047 4.4
2373 IPL HAB9 1.034 4.3
4484 QUIPPER9 1.035 4.3
4373 IPL HAR9 1.046 4.4
1.069 4483 26.7 TCE_L1
0.978 3483 24.5 TCE_L2
483 TCE_H1 1.045 144.2
97701 SPEC_1 1.062 4.5
81483 KEYSTN_2_A2
80483 KEYSTN_2_A1
4037 HRT EXP9
HRT EXP7 1.030 4.3
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362 EDGERTO7 1.057 145.9
75 HUGHEND7 1.041 143.7
4075 HUGHEND9 1.038 26.0
809 EXPRESTP 1.045 144.2
97987 NILREM 7 1.045 144.2
273 NILREM 4 1.084 260.1
14001 HEISLERTAP 1.079 148.9
19400 HEISLER9 1.075 26.9
1402 HEISLER 144 1.079 148.9
10400 HEISLERMID 1.076 148.5
1400 HEISLER8 1.079 74.4
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19401 BIGKNIF9 1.020 4.2
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15491 BR5 AUX1 0.998 4.2
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16492 STNA AUX 1.020 2.4
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10491 757S701T 1.068 147.4
1491 BAT. RV7 1.094 151.0
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1496 BAT #4 1.021 16.3
1497 BAT #5 1.028 21.6
1469 BAT RV79 1.081 259.4
11499 757S912T 1.040 249.7
1489 BAT RV80 1.081 259.4
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1403 PAINTRT4
18403 PAINTRT2 1.036 25.9
18498 BIGEOOA9 1.018 7.0
19498 BIGFOOT9 1.010 25.3
1498 BIGFOOT8 1.010 14.2
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74 METIS647
87 METIS644 1.068 256.4
4074 METIS649 1.041 26.0
99230 CONFWIND 1.039 35.8
99231 CONFWINDGE 1.039 35.8
80074 KEYSTN_2_B1 4.3
81074 KEYSTN_2_B2 4.3
648 HANSMAN9 1.045 144.2
4086 PROVOST9 1.047 26.2
86 PROVOST7 1.039 143.4
3112 METISKA9
4112 METISKO9
112 METISKO7 1.045 144.2
989 703ALTAP 1.045 144.2
4219 KILLARN9 1.070 26.7
219 KILLARN7 1.051 145.0
4220 HAYTER 9 1.040 26.0
220 HAYTER 7 1.040 143.6
99221 BULLCREEKGE 1.040 35.9
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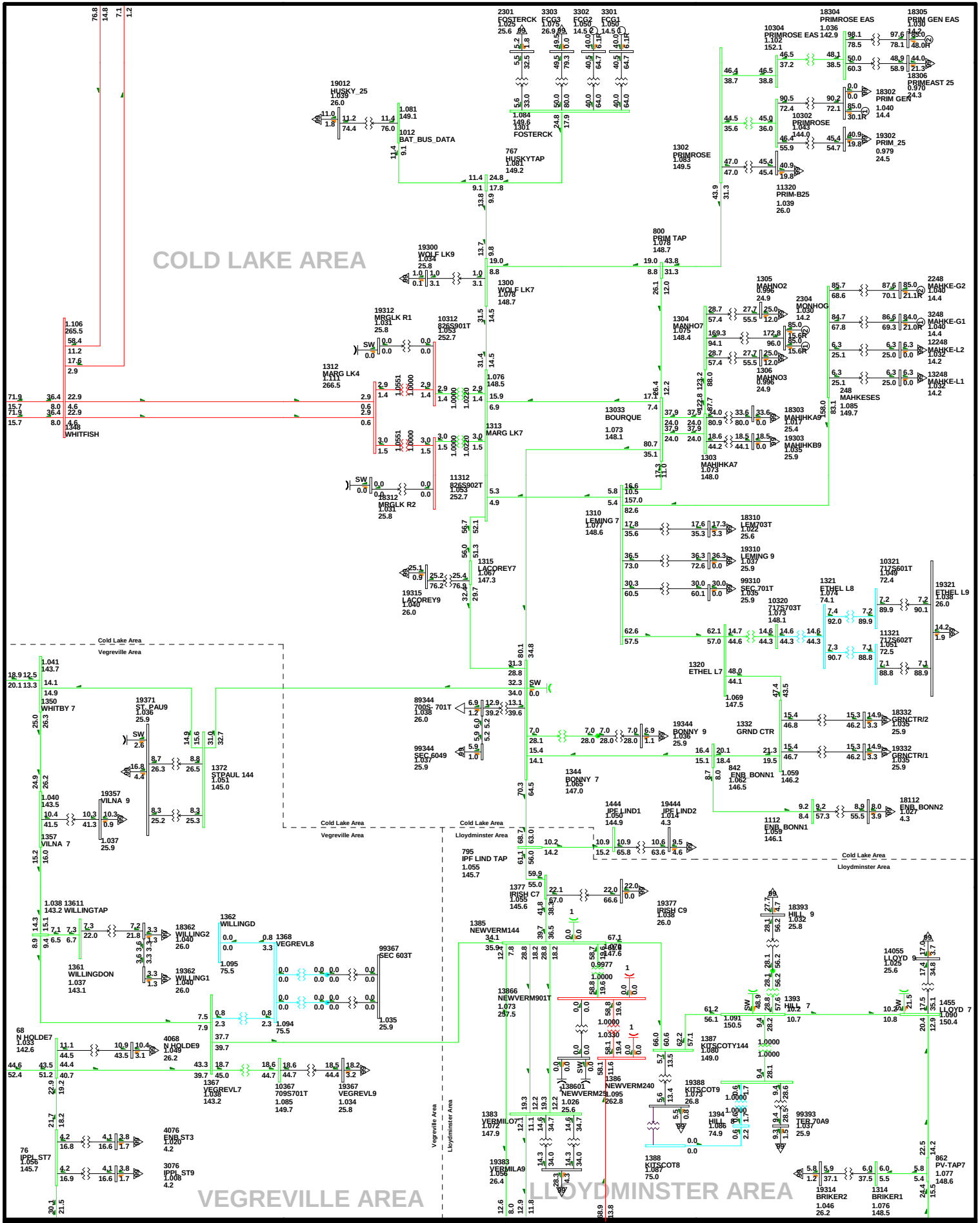
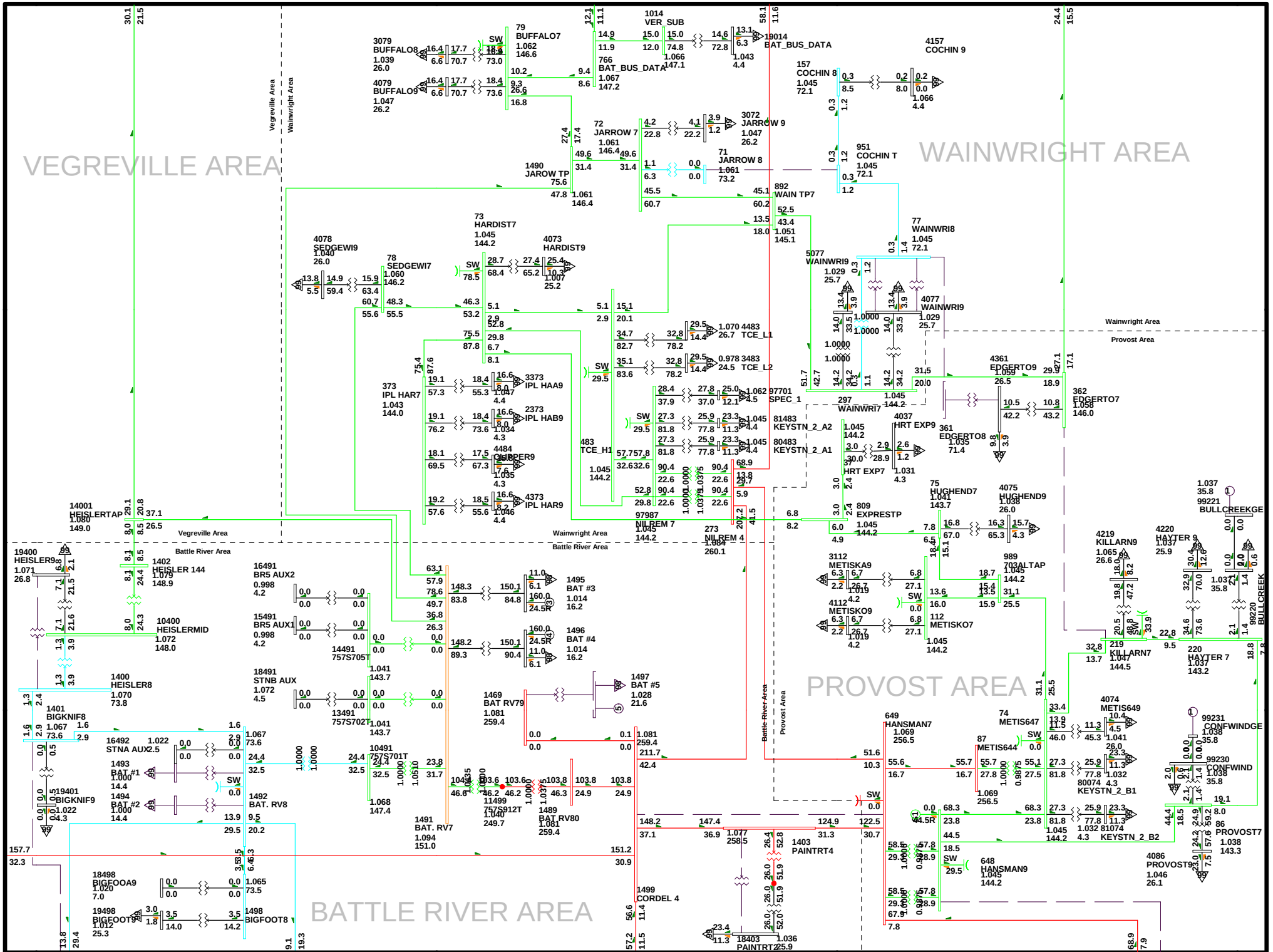
CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
THU, APR 08 2010 16:31
D1-15
2017SP-Alt 2-14.b
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
THU, APR 08 2010 16:31
D1-16

2017SP-Alt 2-15.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000


VEGREVILLE AREA
WAINWRIGHT AREA
PROVOST AREA
BATTLE RIVER AREA
Vegreville Area
Wainwright Area
Battle River Area
Provost Area
3079 BUFFALO8 1.039 26.0
4079 BUFFALO9 1.047 26.2
79 BUFFALO7 1.062 146.6
1014 VER_SUB
19014 BAT_BUS_DATA
766 BAT_BUS_DATA 1.067 147.2
4157 COCHIN 9
157 COCHIN 8 1.045 72.1
951 COCHIN T 1.045 72.1
72 JARROW 7 1.061 146.4
3072 JARROW 9 1.047 26.2
71 JARROW 8 1.061 73.2
1490 JAROW TP 75.6
892 WAIN TP7
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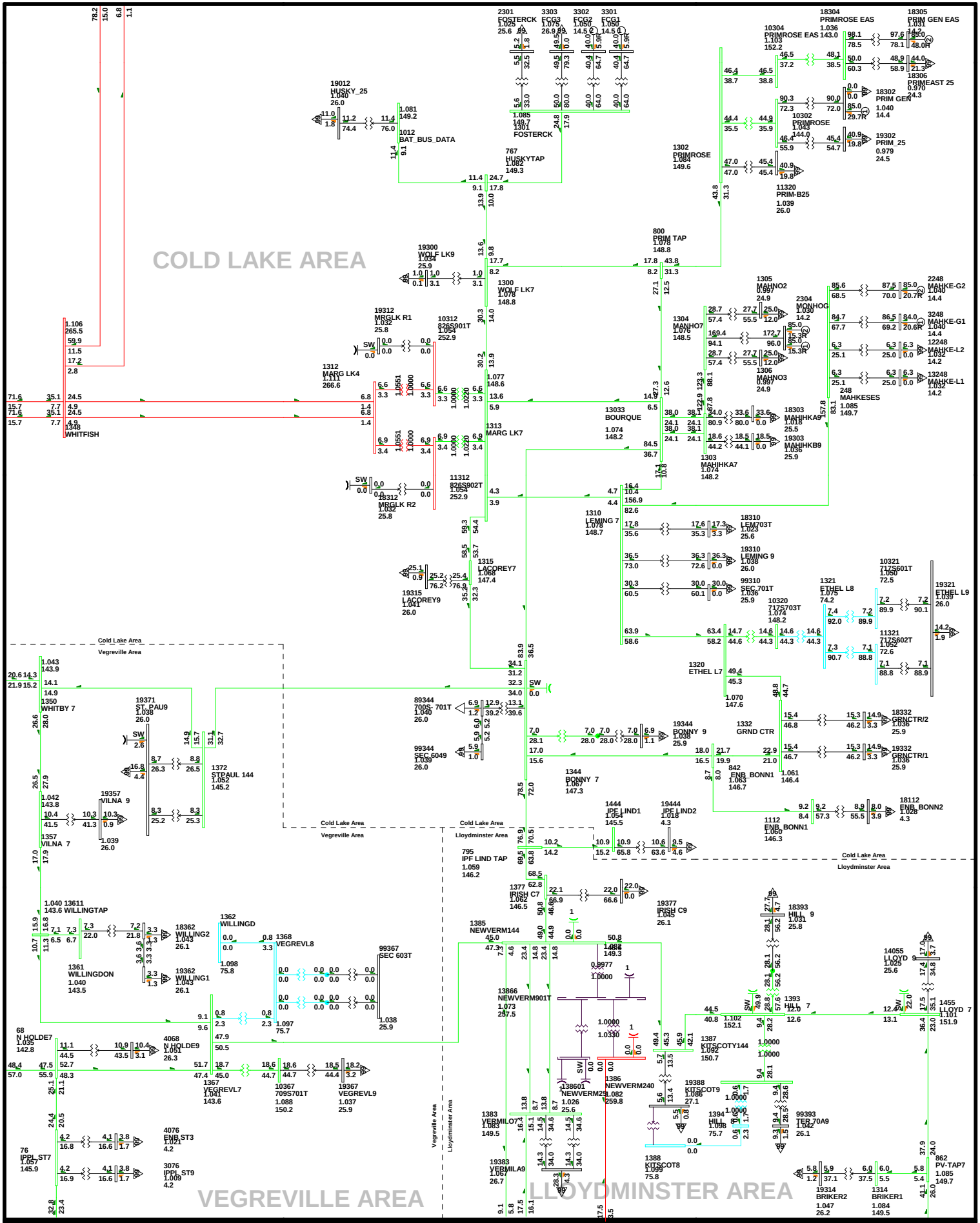
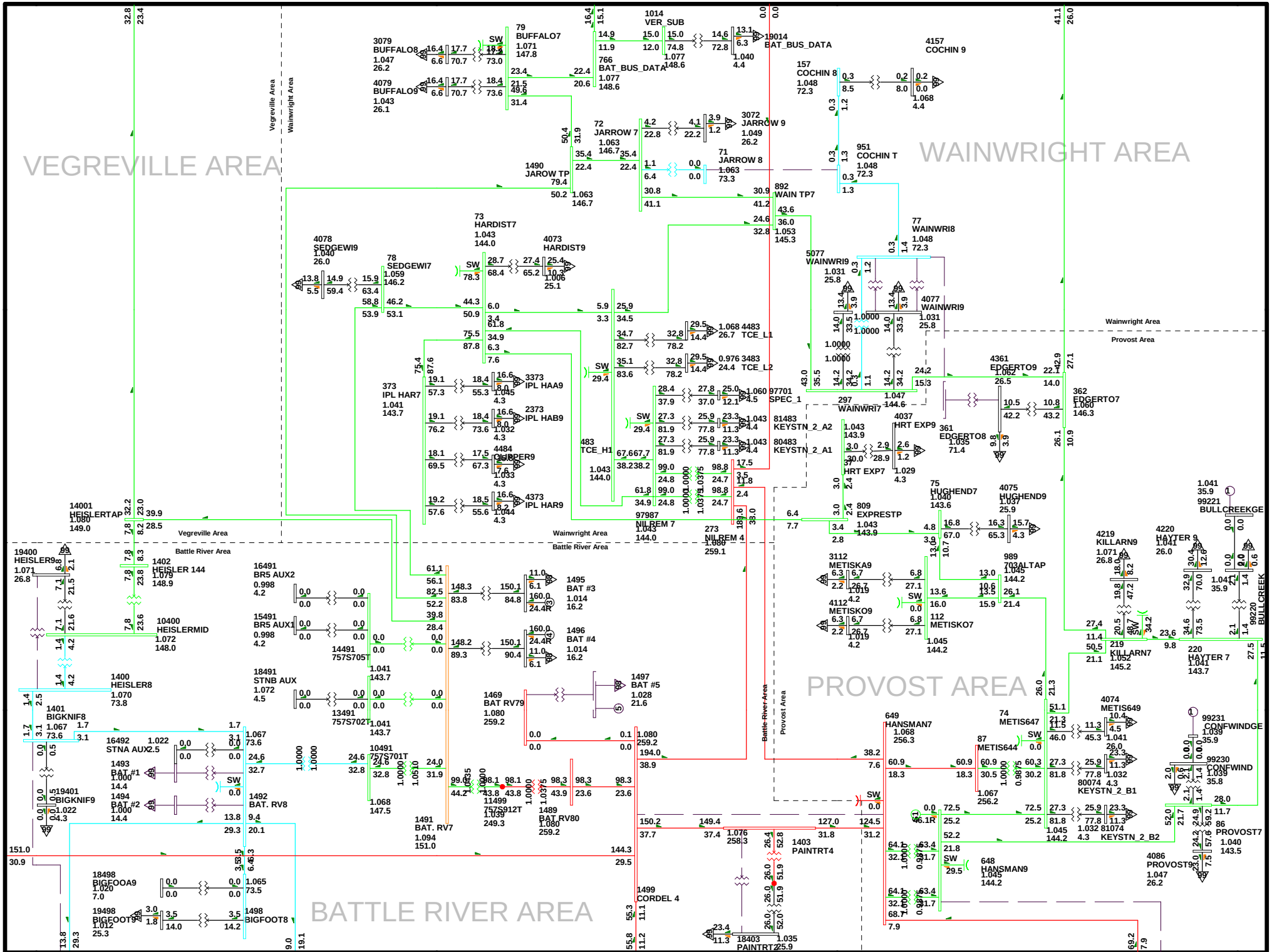
5077 WAINWRI9 1.029 25.7
4077 WAINWRI9 1.029 25.7
73 HARDIST7 1.045 144.2
4073 HARDIST9 1.007 25.2
4078 SEDGEWI9 1.040 26.0
78 SEDGEWI7 1.060 146.2
1.070 4483 26.7 TCE_L1
0.978 3483 24.5 TCE_L2
373 IPL HAR7 1.043 144.0
3373 IPL HAA9 1.047 4.4
2373 IPL HAB9 1.034 4.3
4484 OLDPER9 1.035 4.3
4373 IPL HAR9 1.046 4.4
483 TCE_H1
1.062 97701 SPEC_1
81483 KEYSTN_2_A2
80483 KEYSTN_2_A1
4037 HRT EXP9
HRT EXP7 1.031 4.3
361 EDGERTO8 1.035 71.4
4361 EDGERTO9 1.059
362 EDGERTO7 1.058 146.0
297 WAINWRI7
273 NILREM 4 1.084 260.1
97987 NILREM 7 1.045 144.2
809 EXPRESTP 1.045 144.2
75 HUGHEND7 1.041 143.7
4075 HUGHEND9 1.038 26.0
989 703ALTAP 1.045 144.2
3112 METISKA9
4112 METISKO9
112 METISKO7 1.045 144.2
14001 HEISLERTAP 1.080 149.0
19400 HEISLER9 1.071 26.8
1402 HEISLER 144 1.079 148.9
10400 HEISLERMID 1.072 148.0
1400 HEISLER8 1.070 73.8
1401 BIGKNIF8 1.067 73.6
19401 BIGKNIF9 1.022 4.3
16491 BR5 AUX2 0.998 4.2
15491 BR5 AUX1 0.998 4.2
14491 757S705T
18491 STNB AUX 1.072 4.5
13491 757S702T
16492 STNA AUX 2.5
1493 BAT #1 1.000 14.4
1494 BAT #2 1.000 14.4
1492 BAT. RV8 9.5 20.2
10491 757S701T
1495 BAT #3 1.014 16.2
1496 BAT #4 1.014 16.2
1497 BAT #5 1.028 21.6
1469 BAT RV79 1.081 259.4
1491 BAT. RV7 1.094 151.0
11499 757S912T 1.040 249.7
1489 BAT RV80 1.081 259.4
1499 CORDEL 4
1403 PAINTRT4
18403 PAINTRT2 1.036 25.9
18498 BIGFOOA9 1.020 7.0
19498 BIGFOOT9 1.012 25.3
1498 BIGFOOT8 1.012 14.2
649 HANSMAN7 1.069 256.5
74 METIS647
87 METIS644
1069 256.5
4074 METIS649 1.041 26.0
80074 KEYSTN_2_B1 4.3
81074 KEYSTN_2_B2 4.3
648 HANSMAN9 1.045 144.2
4086 PROVOST9 1.046 26.1
86 PROVOST7 1.038 143.3
99231 CONFWINDGE 1.038 35.8
99230 CONFWIND 1.038 35.8
99221 BULLCREEKGE 1.037 35.8
99220 BULLCREEK 1.037 35.8
4219 KILLARN9 1.065 26.6
219 KILLARN7 1.047 144.5
4220 HAYTER 9 1.037 25.9
220 HAYTER 7 1.037 143.2
CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
THU, APR 08 2010 16:31
D1-16
2017SP-Alt 2-15.b
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
THU, APR 08 2010 16:31
D1-17

2017SP-Alt 2-16.a

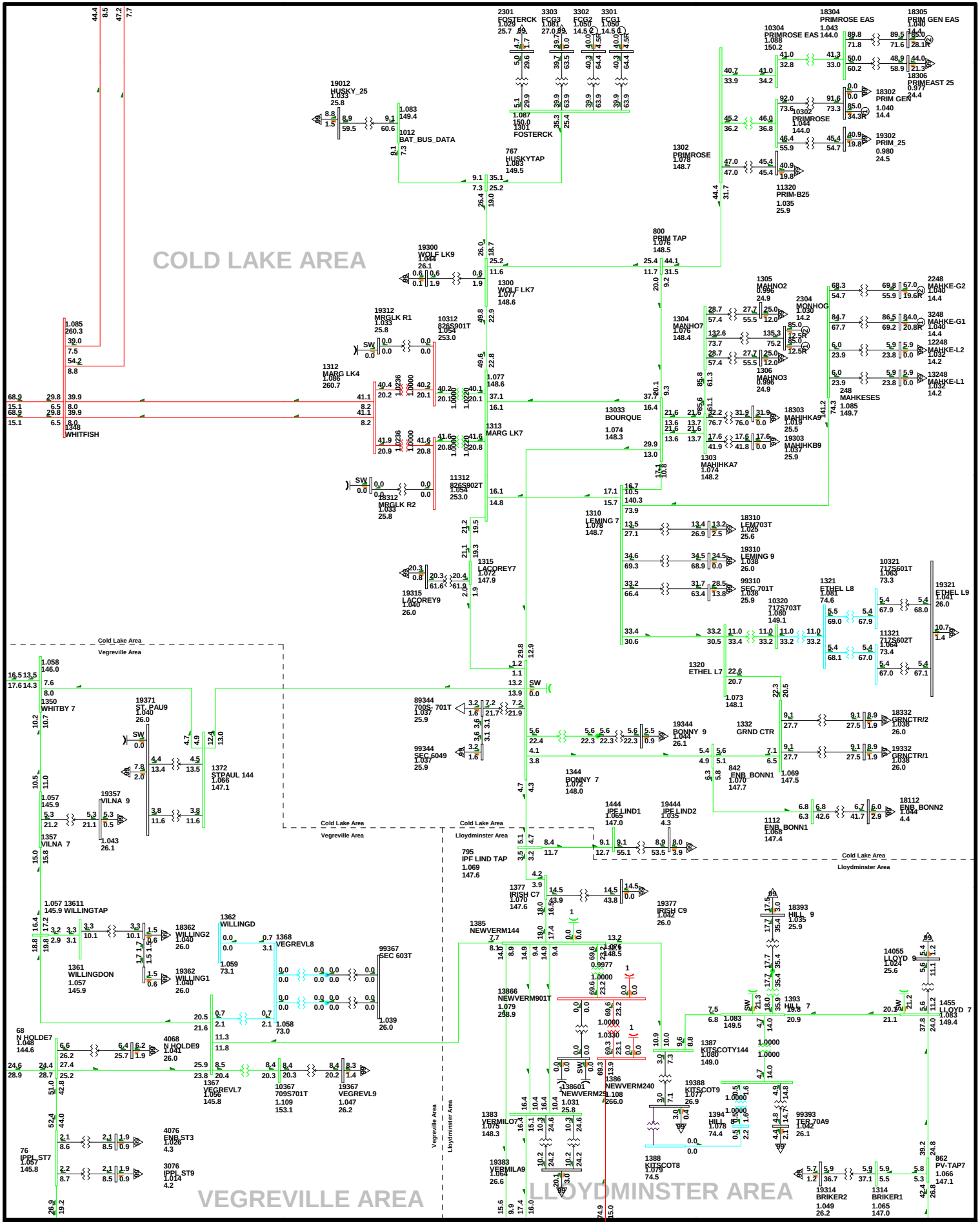
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
THU, APR 08 2010 16:31
D1-17

2017SP-Alt 2-16.b

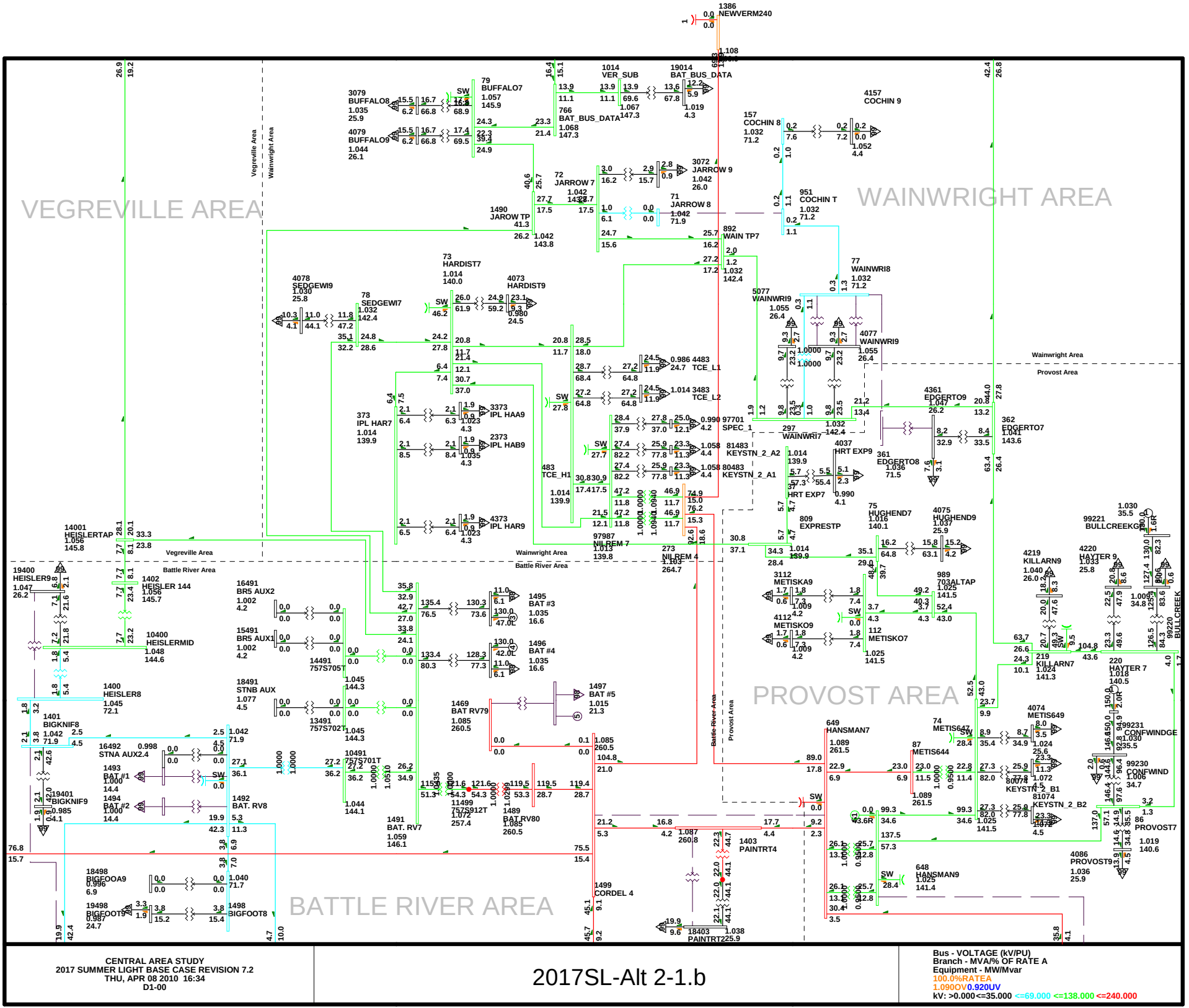
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER LIGHT BASE CASE REVISION 7.2
THU, APR 08 2010 16:34
D1-00

2017SL-Alt 2-1.a

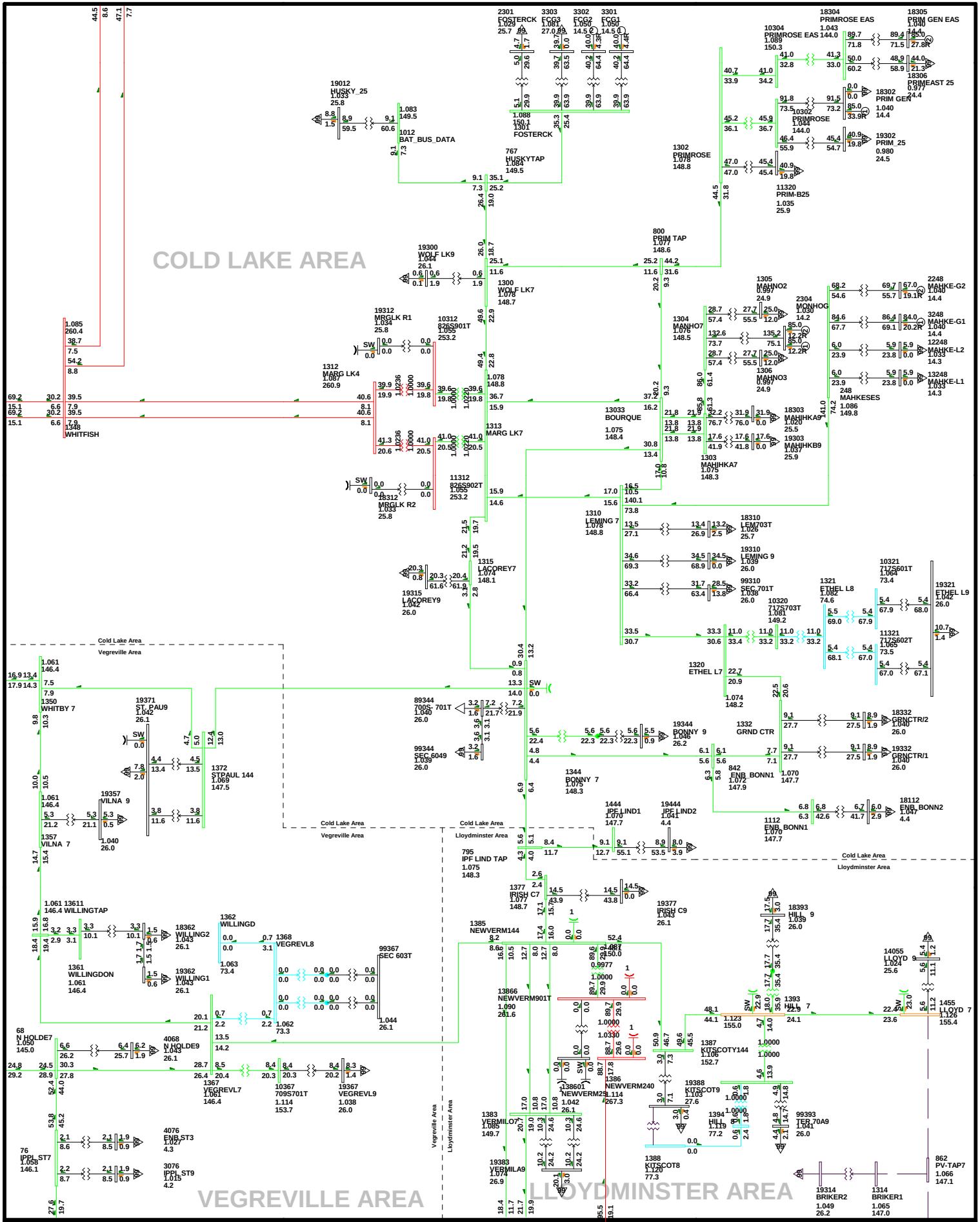
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER LIGHT BASE CASE REVISION 7.2
THU, APR 08 2010 16:34
D1-00

2017SL-Alt 2-1.b

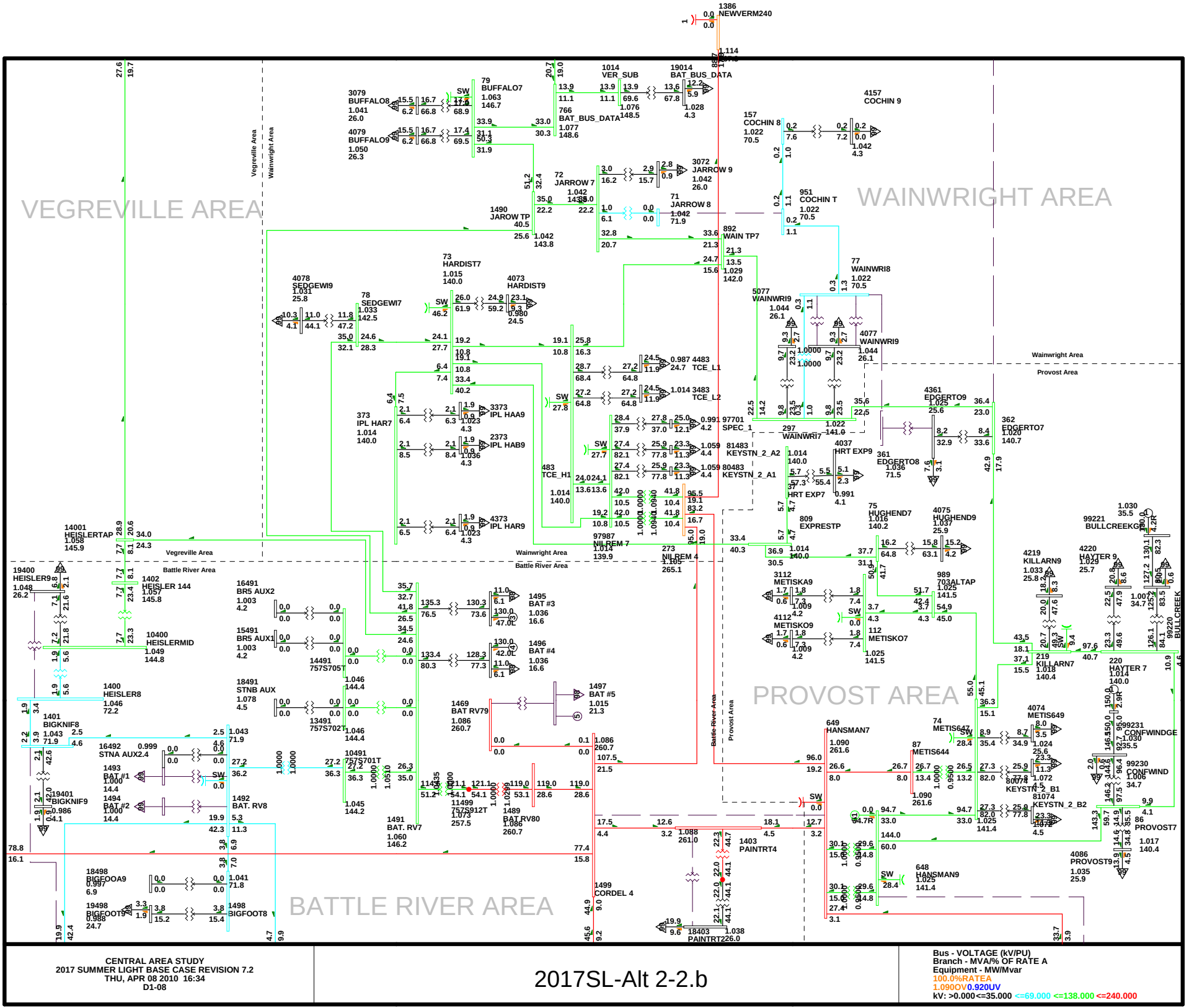
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

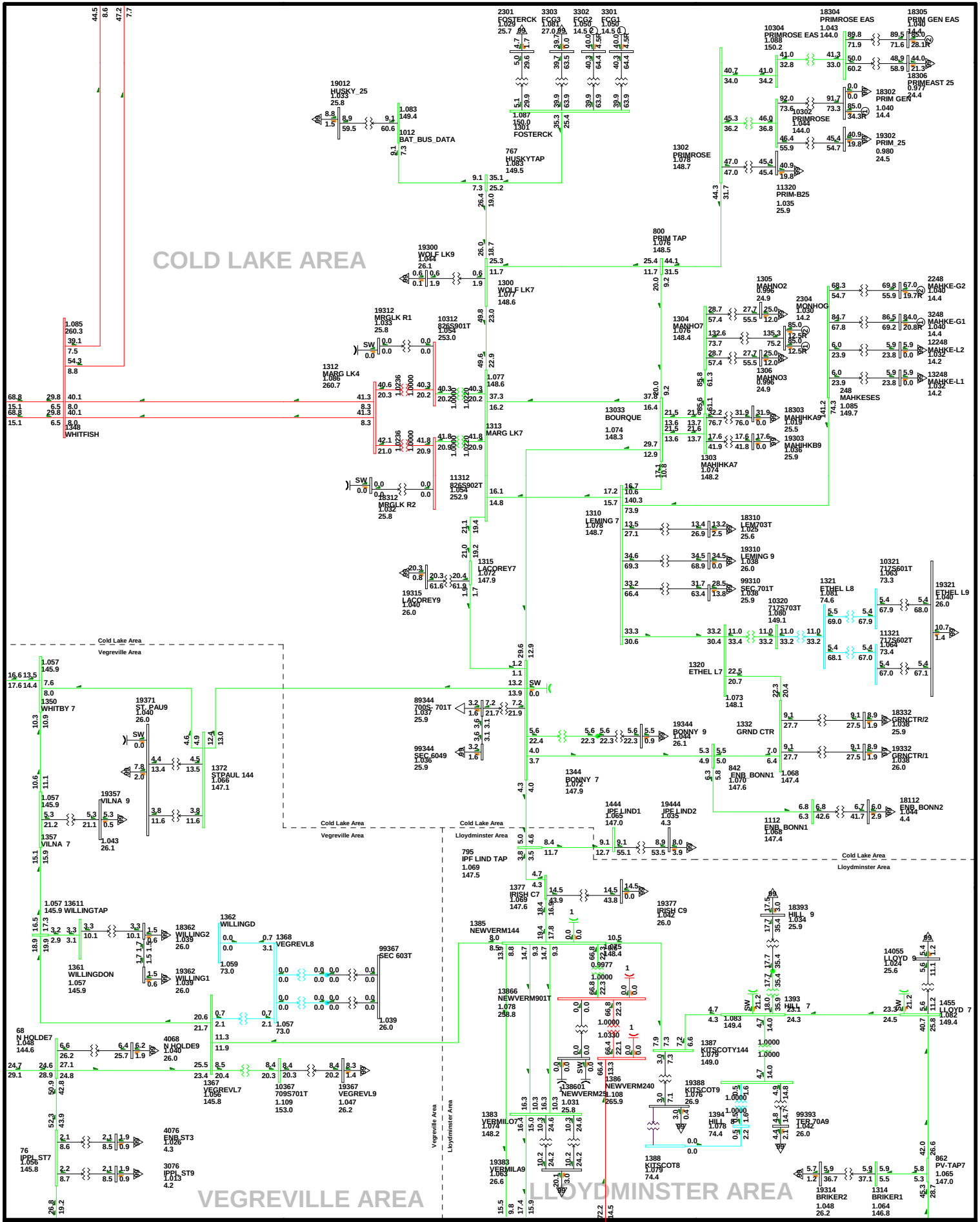


CENTRAL AREA STUDY
2017 SUMMER LIGHT BASE CASE REVISION 7.2
THU, APR 08 2010 16:34
D1-08

2017SL-Alt 2-2.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

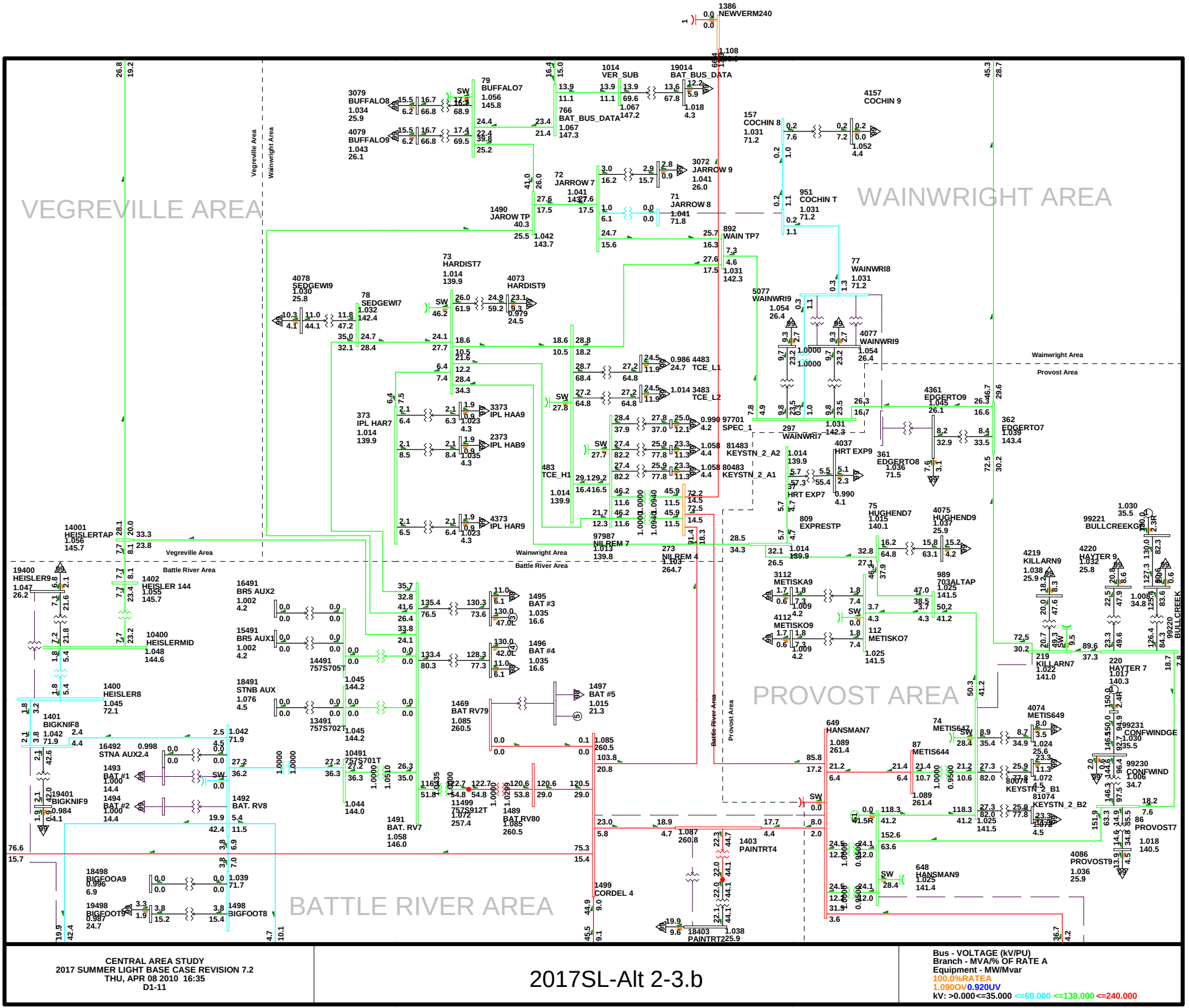

VEGREVILLE AREA
WAINWRIGHT AREA
PROVOST AREA
BATTLE RIVER AREA
Vegreville Area
Wainwright Area
Provost Area
Battle River Area
1386 NEWVERM240
1014 VER_SUB
19014 BAT_BUS_DATA
766 BAT_BUS_DATA
79 BUFFALO7
3079 BUFFALO8
4079 BUFFALO9
4157 COCHIN 9
157 COCHIN 8
951 COCHIN T
71 JARROW 8
72 JARROW 7
3072 JARROW 9
1490 JAROW TP
892 WAIN TP7
77 WAINWRI8
5077 WAINWRI9
4077 WAINWRI9
73 HARDIST7
4073 HARDIST9
78 SEDGEWI7
4078 SEDGEWI9
373 IPL HAR7
3373 IPL HAA9
2373 IPL HAB9
4373 IPL HAR9
483 TCE_H1
4483 TCE_L1
3483 TCE_L2
97701 SPEC_1
81483 KEYSTN_2_A2
80483 KEYSTN_2_A1
297 WAINWRI7
4037 HRT EXP9
HRT EXP7
361 EDGERTO8
4361 EDGERTO9
362 EDGERTO7
809 EXPRESTP
75 HUGHEND7
4075 HUGHEND9
989 703ALTAP
3112 METISKA9
4112 METISKO9
112 METISKO7
14001 HEISLERTAP
19400 HEISLER9
1402 HEISLER 144
10400 HEISLERMID
1400 HEISLER8
1401 BIGKNIF8
19401 BIGKNIF9
16491 BR5 AUX2
15491 BR5 AUX1
14491 757S705T
18491 STNB AUX
13491 757S702T
16492 STNA AUX2.4
1493 BAT #1
1494 BAT #2
1492 BAT. RV8
10491 757S701T
1491 BAT. RV7
1469 BAT RV79
1495 BAT #3
1496 BAT #4
1497 BAT #5
1489 BAT RV80
11499 757S912T
273 NIL REM 4
97987 NIL REM 7
1499 CORDEL 4
1403 PAINTRT4
18403 PAINTRT
649 HANSMAN7
648 HANSMAN9
74 METIS647
87 METIS644
4074 METIS649
80078 KEYSTN_2_B1
81074 KEYSTN_2_B2
4086 PROVOST9
86 PROVOST7
18498 BIGFOOA9
19498 BIGFOOT9
1498 BIGFOOT8
4219 KILLARN9
219 KILLARN7
4220 HAYTER 9
220 HAYTER 7
99221 BULLCREEKGB
99220 BULLCREEK
99231 CONFWINDGE
99230 CONFWIND
CENTRAL AREA STUDY
2017 SUMMER LIGHT BASE CASE REVISION 7.2
THU, APR 08 2010 16:34
D1-08
2017SL-Alt 2-2.b
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER LIGHT BASE CASE REVISION 7.2
THU, APR 08 2010 16:35
D1-11

2017SL-Alt 2-3.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000


VEGREVILLE AREA
WAINWRIGHT AREA
PROVOST AREA
BATTLE RIVER AREA
Vegreville Area
Wainwright Area
Battle River Area
Provost Area
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1014 VER_SUB
19014 BAT_BUS_DATA
766 BAT_BUS_DATA
79 BUFFALO7
3079 BUFFALO8
4079 BUFFALO9
4157 COCHIN 9
157 COCHIN 8
951 COCHIN T
72 JARROW 7
3072 JARROW 9
71 JARROW 8
1490 JAROW TP
892 WAIN TP7
73 HARDIST7
4073 HARDIST9
78 SEDGEWI7
4078 SEDGEWI9
77 WAINWRI8
5077 WAINWRI9
4077 WAINWRI9
4361 EDGERTO9
362 EDGERTO7
361 EDGERTO8
4037 HRT EXP9
HRT EXP7
297 WAINWRI7
373 IPL HAR7
3373 IPL HAA9
2373 IPL HAB9
4373 IPL HAR9
483 TCE_H1
3483 TCE_L2
4483 TCE_L1
81483 KEYSTN_2_A2
80483 KEYSTN_2_A1
97701 SPEC_1
97987 NIL REM 7
273 NIL REM 4
809 EXPRESTP
75 HUGHEND7
4075 HUGHEND9
14001 HEISLERTAP
19400 HEISLER9
1402 HEISLER 144
10400 HEISLERMID
1400 HEISLER8
1401 BIGKNIF8
19401 BIGKNIF9
16491 BR5 AUX2
15491 BR5 AUX1
18491 STNB AUX
16492 STNA AUX2.4
14491 757S705T
13491 757S702T
10491 757S701T
11499 757S912T
1491 BAT. RV7
1492 BAT. RV8
1493 BAT #1
1494 BAT #2
1495 BAT #3
1496 BAT #4
1497 BAT #5
1469 BAT RV79
1489 BAT RV80
1499 CORDEL 4
1403 PAINTRT4
18403 PAINTRT
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19498 BIGFOOT9
1498 BIGFOOT8
649 HANSMAN7
648 HANSMAN9
74 METIS647
87 METIS644
4074 METIS649
989 703ALTAP
3112 METISKA9
4112 METISKO9
112 METISKO7
80078 KEYSTN_2_B1
81074 KEYSTN_2_B2
4086 PROVOST9
86 PROVOST7
4219 KILLARN9
219 KILLARN7
4220 HAYTER 9
220 HAYTER 7
99221 BULLCREEKGR
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99231 CONFWINDGE
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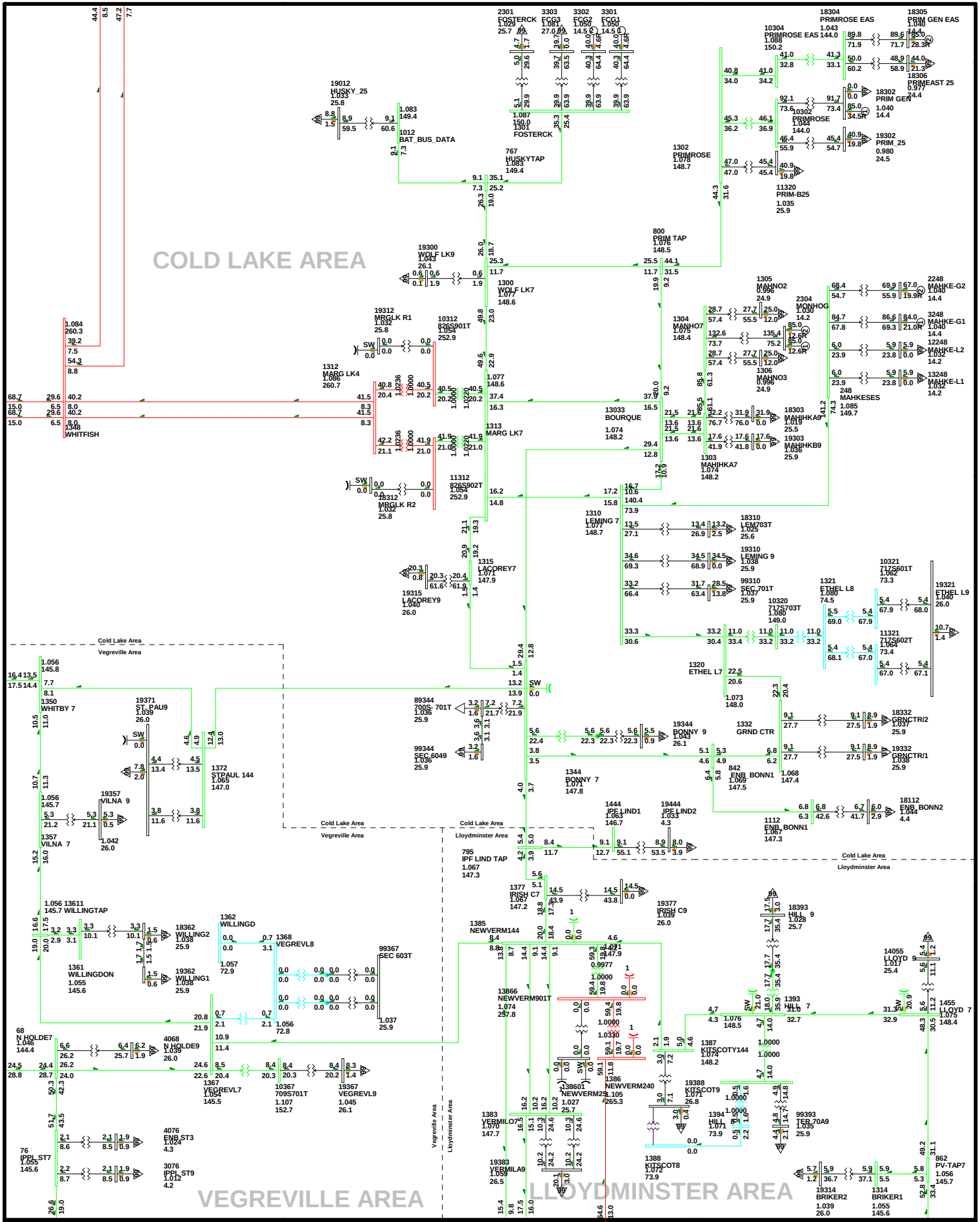
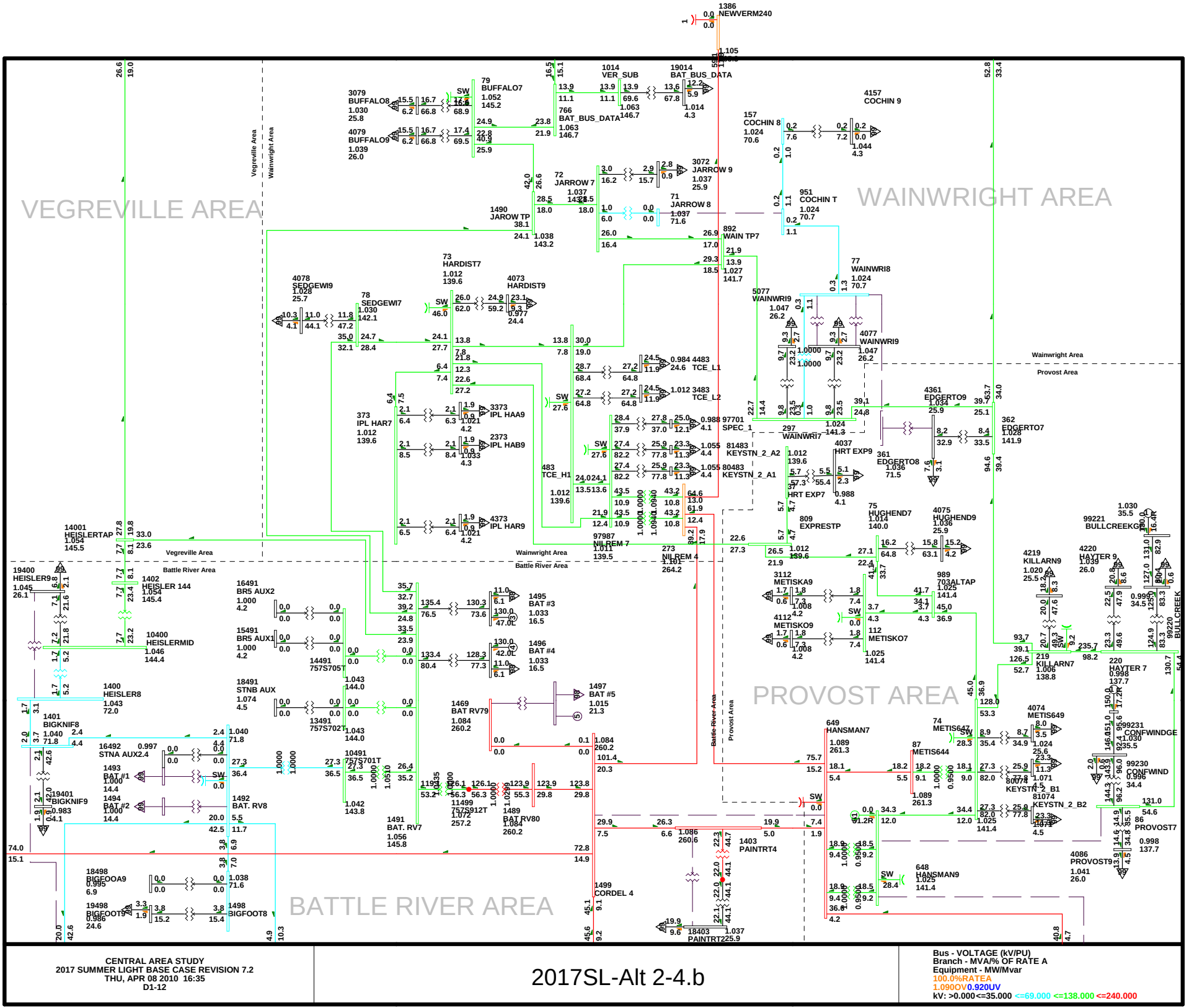
CENTRAL AREA STUDY
2017 SUMMER LIGHT BASE CASE REVISION 7.2
THU, APR 08 2010 16:35
D1-11
2017SL-Alt 2-3.b
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER LIGHT BASE CASE REVISION 7.2
THU, APR 08 2010 16:35
D1-12

2017SL-Alt 2-4.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000


VEGREVILLE AREA
WAINWRIGHT AREA
PROVOST AREA
BATTLE RIVER AREA
Vegreville Area
Wainwright Area
Battle River Area
Provost Area
1386 NEWVERM240
1014 VER_SUB
19014 BAT_BUS_DATA
766 BAT_BUS_DATA
3079 BUFFALO8
4079 BUFFALO9
79 BUFFALO7
72 JARROW 7
71 JARROW 8
1490 JAROW TP
3072 JARROW 9
4157 COCHIN 9
157 COCHIN 8
951 COCHIN T
892 WAIN TP7
77 WAINWRI8
5077 WAINWRI9
4077 WAINWRI9
4078 SEDGEWI9
78 SEDGEWI7
73 HARDIST7
4073 HARDIST9
373 IPL HAR7
3373 IPL HAA9
2373 IPL HAB9
4373 IPL HAR9
483 TCE_H1
4483 TCE_L1
3483 TCE_L2
97701 SPEC_1
297 WAINWRI7
81483 KEYSTN_2_A2
80483 KEYSTN_2_A1
4037 HRT EXP9
HRT EXP7
361 EDGERTO8
4361 EDGERTO9
362 EDGERTO7
809 EXPRESTP
75 HUGHEND7
4075 HUGHEND9
97987 NIL REM 7
273 NIL REM 4
14001 HEISLERTAP
19400 HEISLER9
1402 HEISLER 144
10400 HEISLERMID
1400 HEISLER8
1401 BIGKNIF8
19401 BIGKNIF9
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15491 BR5 AUX1
18491 STNB AUX
16492 STNA AUX2
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1492 BAT. RV8
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11491 757S912T
1491 BAT. RV7
1495 BAT #3
1496 BAT #4
1497 BAT #5
1469 BAT RV79
1489 BAT RV80
1499 CORDEL 4
18498 BIGFOOA9
19498 BIGFOOT9
1498 BIGFOOT8
18403 PAINTRT2
1403 PAINTRT4
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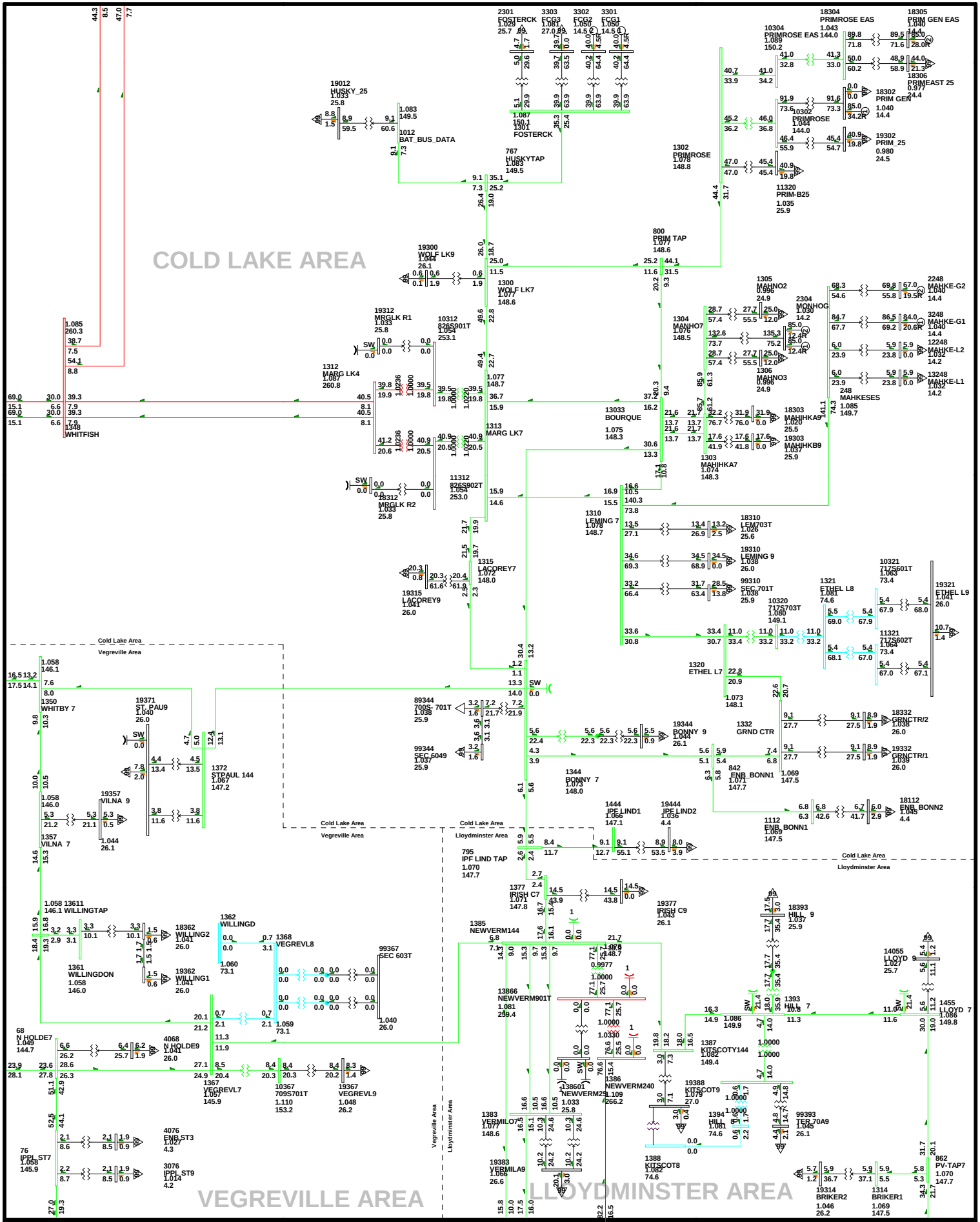
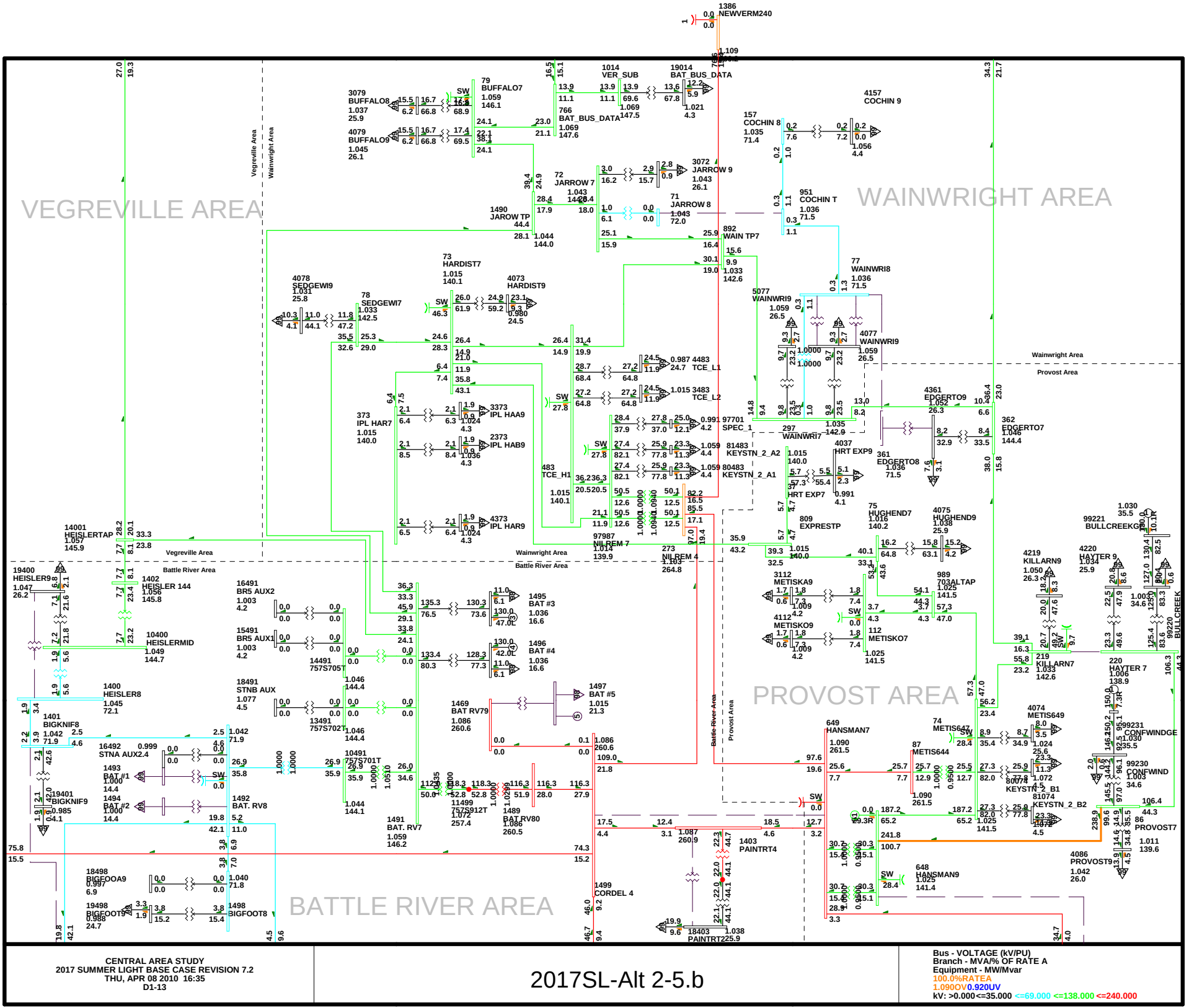
648 HANSMAN9
74 METIS647
87 METIS644
4074 METIS649
989 703ALTAP
3112 METISKA9
4112 METISKO9
112 METISKO7
4219 KILLARN9
219 KILLARN7
4220 HAYTER 9
220 HAYTER 7
99221 BULLCREEKGB
99220 BULLCREEK
99231 CONFWINDGE
99230 CONFWIND
81074 KEYSTN_2_B1
80074 KEYSTN_2_B2
4086 PROVOST9
86 PROVOST7
CENTRAL AREA STUDY
2017 SUMMER LIGHT BASE CASE REVISION 7.2
THU, APR 08 2010 16:35
D1-12
2017SL-Alt 2-4.b
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

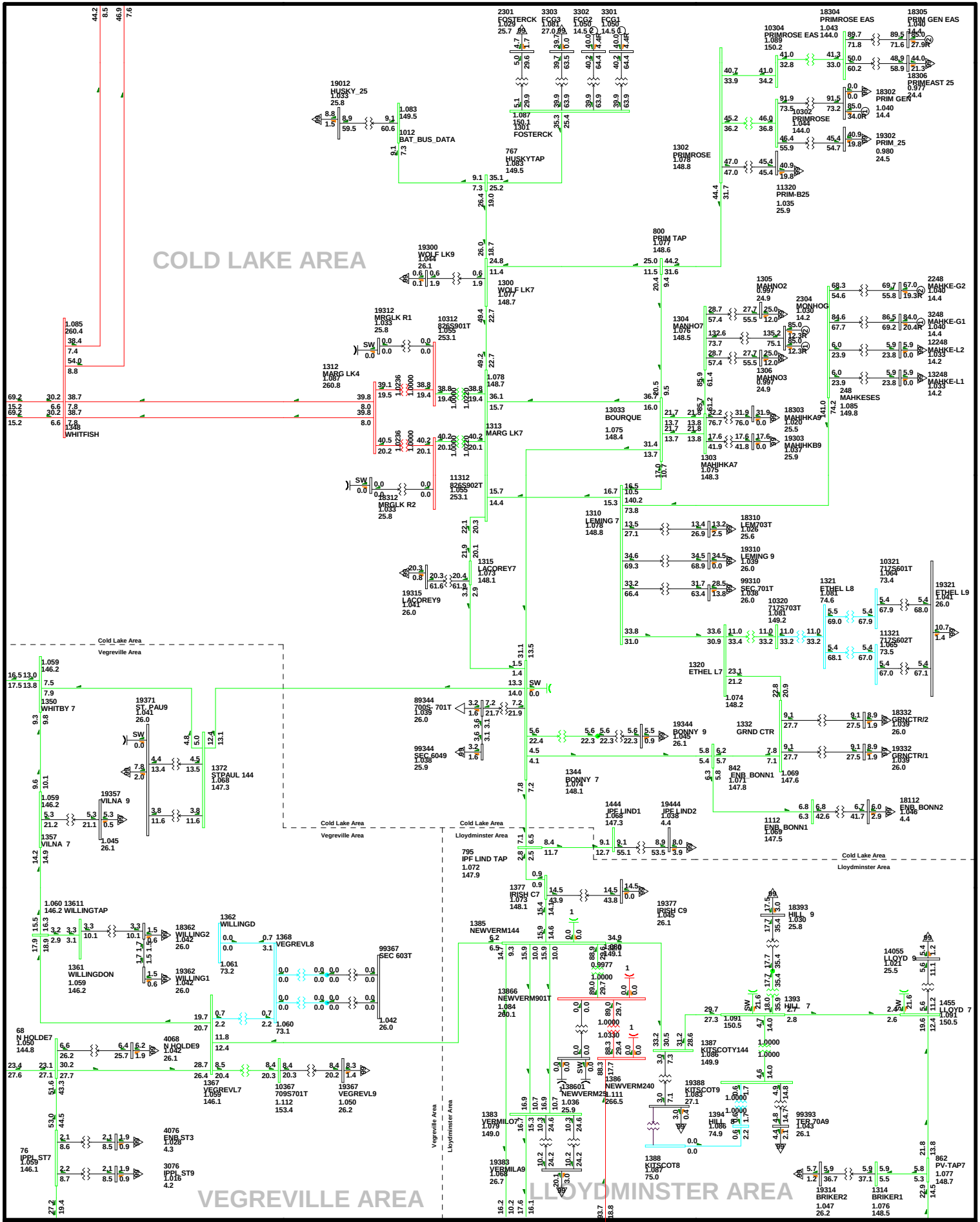


CENTRAL AREA STUDY
2017 SUMMER LIGHT BASE CASE REVISION 7.2
THU, APR 08 2010 16:35
D1-13

2017SL-Alt 2-5.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

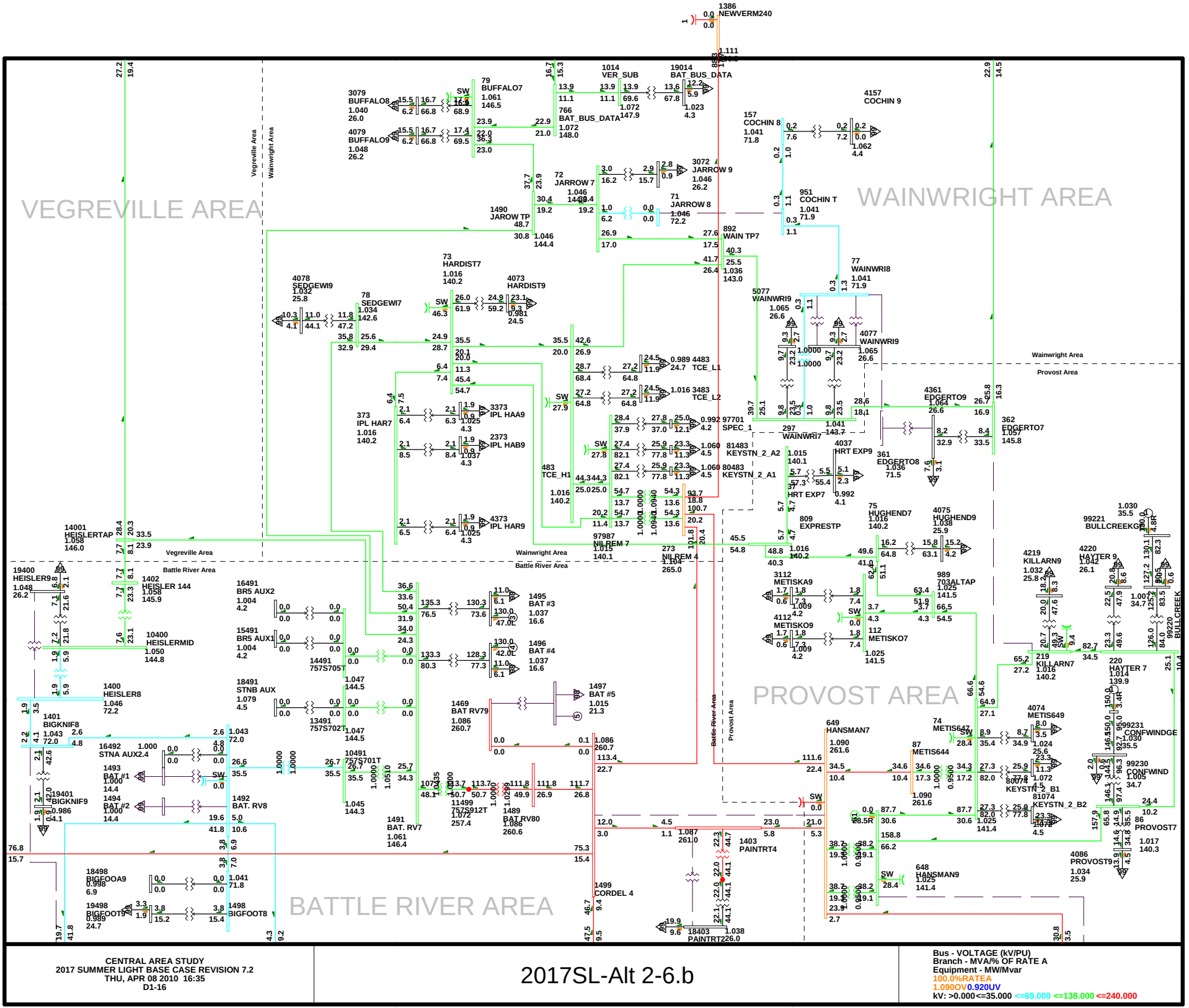

VEGREVILLE AREA
WAINWRIGHT AREA
PROVOST AREA
BATTLE RIVER AREA
Vegreville Area
Wainwright Area
Battle River Area
Provost Area
1386 NEWVERM240
1014 VER_SUB
19014 BAT_BUS_DATA
766 BAT_BUS_DATA
3079 BUFFALO8
4079 BUFFALO9
79 BUFFALO7
4157 COCHIN 9
157 COCHIN 8
951 COCHIN T
72 JARROW 7
71 JARROW 8
3072 JARROW 9
1490 JAROW TP
892 WAIN TP7
73 HARDIST7
4073 HARDIST9
4078 SEDGEWI9
78 SEDGEWI7
77 WAINWRI8
5077 WAINWRI9
4077 WAINWRI9
4361 EDGERTO9
362 EDGERTO7
361 EDGERTO8
4037 HRT EXP9
HRT EXP7
297 WAINWRI7
373 IPL HAR7
3373 IPL HAA9
2373 IPL HAB9
4373 IPL HAR9
483 TCE_H1
4483 TCE_L1
3483 TCE_L2
97701 SPEC_1
81483 KEYSTN_2_A2
80483 KEYSTN_2_A1
97987 NIL REM 7
273 NIL REM 4
14001 HEISLERTAP
19400 HEISLER9
1402 HEISLER 144
10400 HEISLERMID
1400 HEISLER8
809 EXPRESTP
75 HUGHEND7
4075 HUGHEND9
3112 METISKA9
4112 METISKO9
112 METISKO7
989 703ALTAP
4219 KILLARN9
219 KILLARN7
4220 HAYTER 9
220 HAYTER 7
99221 BULLCREEKGR
99220 BULLCREEK
99231 CONFWINDGE
99230 CONFWIND
1401 BIGKNIF8
19401 BIGKNIF9
16492 STNA AUX2.4
1493 BAT #1
1494 BAT #2
1492 BAT. RV8
18498 BIGFOOA9
19498 BIGFOOT9
1498 BIGFOOT8
16491 BR5 AUX2
15491 BR5 AUX1
14491 757S705T
18491 STNB AUX
13491 757S702T
10491 757S701T
11491 757S912T
1491 BAT. RV7
1495 BAT #3
1496 BAT #4
1497 BAT #5
1469 BAT RV79
1489 BAT RV80
1499 CORDEL 4
1403 PAINTRT4
18403 PAINTRT
649 HANSMAN7
648 HANSMAN9
74 METIS647
87 METIS644
80078 KEYSTN_2_B1
81074 KEYSTN_2_B2
4074 METIS649
1403 PAINTRT4
4086 PROVOST9
86 PROVOST7
CENTRAL AREA STUDY
2017 SUMMER LIGHT BASE CASE REVISION 7.2
THU, APR 08 2010 16:35
D1-13
2017SL-Alt 2-5.b
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER LIGHT BASE CASE REVISION 7.2
THU, APR 08 2010 16:35
D1-16

2017SL-Alt 2-6.a

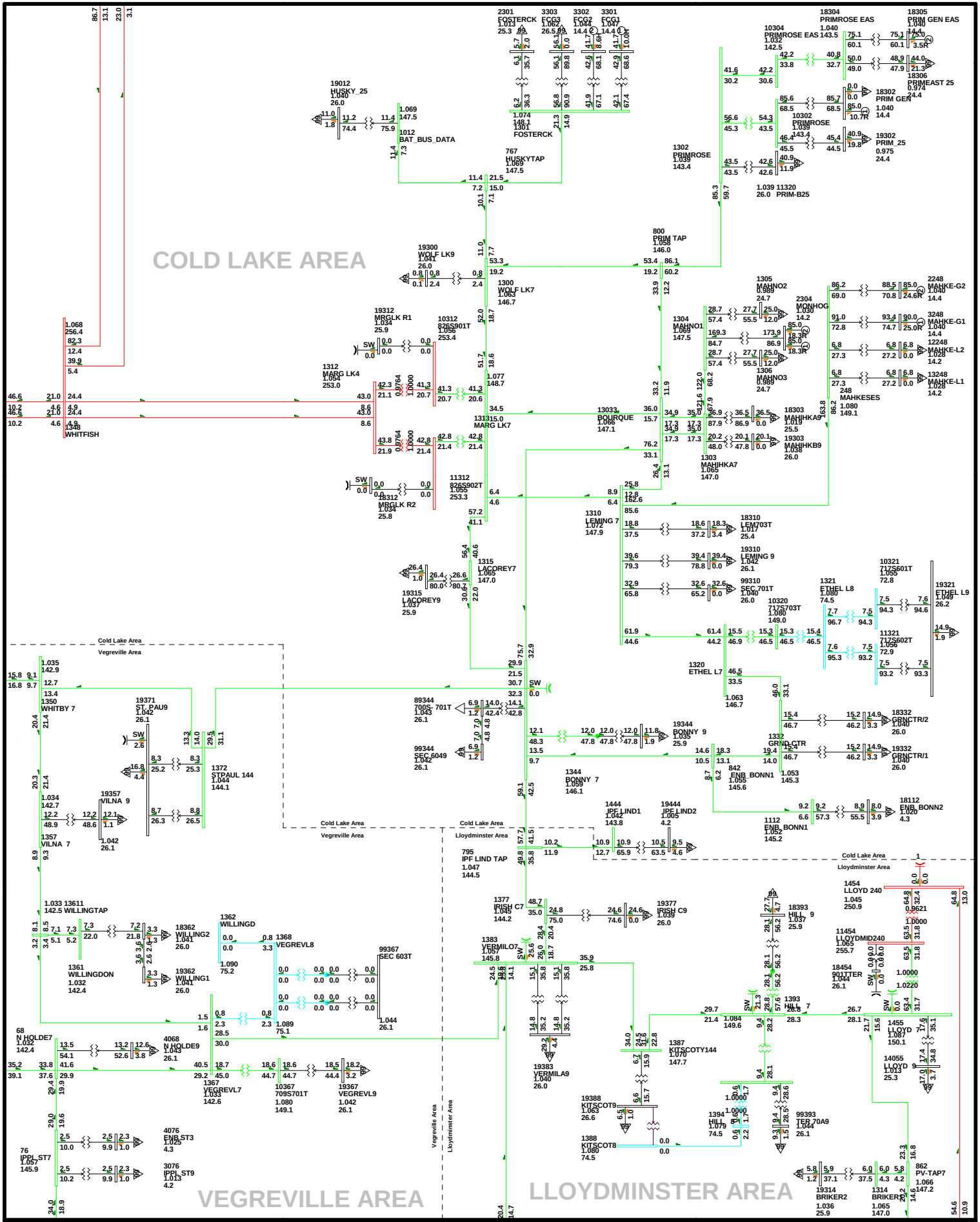
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER LIGHT BASE CASE REVISION 7.2
THU, APR 08 2010 16:35
D1-16

2017SL-Alt 2-6.b

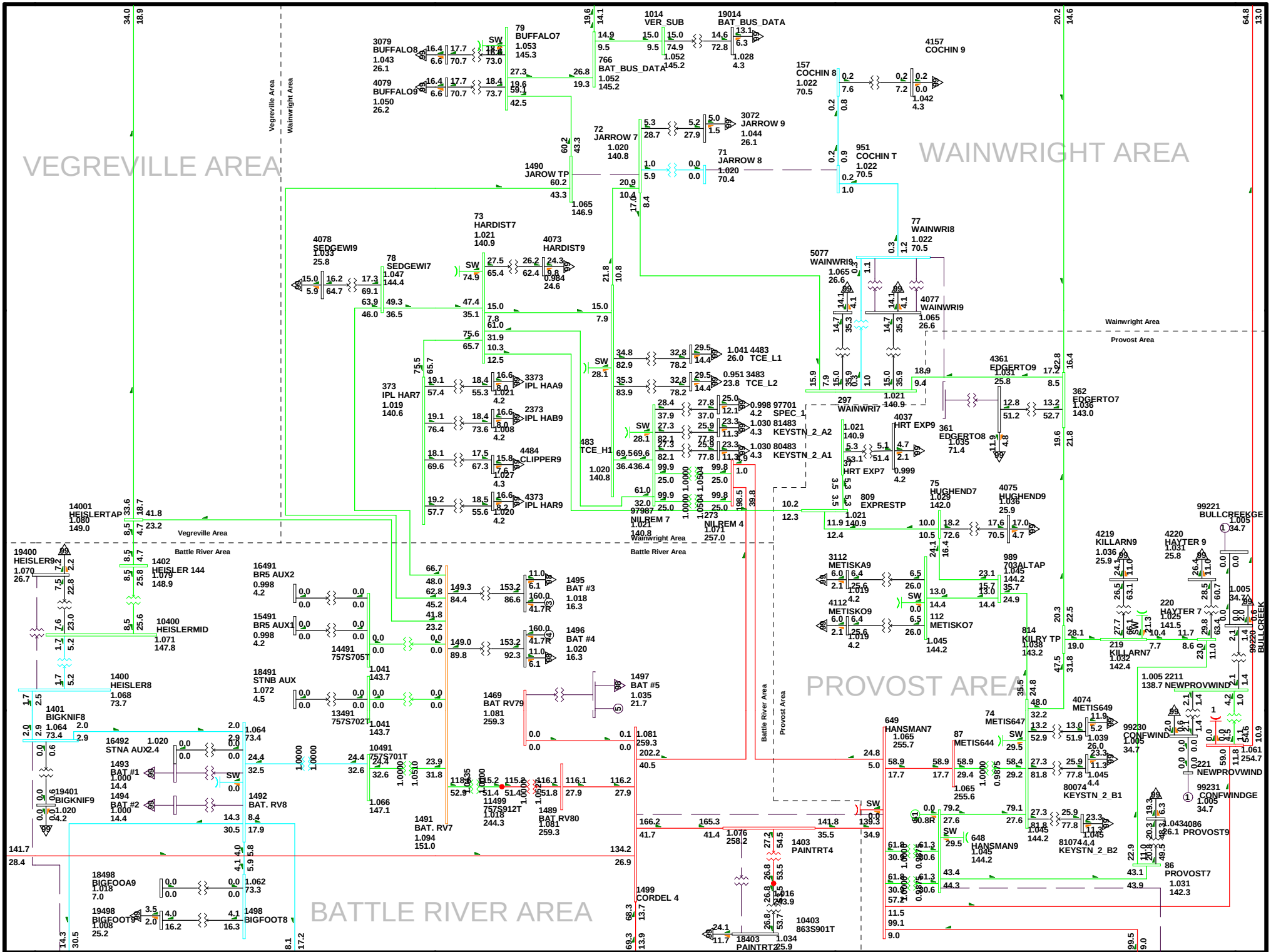
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 9:36
D1-00

2017WP-Alt 3-1.a

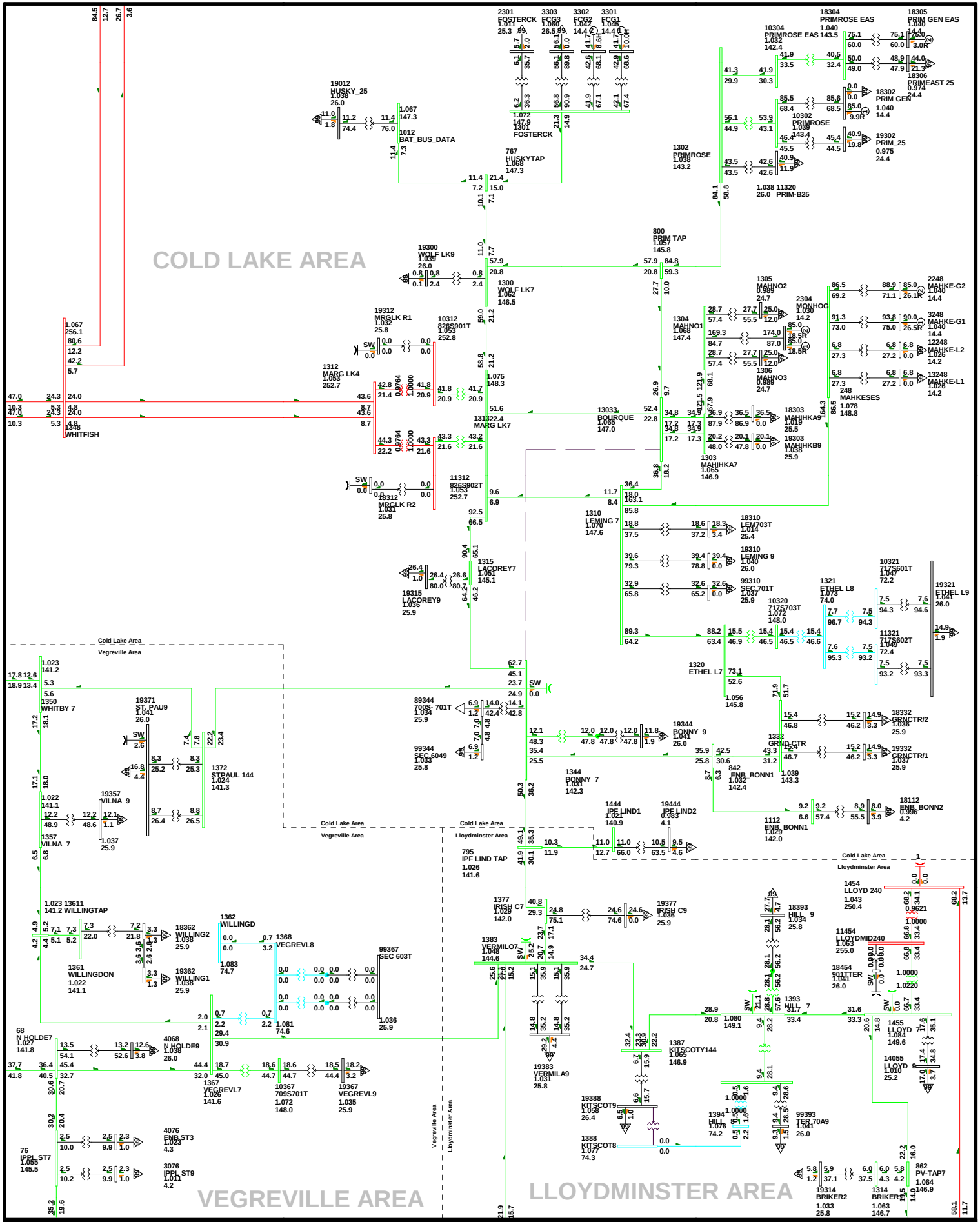
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000<=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 9:36
D1-00

2017WP-Alt 3-1.b

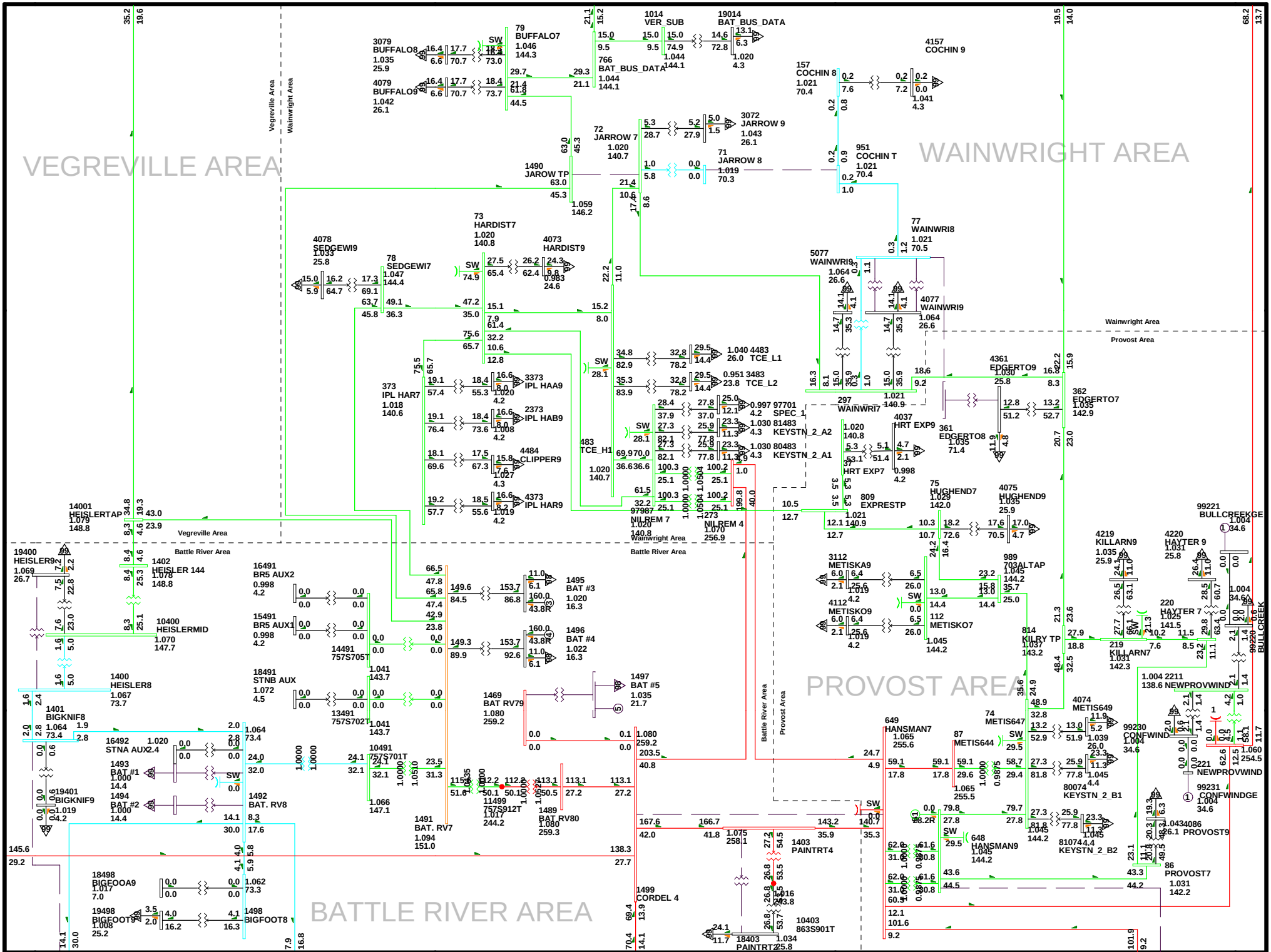
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV 0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000

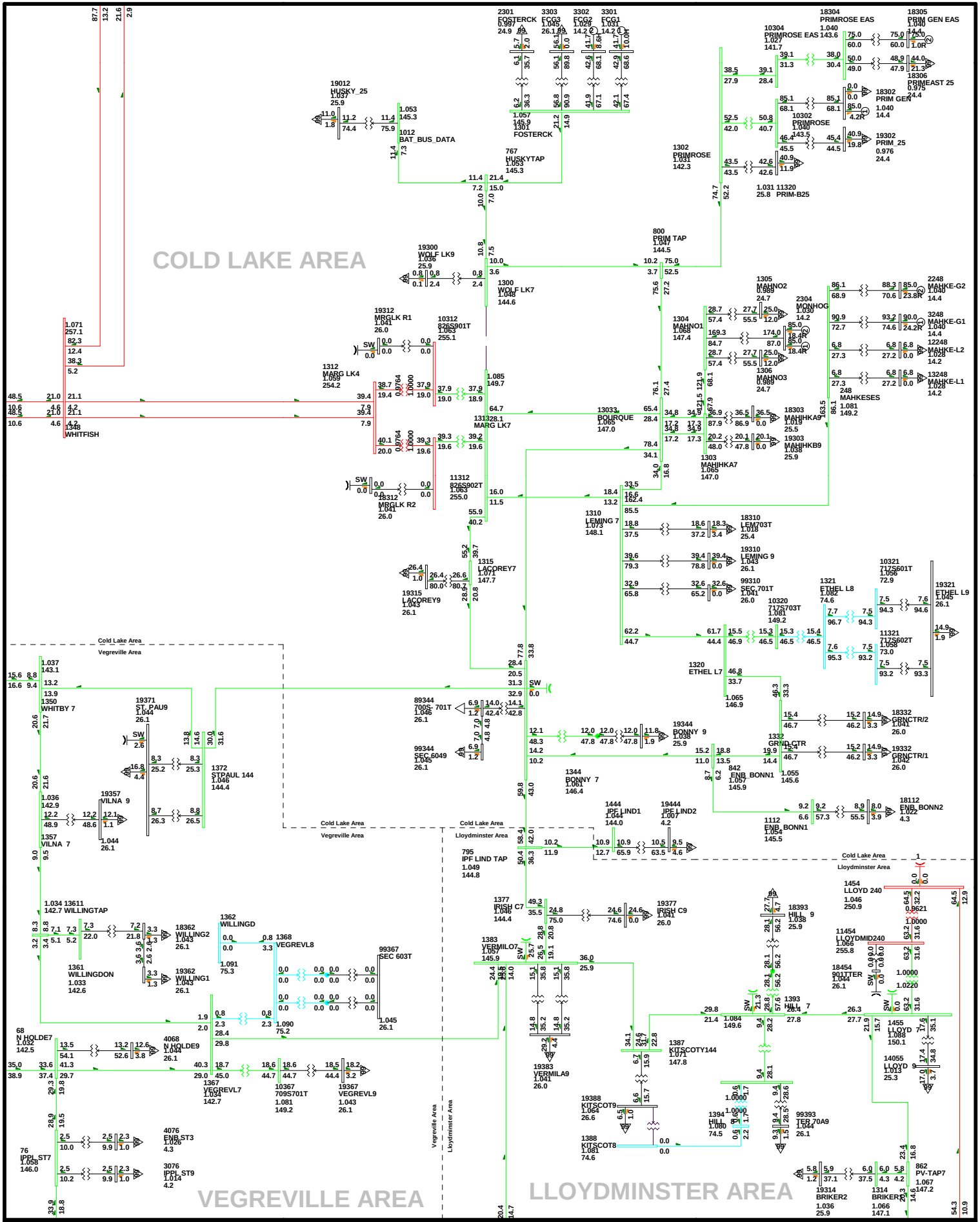


CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 9:36
D1-01

2017WP-Alt 3-2.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000<=240.000

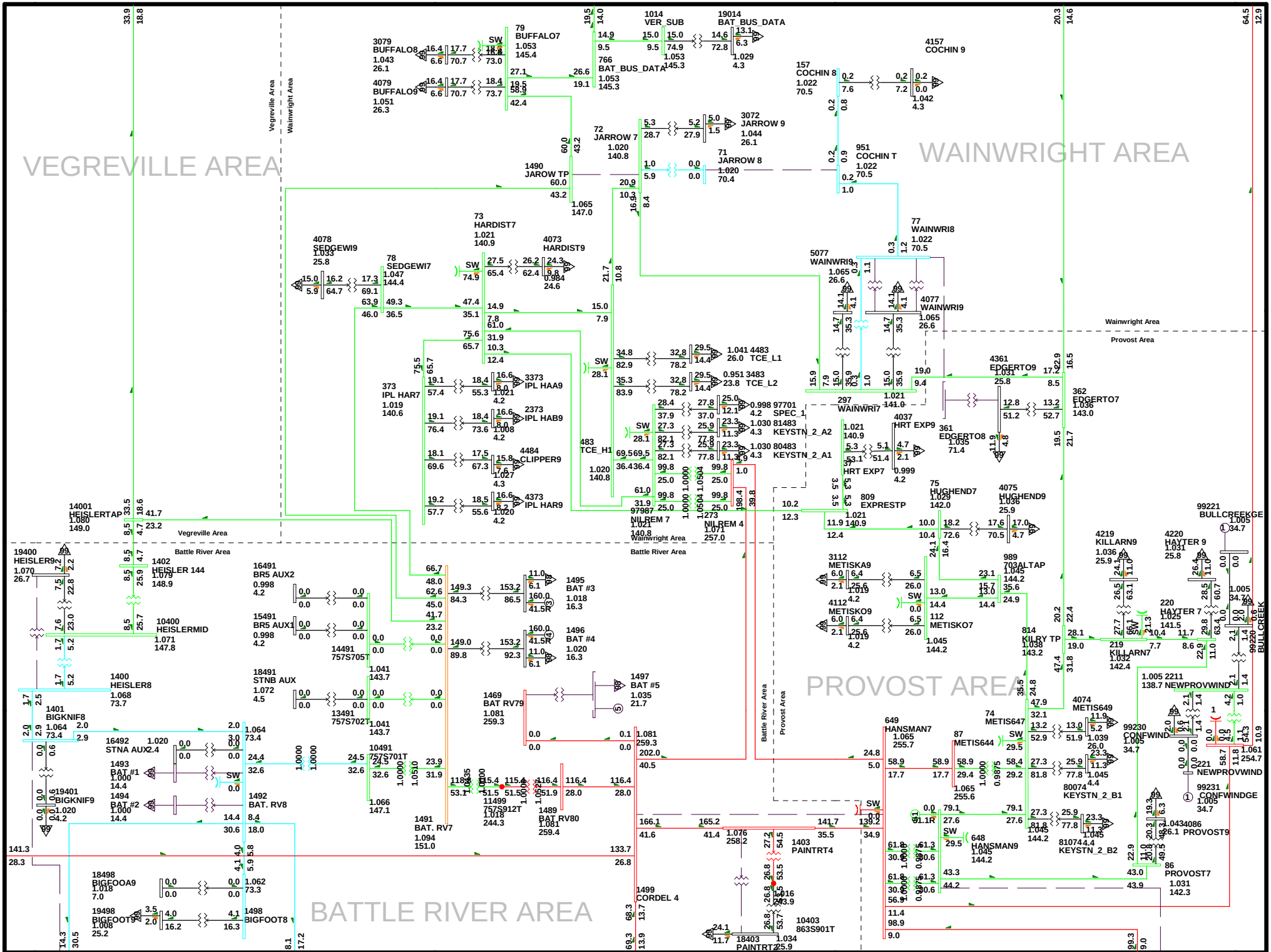

VEGREVILLE AREA
WAINWRIGHT AREA
PROVOST AREA
BATTLE RIVER AREA
Vegreville Area
Wainwright Area
Provost Area
Battle River Area
3079 BUFFALO8 1.035 25.9
4079 BUFFALO9 1.042 26.1
79 BUFFALO7 1.046 144.3
766 BAT_BUS_DATA 1.044 144.1
1014 VER_SUB
19014 BAT_BUS_DATA 1.020 4.3
4157 COCHIN 9
157 COCHIN 8 1.021 70.4
1041 4.3
951 COCHIN T 1.021 70.4
72 JARROW 7 1.020 140.7
3072 JAROW 9 1.043 26.1
71 JARROW 8 1.019 70.3
1490 JAROW TP 63.0 1.059 146.2
73 HARDIST7 1.020 140.8
4073 HARDIST9 0.983 24.6
4078 SEDGEWI9 1.033 25.8
78 SEDGEWI7 1.047 144.4
77 WAINWRI8 1.021 70.5
5077 WAINWRI9 1.064 26.6
4077 WAINWRI9 1.064 26.6
297 WAINWRI7 1.021 140.9
4361 EDGERTO9 1.030 25.8
362 EDGERTO7 1.035 142.9
361 EDGERTO8 1.035 71.4
4037 HRT EXP9 1.030 81483 4.3 KEYSTN_2_A2
HRT EXP7 1.030 80483 4.3 KEYSTN_2_A1
0.998 4.2
373 IPL HAR7 1.018 140.6
3373 IPL HAA9 1.020 4.2
2373 IPL HAB9 1.008 4.2
4484 CLIPPER9 1.027 4.3
4373 IPL HAR9 1.019 4.2
483 TCE_H1 1.020 140.7
1.040 4483 26.0 TCE_L1
0.951 3483 23.8 TCE_L2
0.997 97701 4.2 SPEC_1
97987 NIL REM 7 1.020 140.8
1273 NIL REM 4 1.070 256.9
809 EXPRESTP 1.021 140.9
75 HUGHEND7 1.029 142.0
4075 HUGHEND9 1.035 25.9
3112 METISKA9 1.019 4.2
4112 METISKO9 1.019 4.2
112 METISKO7 1.045 144.2
989 703ALTAP 1.045 144.2
814 KILRY TP 1.037 143.2
4219 KILLARN9 1.035 25.9
219 KILLARN7 1.031 142.3
4220 HAYTER 9 1.031 25.8
220 HAYTER 7 1.025 141.5
99221 BULLCREEKGE 1.004 34.6
99220 BULL CREEK
14001 HEISLERTAP 1.079 148.8
19400 HEISLER9 1.069 26.7
1402 HEISLER 144 1.078 148.8
10400 HEISLERMID 1.070 147.7
1400 HEISLER8 1.067 73.7
1401 BIGKNIF8 1.064 73.4
19401 BIGKNIF9 1.019 4.2
16491 BR5 AUX2 0.998 4.2
15491 BR5 AUX1 0.998 4.2
14491 757S705T
18491 STNB AUX 1.072 4.5
13491 757S702T
16492 STNA AUX 1.020 2.4
10491 757S701T
1493 BAT #1 1.000 14.4
1494 BAT #2 1.000 14.4
1492 BAT. RV8
1491 BAT. RV7 1.094 151.0
1469 BAT RV79 1.080 259.2
1495 BAT #3 1.020 16.3
1496 BAT #4 1.022 16.3
1497 BAT #5 1.035 21.7
11499 757S912T 1.017 244.2
1489 BAT RV80 1.080 259.3
1499 CORDEL 4
1403 PAINTRT4
10403 863S901T
18403 PAINTRT2 1.034 25.8
18498 BIGEOOA9 1.017 7.0
19498 BIGFOOT9 1.008 25.2
1498 BIGFOOT8
649 HANSMAN7 1.065 255.6
87 METIS644
74 METIS647
4074 METIS649
99230 CONFWIND 1.004 34.6
99231 CONFWINDGE 1.004 34.6
1004 2211 138.6 NEWPROVWIND
221 NEWPROVWIND
80074 KEYSTN_2_B1
810744 KEYSTN_2_B2
648 HANSMAN9 1.045 144.2
1043 4086 26.1 PROVOST9
86 PROVOST7 1.031 142.2
CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 9:36
D1-01
2017WP-Alt 3-2.b
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV 0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 9:36
D1-02

2017WP-Alt 3-3.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000<=240.000


VEGREVILLE AREA
WAINWRIGHT AREA
PROVOST AREA
BATTLE RIVER AREA
Vegreville Area
Wainwright Area
Provost Area
Battle River Area
3079 BUFFALO8 1.043 26.1
4079 BUFFALO9 1.051 26.3
79 BUFFALO7 1.053 145.4
766 BAT_BUS_DATA 1.053 145.3
1014 VER_SUB 1.053 145.3
19014 BAT_BUS_DATA 1.029 4.3
4157 COCHIN 9
157 COCHIN 8 1.022 70.5
1.042 4.3
72 JARROW 7 1.020 140.8
3072 JAROW 9 1.044 26.1
71 JARROW 8 1.020 70.4
951 COCHIN T 1.022 70.5
1490 JAROW TP 60.0 43.2 1.065 147.0
73 HARDIST7 1.021 140.9
4073 HARDIST9 0.984 24.6
4078 SEDGEWI9 1.033 25.8
78 SEDGEWI7 1.047 144.4
77 WAINWRI8 1.022 70.5
5077 WAINWRI9 1.065 26.6
4077 WAINWRI9 1.065 26.6
4361 EDGERTO9 1.031 25.8
362 EDGERTO7 1.036 143.0
361 EDGERTO8 1.035 71.4
297 WAINWRI7 1.021 141.0
4037 HRT EXP9
HRT EXP7 0.999 4.2
373 IPL HAR7 1.019 140.6
3373 IPL HAA9 1.021 4.2
2373 IPL HAB9 1.008 4.2
4484 CLIPPER9 1.027 4.3
4373 IPL HAR9 1.020 4.2
483 TCE_H1 1.020 140.8
1.041 4483 26.0 TCE_L1
0.951 3483 23.8 TCE_L2
0.998 97701 4.2 SPEC_1
1.030 81483 4.3 KEYSTN_2_A2
1.030 80483 4.3 KEYSTN_2_A1
97987 NIL REM 7 1.021 140.8
1273 NIL REM 4 1.071 257.0
809 EXPRESTP 1.021 140.9
75 HUGHEND7 1.029 142.0
4075 HUGHEND9 1.036 25.9
14001 HEISLERTAP 1.080 149.0
19400 HEISLER9 1.070 26.7
1402 HEISLER 144 1.079 148.9
10400 HEISLERMID 1.071 147.8
1400 HEISLER8 1.068 73.7
1401 BIGKNIF8 1.064 73.4
19401 BIGKNIF9 1.020 4.2
16491 BR5 AUX2 0.998 4.2
15491 BR5 AUX1 0.998 4.2
14491 757S705T
18491 STNB AUX 1.072 4.5
13491 757S702T
16492 STNA AUX 1.020 2.4
10491 757S701T
1493 BAT #1 1.000 14.4
1494 BAT #2 1.000 14.4
1492 BAT. RV8 1.064 73.4
1491 BAT. RV7 1.094 151.0
1469 BAT RV79 1.081 259.3
1495 BAT #3 1.018 16.3
1496 BAT #4 1.020 16.3
1497 BAT #5 1.035 21.7
1081 259.3 202.0 40.5
11499 757S912T 1.018 244.3
1489 BAT RV80 1.081 259.4
1499 CORDEL 4 1.076 258.2
1403 PAINTRT4 1.016 83.9
10403 863S901T 1.034 25.9
18403 PAINTRT2
18498 BIGFOOA9 1.018 7.0
19498 BIGFOOT9 1.008 25.2
1062 73.3
1498 BIGFOOT8 16.3
649 HANSMAN7 1.065 255.7
87 METIS644 1.065 255.6
74 METIS647
4074 METIS649 1.005 34.7
80074 KEYSTN_2_B1
810744 KEYSTN_2_B2
648 HANSMAN9 1.045 144.2
3112 METISKA9 1.019 4.2
4112 METISKO9 1.019 4.2
112 METISKO7 1.045 144.2
989 703ALTAP 1.045 144.2
814 KILRY TP 1.038 143.2
4219 KILLARN9 1.036 25.9
219 KILLARN7 1.032 142.4
4220 HAYTER 9 1.031 25.8
220 HAYTER 7 1.025 141.5
99221 BULLCREEKGE 1.005 34.7
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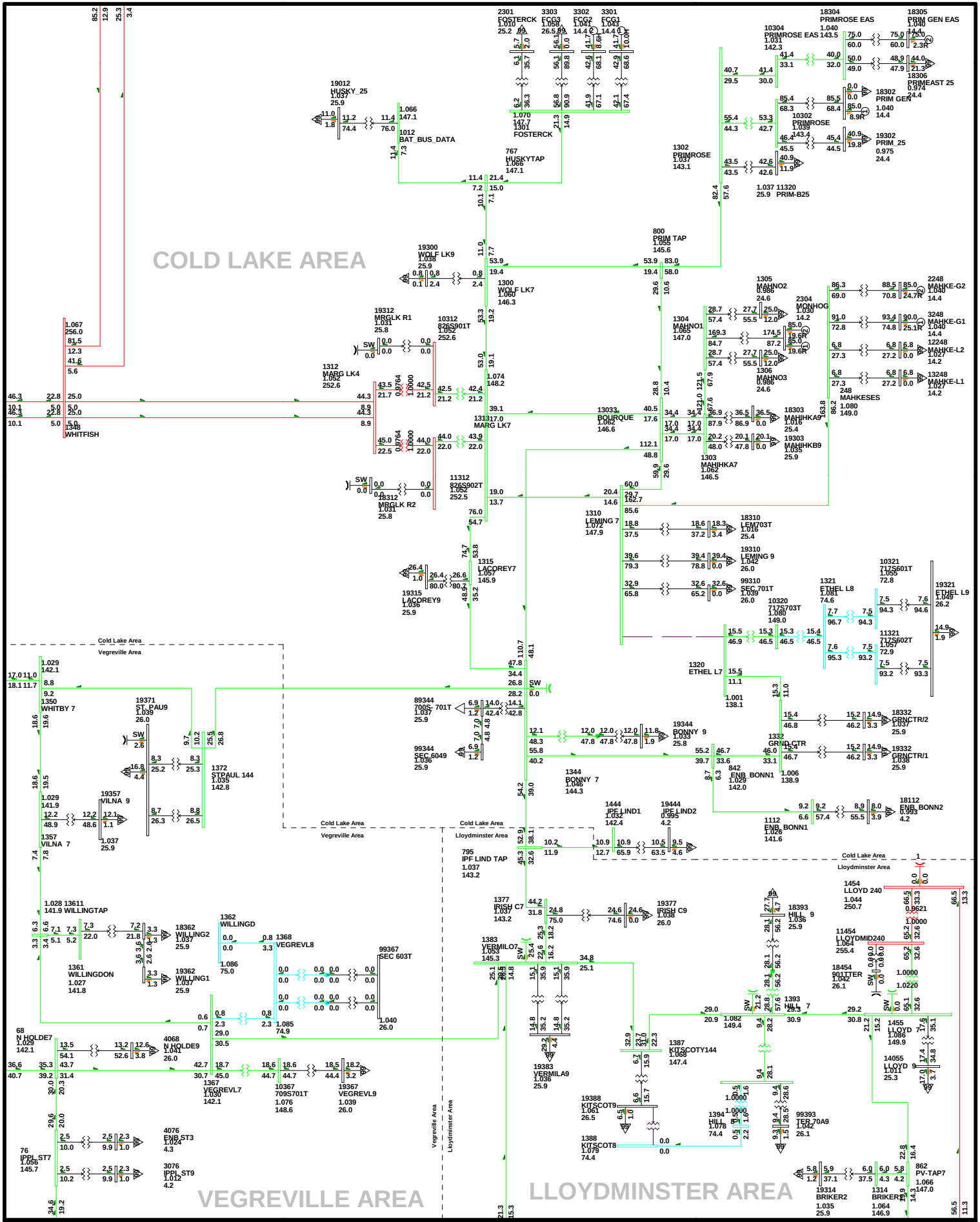
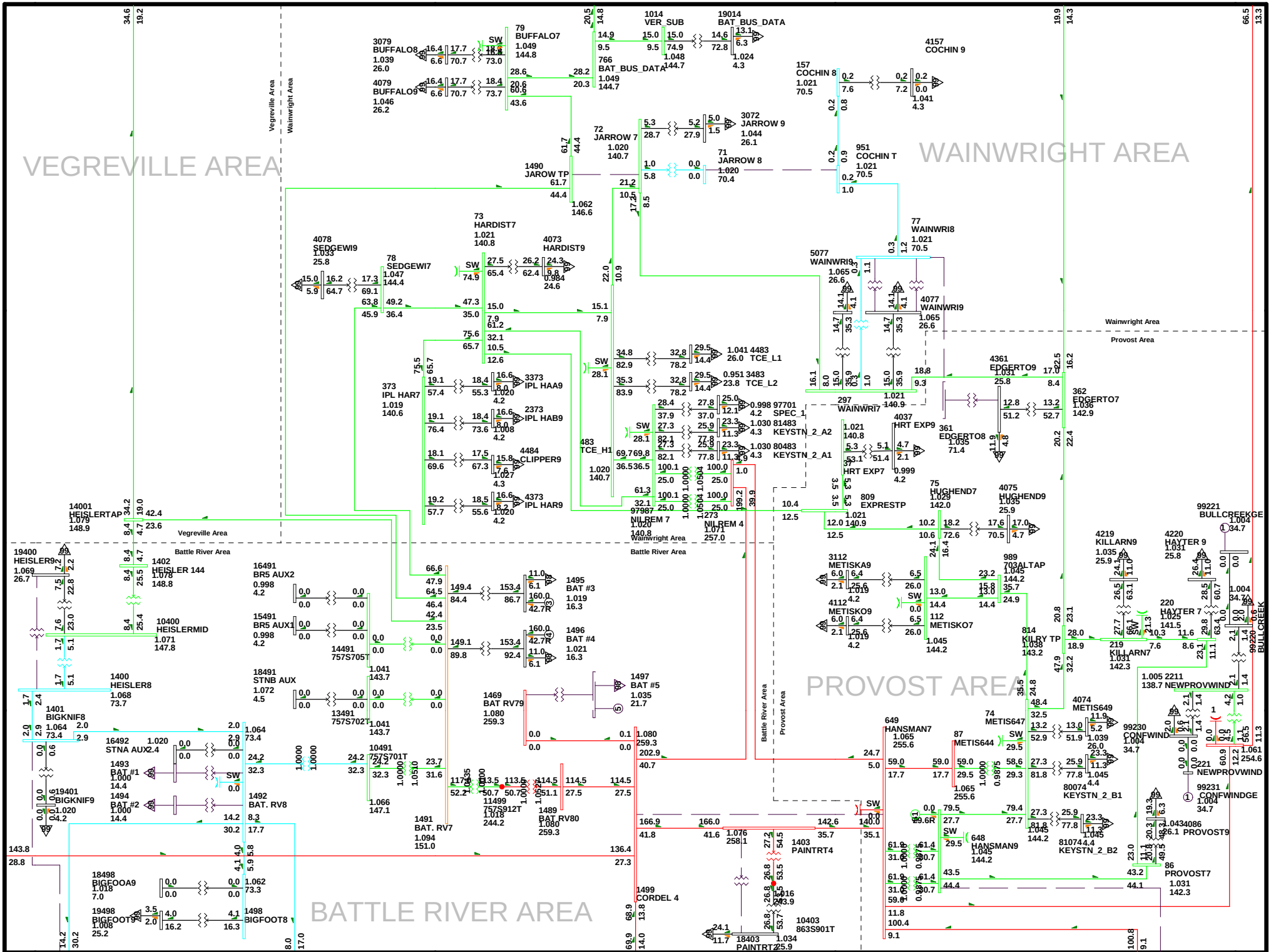
1.005 2211 138.7 NEWPROVWIND
221 NEWPROVWIND
1.043 4086 26.1 PROVOST9
86 PROVOST7 1.031 142.3
CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 9:36
D1-02
2017WP-Alt 3-3.b
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV 0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 9:36
D1-03

2017WP-Alt 3-4.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000<=240.000


VEGREVILLE AREA
WAINWRIGHT AREA
PROVOST AREA
BATTLE RIVER AREA
Vegreville Area
Wainwright Area
Provost Area
Battle River Area
3079 BUFFALO8 1.039 26.0
4079 BUFFALO9 1.046 26.2
79 BUFFALO7 1.049 144.8
1014 VER_SUB 1.048 144.7
19014 BAT_BUS_DATA 1.024 4.3
766 BAT_BUS_DATA 1.049 144.7
4157 COCHIN 9
157 COCHIN 8 1.021 70.5
1.041 4.3
72 JARROW 7 1.020 140.7
3072 JARROW 9 1.044 26.1
71 JARROW 8 1.020 70.4
951 COCHIN T 1.021 70.5
1490 JAROW TP 61.7 44.4 1.062 146.6
73 HARDIST7 1.021 140.8
4073 HARDIST9 0.984 24.6
4078 SEDGEWI9 1.033 25.8
78 SEDGEWI7 1.047 144.4
77 WAINWRI8 1.021 70.5
5077 WAINWRI9 1.065 26.6
4077 WAINWRI9 1.065 26.6
373 IPL HAR7 1.019 140.6
3373 IPL HAA9 1.020 4.2
2373 IPL HAB9 1.008 4.2
4484 CLIPPER9 1.027 4.3
4373 IPL HAR9 1.020 4.2
483 TCE_H1 1.020 140.7
1.041 4483 26.0 TCE_L1
0.951 3483 23.8 TCE_L2
0.998 97701 4.2 SPEC_1
1.030 81483 4.3 KEYSTN_2_A2
1.030 80483 4.3 KEYSTN_2_A1
97987 NIL REM 7 1.020 140.8
1273 NIL REM 4 1.071 257.0
297 WAINWRI7 1.021 140.9
4037 HRT EXP9 1.035 71.4
HRT EXP7 0.999 4.2
361 EDGERTO8 1.035 71.4
4361 EDGERTO9 1.031 25.8
362 EDGERTO7 1.036 142.9
809 EXPRESTP 1.021 142.0
75 HUGHEND7 1.029 142.0
4075 HUGHEND9 1.035 25.9
14001 HEISLERTAP 1.079 148.9
19400 HEISLER9 1.069 26.7
1402 HEISLER 144 1.078 148.8
10400 HEISLERMID 1.071 147.8
1400 HEISLER8 1.068 73.7
1401 BIGKNIF8 1.064 73.4
19401 BIGKNIF9 1.020 4.2
16491 BR5 AUX2 0.998 4.2
15491 BR5 AUX1 0.998 4.2
14491 757S705T
18491 STNB AUX 1.072 4.5
13491 757S702T
16492 STNA AUX 1.020 2.4
10491 757S701T
1493 BAT #1 1.000 14.4
1494 BAT #2 1.000 14.4
1492 BAT. RV8 8.3
1491 BAT. RV7 1.094 151.0
1495 BAT #3 1.019 16.3
1496 BAT #4 1.021 16.3
1497 BAT #5 1.035 21.7
1469 BAT RV79 1.080 259.3
11499 757S912T 1.018 244.2
1489 BAT RV80 1.080 259.3
1403 PAINTRT4 1.076 258.1
10403 863S901T 1.034 25.9
18403 PAINTRT2
1499 CORDEL 4
18498 BIGFOOA9 1.018 7.0
19498 BIGFOOT9 1.008 25.2
1498 BIGFOOT8 1.062 73.3
649 HANSMAN7 1.065 255.6
74 METIS647
87 METIS644 1.065 255.6
4074 METIS649 1.045 144.2
80074 KEYSTN_2_B1
810744 KEYSTN_2_B2
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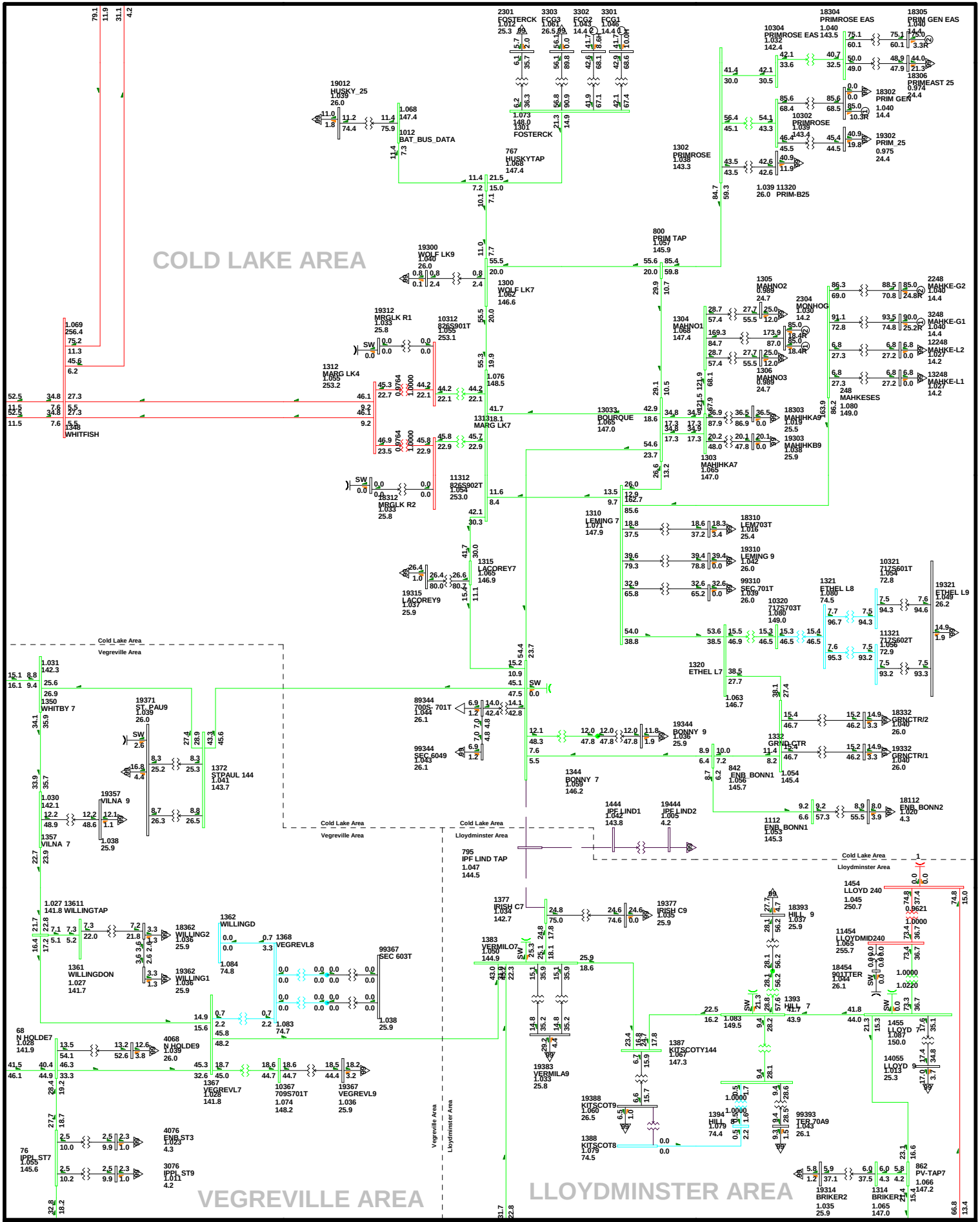
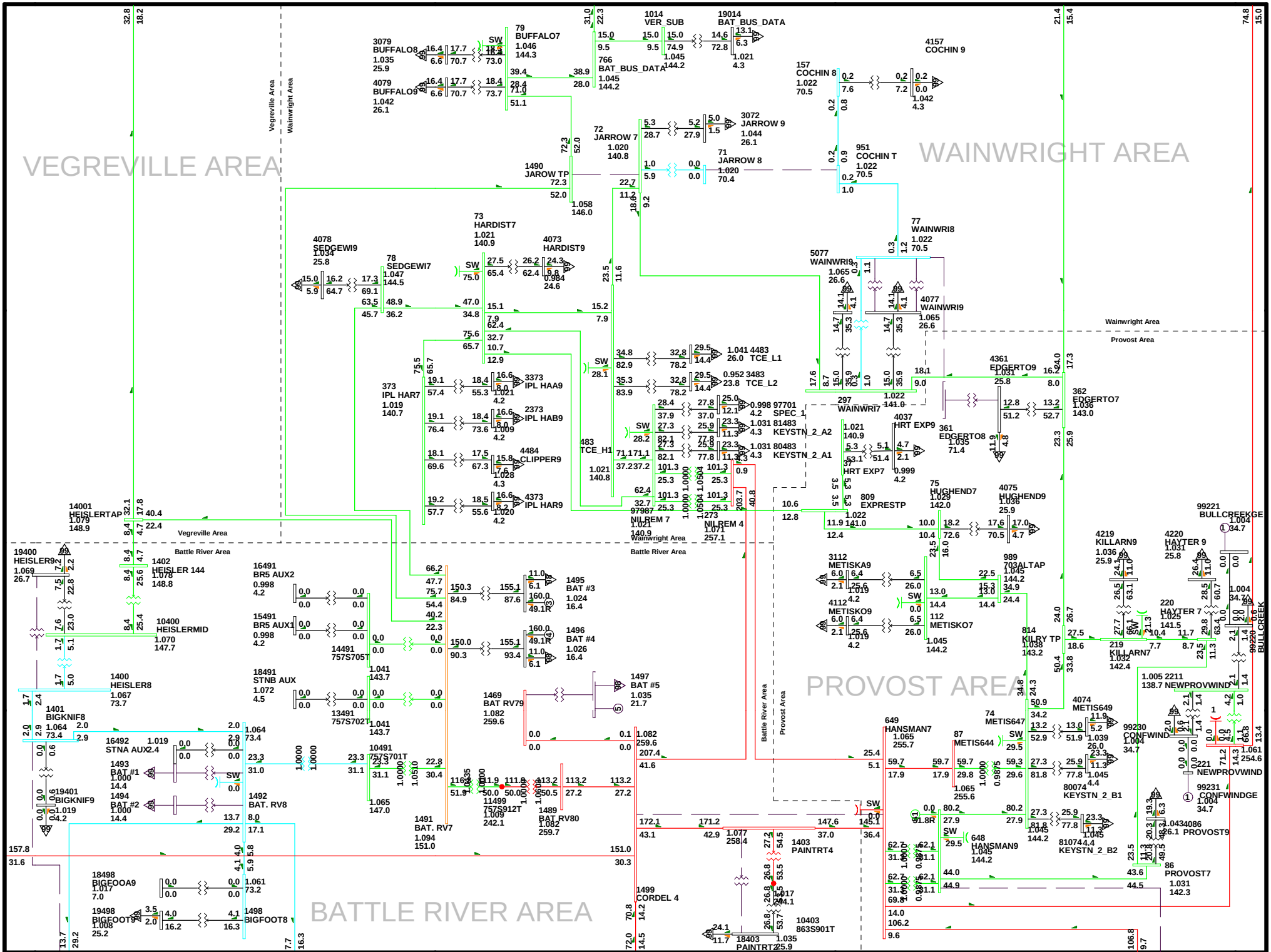
3112 METISKA9 1.019 4.2
4112 METISKO9 1.019 4.2
112 METISKO7 1.045 144.2
989 703ALTAP 1.045 144.2
814 KILRY TP 1.038 143.2
4219 KILLARN9 1.035 25.9
219 KILLARN7 1.031 142.3
4220 HAYTER 9 1.031 25.8
220 HAYTER 7 1.025 141.5
99230 CONFWIND 1.004 34.7
99231 CONFWINDGE 1.004 34.7
99221 BULLCREEKGE 1.004 34.7
99220 BULL CREEK
1.005 2211 138.7 NEWPROVWIND
221 NEWPROVWIND
1.043 4086 26.1 PROVOST9
86 PROVOST7 1.031 142.3
CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 9:36
D1-03
2017WP-Alt 3-4.b
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV 0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 9:36
D1-04

2017WP-Alt 3-5.a

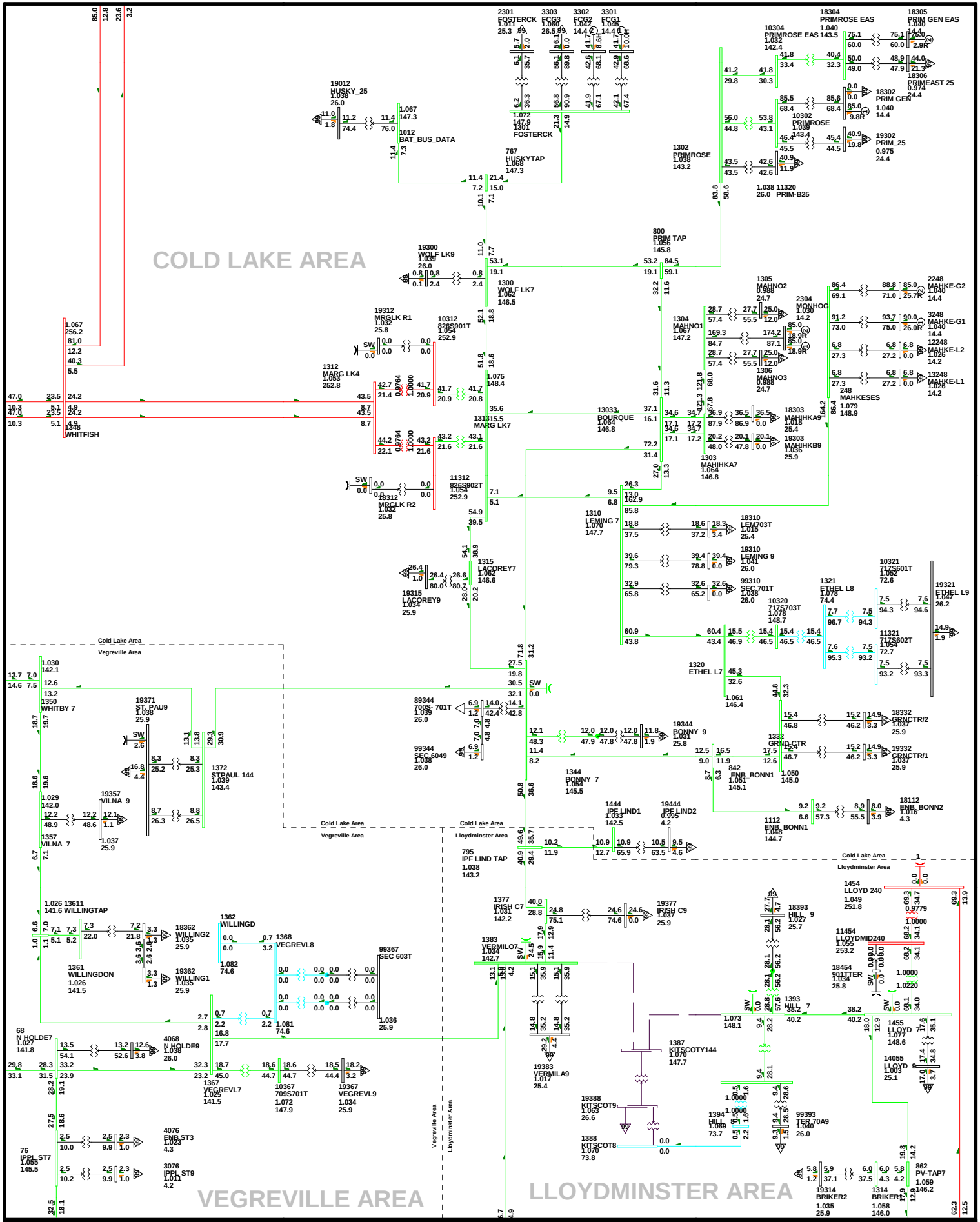
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000<=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 9:36
D1-04

2017WP-Alt 3-5.b

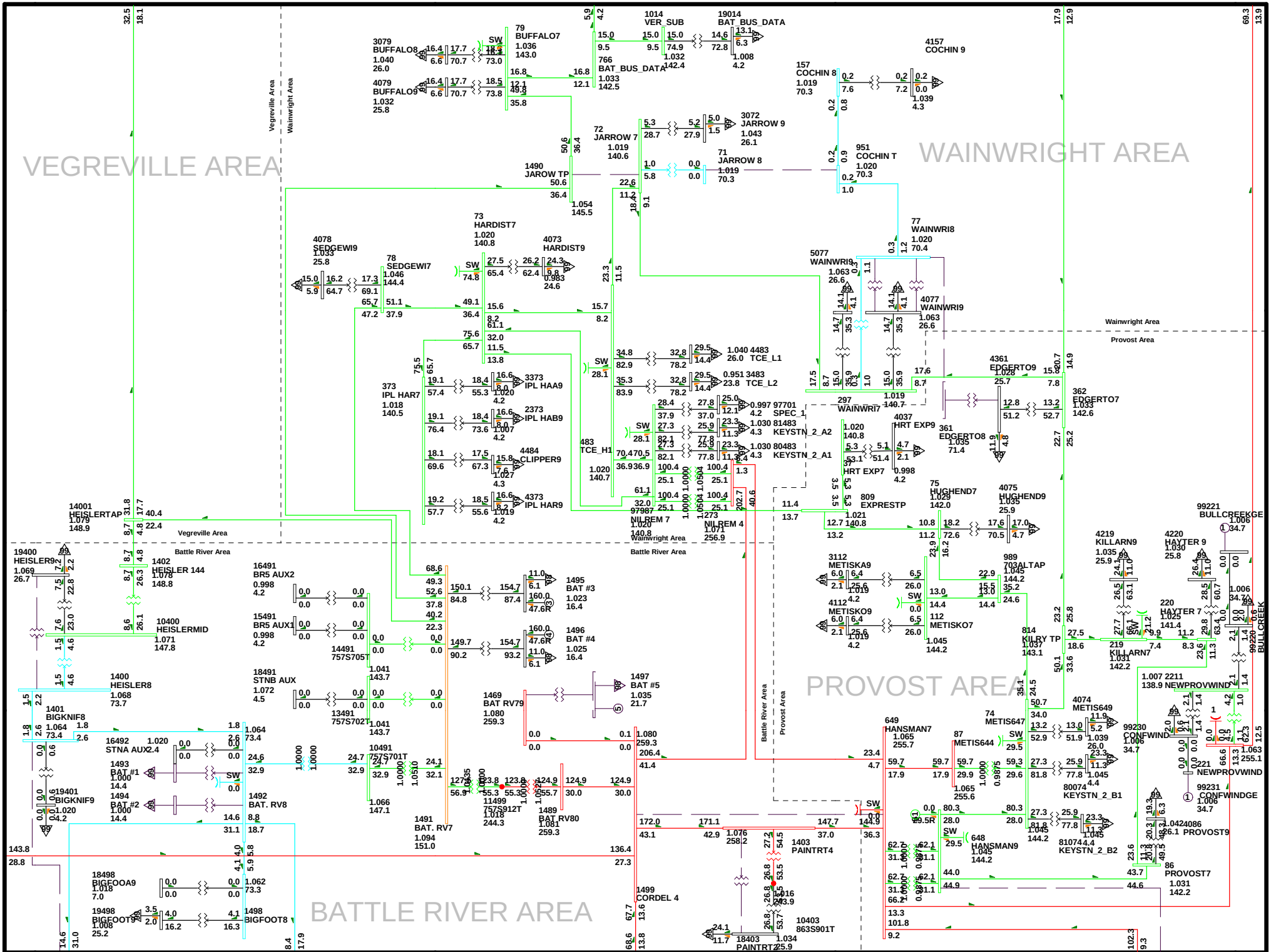
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV 0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 9:36
D1-05

2017WP-Alt 3-6.a

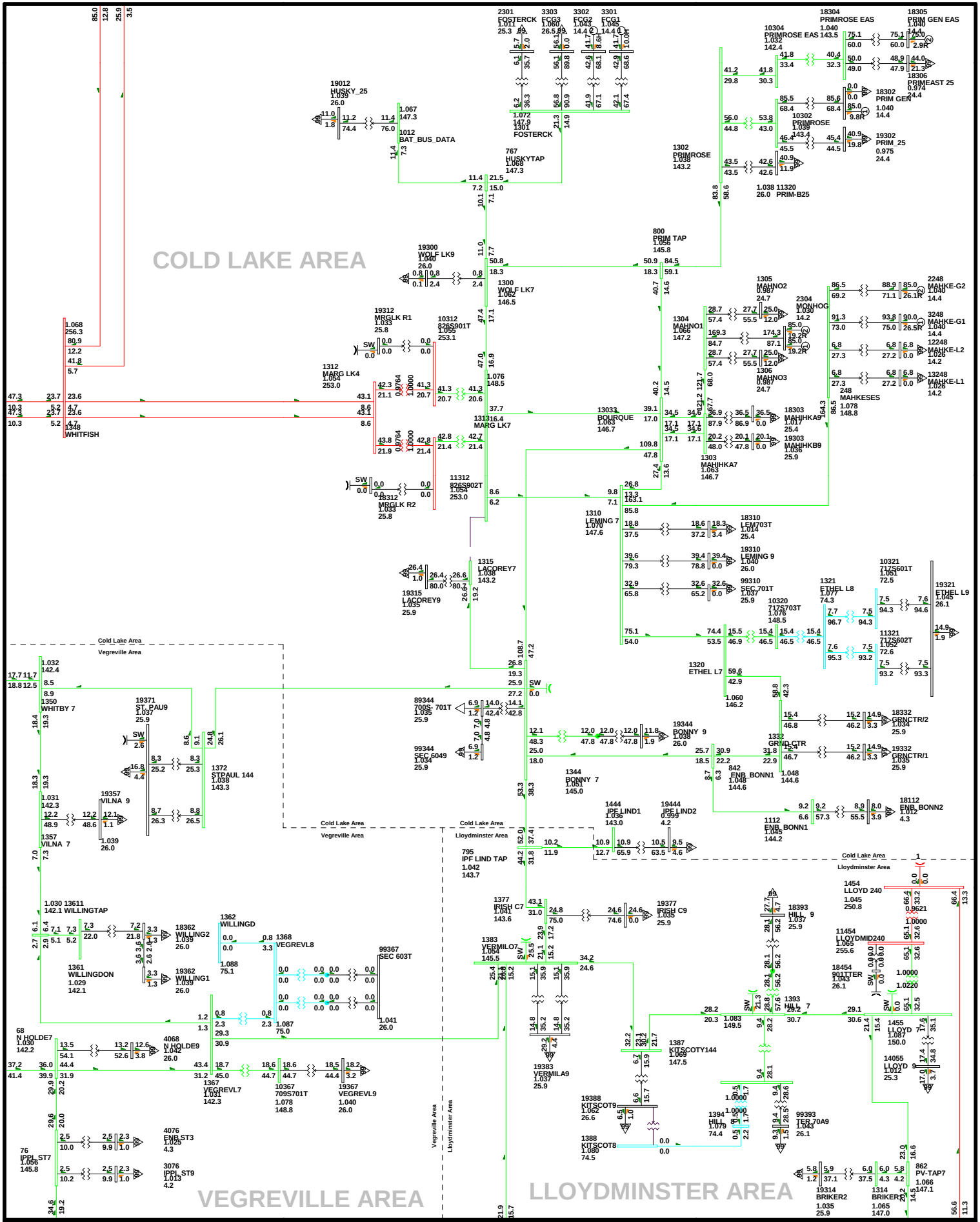
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000<=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 9:36
D1-05

2017WP-Alt 3-6.b

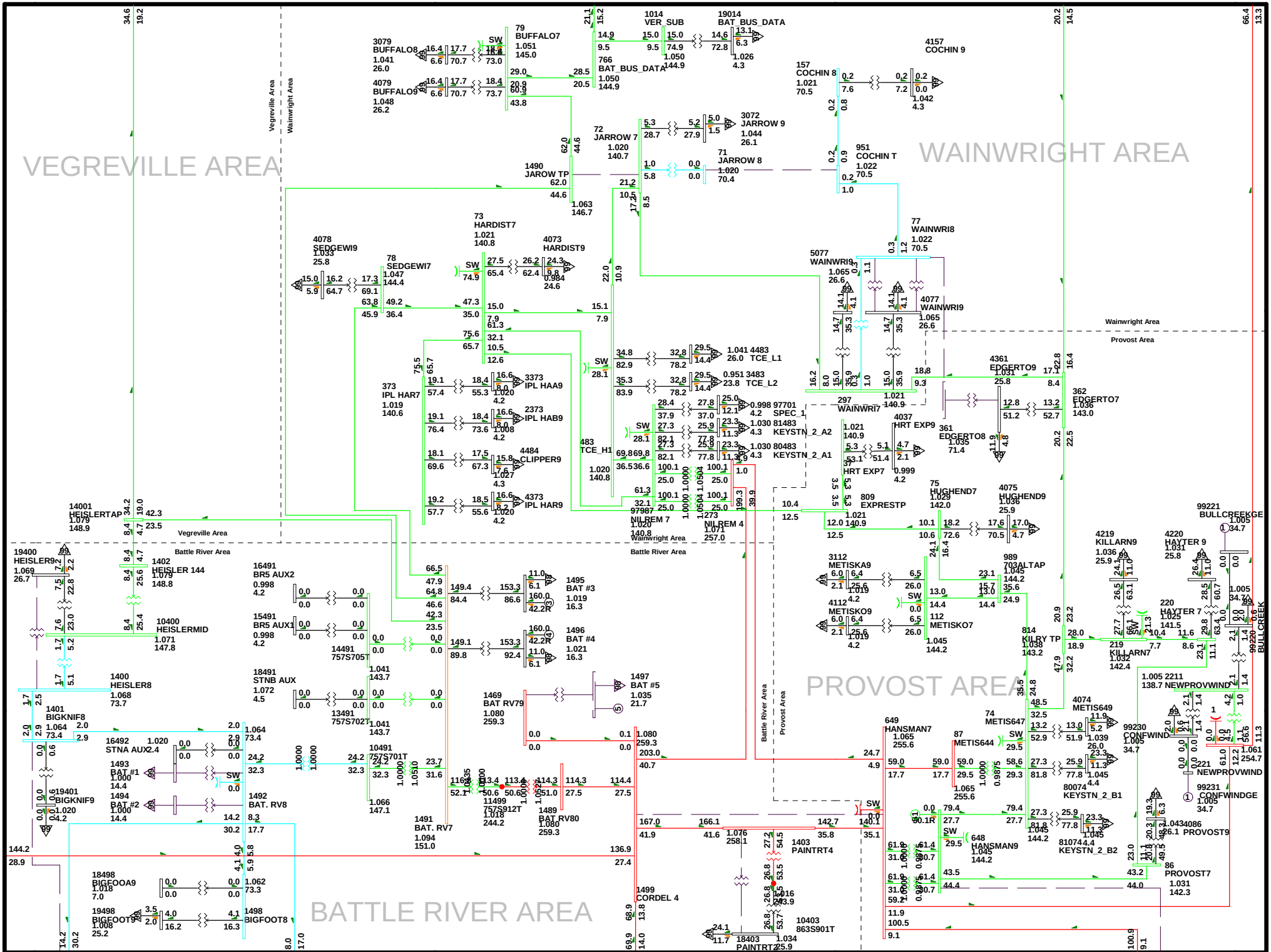
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV 0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 9:36
D1-06

2017WP-Alt 3-7.a

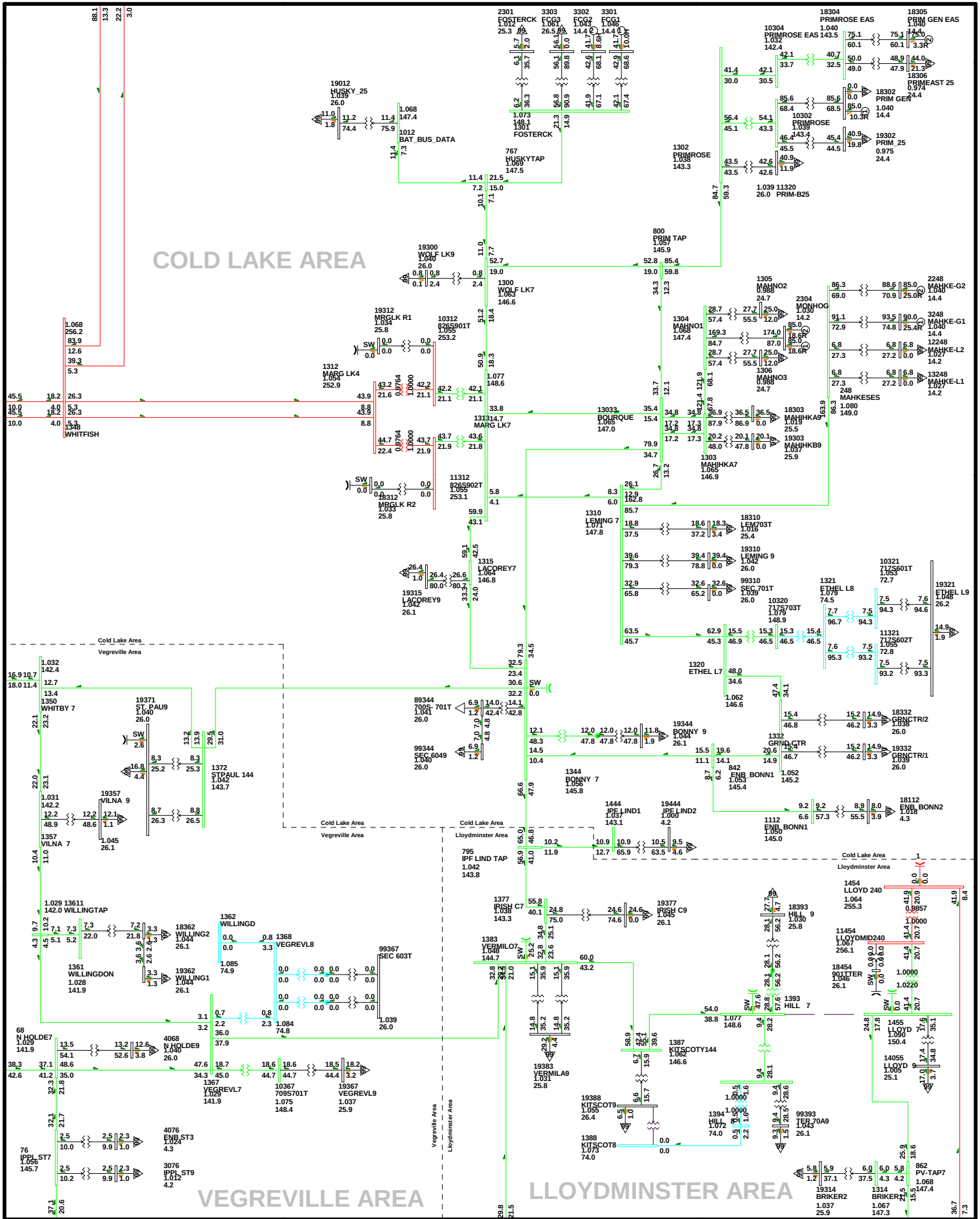
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000<=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 9:36
D1-06

2017WP-Alt 3-7.b

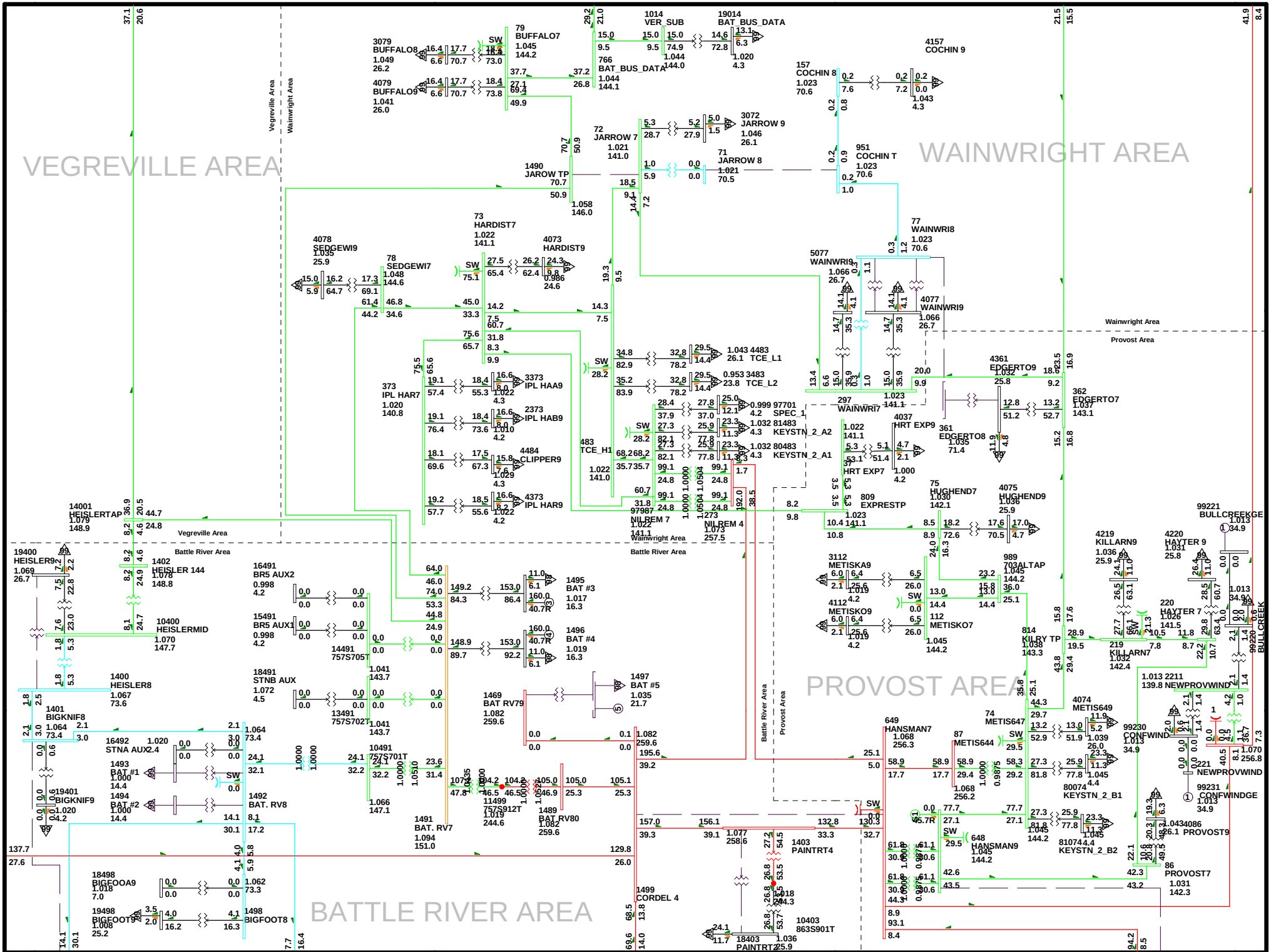
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV 0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000

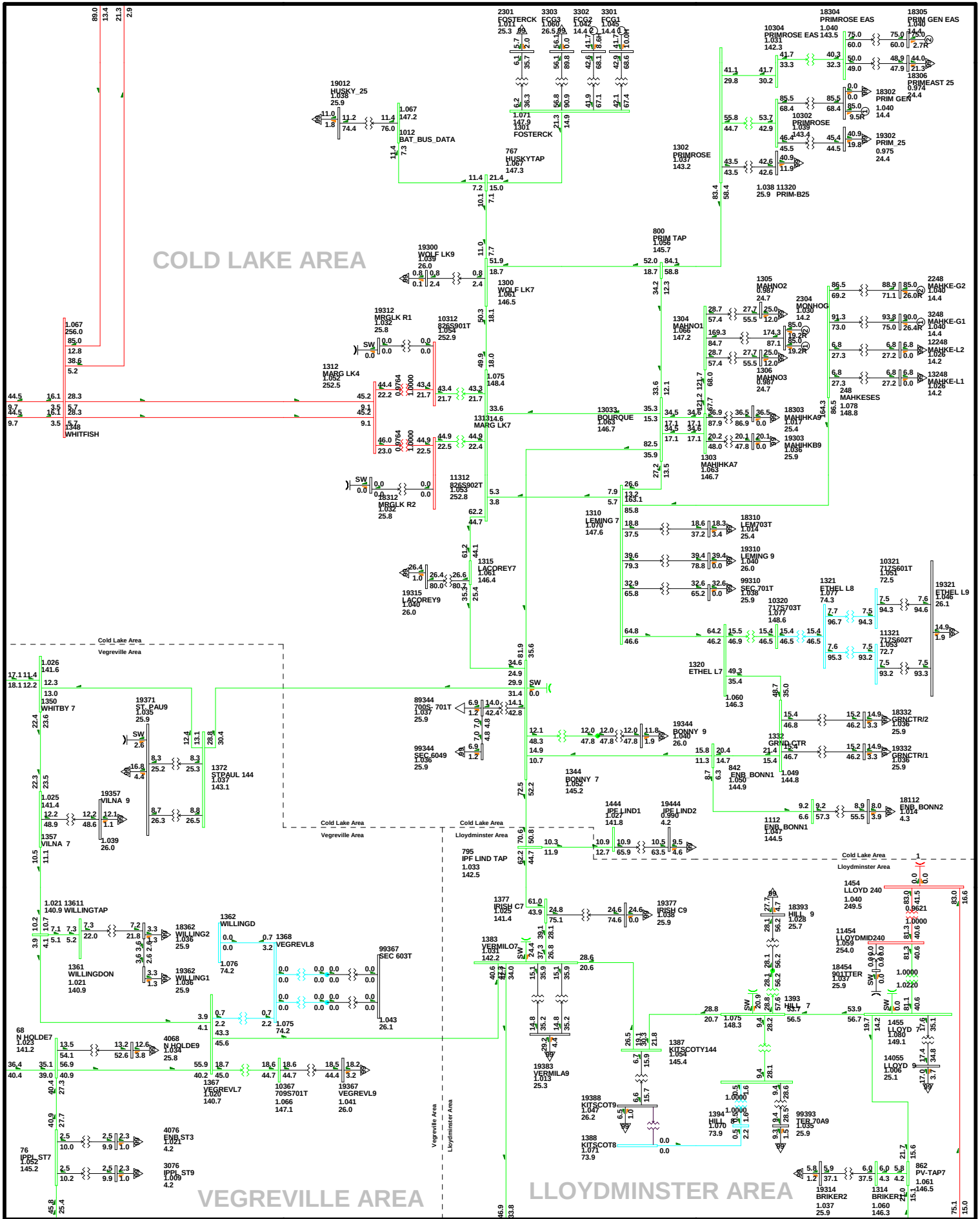


CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 9:37
D1-07

2017WP-Alt 3-8.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000<=240.000

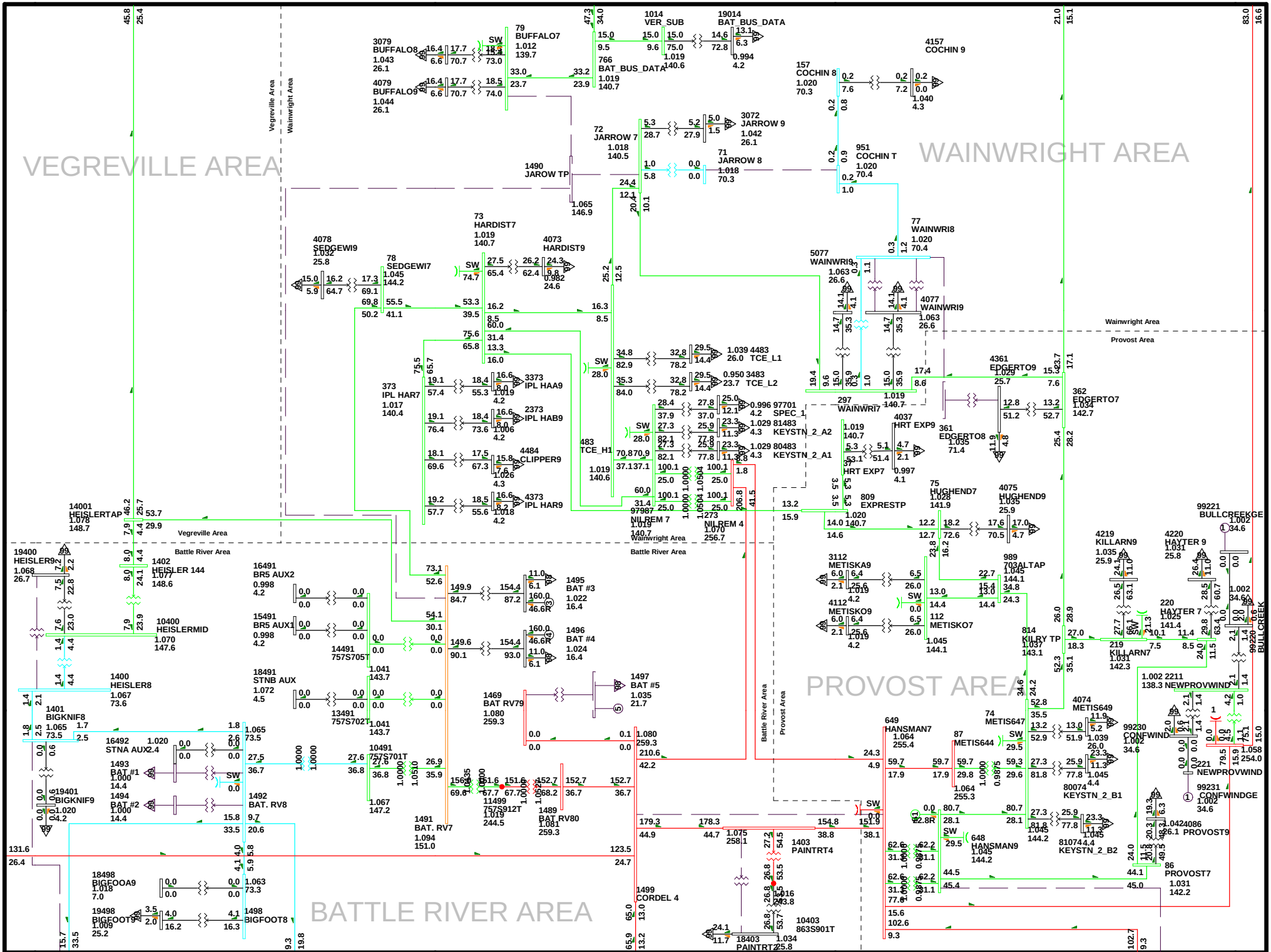

VEGREVILLE AREA
WAINWRIGHT AREA
PROVOST AREA
BATTLE RIVER AREA
Vegreville Area
Wainwright Area
Provost Area
Battle River Area
3079 BUFFALO8 1.049 26.2
4079 BUFFALO9 1.041 26.0
79 BUFFALO7 1.045 144.2
766 BAT_BUS_DATA 1.044 144.1
1014 VER_SUB 1.044 144.0
19014 BAT_BUS_DATA 1.020 4.3
4157 COCHIN 9
157 COCHIN 8 1.023 70.6
1043 4.3
72 JARROW 7 1.021 141.0
3072 JARROW 9 1.046 26.1
71 JARROW 8 1.021 70.5
951 COCHIN T 1.023 70.6
1490 JAROW TP 70.7 50.9 1.058 146.0
77 WAINWRI8 1.023 70.6
5077 WAINWRI9 1.066 26.7
4077 WAINWRI9 1.066 26.7
297 WAINWRI7 1.023 141.1
4078 SEDGEWI9 1.035 25.9
78 SEDGEWI7 1.048 144.6
73 HARDIST7 1.022 141.1
4073 HARDIST9 0.986 24.6
373 IPL HAR7 1.020 140.8
3373 IPL HAA9 1.022 4.3
2373 IPL HAB9 1.010 4.2
4484 CLIPPER9 1.029 4.3
4373 IPL HAR9 1.022 4.2
483 TCE_H1 1.022 141.0
1.043 4483 26.1 TCE_L1
0.953 3483 23.8 TCE_L2
0.999 97701 4.2 SPEC_1
1.032 81483 4.3 KEYSTN_2_A2
1.032 80483 4.3 KEYSTN_2_A1
97987 NIL REM 7 1.022 141.1
1273 NIL REM 4 1.073 257.5
4037 HRT EXP9 1.022 141.1
HRT EXP7 1.000 4.2
809 EXPRESTP 1.023 141.1
75 HUGHEND7 1.030 142.1
4075 HUGHEND9 1.036 25.9
4361 EDGERTO9 1.032 25.8
361 EDGERTO8 1.035 71.4
362 EDGERTO7 1.037 143.1
14001 HEISLERTAP 1.079 148.9
19400 HEISLER9 1.069 26.7
1402 HEISLER 144 1.078 148.8
10400 HEISLERMID 1.070 147.7
1400 HEISLER8 1.067 73.6
1401 BIGKNIF8 1.064 73.4
19401 BIGKNIF9 1.020 4.2
16491 BR5 AUX2 0.998 4.2
15491 BR5 AUX1 0.998 4.2
14491 757S705T 1.041 143.7
18491 STNB AUX 1.072 4.5
13491 757S702T 1.041 143.7
16492 STNA AUX 1.020 2.4
10491 757S701T 1.066 147.1
1493 BAT #1 1.000 14.4
1494 BAT #2 1.000 14.4
1492 BAT. RV8 1.064 73.4
1495 BAT #3 1.017 16.3
1496 BAT #4 1.019 16.3
1497 BAT #5 1.035 21.7
1469 BAT RV79 1.082 259.6
1491 BAT. RV7 1.094 151.0
11499 757S912T 1.019 244.6
1489 BAT RV80 1.082 259.6
1499 CORDEL 4 1.077 258.6
1403 PAINTRT4 1.045 144.2
10403 863S901T 1.036 25.9
18403 PAINTRT7 1.036 25.9
18498 BIGFOOA9 1.018 7.0
19498 BIGFOOT9 1.008 25.2
1498 BIGFOOT8 1.062 73.3
649 HANSMAN7 1.068 256.3
87 METIS644 1.068 256.2
74 METIS647 1.045 144.2
4074 METIS649 1.039 26.0
80074 KEYSTN_2_B1
810744 KEYSTN_2_B2
648 HANSMAN9 1.045 144.2
3112 METISKA9 1.019 4.2
4112 METISKO9 1.019 4.2
112 METISKO7 1.045 144.2
814 KILRY TP 1.038 143.3
989 703ALTAP 1.045 144.2 36.0
4219 KILLARN9 1.036 25.9
219 KILLARN7 1.032 142.4
4220 HAYTER 9 1.031 25.8
220 HAYTER 7 1.026 141.5
99221 BULLCREEKGE 1.013 34.9
99230 CONFWIND 1.013 34.9
99231 CONFWINDGE 1.013 34.9
221 NEWPROVWIND
1.013 2211 139.8 NEWPROVWIND
1.043 4086 26.1 PROVOST9
86 PROVOST7 1.031 142.3
CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 9:37
D1-07
2017WP-Alt 3-8.b
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV 0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 9:37
D1-09

2017WP-Alt 3-9.a

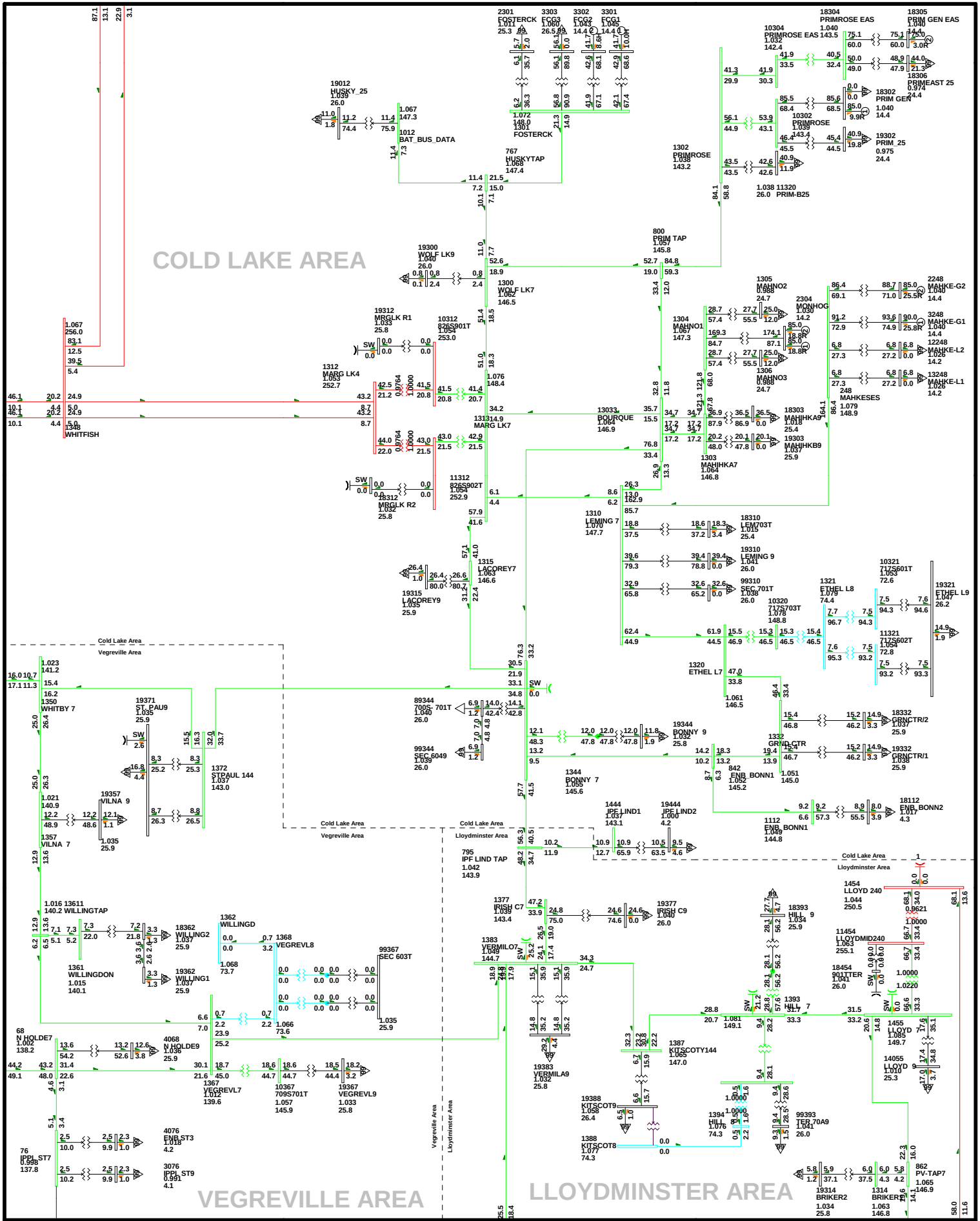
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000<=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 9:37
D1-09

2017WP-Alt 3-9.b

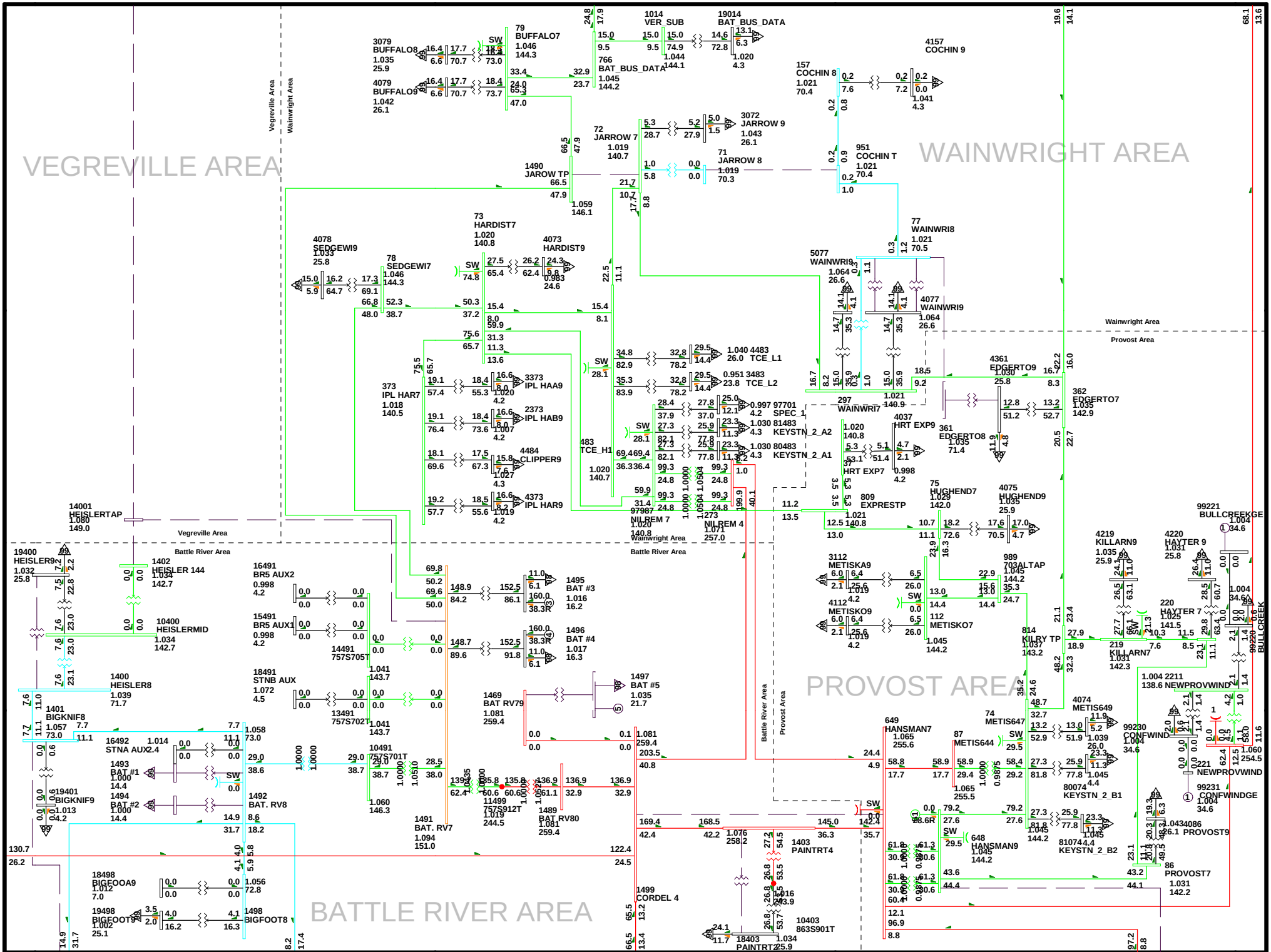
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV 0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 9:37
D1-10

2017WP-Alt 3-10.a

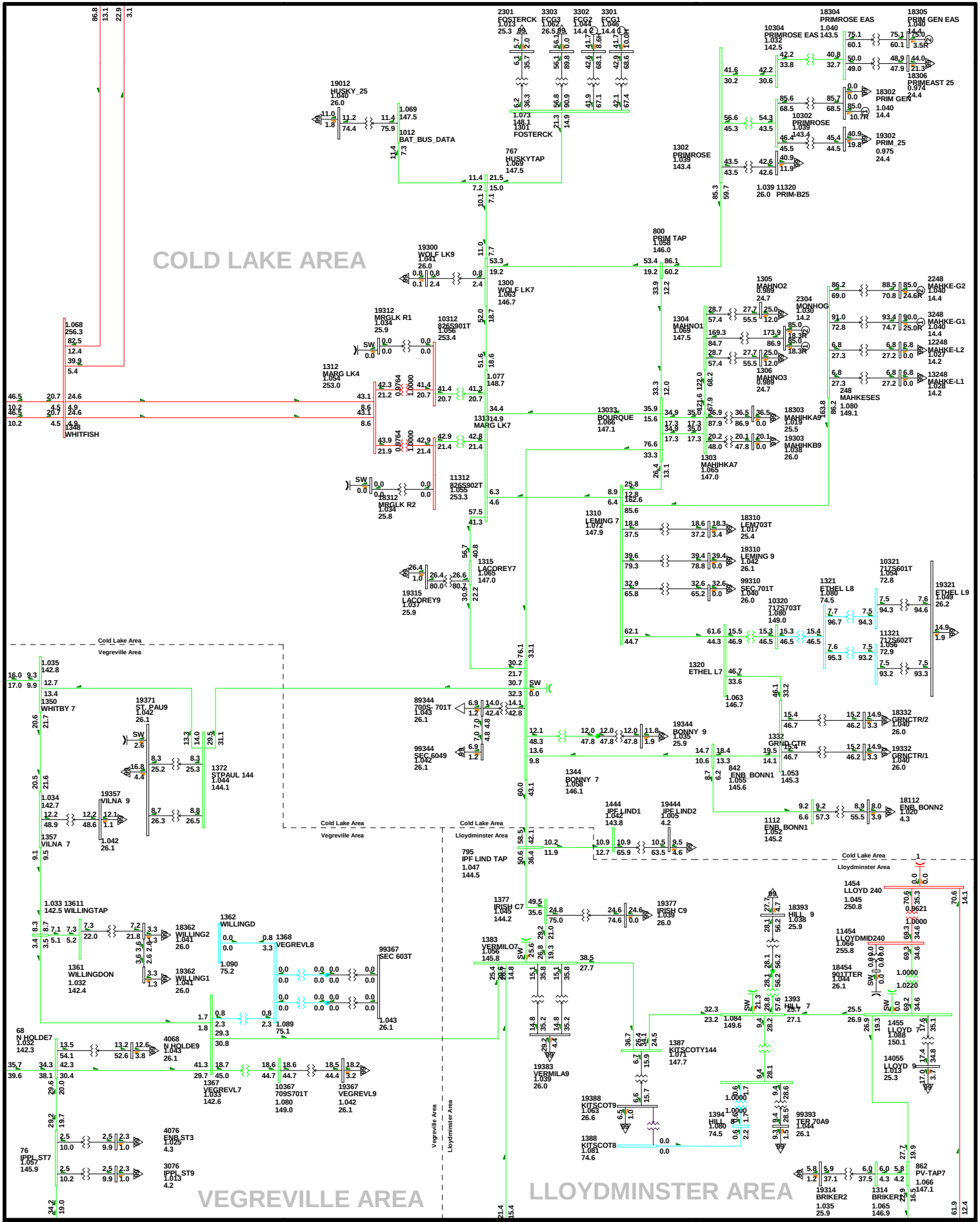
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000<=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 9:37
D1-10

2017WP-Alt 3-10.b

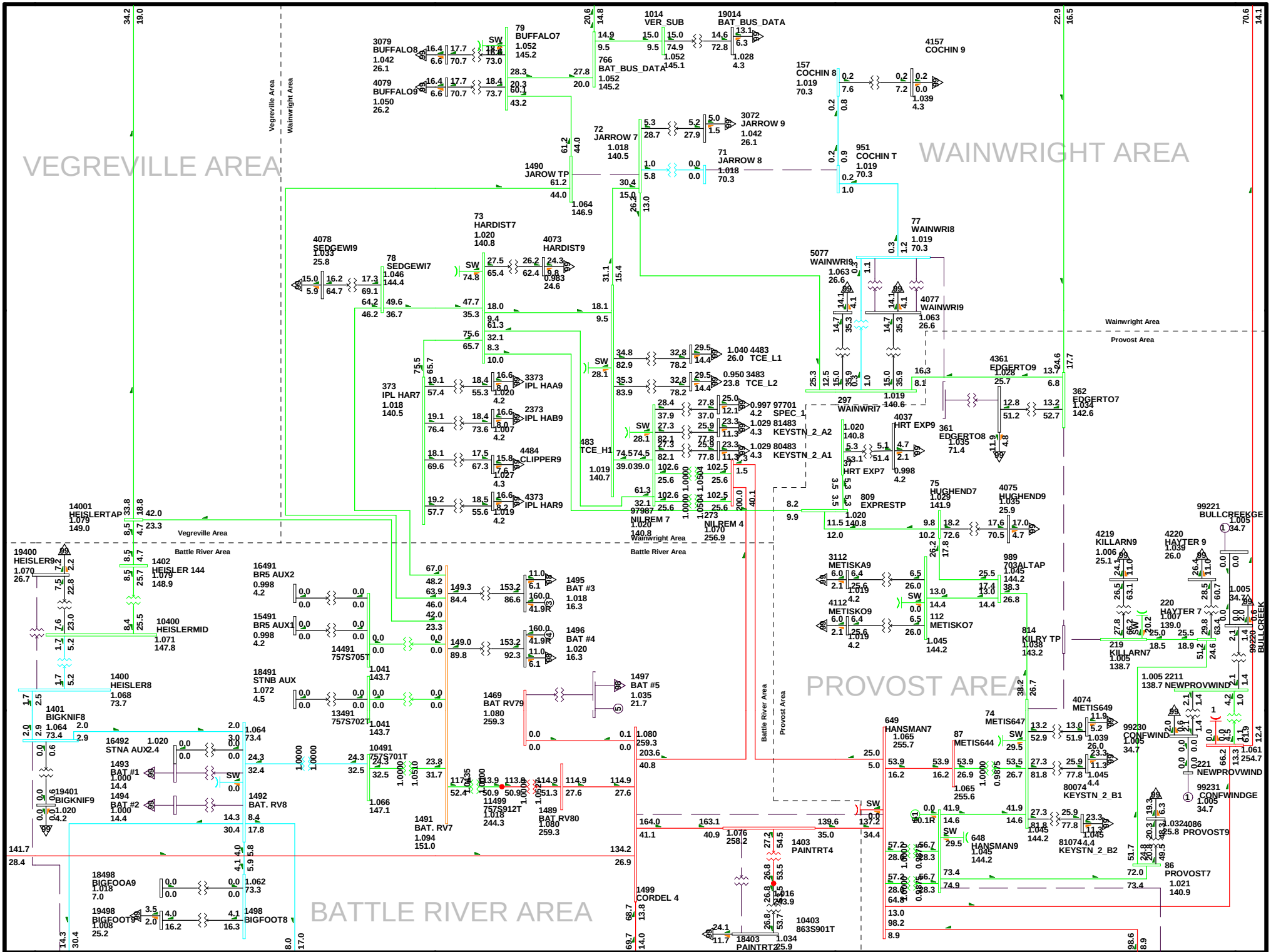
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV 0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 9:37
D1-11b

2017WP-Alt 3-11.a

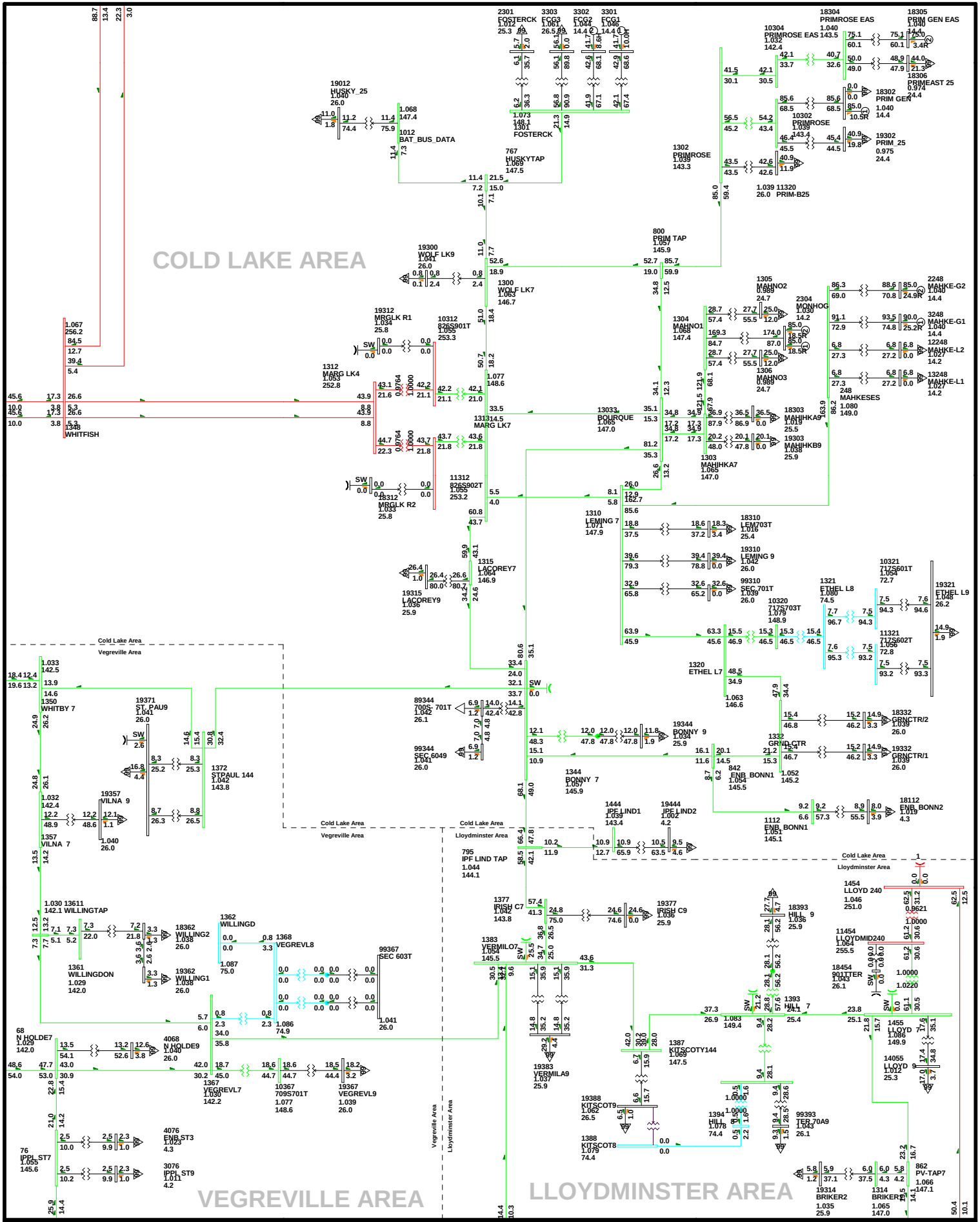
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000<=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 9:37
D1-11b

2017WP-Alt 3-11.b

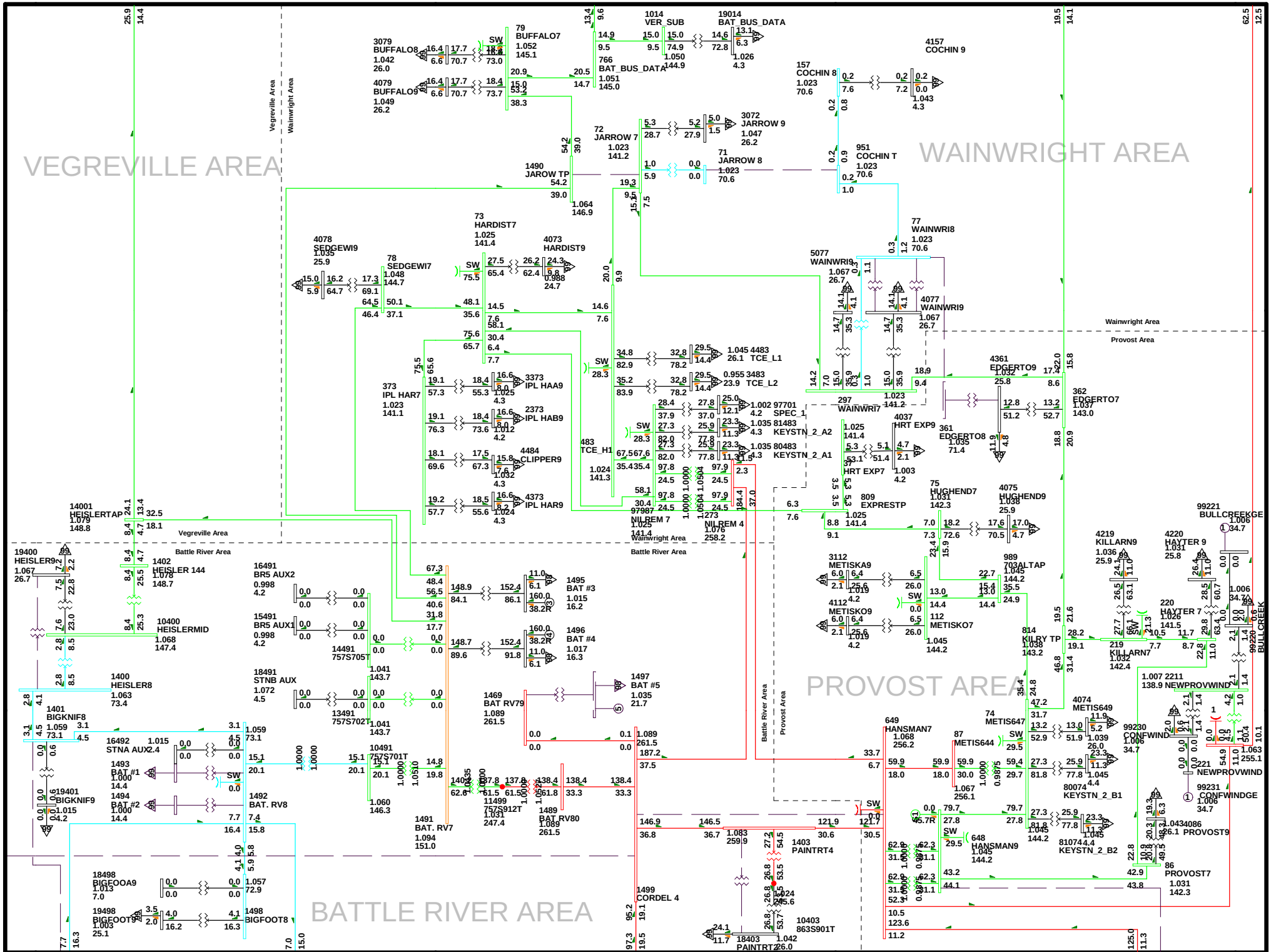
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV 0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 9:37
D1-14

2017WP-Alt 3-12.a

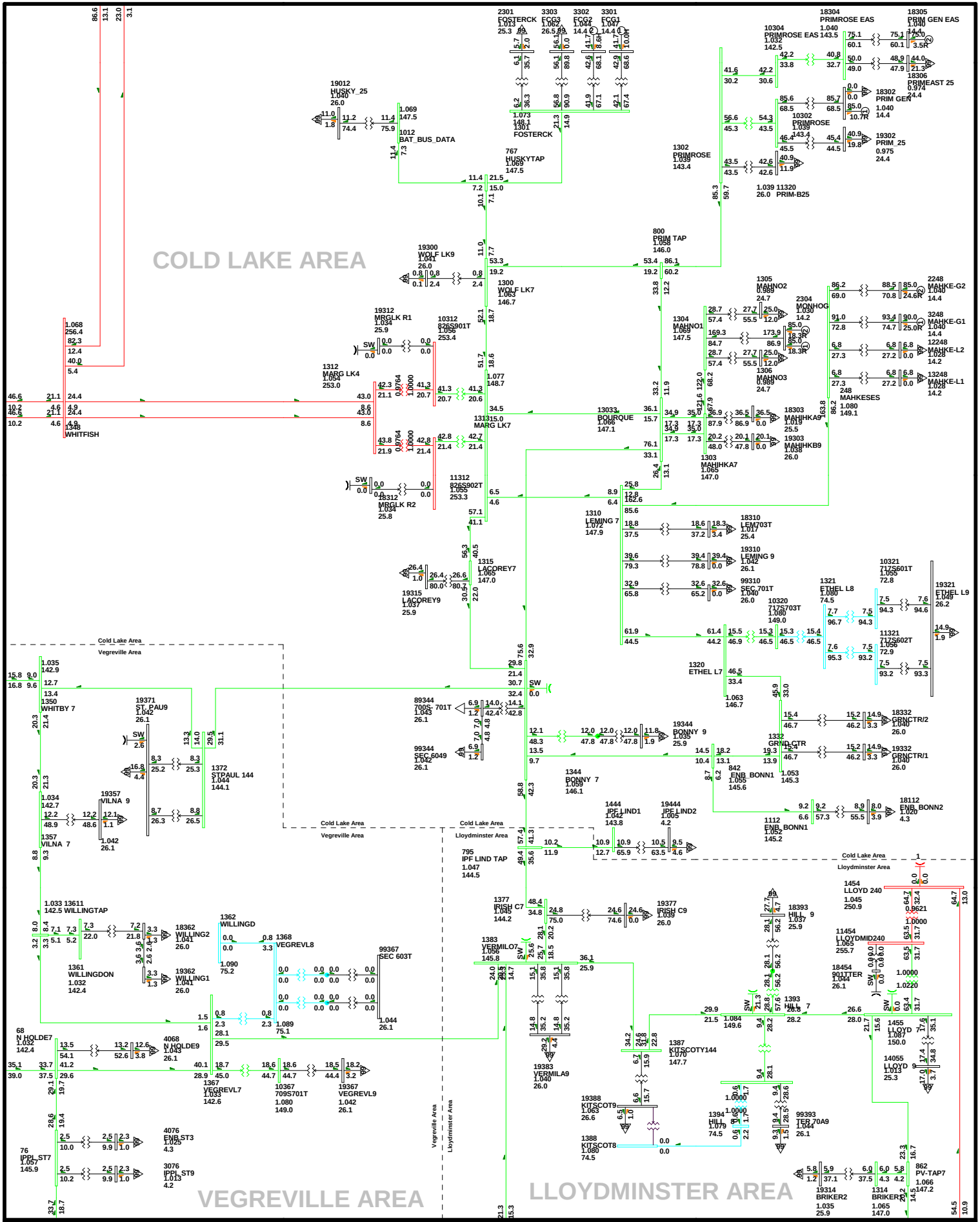
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000<=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 9:37
D1-14

2017WP-Alt 3-12.b

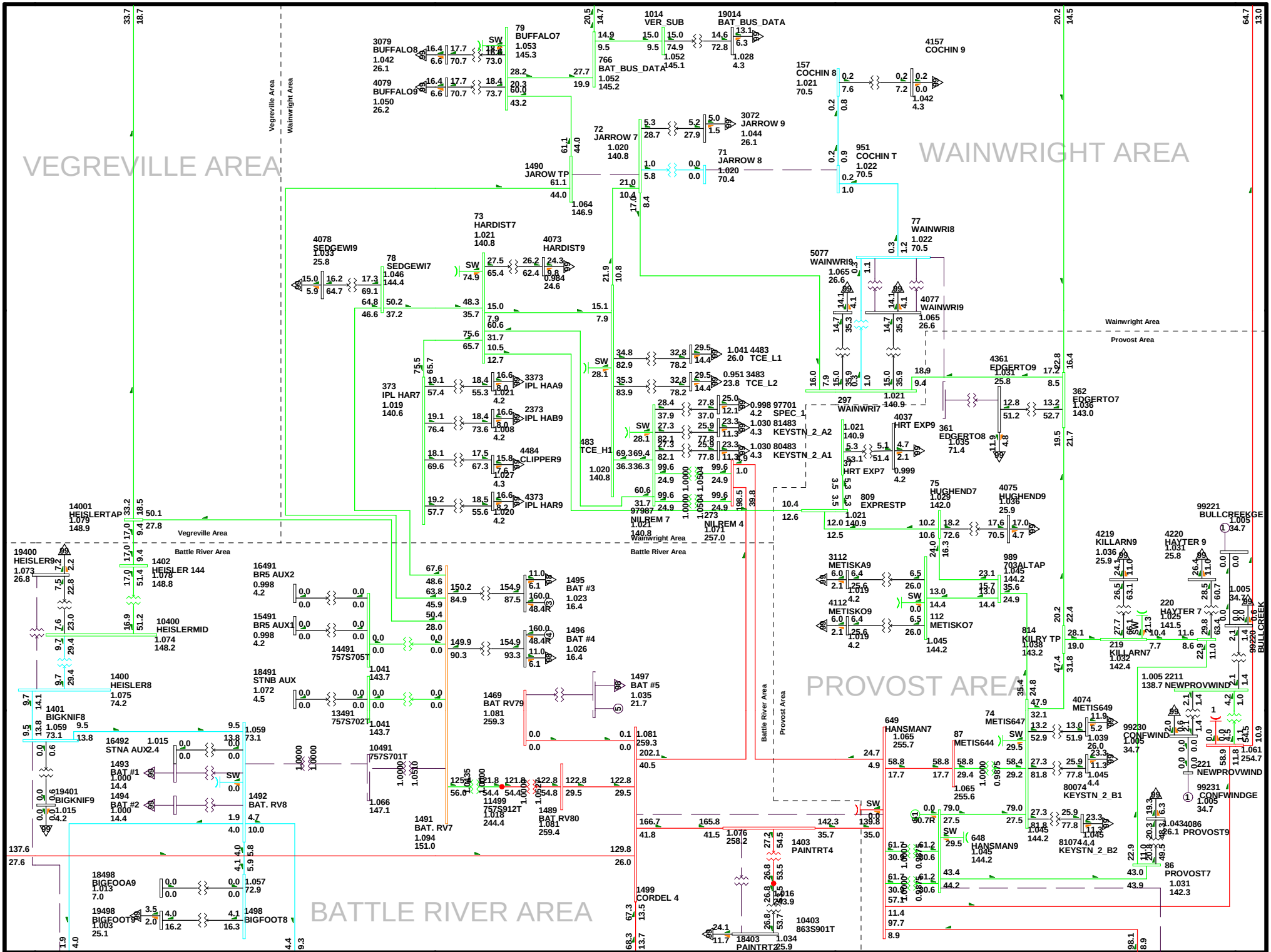
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV 0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 9:37
D1-15

2017WP-Alt 3-13.a

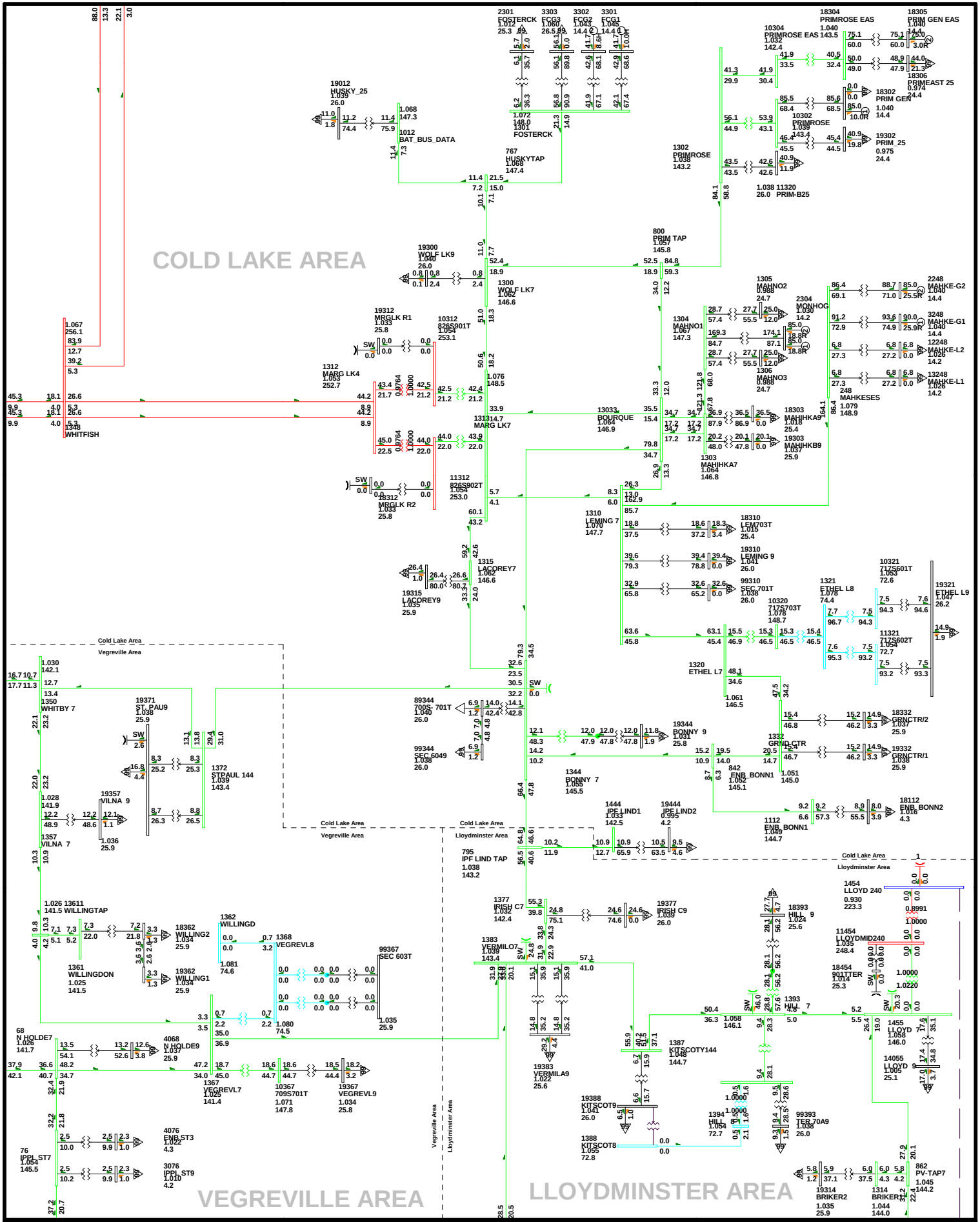
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000<=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 9:37
D1-15

2017WP-Alt 3-13.b

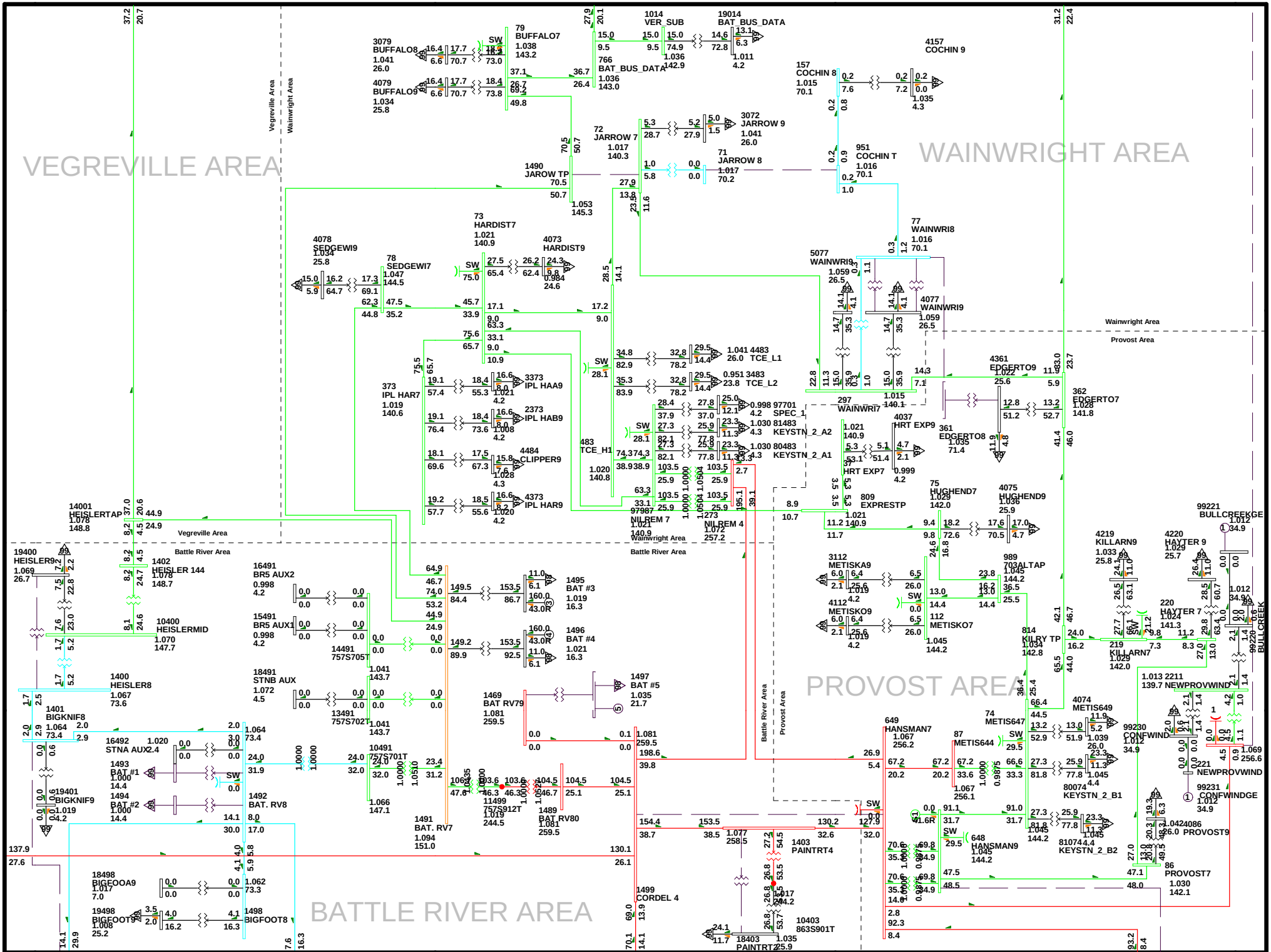
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV 0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 9:37
D1-18

2017WP-Alt 3-14.a

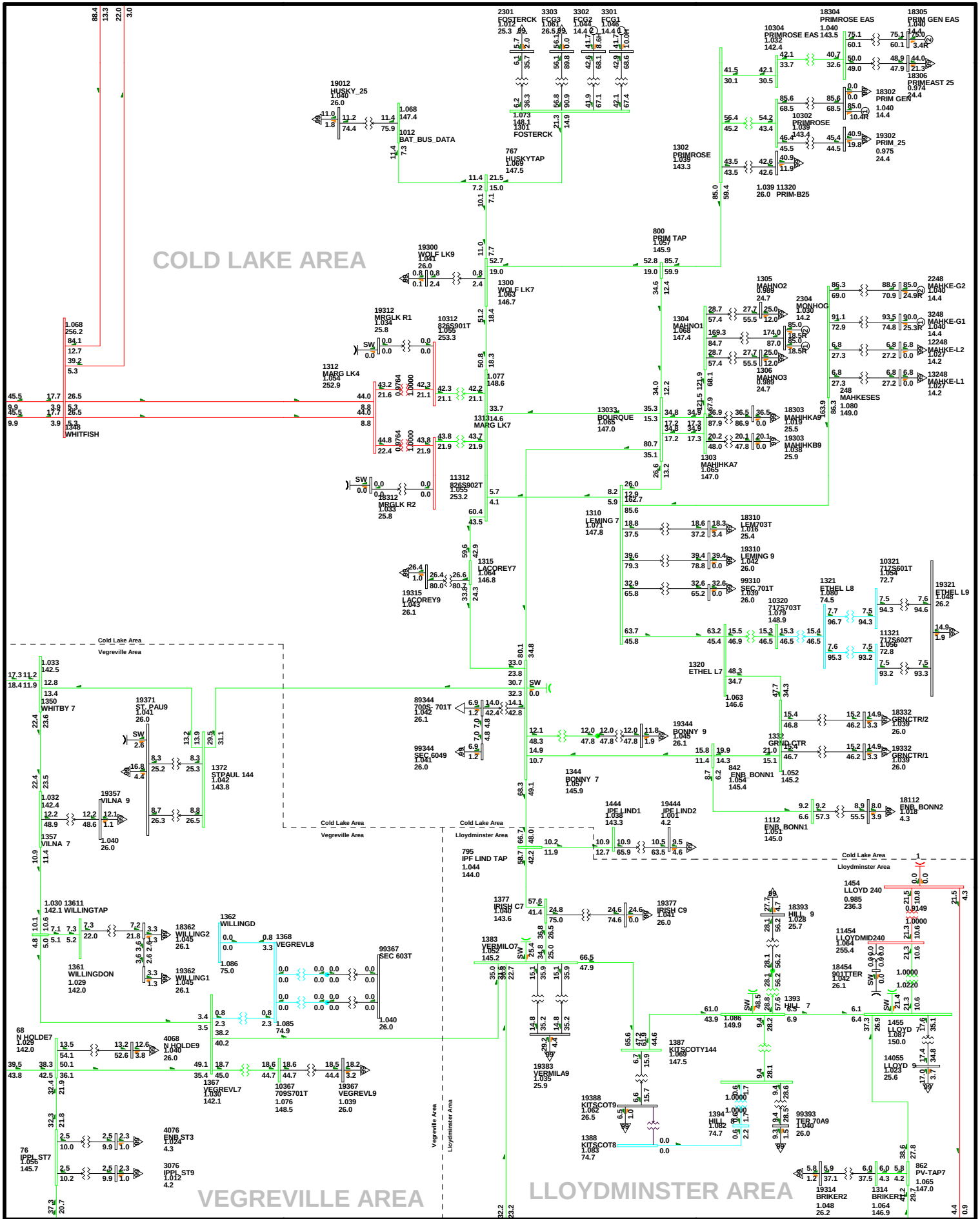
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000<=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 9:37
D1-18

2017WP-Alt 3-14.b

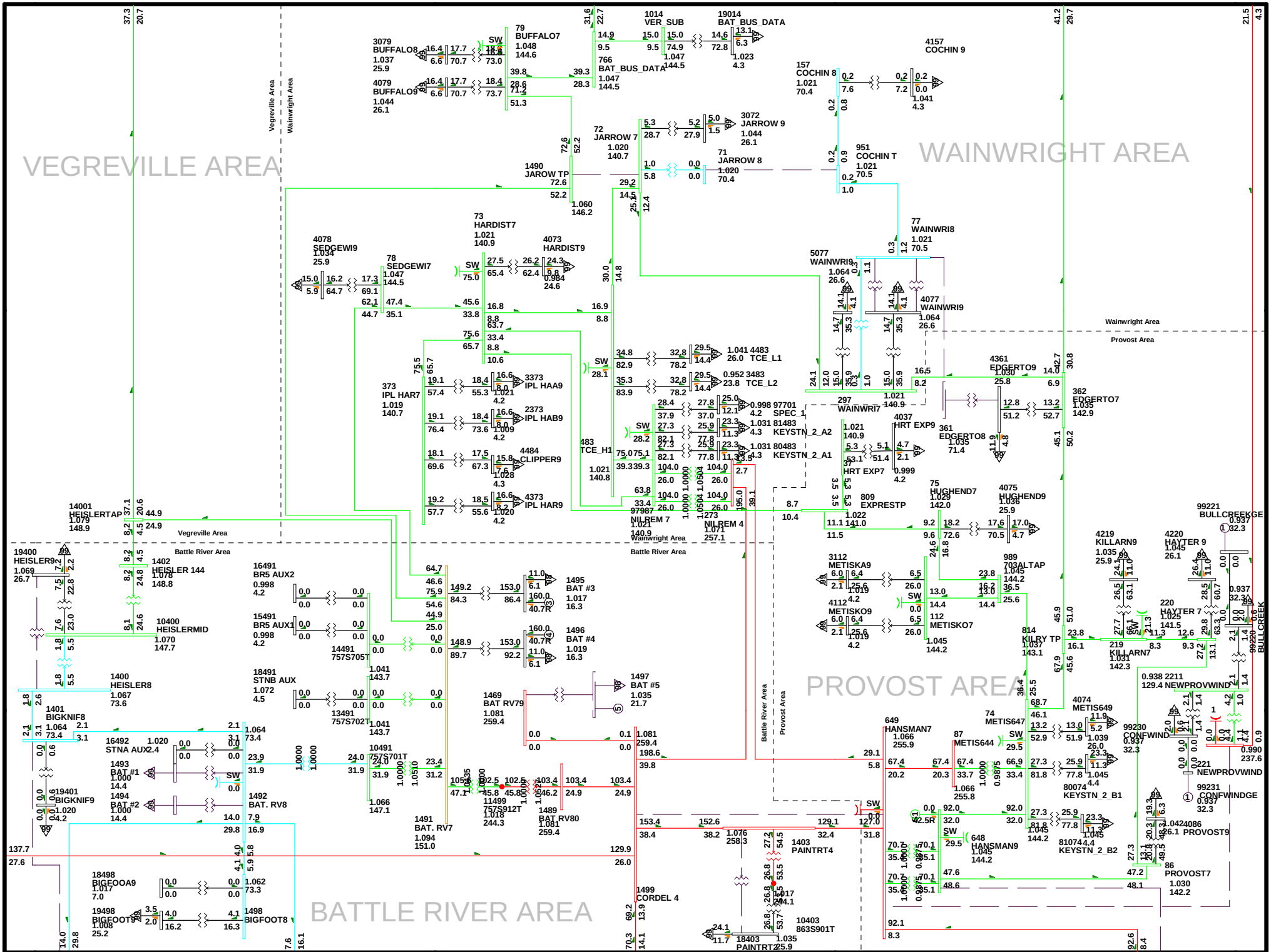
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV 0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 9:37
D1-19

2017WP-Alt 3-15.a

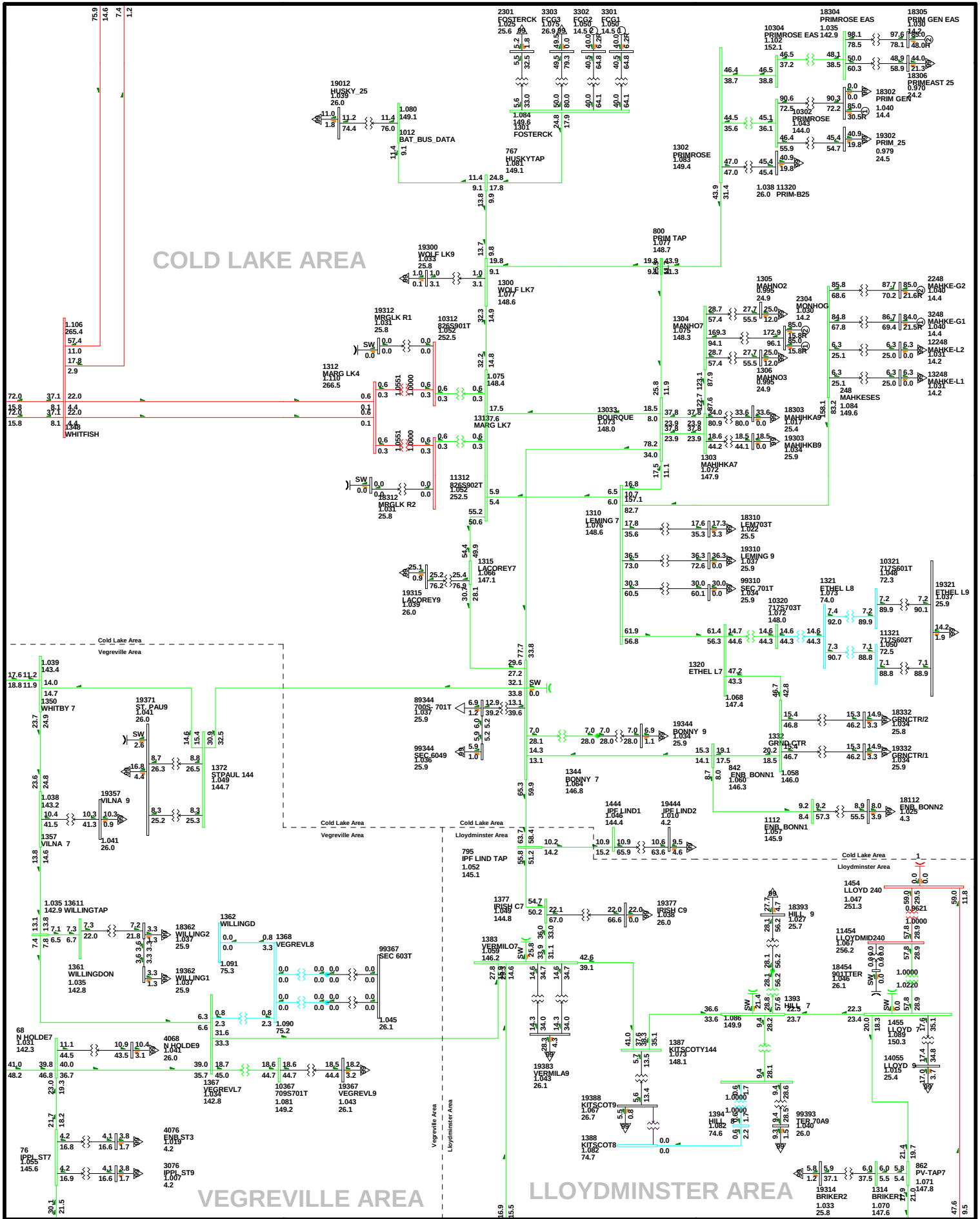
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000<=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 9:37
D1-19

2017WP-Alt 3-15.b

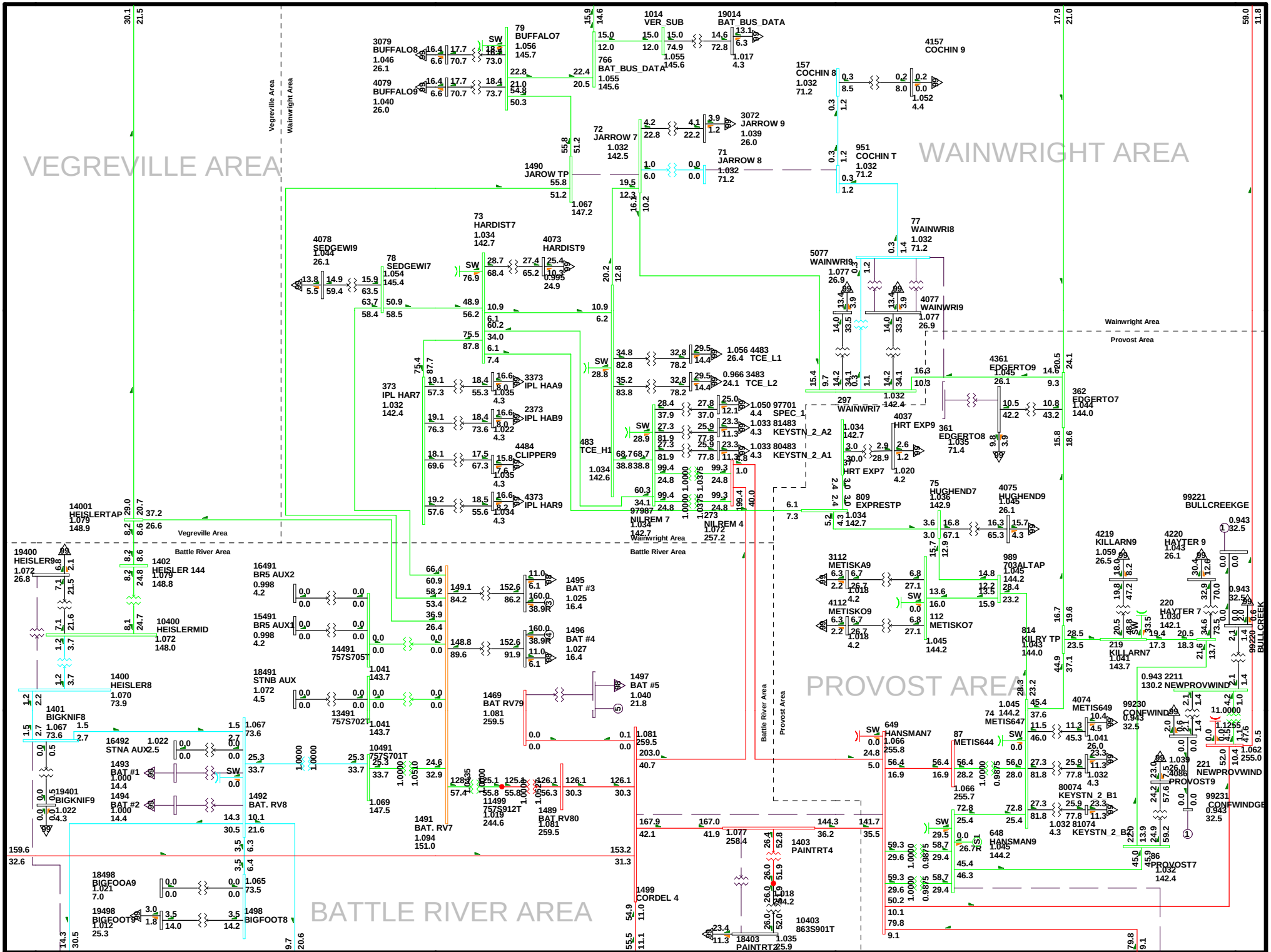
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV 0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 9:53
D1-00

2017SP-Alt 3-1.a

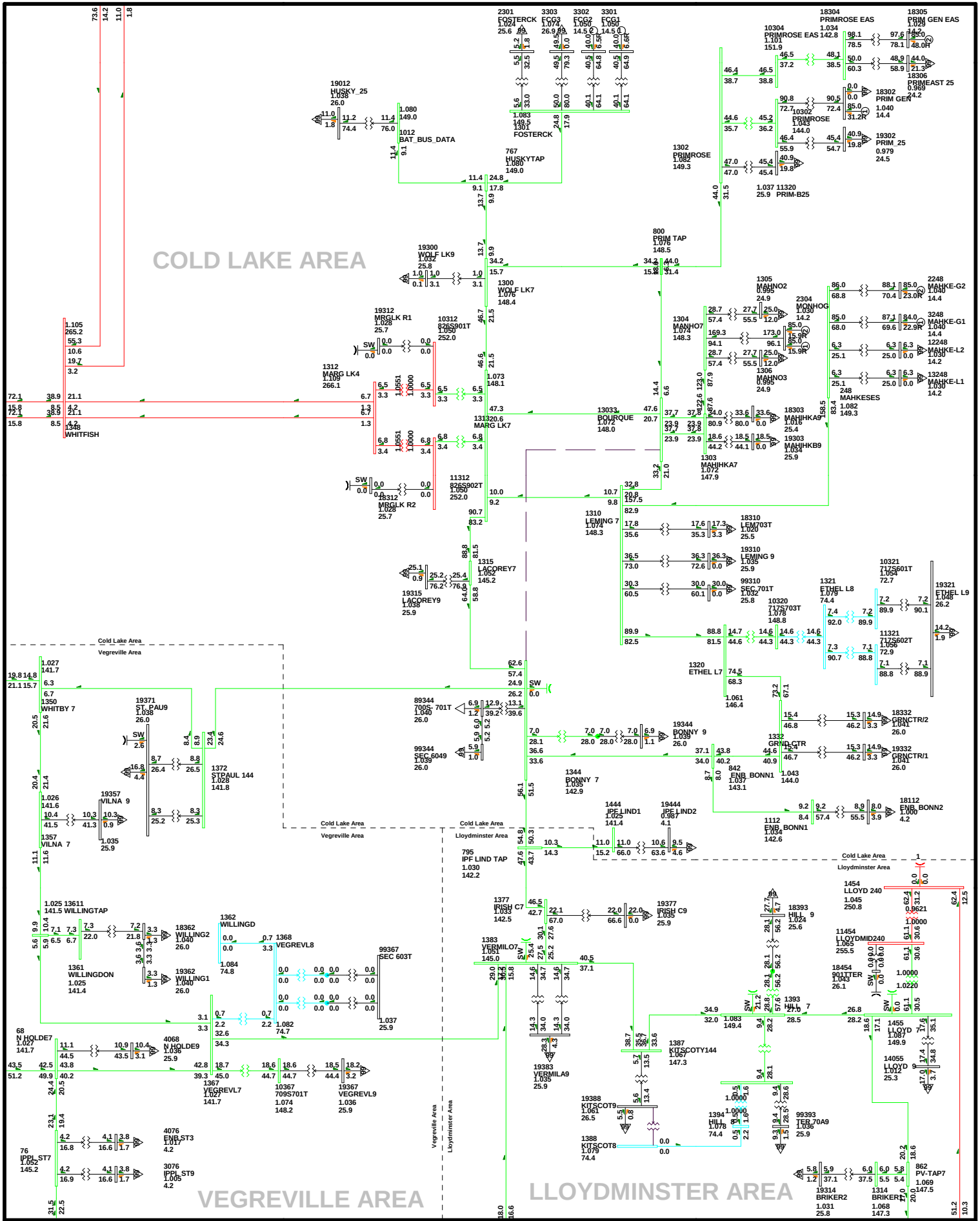
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 9:53
D1-00

2017SP-Alt 3-1.b

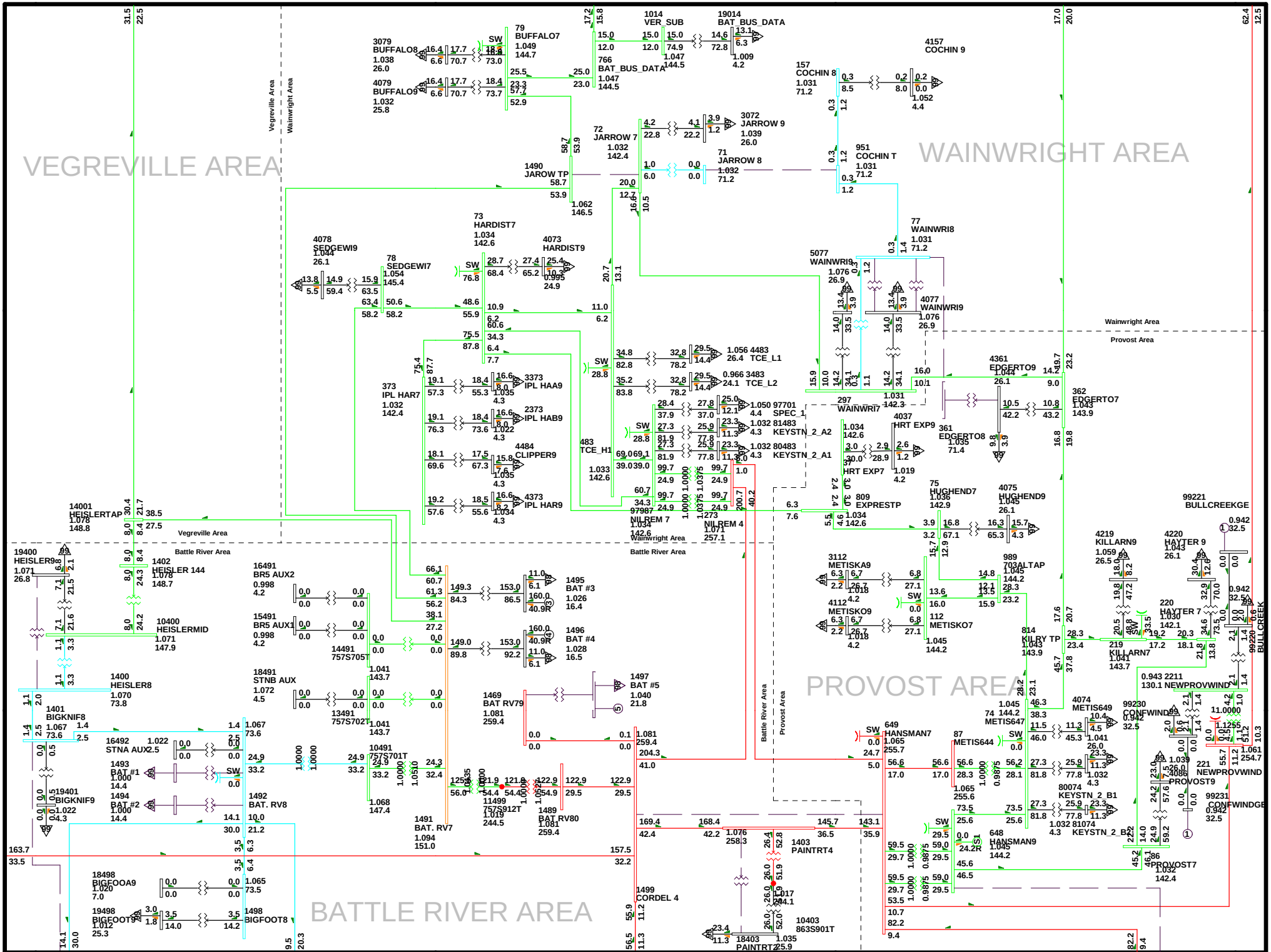
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 9:53
D1-01

2017SP-Alt 3-2.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000


VEGREVILLE AREA
WAINWRIGHT AREA
PROVOST AREA
BATTLE RIVER AREA
Vegreville Area
Wainwright Area
Provost Area
Battle River Area
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4079 BUFFALO9 1.032 25.8
79 BUFFALO7 1.049 144.7
766 BAT_BUS_DATA 1.047 144.5
1014 VER_SUB
19014 BAT_BUS_DATA 1.009 4.2
4157 COCHIN 9
157 COCHIN 8 1.031 71.2
1.052 4.4
72 JAROW 7 1.032 142.4
3072 JAROW 9 1.039 26.0
71 JARROW 8 1.032 71.2
951 COCHIN T 1.031 71.2
1490 JAROW TP 58.7 53.9 1.062 146.5
73 HARDIST7 1.034 142.6
4073 HARDIST9
4078 SEDGEWI9 1.044 26.1
78 SEDGEWI7 1.054 145.4
77 WAINWRI8 1.031 71.2
5077 WAINWRI9 1.076 26.9
4077 WAINWRI9 1.076 26.9
1.031 142.3
297 WAINWRI7
4361 EDGERTO9 1.044 26.1
362 EDGERTO7 1.043 143.9
361 EDGERTO8 1.035 71.4
4037 HRT EXP9
HRT EXP7 1.019 4.2
373 IPL HAR7 1.032 142.4
3373 IPL HAA9 1.035 4.3
2373 IPL HAB9 1.022 4.3
4484 CLIPPER9 1.035 4.3
4373 IPL HAR9 1.034 4.3
483 TCE_H1 1.033 142.6
1.056 4483 26.4 TCE_L1
0.966 3483 24.1 TCE_L2
1.050 97701 4.4 SPEC_1
1.032 81483 4.3 KEYSTN_2_A2
1.032 80483 4.3 KEYSTN_2_A1
97987 NIL REM 7 1.034 142.6
1273 NIL REM 4 1.071 257.1
809 EXPRESTP 1.034 142.6
75 HUGHEND7 1.036 142.9
4075 HUGHEND9 1.045 26.1
14001 HEISLERTAP 1.078 148.8
19400 HEISLER9 1.071 26.8
1402 HEISLER 144 1.078 148.7
10400 HEISLERMID 1.071 147.9
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1401 BIGKNIF8 1.067 73.6
19401 BIGKNIF9 1.022 84.3
16491 BR5 AUX2 0.998 4.2
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18491 STNB AUX 1.072 4.5
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16492 STNA AUX 1.022
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1492 BAT. RV8
1491 BAT. RV7 1.094 151.0
1495 BAT #3 1.026 16.4
1496 BAT #4 1.028 16.5
1497 BAT #5 1.040 21.8
1469 BAT RV79 1.081 259.4
11499 757S912T 1.019 244.5
1489 BAT RV80 1.081 259.4
1499 CORDEL 4
1403 PAINTRT4
10403 863S901T
18403 PAINTRT2 1.035 25.9
18498 BIGFOOA9 1.020 7.0
19498 BIGFOOT9 1.012 25.3
1498 BIGFOOT8
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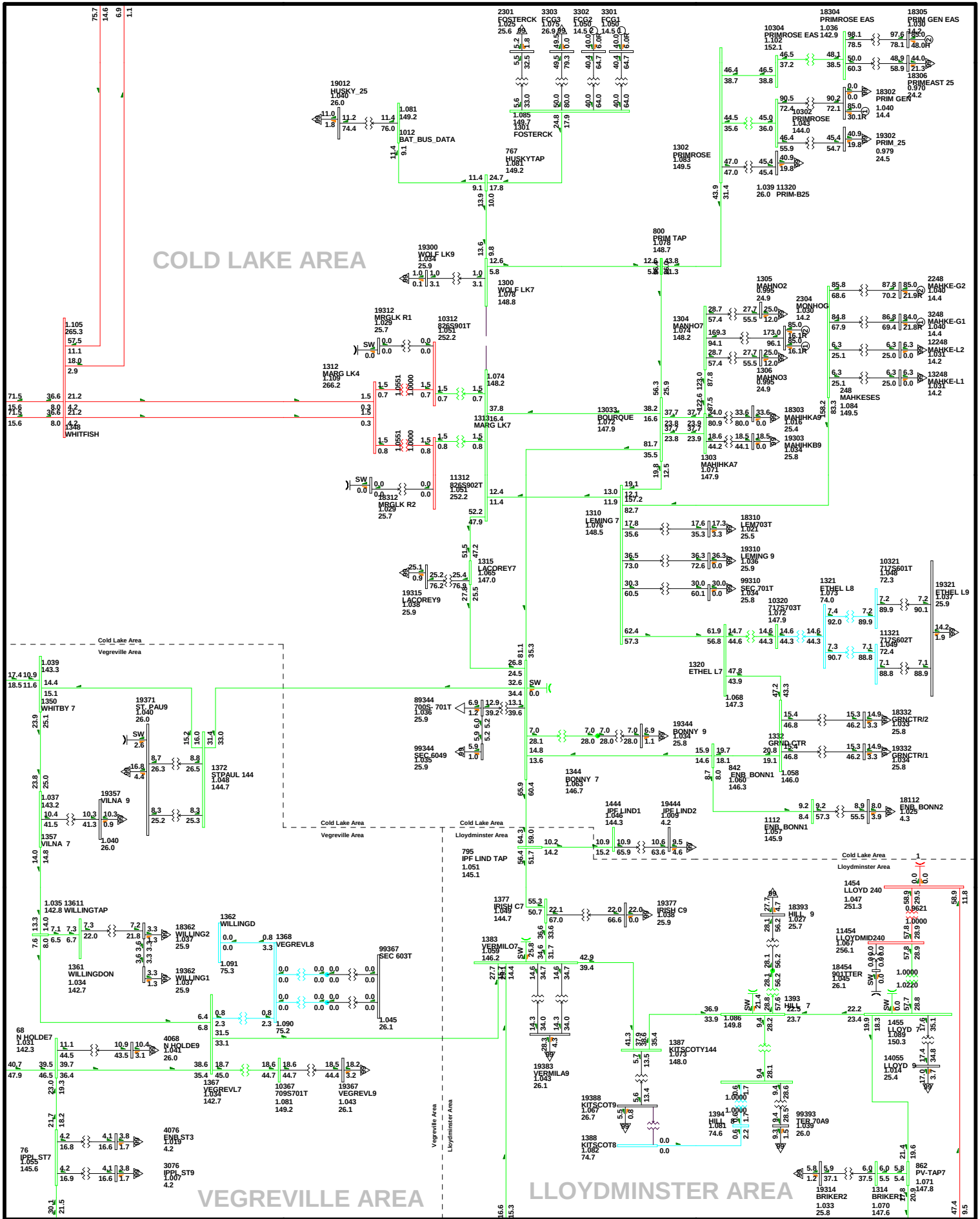
4112 METISKO9
112 METISKO7 1.045 144.2
814 KILRY TP 1.043 143.9
219 KILLARN7 1.041 143.7
4219 KILLARN9 1.059 26.5
4220 HAYTER 9 1.043 26.1
220 HAYTER 7 1.030 142.1
989 703ALTAP 1.045 144.2
74 METIS647 1.045 144.2
4074 METIS649
87 METIS644
649 HANSMAN7 1.065 255.7
648 HANSMAN9 1.045 144.2
80074 KEYSTN_2_B1
81074 KEYSTN_2_B2
99221 BULLCREEKGE
99229 BULLCREEK
99230 CONFWIND9 0.942 32.5
99231 CONFWIND8 0.942 32.5
0.943 2211 130.1 NEWPROVWIND
221 NEWPROVWIND
1.039 4086 PROVOST9
86 PROVOST7 1.032 142.4
CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 9:54
D1-01
2017SP-Alt 3-2.b
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 9:54
D1-02

2017SP-Alt 3-3.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
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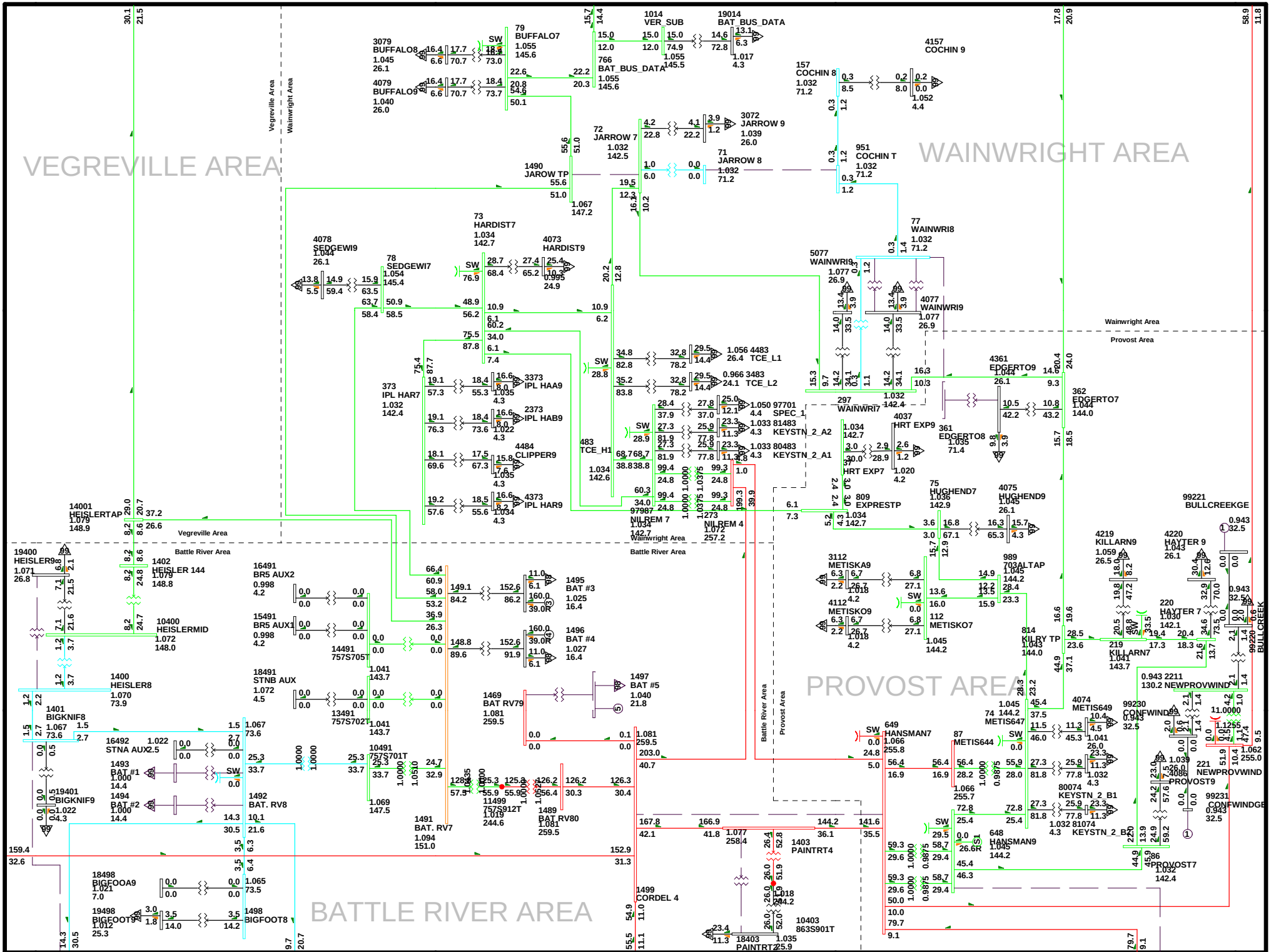
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000


VEGREVILLE AREA
WAINWRIGHT AREA
PROVOST AREA
BATTLE RIVER AREA
Vegreville Area
Wainwright Area
Provost Area
Battle River Area
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4079 BUFFALO9 1.040 26.0
79 BUFFALO7 1.055 145.6
766 BAT_BUS_DATA 1.055 145.6
1014 VER_SUB 1.055 145.5
19014 BAT_BUS_DATA 1.017 4.3
4157 COCHIN 9
157 COCHIN 8 1.032 71.2
1052 4.4
72 JAROW 7 1.032 142.5
3072 JARROW 9 1.039 26.0
71 JARROW 8 1.032 71.2
951 COCHIN T 1.032 71.2
1490 JAROW TP 55.6 51.0 1.067 147.2
73 HARDIST7 1.034 142.7
4073 HARDIST9
4078 SEDGEWI9 1.044 26.1
78 SEDGEWI7 1.054 145.4
373 IPL HAR7 1.032 142.4
3373 IPL HAA9 1.035 4.3
2373 IPL HAB9 1.022 4.3
4484 CLIPPER9 1.035 4.3
4373 IPL HAR9 1.034 4.3
483 TCE_H1 1.034 142.6
1.056 4483 26.4 TCE_L1
0.966 3483 24.1 TCE_L2
97701 SPEC_1 1.050 4.4
81483 KEYSTN_2_A2 1.033 4.3
80483 KEYSTN_2_A1 1.033 4.3
97987 NII REM 7 1.034 142.7
1273 NII REM 4 1.072 257.2
77 WAINWRI8 1.032 71.2
5077 WAINWRI9 1.077 26.9
4077 WAINWRI9 1.077 26.9
297 WAINWRI7 1.032 142.4
4037 HRT EXP9 1.034 142.7
HRT EXP7 1.020 4.2
809 EXPRESTP 1.034 142.7
4361 EDGERTO9 1.044 26.1
362 EDGERTO7 1.044 144.0
361 EDGERTO8 1.035 71.4
75 HUGHEND7 1.036 142.9
4075 HUGHEND9 1.045 26.1
14001 HEISLERTAP 1.079 148.9
19400 HEISLER9 1.071 26.8
1402 HEISLER 144 1.073 148.8
10400 HEISLERMID 1.072 148.0
1400 HEISLER8 1.070 73.9
1401 BIGKNIF8 1.067 73.6
19401 BIGKNIF9 1.022 4.3
16491 BR5 AUX2 0.998 4.2
15491 BR5 AUX1 0.998 4.2
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13491 757S702T
16492 STNA AUX 1.022 2.5
10491 757S701T
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1496 BAT #4 1.027 16.4
1497 BAT #5 1.040 21.8
1469 BAT RV79 1.081 259.5
1491 BAT. RV7 1.094 151.0
11499 757S912T 1.019 244.6
1489 BAT RV80 1.081 259.5
1403 PAINTRT4
18403 PAINTRT2 1.035 25.9
10403 863S901T
1499 CORDEL 4
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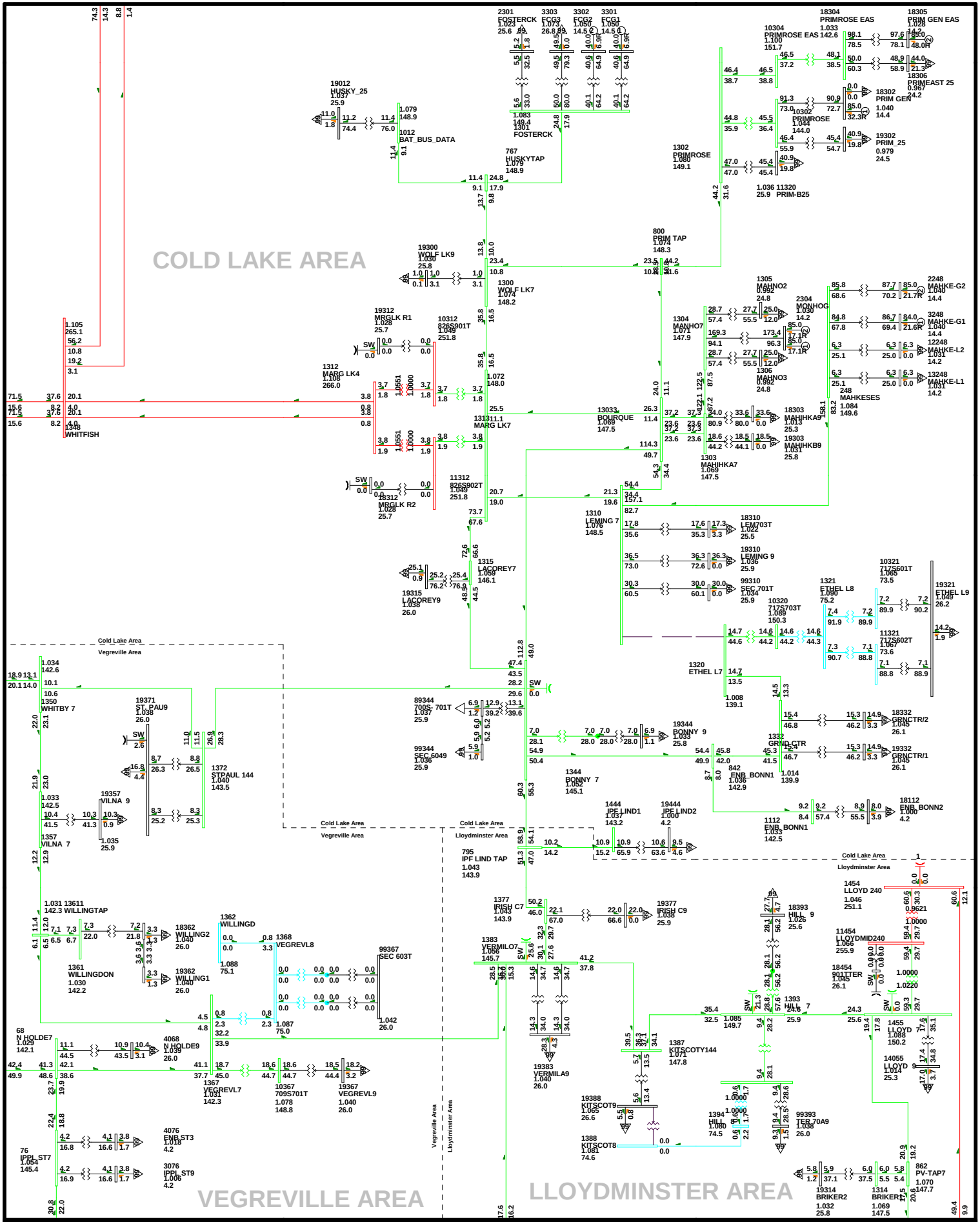
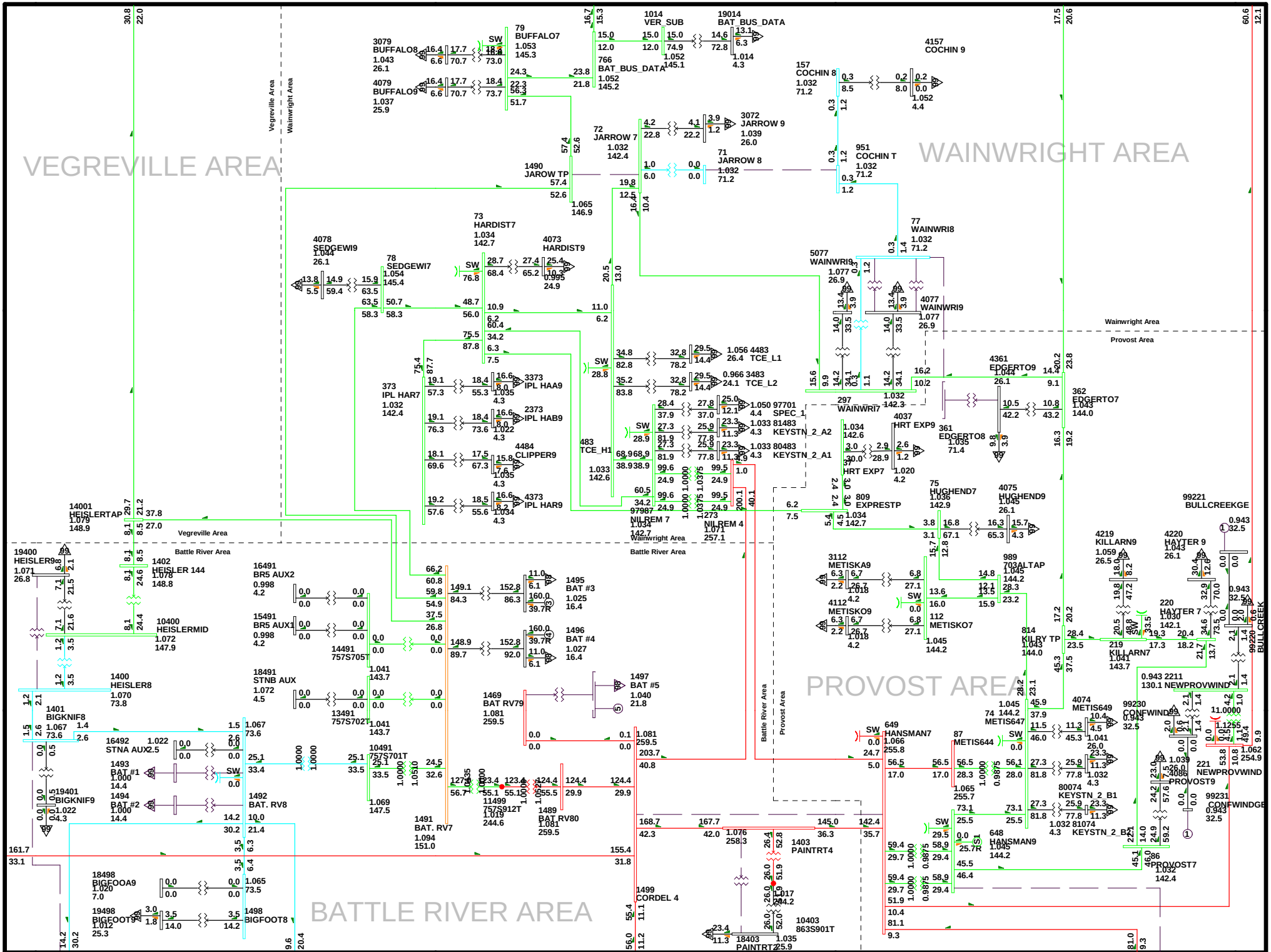
19498 BIGFOOT9 1.012 25.3
1498 BIGFOOT8
649 HANSMAN7 1.066 255.8
87 METIS644
74 METIS647 1.045 144.2
4074 METIS649
648 HANSMAN9 1.045 144.2
80074 KEYSTN_2_B1 1.032 4.3
81074 KEYSTN_2_B2
3112 METISKA9
4112 METISKO9
112 METISKO7 1.045 144.2
989 703ALTAP 1.045 144.2
814 KILRY TP 1.043 144.0
4219 KILLARN9 1.059 26.5
219 KILLARN7 1.041 143.7
4220 HAYTER 9 1.043 26.1
220 HAYTER 7 1.030 142.1
99221 BULLCREEKGE
99229 BULLCREEK
0.943 2211 130.2 NEWPROVWIND
99230 CONFWIND9 0.943 32.5
99231 CONFWINDGE 0.943 32.5
221 NEWPROVWIND 1.039 26.0
4086 PROVOST9
86 PROVOST7 1.032 142.4
CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 9:54
D1-02
2017SP-Alt 3-3.b
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 9:54
D1-03

2017SP-Alt 3-4.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000


VEGREVILLE AREA
WAINWRIGHT AREA
PROVOST AREA
BATTLE RIVER AREA
Vegreville Area
Wainwright Area
Provost Area
Battle River Area
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4079 BUFFALO9 1.037 25.9
79 BUFFALO7 1.053 145.3
766 BAT_BUS_DATA 1.052 145.2
1014 VER_SUB
19014 BAT_BUS_DATA
4157 COCHIN 9
157 COCHIN 8 1.032 71.2
1.052 4.4
72 JAROW 7 1.032 142.4
3072 JAROW 9 1.039 26.0
71 JAROW 8 1.032 71.2
951 COCHIN T 1.032 71.2
1490 JAROW TP 57.4 52.6 1.065 146.9
77 WAINWRI8 1.032 71.2
5077 WAINWRI9 1.077 26.9
4077 WAINWRI9 1.077 26.9
4078 SEDGEWI9 1.044 26.1
78 SEDGEWI7 1.054 145.4
73 HARDIST7 1.034 142.7
4073 HARDIST9
373 IPL HAR7 1.032 142.4
3373 IPL HAA9 1.035 4.3
2373 IPL HAB9 1.022 4.3
4484 CLIPPER9 1.035 4.3
4373 IPL HAR9 1.034 4.3
483 TCE_H1 1.033 142.6
1.056 4483 26.4 TCE_L1
0.966 3483 24.1 TCE_L2
1.050 97701 4.4 SPEC_1
1.033 81483 4.3 KEYSTN_2_A2
1.033 80483 4.3 KEYSTN_2_A1
97987 NIL REM 7 1.034 142.7
1273 NIL REM 4 1.071 257.1
297 WAINWRI7 1.034 142.6
4037 HRT EXP9
HRT EXP7 1.020 4.2
361 EDGERTO8 1.035 71.4
4361 EDGERTO9 1.044 26.1
362 EDGERTO7 1.043 144.0
809 EXPRESTP 1.034 142.7
75 HUGHEND7 1.036 142.9
4075 HUGHEND9 1.045 26.1
14001 HEISLERAP 1.079 148.9
19400 HEISLER9 1.071 26.8
1402 HEISLER 144 1.078 148.8
10400 HEISLERMID 1.072 147.9
1400 HEISLER8 1.070 73.8
1401 BIGKNIF8 1.067 73.6
19401 BIGKNIF9 1.022 24.3
16491 BR5 AUX2 0.998 4.2
15491 BR5 AUX1 0.998 4.2
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18491 STNB AUX 1.072 4.5
13491 757S702T 1.041 143.7
16492 STNA AUX 1.022 2.5
10491 757S701T 1.069 147.5
1493 BAT #1 1.000 14.4
1494 BAT #2 1.000 14.4
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1495 BAT #3 1.025 16.4
1496 BAT #4 1.027 16.4
1497 BAT #5 1.040 21.8
1469 BAT RV79 1.081 259.5
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1489 BAT RV80 1.081 259.5
1499 CORDEL 4
1403 PAINTRT4
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18403 PAINTRT2
18498 BIGFOOA9 1.020 7.0
19498 BIGFOOT9 1.012 25.3
1498 BIGFOOT8
649 HANSMAN7 1.066 255.8
87 METIS644
74 METIS647 1.045 144.2
3112 METISKA9
4112 METISKO9
112 METISKO7 1.045 144.2
989 703ALTAP 1.045 144.2
814 KILRY TP 1.043 144.0
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486 PROVOST7 1.032 142.4
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219 KILLARN7 1.041 143.7
4220 HAYTER 9 1.043 26.1
220 HAYTER 7 1.030 142.1
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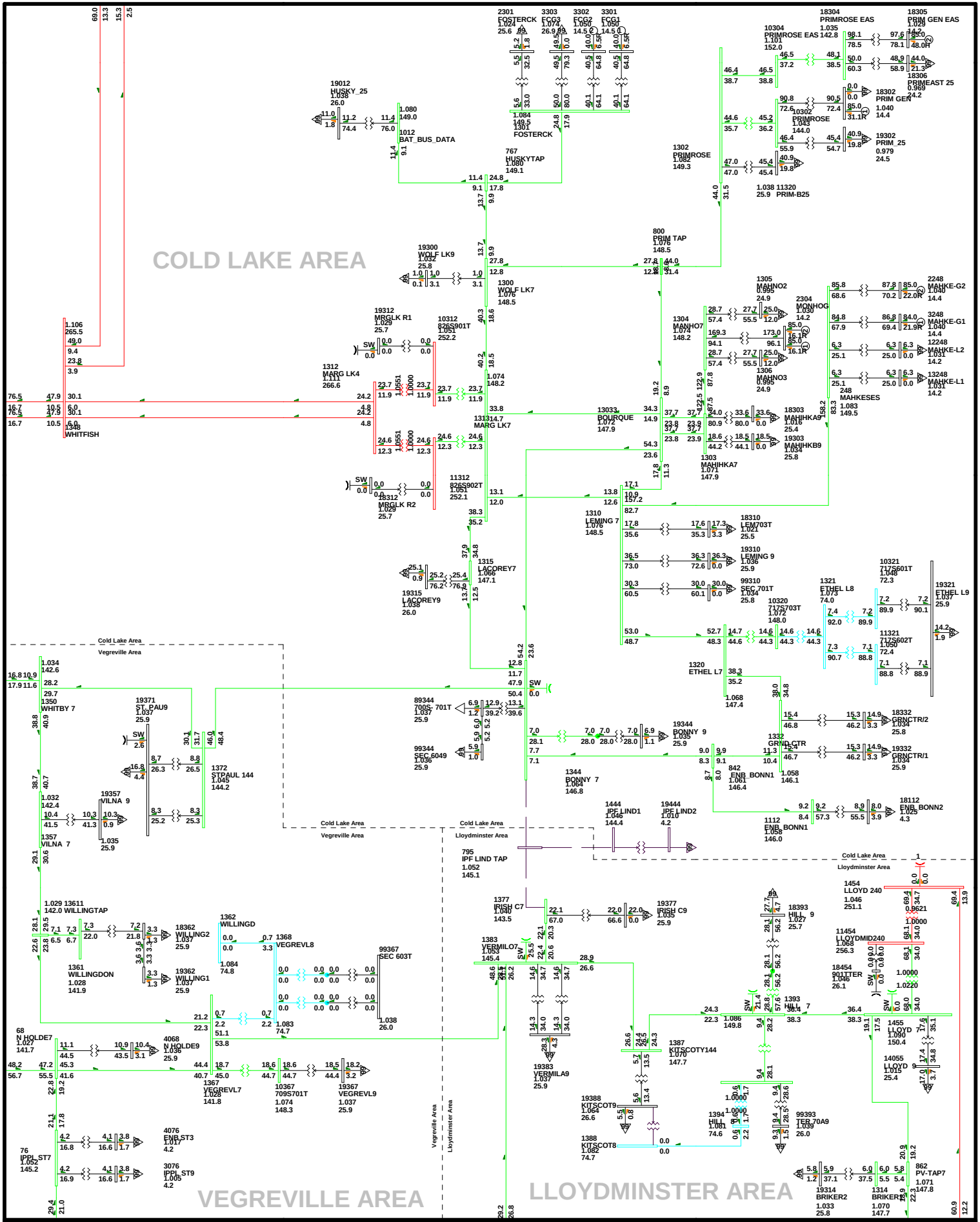
CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 9:54
D1-03
2017SP-Alt 3-4.b
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 9:54
D1-04

2017SP-Alt 3-5.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
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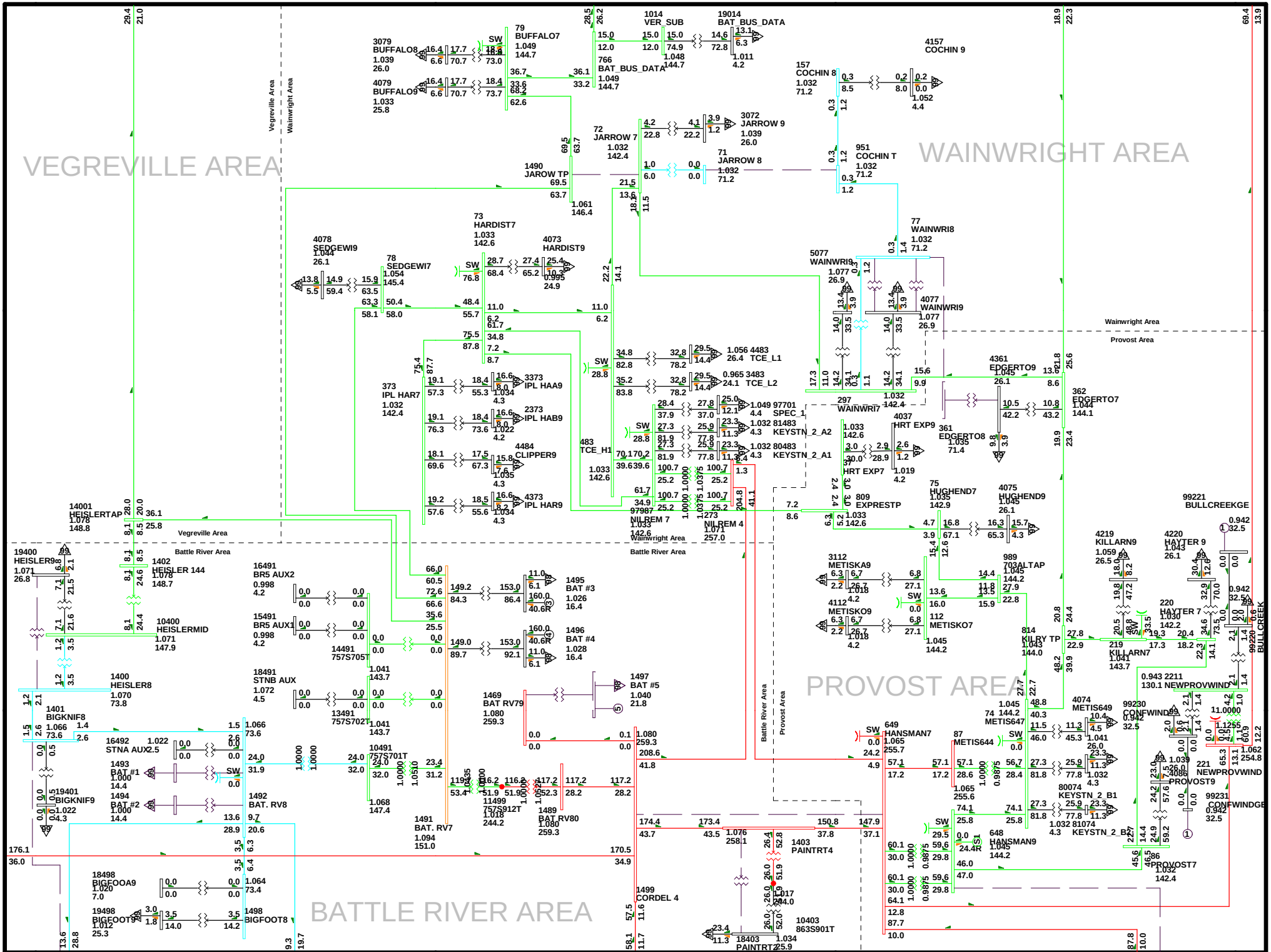
VEGREVILLE AREA
WAINWRIGHT AREA
PROVOST AREA
BATTLE RIVER AREA
Vegreville Area
Wainwright Area
Provost Area
Battle River Area
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4079 BUFFALO9 1.033 25.8
79 BUFFALO7 1.049 144.7
766 BAT_BUS_DATA 1.049 144.7
1014 VER_SUB
19014 BAT_BUS_DATA
4157 COCHIN 9
157 COCHIN 8 1.032 71.2
951 COCHIN T 1.032 71.2
1052 4.4
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3072 JARROW 9 1.039 26.0
71 JARROW 8 1.032 71.2
1490 JAROW TP 69.5 63.7
1.061 146.4
73 HARDIST7 1.033 142.6
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78 SEDGEWI7 1.054 145.4
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77 WAINWRI8 1.032 71.2
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0.965 3483 24.1 TCE_L2
373 IPL HAR7 1.032 142.4
3373 IPL HAA9 1.034 4.3
2373 IPL HAB9 1.022 4.2
4484 CLIPPER9 1.035 4.3
4373 IPL HAR9 1.034 4.3
483 TCE_H1 1.033 142.6
97987 NIL REM 7 1.033 142.6
1273 NIL REM 4 1.071 257.0
4361 EDGERTO9 1.045 26.1
362 EDGERTO7 1.044 144.1
297 WAINWRI7 1.033 142.6
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361 EDGERTO8 1.035 71.4
HRT EXP7 1.019 4.2
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81483 KEYSTN_2_A2 4.3
80483 KEYSTN_2_A1 4.3
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75 HUGHEND7 1.035 142.9
4075 HUGHEND9 1.045 26.1
14001 HEISLERTAP 1.078 148.8
19400 HEISLER9 1.071 26.8
1402 HEISLER 144 1.078 148.7
10400 HEISLERMID 1.071 147.9
1400 HEISLER8 1.070 73.8
1401 BIGKNIF8 1.066 73.6
19401 BIGKNIF9 1.022 24.3
16491 BR5 AUX2 0.998 4.2
15491 BR5 AUX1 0.998 4.2
14491 757S705T
18491 STNB AUX 1.072 4.5
13491 757S702T
16492 STNA AUX 1.022 2.5
10491 757S701T
1495 BAT #3 1.026 16.4
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1497 BAT #5 1.040 21.8
1469 BAT RV79 1.080 259.3
1493 BAT #1 1.000 14.4
1494 BAT #2 1.000 14.4
1492 BAT. RV8 1.012 9.7
1491 BAT. RV7 1.094 151.0
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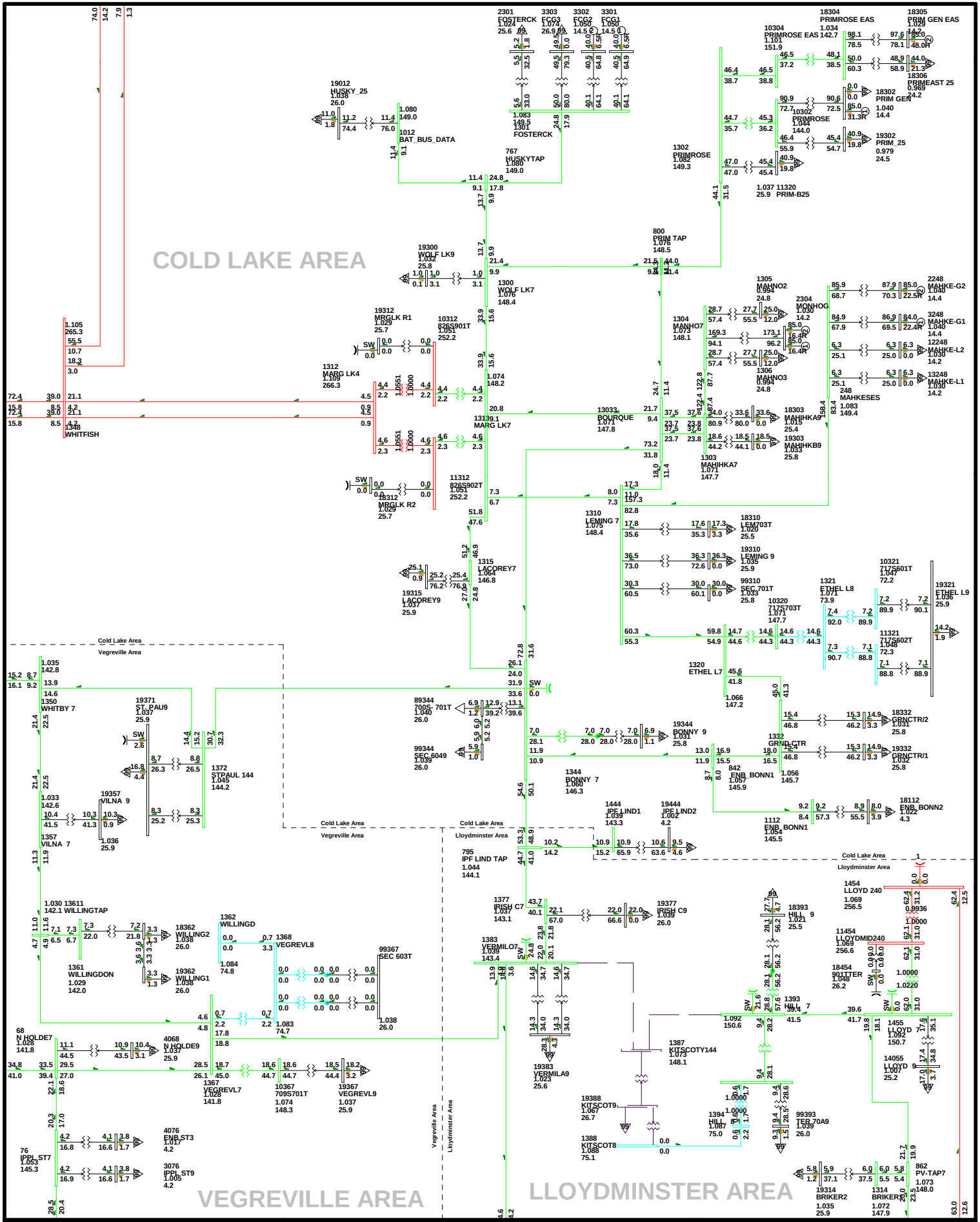
4112 METISKO9 1.018 4.2
112 METISKO7 1.045 144.2
814 KILRY TP 1.043 144.0
4219 KILLARN9 1.059 26.5
219 KILLARN7 1.041 143.7
4220 HAYTER 9 1.043 26.1
220 HAYTER 7 1.030 142.2
99221 BULLCREEKGE 0.942 32.5
99229 BULLCREEK 0.942 32.5
0.943 2211 130.1 NEWPROVWIND
99230 CONFWIND9 0.942 32.5
221 NEWPROVWIND 1.062 254.8
99231 CONFWINDGE 0.942 32.5
PROVOST9 1.039 26.0
4086 PROVOST7 1.032 142.4
649 HANSMAN7 1.065 255.7
87 METIS644 1.065 255.6
74 METIS647 1.045 144.2
4074 METIS649 1.041 26.0
80074 KEYSTN_2_B1 1.032 4.3
81074 KEYSTN_2_B2 1.032 4.3
648 HANSMAN9 1.045 144.2
989 703ALTAP 1.045 144.2
CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 9:54
D1-04
2017SP-Alt 3-5.b
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 9:54
D1-05

2017SP-Alt 3-6.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
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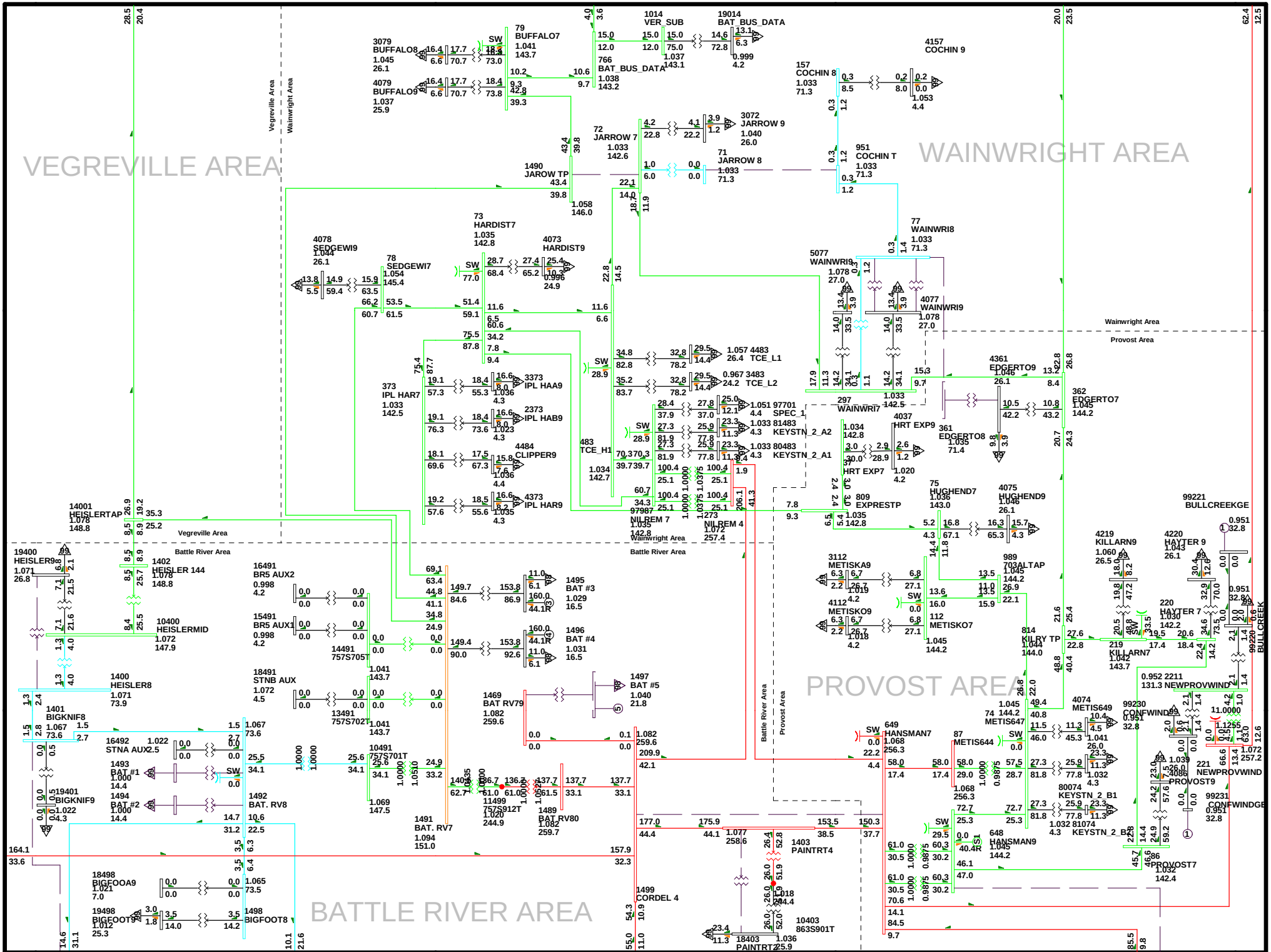
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000


VEGREVILLE AREA
WAINWRIGHT AREA
PROVOST AREA
BATTLE RIVER AREA
Vegreville Area
Wainwright Area
Provost Area
Battle River Area
3079 BUFFALO8 1.045 26.1
4079 BUFFALO9 1.037 25.9
79 BUFFALO7 1.041 143.7
766 BAT_BUS_DATA 1.038 143.2
1014 VER_SUB 1.037 143.1
19014 BAT_BUS_DATA 0.999 4.2
4157 COCHIN 9
157 COCHIN 8 1.033 71.3
1.053 4.4
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3072 JAROW 9 1.040 26.0
71 JAROW 8 1.033 71.3
951 COCHIN T 1.033 71.3
1490 JAROW TP 43.4 39.8 1.058 146.0
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4073 HARDIST9
4078 SEDGEWI9 1.044 26.1
78 SEDGEWI7 1.054 145.4
373 IPL HAR7 1.033 142.5
3373 IPL HAA9 1.036 4.3
2373 IPL HAB9 1.023 4.3
4484 CLIPPER9 1.036 4.4
4373 IPL HAR9 1.035 4.3
77 WAINWRI8 1.033 71.3
5077 WAINWRI9 1.078 27.0
4077 WAINWRI9 1.078 27.0
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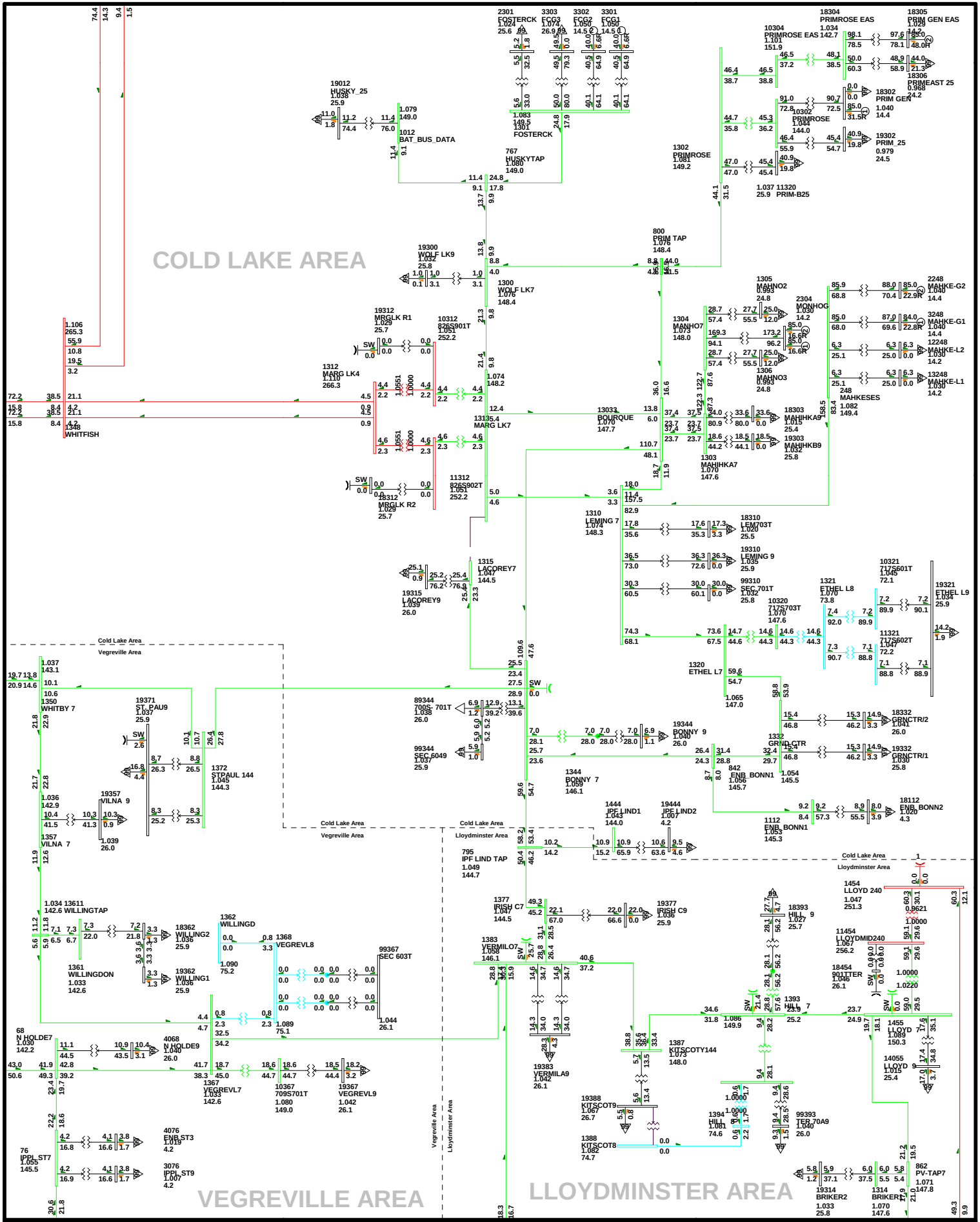
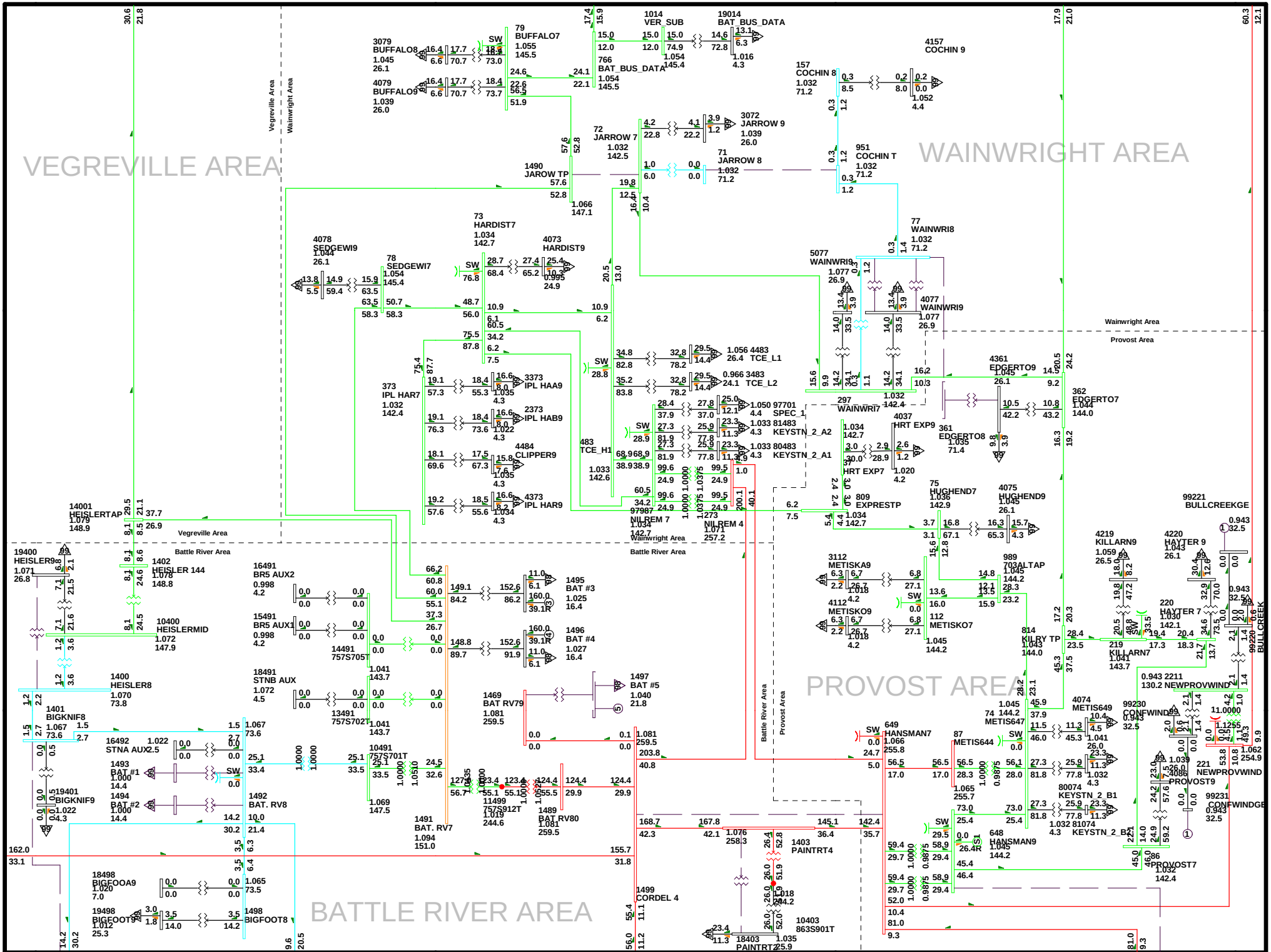
483 TCE_H1 1.034 142.7
297 WAINWRI7 1.033 142.5
4037 HRT EXP9 1.034 142.8
HRT EXP7 1.020 4.2
361 EDGERTO8 1.035 71.4
4361 EDGERTO9 1.046 26.1
362 EDGERTO7 1.045 144.2
1.051 97701 4.4 SPEC_1
1.033 81483 4.3 KEYSTN_2_A2
1.033 80483 4.3 KEYSTN_2_A1
97987 NIL REM 7 1.035 142.8
1273 NIL REM 4 1.072 257.4
809 EXPRESTP 1.035 142.8
75 HUGHEND7 1.036 143.0
4075 HUGHEND9 1.046 26.1
14001 HEISLERTAP 1.078 148.8
19400 HEISLER9 1.071 26.8
1402 HEISLER 144 1.078 148.8
10400 HEISLERMID 1.072 147.9
1400 HEISLER8 1.071 73.9
1401 BIGKNIF8 1.067 73.6
19401 BIGKNIF9 1.022 24.3
16491 BR5 AUX2 0.998 4.2
15491 BR5 AUX1 0.998 4.2
14491 757S705T
18491 STNB AUX 1.072 4.5
13491 757S702T
16492 STNA AUX 1.022 2.5
10491 757S701T
1493 BAT #1 1.000 14.4
1494 BAT #2 1.000 14.4
1492 BAT. RV8 10.6
1491 BAT. RV7 1.094 151.0
1495 BAT #3 1.029 16.5
1496 BAT #4 1.031 16.5
1497 BAT #5 1.040 21.8
1469 BAT RV79 1.082 259.6
11499 757S912T 1.020 244.9
1489 BAT RV80 1.082 259.7
18498 BIGFOOA9 1.021 7.0
19498 BIGFOOT9 1.012 25.3
1498 BIGFOOT8 1.012 14.2
1499 CORDEL 4 1.077 258.6
1403 PAINTRT4
18403 PAINTRT2 1.036 25.9
10403 863S901T
3112 METISKA9 1.019 4.2
4112 METISKO9 1.019 4.2
112 METISKO7 1.045 144.2
989 703ALTAP 1.045 144.2 26.9
814 KILRY TP 1.044 144.0
649 HANSMAN7 1.068 256.3
87 METIS644
74 144.2 METIS647
4074 METIS649 1.041 26.0
80074 81074 KEYSTN_2_B1 1.032 4.3
KEYSTN_2_B2
648 HANSMAN9 1.045 144.2
86 PROVOST7 1.032 142.4
4219 KILLARN9 1.060 26.5
219 KILLARN7 1.042 143.7
4220 HAYTER 9 1.043 26.1
220 HAYTER 7 1.030 142.2
99221 BULLCREEKGE
99229 BULLCREEK
0.952 2211 131.3 NEWPROVWIND
99230 CONFWIND9 0.951 32.8
99231 CONFWINDGE 0.951 32.8
221 NEWPROVWIND 1.039 26.0
4086 PROVOST9
1.125 1.072 257.2
11.0000
CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 9:54
D1-05
2017SP-Alt 3-6.b
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 9:54
D1-06

2017SP-Alt 3-7.a

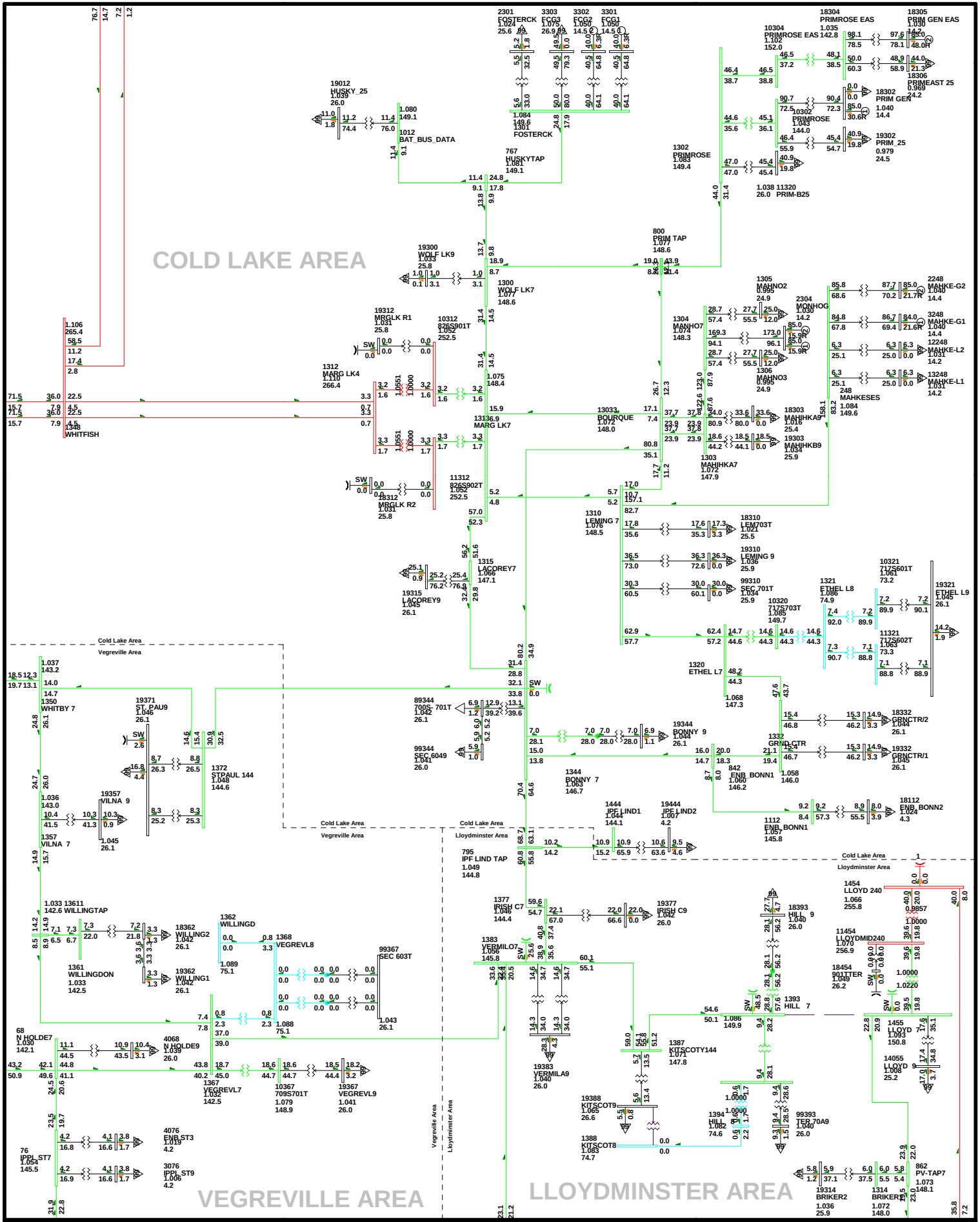
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 9:54
D1-06

2017SP-Alt 3-7.b

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 9:54
D1-07

2017SP-Alt 3-8.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
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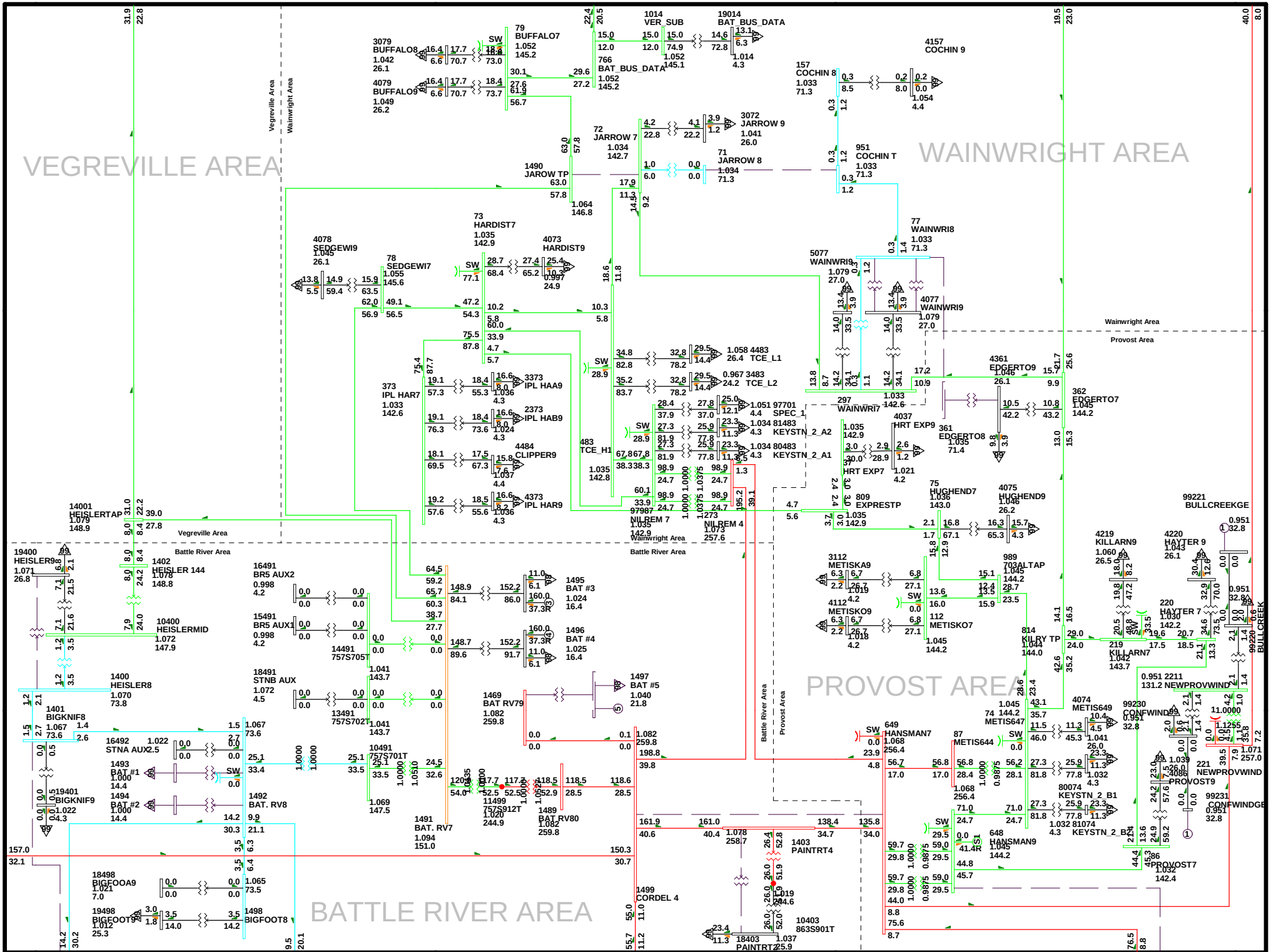
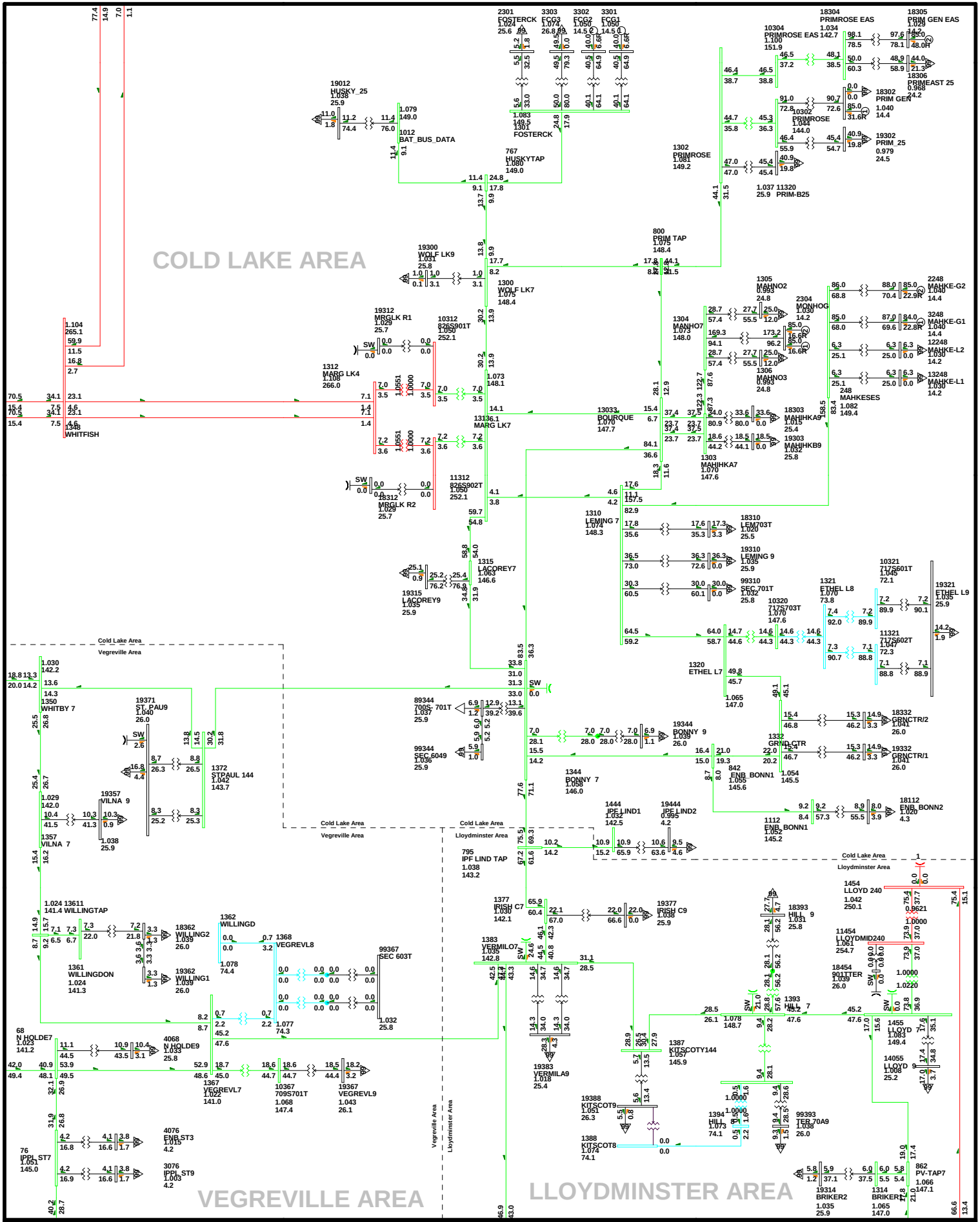
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

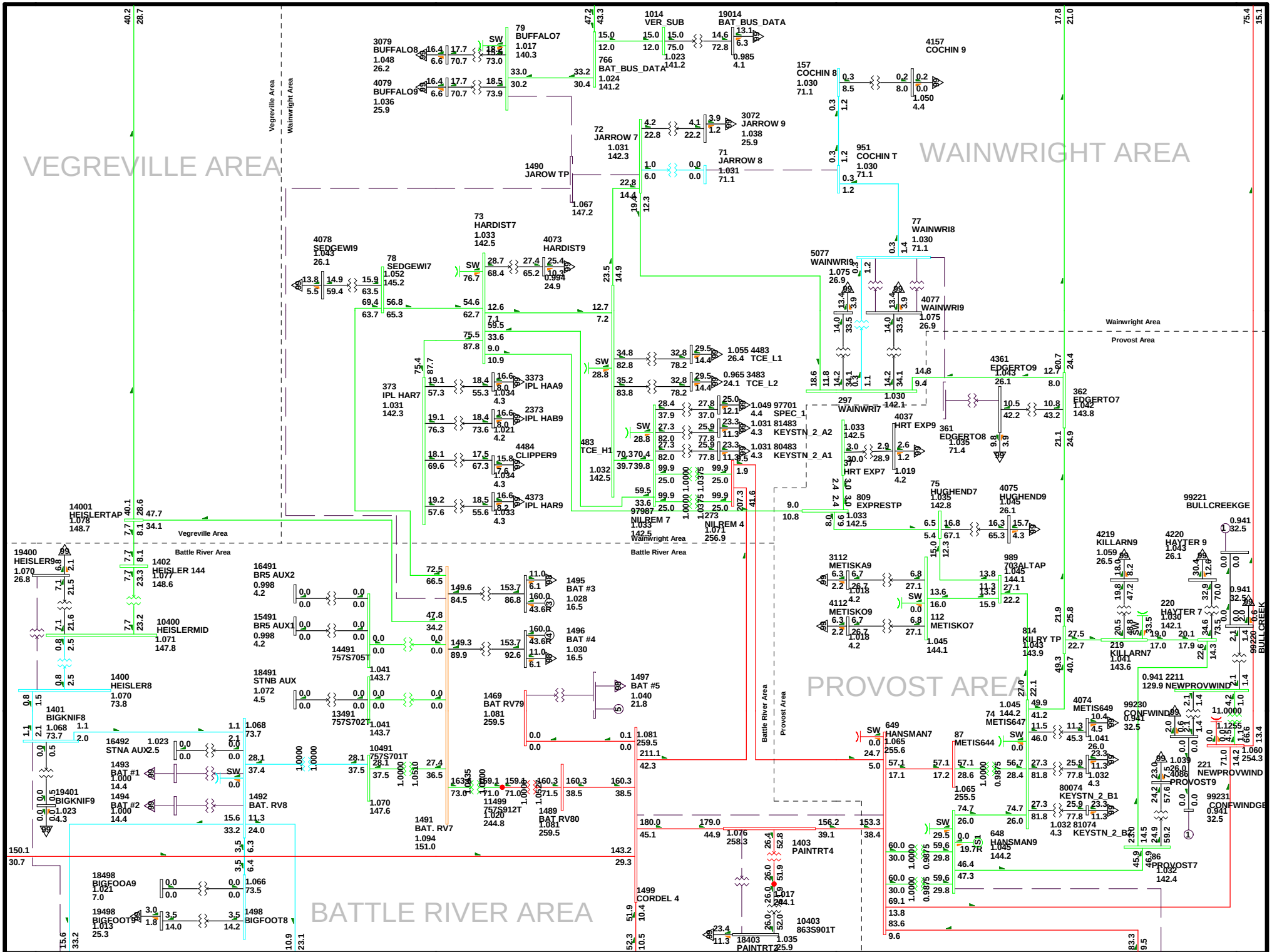

VEGREVILLE AREA
WAINWRIGHT AREA
PROVOST AREA
BATTLE RIVER AREA
Vegreville Area
Wainwright Area
Provost Area
Battle River Area
3079 BUFFALO8 1.042 26.1
4079 BUFFALO9 1.049 26.2
79 BUFFALO7 1.052 145.2
1014 VER_SUB
19014 BAT_BUS_DATA
766 BAT_BUS_DATA 1.052 145.2
4157 COCHIN 9
157 COCHIN 8 1.033 71.3
1.054 4.4
72 JARROW 7 1.034 142.7
3072 JAROW 9 1.041 26.0
71 JARROW 8 1.034 71.3
951 COCHIN T 1.033 71.3
1490 JAROW TP 63.0 57.8 1.064 146.8
73 HARDIST7 1.035 142.9
4078 SEDGEWI9 1.045 26.1
78 SEDGEWI7 1.055 145.6
4073 HARDIST9 1.037 24.9
77 WAINWRI8 1.033 71.3
5077 WAINWRI9 1.079 27.0
4077 WAINWRI9 1.079 27.0
373 IPL HAR7 1.033 142.6
3373 IPL HAA9 1.036 4.3
2373 IPL HAB9 1.024 4.3
4484 CLIPPER9 1.037 4.4
4373 IPL HAR9 1.036 4.3
483 TCE_H1 1.035 142.8
1.058 4483 26.4 TCE_L1
0.967 3483 24.2 TCE_L2
1.051 97701 4.4 SPEC_1
1.034 81483 4.3 KEYSTN_2_A2
1.034 80483 4.3 KEYSTN_2_A1
97987 NIL REM 7 1.035 142.9
1273 NIL REM 4 1.073 257.6
297 WAINWRI7 1.035 142.9
4037 HRT EXP9
HRT EXP7 1.021 4.2
361 EDGERTO8 1.035 71.4
4361 EDGERTO9 1.046 26.1
362 EDGERTO7 1.045 144.2
809 EXPRESTP
75 HUGHEND7 1.036 143.0
4075 HUGHEND9 1.046 26.2
14001 HEISLERTAP 1.079 148.9
19400 HEISLER9 1.071 26.8
1402 HEISLER 144 1.078 148.8
10400 HEISLERMID 1.072 147.9
1400 HEISLER8 1.070 73.8
1401 BIGKNIF8 1.067 73.6
19401 BIGKNIF9 1.022 24.3
16491 BR5 AUX2 0.998 4.2
15491 BR5 AUX1 0.998 4.2
14491 757S705T
18491 STNB AUX 1.072 4.5
13491 757S702T
16492 STNA AUX 1.022 2.5
10491 757S701T
1493 BAT #1 1.000 14.4
1494 BAT #2 1.000 14.4
1492 BAT. RV8
1491 BAT. RV7 1.094 151.0
1495 BAT #3 1.024 16.4
1496 BAT #4 1.025 16.4
1497 BAT #5 1.040 21.8
1469 BAT RV79 1.082 259.8
11499 757S912T 1.020 244.9
1489 BAT RV80 1.082 259.8
1499 CORDEL 4 1.019 284.6
1403 PAINTRT4
10403 863S901T
18403 PAINTRT3 1.037 25.9
18498 BIGFOOA9 1.021 7.0
19498 BIGFOOT9 1.012 25.3
1498 BIGFOOT8
3112 METISKA9 1.019 4.2
4112 METISKO9 1.019 4.2
112 METISKO7 1.045 144.2
814 KILRY TP 1.044 144.0
4219 KILLARN9 1.060 26.5
219 KILLARN7 1.042 143.7
4220 HAYTER 9 1.043 26.1
220 HAYTER 7 1.030 142.2
99221 BULLCREEKGE
99229 BULLCREEK
0.951 2211 131.2 NEWPROVWIND
989 703ALTAP 1.045 144.2
74 144.2 METIS647
4074 METIS649
99230 CONFWIND9 0.951 32.8
87 METIS644
649 HANSMAN7 1.068 256.4
648 HANSMAN9 1.045 144.2
80074 KEYSTN_2_B1
81074 KEYSTN_2_B2
221 NEWPROVWIND
99231 CONFWINDGE 0.951 32.8
PROVOST9 1.039 257.0
PROVOST7 1.032 142.4
CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 9:54
D1-07
2017SP-Alt 3-8.b
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 9:54
D1-09

2017SP-Alt 3-9.a

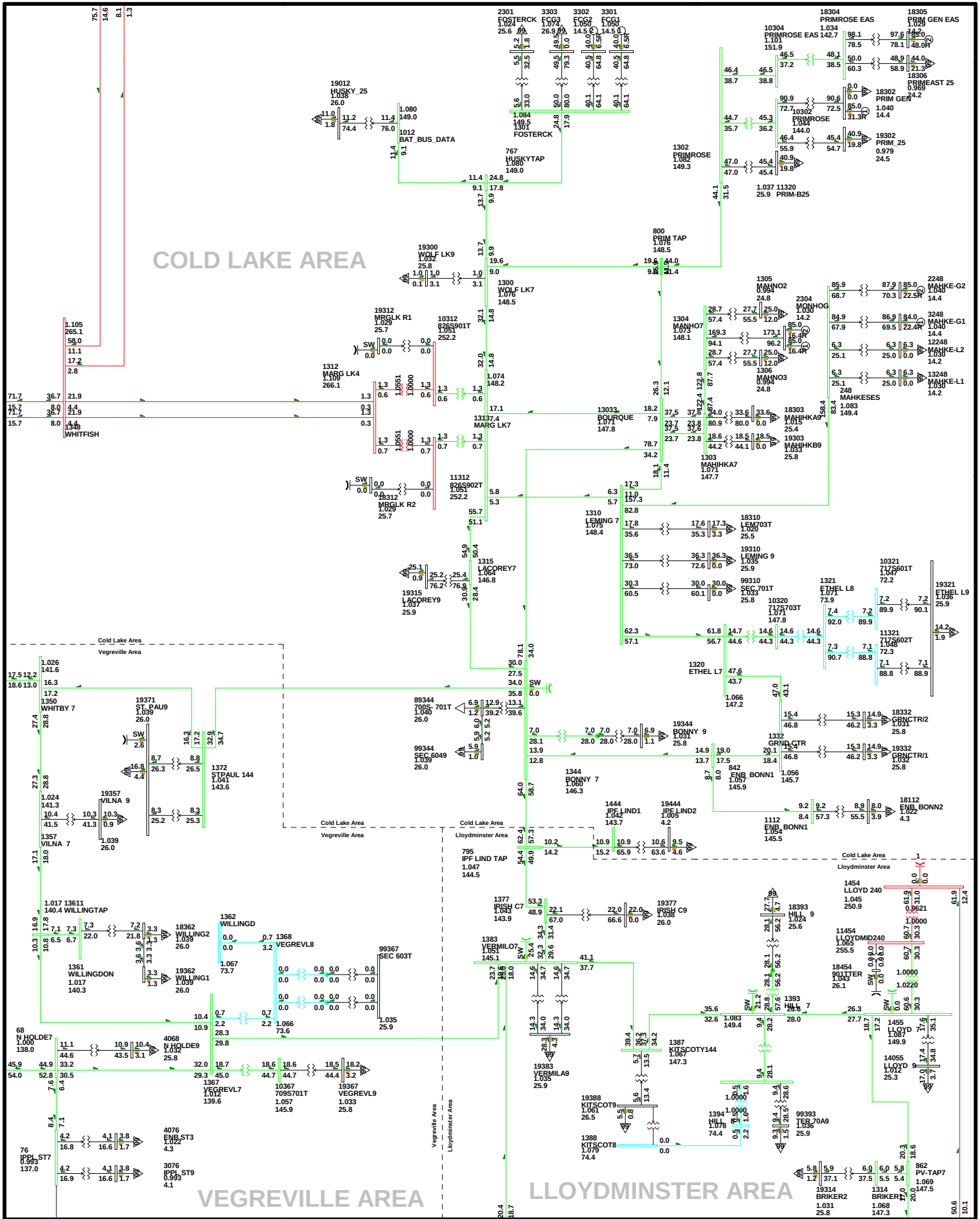
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 9:55
D1-09

2017SP-Alt 3-9.b

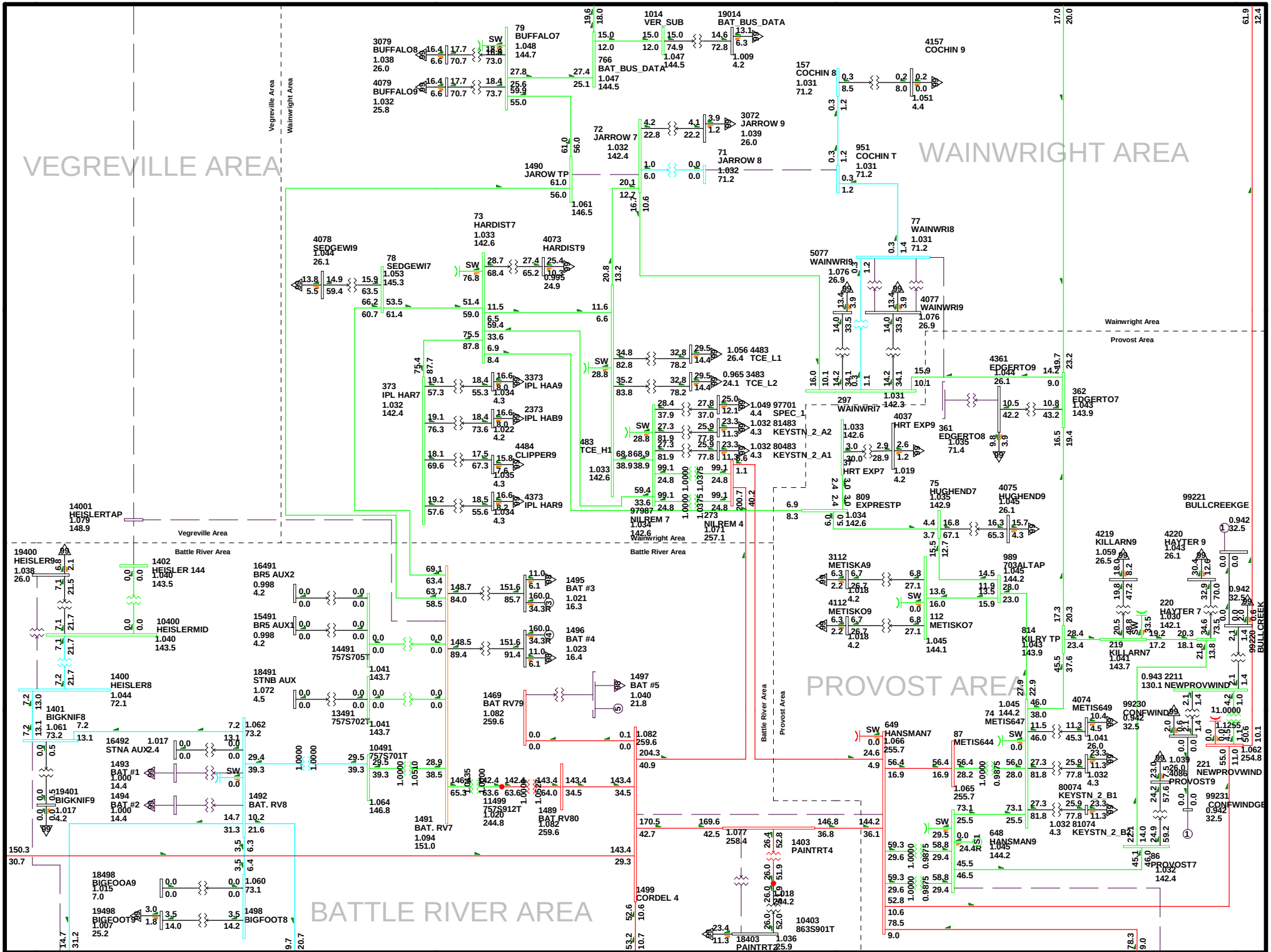
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 9:55
D1-10

2017SP-Alt 3-10.a

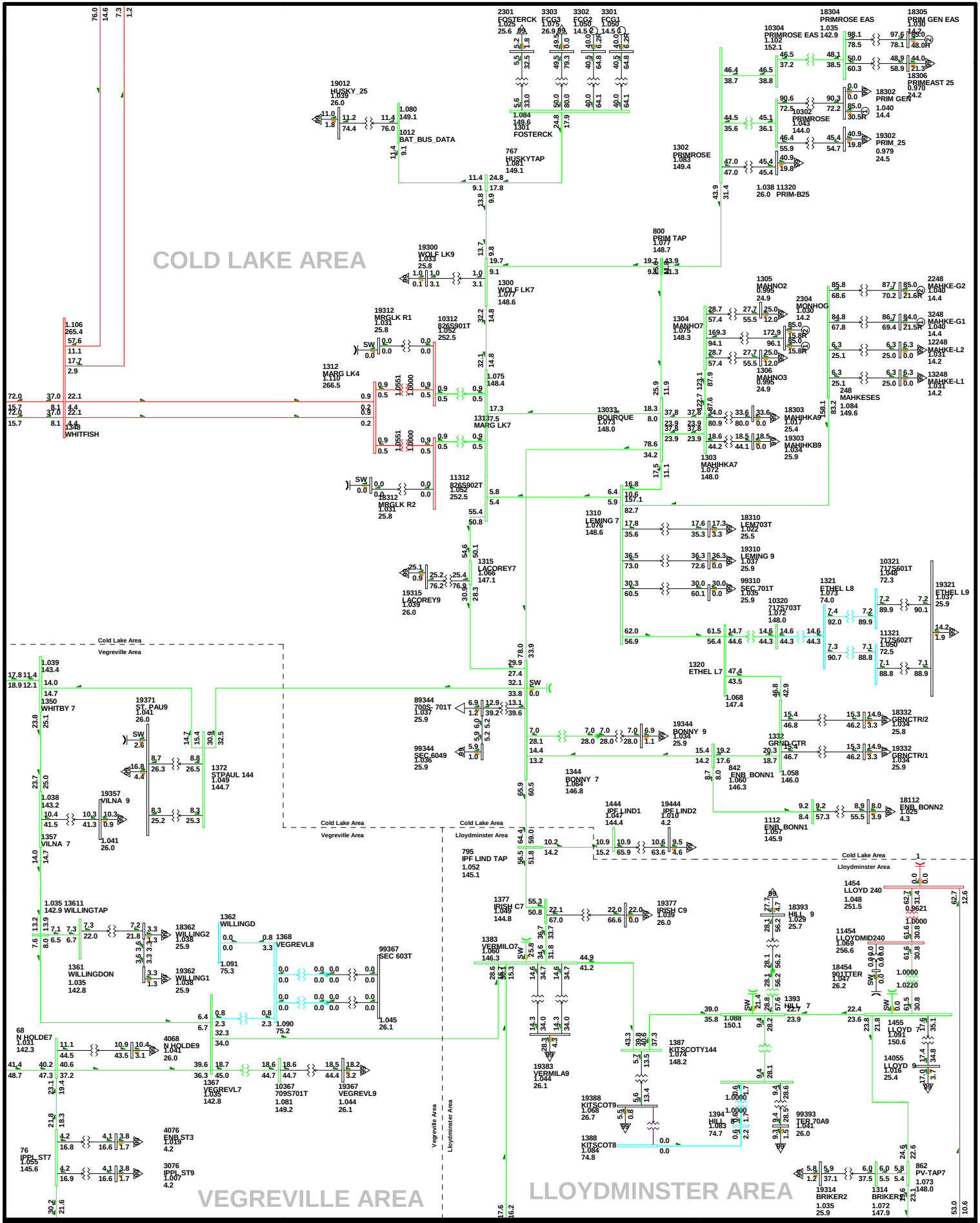
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 9:55
D1-10

2017SP-Alt 3-10.b

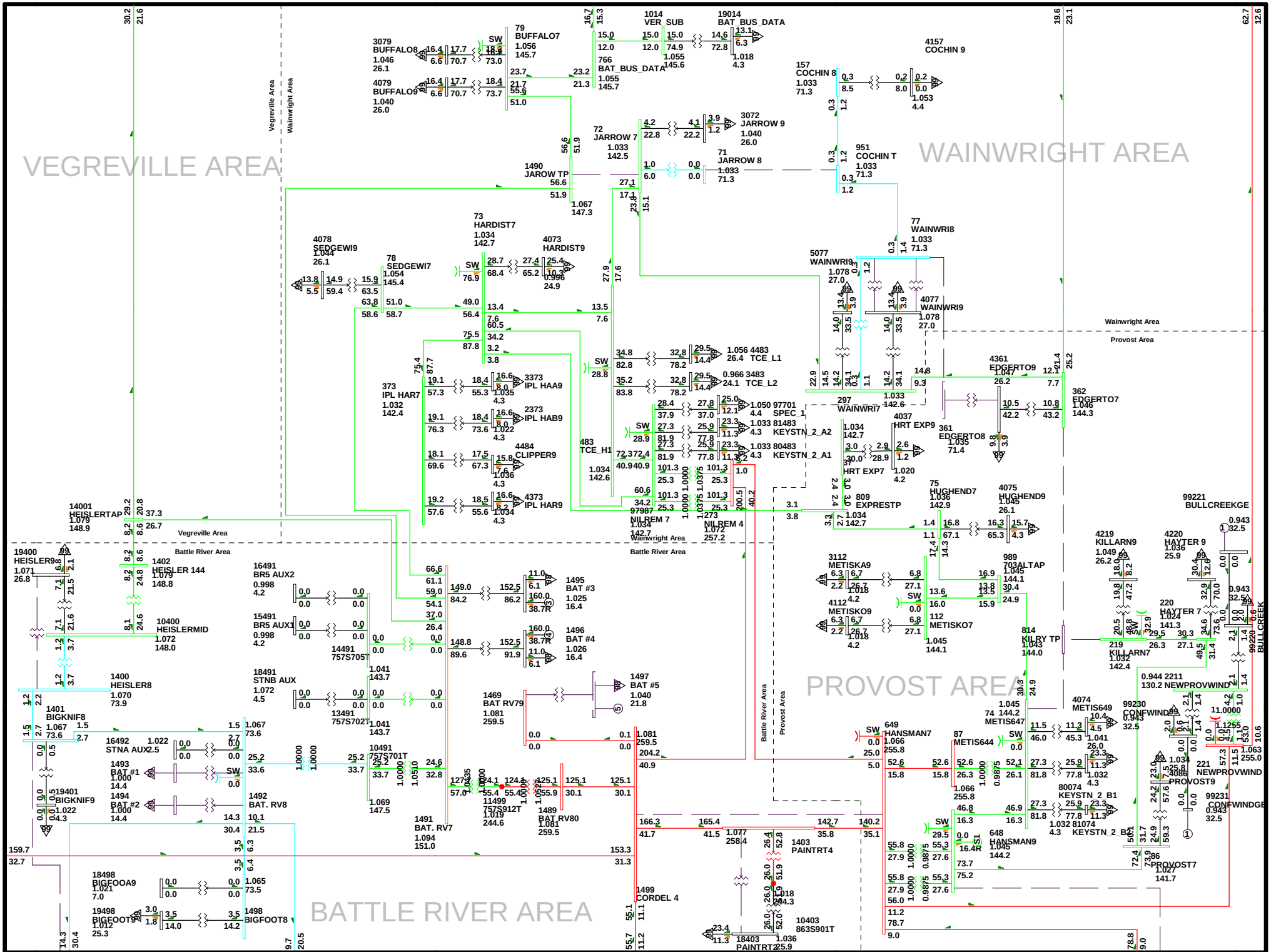
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

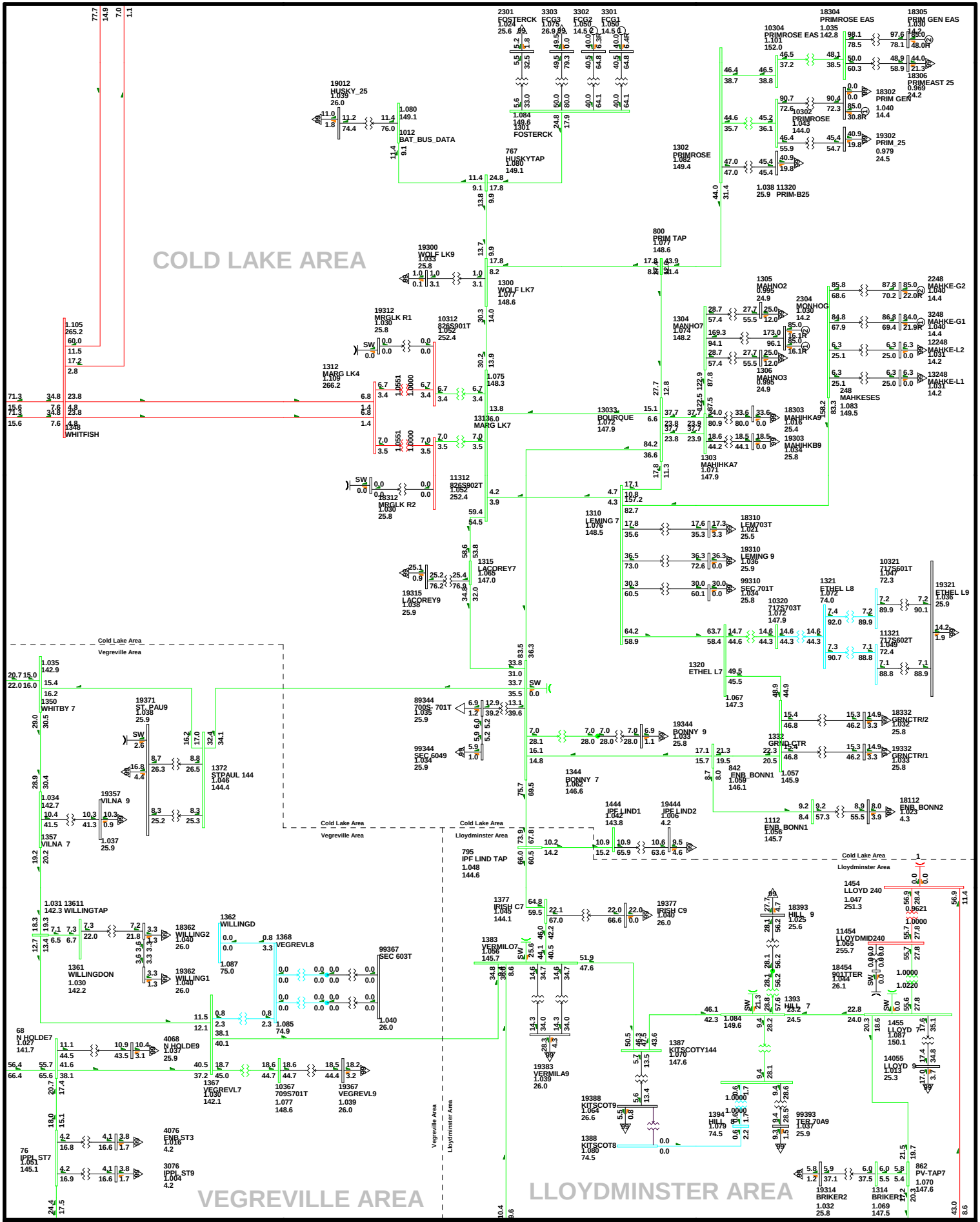


CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 9:55
D1-11b

2017SP-Alt 3-11.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

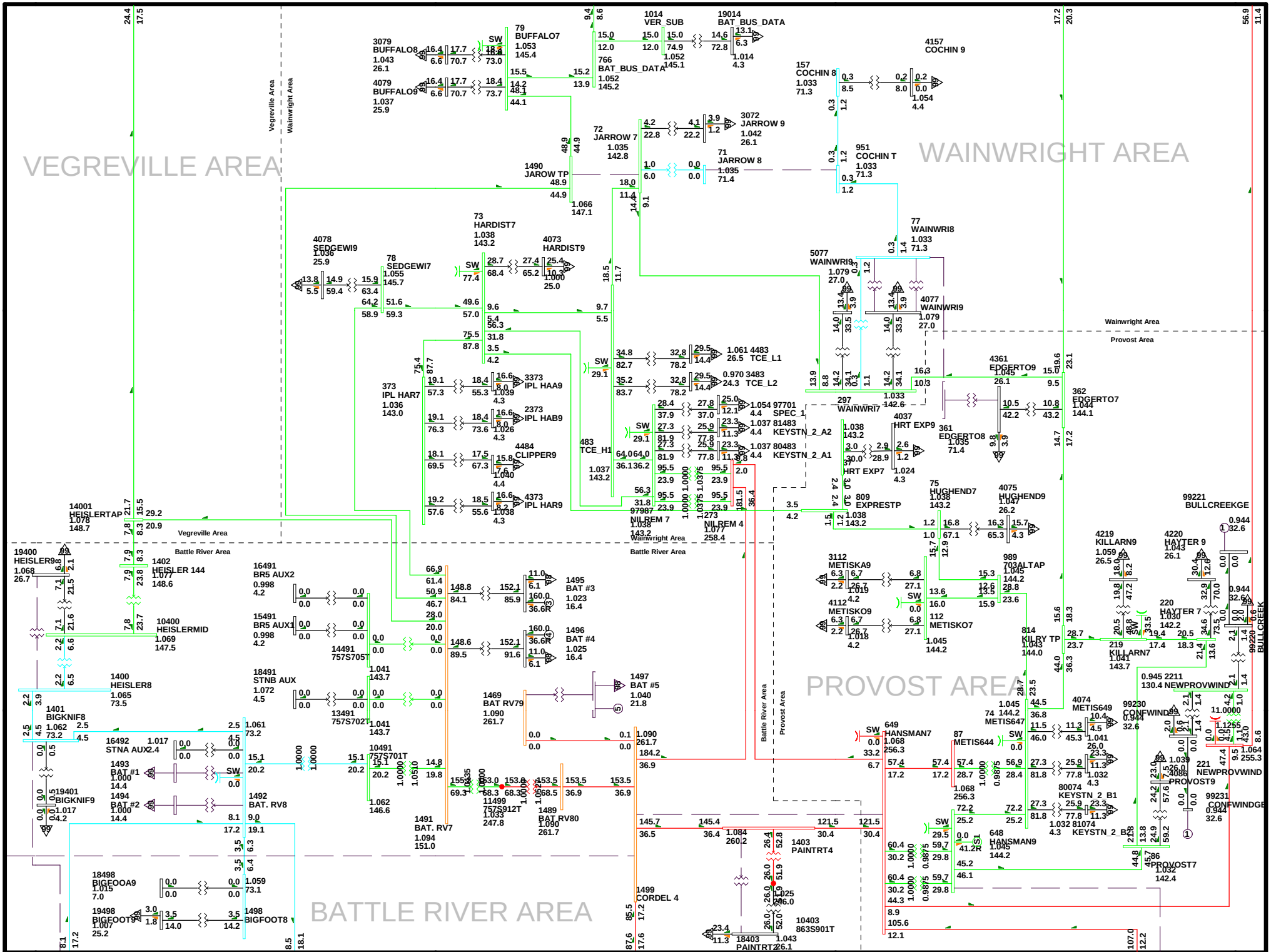

VEGREVILLE AREA
WAINWRIGHT AREA
PROVOST AREA
BATTLE RIVER AREA
Vegreville Area
Wainwright Area
Provost Area
Battle River Area
3079 BUFFALO8 1.046 26.1
4079 BUFFALO9 1.040 26.0
79 BUFFALO7 1.056 145.7
766 BAT_BUS_DATA 1.055 145.7
1014 VER_SUB 1.055 145.6
19014 BAT_BUS_DATA 1.018 4.3
4157 COCHIN 9
157 COCHIN 8 1.033 71.3
1.053 4.4
72 JAROW 7 1.033 142.5
3072 JARROW 9 1.040 26.0
71 JARROW 8 1.033 71.3
951 COCHIN T 1.033 71.3
1490 JAROW TP 56.6 51.9 1.067 147.3
4078 SEDGEWI9 1.044 26.1
78 SEDGEWI7 1.054 145.4
73 HARDIST7 1.034 142.7
4073 HARDIST9
77 WAINWRI8 1.033 71.3
5077 WAINWRI9 1.078 27.0
4077 WAINWRI9 1.078 27.0
373 IPL HAR7 1.032 142.4
3373 IPL HAA9 1.035 4.3
2373 IPL HAB9 1.022 4.3
4484 CLIPPER9 1.036 4.3
4373 IPL HAR9 1.034 4.3
483 TCE_H1 1.034 142.6
1.056 4483 26.4 TCE_L1
0.966 3483 24.1 TCE_L2
1.050 97701 4.4 SPEC_1
1.033 81483 4.3 KEYSTN_2_A2
1.033 80483 4.3 KEYSTN_2_A1
97987 NIL REM 7 1.034 142.7
1273 NIL REM 4 1.072 257.2
297 WAINWRI7 1.033 142.6
4037 HRT EXP9 1.034 142.7
HRT EXP7 1.020 4.2
361 EDGERTO8 1.035 71.4
4361 EDGERTO9 1.047 26.2
362 EDGERTO7 1.046 144.3
809 EXPRESTP 1.034 142.7
75 HUGHEND7 1.036 142.9
4075 HUGHEND9 1.045 26.1
14001 HEISLERTAP 1.079 148.9
19400 HEISLER9 1.071 26.8
1402 HEISLER 144 1.073 148.8
10400 HEISLERMID 1.072 148.0
1400 HEISLER8 1.070 73.9
1401 BIGKNIF8 1.067 73.6
19401 BIGKNIF9 1.022 24.3
16491 BR5 AUX2 0.998 4.2
15491 BR5 AUX1 0.998 4.2
14491 757S705T
18491 STNB AUX 1.072 4.5
13491 757S702T
16492 STNA AUX 1.022 2.5
1493 BAT #1 1.000 14.4
1494 BAT #2 1.000 14.4
1492 BAT. RV8 10.1
10491 757S701T
1495 BAT #3 1.025 16.4
1496 BAT #4 1.026 16.4
1497 BAT #5 1.040 21.8
1469 BAT RV79 1.081 259.5
1491 BAT. RV7 1.094 151.0
11499 757S912T 1.019 244.6
1489 BAT RV80 1.081 259.5
1499 CORDEL 4
1403 PAINTRT4
18403 PAINTRT2 1.036 25.9
10403 863S901T
18498 BIGFOOA9 1.021 7.0
19498 BIGFOOT9 1.012 25.3
1498 BIGFOOT8
649 HANSMAN7 1.066 255.8
87 METIS644
74 METIS647 1.045 144.2
4074 METIS649
648 HANSMAN9 1.045 144.2
80074 KEYSTN_2_B1 1.032 4.3
81074 KEYSTN_2_B2
3112 METISKA9 1.018 4.2
4112 METISKO9 1.018 4.2
112 METISKO7 1.045 144.1
989 703ALTAP 1.045 144.1 30.4
814 KILRY TP 1.043 144.0
4219 KILLARN9 1.049 26.2
219 KILLARN7 1.032 142.4
4220 HAYTER 9 1.036 25.9
220 HAYTER 7 1.024 141.3
99221 BULLCREEKGE 0.943 32.5
99229 BULLCREEK
0.944 2211 130.2 NEWPROVWIND
99230 CONFWIND9 0.943 32.5
99231 CONFWINDG 0.943 32.5
221 NEWPROVWIND 1.034 25.8
4086 PROVOST9
386 PROVOST7 1.027 141.7
CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 9:55
D1-11b
2017SP-Alt 3-11.b
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 9:55
D1-14

2017SP-Alt 3-12.a

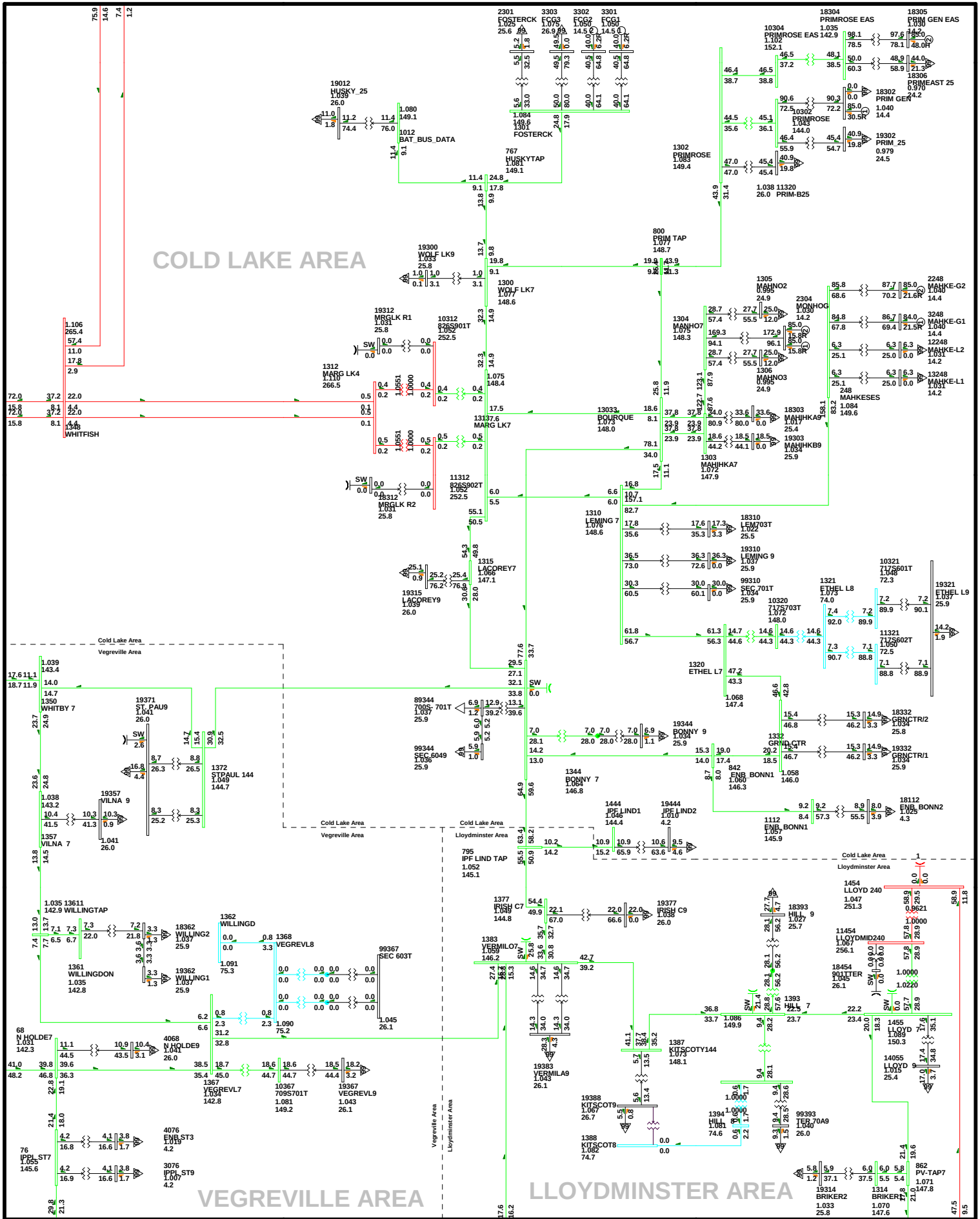
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 9:55
D1-14

2017SP-Alt 3-12.b

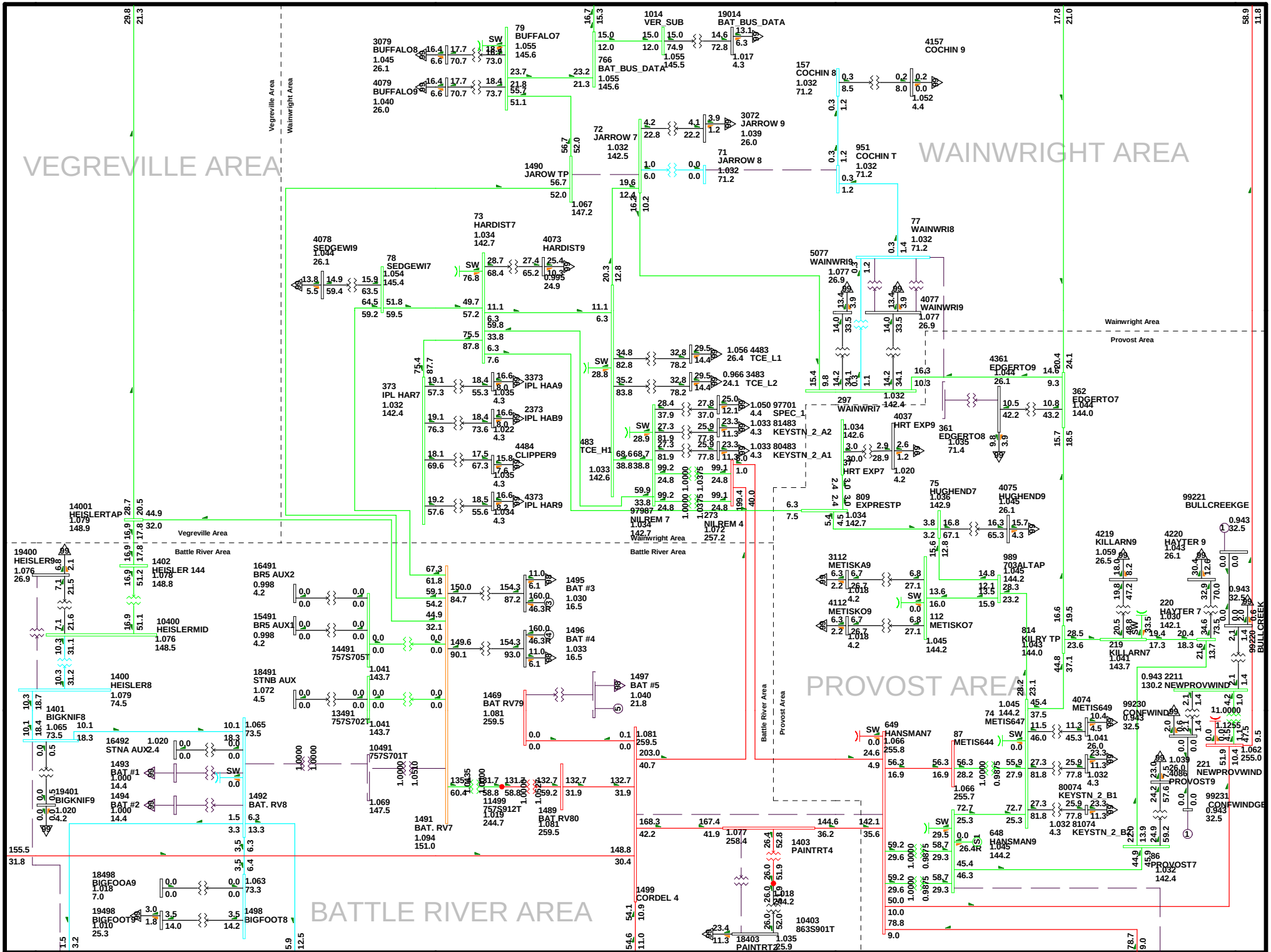
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 9:55
D1-15

2017SP-Alt 3-13.a

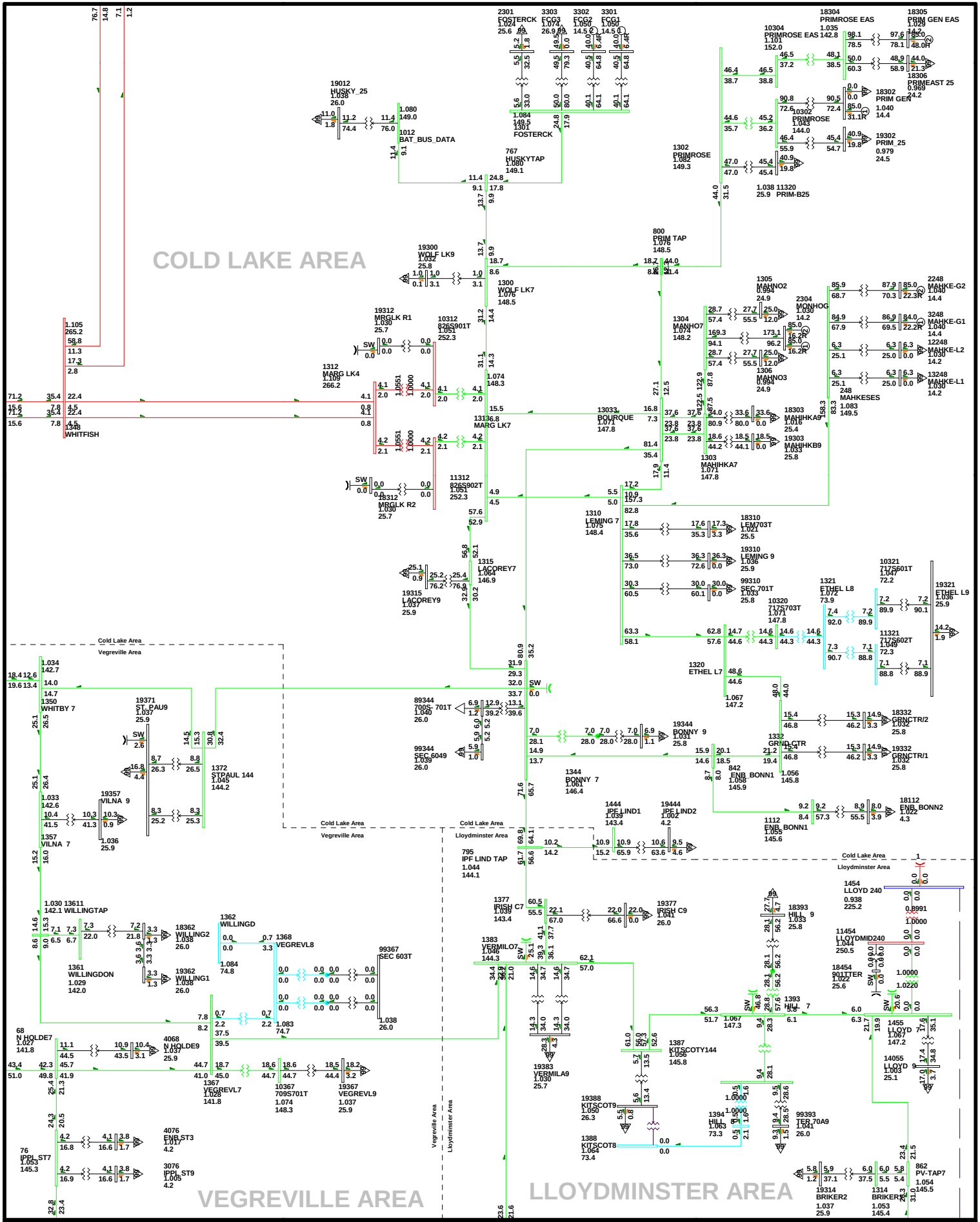
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 9:55
D1-15

2017SP-Alt 3-13.b

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 9:55
D1-18

2017SP-Alt 3-14.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
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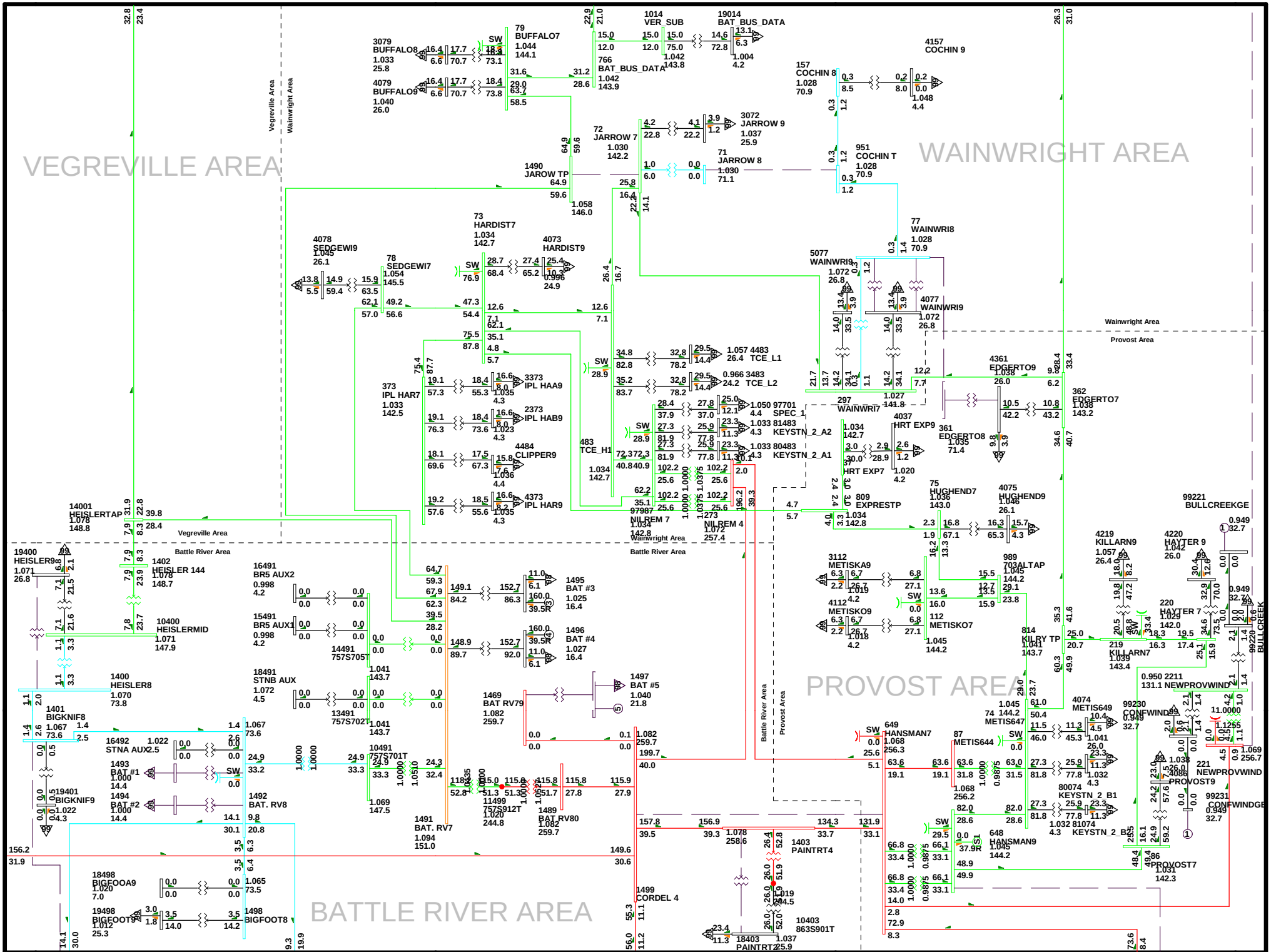
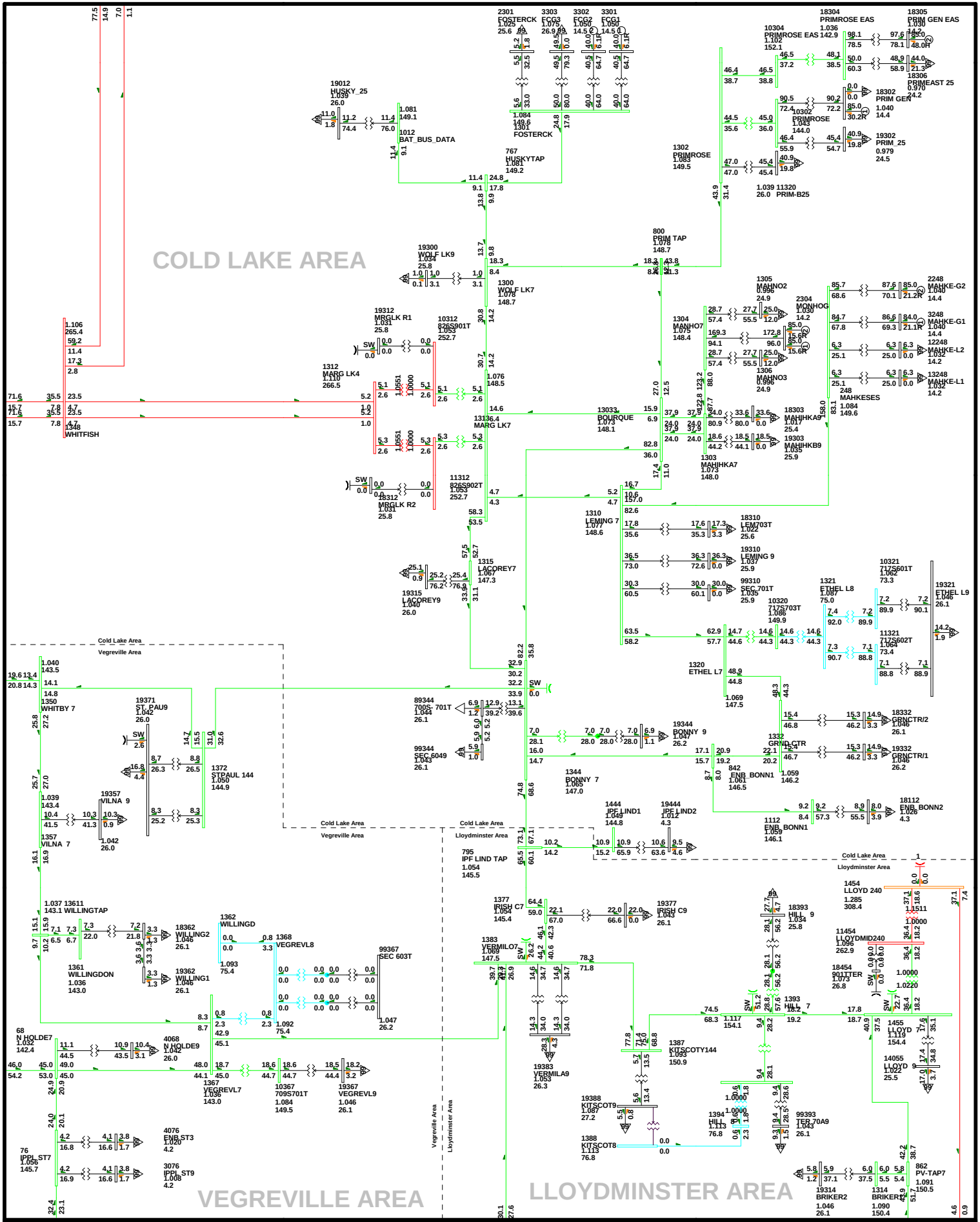
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 9:55
D1-18

2017SP-Alt 3-14.b

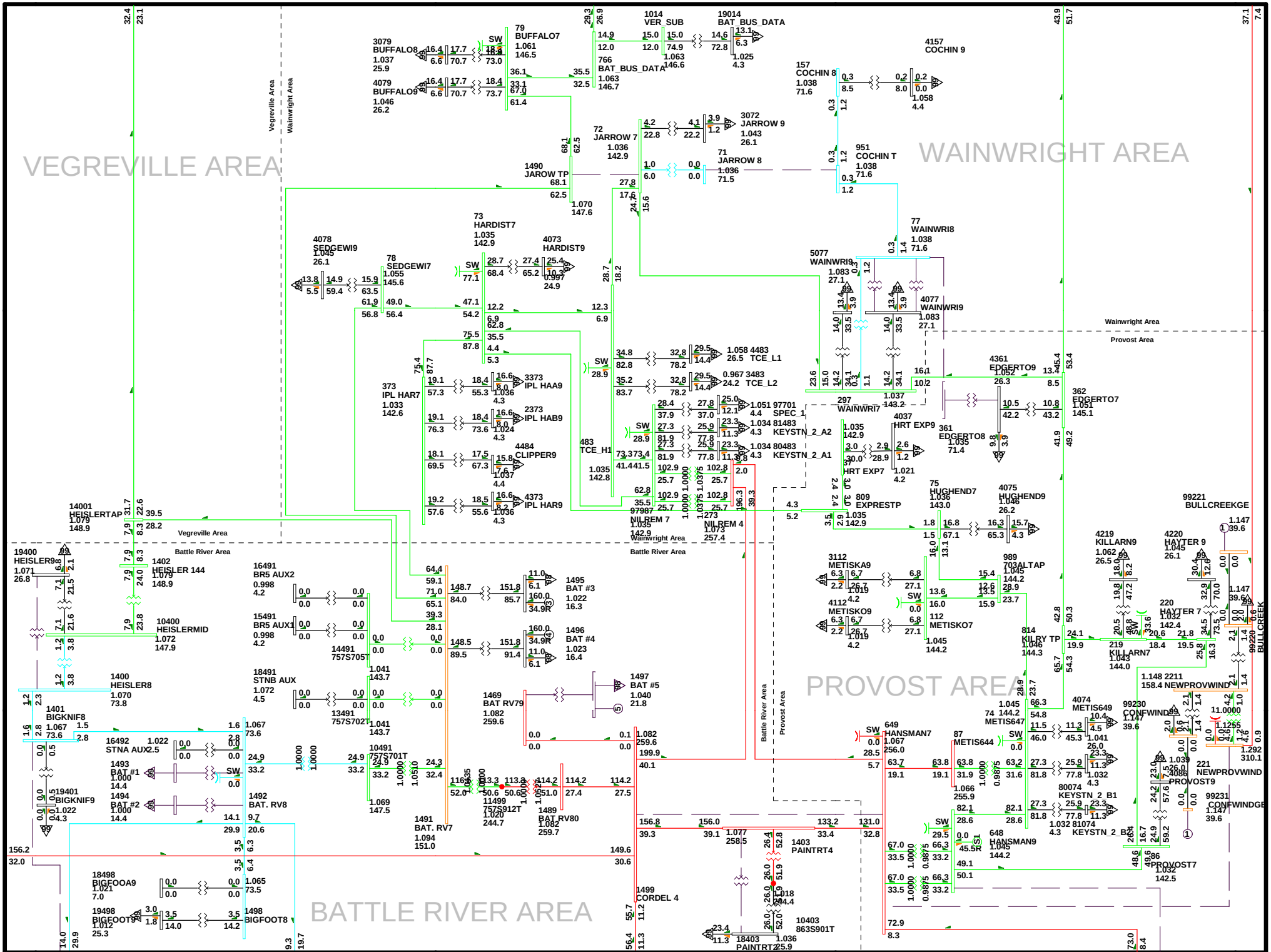
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 9:55
D1-19

2017SP-Alt 3-15.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 9:55
D1-19

2017SP-Alt 3-15.b

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
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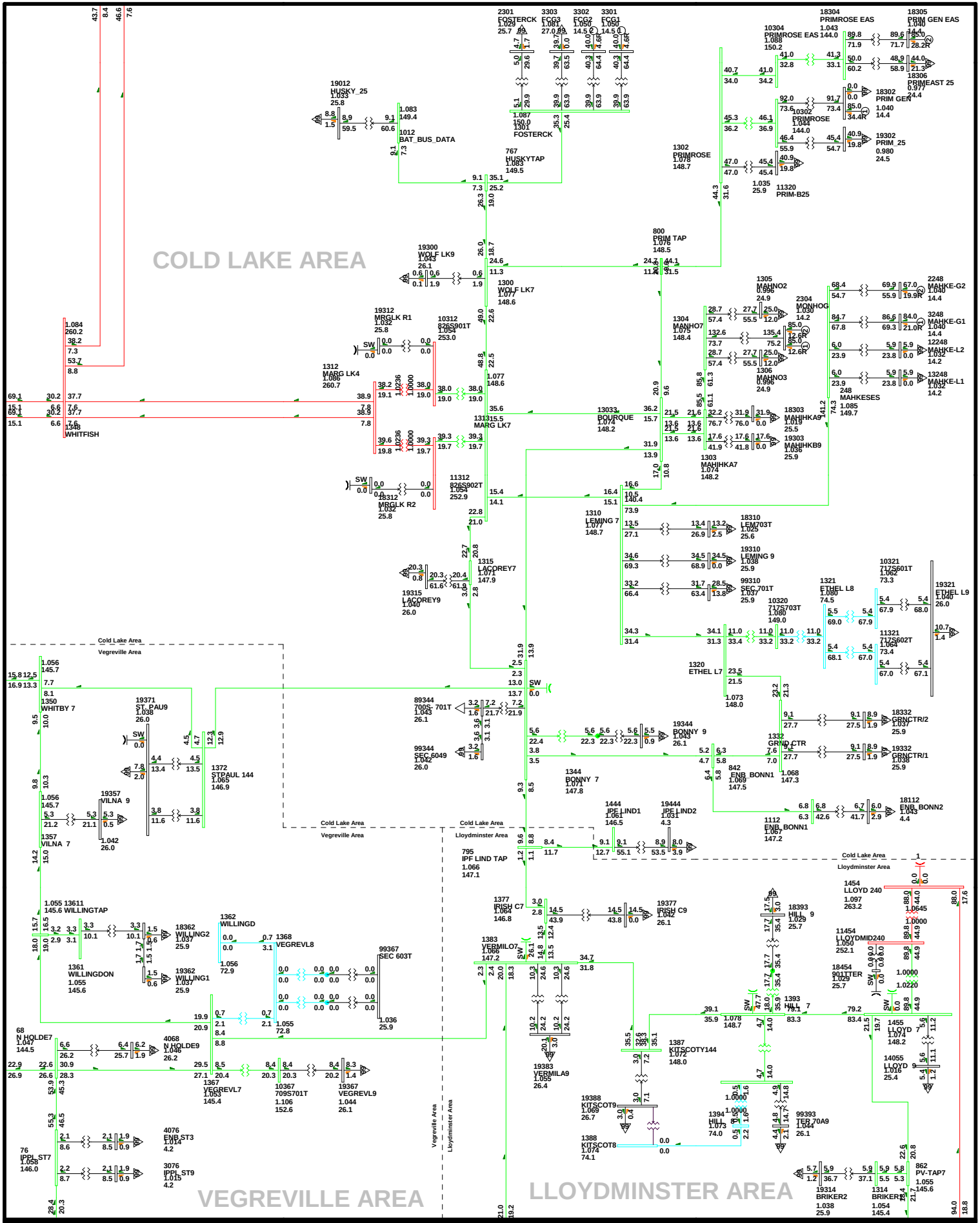
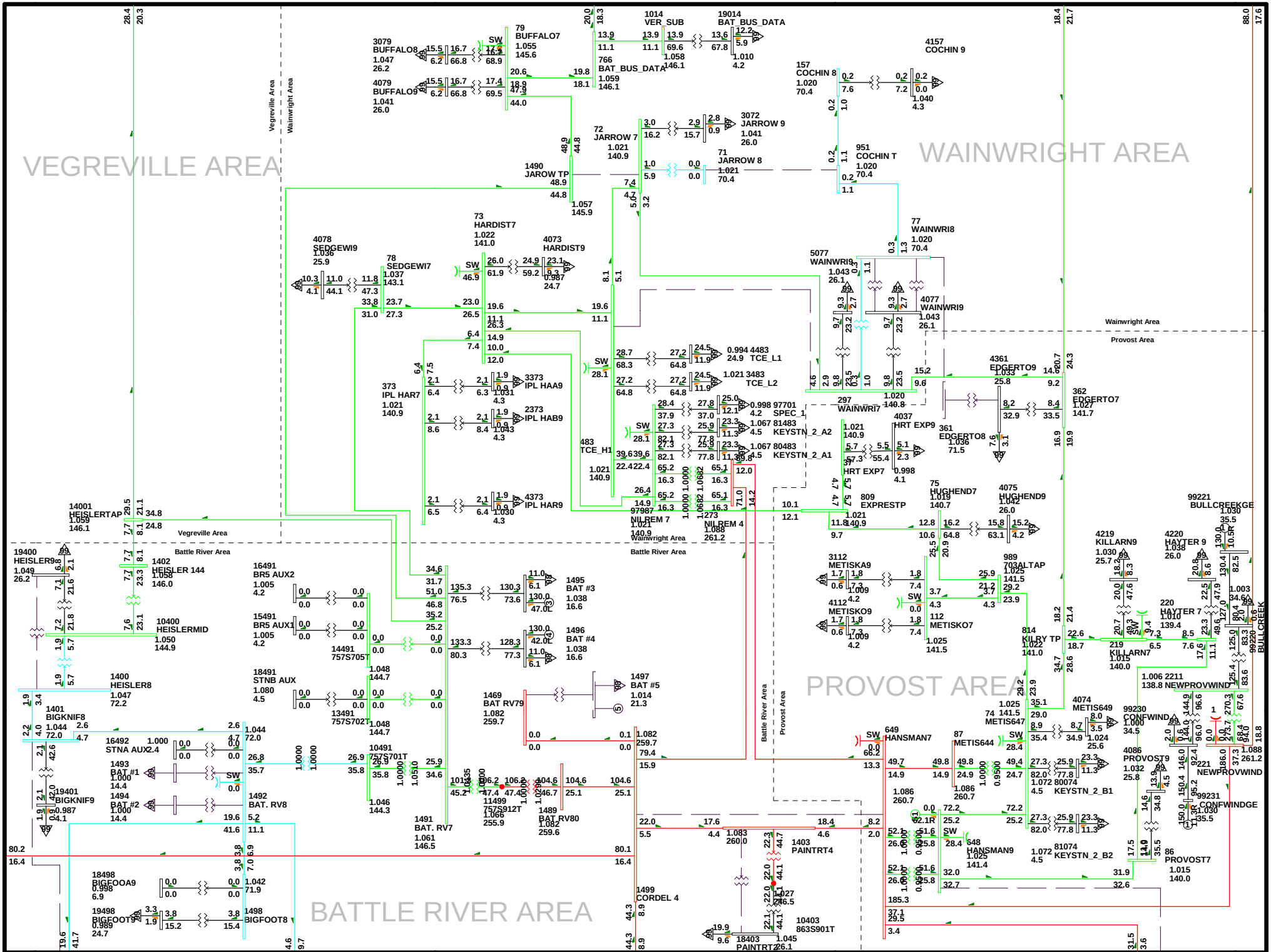
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER LIGHT BASE CASE REVISION 7.2
FRI, APR 09 2010 10:00
D1-00

2017SL-Alt 3-1.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER LIGHT BASE CASE REVISION 7.2
FRI, APR 09 2010 10:01
D1-00

2017SL-Alt 3-1.b

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
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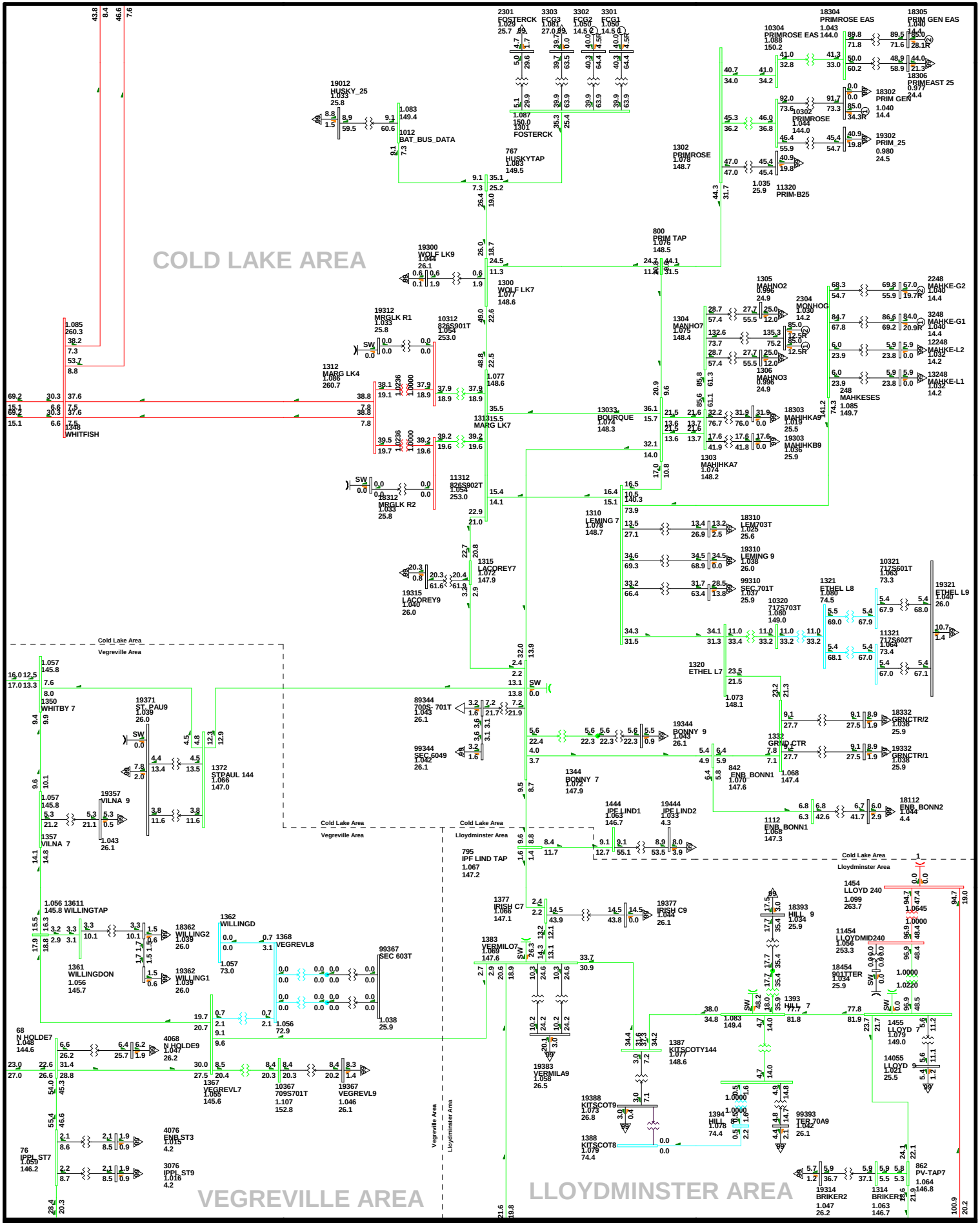
1.090OV0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER LIGHT BASE CASE REVISION 7.2
FRI, APR 09 2010 10:01
D1-11b

2017SL-Alt 3-2.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
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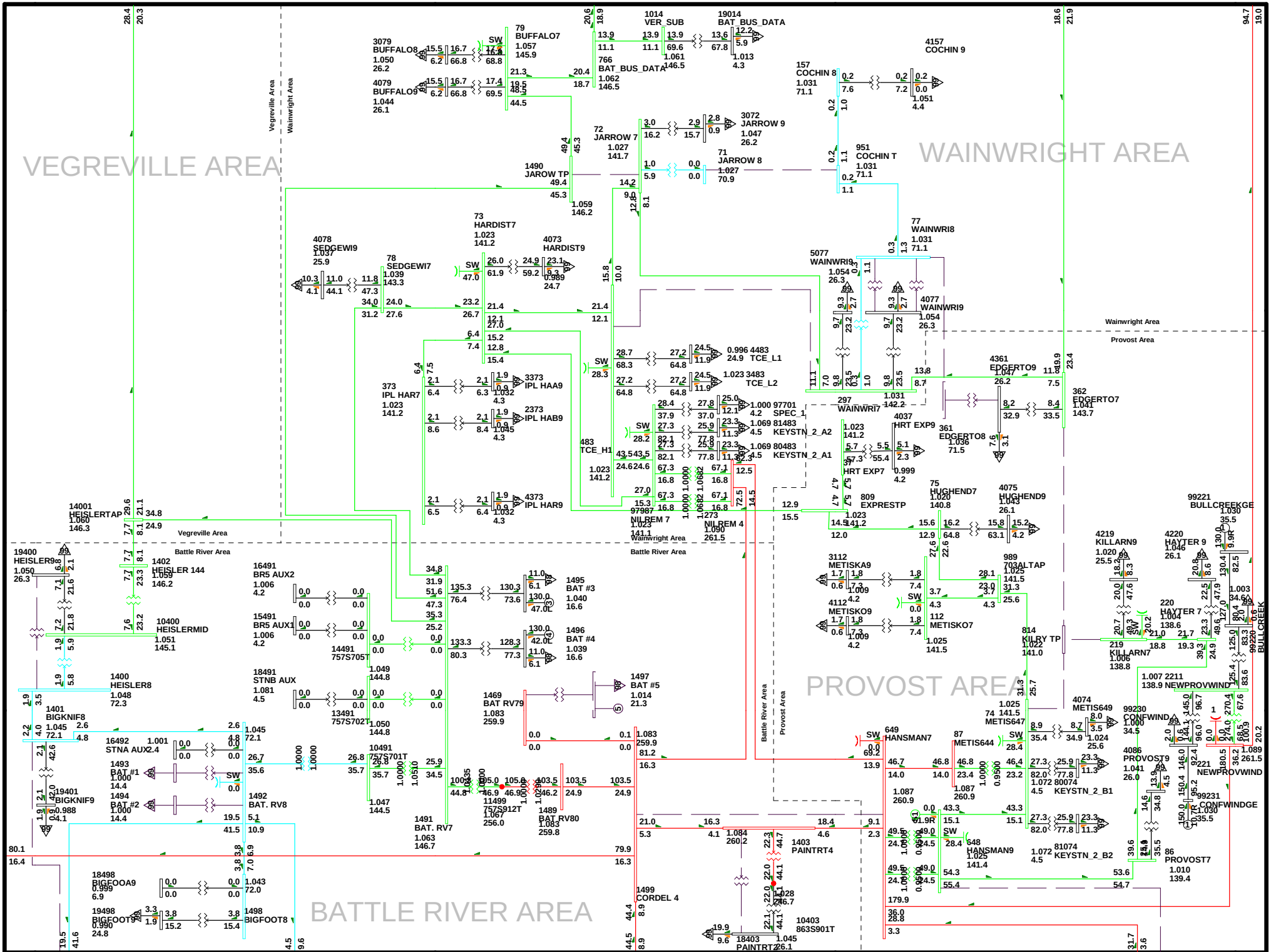
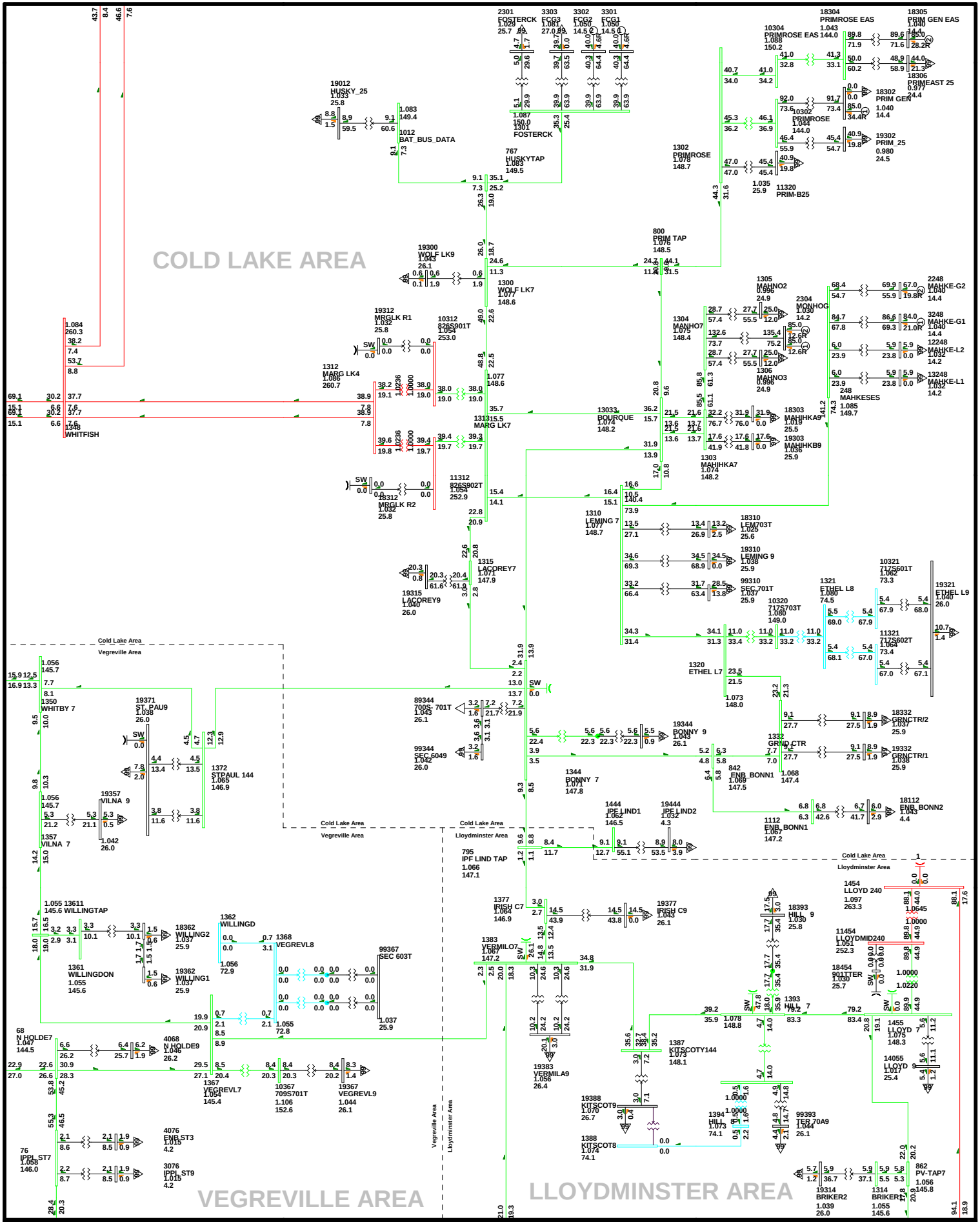
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

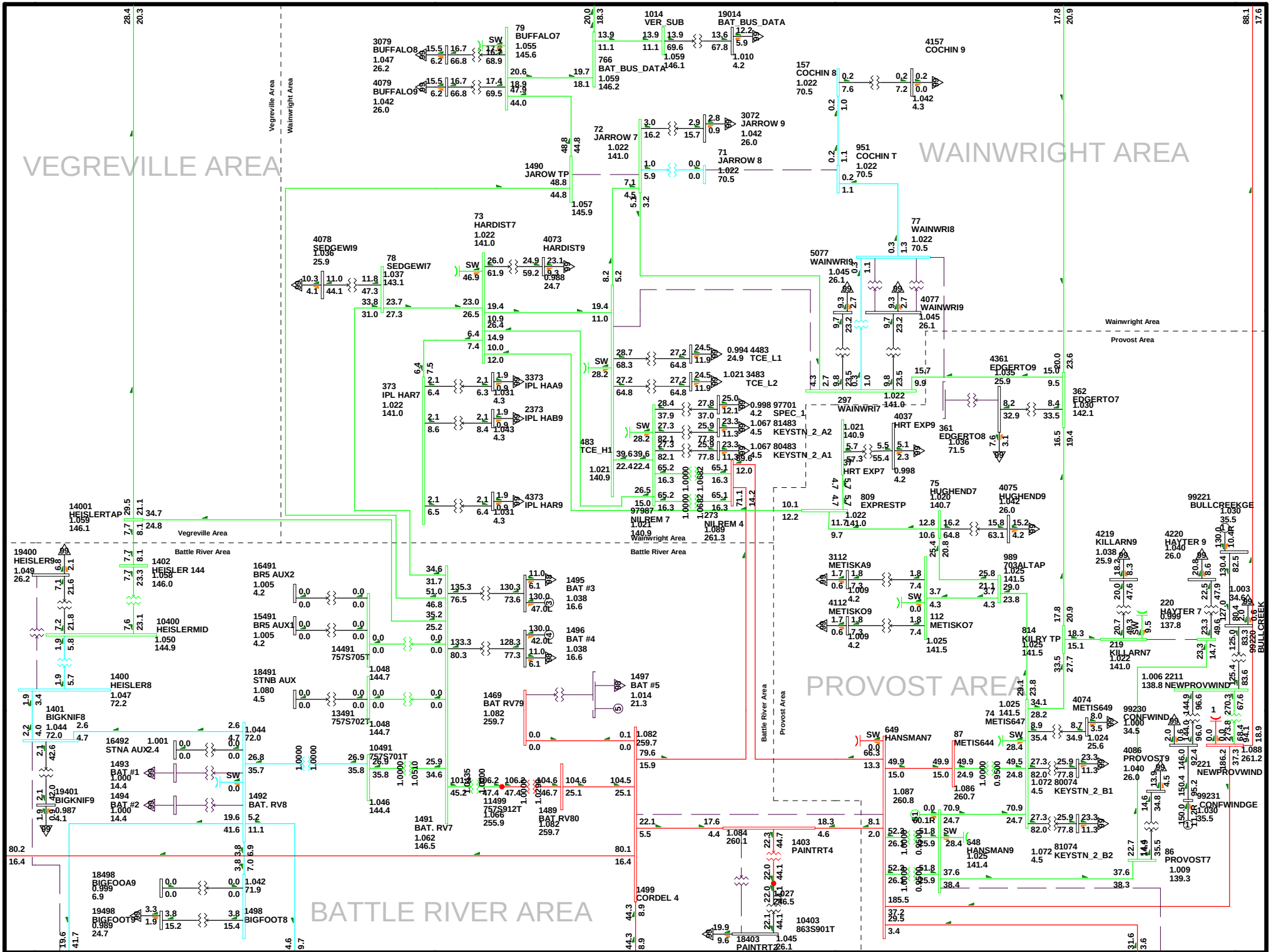

VEGREVILLE AREA
WAINWRIGHT AREA
PROVOST AREA
BATTLE RIVER AREA
Vegreville Area
Wainwright Area
Battle River Area
Provost Area
3079 BUFFALO8 1.050 26.2
4079 BUFFALO9 1.044 26.1
79 BUFFALO7 1.057 145.9
1014 VER_SUB
19014 BAT_BUS_DATA
766 BAT_BUS_DATA 1.062 146.5
1.061 146.5
1.013 4.3
4157 COCHIN 9
157 COCHIN 8 1.031 71.1
1.051 4.4
72 JARROW 7 1.027 141.7
3072 JARROW 9 1.047 26.2
71 JARROW 8 1.027 70.9
951 COCHIN T 1.031 71.1
1490 JAROW TP 49.4 45.3 1.059 146.2
73 HARDIST7 1.023 141.2
4073 HARDIST9 0.989 24.7
4078 SEDGEWI9 1.037 25.9
78 SEDGEWI7 1.039 143.3
77 WAINWRI8 1.031 71.1
5077 WAINWRI9 1.054 26.3
4077 WAINWRI9 1.054 26.3
4361 EDGERTO9 1.047 26.2
362 EDGERTO7 1.041 143.7
373 IPL HAR7 1.023 141.2
3373 IPL HAA9 1.032 4.3
2373 IPL HAB9 1.045 4.3
4373 IPL HAR9 1.032 4.3
483 TCE_H1 1.023 141.2
0.996 4483 24.9 TCE_L1
1.023 3483 TCE_L2
1.000 97701 4.2 SPEC_1
1.069 81483 4.5 KEYSTN_2_A2
1.069 80483 4.5 KEYSTN_2_A1
297 WAINWRI7 1.031 142.2
4037 HRT EXP9 1.023 141.2
361 EDGERTO8 1.036 71.5
HRT EXP7 0.999 4.2
97987 NIL REM 7 1.022 141.1
NIL REM 4 1.090 261.5
809 EXPRESTP 1.023 141.2
75 HUGHEND7 1.020 140.8
4075 HUGHEND9 1.043 26.1
14001 HEISLERTAP 1.060 146.3
19400 HEISLER9 1.050 26.3
1402 HEISLER 144 1.059 146.2
10400 HEISLERMID 1.051 145.1
1400 HEISLER8 1.048 72.3
1401 BIGKNIF8 1.045 72.1
19401 BIGKNIF9 0.988 24.1
16491 BR5 AUX2 1.006 4.2
15491 BR5 AUX1 1.006 4.2
14491 757S705T
18491 STNB AUX 1.081 4.5
13491 757S702T
1495 BAT #3 1.040 16.6
1496 BAT #4 1.039 16.6
1497 BAT #5 1.014 21.3
1469 BAT RV79 1.083 259.9
16492 STNA AUX 2.4
1493 BAT #1 1.000 14.4
1494 BAT #2 1.000 14.4
1492 BAT. RV8 5.1
10491 757S701T
1491 BAT. RV7 1.063 146.7
11499 757S912T 1.067 256.0
1489 BAT RV80 1.083 259.8
1499 CORDEL 4
18498 BIGFOOA9 0.999 6.9
19498 BIGFOOT9 0.990 24.8
1498 BIGFOOT8 15.4
649 HANSMAN7 69.2
87 METIS644
74 METIS647 1.025 141.5
4074 METIS649 1.024 25.6
648 HANSMAN9 1.025 141.4
81074 KEYSTN_2_B2
80074 KEYSTN_2_B1
1403 PAINTRT4
10403 863S901T
18403 PAINTRT2 1.045 26.1
3112 METISKA9 1.009 4.2
4112 METISKO9 1.009 4.2
112 METISKO7 1.025 141.5
814 KILRY TP 1.022 141.0
989 703ALTAP 1.025 141.5
4219 KILLARN9 1.020 25.5
219 KILLARN7 1.006 138.8
4220 HAYTER 9 1.046 26.1
220 HAYTER 7 1.004 138.6
99221 BULLCREEKGE 1.030 35.5
99231 BULLCREEK
1.007 2211 138.9 NEWPROVWIND
99230 CONFWIND 1.000 34.5
4086 PROVOST9 1.041 26.0
221 NEWPROVWIND
99231 CONFWINDGE 1.030 35.5
86 PROVOST7 1.010 139.4
CENTRAL AREA STUDY
2017 SUMMER LIGHT BASE CASE REVISION 7.2
FRI, APR 09 2010 10:01
D1-11b
2017SL-Alt 3-2.b
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER LIGHT BASE CASE REVISION 7.2
FRI, APR 09 2010 10:01
D1-13

2017SL-Alt 3-3.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER LIGHT BASE CASE REVISION 7.2
FRI, APR 09 2010 10:01
D1-13

2017SL-Alt 3-3.b

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000

2017 Power Flow Plots

Alternatives 1, 2 & 3
Battle River Unit # 5 ON

Case Summary Page	2017 Alt 1 WP BR #5 ON	
Contingency Number	**Fig #**	**Description**
D1-00	2017WP-Alt 1 BR #5 ON-1.a	Base Case
D1-00	2017WP-Alt 1 BR #5 ON-1.b	Base Case
D1-21	2017WP-Alt 1 BR #5 ON-2.a	Bonnyville 700S to Irish Creek 706S (7L53) and Battle River 757S to Buffalo Creek 526S (7L50) Jarrow 252S Tap
D1-21	2017WP-Alt 1 BR #5 ON-2.b	Bonnyville 700S to Irish Creek 706S (7L53) and Battle River 757S to Buffalo Creek 526S (7L50) Jarrow 252S Tap
D1-23	2017WP-Alt 1 BR #5 ON-3.a	Bonnyville 700S to Irish Creek 706S (7L53) and Hill 751S (7L14) to Kitscoty 705S Tap
D1-23	2017WP-Alt 1 BR #5 ON-3.b	Bonnyville 700S to Irish Creek 706S (7L53) and Hill 751S (7L14) to Kitscoty 705S Tap
D1-24	2017WP-Alt 1 BR #5 ON-4.a	Battle River 757S to Buffalo Creek 526S (7L50) Jarrow 252S Tap and Edgerton 899S to Lloydminster 716S (7L749) Briker 880S Tap
D1-24	2017WP-Alt 1 BR #5 ON-4.b	Battle River 757S to Buffalo Creek 526S (7L50) Jarrow 252S Tap and Edgerton 899S to Lloydminster 716S (7L749) Briker 880S Tap
D1-24b	2017WP-Alt 1 BR #5 ON-5.a	Battle River 757S to Buffalo Creek 526S (7L50) Jarrow 252S Tap and Edgerton 899S to Lloydminster 716S (7L749) Briker 880S Tap
D1-24b	2017WP-Alt 1 BR #5 ON-5.b	Battle River 757S to Buffalo Creek 526S (7L50) Jarrow 252S Tap and Edgerton 899S to Lloydminster 716S (7L749) Briker 880S Tap
D1-25	2017WP-Alt 1 BR #5 ON-6.a	Hansman Lake 650S to Provost 545S (715L) and Metiskow 648S to Killarney 267S (7L749)
D1-25	2017WP-Alt 1 BR #5 ON-6.b	Hansman Lake 650S to Provost 545S (715L) and Metiskow 648S to Killarney 267S (7L749)
D1-26	2017WP-Alt 1 BR #5 ON-7.a	Cordel 755S to Paintearth Creek 863S (9L27) and Cordel 755S to Nilrem (9LNew)
D1-26	2017WP-Alt 1 BR #5 ON-7.b	Cordel 755S to Paintearth Creek 863S (9L27) and Cordel 755S to Nilrem (9LNew)
D1-27	2017WP-Alt 1 BR #5 ON-8.a	Bonnyville 700S (7L24) (7L53) (7L89) (7L139)
D1-27	2017WP-Alt 1 BR #5 ON-8.b	Bonnyville 700S (7L24) (7L53) (7L89) (7L139)
D1-28	2017WP-Alt 1 BR #5 ON-9.a	Battle River 757S
D1-28	2017WP-Alt 1 BR #5 ON-9.b	Battle River 757S
D1-30	2017WP-Alt 1 BR #5 ON-10.a	Hansman Lake (650S) 138 kV
D1-30	2017WP-Alt 1 BR #5 ON-10.b	Hansman Lake (650S) 138 kV
D1-31	2017WP-Alt 1 BR #5 ON-11.a	Hansman Lake (650S) 240 kV
D1-31	2017WP-Alt 1 BR #5 ON-11.b	Hansman Lake (650S) 240 kV
D1-32	2017WP-Alt 1 BR #5 ON-12.a	Tucuman (478S) 138 kV
D1-32	2017WP-Alt 1 BR #5 ON-12.b	Tucuman (478S) 138 kV
D1-33	2017WP-Alt 1 BR #5 ON-13.a	Nilrem 240 kV
D1-33	2017WP-Alt 1 BR #5 ON-13.b	Nilrem 240 kV
D1-34	2017WP-Alt 1 BR #5 ON-14.a	Cordel 240 kV
D1-34	2017WP-Alt 1 BR #5 ON-14.b	Cordel 240 kV
D1-35	2017WP-Alt 1 BR #5 ON-15.a	Marguerite Lake (826S)
D1-35	2017WP-Alt 1 BR #5 ON-15.b	Marguerite Lake (826S)
D1-36	2017WP-Alt 1 BR #5 ON-16.a	Battle River Generating Station 3-4-6
D1-36	2017WP-Alt 1 BR #5 ON-16.b	Battle River Generating Station 3-4-6

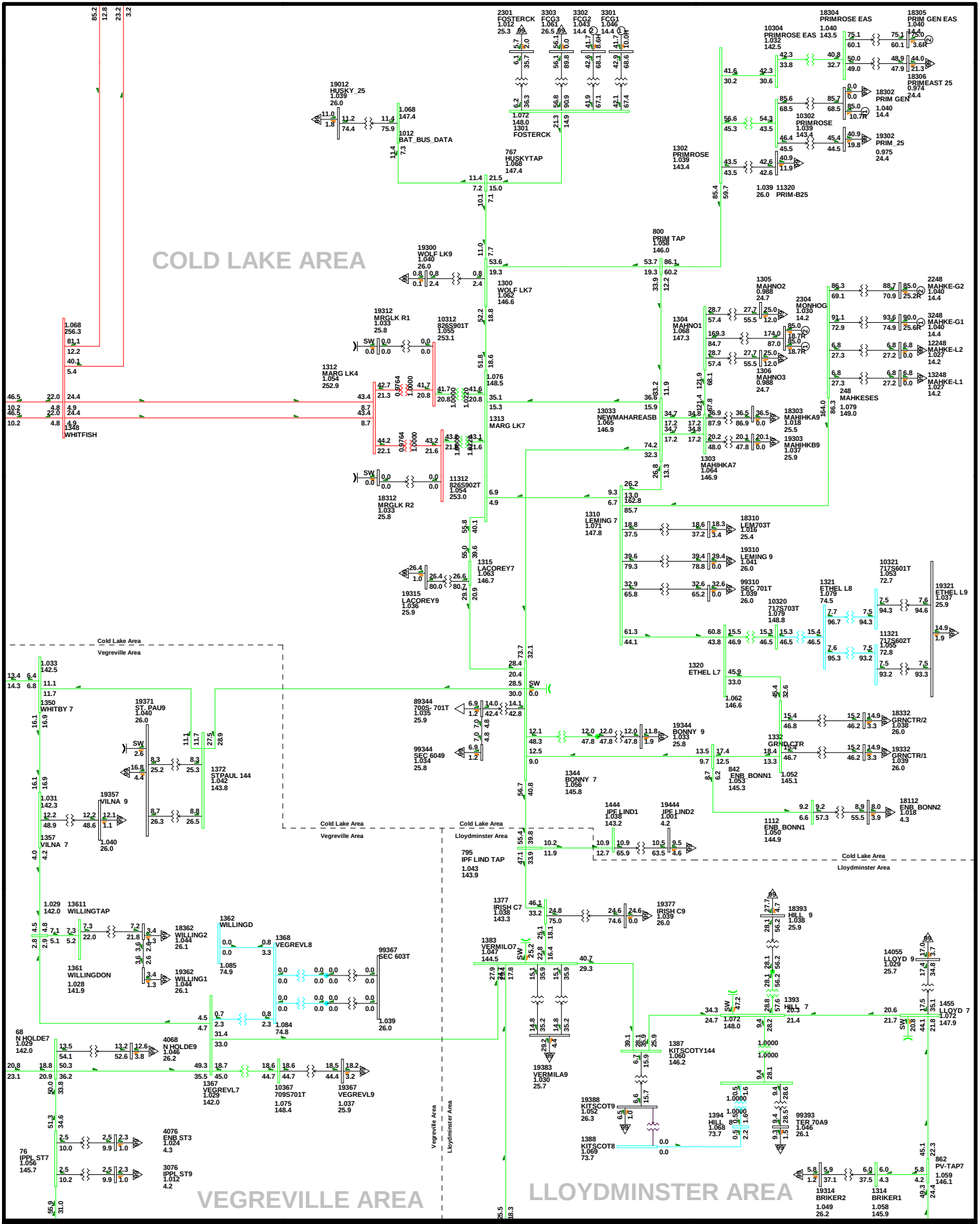
Case Summary Page	2017 Alt 1 SP BR #5 ON	
Contingency Number	**Fig #**	**Description**
D1-00	2017SP-Alt 1 BR #5 ON-1.a	Base Case
D1-00	2017SP-Alt 1 BR #5 ON-1.b	Base Case
D1-21	2017SP-Alt 1 BR #5 ON-2.a	Bonnyville 700S to Irish Creek 706S (7L53) and Battle River 757S to Buffalo Creek 526S (7L50) Jarrow 252S Tap
D1-21	2017SP-Alt 1 BR #5 ON-2.b	Bonnyville 700S to Irish Creek 706S (7L53) and Battle River 757S to Buffalo Creek 526S (7L50) Jarrow 252S Tap
D1-23	2017SP-Alt 1 BR #5 ON-3.a	Bonnyville 700S to Irish Creek 706S (7L53) and Hill 751S (7L14) to Kitscoty 705S Tap
D1-23	2017SP-Alt 1 BR #5 ON-3.b	Bonnyville 700S to Irish Creek 706S (7L53) and Hill 751S (7L14) to Kitscoty 705S Tap
D1-24	2017SP-Alt 1 BR #5 ON-4.a	Battle River 757S to Buffalo Creek 526S (7L50) Jarrow 252S Tap and Edgerton 899S to Lloydminster 716S (7L749) Briker 880S Tap
D1-24	2017SP-Alt 1 BR #5 ON-4.b	Battle River 757S to Buffalo Creek 526S (7L50) Jarrow 252S Tap and Edgerton 899S to Lloydminster 716S (7L749) Briker 880S Tap
D1-24b	2017SP-Alt 1 BR #5 ON-5.a	Battle River 757S to Buffalo Creek 526S (7L50) Jarrow 252S Tap and Edgerton 899S to Lloydminster 716S (7L749) Briker 880S Tap
D1-24b	2017SP-Alt 1 BR #5 ON-5.b	Battle River 757S to Buffalo Creek 526S (7L50) Jarrow 252S Tap and Edgerton 899S to Lloydminster 716S (7L749) Briker 880S Tap
D1-25	2017SP-Alt 1 BR #5 ON-6.a	Hansman Lake 650S to Provost 545S (715L) and Metiskow 648S to Killarney 267S (7L749)
D1-25	2017SP-Alt 1 BR #5 ON-6.b	Hansman Lake 650S to Provost 545S (715L) and Metiskow 648S to Killarney 267S (7L749)
D1-26	2017SP-Alt 1 BR #5 ON-7.a	Cordel 755S to Paintearth Creek 863S (9L27) and Cordel 755S to Nilrem (9LNew)
D1-26	2017SP-Alt 1 BR #5 ON-7.b	Cordel 755S to Paintearth Creek 863S (9L27) and Cordel 755S to Nilrem (9LNew)
D1-27	2017SP-Alt 1 BR #5 ON-8.a	Bonnyville 700S (7L24) (7L53) (7L89) (7L139)
D1-27	2017SP-Alt 1 BR #5 ON-8.b	Bonnyville 700S (7L24) (7L53) (7L89) (7L139)
D1-28	2017SP-Alt 1 BR #5 ON-9.a	Battle River 757S
D1-28	2017SP-Alt 1 BR #5 ON-9.b	Battle River 757S
D1-30	2017SP-Alt 1 BR #5 ON-10.a	Hansman Lake (650S) 138 kV
D1-30	2017SP-Alt 1 BR #5 ON-10.b	Hansman Lake (650S) 138 kV
D1-31	2017SP-Alt 1 BR #5 ON-11.a	Hansman Lake (650S) 240 kV
D1-31	2017SP-Alt 1 BR #5 ON-11.b	Hansman Lake (650S) 240 kV
D1-32	2017SP-Alt 1 BR #5 ON-12.a	Tucuman (478S) 138 kV
D1-32	2017SP-Alt 1 BR #5 ON-12.b	Tucuman (478S) 138 kV
D1-33	2017SP-Alt 1 BR #5 ON-13.a	Nilrem 240 kV
D1-33	2017SP-Alt 1 BR #5 ON-13.b	Nilrem 240 kV
D1-34	2017SP-Alt 1 BR #5 ON-14.a	Cordel 240 kV
D1-34	2017SP-Alt 1 BR #5 ON-14.b	Cordel 240 kV
D1-35	2017SP-Alt 1 BR #5 ON-15.a	Marguerite Lake (826S)
D1-35	2017SP-Alt 1 BR #5 ON-15.b	Marguerite Lake (826S)
D1-36	2017SP-Alt 1 BR #5 ON-16.a	Battle River Generating Station 3-4-6
D1-36	2017SP-Alt 1 BR #5 ON-16.b	Battle River Generating Station 3-4-6

Case Summary Page	2017 Alt 2 WP BR #5 ON	
Contingency Number	**Fig #**	**Description**
D1-00	2017WP-Alt 2 BR #5 ON-1.a	Base Case
D1-00	2017WP-Alt 2 BR #5 ON-1.b	Base Case
D1-23	2017WP-Alt 2 BR #5 ON-2.a	Bonnyville 700S to Irish Creek 706S (7L53) and Hill 751S (7L14) to Kitscoty 705S Tap
D1-23	2017WP-Alt 2 BR #5 ON-2.b	Bonnyville 700S to Irish Creek 706S (7L53) and Hill 751S (7L14) to Kitscoty 705S Tap
D1-24	2017WP-Alt 2 BR #5 ON-3.a	Battle River 757S to Buffalo Creek 526S (7L50) Jarrow 252S Tap and Edgerton 899S to Lloydminster 716S (7L749) Briker 880S Tap
D1-24	2017WP-Alt 2 BR #5 ON-3.b	Battle River 757S to Buffalo Creek 526S (7L50) Jarrow 252S Tap and Edgerton 899S to Lloydminster 716S (7L749) Briker 880S Tap
D1-25	2017WP-Alt 2 BR #5 ON-4.a	Hansman Lake 650S to Provost 545S (715L) and Metiskow 648S to Killarney 267S (7L749)
D1-25	2017WP-Alt 2 BR #5 ON-4.b	Hansman Lake 650S to Provost 545S (715L) and Metiskow 648S to Killarney 267S (7L749)
D1-26	2017WP-Alt 2 BR #5 ON-5.a	Cordel 755S to Paintearth Creek 863S (9L27) and Cordel 755S to Nilrem (9LNew)
D1-26	2017WP-Alt 2 BR #5 ON-5.b	Cordel 755S to Paintearth Creek 863S (9L27) and Cordel 755S to Nilrem (9LNew)
D1-27	2017WP-Alt 2 BR #5 ON-6.a	Bonnyville 700S (7L24) (7L53) (7L89) (7L139)
D1-27	2017WP-Alt 2 BR #5 ON-6.b	Bonnyville 700S (7L24) (7L53) (7L89) (7L139)
D1-28	2017WP-Alt 2 BR #5 ON-7.a	Battle River 757S
D1-28	2017WP-Alt 2 BR #5 ON-7.b	Battle River 757S
D1-30	2017WP-Alt 2 BR #5 ON-8.a	Hansman Lake (650S) 138 kV
D1-30	2017WP-Alt 2 BR #5 ON-8.b	Hansman Lake (650S) 138 kV
D1-31	2017WP-Alt 2 BR #5 ON-9.a	Hansman Lake (650S) 240 kV
D1-31	2017WP-Alt 2 BR #5 ON-9.b	Hansman Lake (650S) 240 kV
D1-32	2017WP-Alt 2 BR #5 ON-10.a	Tucuman (478S) 138 kV
D1-32	2017WP-Alt 2 BR #5 ON-10.b	Tucuman (478S) 138 kV
D1-33	2017WP-Alt 2 BR #5 ON-11.a	Nilrem 240 kV
D1-33	2017WP-Alt 2 BR #5 ON-11.b	Nilrem 240 kV
D1-34	2017WP-Alt 2 BR #5 ON-12.a	Cordel 240 kV
D1-34	2017WP-Alt 2 BR #5 ON-12.b	Cordel 240 kV
D1-35	2017WP-Alt 2 BR #5 ON-13.a	Marguerite Lake (826S)
D1-35	2017WP-Alt 2 BR #5 ON-13.b	Marguerite Lake (826S)
D1-36	2017WP-Alt 2 BR #5 ON-14.a	Battle River Generating Station 3-4-6
D1-36	2017WP-Alt 2 BR #5 ON-14.b	Battle River Generating Station 3-4-6

Case Summary Page	2017 Alt 2 SP BR #5 ON	
Contingency Number	**Fig #**	**Description**
D1-00	2017SP-Alt 2 BR #5 ON-1.a	Base Case
D1-00	2017SP-Alt 2 BR #5 ON-1.b	Base Case
D1-23	2017SP-Alt 2 BR #5 ON-2.a	Bonnyville 700S to Irish Creek 706S (7L53) and Hill 751S (7L14) to Kitscoty 705S Tap
D1-23	2017SP-Alt 2 BR #5 ON-2.b	Bonnyville 700S to Irish Creek 706S (7L53) and Hill 751S (7L14) to Kitscoty 705S Tap
D1-24	2017SP-Alt 2 BR #5 ON-3.a	Battle River 757S to Buffalo Creek 526S (7L50) Jarrow 252S Tap and Edgerton 899S to Lloydminster 716S (7L749) Briker 880S Tap
D1-24	2017SP-Alt 2 BR #5 ON-3.b	Battle River 757S to Buffalo Creek 526S (7L50) Jarrow 252S Tap and Edgerton 899S to Lloydminster 716S (7L749) Briker 880S Tap
D1-25	2017SP-Alt 2 BR #5 ON-4.a	Hansman Lake 650S to Provost 545S (715L) and Metiskow 648S to Killarney 267S (7L749)
D1-25	2017SP-Alt 2 BR #5 ON-4.b	Hansman Lake 650S to Provost 545S (715L) and Metiskow 648S to Killarney 267S (7L749)
D1-26	2017SP-Alt 2 BR #5 ON-5.a	Cordel 755S to Paintearth Creek 863S (9L27) and Cordel 755S to Nilrem (9LNew)
D1-26	2017SP-Alt 2 BR #5 ON-5.b	Cordel 755S to Paintearth Creek 863S (9L27) and Cordel 755S to Nilrem (9LNew)
D1-27	2017SP-Alt 2 BR #5 ON-6.a	Bonnyville 700S (7L24) (7L53) (7L89) (7L139)
D1-27	2017SP-Alt 2 BR #5 ON-6.b	Bonnyville 700S (7L24) (7L53) (7L89) (7L139)
D1-28	2017SP-Alt 2 BR #5 ON-7.a	Battle River 757S
D1-28	2017SP-Alt 2 BR #5 ON-7.b	Battle River 757S
D1-30	2017SP-Alt 2 BR #5 ON-8.a	Hansman Lake (650S) 138 kV
D1-30	2017SP-Alt 2 BR #5 ON-8.b	Hansman Lake (650S) 138 kV
D1-31	2017SP-Alt 2 BR #5 ON-9.a	Hansman Lake (650S) 240 kV
D1-31	2017SP-Alt 2 BR #5 ON-9.b	Hansman Lake (650S) 240 kV
D1-32	2017SP-Alt 2 BR #5 ON-10.a	Tucuman (478S) 138 kV
D1-32	2017SP-Alt 2 BR #5 ON-10.b	Tucuman (478S) 138 kV
D1-33	2017SP-Alt 2 BR #5 ON-11.a	Nilrem 240 kV
D1-33	2017SP-Alt 2 BR #5 ON-11.b	Nilrem 240 kV
D1-34	2017SP-Alt 2 BR #5 ON-12.a	Cordel 240 kV
D1-34	2017SP-Alt 2 BR #5 ON-12.b	Cordel 240 kV
D1-35	2017SP-Alt 2 BR #5 ON-13.a	Marguerite Lake (826S)
D1-35	2017SP-Alt 2 BR #5 ON-13.b	Marguerite Lake (826S)
D1-36	2017SP-Alt 2 BR #5 ON-14.a	Battle River Generating Station 3-4-6
D1-36	2017SP-Alt 2 BR #5 ON-14.b	Battle River Generating Station 3-4-6

Case Summary Page	2017 Alt 3 WP BR #5 ON	
Contingency Number	Fig #	Description
D1-00	2017WP-Alt 3 BR #5 ON-1.a	Base Case
D1-00	2017WP-Alt 3 BR #5 ON-1.b	Base Case
D1-20	2017WP-Alt 3 BR #5 ON-2.a	Bonnyville 700S to Irish Creek 706S (7L53) and Hill 751S to Loydminster 716S (7L42)
D1-20	2017WP-Alt 3 BR #5 ON-2.b	Bonnyville 700S to Irish Creek 706S (7L53) and Hill 751S to Loydminster 716S (7L42)
D1-21	2017WP-Alt 3 BR #5 ON-3.a	Bonnyville 700S to Irish Creek 706S (7L53) and Battle River 757S to Buffalo Creek 526S (7L50) Jarrow 252S Tap
D1-21	2017WP-Alt 3 BR #5 ON-3.b	Bonnyville 700S to Irish Creek 706S (7L53) and Battle River 757S to Buffalo Creek 526S (7L50) Jarrow 252S Tap
D1-22	2017WP-Alt 3 BR #5 ON-4.a	Bonnyville 700S to Irish Creek 706S (7L53) and Vermilion 710S to Kitscoty 705S Tap
D1-22	2017WP-Alt 3 BR #5 ON-4.b	Bonnyville 700S to Irish Creek 706S (7L53) and Vermilion 710S to Kitscoty 705S Tap
D1-23	2017WP-Alt 3 BR #5 ON-5.a	Bonnyville 700S to Irish Creek 706S (7L53) and Hill 751S (7L14) to Kitscoty 705S Tap
D1-23	2017WP-Alt 3 BR #5 ON-5.b	Bonnyville 700S to Irish Creek 706S (7L53) and Hill 751S (7L14) to Kitscoty 705S Tap
D1-24	2017WP-Alt 3 BR #5 ON-6.a	Battle River 757S to Buffalo Creek 526S (7L50) Jarrow 252S Tap and Edgerton 899S to Lloydminster 716S (7L749) Briker 880S Tap
D1-24	2017WP-Alt 3 BR #5 ON-6.b	Battle River 757S to Buffalo Creek 526S (7L50) Jarrow 252S Tap and Edgerton 899S to Lloydminster 716S (7L749) Briker 880S Tap
D1-26	2017WP-Alt 3 BR #5 ON-7.a	Cordel 755S to Paintearth Creek 863S (9L27) and Cordel 755S to Nilrem (9LNew)
D1-26	2017WP-Alt 3 BR #5 ON-7.b	Cordel 755S to Paintearth Creek 863S (9L27) and Cordel 755S to Nilrem (9LNew)
D1-27	2017WP-Alt 3 BR #5 ON-8.a	Bonnyville 700S (7L24) (7L53) (7L89) (7L139)
D1-27	2017WP-Alt 3 BR #5 ON-8.b	Bonnyville 700S (7L24) (7L53) (7L89) (7L139)
D1-28	2017WP-Alt 3 BR #5 ON-9.a	Battle River 757S
D1-28	2017WP-Alt 3 BR #5 ON-9.b	Battle River 757S
D1-29	2017WP-Alt 3 BR #5 ON-10.a	Metiskow (648S) 138 kV (70L3) (749L) (885L) (Killarney Tap)
D1-29	2017WP-Alt 3 BR #5 ON-10.b	Metiskow (648S) 138 kV (70L3) (749L) (885L) (Killarney Tap)
D1-30	2017WP-Alt 3 BR #5 ON-11.a	Hansman Lake (650S) 138 kV
D1-30	2017WP-Alt 3 BR #5 ON-11.b	Hansman Lake (650S) 138 kV
D1-31	2017WP-Alt 3 BR #5 ON-12.a	Hansman Lake (650S) 240 kV
D1-31	2017WP-Alt 3 BR #5 ON-12.b	Hansman Lake (650S) 240 kV
D1-32	2017WP-Alt 3 BR #5 ON-13.a	Tucuman (478S) 138 kV
D1-32	2017WP-Alt 3 BR #5 ON-13.b	Tucuman (478S) 138 kV
D1-33	2017WP-Alt 3 BR #5 ON-14.a	Nilrem 240 kV
D1-33	2017WP-Alt 3 BR #5 ON-14.b	Nilrem 240 kV
D1-34	2017WP-Alt 3 BR #5 ON-15.a	Cordel 240 kV
D1-34	2017WP-Alt 3 BR #5 ON-15.b	Cordel 240 kV
D1-35	2017WP-Alt 3 BR #5 ON-16.a	Marguerite Lake (826S)
D1-35	2017WP-Alt 3 BR #5 ON-16.b	Marguerite Lake (826S)
D1-36	2017WP-Alt 3 BR #5 ON-17.a	Battle River Generating Station 3-4-6
D1-36	2017WP-Alt 3 BR #5 ON-17.b	Battle River Generating Station 3-4-6

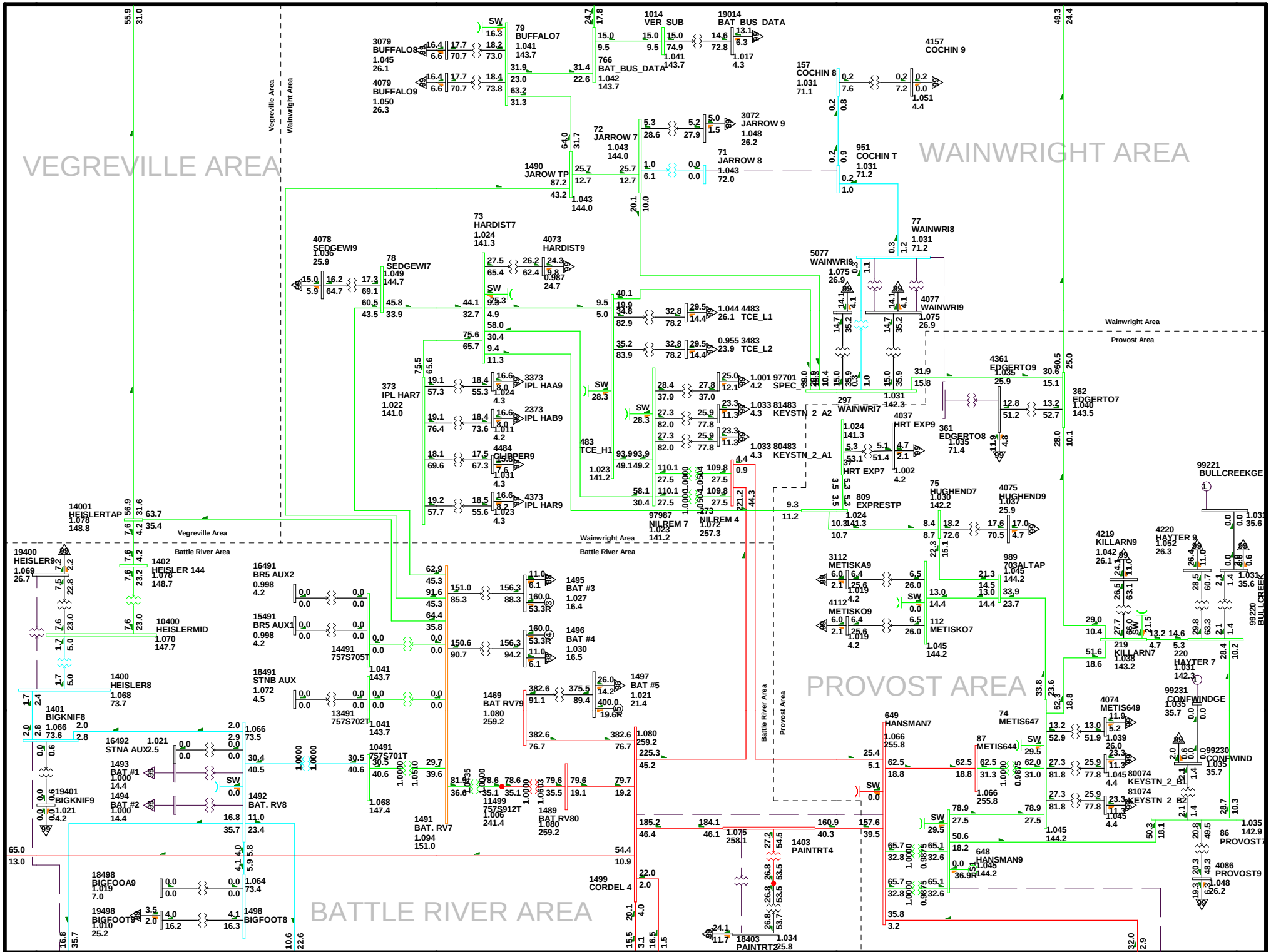
Case Summary Page	2017 Alt 3 SP BR #5 ON	
Contingency Number	**Fig #**	**Description**
D1-00	2017SP-Alt 3 BR #5 ON-1.a	Base Case
D1-00	2017SP-Alt 3 BR #5 ON-1.b	Base Case
D1-20	2017SP-Alt 3 BR #5 ON-2.a	Bonnyville 700S to Irish Creek 706S (7L53) and Hill 751S to Loydminster 716S (7L42)
D1-20	2017SP-Alt 3 BR #5 ON-2.b	Bonnyville 700S to Irish Creek 706S (7L53) and Hill 751S to Loydminster 716S (7L42)
D1-21	2017SP-Alt 3 BR #5 ON-3.a	Bonnyville 700S to Irish Creek 706S (7L53) and Battle River 757S to Buffalo Creek 526S (7L50) Jarrow 252S Tap
D1-21	2017SP-Alt 3 BR #5 ON-3.b	Bonnyville 700S to Irish Creek 706S (7L53) and Battle River 757S to Buffalo Creek 526S (7L50) Jarrow 252S Tap
D1-22	2017SP-Alt 3 BR #5 ON-4.a	Bonnyville 700S to Irish Creek 706S (7L53) and Vermilion 710S to Kitscoty 705S Tap
D1-22	2017SP-Alt 3 BR #5 ON-4.b	Bonnyville 700S to Irish Creek 706S (7L53) and Vermilion 710S to Kitscoty 705S Tap
D1-23	2017SP-Alt 3 BR #5 ON-5.a	Bonnyville 700S to Irish Creek 706S (7L53) and Hill 751S (7L14) to Kitscoty 705S Tap
D1-23	2017SP-Alt 3 BR #5 ON-5.b	Bonnyville 700S to Irish Creek 706S (7L53) and Hill 751S (7L14) to Kitscoty 705S Tap
D1-24	2017SP-Alt 3 BR #5 ON-6.a	Battle River 757S to Buffalo Creek 526S (7L50) Jarrow 252S Tap and Edgerton 899S to Lloydminster 716S (7L749) Briker 880S Tap
D1-24	2017SP-Alt 3 BR #5 ON-6.b	Battle River 757S to Buffalo Creek 526S (7L50) Jarrow 252S Tap and Edgerton 899S to Lloydminster 716S (7L749) Briker 880S Tap
D1-26	2017SP-Alt 3 BR #5 ON-7.a	Cordel 755S to Paintearth Creek 863S (9L27) and Cordel 755S to Nilrem (9LNew)
D1-26	2017SP-Alt 3 BR #5 ON-7.b	Cordel 755S to Paintearth Creek 863S (9L27) and Cordel 755S to Nilrem (9LNew)
D1-27	2017SP-Alt 3 BR #5 ON-8.a	Bonnyville 700S (7L24) (7L53) (7L89) (7L139)
D1-27	2017SP-Alt 3 BR #5 ON-8.b	Bonnyville 700S (7L24) (7L53) (7L89) (7L139)
D1-28	2017SP-Alt 3 BR #5 ON-9.a	Battle River 757S
D1-28	2017SP-Alt 3 BR #5 ON-9.b	Battle River 757S
D1-29	2017SP-Alt 3 BR #5 ON-10.a	Metiskow (648S) 138 kV (70L3) (749L) (885L) (Killarney Tap)
D1-29	2017SP-Alt 3 BR #5 ON-10.b	Metiskow (648S) 138 kV (70L3) (749L) (885L) (Killarney Tap)
D1-30	2017SP-Alt 3 BR #5 ON-11.a	Hansman Lake (650S) 138 kV
D1-30	2017SP-Alt 3 BR #5 ON-11.b	Hansman Lake (650S) 138 kV
D1-31	2017SP-Alt 3 BR #5 ON-12.a	Hansman Lake (650S) 240 kV
D1-31	2017SP-Alt 3 BR #5 ON-12.b	Hansman Lake (650S) 240 kV
D1-32	2017SP-Alt 3 BR #5 ON-13.a	Tucuman (478S) 138 kV
D1-32	2017SP-Alt 3 BR #5 ON-13.b	Tucuman (478S) 138 kV
D1-33	2017SP-Alt 3 BR #5 ON-14.a	Nilrem 240 kV
D1-33	2017SP-Alt 3 BR #5 ON-14.b	Nilrem 240 kV
D1-34	2017SP-Alt 3 BR #5 ON-15.a	Cordel 240 kV
D1-34	2017SP-Alt 3 BR #5 ON-15.b	Cordel 240 kV
D1-35	2017SP-Alt 3 BR #5 ON-16.a	Marguerite Lake (826S)
D1-35	2017SP-Alt 3 BR #5 ON-16.b	Marguerite Lake (826S)
D1-36	2017SP-Alt 3 BR #5 ON-17.a	Battle River Generating Station 3-4-6
D1-36	2017SP-Alt 3 BR #5 ON-17.b	Battle River Generating Station 3-4-6



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 30 2010 16:13
D1-00

2017WP-Alt 1 BR#5 ON-1.a

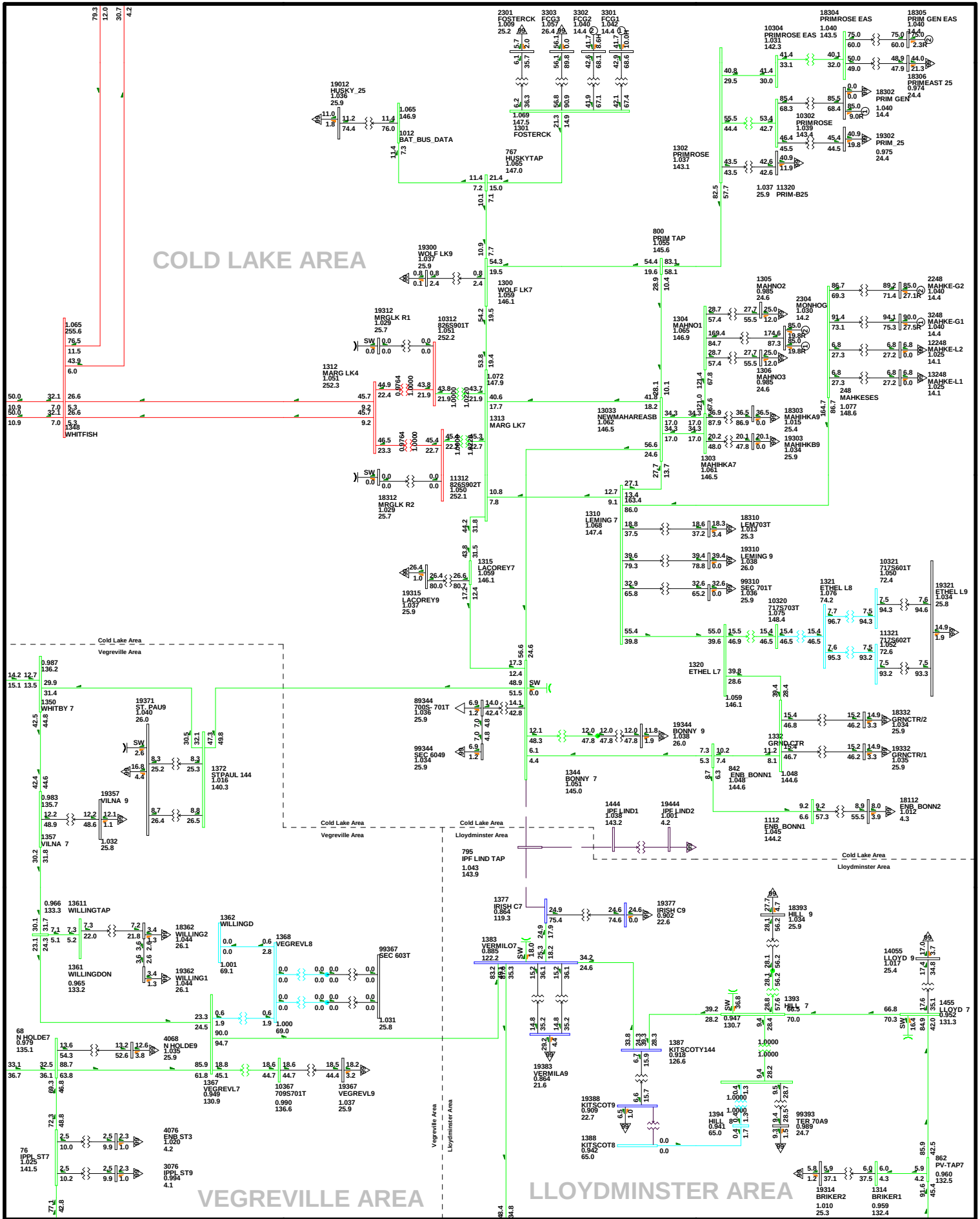
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 30 2010 16:13
D1-00

2017WP-Alt 1 BR#5 ON-1.b

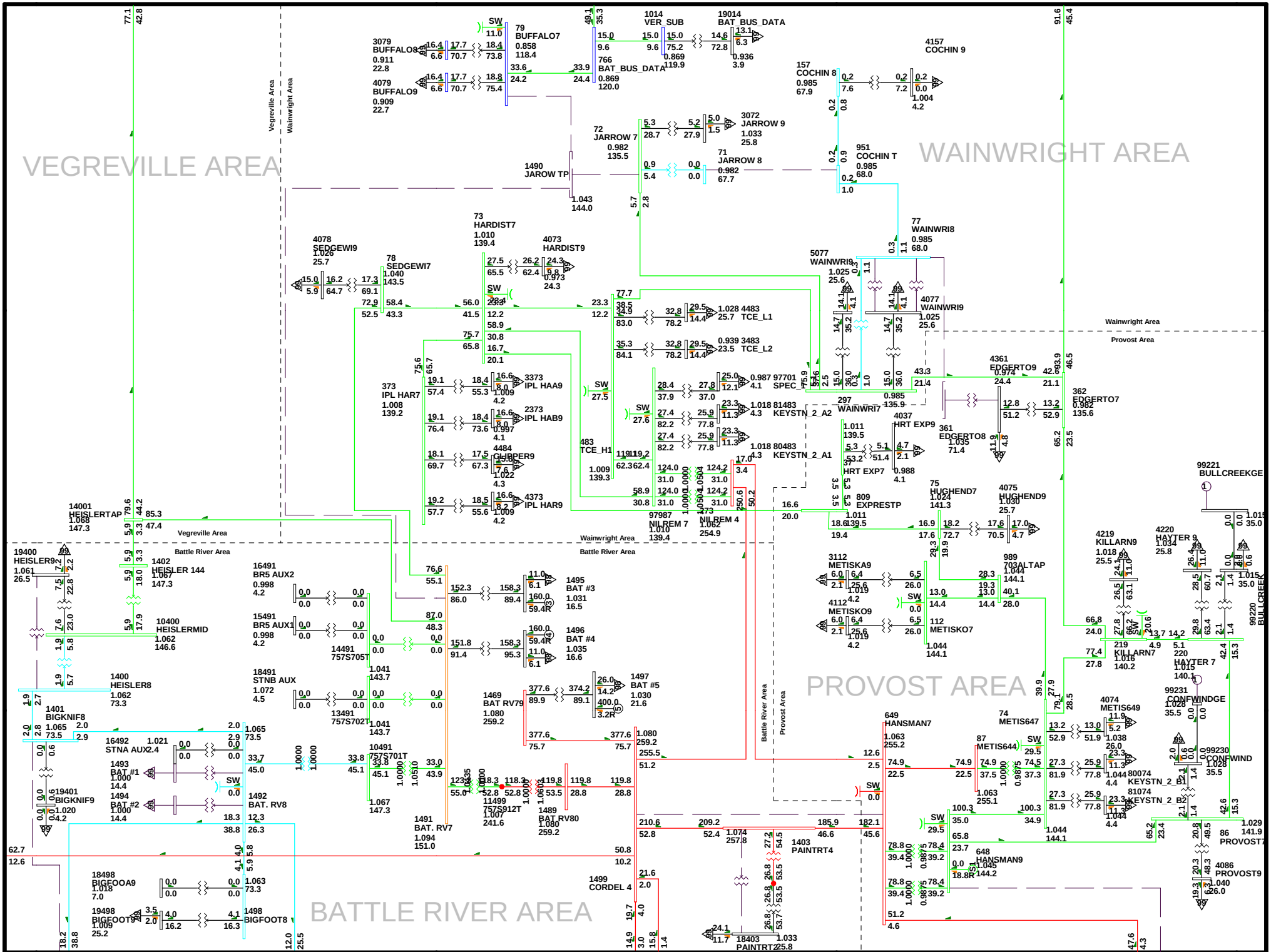
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 30 2010 16:13
D1-21

2017WP-Alt 1 BR#5 ON-2.a

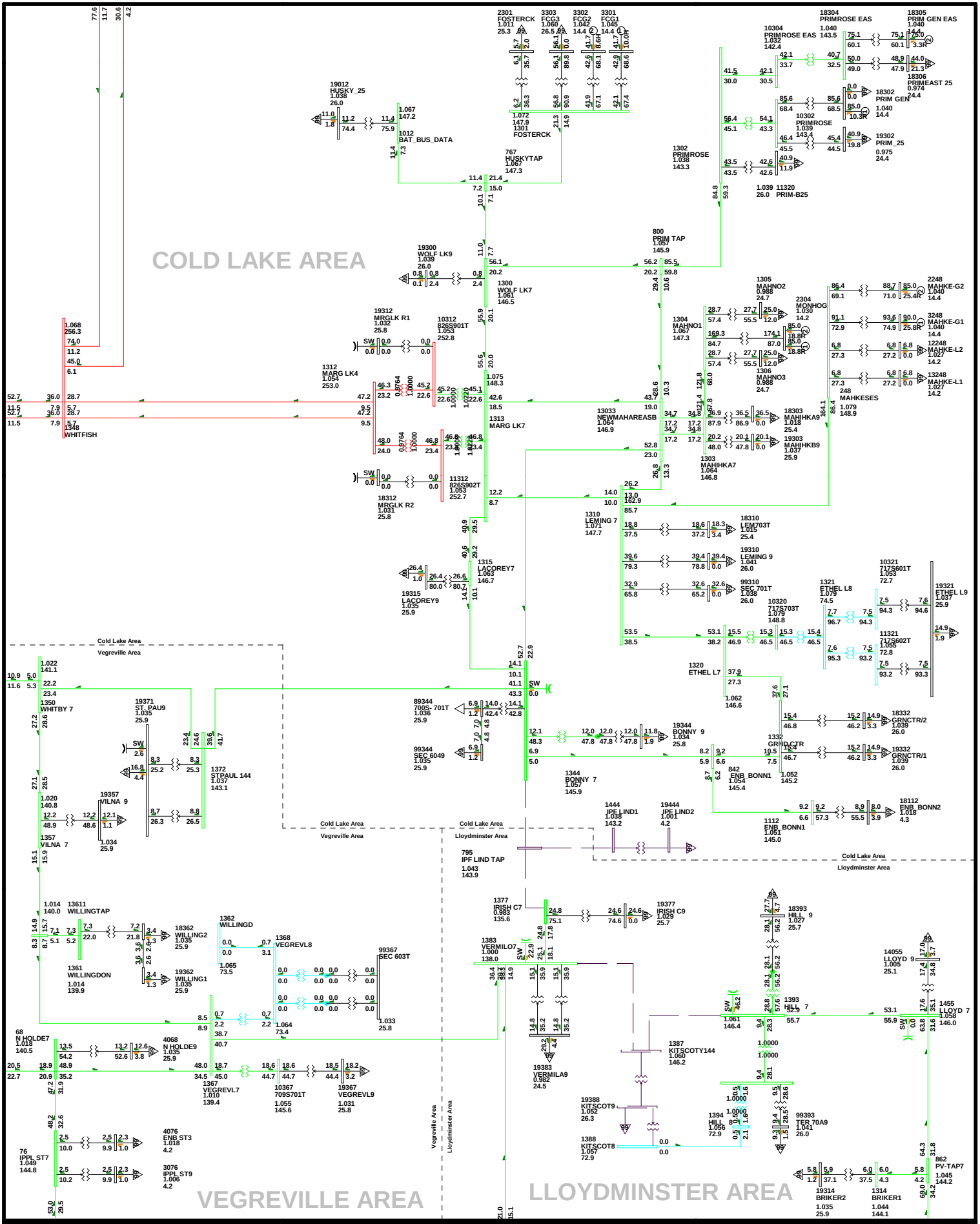
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 30 2010 16:13
D1-21

2017WP-Alt 1 BR#5 ON-2.b

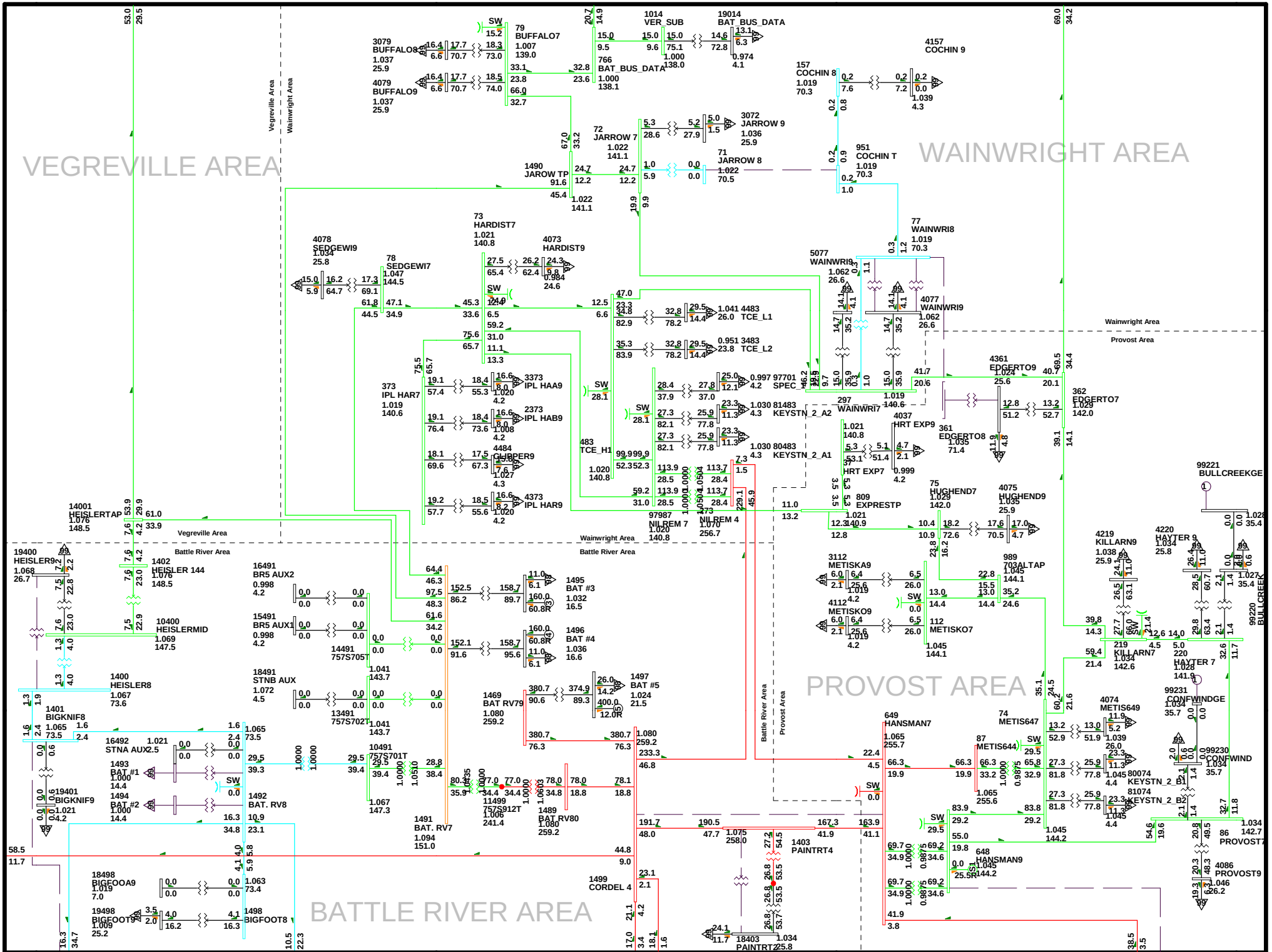
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000

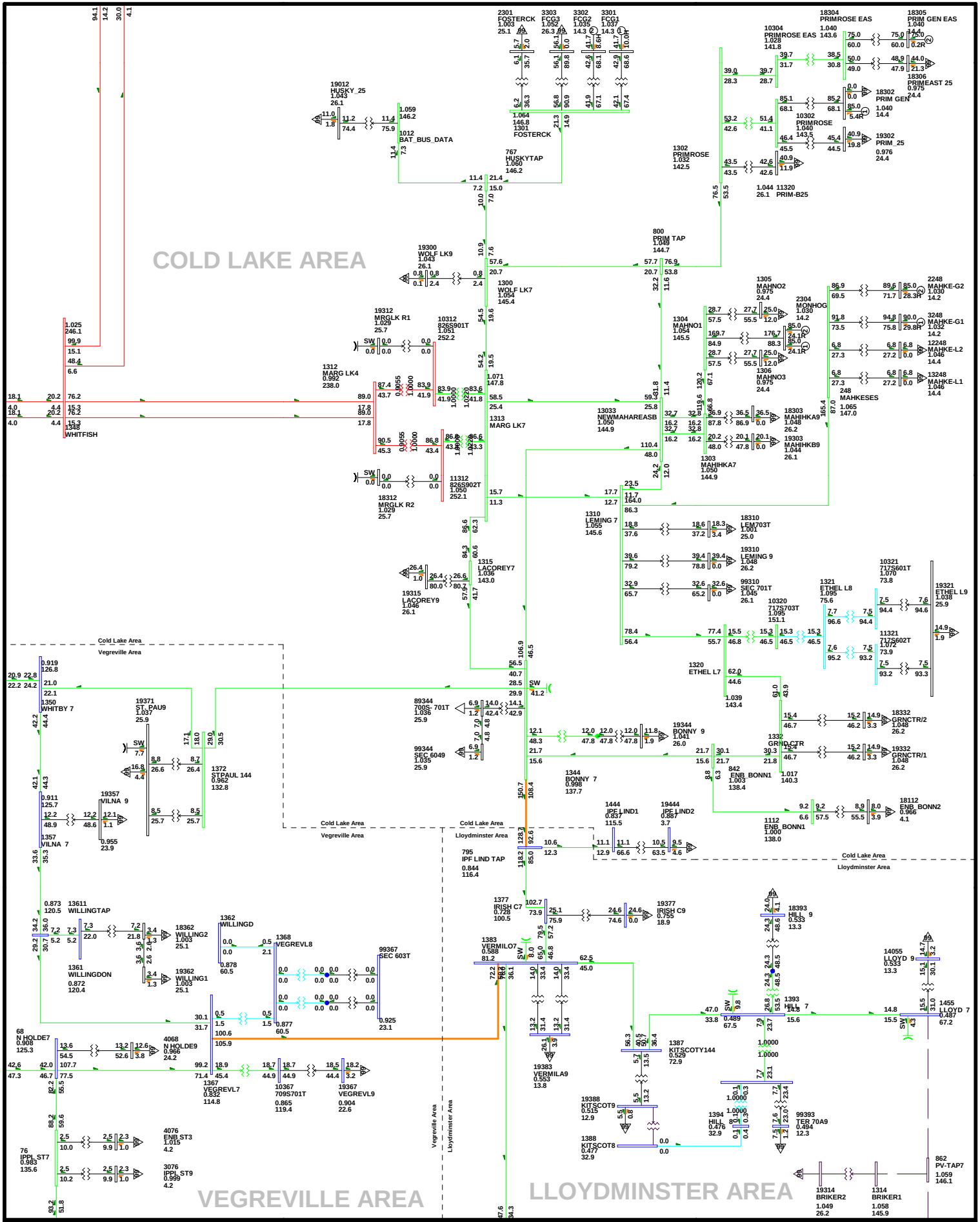


CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 30 2010 16:13
D1-23

2017WP-Alt 1 BR#5 ON-3.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

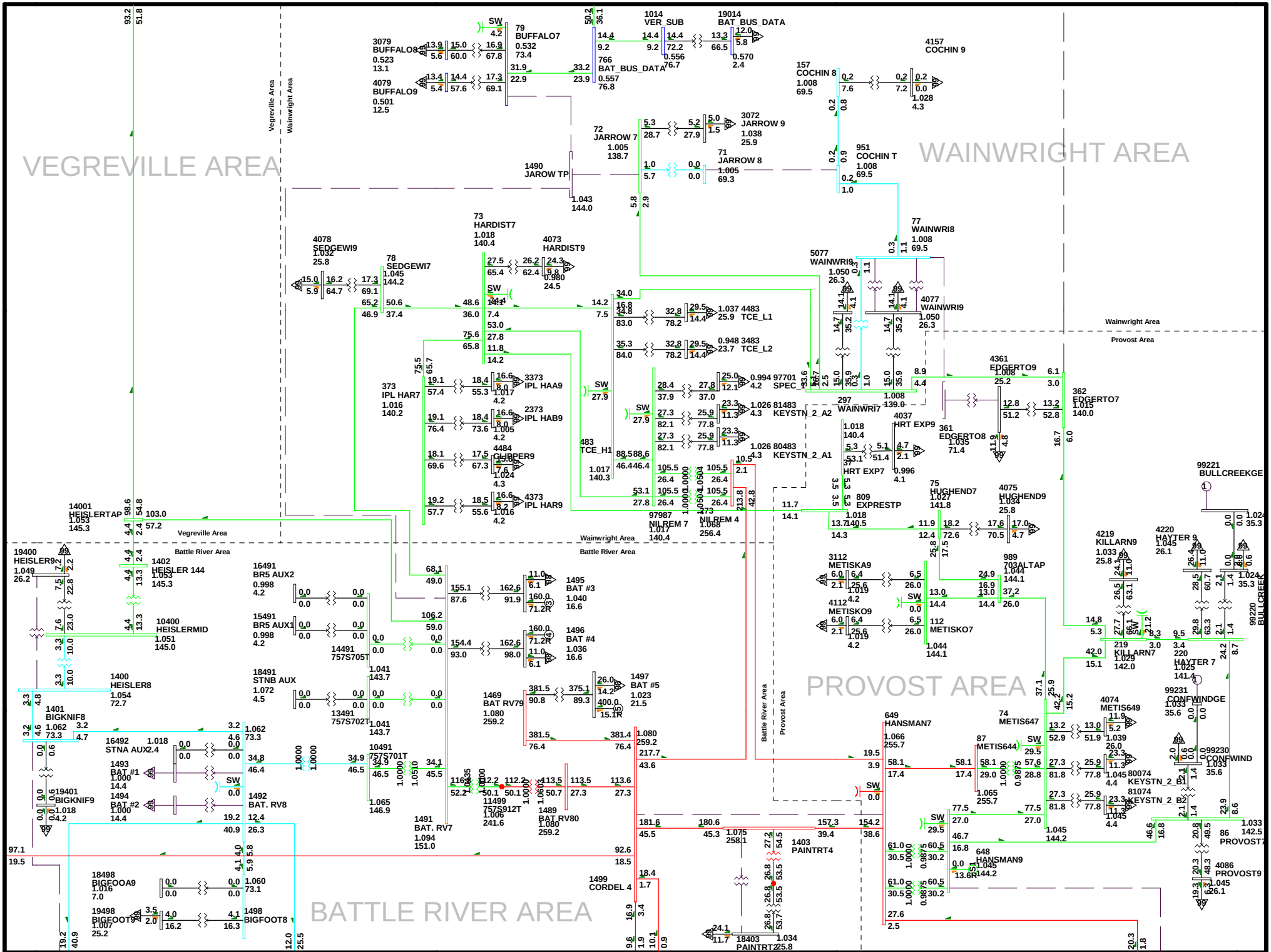

VEGREVILLE AREA
WAINWRIGHT AREA
PROVOST AREA
BATTLE RIVER AREA
Vegreville Area
Wainwright Area
Battle River Area
Provost Area
79 BUFFALO7 1.007 139.0
3079 BUFFALO8 1.037 25.9
4079 BUFFALO9 1.037 25.9
766 BAT_BUS_DATA 1.000 138.1
1014 VER_SUB
19014 BAT_BUS_DATA
4157 COCHIN 9
157 COCHIN 8 1.019 70.3
951 COCHIN T 1.019 70.3
72 JARROW 7 1.022 141.1
3072 JAROW 9 1.036 25.9
71 JARROW 8 1.022 70.5
1490 JAROW TP 91.6 1.022 141.1
73 HARDIST7 1.021 140.8
4073 HARDIST9 0.984 24.6
4078 SEDGEWI9 1.034 25.8
78 SEDGEWI7 1.047 144.5
77 WAINWRI8 1.019 70.3
5077 WAINWRI9 1.062 26.6
4077 WAINWRI9 1.062 26.6
373 IPL HAR7 1.019 140.6
3373 IPL HAA9 1.020 4.2
2373 IPL HAB9 1.008 4.2
4484 GUBRER9 1.027 4.3
4373 IPL HAR9 1.020 4.2
483 TCE_H1 1.020 140.8
1.041 4483 TCE_L1
0.951 3483 TCE_L2
0.997 97701 SPEC_H
1.030 81483 KEYSTN_2_A2
1.030 80483 KEYSTN_2_A1
97987 NIL REM 7 1.020 140.8
273 NIL REM 4 1.070 256.7
297 WAINWRI7 1.019 140.6
4037 HRT EXP9 1.035 71.4
HRT EXP7 1.021 140.8
0.999 4.2
361 EDGERTO8 1.035 71.4
4361 EDGERTO9 1.024 25.6
362 EDGERTO7 1.029 142.0
809 EXPRESTP 1.021 140.9
75 HUGHEND7 1.029 142.0
4075 HUGHEND9 1.035 25.9
14001 HEISLERTAP 1.076 148.5
1402 HEISLER 144 1.076 148.5
10400 HEISLERMID 1.069 147.5
19400 HEISLER9 1.068 26.7
1400 HEISLER8 1.067 73.6
1401 BIGKNIF8 1.065 73.5
19401 BIGKNIF9 1.021 4.2
16491 BR5 AUX2 0.998 4.2
15491 BR5 AUX1 0.998 4.2
14491 757S705T 1.041 143.7
18491 STNB AUX 1.072 4.5
13491 757S702T 1.041 143.7
16492 STNA AUX 1.021 2.5
10491 757S701T 1.067 147.3
1493 BAT #1 1.000 14.4
1494 BAT #2 1.000 14.4
1492 BAT. RV8 10.9
1491 BAT. RV7 1.094 151.0
1495 BAT #3 1.032 16.5
1496 BAT #4 1.036 16.6
1497 BAT #5 1.024 21.5
1469 BAT RV79 1.080 259.2
11499 757S912T 1.006 241.4
1489 BAT RV80 1.080 259.2
18498 BIGFOOA9 1.019 7.0
19498 BIGFOOT9 1.009 25.2
1498 BIGFOOT8 1.009 16.3
1499 CORDEL 4
1403 PAINTRT4
18403 PAINTRT 1.034 25.8
649 HANSMAN7 1.065 255.7
74 METIS647
87 METIS644
1.065 255.6
648 HANSMAN9 1.045 144.2
3112 METISKA9
4112 METISKO9
112 METISKO7 1.045 144.1
989 703ALTAP 1.045 144.1
4074 METIS649
80074 KEYSTN_2_B1
81074 KEYSTN_2_B2
4219 KILLARN9 1.038 25.9
219 KILLARN7 1.034 142.6
4220 HAYTER 9 1.034 25.8
220 HAYTER 7 1.028 141.9
99221 BULLCREEKGE
99220 BULLCREEK
99231 CONFWINDGE 1.034 35.7
99230 CONFWIND 1.034 35.7
86 PROVOST7 1.034 142.7
4086 PROVOST9 1.046 26.2
CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 30 2010 16:13
D1-23
2017WP-Alt 1 BR#5 ON-3.b
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 30 2010 16:13
D1-24

2017WP-Alt 1 BR#5 ON-4.a

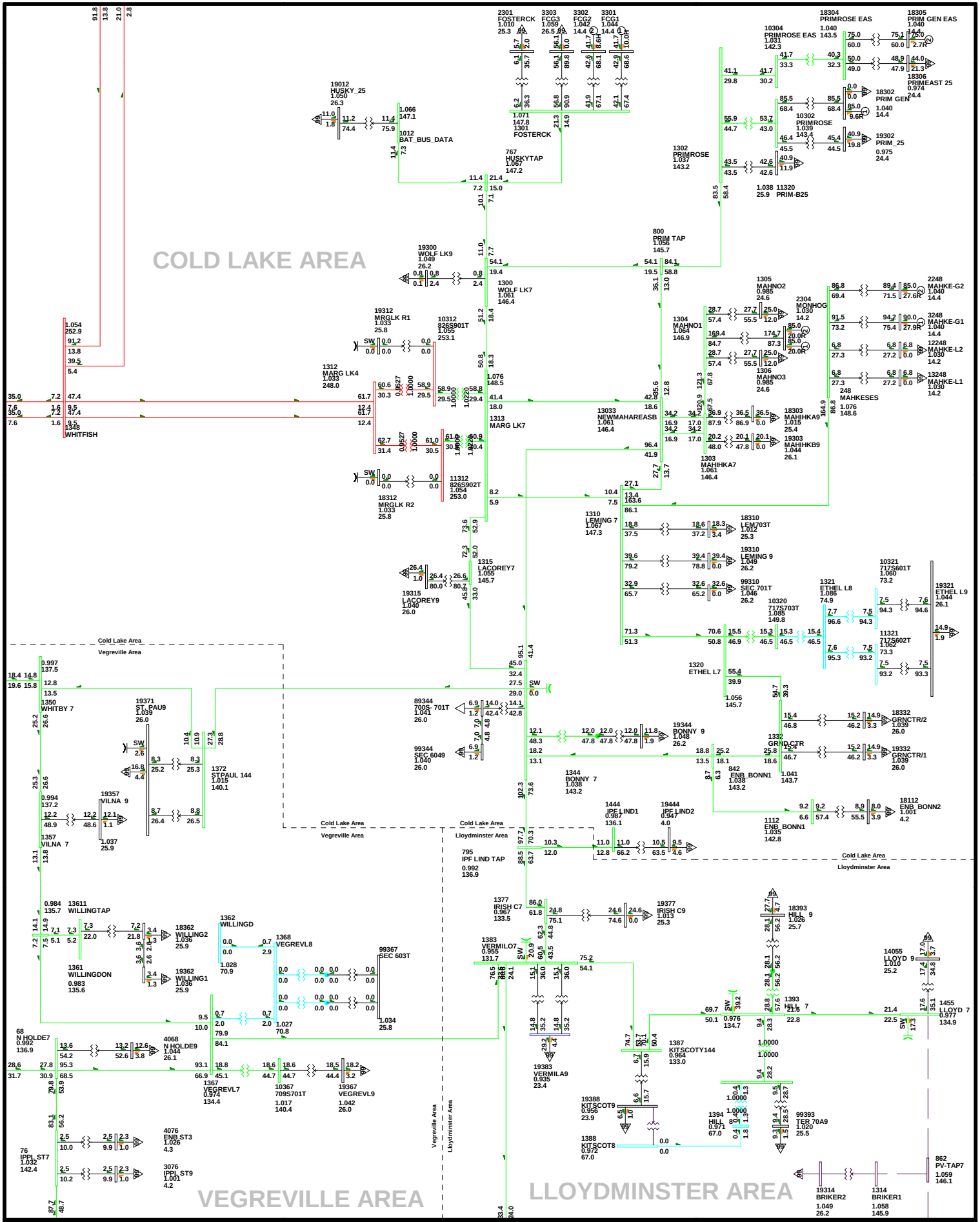
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 30 2010 16:13
D1-24

2017WP-Alt 1 BR#5 ON-4.b

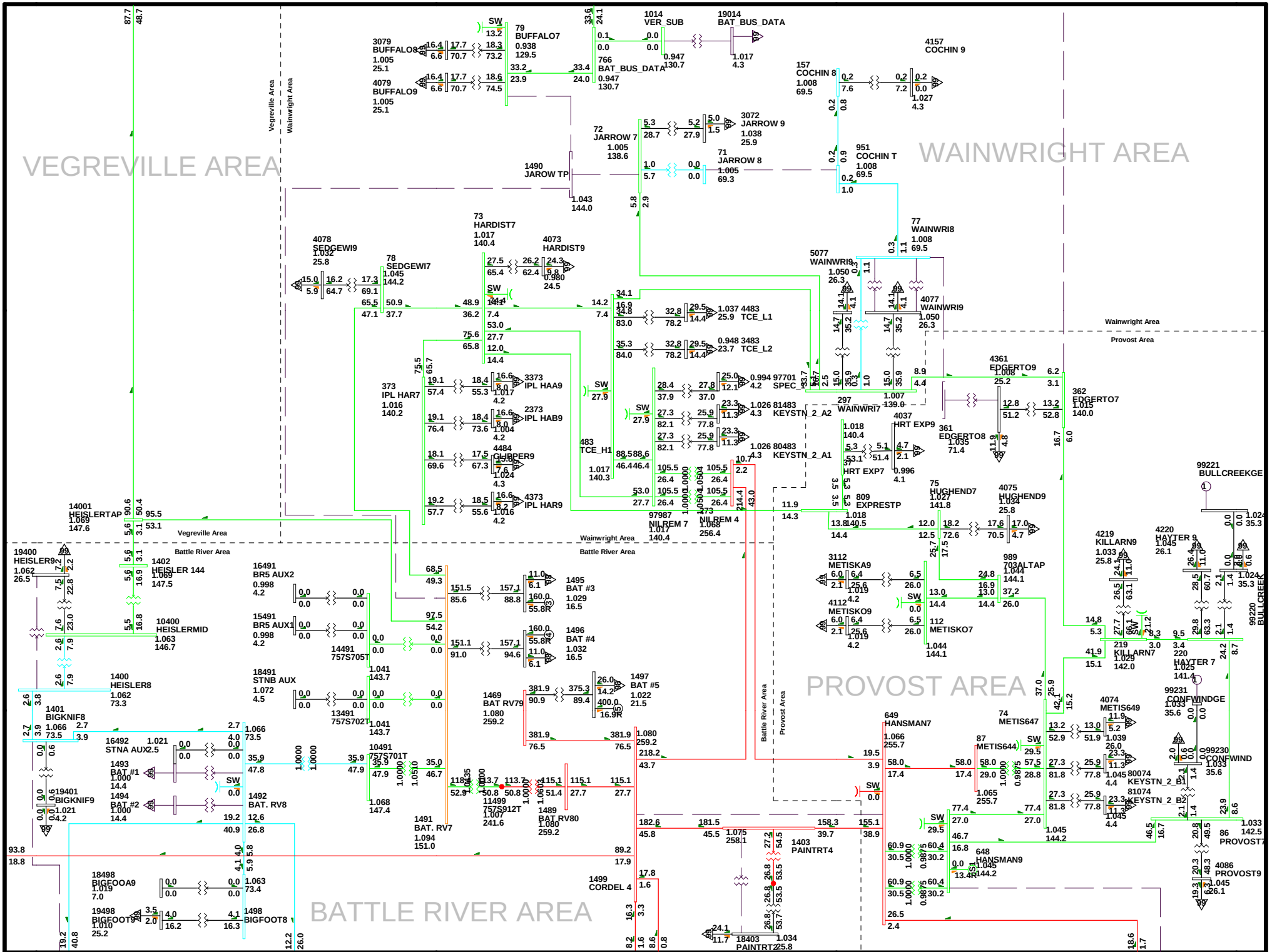
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 30 2010 16:14
D1-24b

2017WP-Alt 1 BR#5 ON-5.a

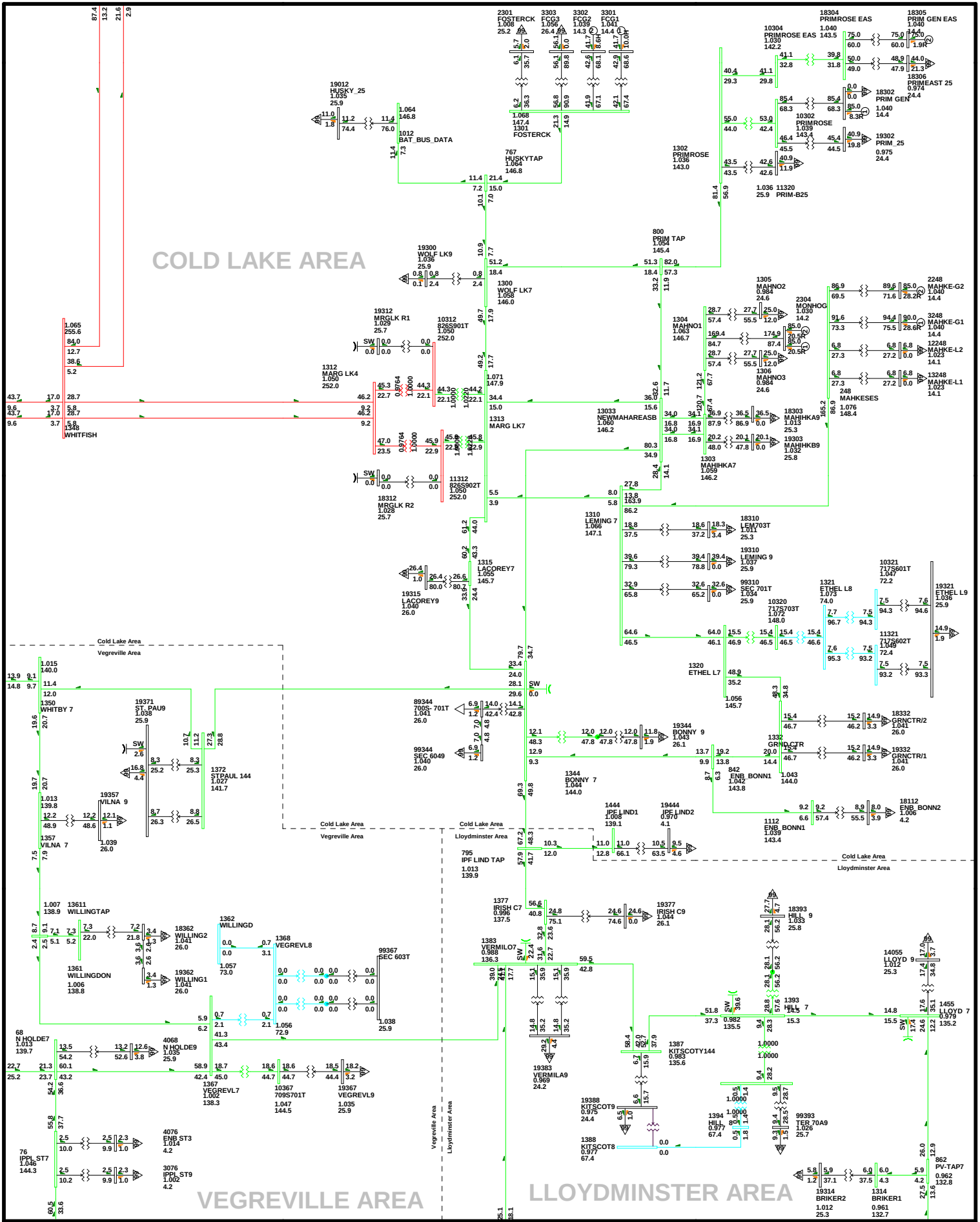
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 30 2010 16:14
D1-24b

2017WP-Alt 1 BR#5 ON-5.b

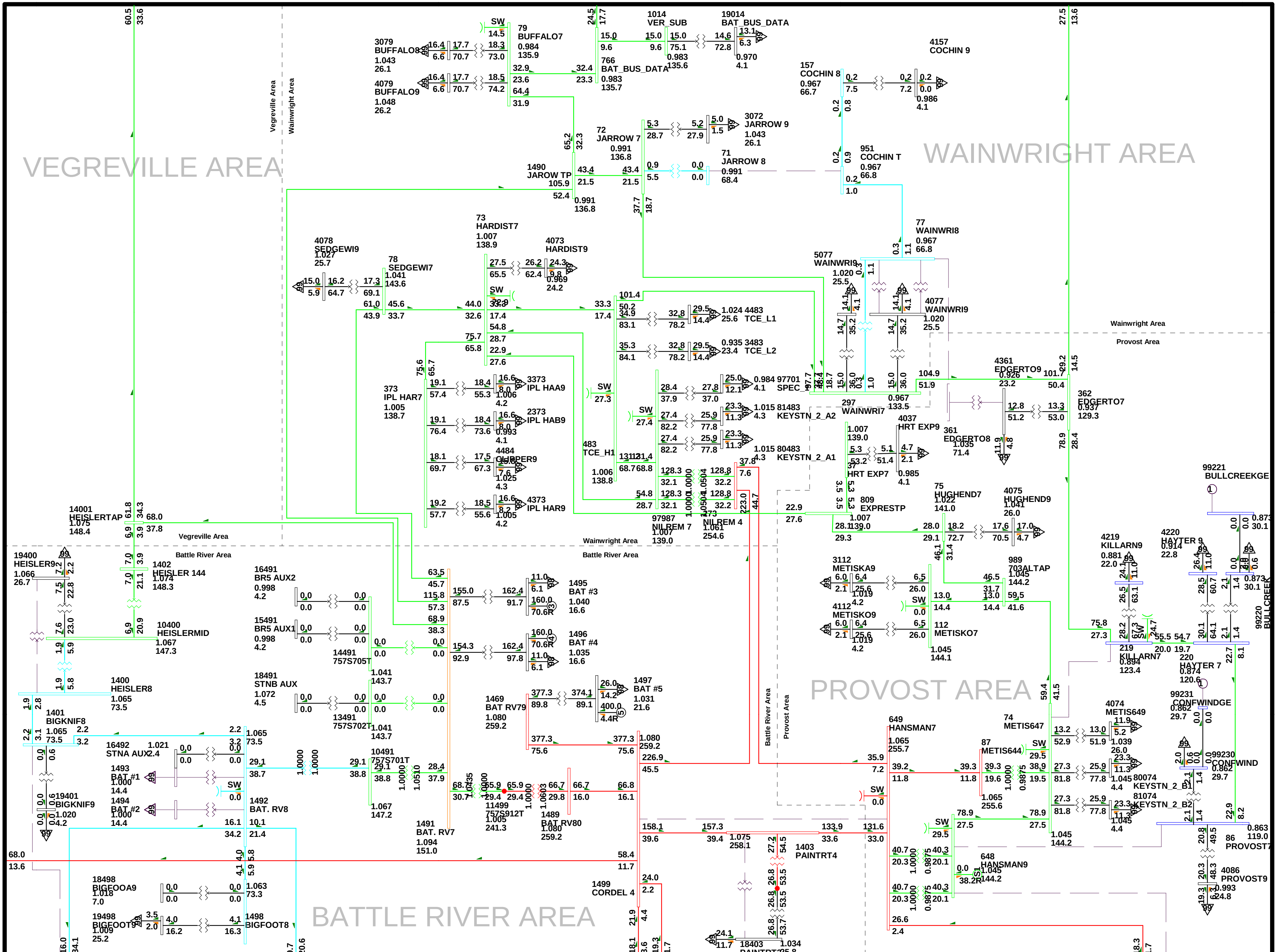
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 30 2010 16:14
D1-25

2017WP-Alt 1 BR#5 ON-6.a

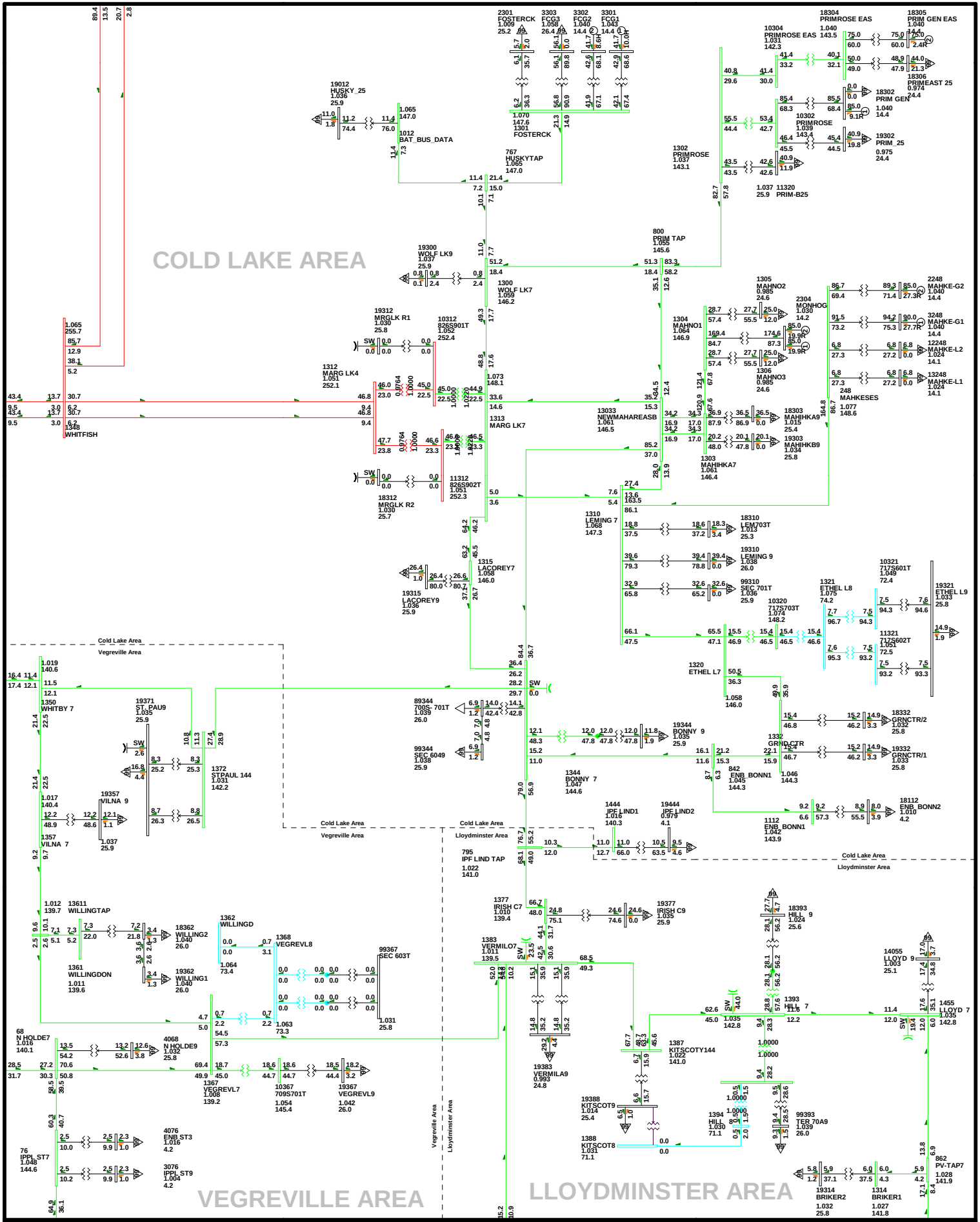
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 30 2010 16:14
D1-25

2017WP-Alt 1 BR#5 ON-6.b

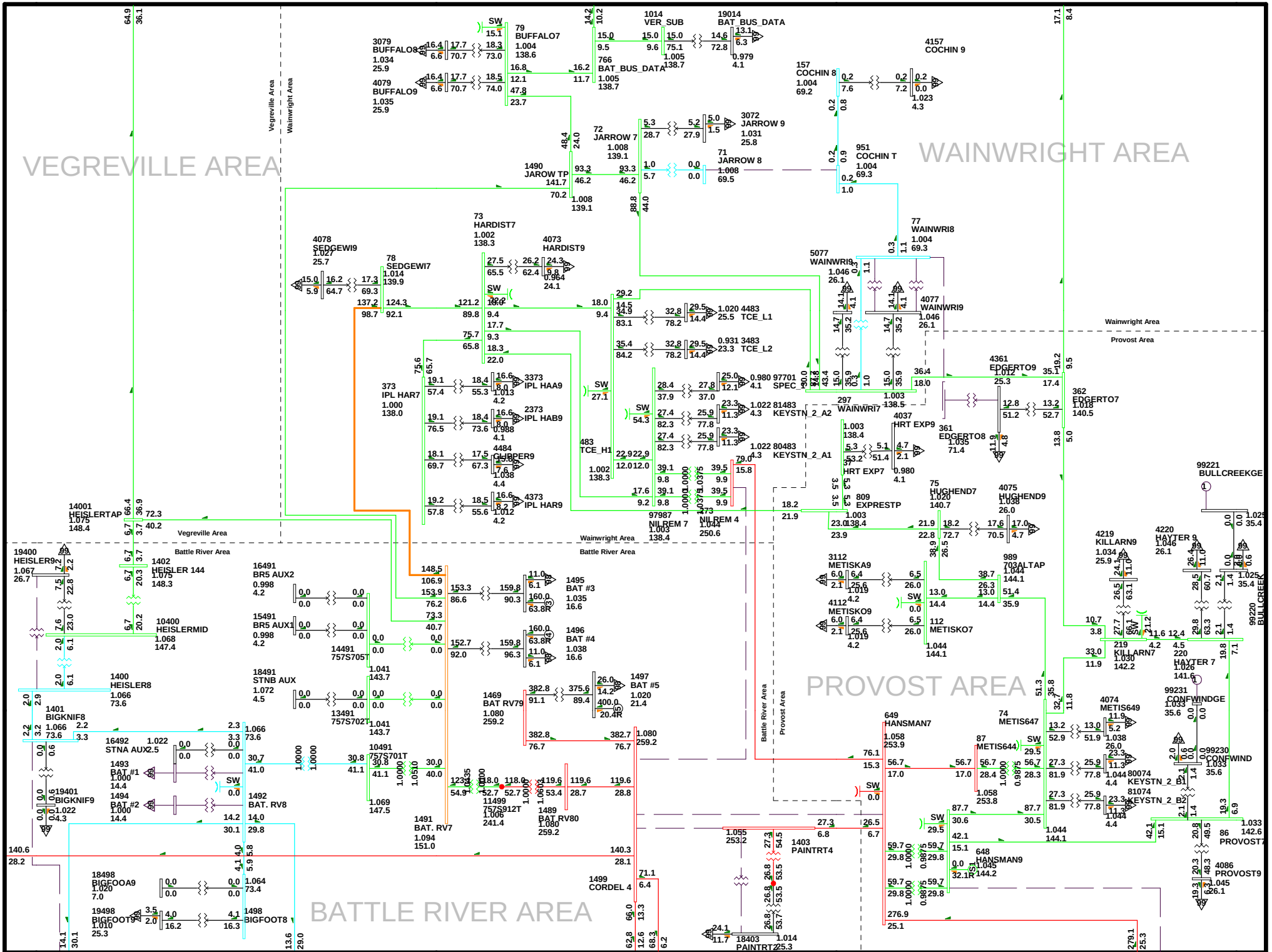
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 30 2010 16:14
D1-26

2017WP-Alt 1 BR#5 ON-7.a

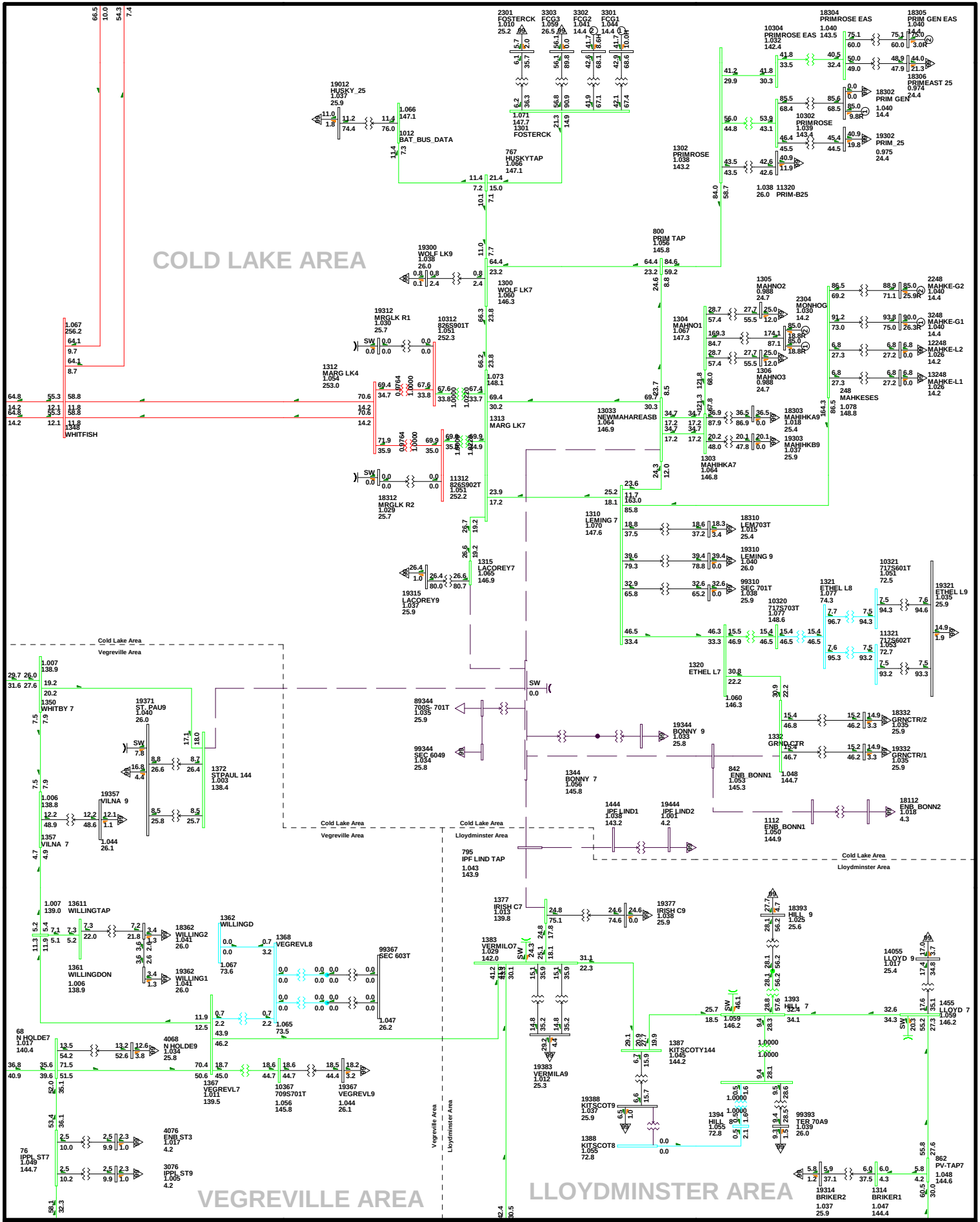
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 30 2010 16:14
D1-26

2017WP-Alt 1 BR#5 ON-7.b

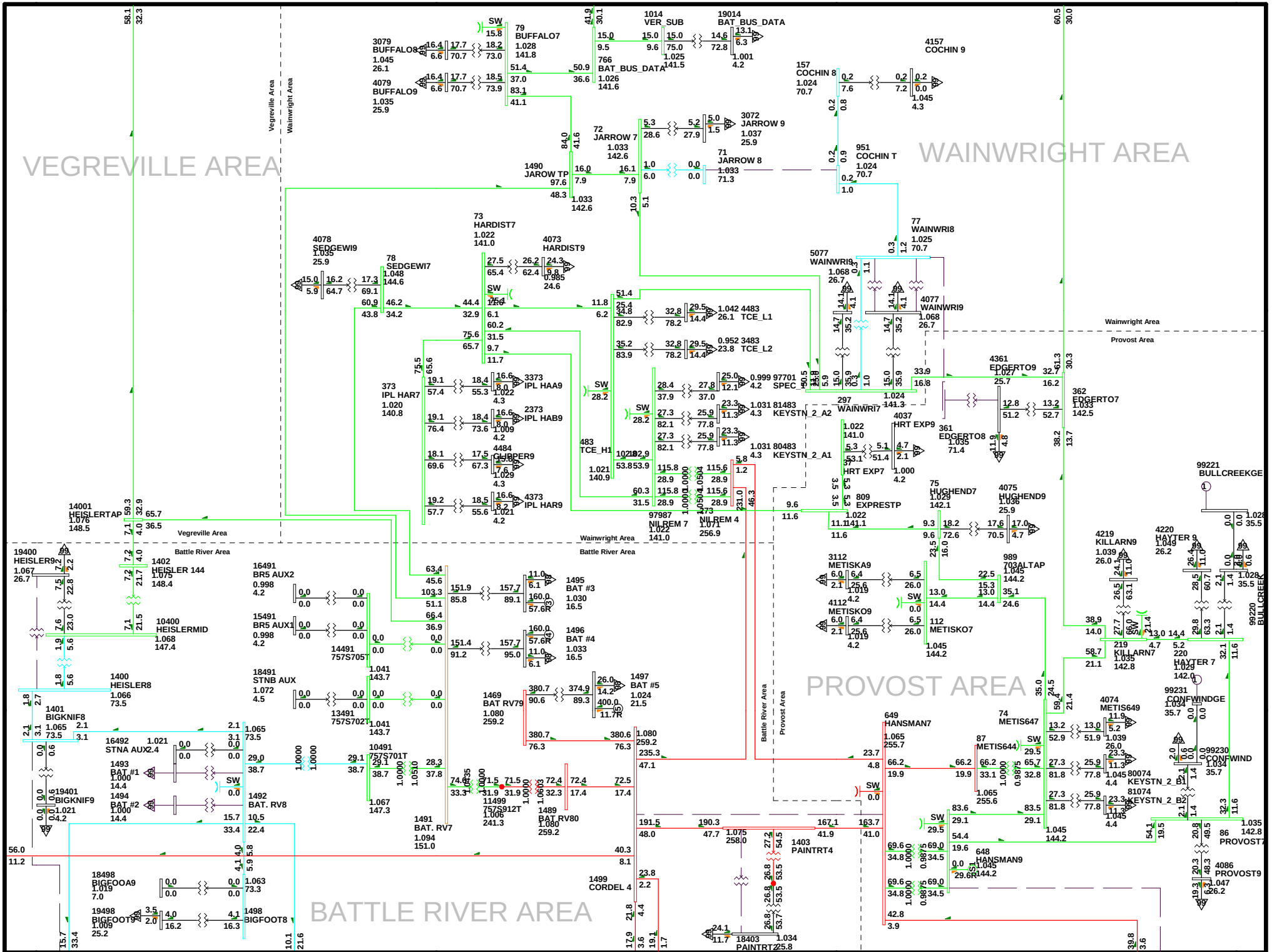
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 30 2010 16:14
D1-27

2017WP-Alt 1 BR#5 ON-8.a

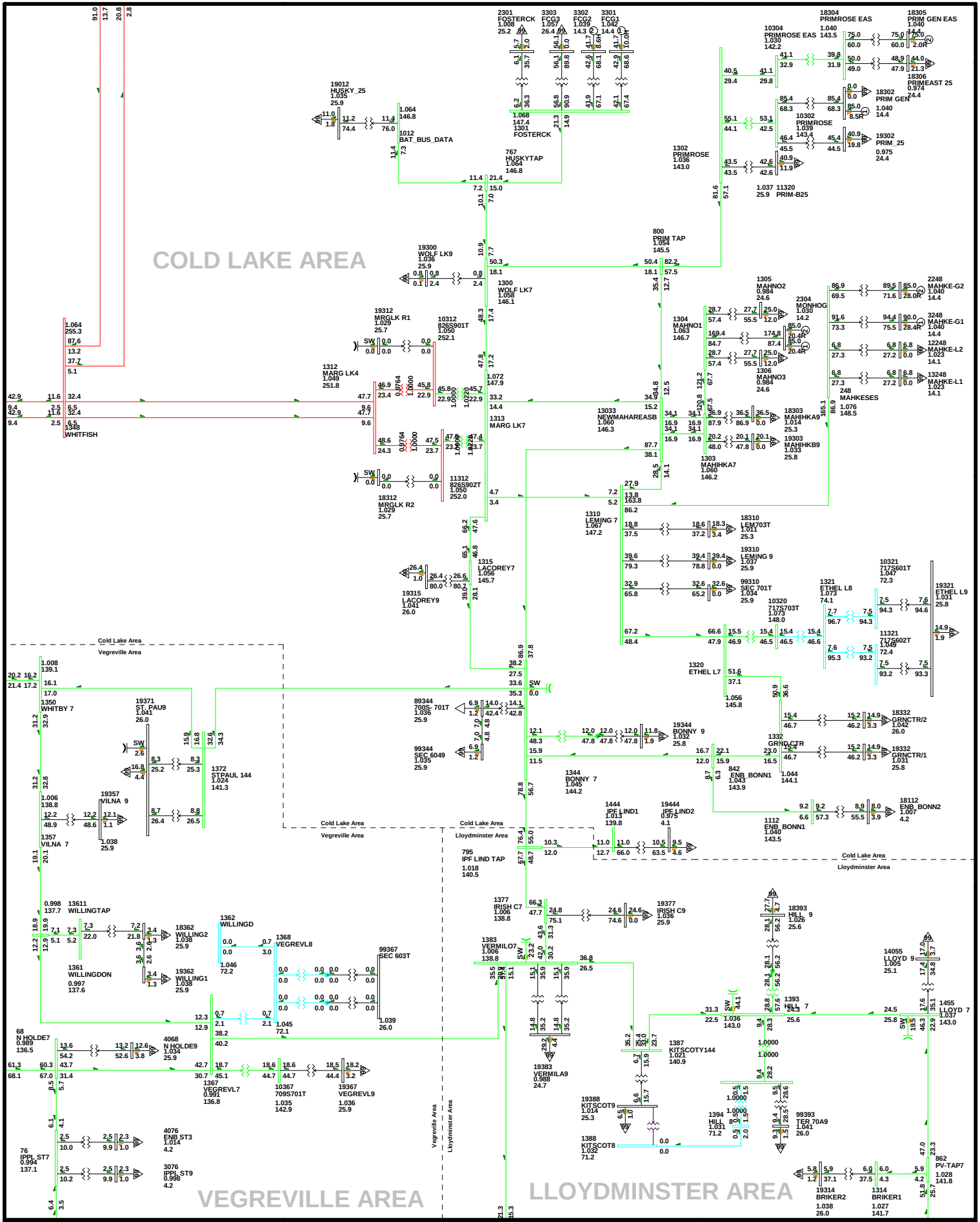
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 30 2010 16:14
D1-27

2017WP-Alt 1 BR#5 ON-8.b

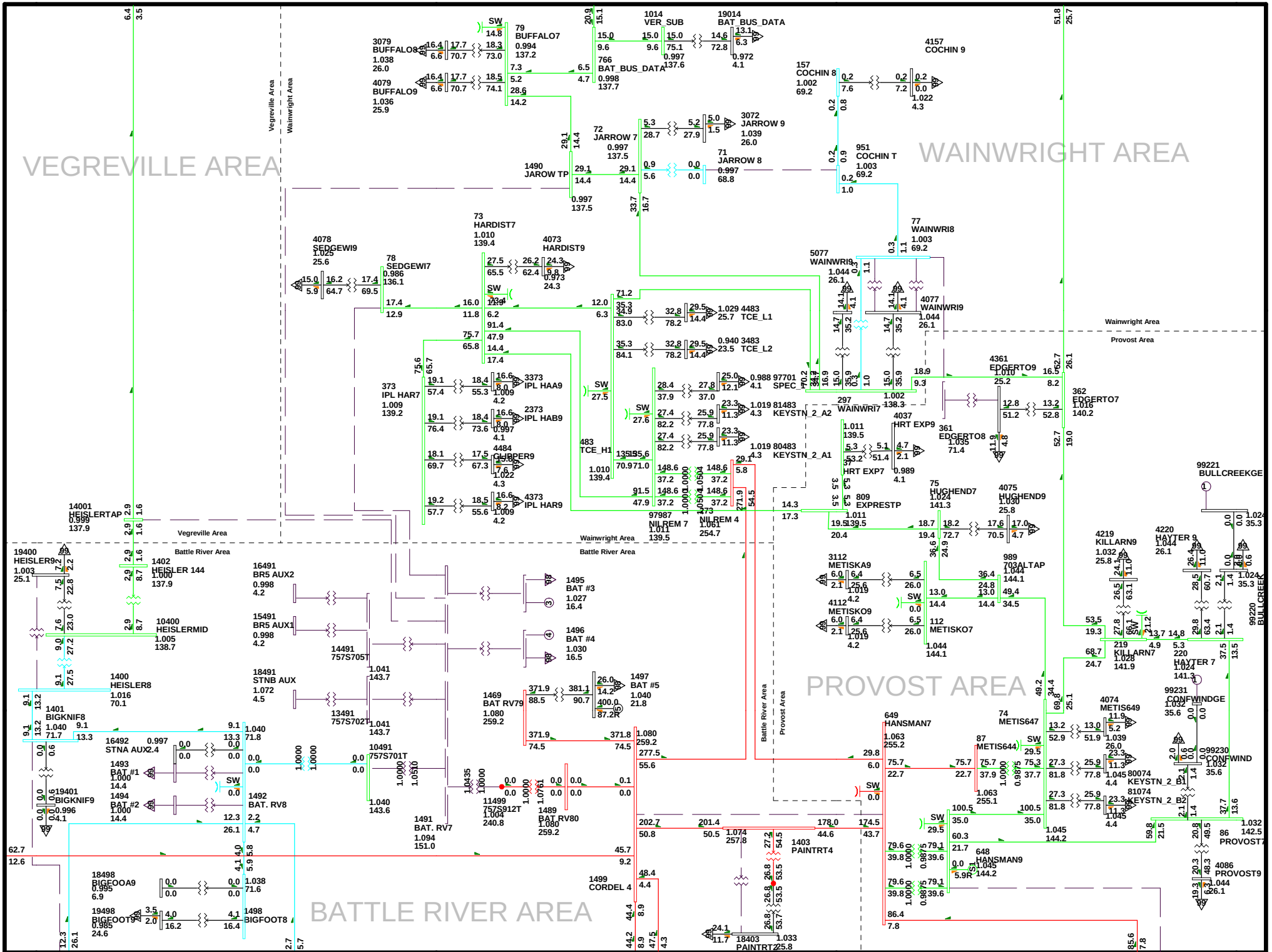
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 30 2010 16:14
D1-28

2017WP-Alt 1 BR#5 ON-9.a

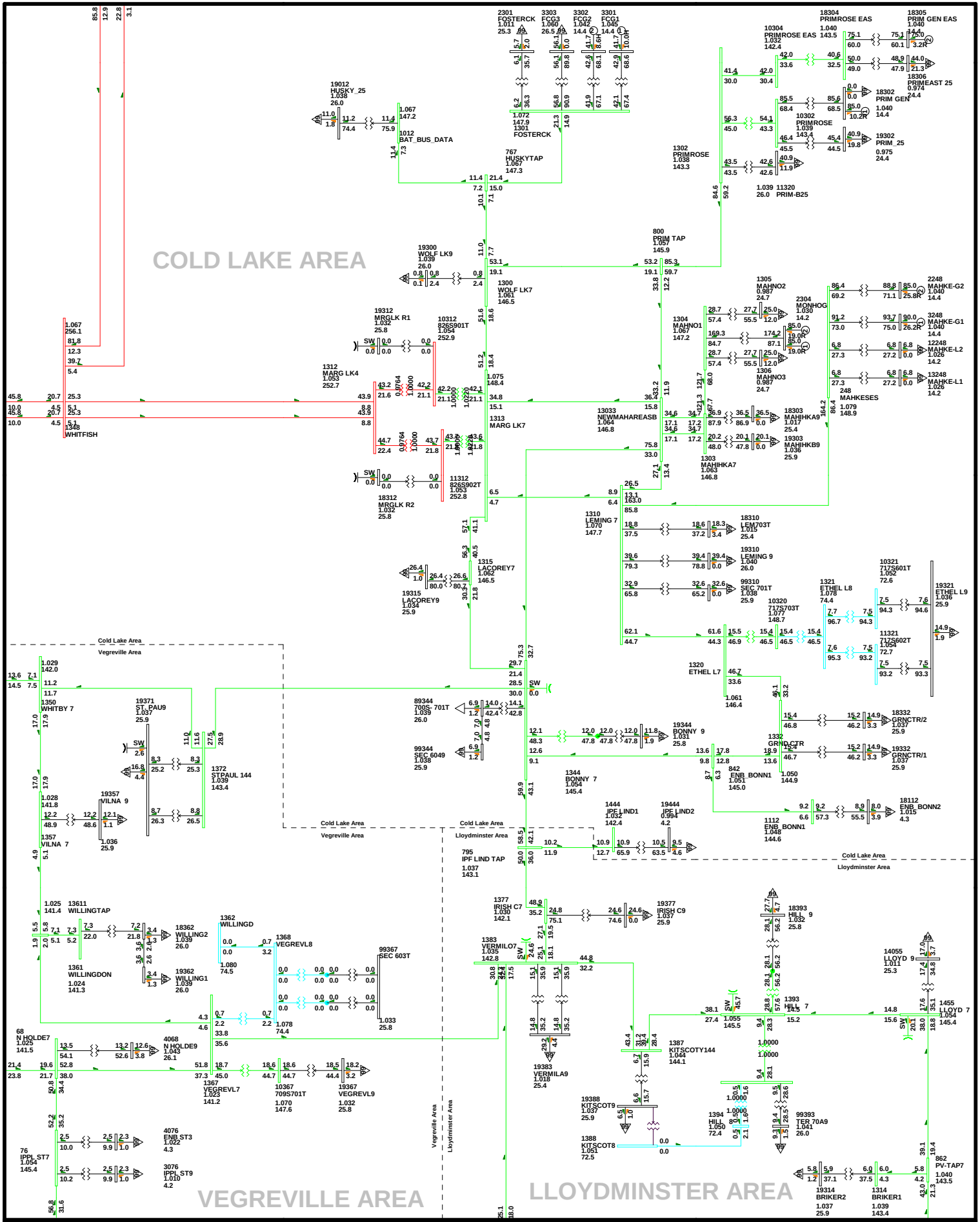
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 30 2010 16:14
D1-28

2017WP-Alt 1 BR#5 ON-9.b

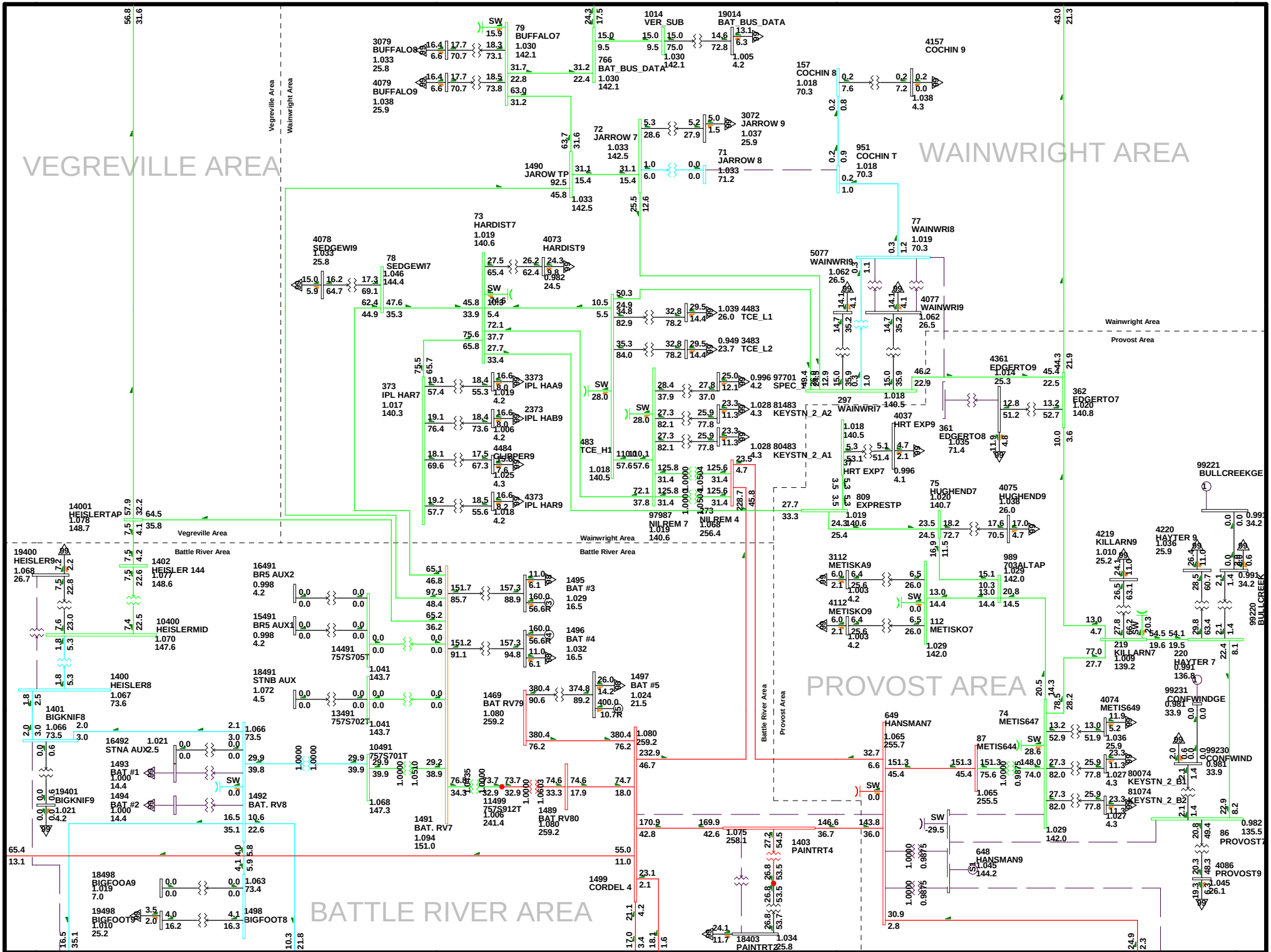
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 30 2010 16:14
D1-30

2017WP-Alt 1 BR#5 ON-10.a

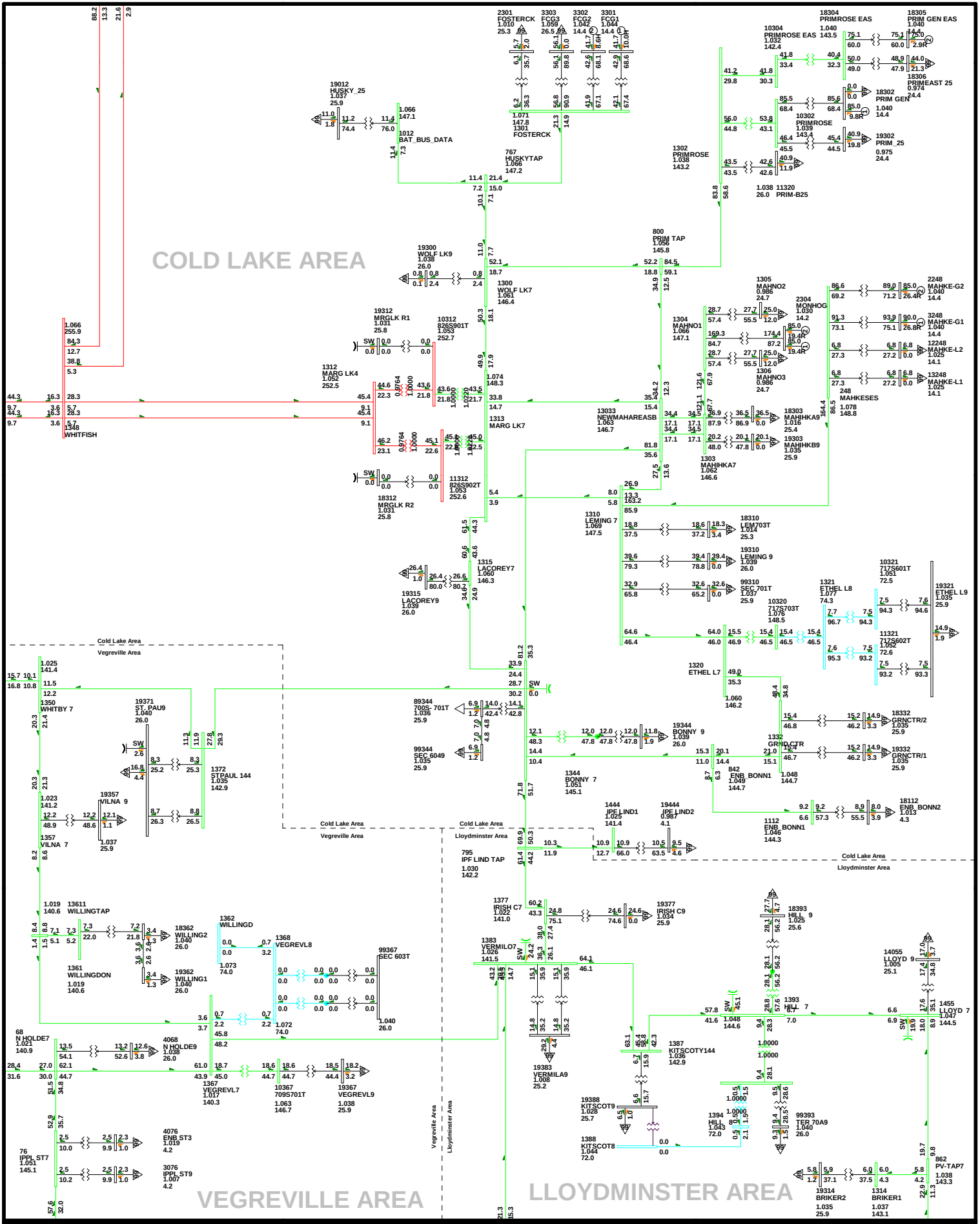
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 30 2010 16:14
D1-30

2017WP-Alt 1 BR#5 ON-10.b

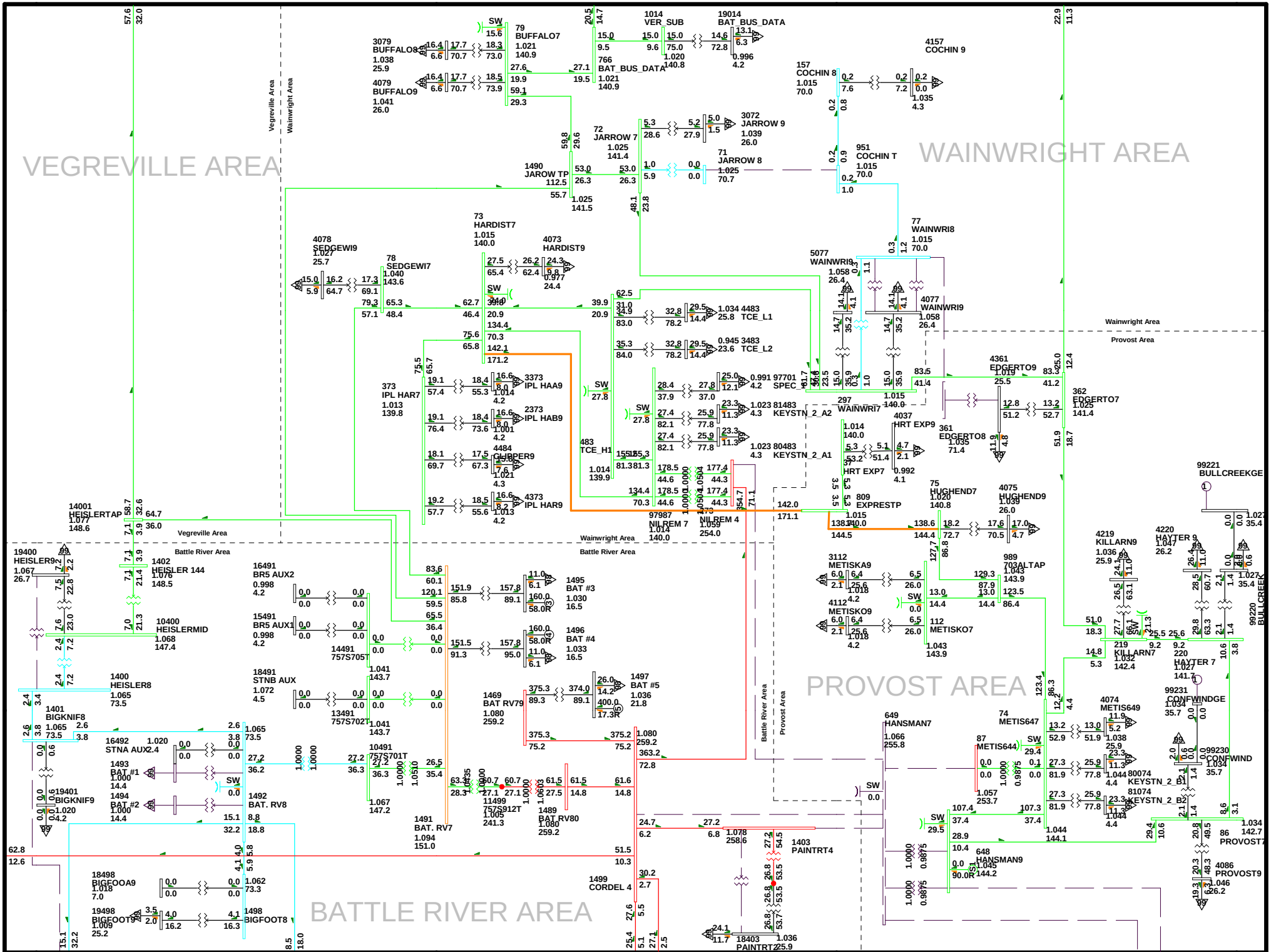
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 30 2010 16:14
D1-31

2017WP-Alt 1 BR#5 ON-11.a

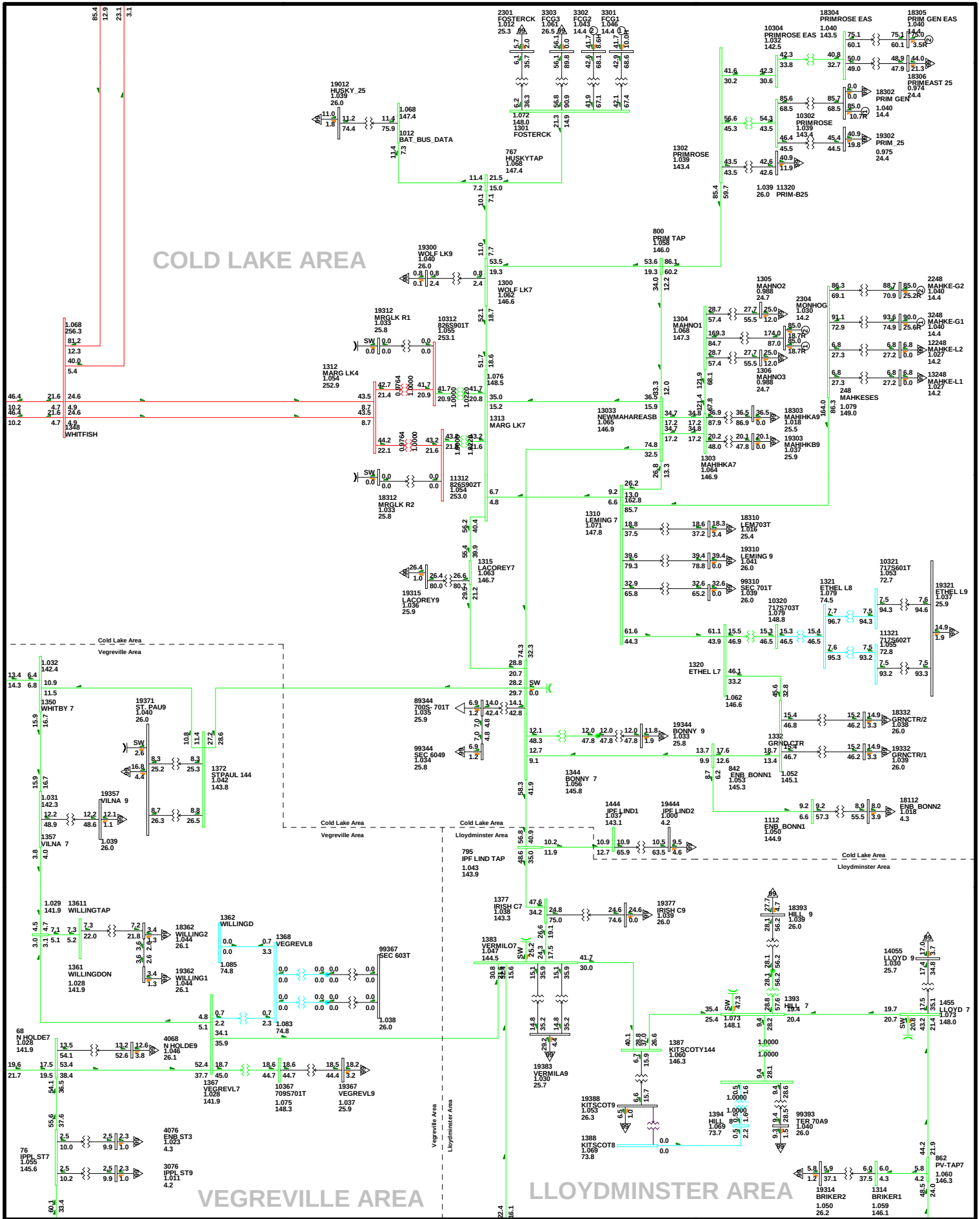
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 30 2010 16:14
D1-31

2017WP-Alt 1 BR#5 ON-11.b

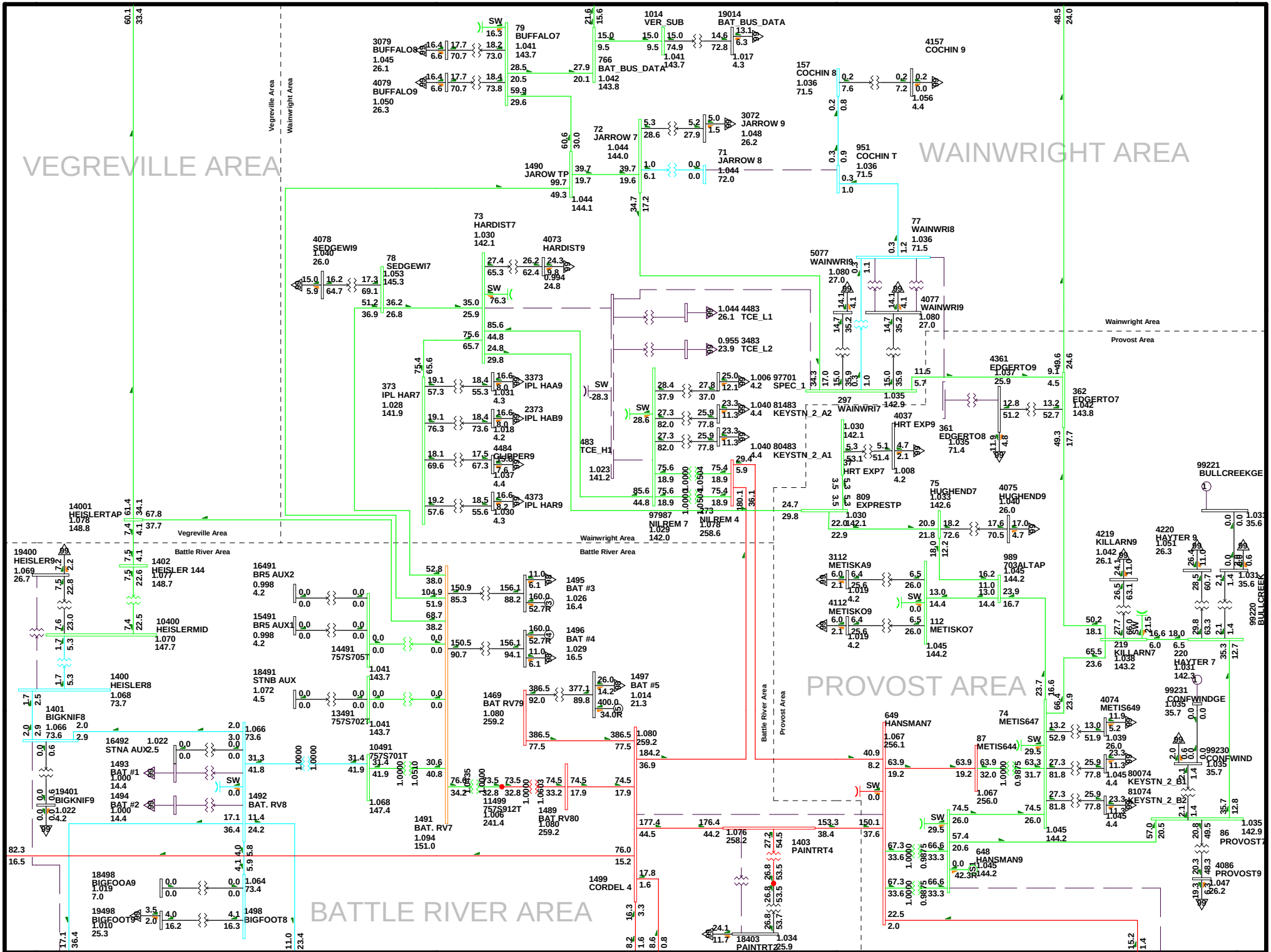
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 30 2010 16:14
D1-32

2017WP-Alt 1 BR#5 ON-12.a

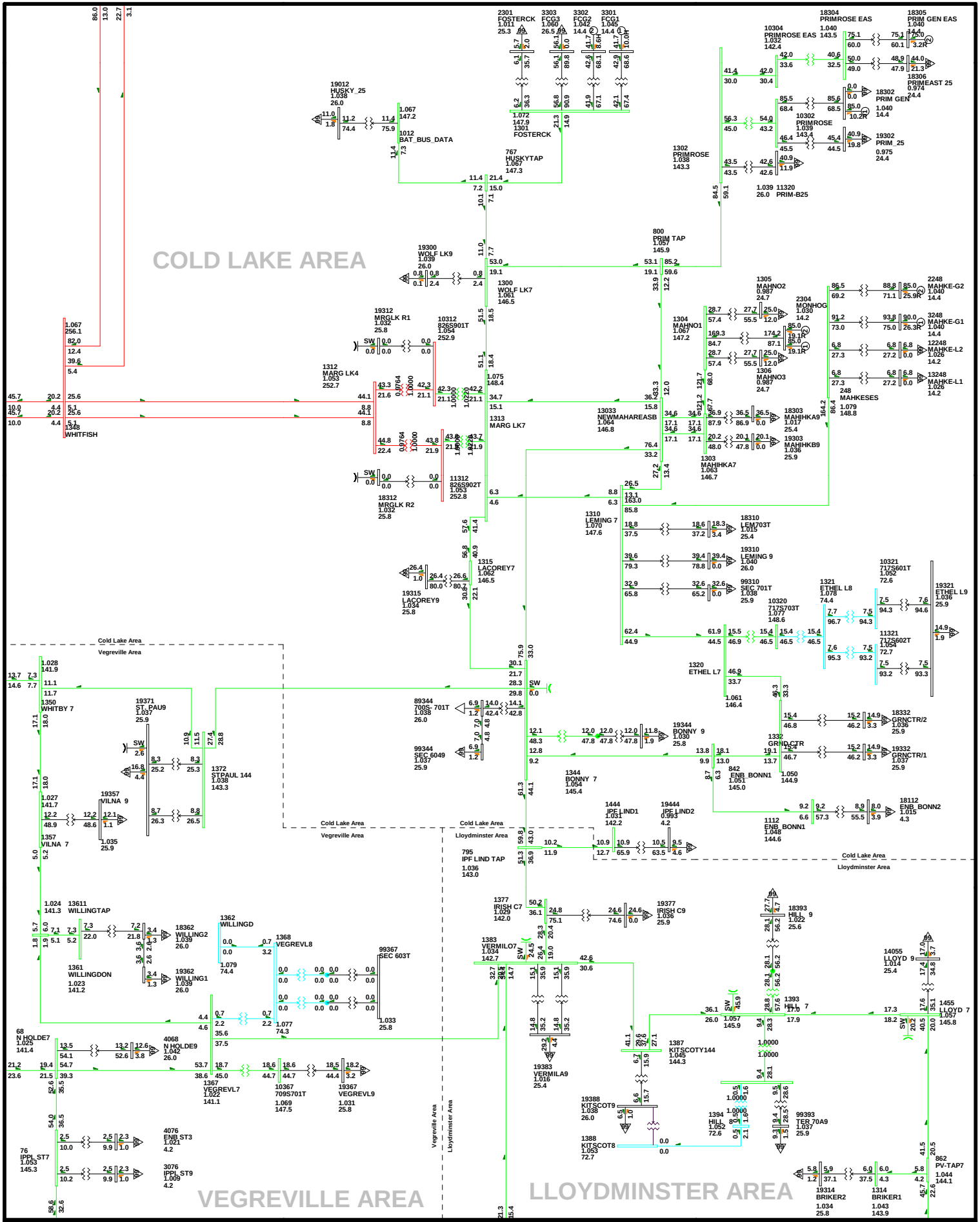
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 30 2010 16:14
D1-32

2017WP-Alt 1 BR#5 ON-12.b

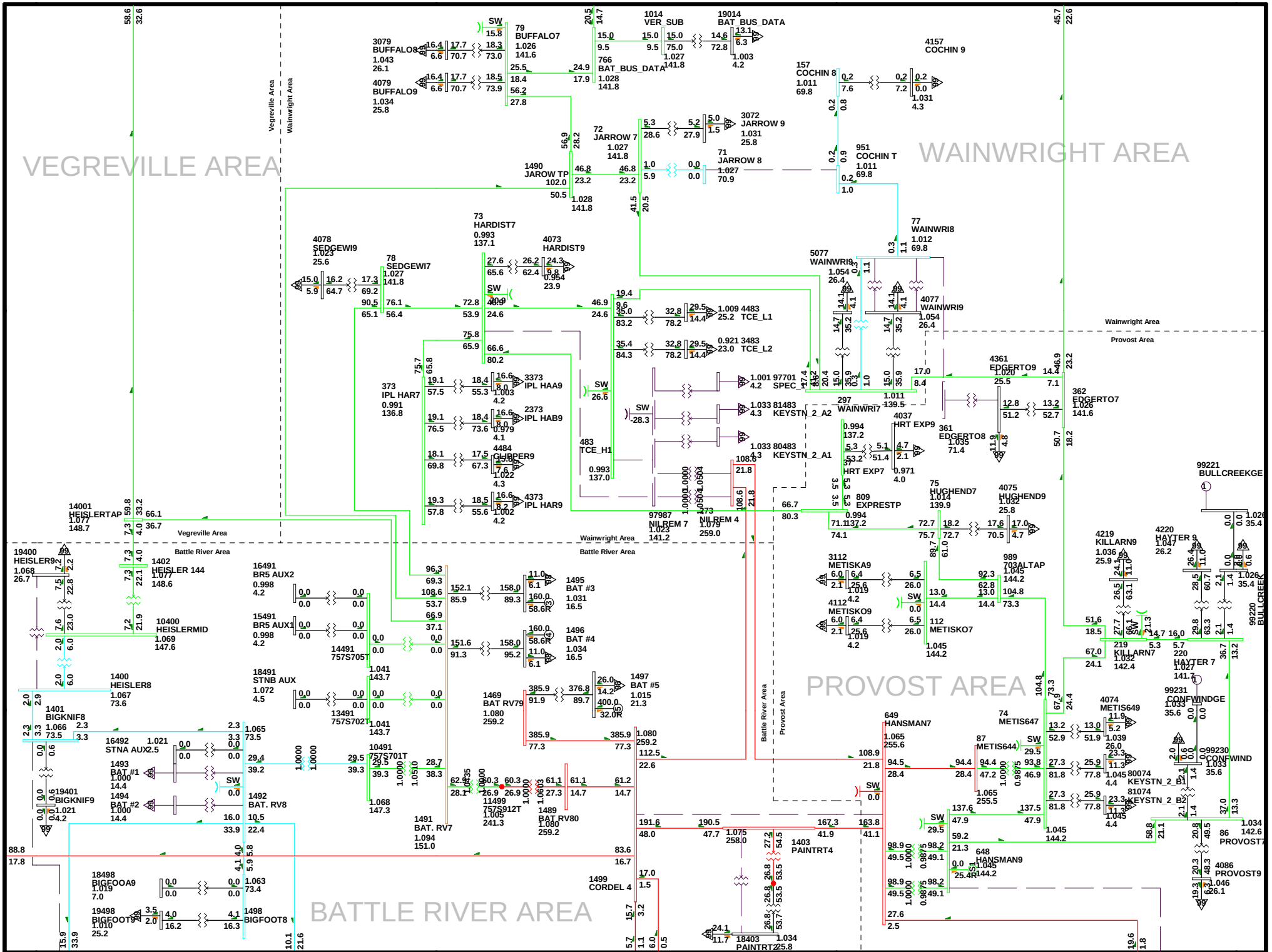
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 30 2010 16:15
D1-33

2017WP-Alt 1 BR#5 ON-13.a

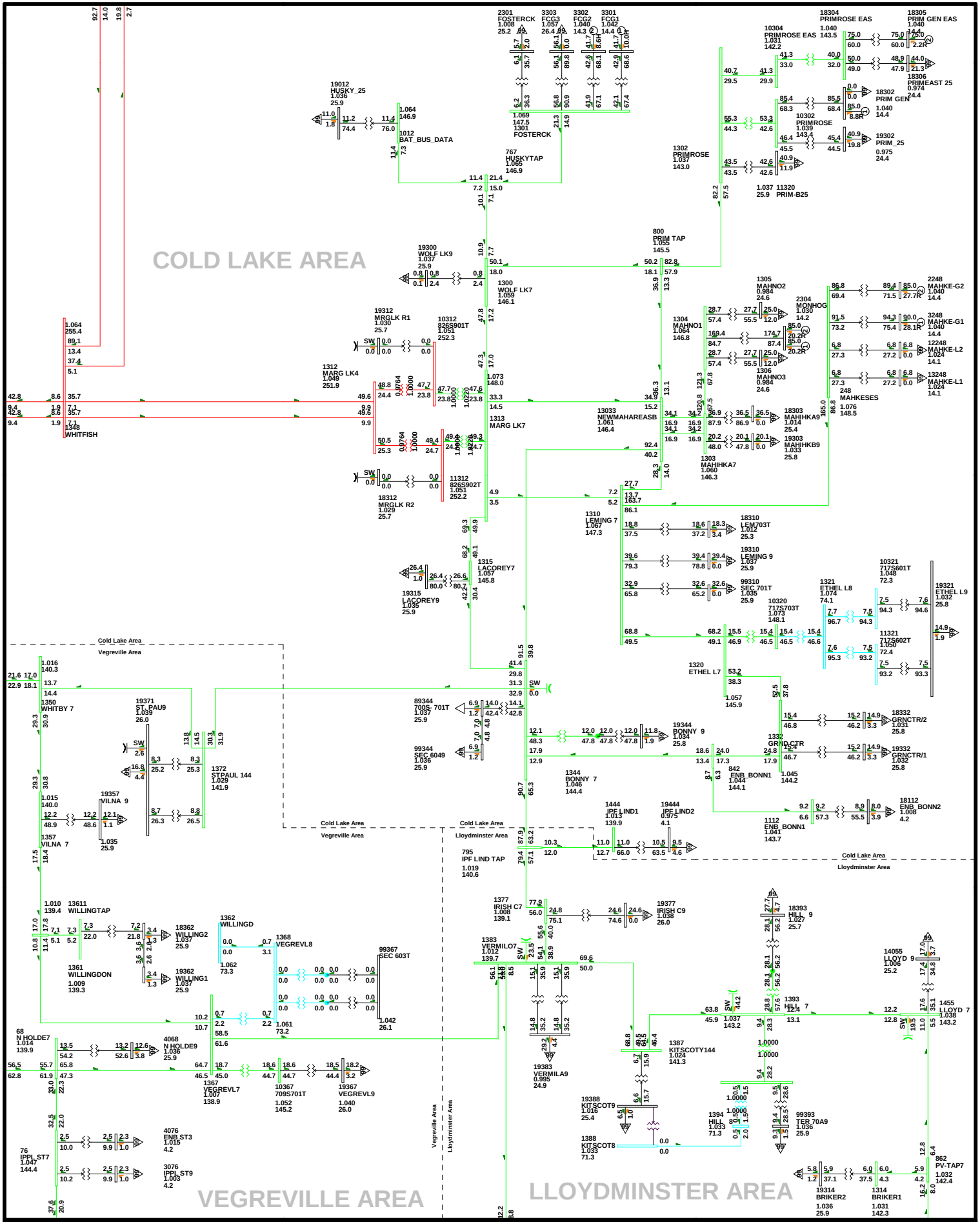
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 30 2010 16:15
D1-33

2017WP-Alt 1 BR#5 ON-13.b

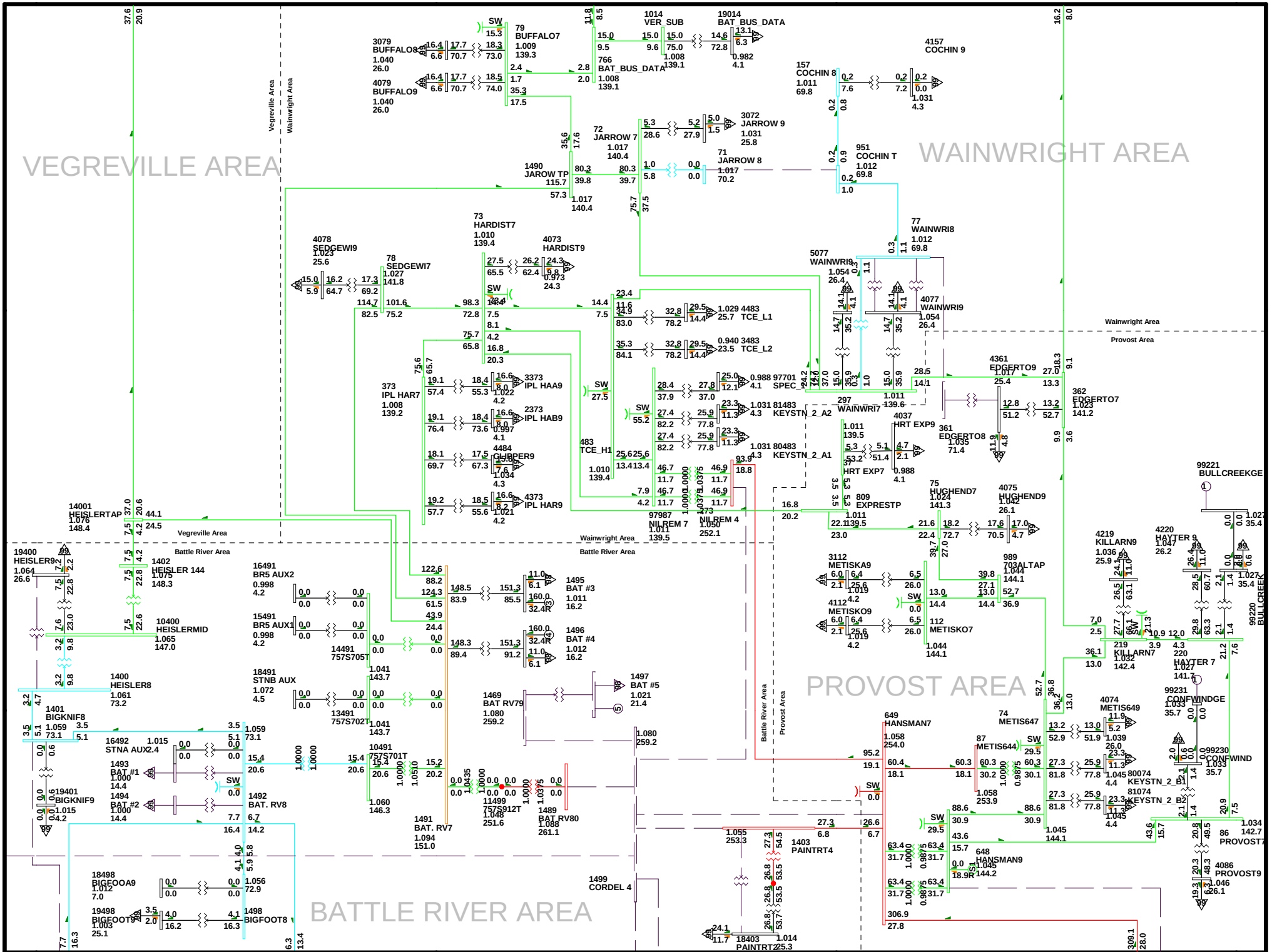
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 30 2010 16:15
D1-34

2017WP-Alt 1 BR#5 ON-14.a

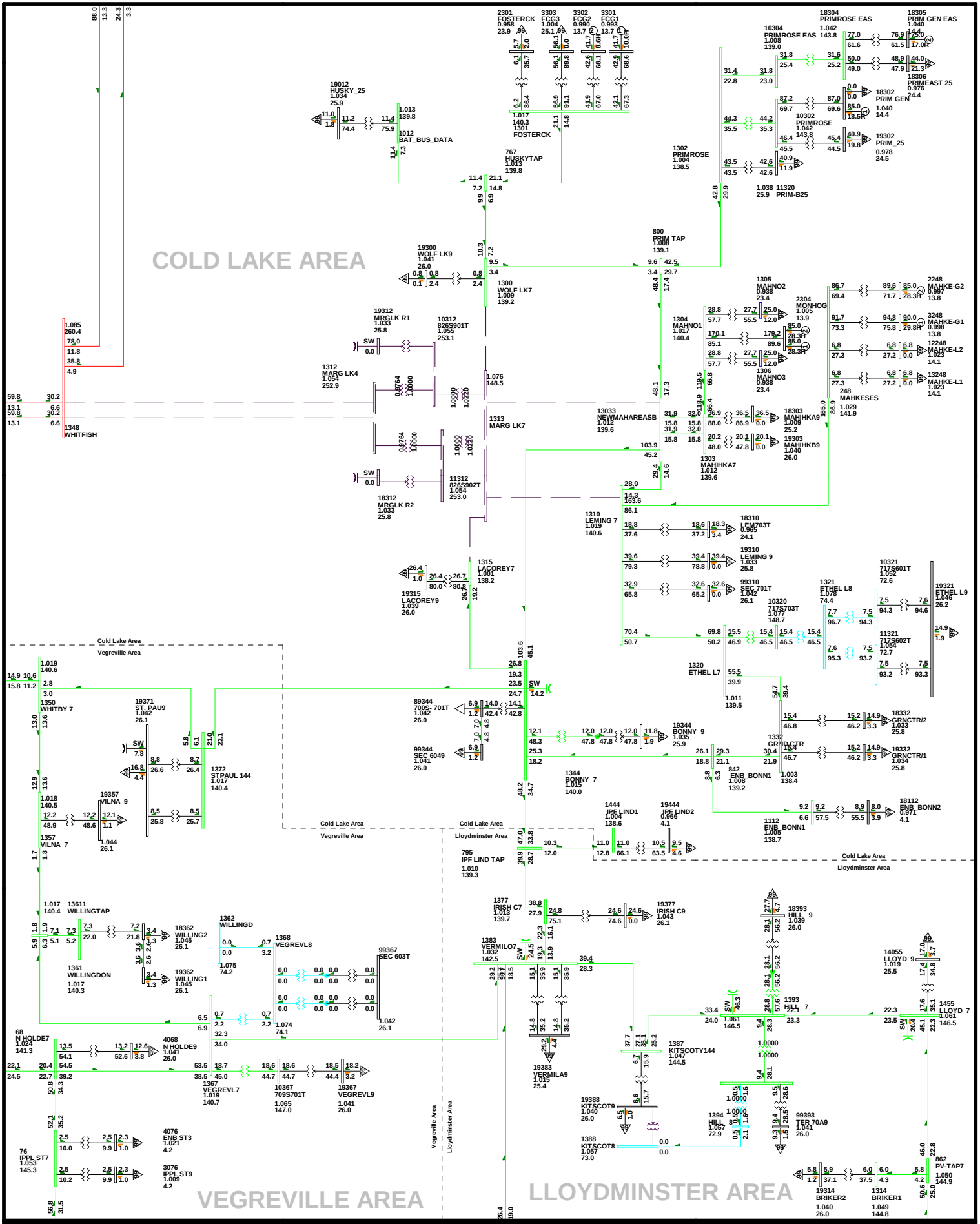
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 30 2010 16:15
D1-34

2017WP-Alt 1 BR#5 ON-14.b

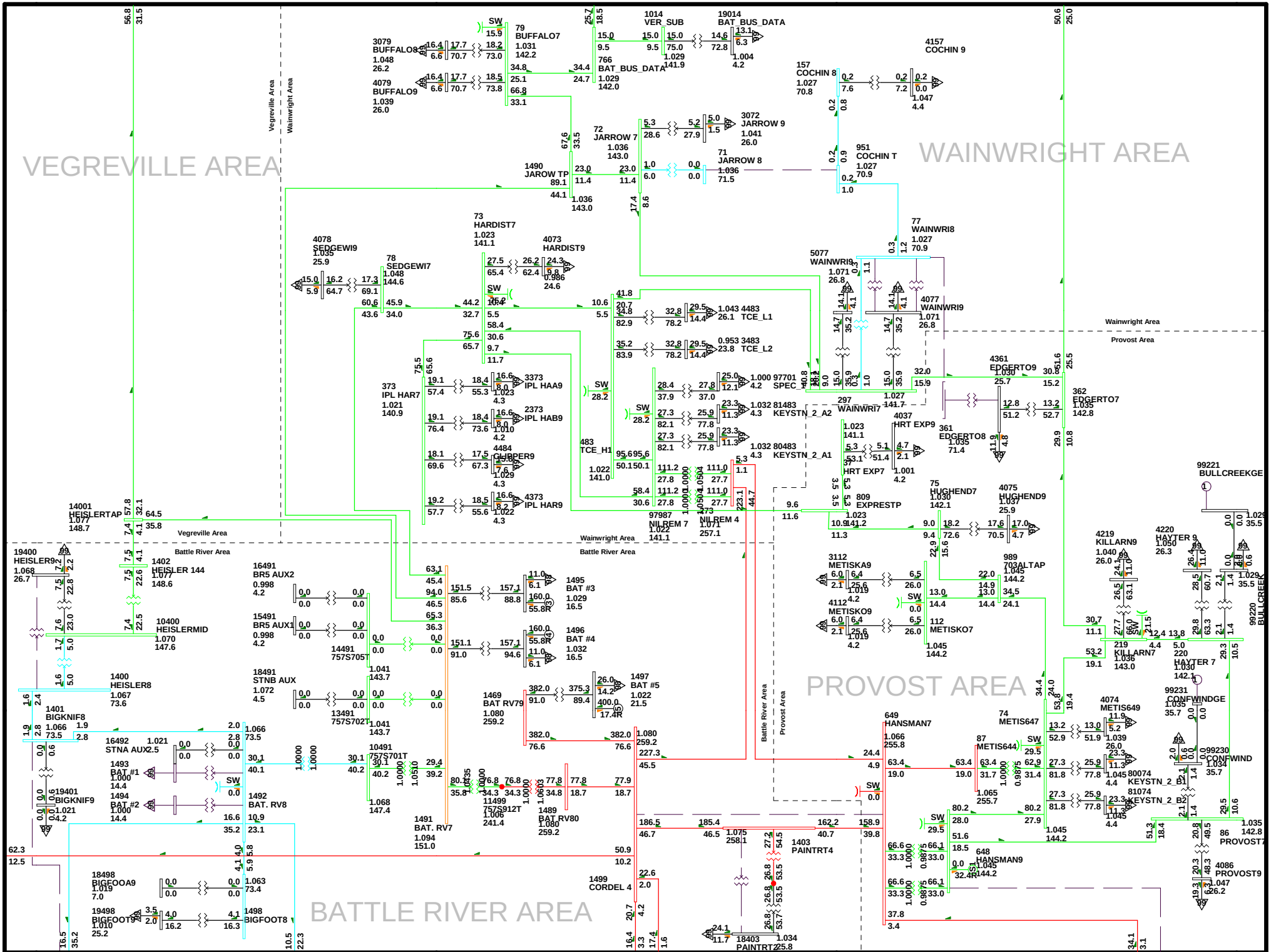
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 30 2010 16:15
D1-35

2017WP-Alt 1 BR#5 ON-15.a

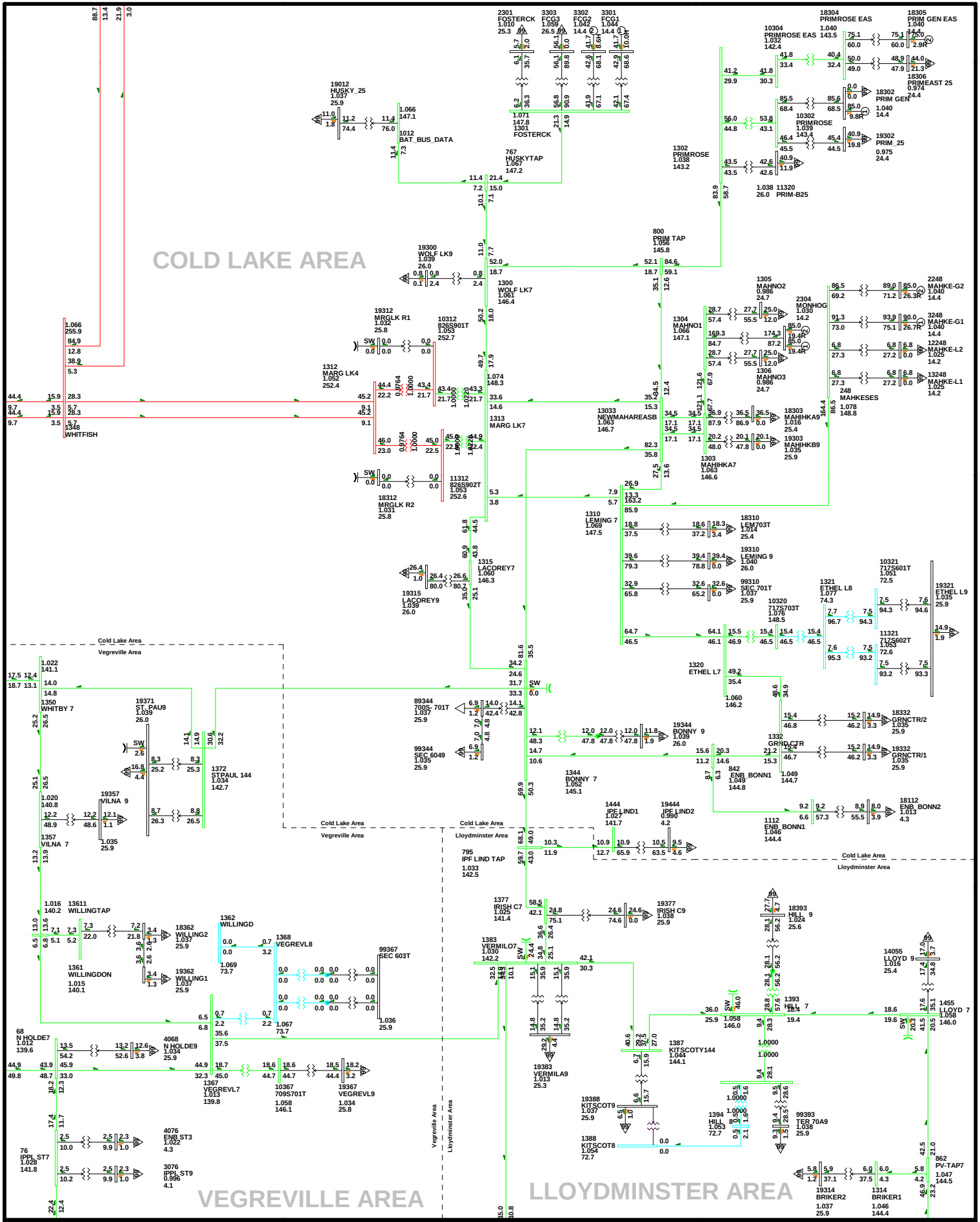
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 30 2010 16:15
D1-35

2017WP-Alt 1 BR#5 ON-15.b

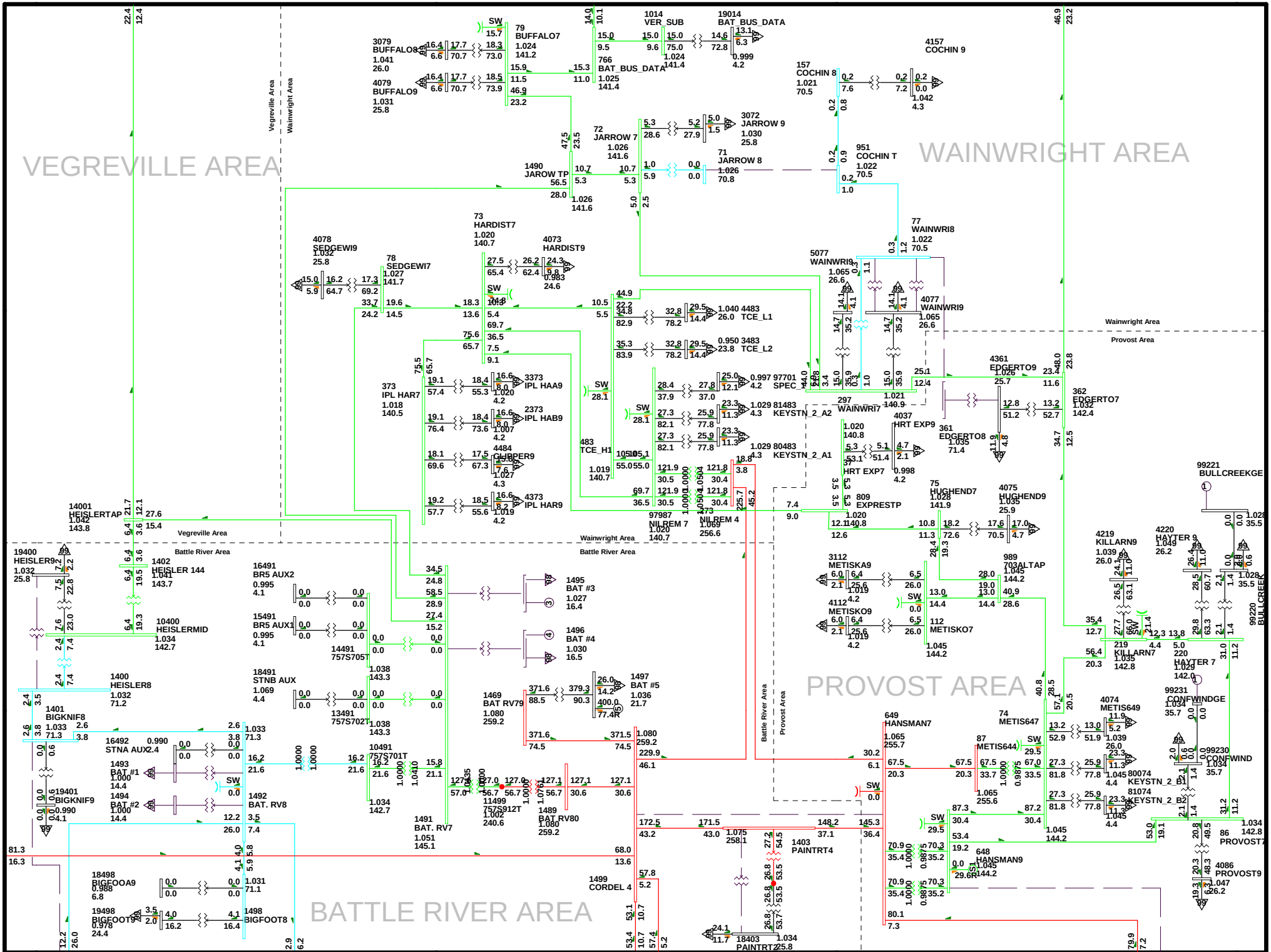
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 30 2010 16:15
D1-36

2017WP-Alt 1 BR#5 ON-16.a

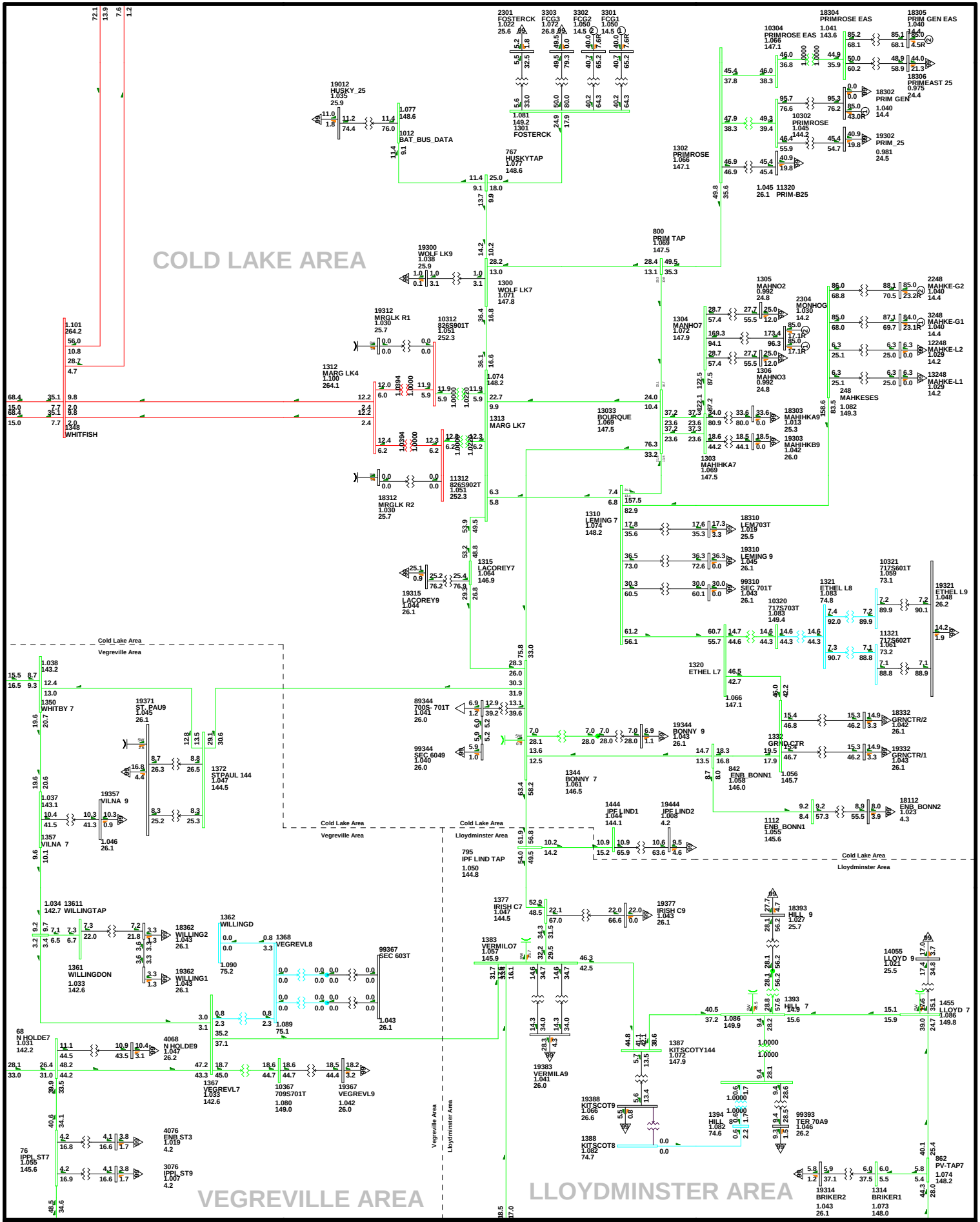
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 30 2010 16:15
D1-36

2017WP-Alt 1 BR#5 ON-16.b

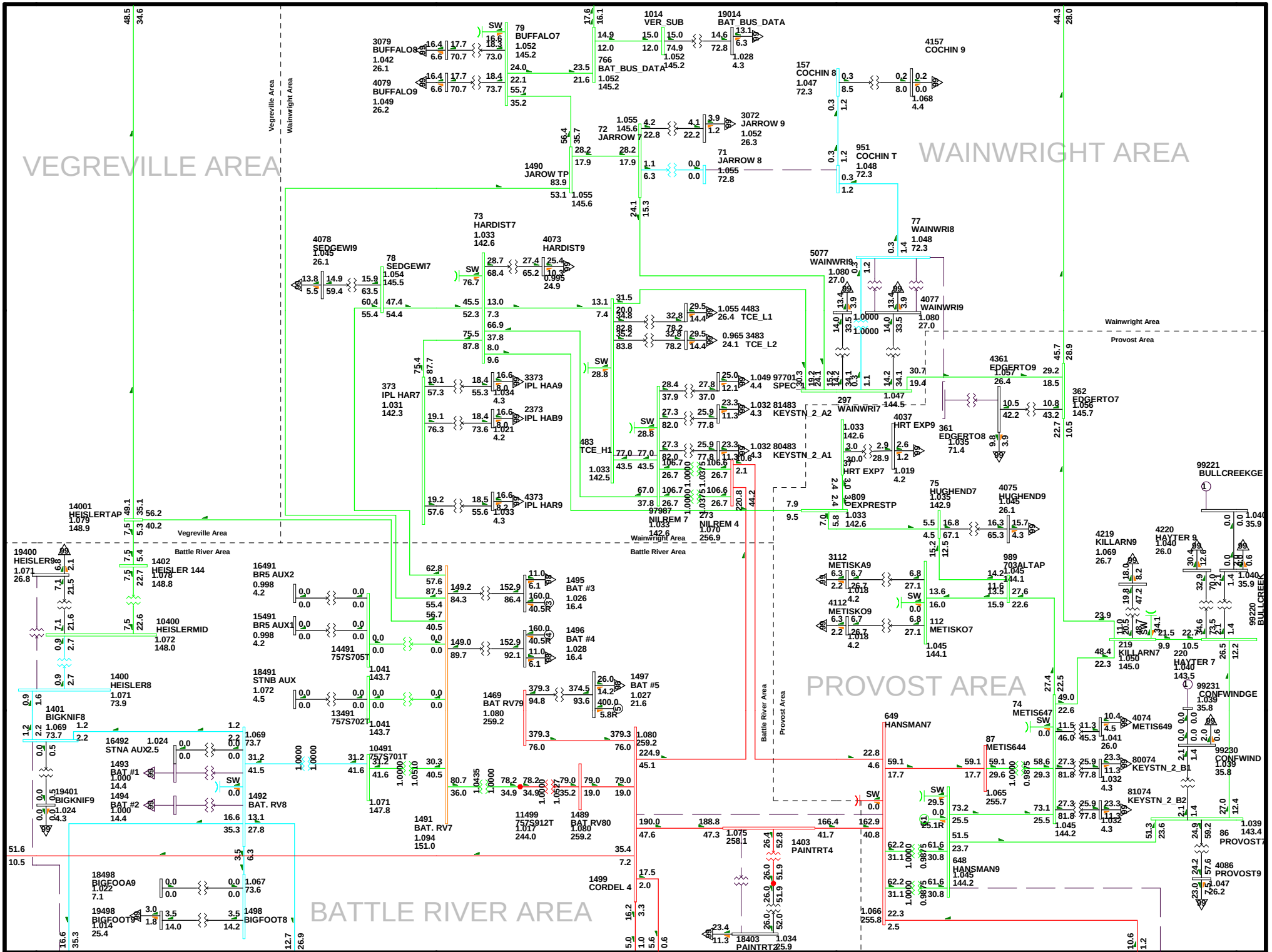
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 10:53
D1-00

2017SP-Alt 1 BR#5 ON-1.a

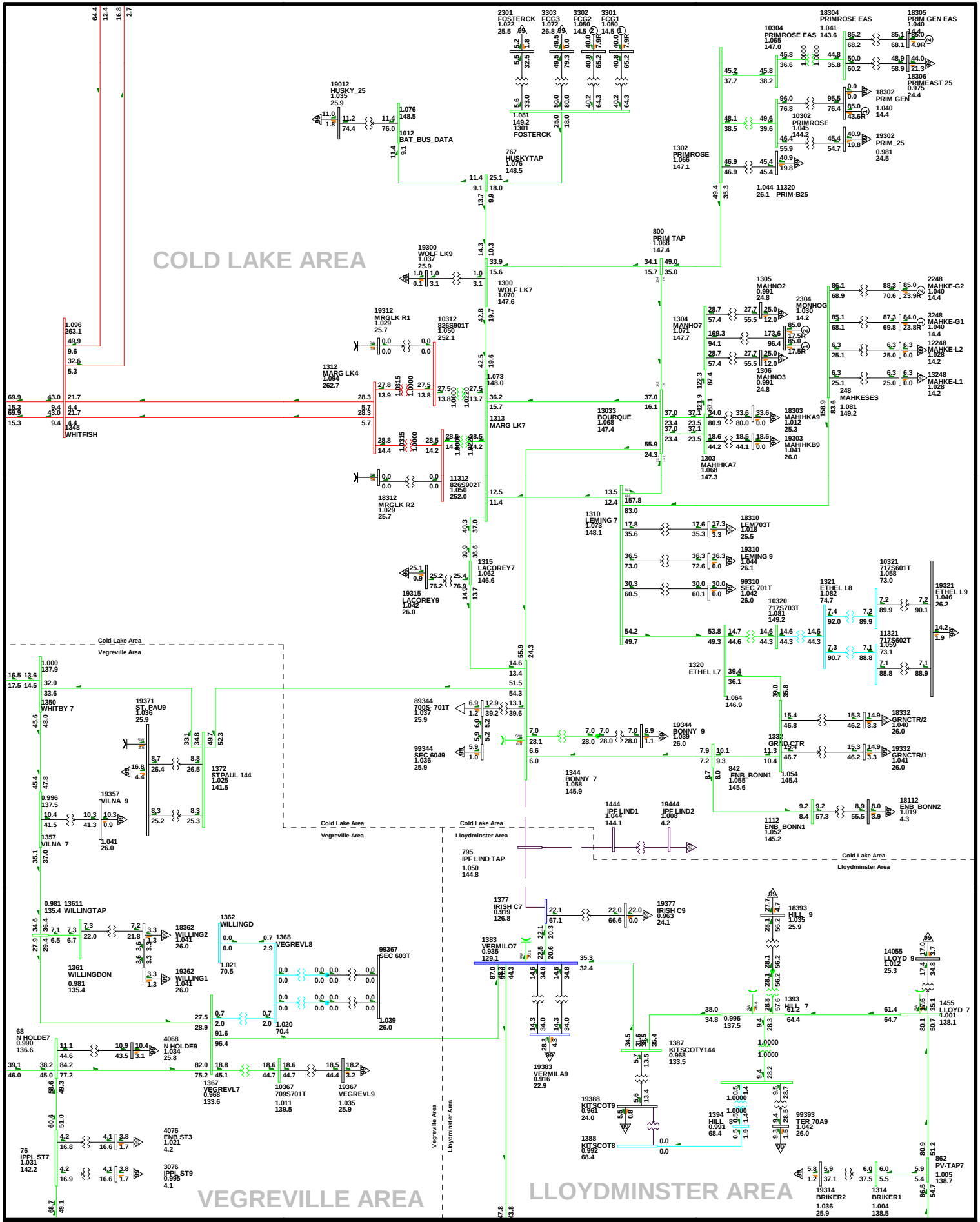
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 10:53
D1-00

2017SP-Alt 1 BR#5 ON-1.b

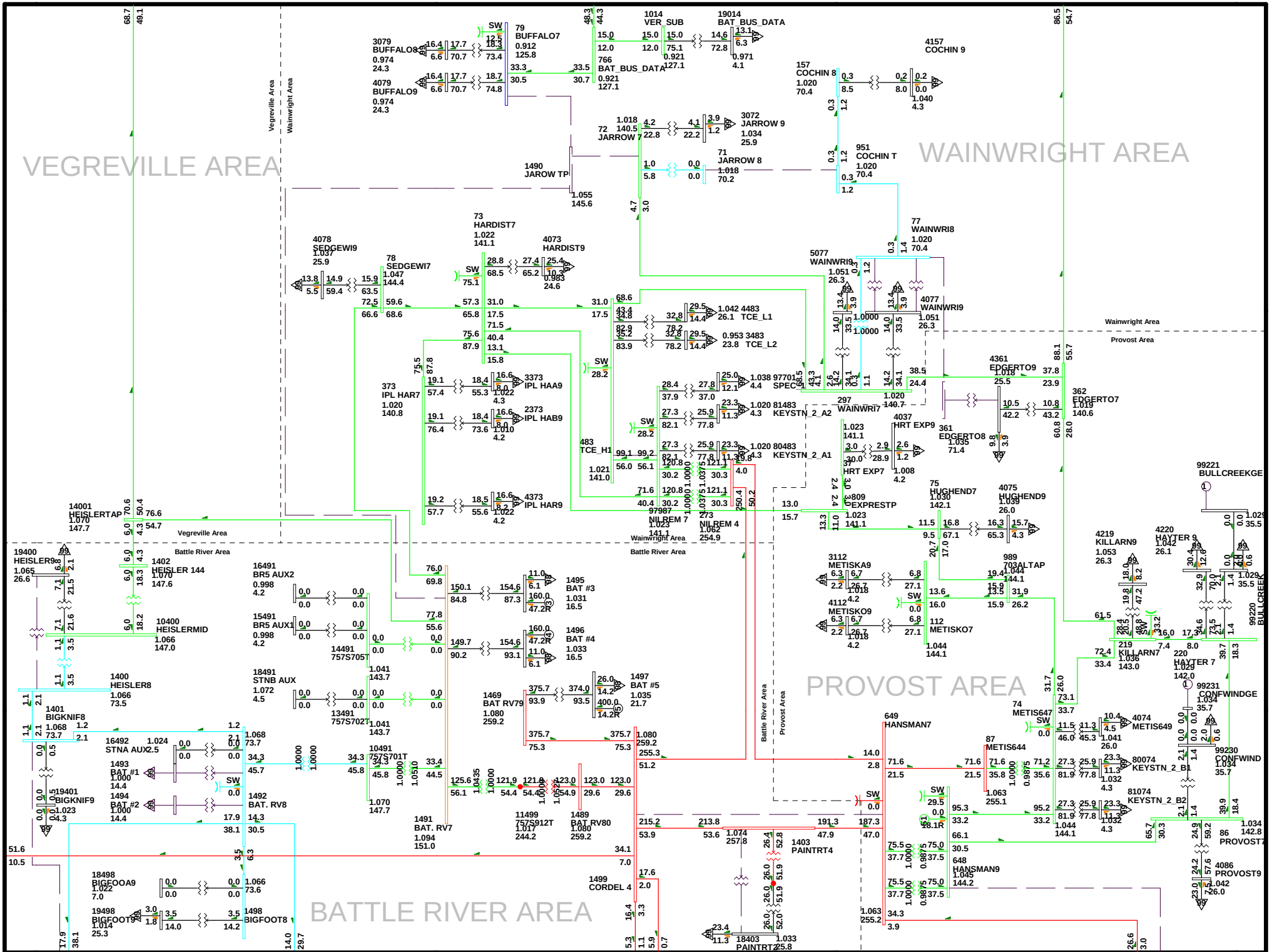
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 10:53
D1-21

2017SP-Alt 1 BR#5 ON-2.a

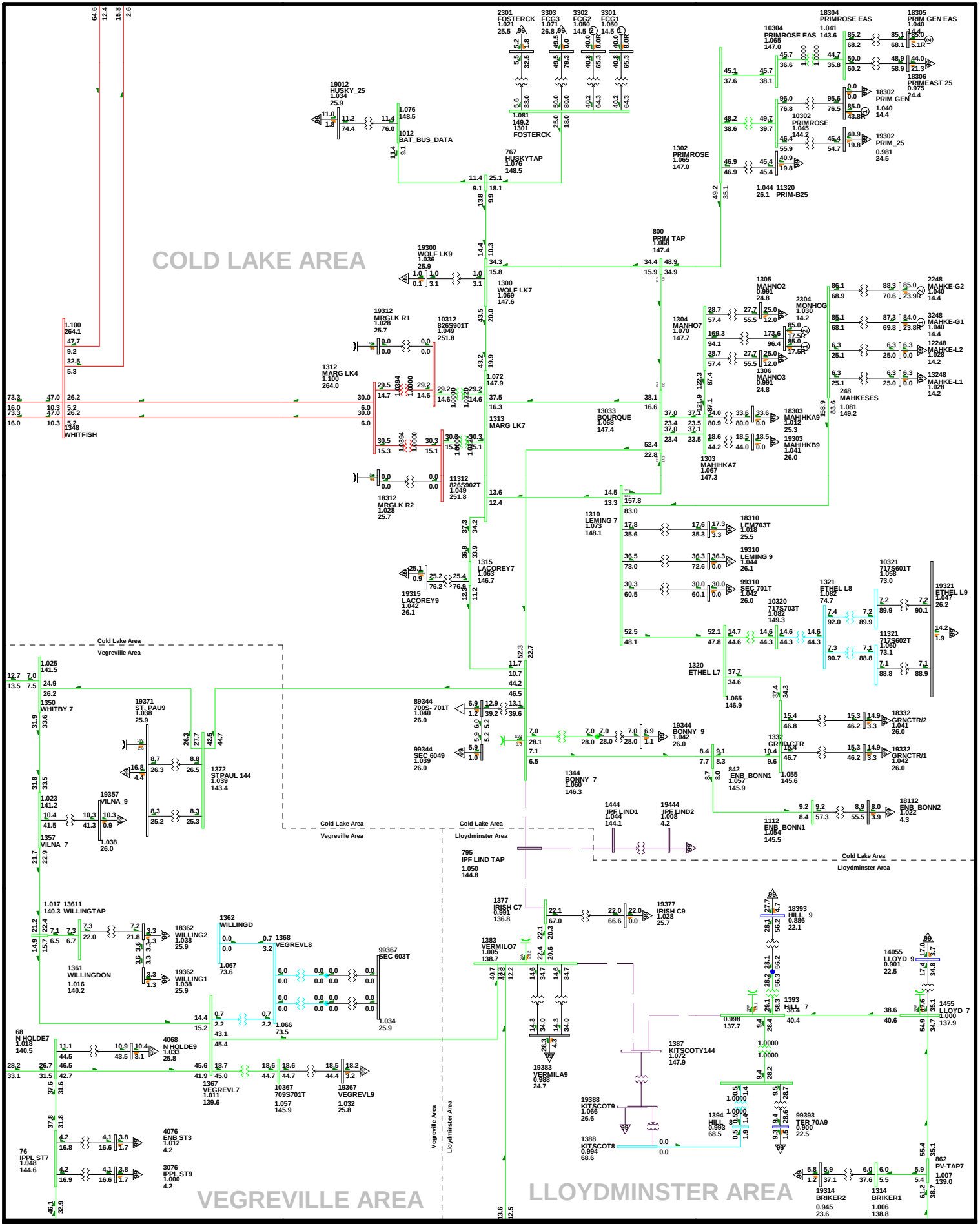
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 10:54
D1-21

2017SP-Alt 1 BR#5 ON-2.b

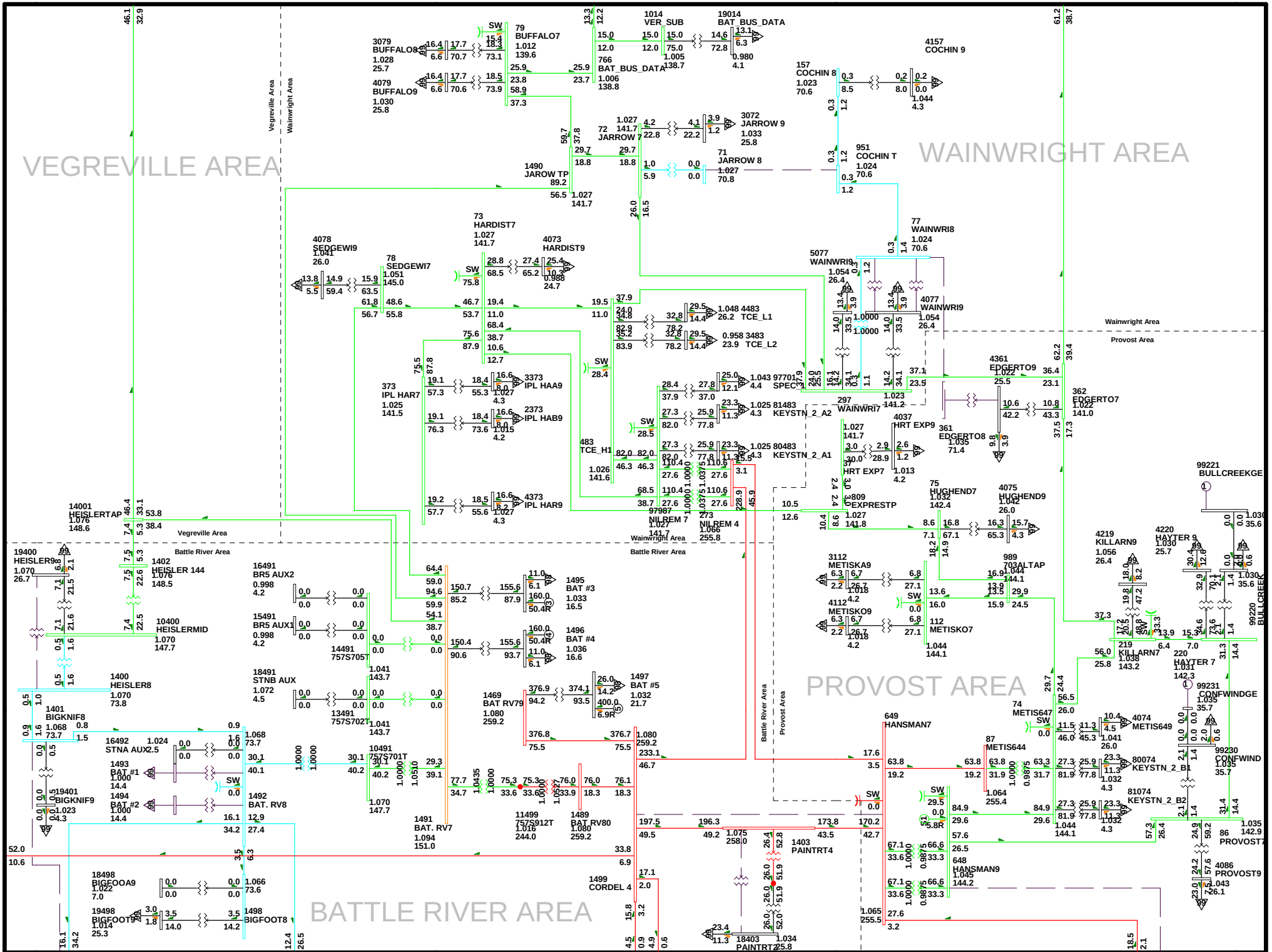
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 10:54
D1-23

2017SP-Alt 1 BR#5 ON-3.a

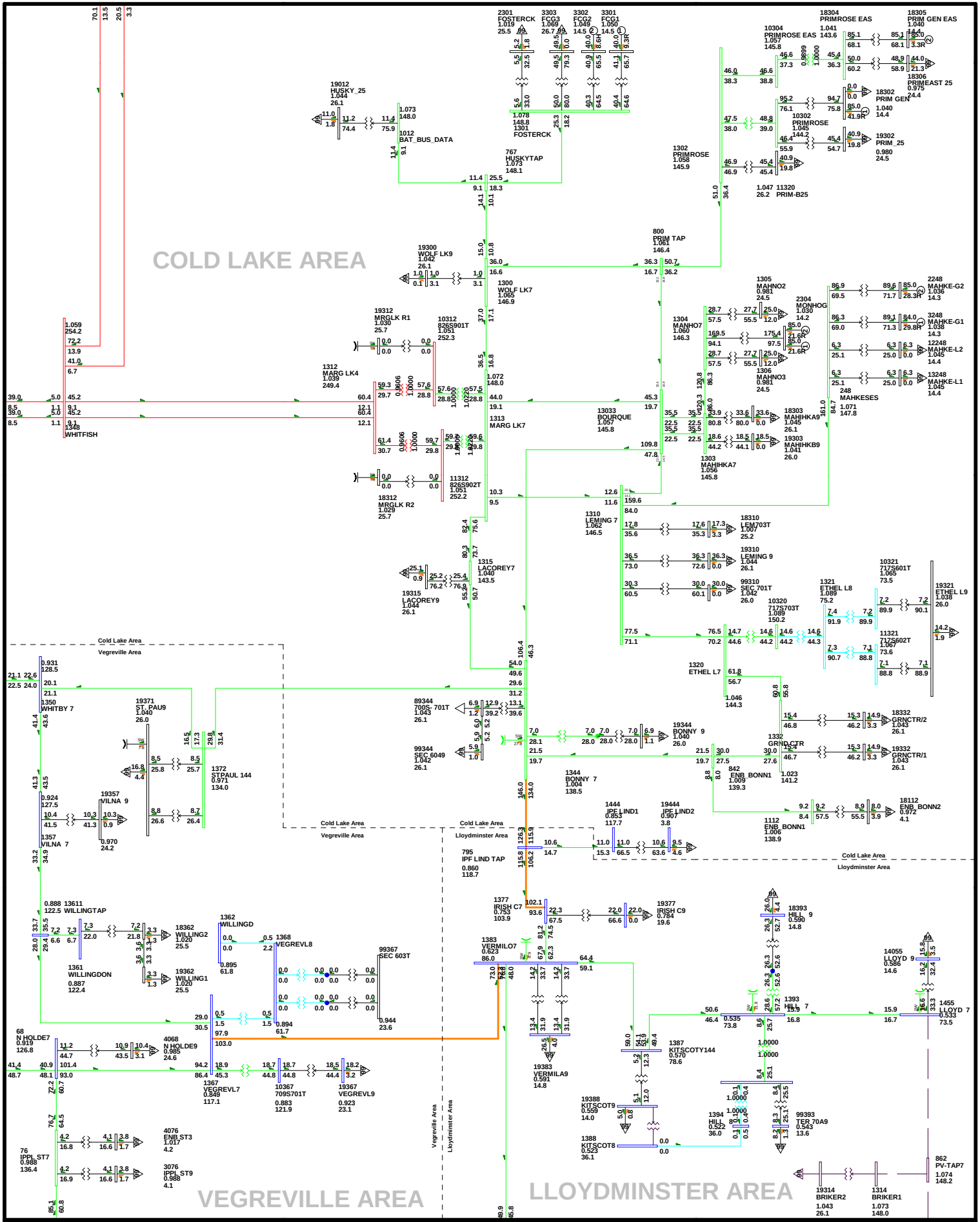
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 10:54
D1-23

2017SP-Alt 1 BR#5 ON-3.b

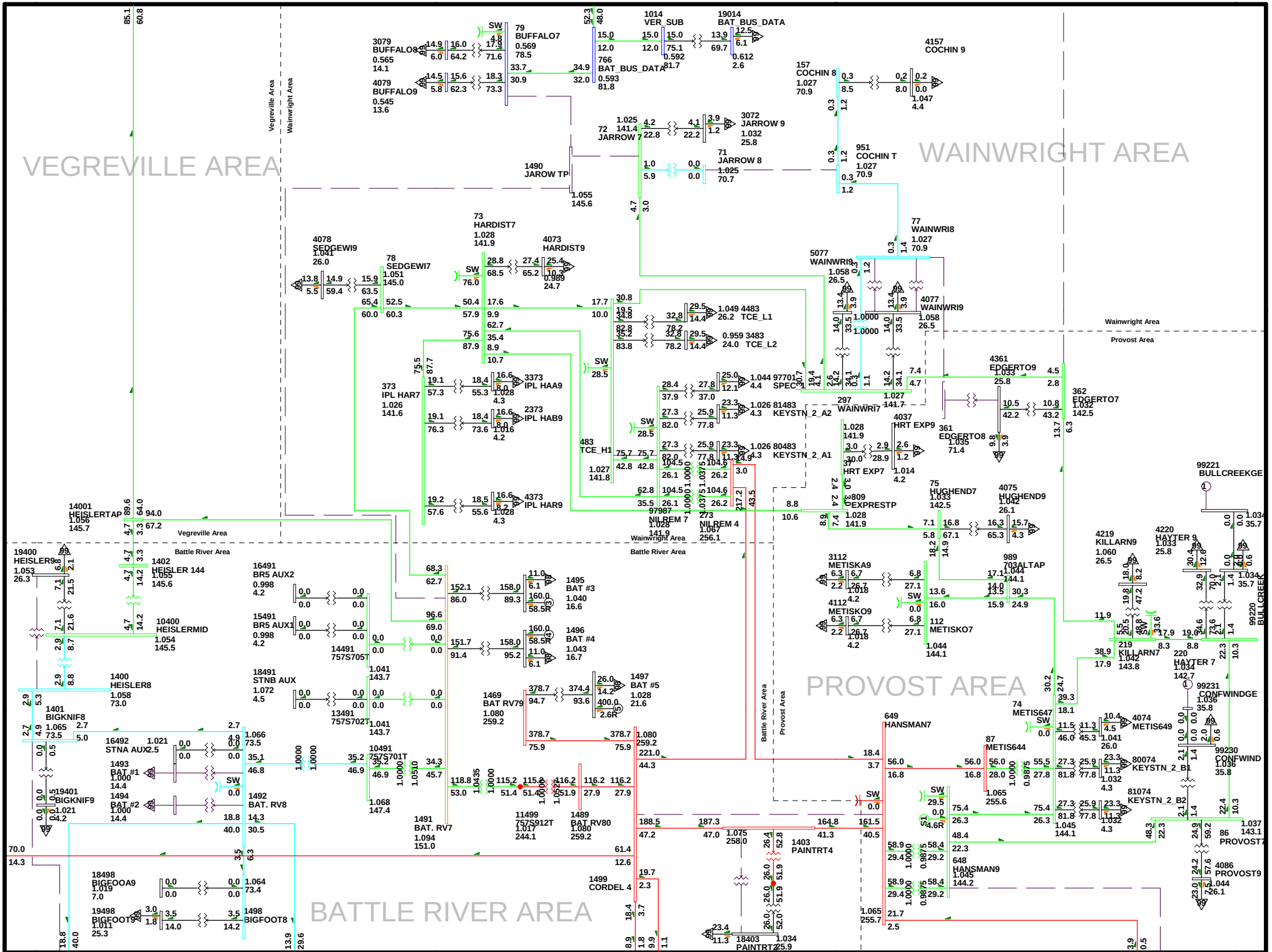
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

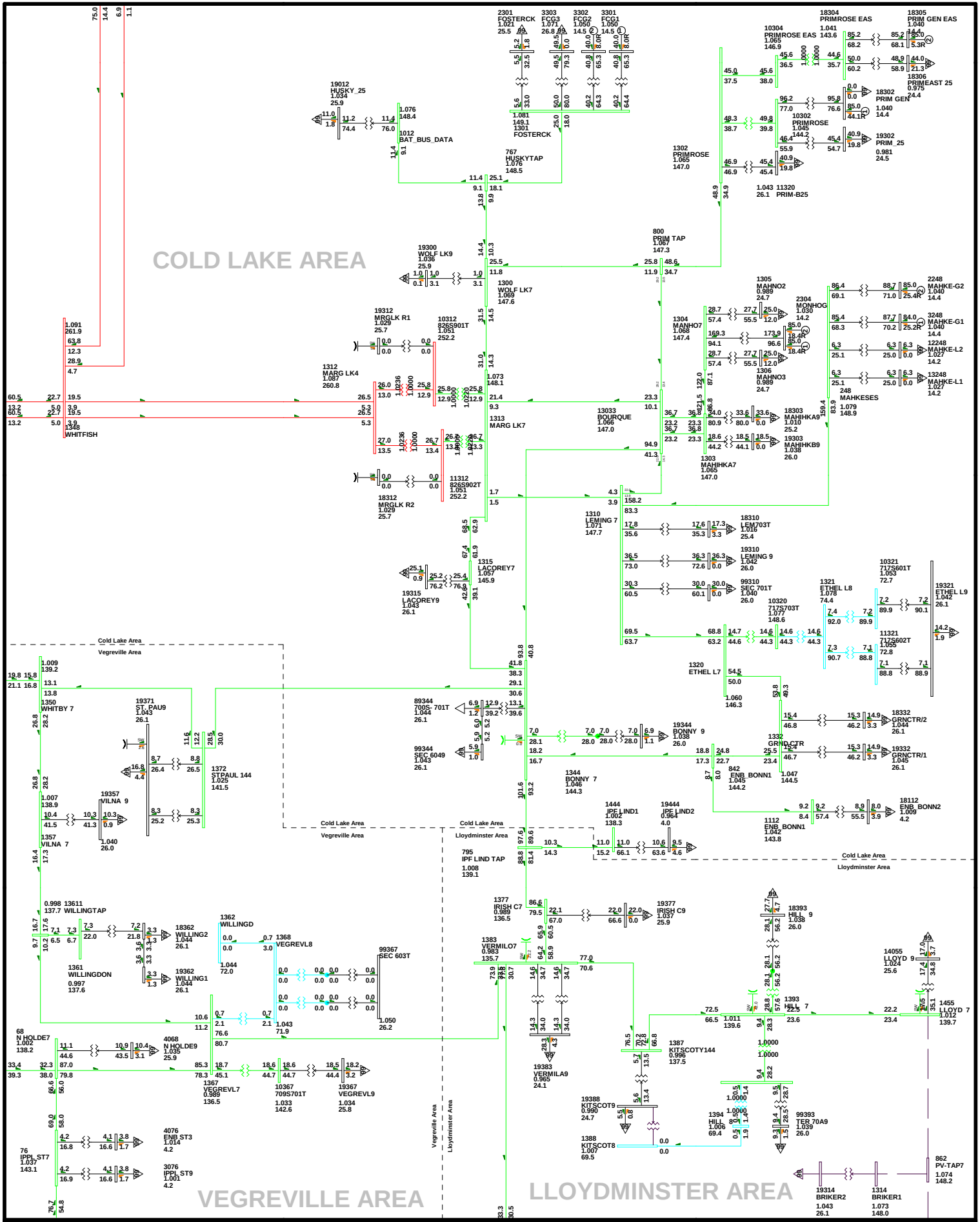


CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 10:54
D1-24

2017SP-Alt 1 BR#5 ON-4.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

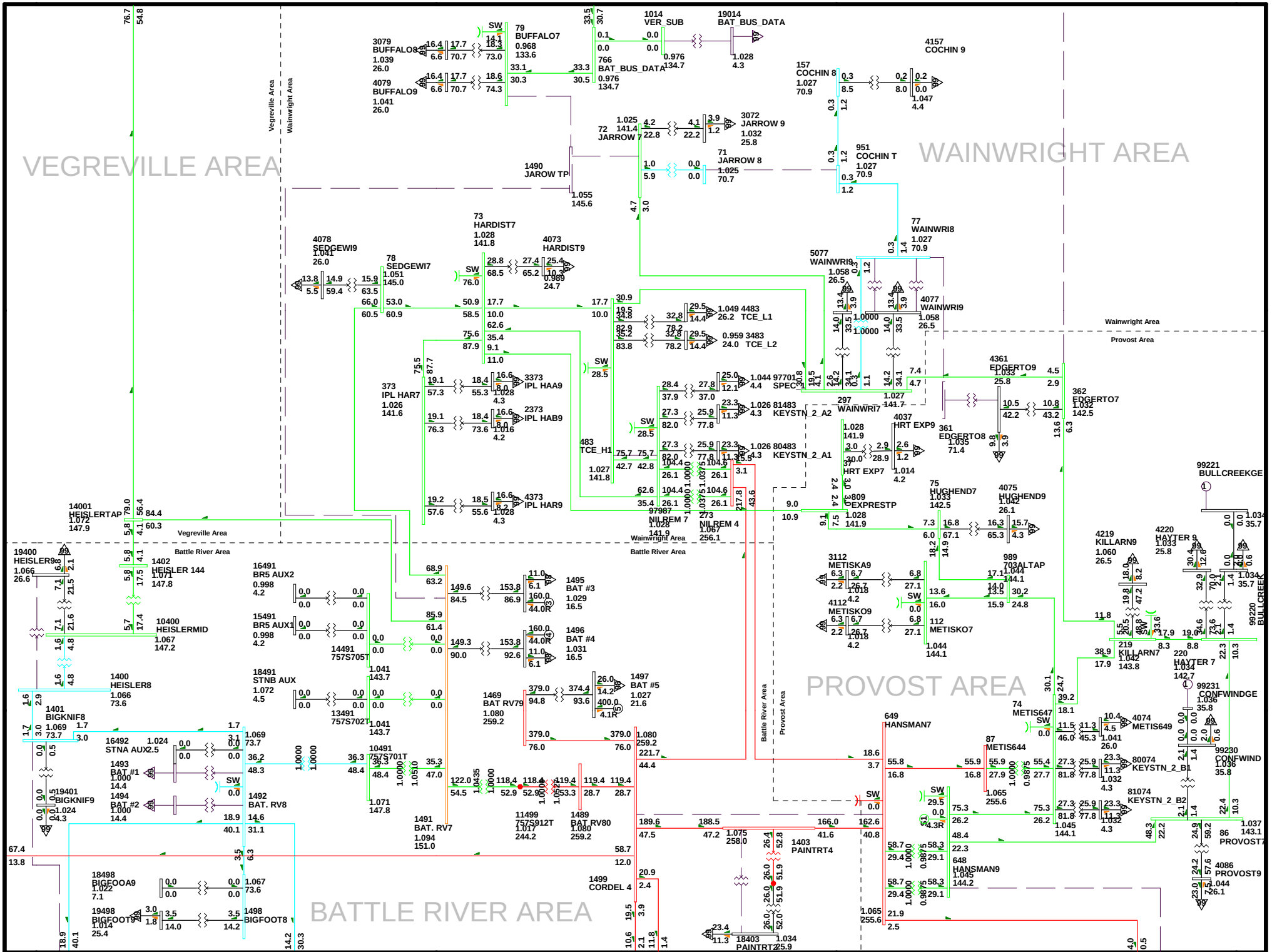

VEGREVILLE AREA
WAINWRIGHT AREA
PROVOST AREA
BATTLE RIVER AREA
Vegreville Area
Wainwright Area
Battle River Area
Provost Area
3079 BUFFALO8 0.565 14.1
4079 BUFFALO9 0.545 13.6
79 BUFFALO7 0.569 78.5
766 BAT_BUS_DATA 0.593 81.8
1014 VER_SUB
19014 BAT_BUS_DATA
4157 COCHIN 9
157 COCHIN 8 1.027 70.9
951 COCHIN T 1.027 70.9
1047 4.4
3072 JARROW 9 1.032 25.8
72 JARROW 7 1.025 141.4
71 JARROW 8 1.025 70.7
1490 JAROW TP 1.055 145.6
77 WAINWRI8 1.027 70.9
5077 WAINWRI9 1.058 26.5
4077 WAINWRI9 1.058 26.5
4078 SEDGEWI9 1.041 26.0
78 SEDGEWI7 1.051 145.0
73 HARDIST7 1.028 141.9
4073 HARDIST9 1.029 24.7
1049 4483 26.2 TCE_L1
0.959 3483 24.0 TCE_L2
373 IPL HAR7 1.026 141.6
3373 IPL HAA9 1.028 4.3
2373 IPL HAB9 1.016 4.2
4373 IPL HAR9 1.028 4.3
483 TCE_H1 1.027 141.8
1044 97701 SPEC_1 4.4
1026 81483 KEYSTN_2_A2 4.3
1026 80483 KEYSTN_2_A1 4.3
297 WAINWRI7 1.027 141.7
4037 HRT EXP9 1.028 141.9
HRT EXP7 1.035 71.4
361 EDGERTO8 1.035 71.4
4361 EDGERTO9 1.033 25.8
362 EDGERTO7 1.032 142.5
1014 4.2
97987 NIL REM 7 1.028 141.9
273 NIL REM 4 1.067 256.1
809 EXPRESTP 1.028 141.9
75 HUGHEND7 1.033 142.5
4075 HUGHEND9 1.042 26.1
989 703ALTAP 1.044 144.1
3112 METISKA9 1.018 4.2
4112 METISKO9 1.018 4.2
112 METISKO7 1.044 144.1
14001 HEISLERTAP 1.056 145.7
19400 HEISLER9 1.053 26.3
1402 HEISLER 144 1.055 145.6
10400 HEISLERMID 1.054 145.5
1400 HEISLER8 1.058 73.0
1401 BIGKNIF8 1.065 73.5
19401 BIGKNIF9 1.021 4.2
16491 BR5 AUX2 0.998 4.2
15491 BR5 AUX1 0.998 4.2
14491 757S705T 1.041 143.7
18491 STNB AUX 1.072 4.5
13491 757S702T 1.041 143.7
16492 STNA AUX 1.021 2.5
10491 757S701T 1.068 147.4
1493 BAT #1 1.000 14.4
1494 BAT #2 1.000 14.4
1492 BAT. RV8 1.066 73.5
18498 BIGFOOA9 1.019 7.0
19498 BIGFOOT9 1.011 25.3
1498 BIGFOOT8 1.064 73.4
1495 BAT #3 1.040 16.6
1496 BAT #4 1.043 16.7
1497 BAT #5 1.028 21.6
1469 BAT RV79 1.080 259.2
1491 BAT. RV7 1.094 151.0
11499 757S912T 1.017 244.1
1489 BAT RV80 1.080 259.2
1499 CORDEL 4 1.080 259.2
1403 PAINTRT4 1.075 258.0
18403 PAINTRT3 1.034 25.9
649 HANSMAN7 1.045 144.2
648 HANSMAN9 1.045 144.2
74 METIS647 1.036 35.8
87 METIS644 1.065 255.6
4074 METIS649 1.041 26.0
80074 KEYSTN_2_B1 1.032 4.3
81074 KEYSTN_2_B2 1.032 4.3
99231 CONFWINDGE 1.036 35.8
99230 CONFWIND 1.036 35.8
86 PROVOST7 1.037 143.1
4086 PROVOST9 1.044 26.1
99221 BULLCREEKGE 1.034 35.7
99220 BULLCREE 1.034 35.7
4219 KILLARN9 1.060 26.5
219 KILLARN7 1.042 143.8
4220 HAYTER 9 1.033 25.8
220 HAYTER 7 1.034 142.7
CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 10:54
D1-24
2017SP-Alt 1 BR#5 ON-4.b
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

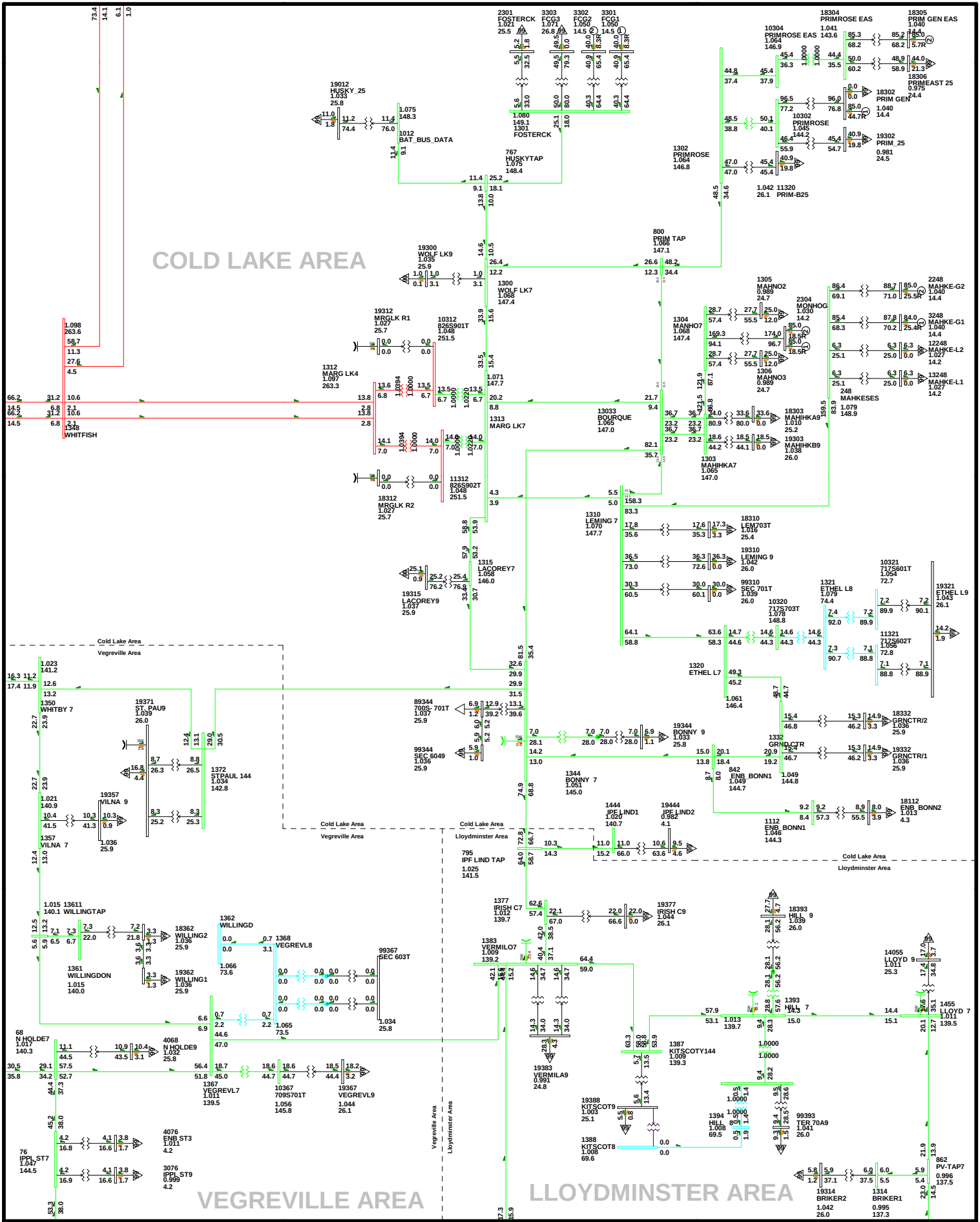


CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 10:54
D1-24b

2017SP-Alt 1 BR#5 ON-5.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

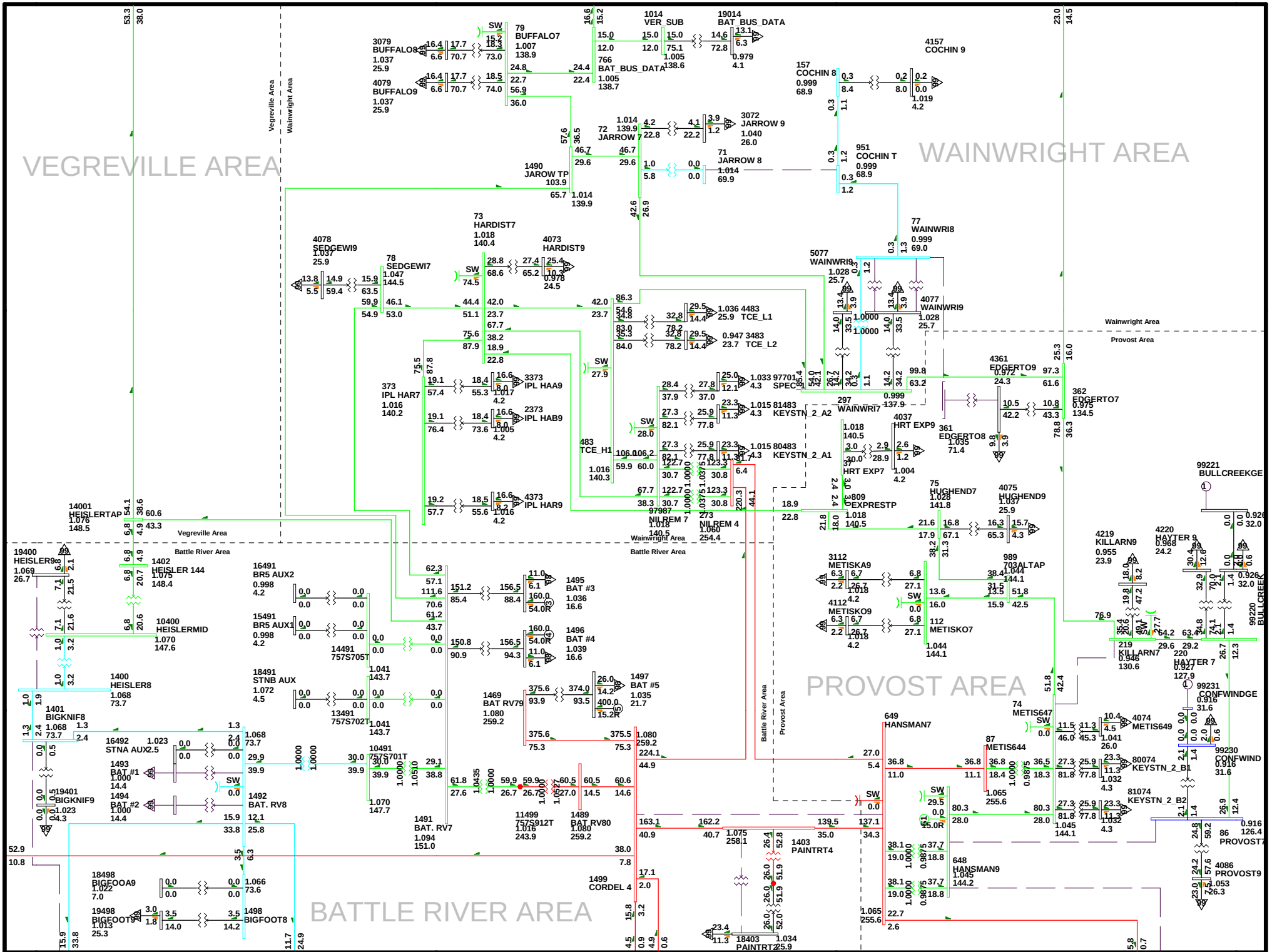

VEGREVILLE AREA
WAINWRIGHT AREA
PROVOST AREA
BATTLE RIVER AREA
Vegreville Area
Wainwright Area
Battle River Area
Provost Area
3079 BUFFALO8 1.039 26.0
4079 BUFFALO9 1.041 26.0
79 BUFFALO7 0.968 133.6
766 BAT_BUS_DATA 0.976 134.7
1014 VER_SUB
19014 BAT_BUS_DATA 1.028 4.3
4157 COCHIN 9
157 COCHIN 8 1.027 70.9
1047 4.4
951 COCHIN T 1.027 70.9
72 JARROW 7 1.025 141.4
3072 JARROW 9 1.032 25.8
71 JARROW 8 1.025 70.7
1490 JAROW TP 1.055 145.6
73 HARDIST7 1.028 141.8
4073 HARDIST9 0.989 24.7
4078 SEDGEWI9 1.041 26.0
78 SEDGEWI7 1.051 145.0
77 WAINWRI8 1.027 70.9
5077 WAINWRI9 1.058 26.5
4077 WAINWRI9 1.058 26.5
1.0000
1.0000
4361 EDGERTO9 1.033 25.8
362 EDGERTO7 1.032 142.5
361 EDGERTO8 1.035 71.4
4037 HRT EXP9
HRT EXP7 1.014 4.2
297 WAINWRI7 1.027 141.7
1.049 4483 26.2 TCE_L1
0.959 3483 24.0 TCE_L2
1.044 97701 4.4 SPEC_1
1.026 81483 4.3 KEYSTN_2_A2
1.026 80483 4.3 KEYSTN_2_A1
373 IPL HAR7 1.026 141.6
3373 IPL HAA9 1.028 4.3
2373 IPL HAB9 1.016 4.2
4373 IPL HAR9 1.028 4.3
483 TCE_H1 1.027 141.8
97987 NIL REM 7 1.028 141.9
273 NIL REM 4 1.067 256.1
809 EXPRESTP 1.028 141.9
75 HUGHEND7 1.033 142.5
4075 HUGHEND9 1.042 26.1
3112 METISKA9 1.018 4.2
4112 METISKO9 1.018 4.2
989 703ALTAP 1.044 144.1
112 METISKO7 1.044 144.1
99221 BULLCREEKGE
4219 KILLARN9 1.060 26.5
4220 HAYTER 9 1.033 25.8
219 KILLARN7 1.042 143.8
220 HAYTER 7 1.034 142.7
99231 CONFWINDGE 1.036 35.8
99220 BULLCREE
14001 HEISLERTAP 1.072 147.9
19400 HEISLER9 1.066 26.6
1402 HEISLER 144 1.071 147.8
10400 HEISLERMID 1.067 147.2
1400 HEISLER8 1.066 73.6
1401 BIGKNIF8 1.069 73.7
19401 BIGKNIF9 1.024 4.3
16492 STNA AUX 1.024 2.5
1493 BAT #1 1.000 14.4
1494 BAT #2 1.000 14.4
1492 BAT. RV8 14.6
16491 BR5 AUX2 0.998 4.2
15491 BR5 AUX1 0.998 4.2
14491 757S705T 1.041 143.7
18491 STNB AUX 1.072 4.5
13491 757S702T 1.041 143.7
10491 757S701T 1.071 147.8
1491 BAT. RV7 1.094 151.0
1495 BAT #3 1.029 16.5
1496 BAT #4 1.031 16.5
1469 BAT RV79 1.080 259.2
1497 BAT #5 1.027 21.6
11499 757S912T 1.017 244.2
1489 BAT RV80 1.080 259.2
1499 CORDEL 4
1403 PAINTRT4
18403 PAINTRT2 1.034 25.9
649 HANSMAN7
74 METIS647
87 METIS644 1.065 255.6
4074 METIS649 1.041 26.0
80074 KEYSTN_2_B1 1.032 4.3
81074 KEYSTN_2_B2 1.032 4.3
99230 CONFWIND 1.036 35.8
86 PROVOST7 1.037 143.1
4086 PROVOST9 1.044 26.1
648 HANSMAN9 1.045 144.2
18498 BIGFOOA9 1.022 7.1
19498 BIGFOOT9 1.014 25.4
1498 BIGFOOT8 1.067 73.6
CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 10:54
D1-24b
2017SP-Alt 1 BR#5 ON-5.b
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 12:28
D1-25

2017SP-Alt 1 BR#5 ON-6.a

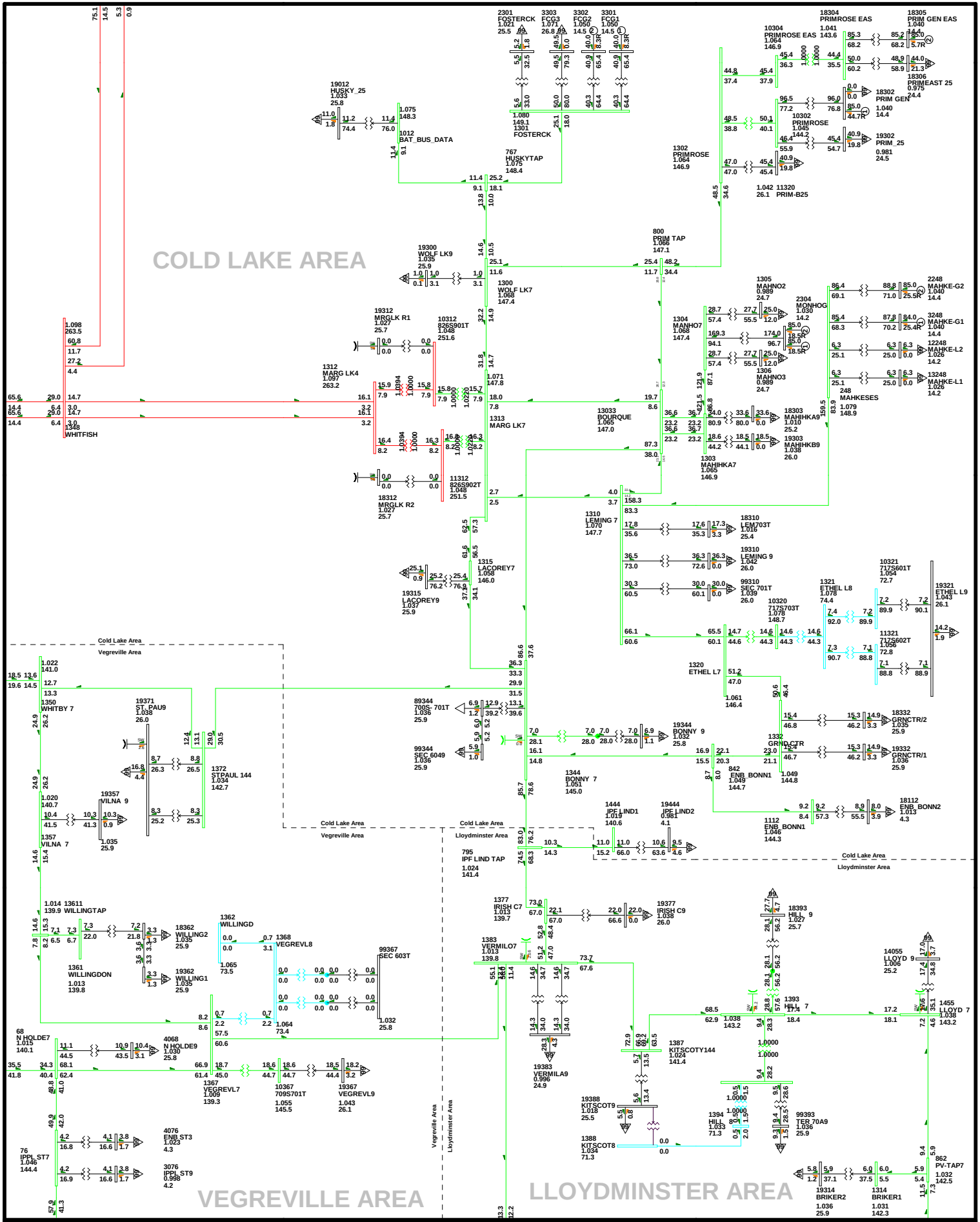
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 12:28
D1-25

2017SP-Alt 1 BR#5 ON-6.b

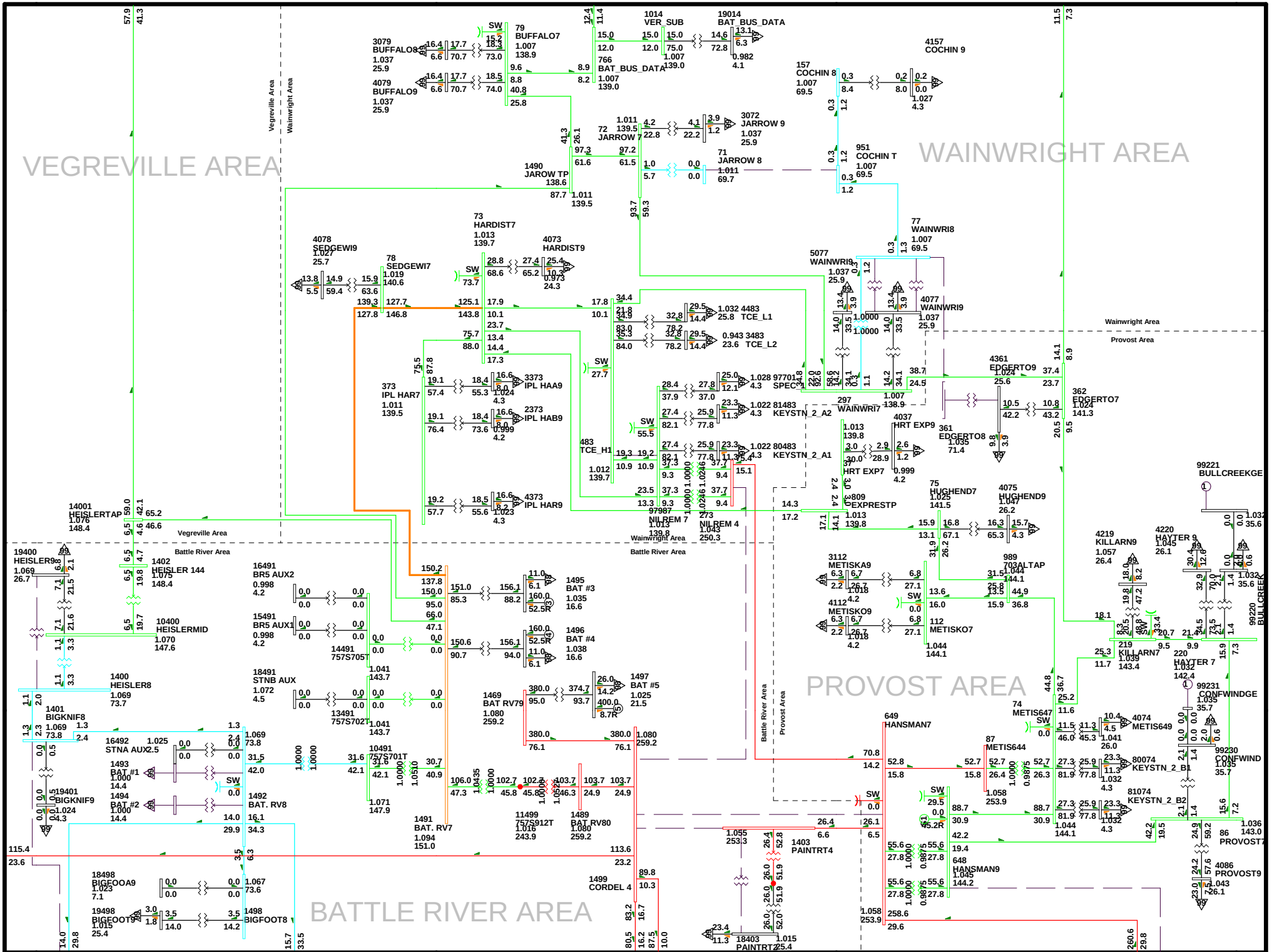
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 10:54
D1-26

2017SP-Alt 1 BR#5 ON-7.a

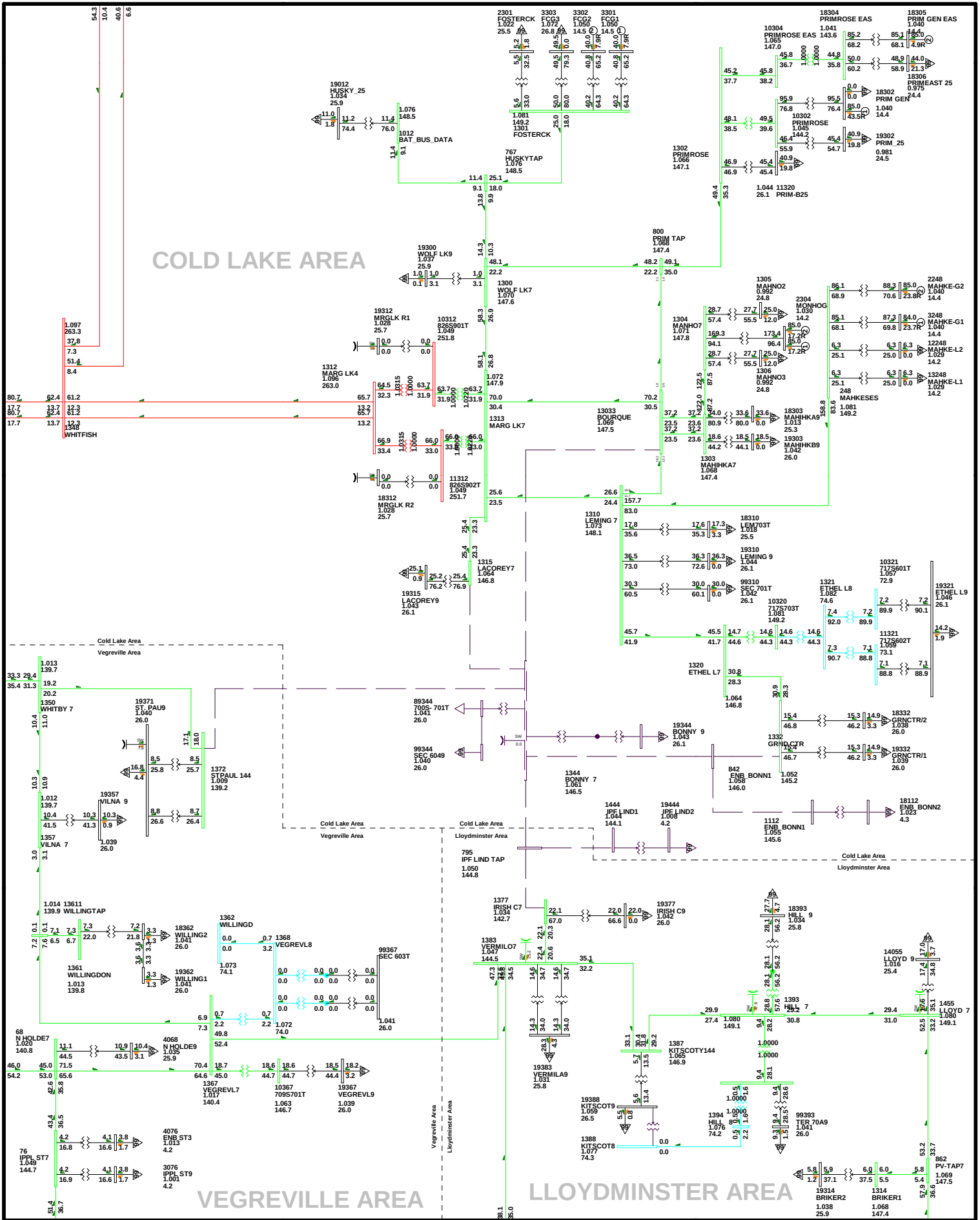
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 10:54
D1-26

2017SP-Alt 1 BR#5 ON-7.b

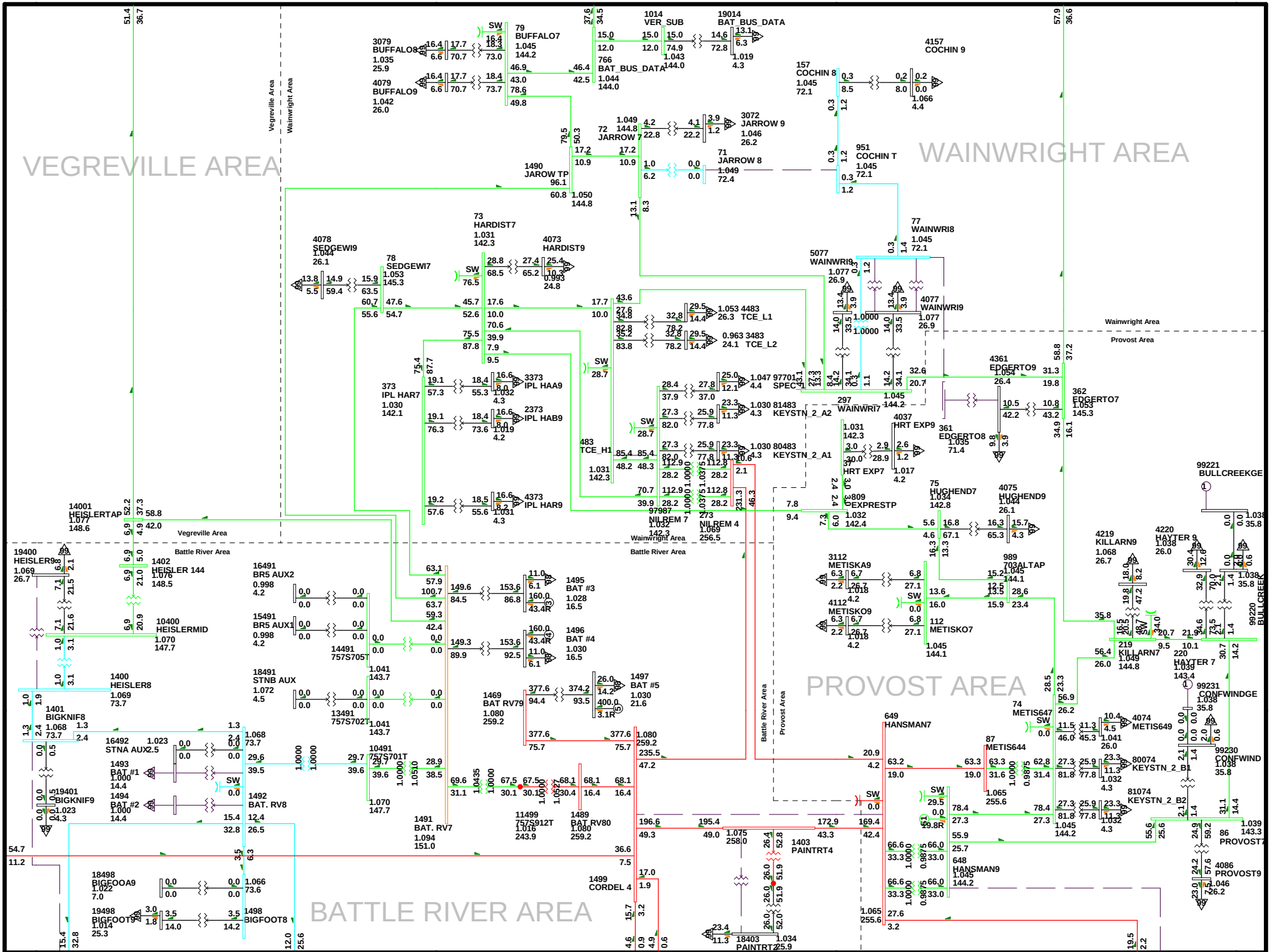
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 10:54
D1-27

2017SP-Alt 1 BR#5 ON-8.a

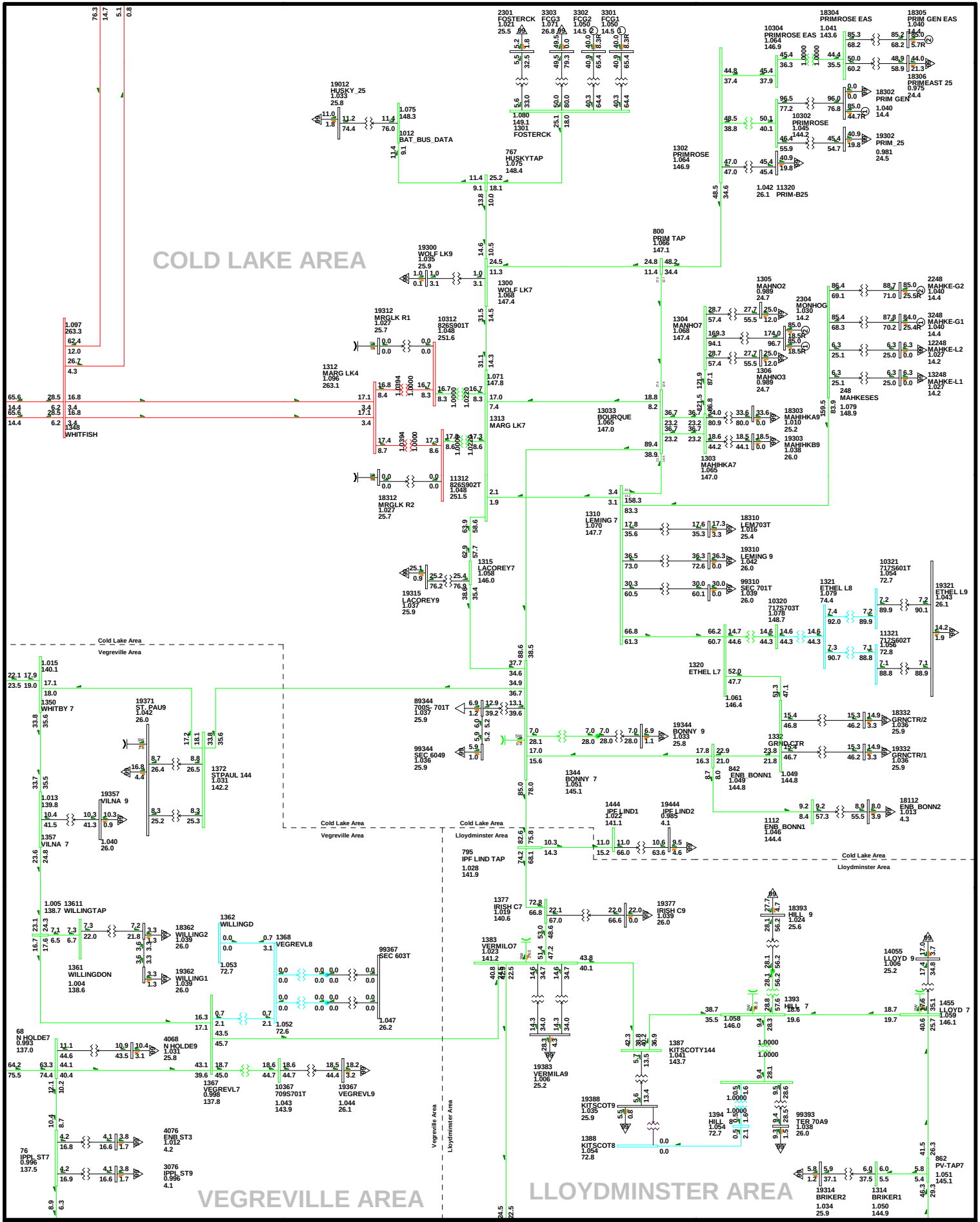
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 10:54
D1-27

2017SP-Alt 1 BR#5 ON-8.b

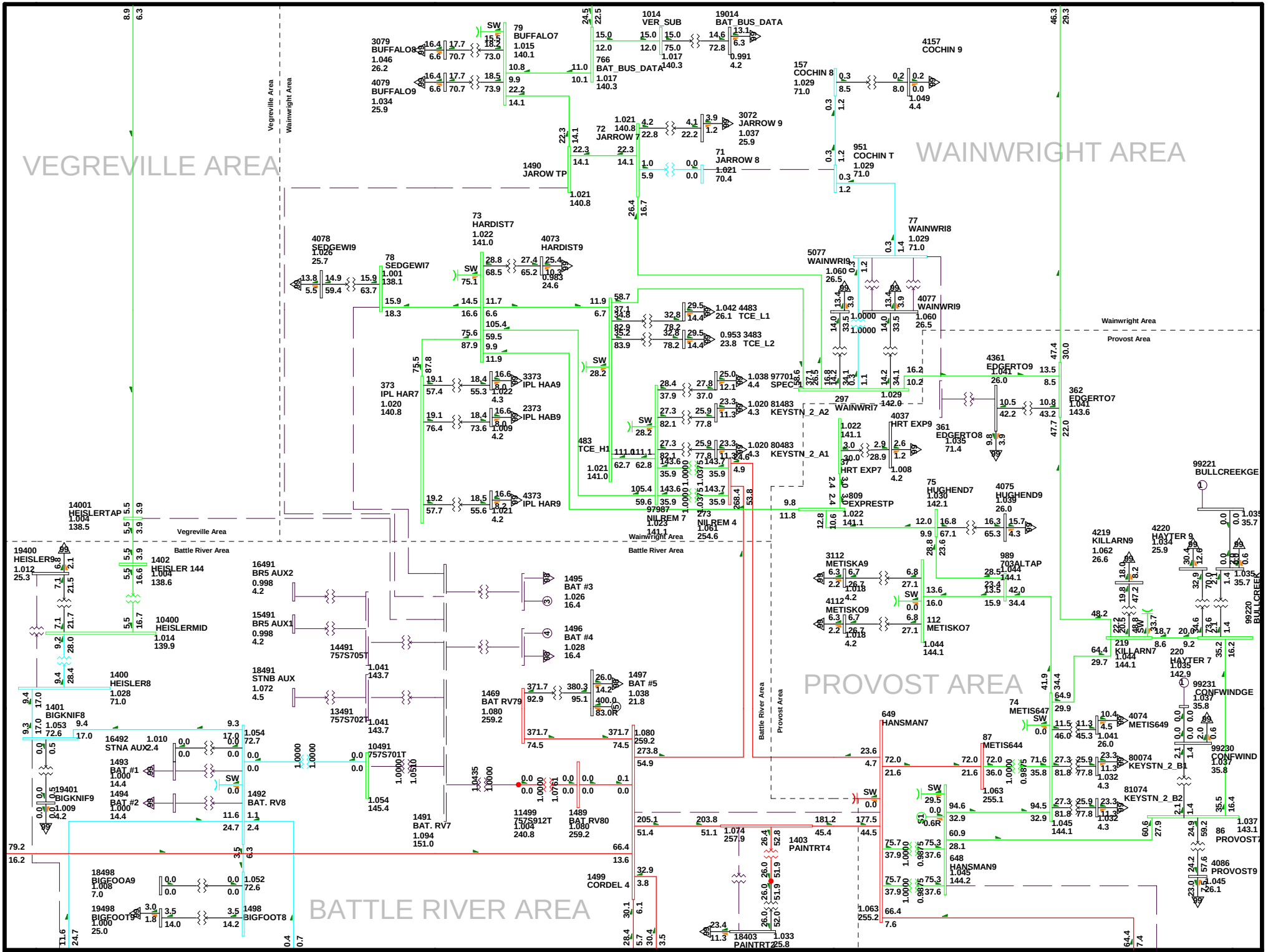
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 10:55
D1-28

2017SP-Alt 1 BR#5 ON-9.a

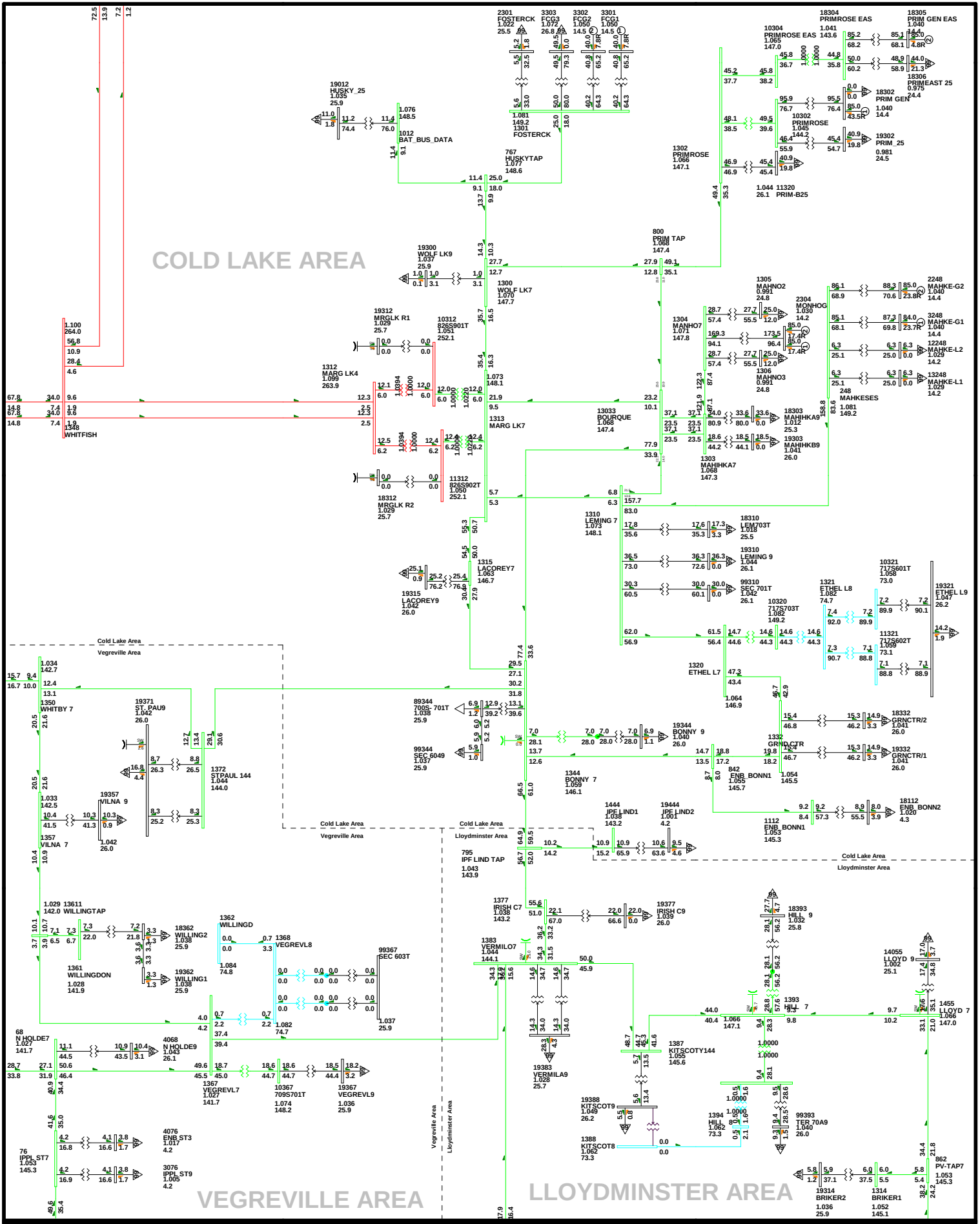
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 10:55
D1-28

2017SP-Alt 1 BR#5 ON-9.b

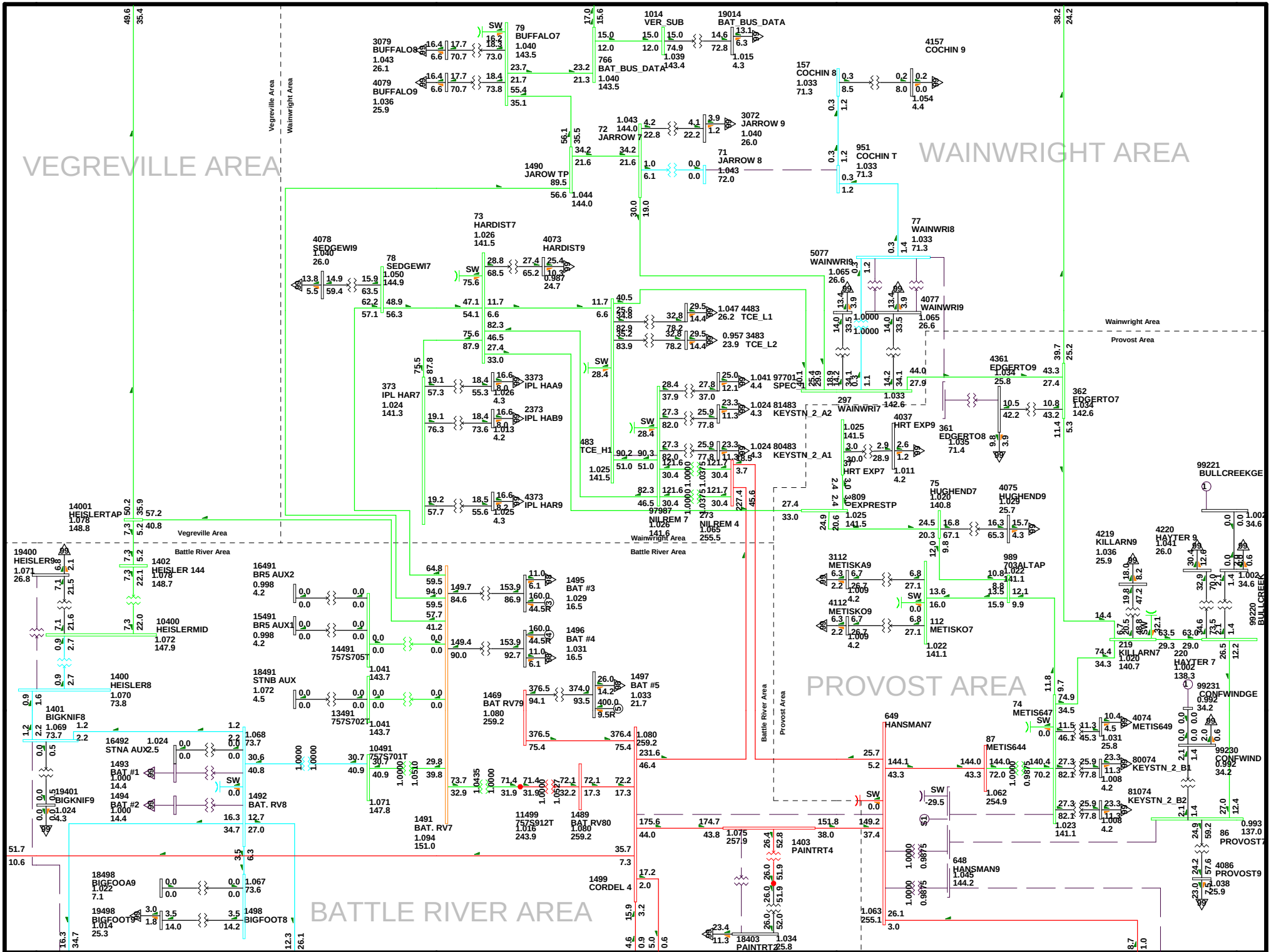
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 10:55
D1-30

2017SP-Alt 1 BR#5 ON-10.a

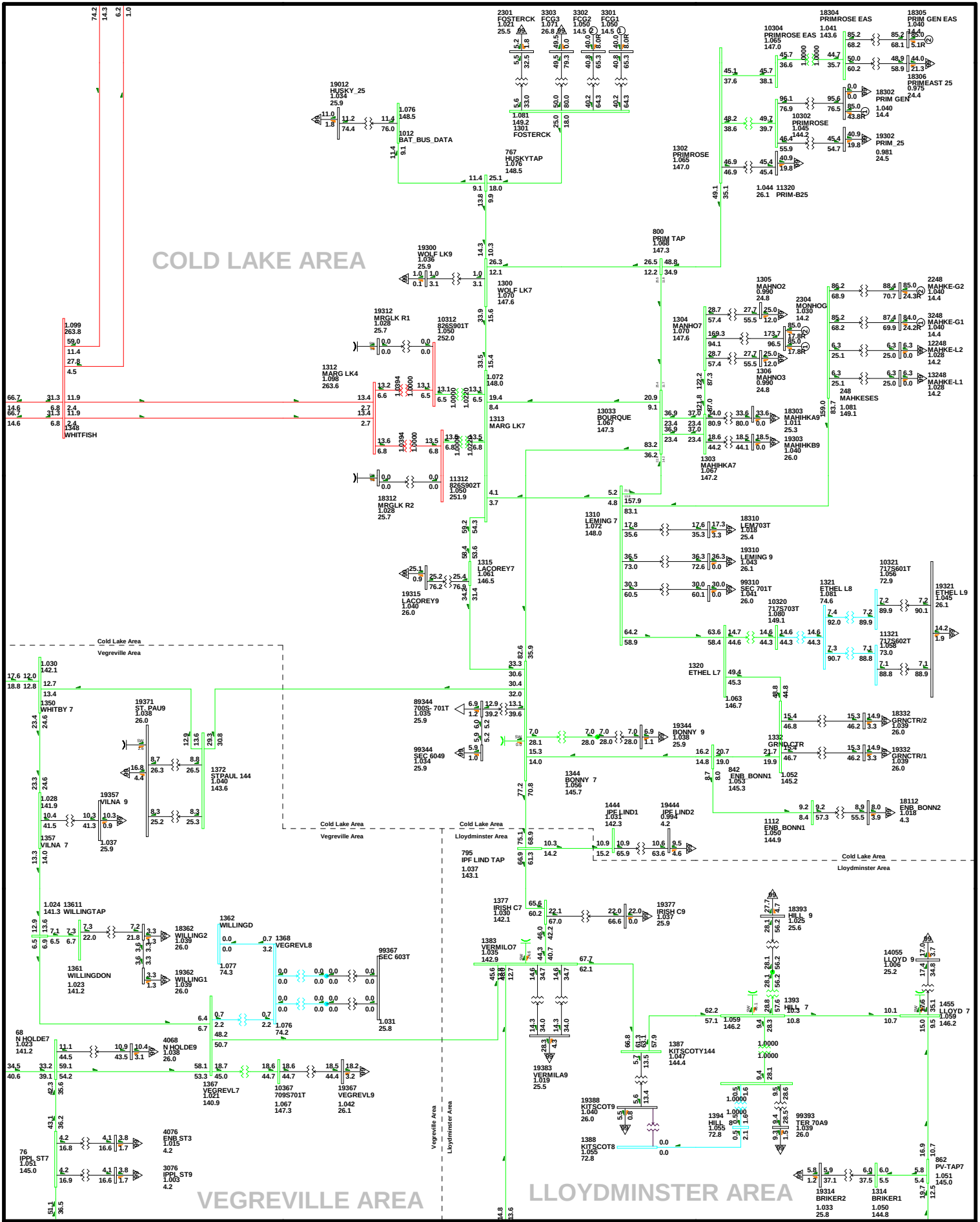
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 10:55
D1-30

2017SP-Alt 1 BR#5 ON-10.b

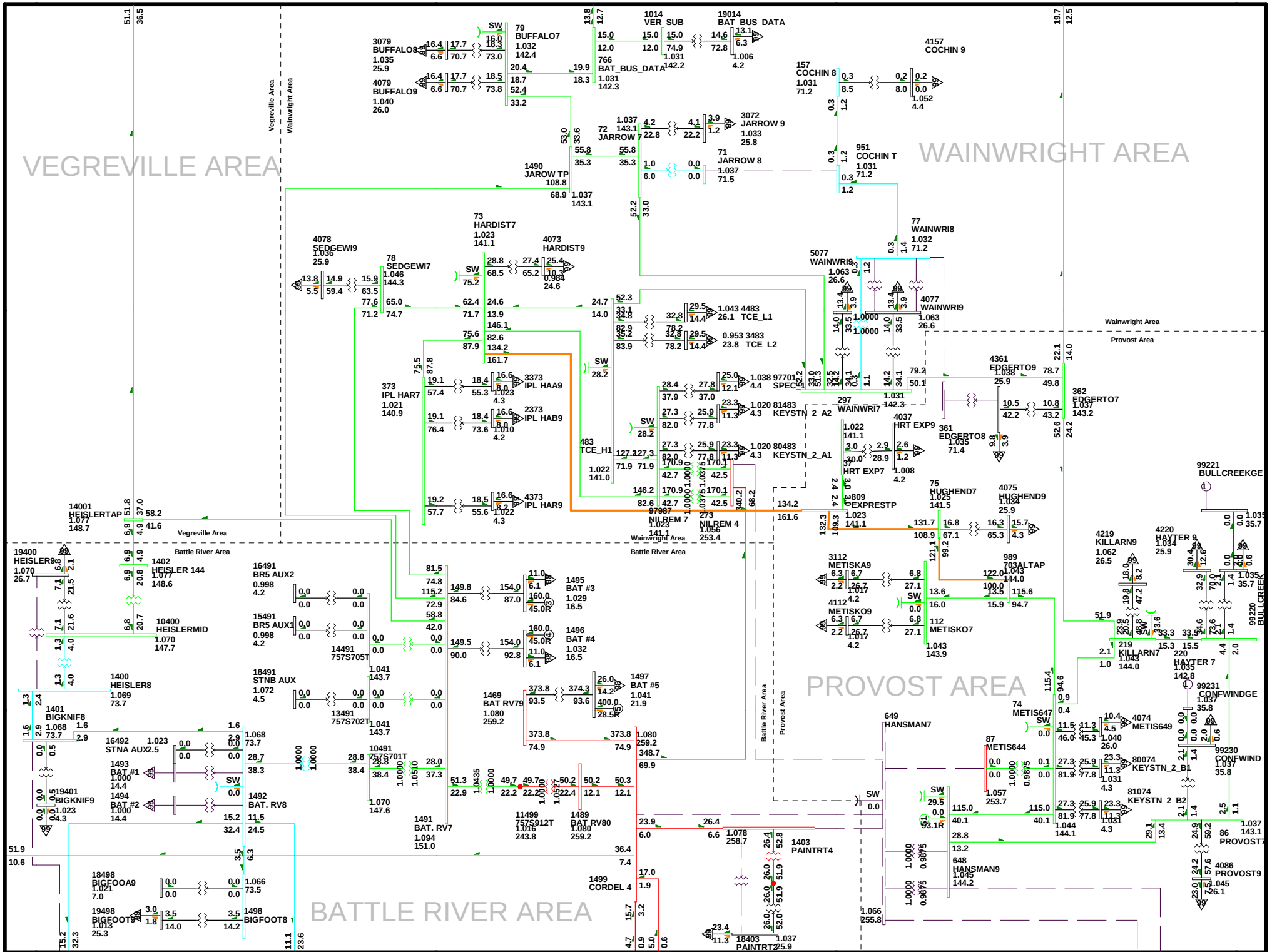
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 10:55
D1-31

2017SP-Alt 1 BR#5 ON-11.a

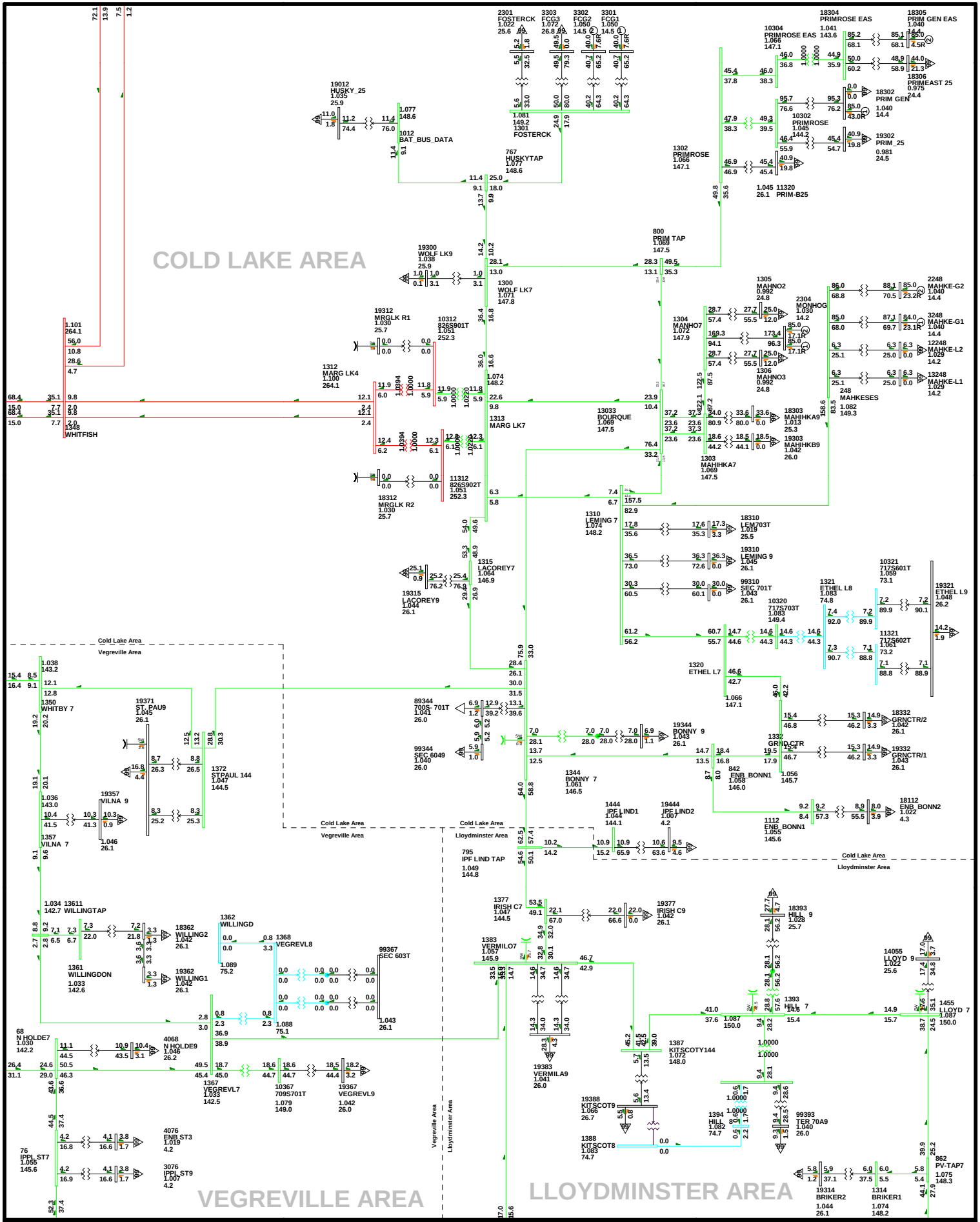
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 10:55
D1-31

2017SP-Alt 1 BR#5 ON-11.b

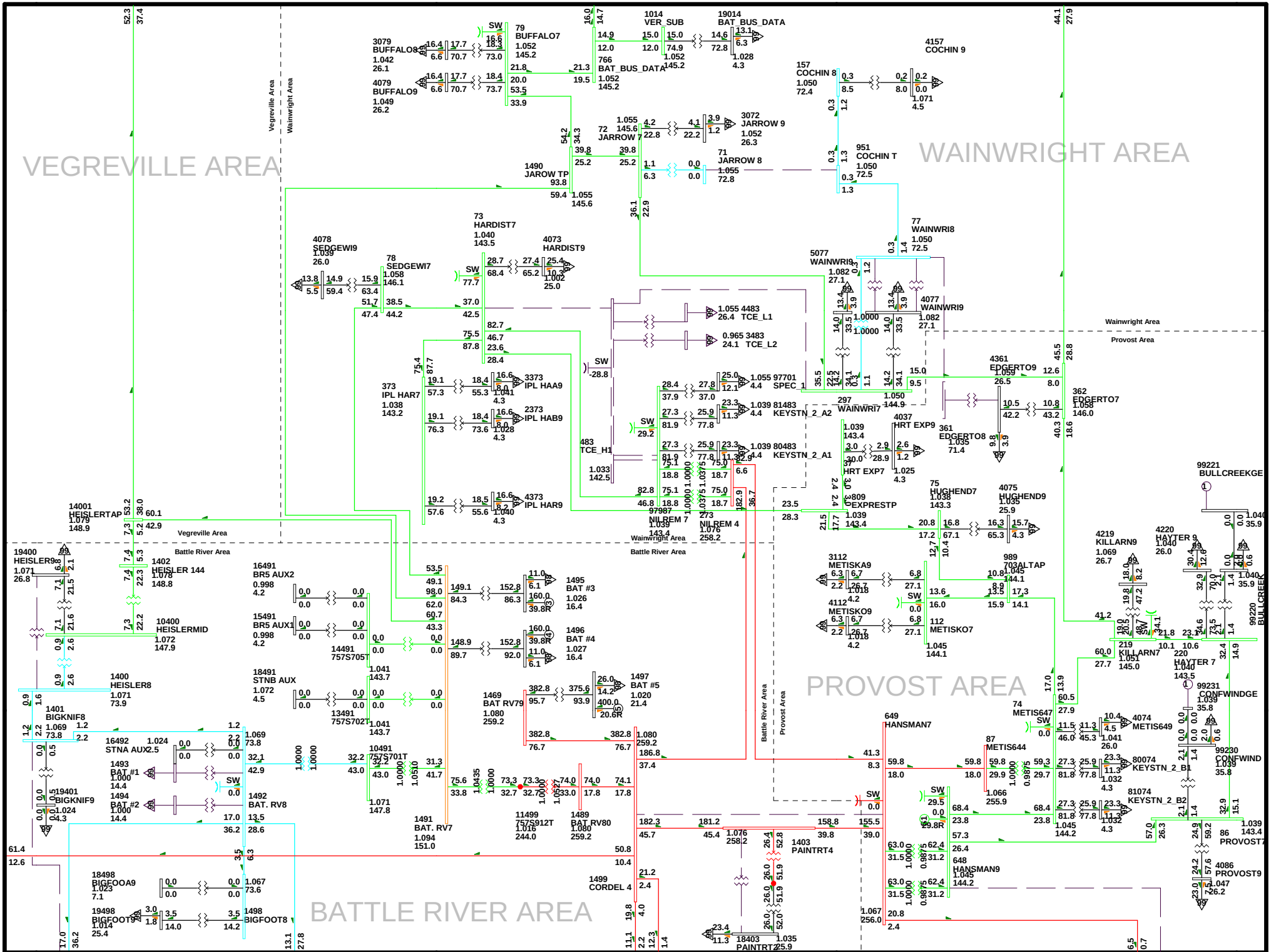
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 10:55
D1-32

2017SP-Alt 1 BR#5 ON-12.a

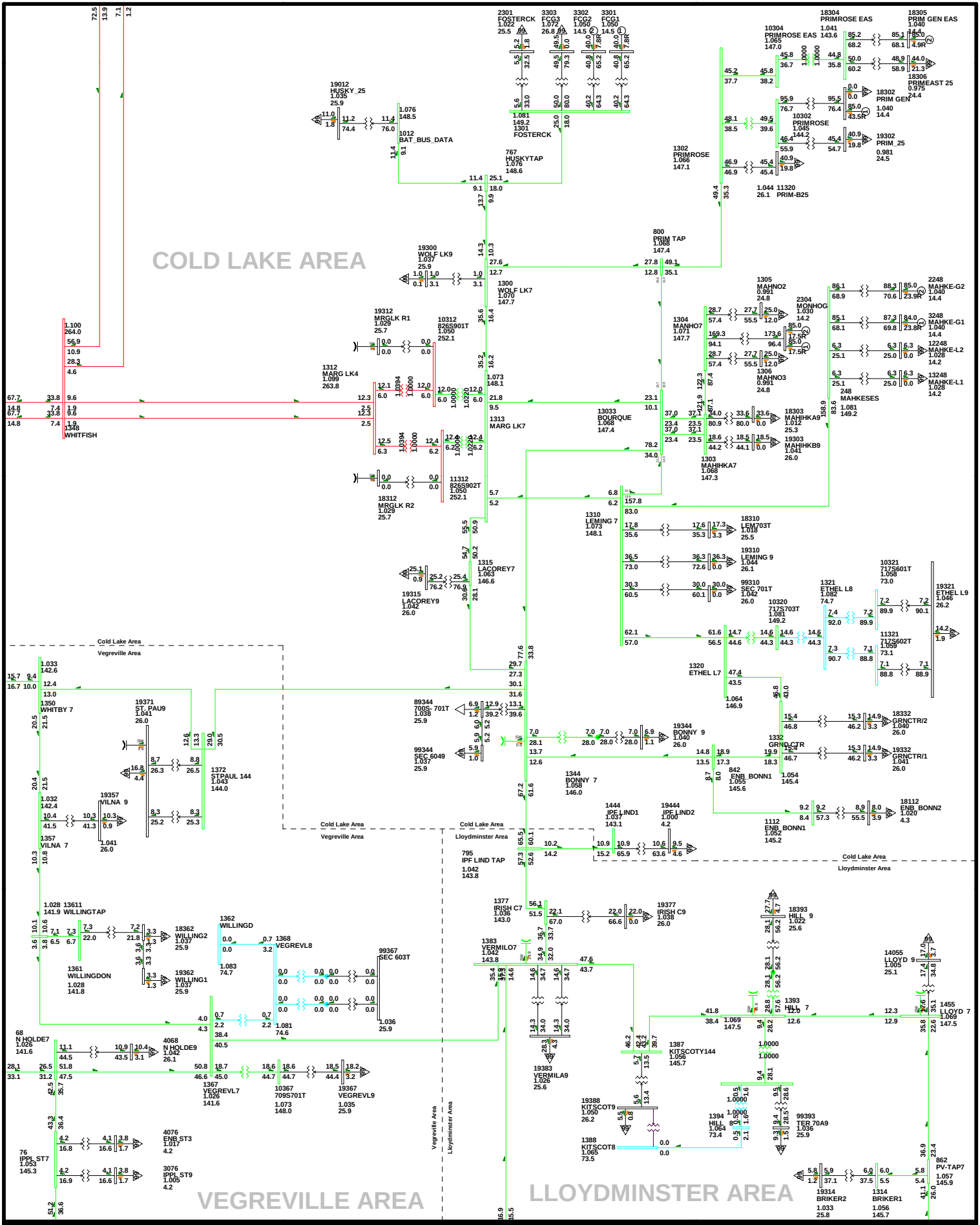
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 10:55
D1-32

2017SP-Alt 1 BR#5 ON-12.b

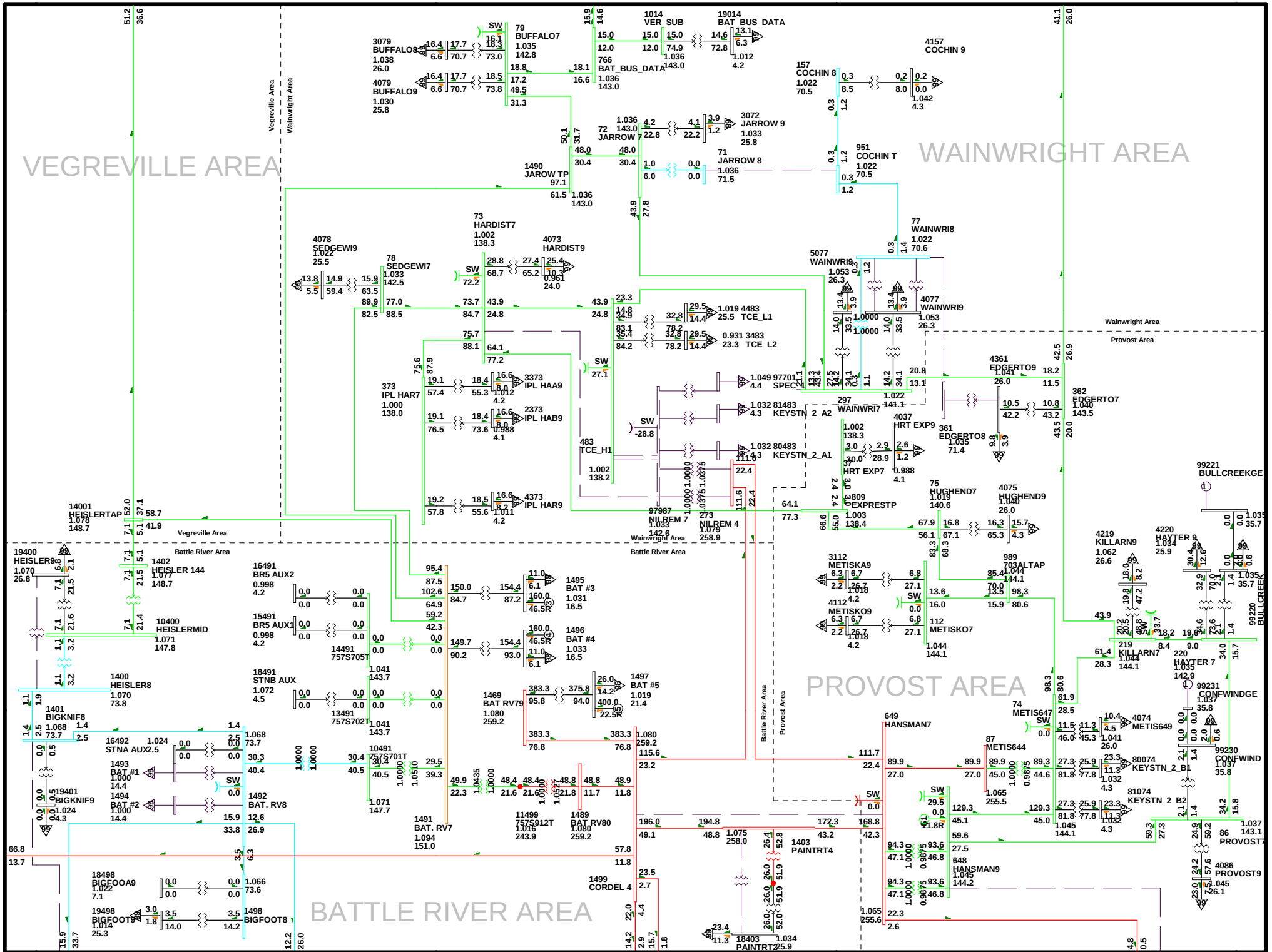
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 11:50
D1-33

2017SP-Alt 1 BR#5 ON-13.a

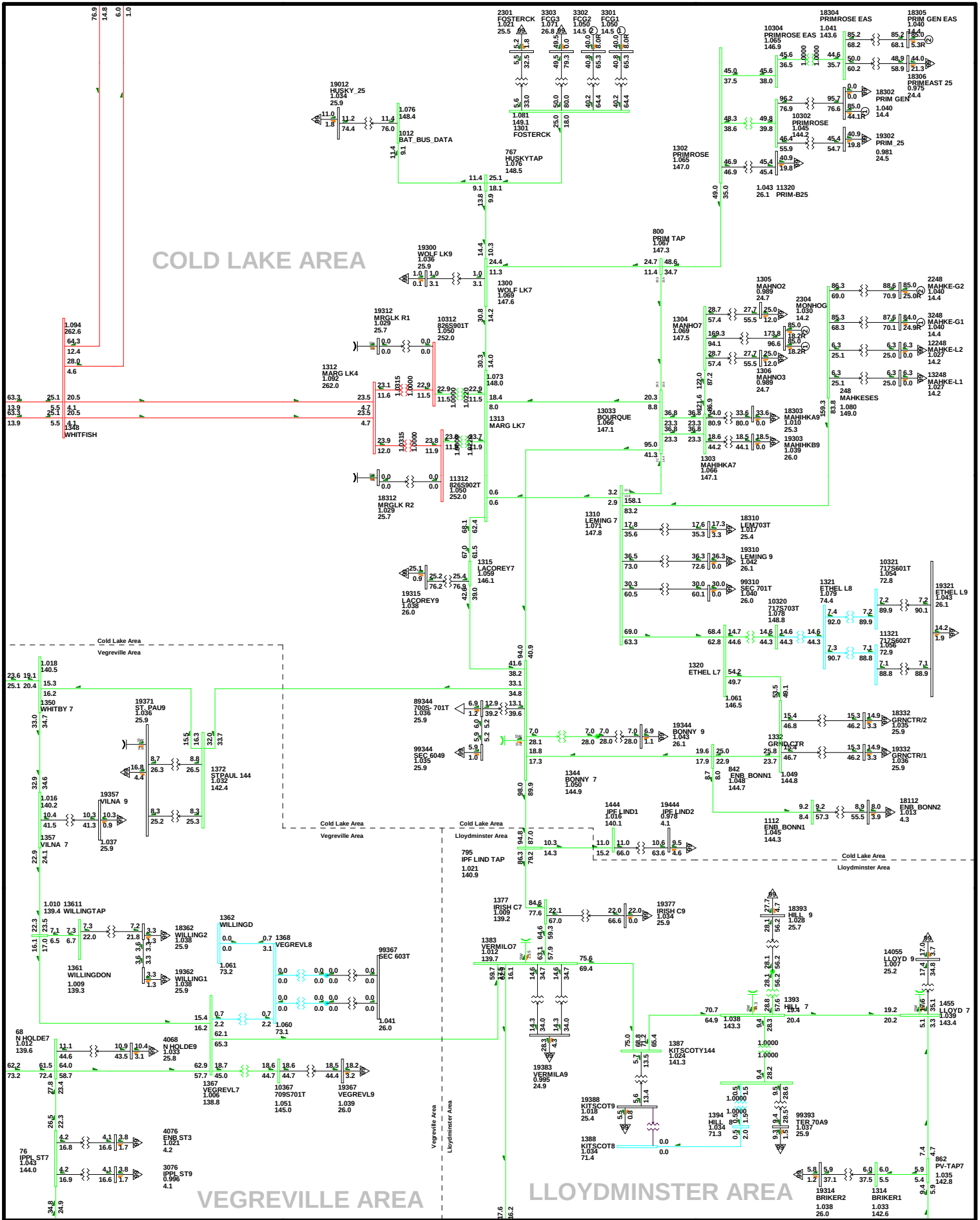
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 11:50
D1-33

2017SP-Alt 1 BR#5 ON-13.b

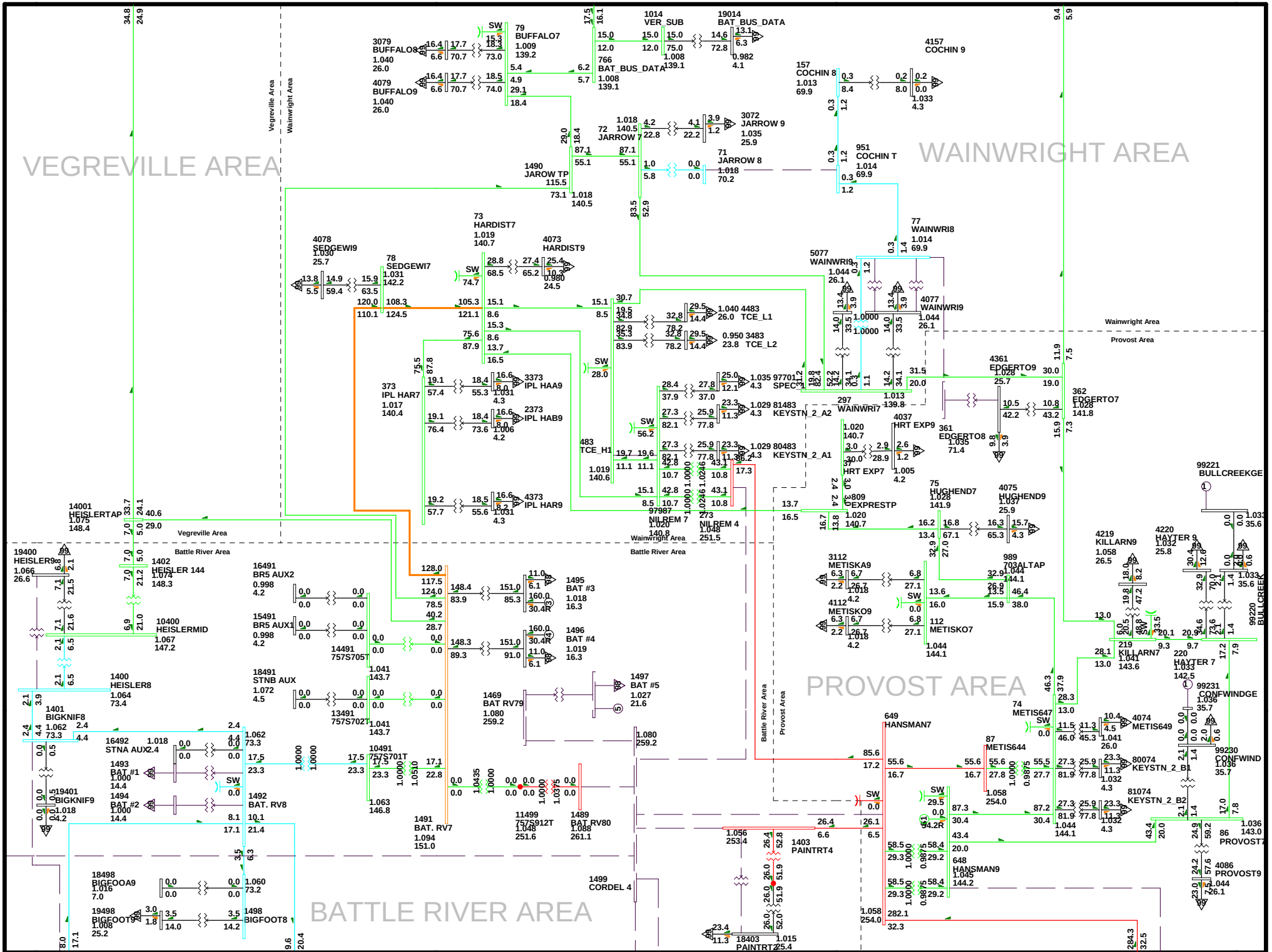
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 10:55
D1-34

2017SP-Alt 1 BR#5 ON-14.a

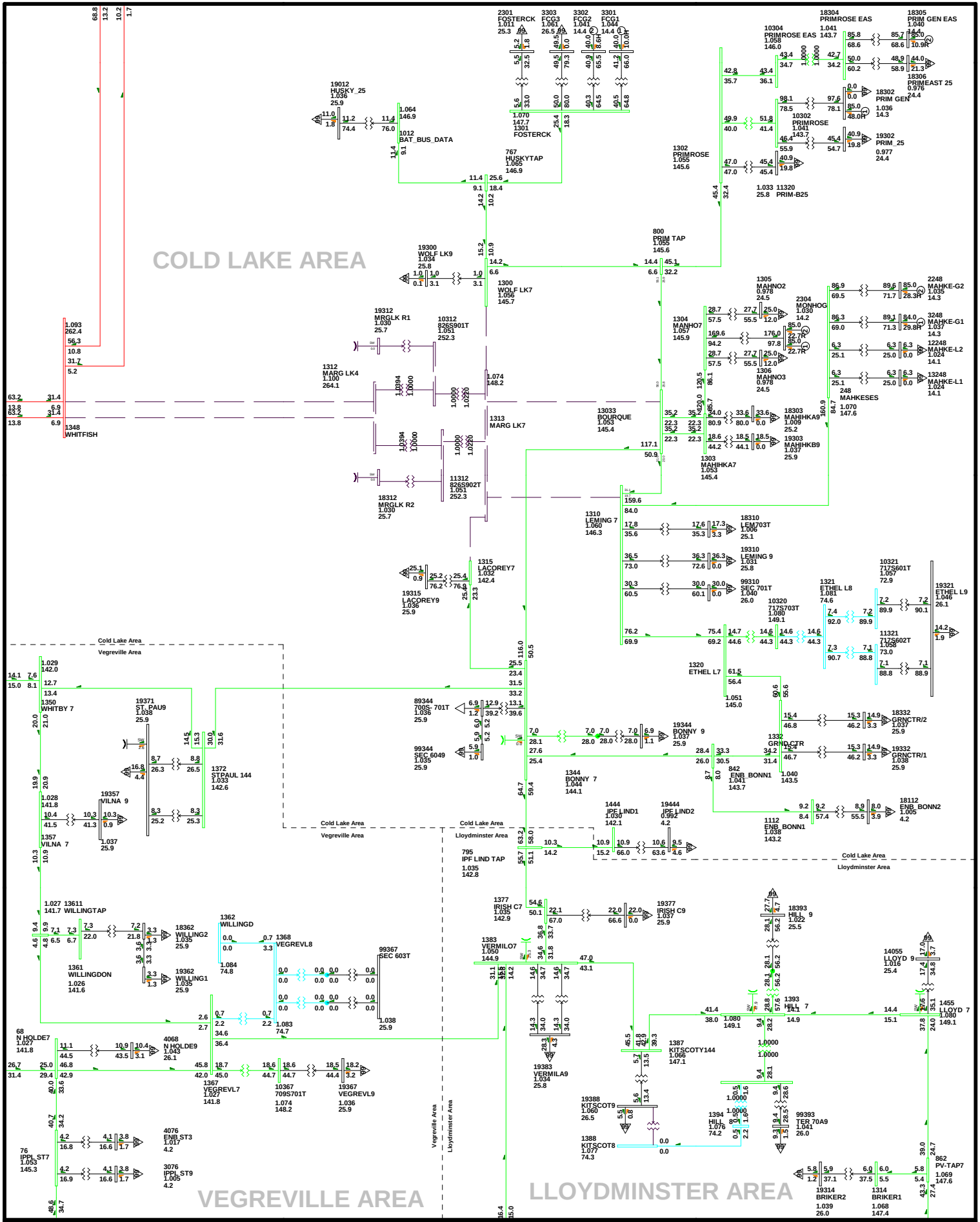
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 10:55
D1-34

2017SP-Alt 1 BR#5 ON-14.b

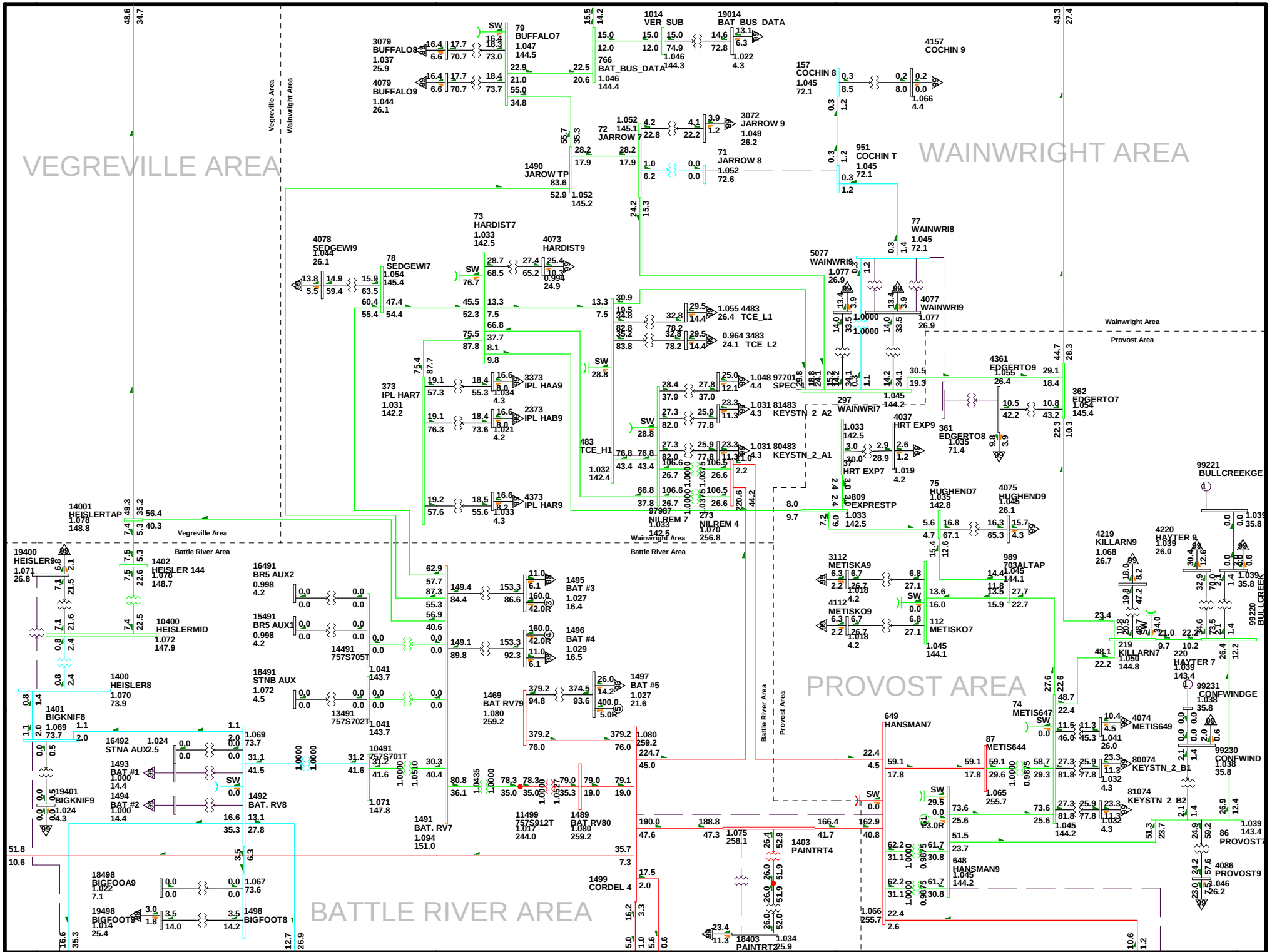
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 10:55
D1-35

2017SP-Alt 1 BR#5 ON-15.a

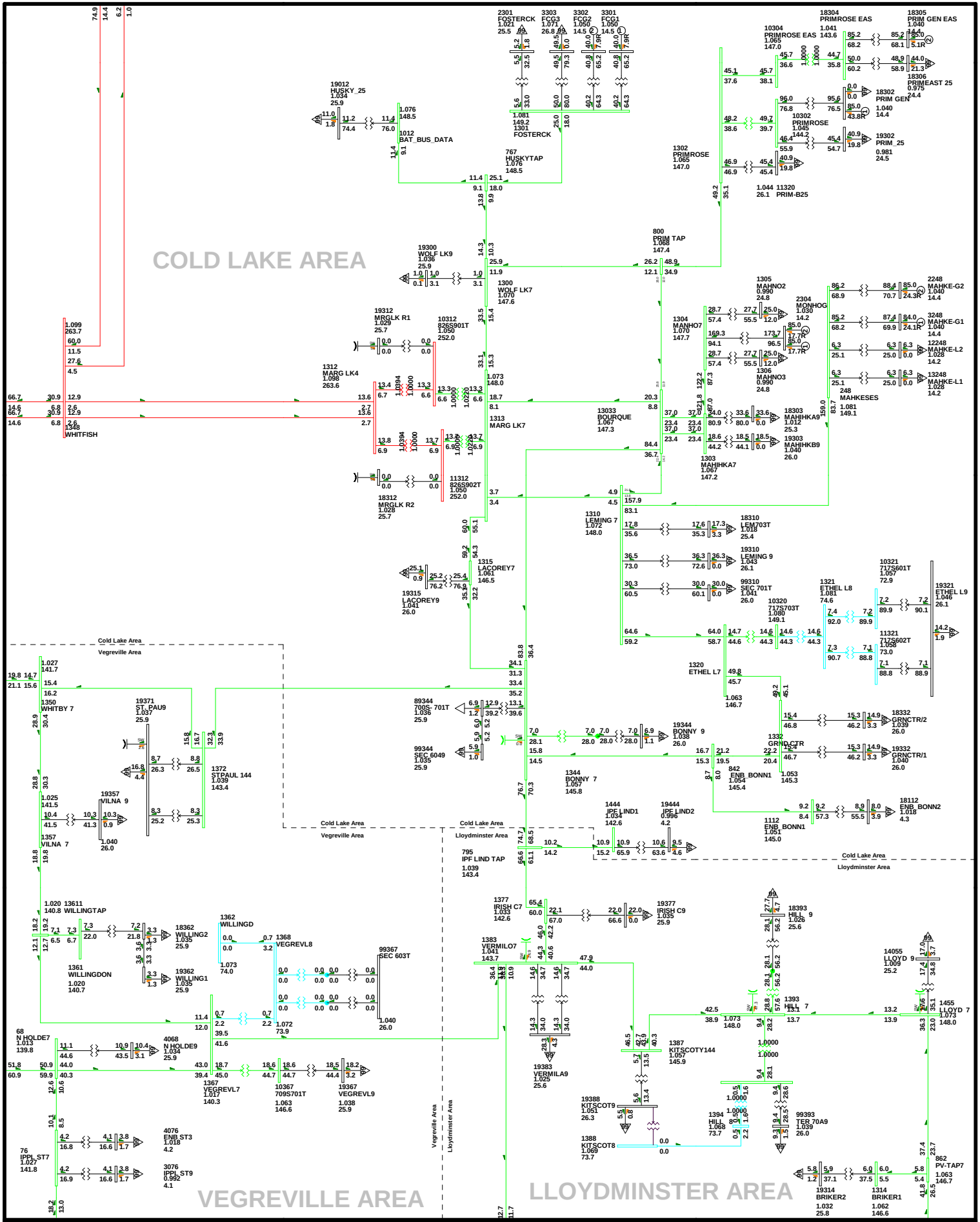
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 10:55
D1-35

2017SP-Alt 1 BR#5 ON-15.b

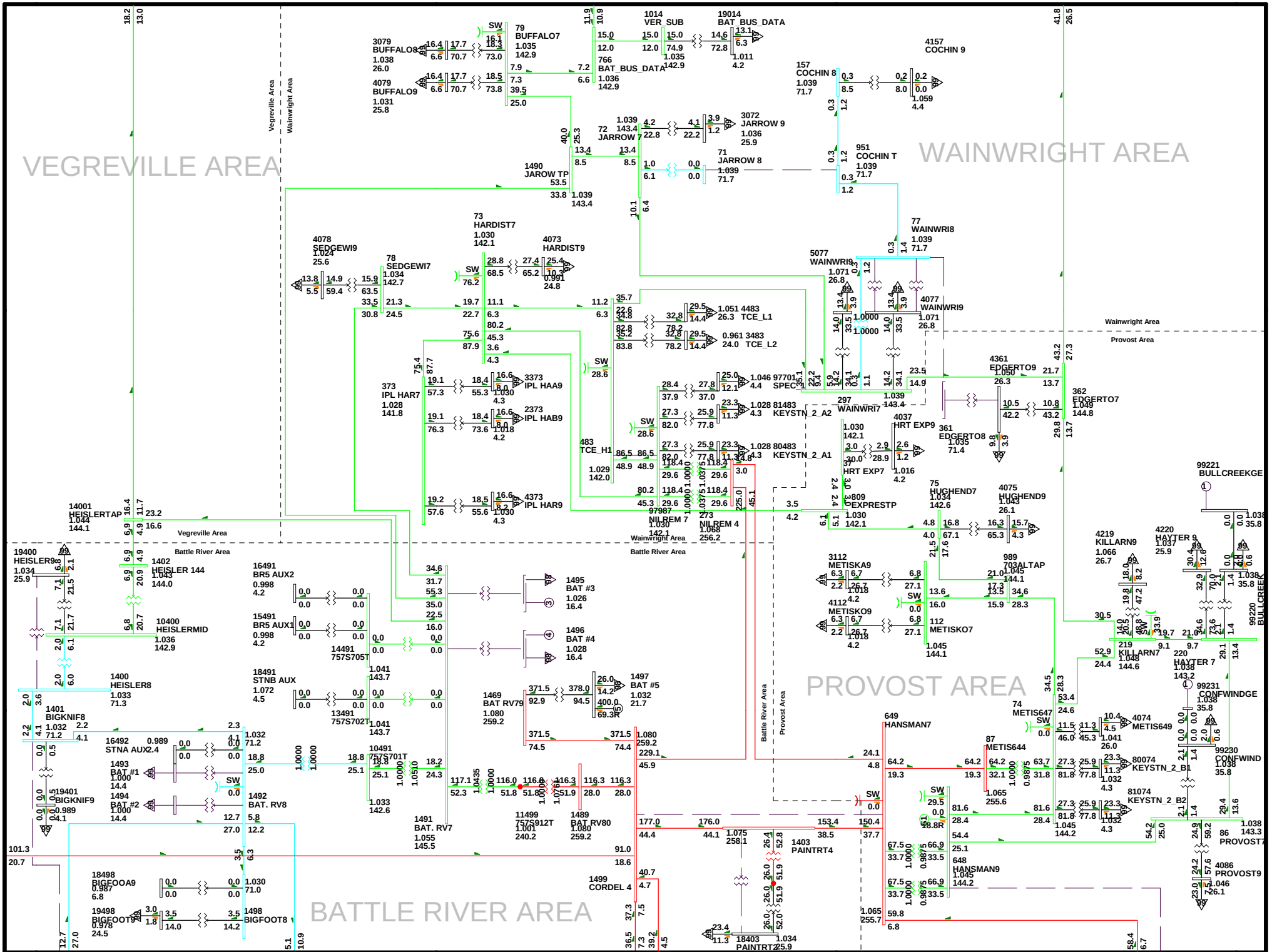
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 10:55
D1-36

2017SP-Alt 1 BR#5 ON-16.a

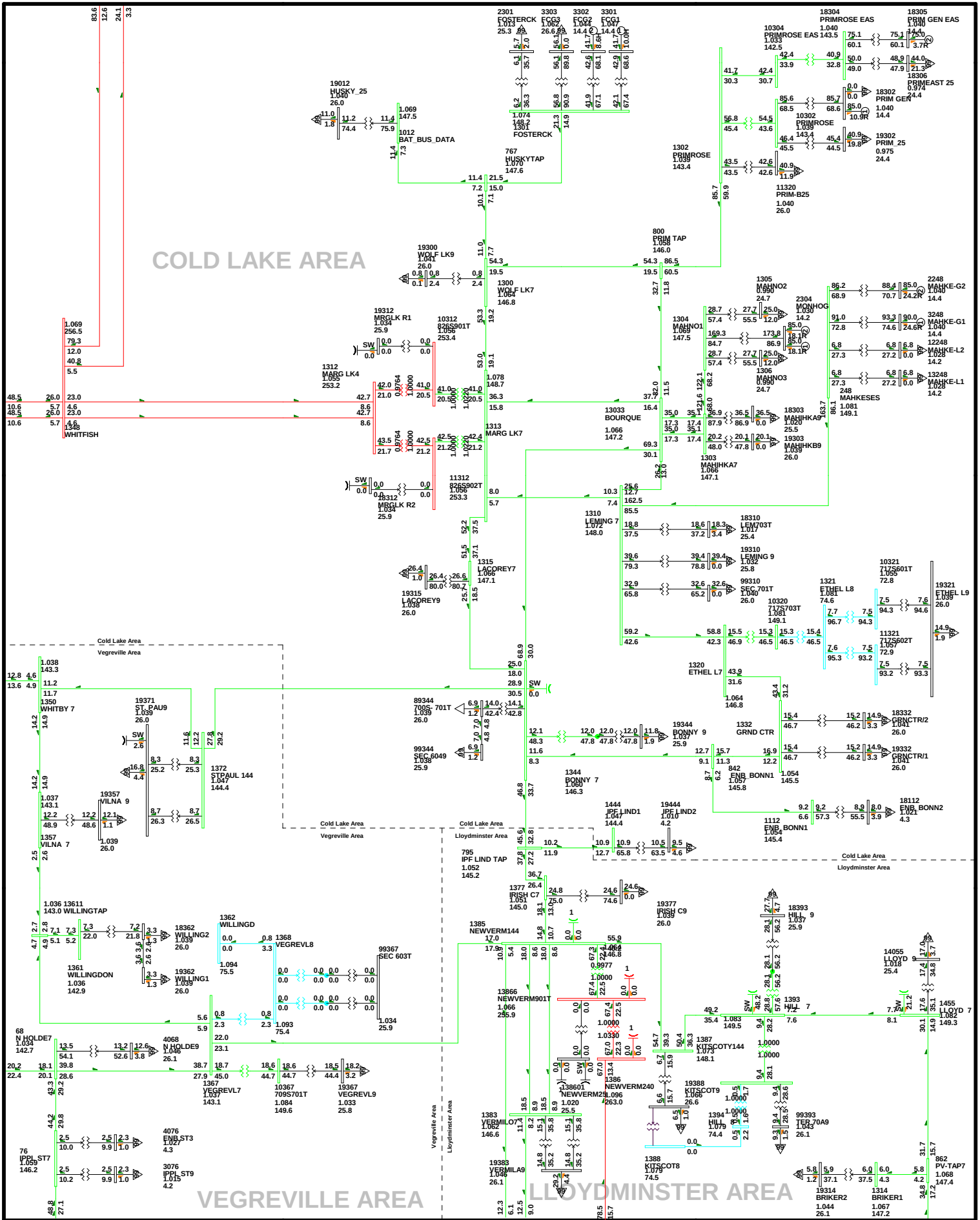
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 10:56
D1-36

2017SP-Alt 1 BR#5 ON-16.b

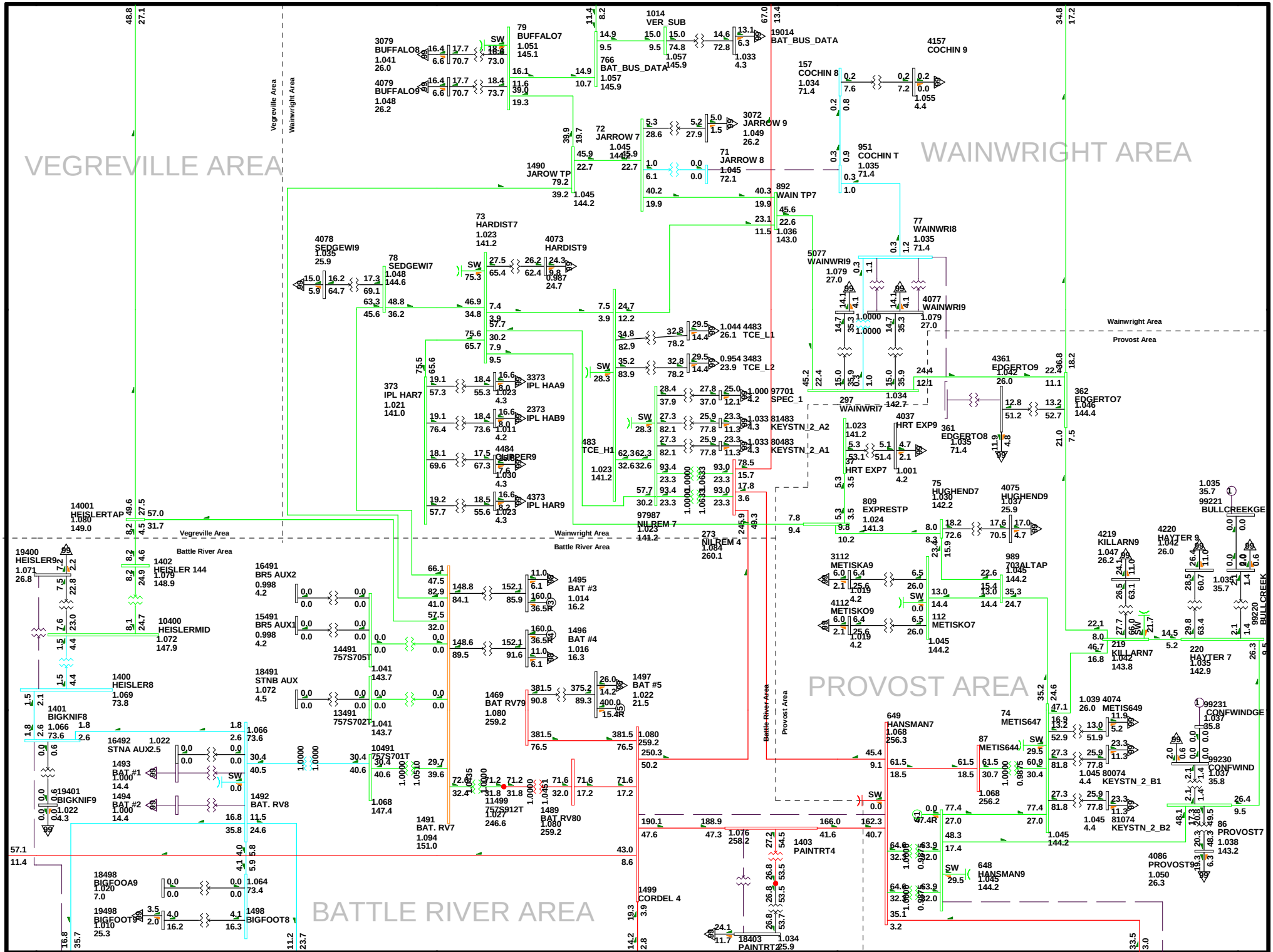
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

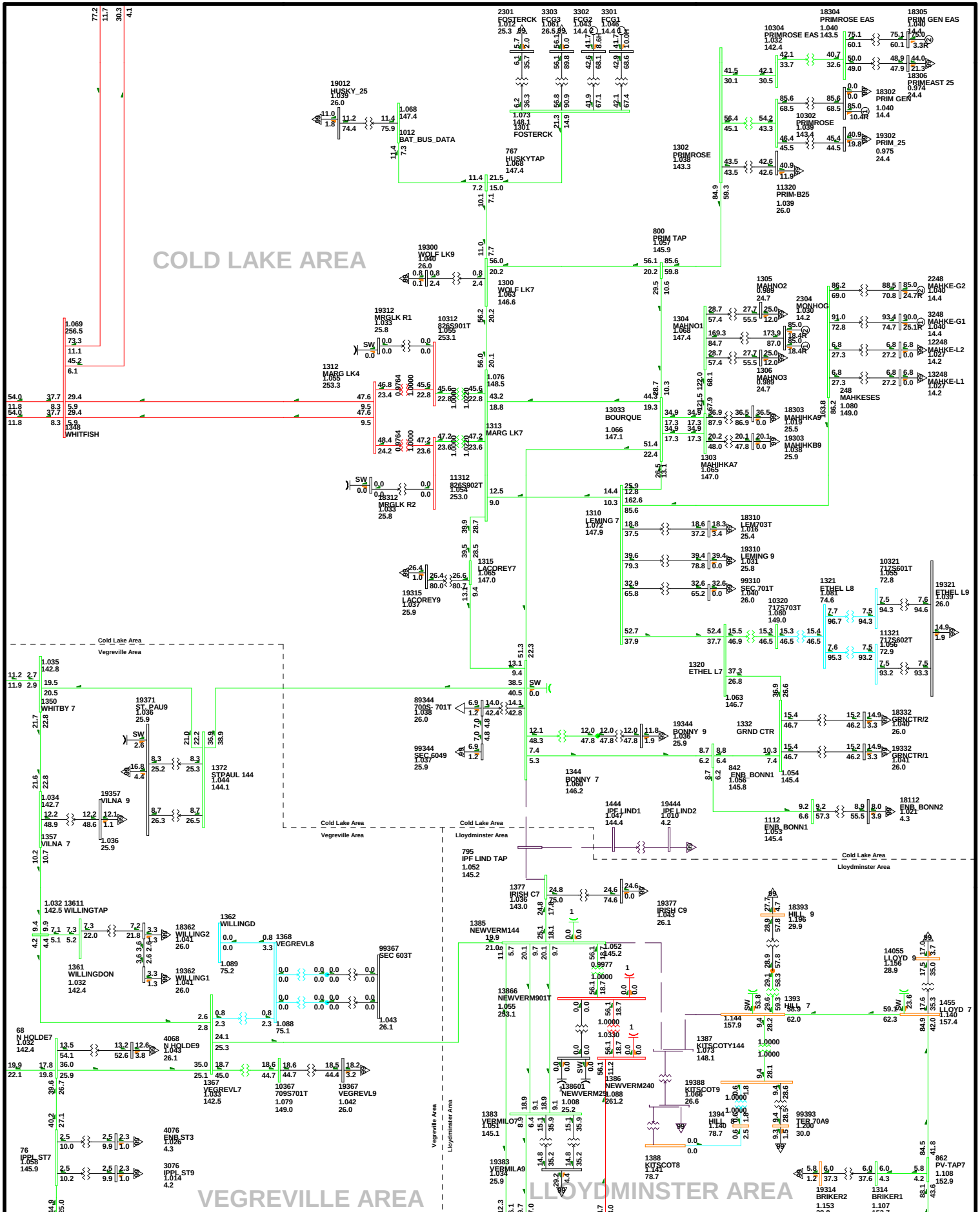


CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 10:59
D1-00

2017WP-Alt 2 BR#5 ON-1.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

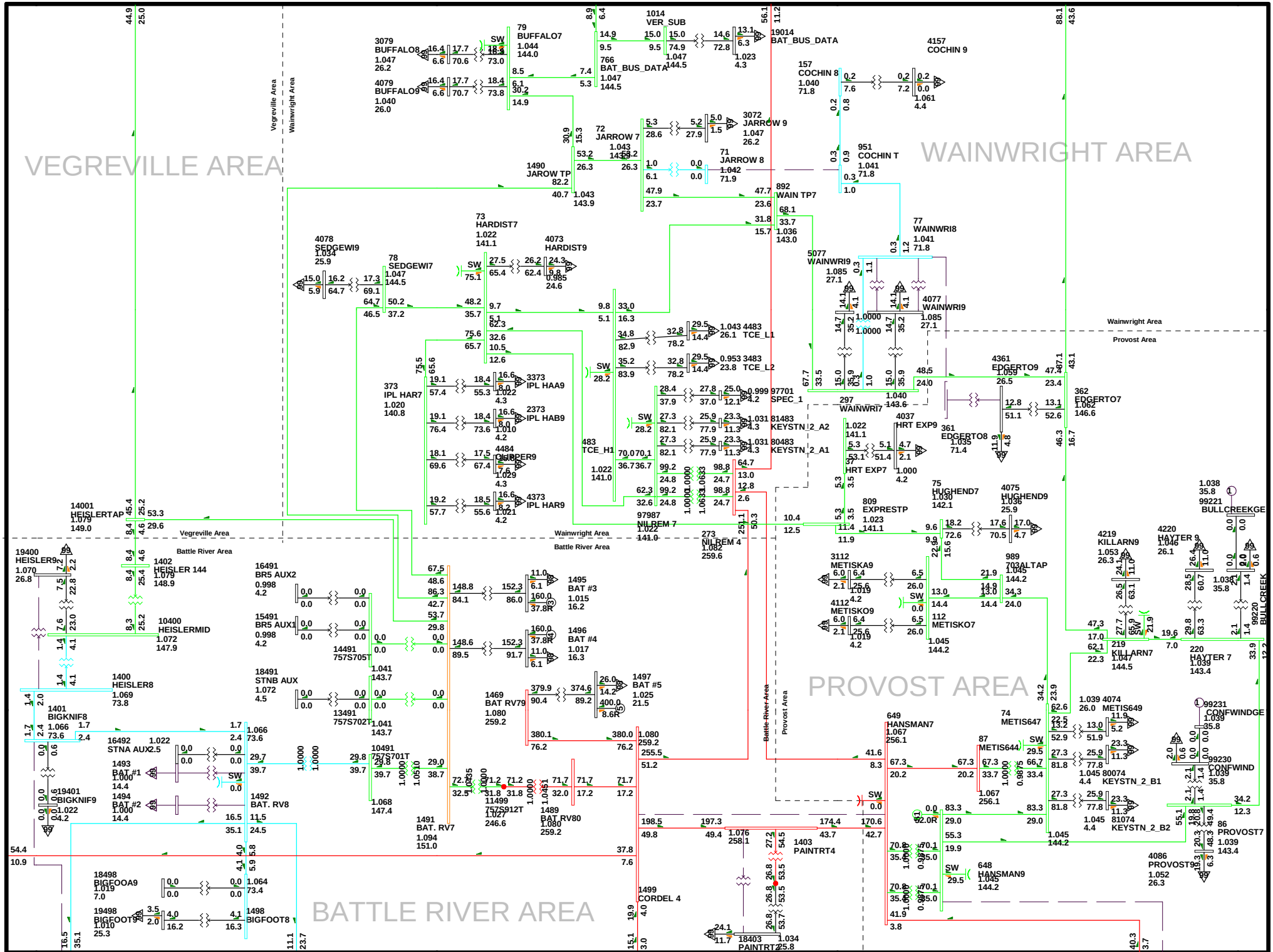

VEGREVILLE AREA
WAINWRIGHT AREA
PROVOST AREA
BATTLE RIVER AREA
Vegreville Area
Wainwright Area
Battle River Area
Provost Area
3079 BUFFALO8 1.041 26.0
4079 BUFFALO9 1.048 26.2
79 BUFFALO7 1.051 145.1
1014 VER_SUB
19014 BAT_BUS_DATA
766 BAT_BUS_DATA 1.057 145.9
4157 COCHIN 9
157 COCHIN 8 1.034 71.4
951 COCHIN T 1.035 71.4
1.055 4.4
3072 JARROW 9 1.049 26.2
72 JARROW 7 1.045 144.2
71 JARROW 8 1.045 72.1
1490 JAROW TP 79.2 1.045 144.2
892 WAIN TP7
77 WAINWRI8 1.035 71.4
5077 WAINWRI9 1.079 27.0
4077 WAINWRI9 1.079 27.0
4078 SEDGEWI9 1.035 25.9
78 SEDGEWI7 1.048 144.6
73 HARDIST7 1.023 141.2
4073 HARDIST9 0.887 24.7
373 IPL HAR7 1.021 141.0
3373 IPL HAA9 1.023 4.3
2373 IPL HAB9 1.011 4.2
4484 CLIPPER9 1.030 4.3
4373 IPL HAR9 1.023 4.3
483 TCE_H1 1.023 141.2
1.044 4483 26.1 TCE_L1
0.954 3483 23.9 TCE_L2
1.000 97701 SPEC_1 4.2
81483 KEYSTN_2_A2 1.033 4.3
80483 KEYSTN_2_A1 1.033 4.3
97987 NIL_REM 7 1.023 141.2
273 NIL_REM 4 1.084 260.1
297 WAINWRI7 1.034 142.7
4037 HRT EXP9 1.035 71.4
HRT EXP7 1.001 4.2
4361 EDGERTO9 1.042 26.0
362 EDGERTO7 1.046 144.4
361 EDGERTO8 1.035 71.4
75 HUGHEND7 1.030 142.2
4075 HUGHEND9 1.037 25.9
809 EXPRESTP 1.024 141.3
14001 HEISLERTAP 1.080 149.0
1402 HEISLER 144 1.079 148.9
10400 HEISLERMID 1.072 147.9
19400 HEISLER9 1.071 26.8
1400 HEISLER8 1.069 73.8
1401 BIGKNIF8 1.066 73.6
19401 BIGKNIF9 1.022 4.3
1493 BAT #1 1.000 14.4
1494 BAT #2 1.000 14.4
1492 BAT. RV8
16492 STNA AUX 1.022 2.5
18498 BIGFOOA9 1.020 7.0
19498 BIGFOOT9 1.010 25.3
1498 BIGFOOT8
16491 BR5 AUX2 0.998 4.2
15491 BR5 AUX1 0.998 4.2
14491 757S705T
18491 STNB AUX 1.072 4.5
13491 757S702T
10491 757S701T
11499 757S912T 1.027 246.6
1491 BAT. RV7 1.094 151.0
1495 BAT #3 1.014 16.2
1496 BAT #4 1.016 16.3
1497 BAT #5 1.022 21.5
1469 BAT RV79 1.080 259.2
1489 BAT RV80 1.080 259.2
1499 CORDEL 4
18403 PAINTRT2 1.034 25.9
1403 PAINTRT4
649 HANSMAN7 1.068 256.3
648 HANSMAN9 1.045 144.2
74 METIS647
87 METIS644
1039 4074 METIS649 1.039 26.0
80074 KEYSTN_2_B1 1.045 4.4
81074 KEYSTN_2_B2 1.045 4.4
3112 METISKA9 1.019 4.2
4112 METISKO9 1.019 4.2
112 METISKO7 1.045 144.2
989 703ALTAP 1.045 144.2
4219 KILLARN9 1.047 26.2
219 KILLARN7 1.042 143.8
4220 HAYTER 9 1.042 26.0
220 HAYTER 7 1.035 142.9
99221 BULLCREEKGE 1.035 35.7
99220 BULLCREEK 1.035 35.7
99231 CONFWINDGE 1.037 35.8
99230 CONFWIND 1.037 35.8
4086 PROVOST9 1.050 26.3
86 PROVOST7 1.038 143.2
CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 10:59
D1-00
2017WP-Alt 2 BR#5 ON-1.b
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 10:59
D1-23

2017WP-Alt 2 BR#5 ON-2.a

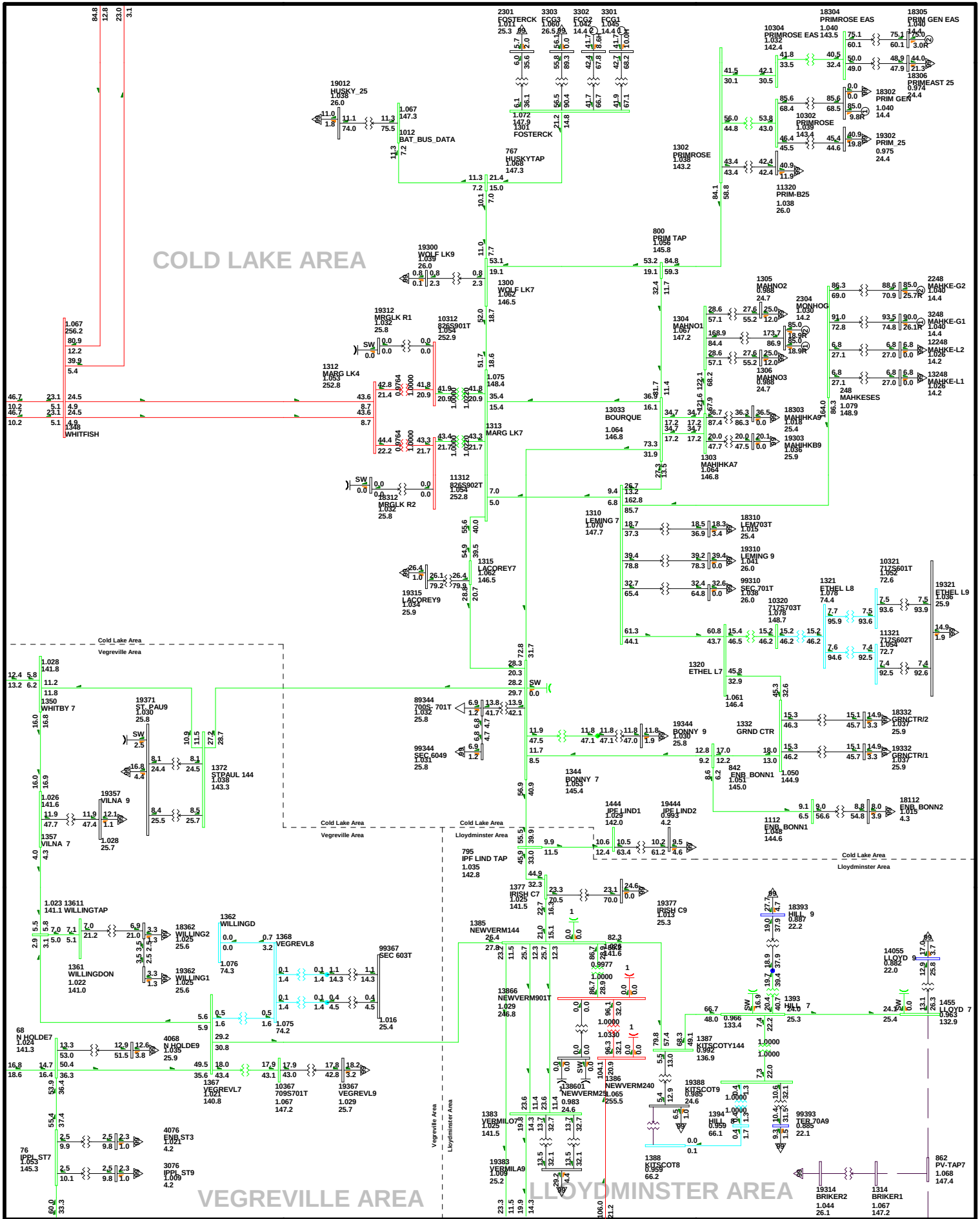
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 10:59
D1-23

2017WP-Alt 2 BR#5 ON-2.b

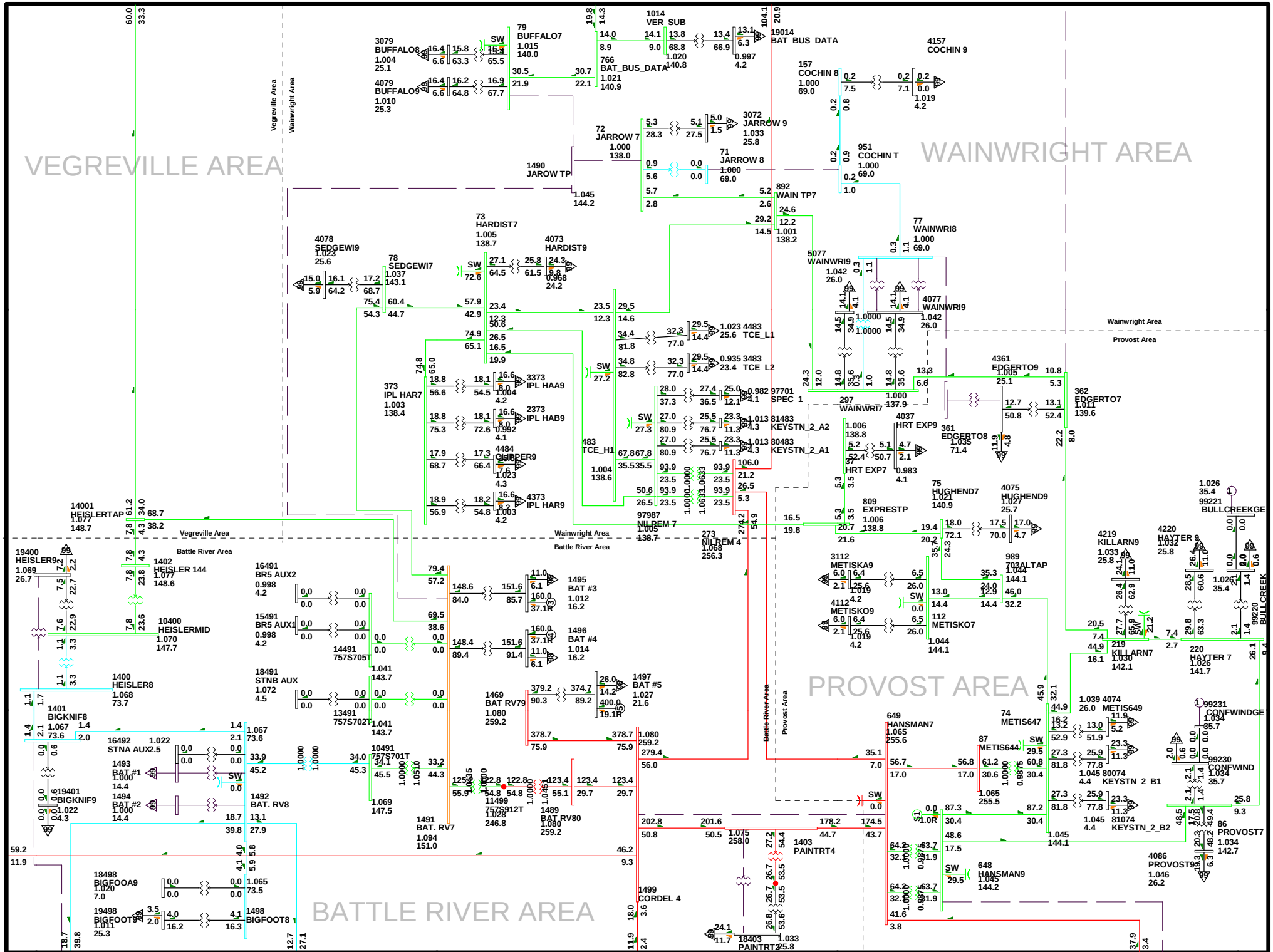
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 10:59
D1-24

2017WP-Alt 2 BR#5 ON-3.a

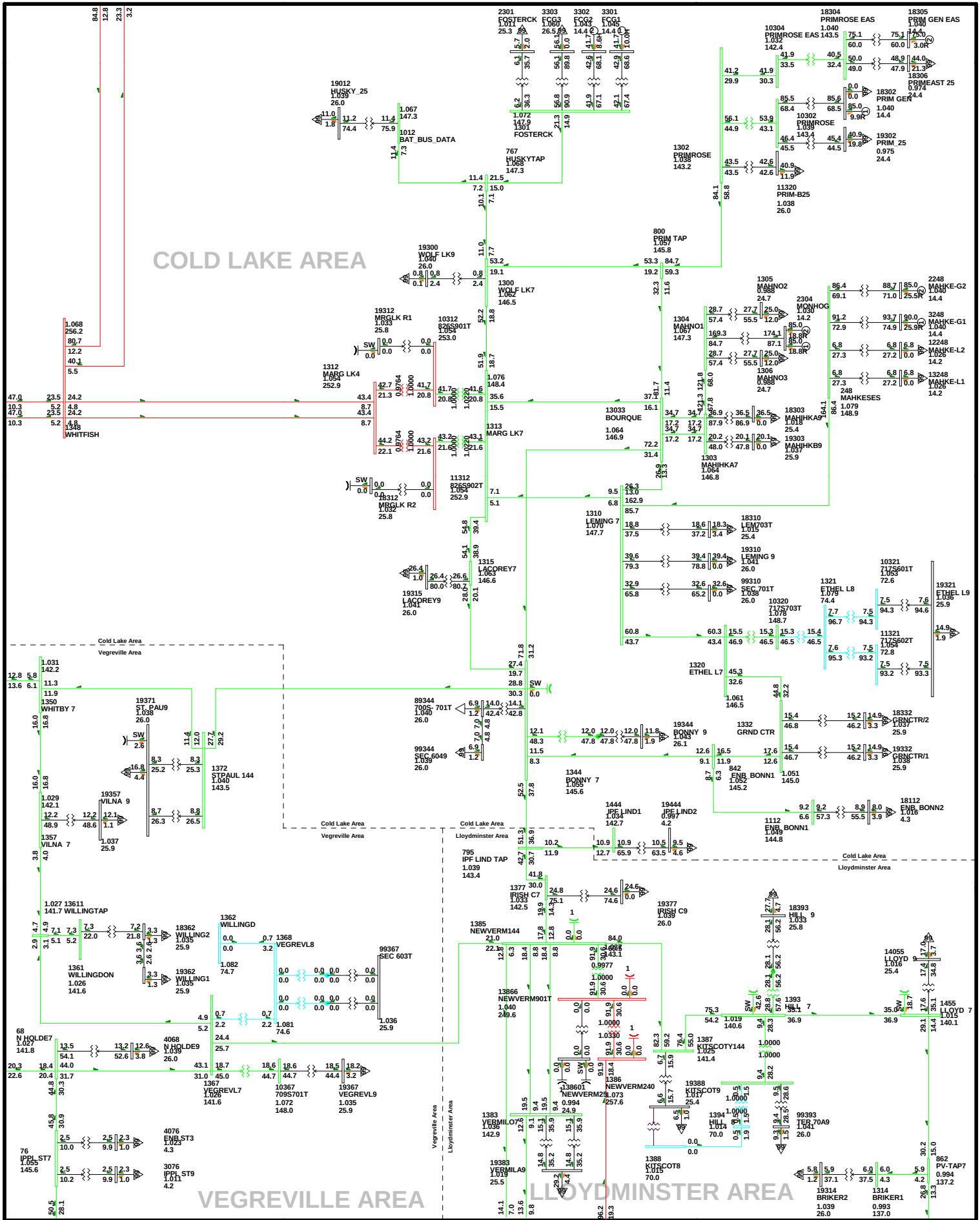
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 10:59
D1-24

2017WP-Alt 2 BR#5 ON-3.b

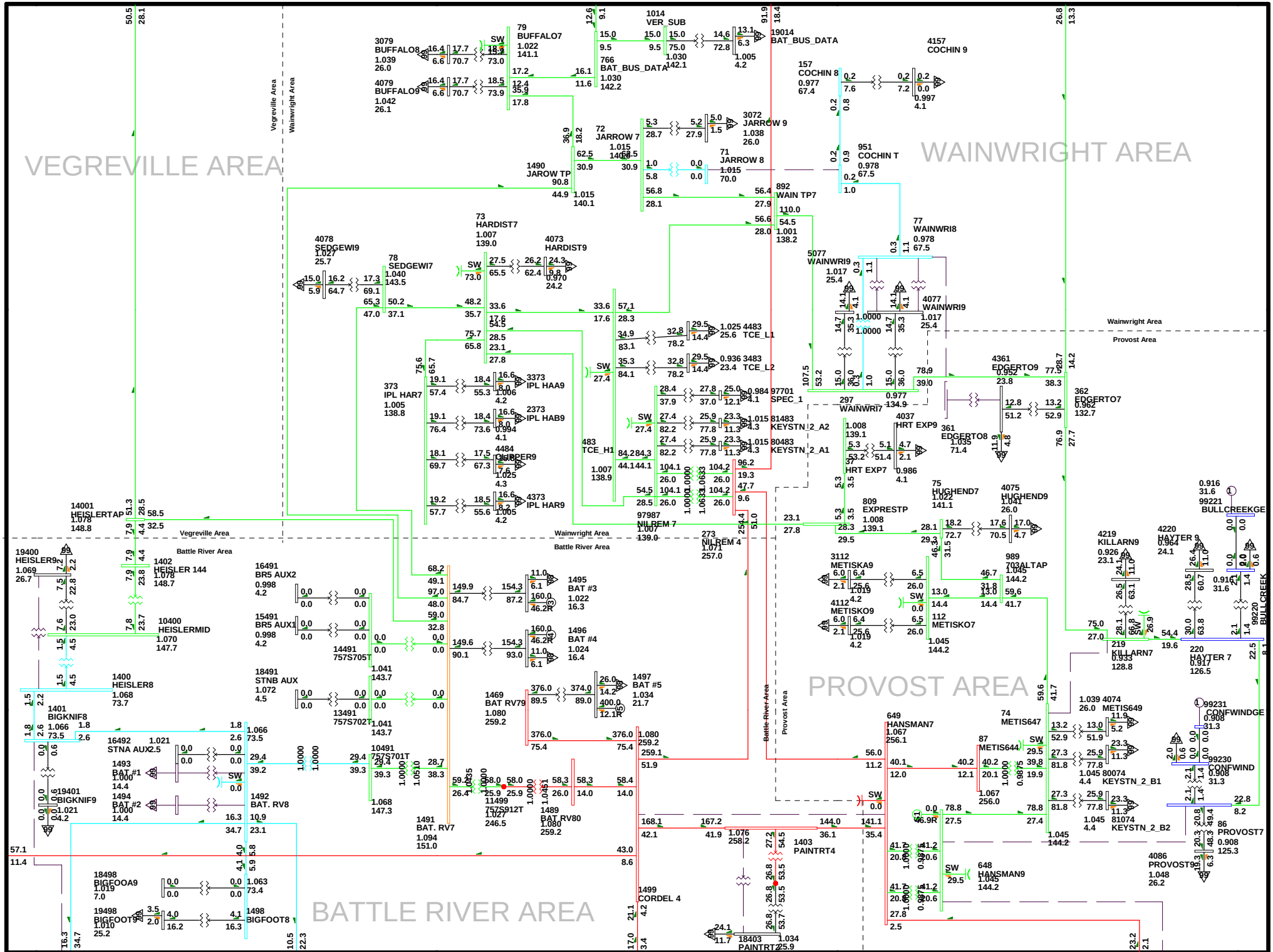
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 12:31
D1-25

2017WP-Alt 2 BR#5 ON-4.a

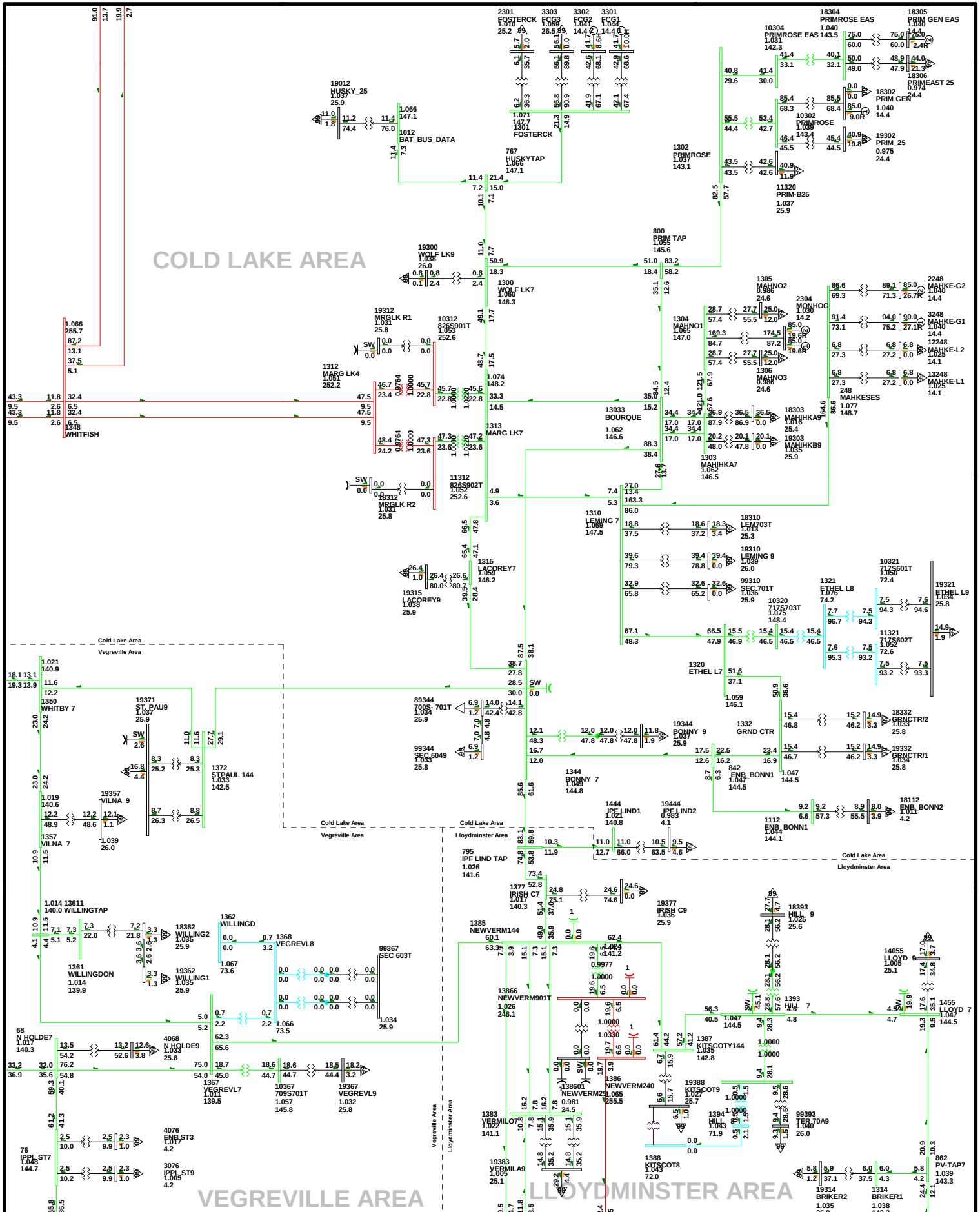
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 12:31
D1-25

2017WP-Alt 2 BR#5 ON-4.b

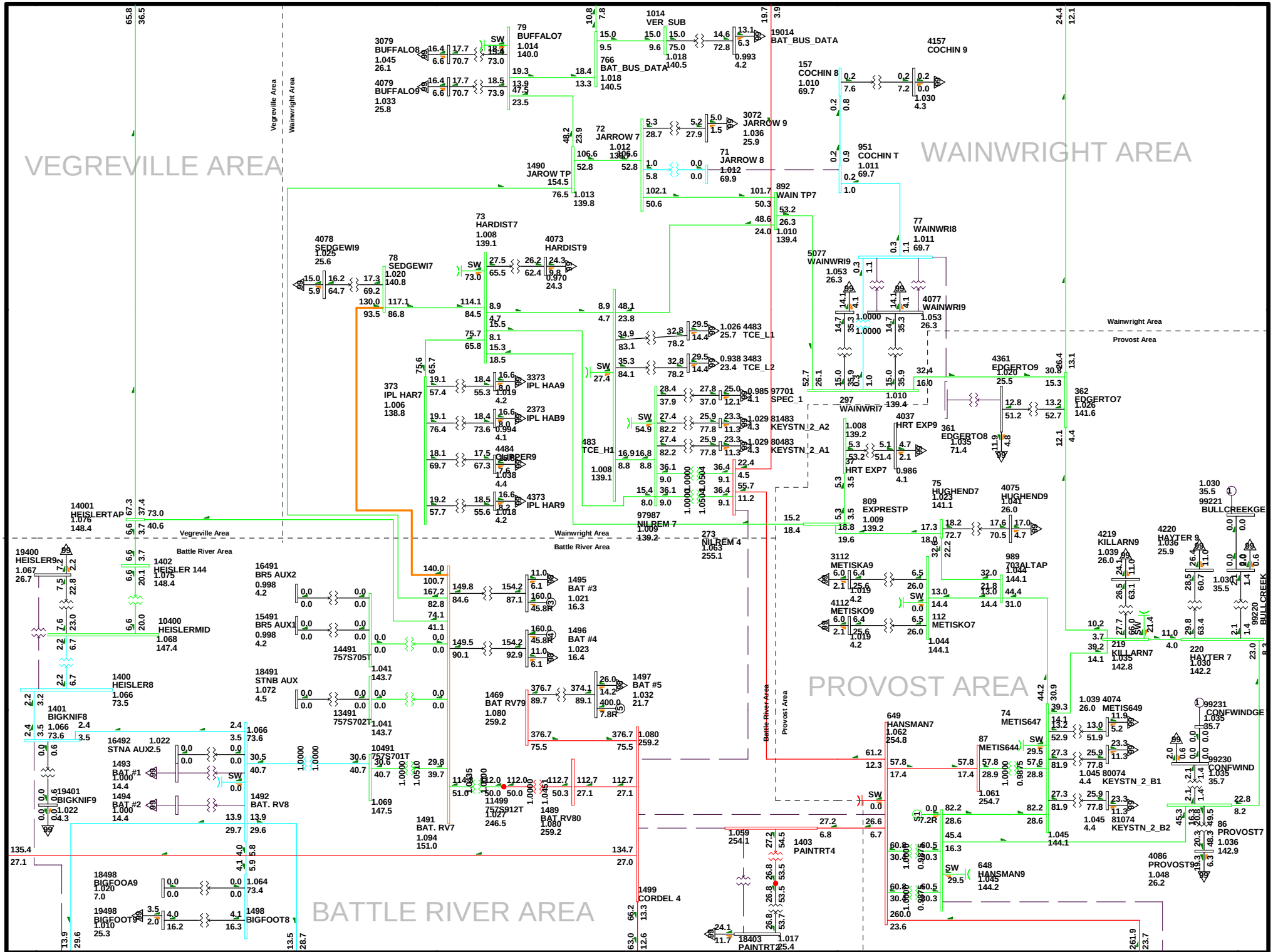
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 11:00
D1-26

2017WP-Alt 2 BR#5 ON-5.a

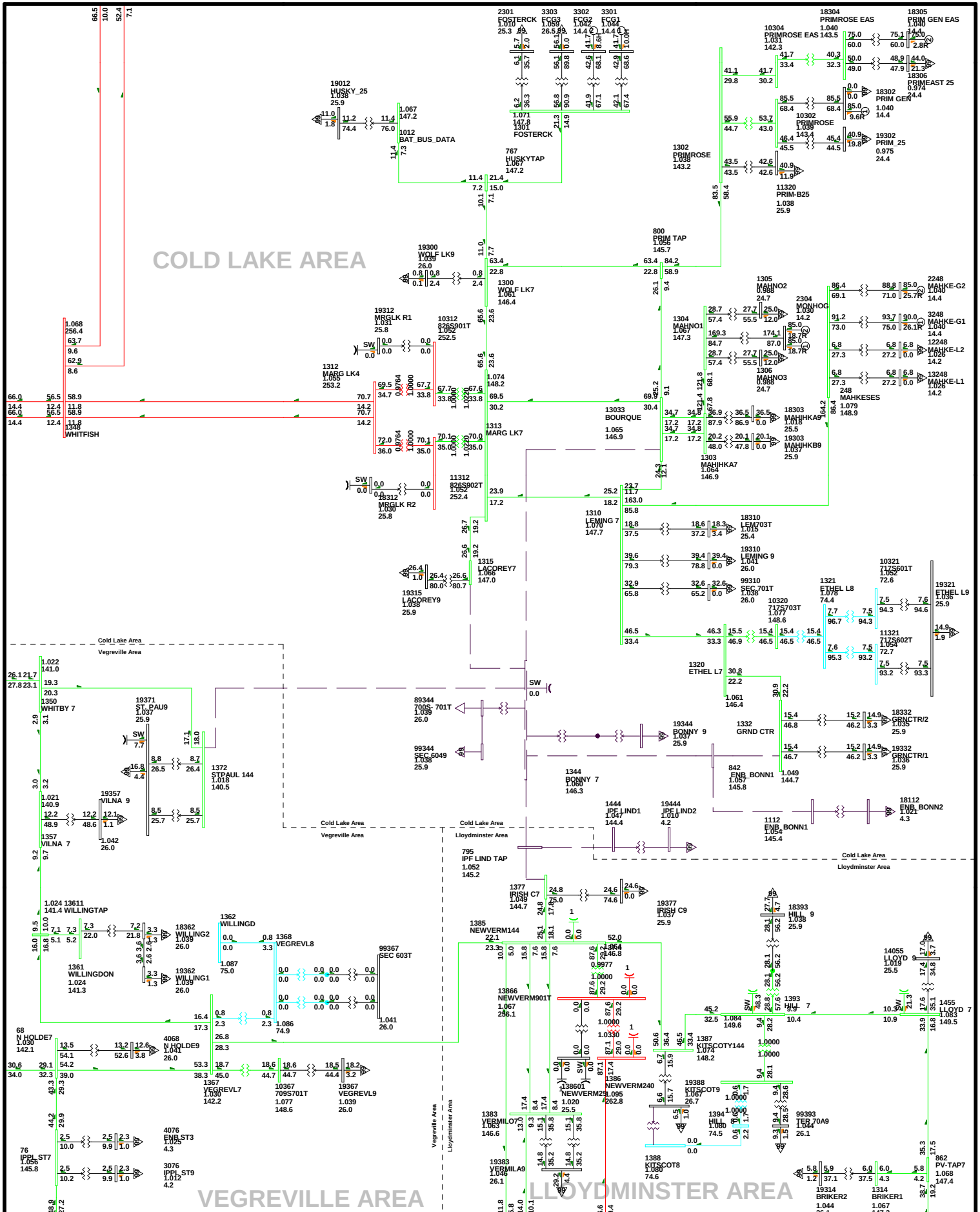
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 11:00
D1-26

2017WP-Alt 2 BR#5 ON-5.b

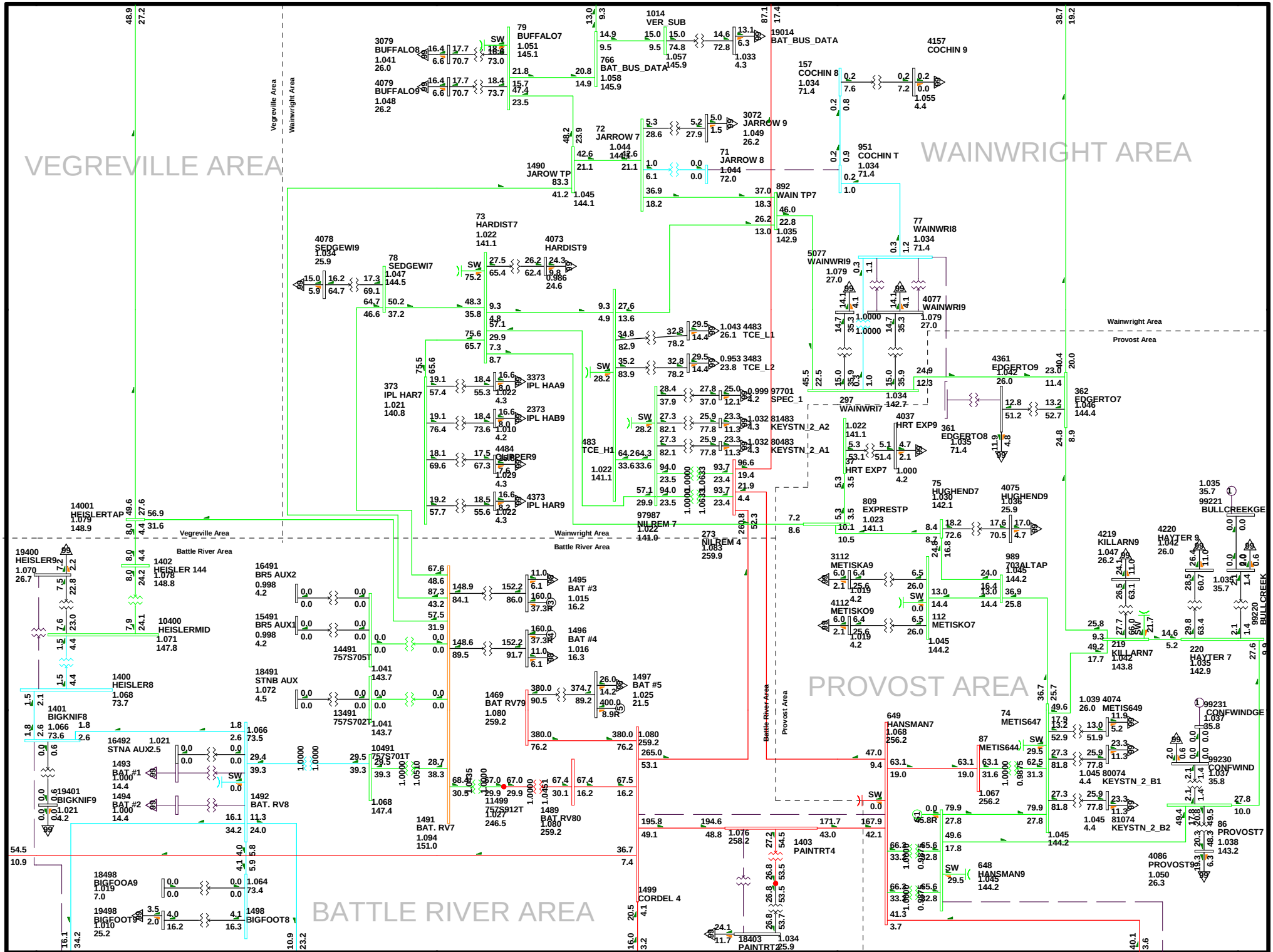
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 11:00
D1-27

2017WP-Alt 2 BR#5 ON-6.a

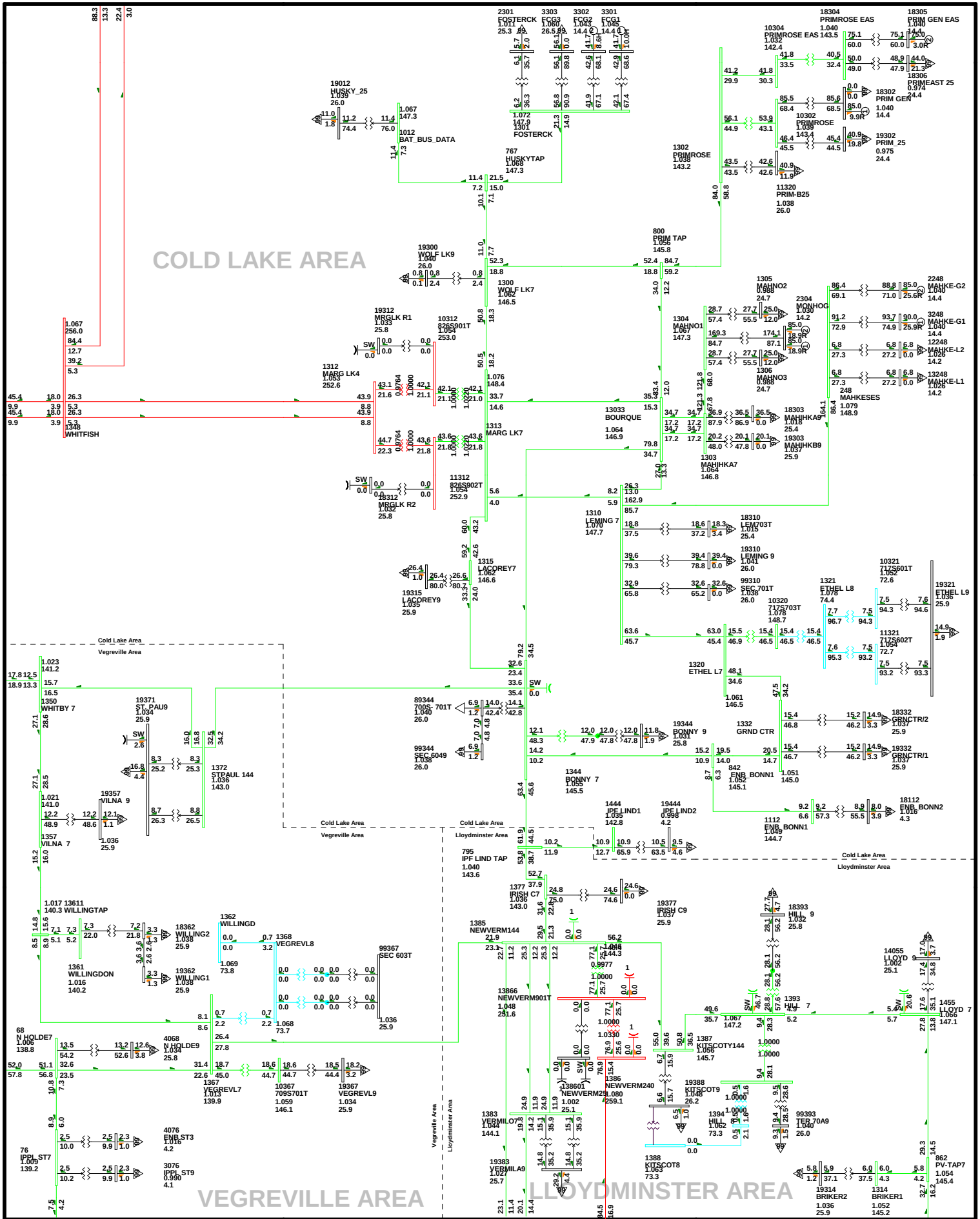
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 11:00
D1-27

2017WP-Alt 2 BR#5 ON-6.b

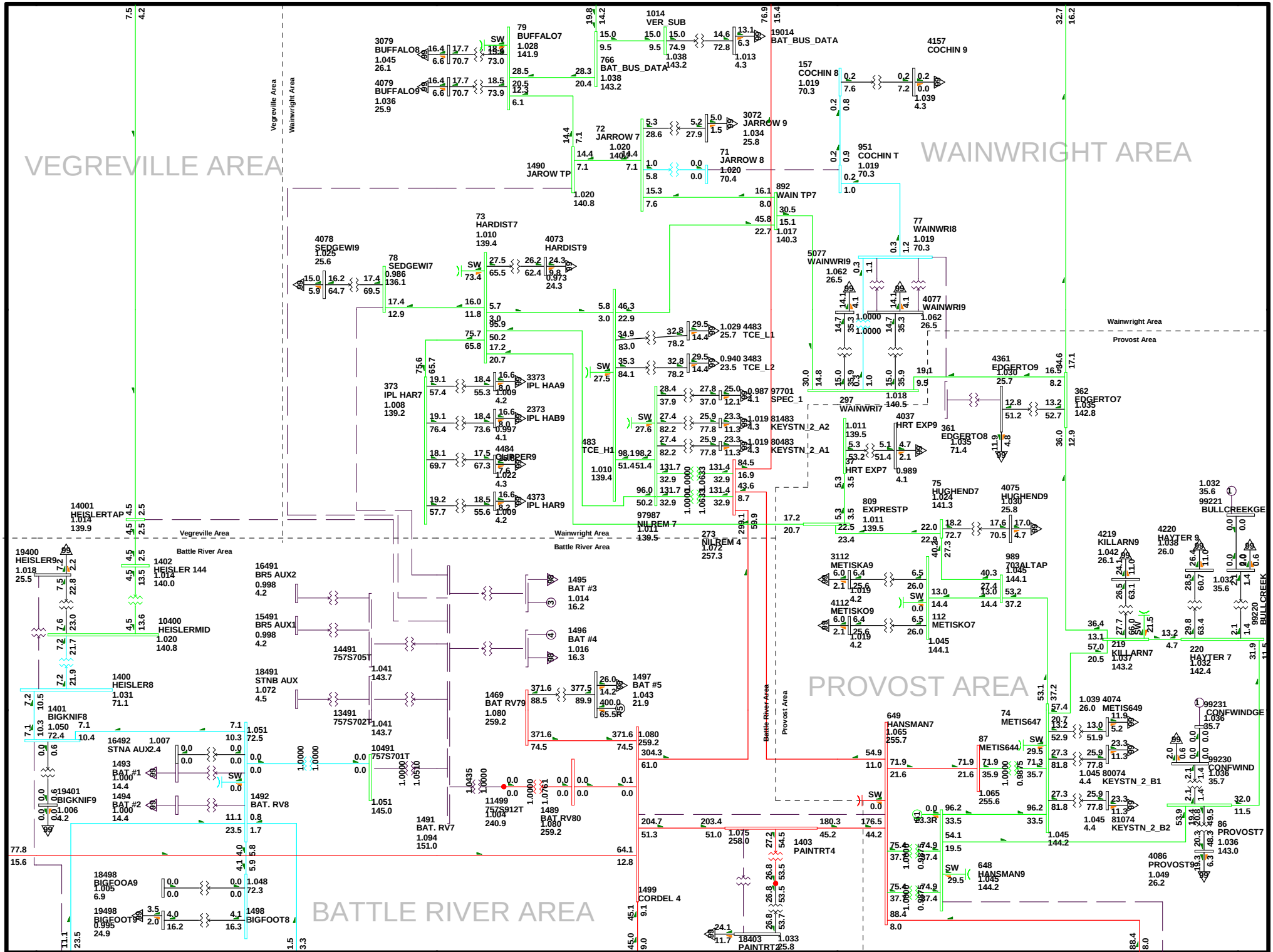
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 11:00
D1-28

2017WP-Alt 2 BR#5 ON-7.a

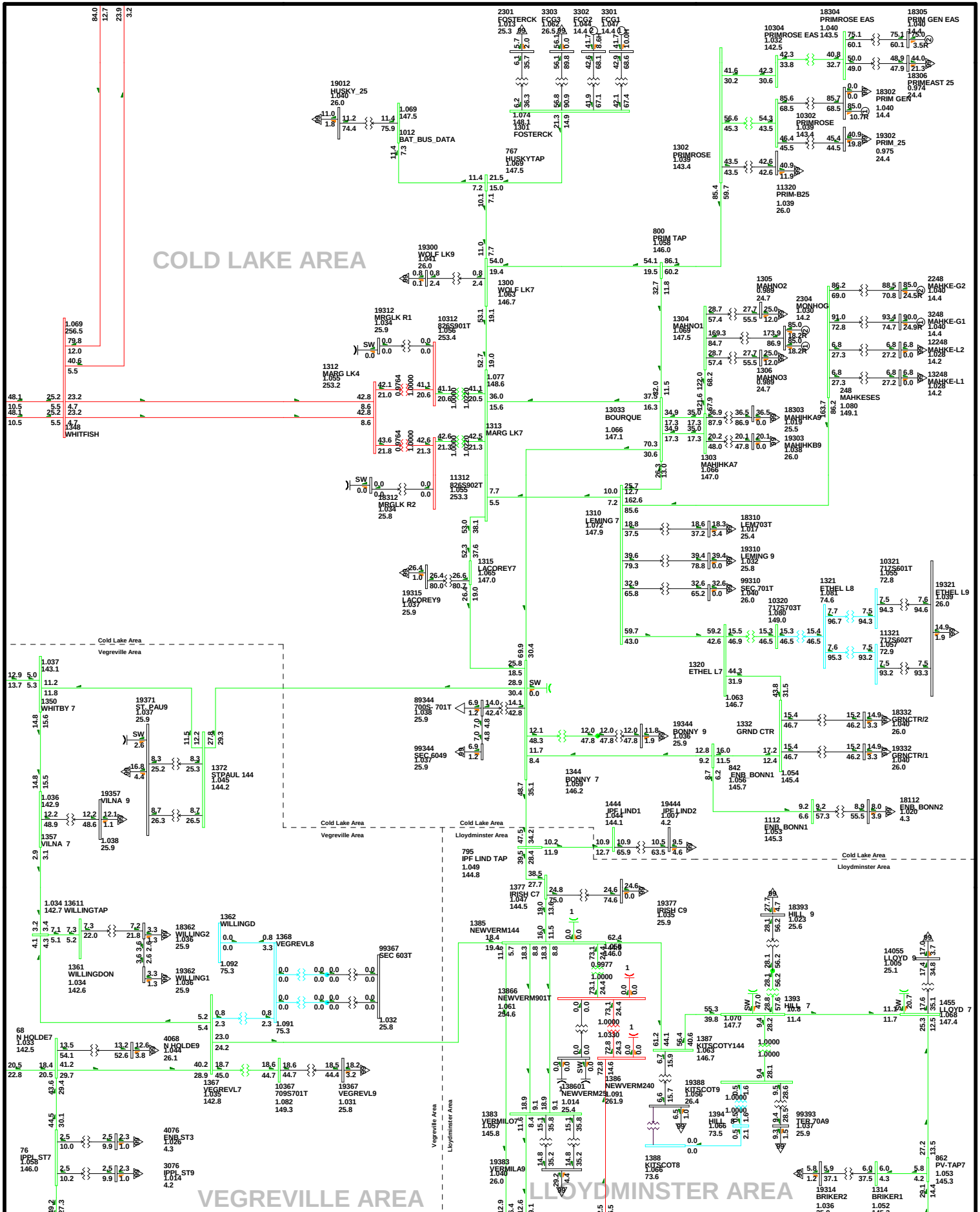
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 11:00
D1-28

2017WP-Alt 2 BR#5 ON-7.b

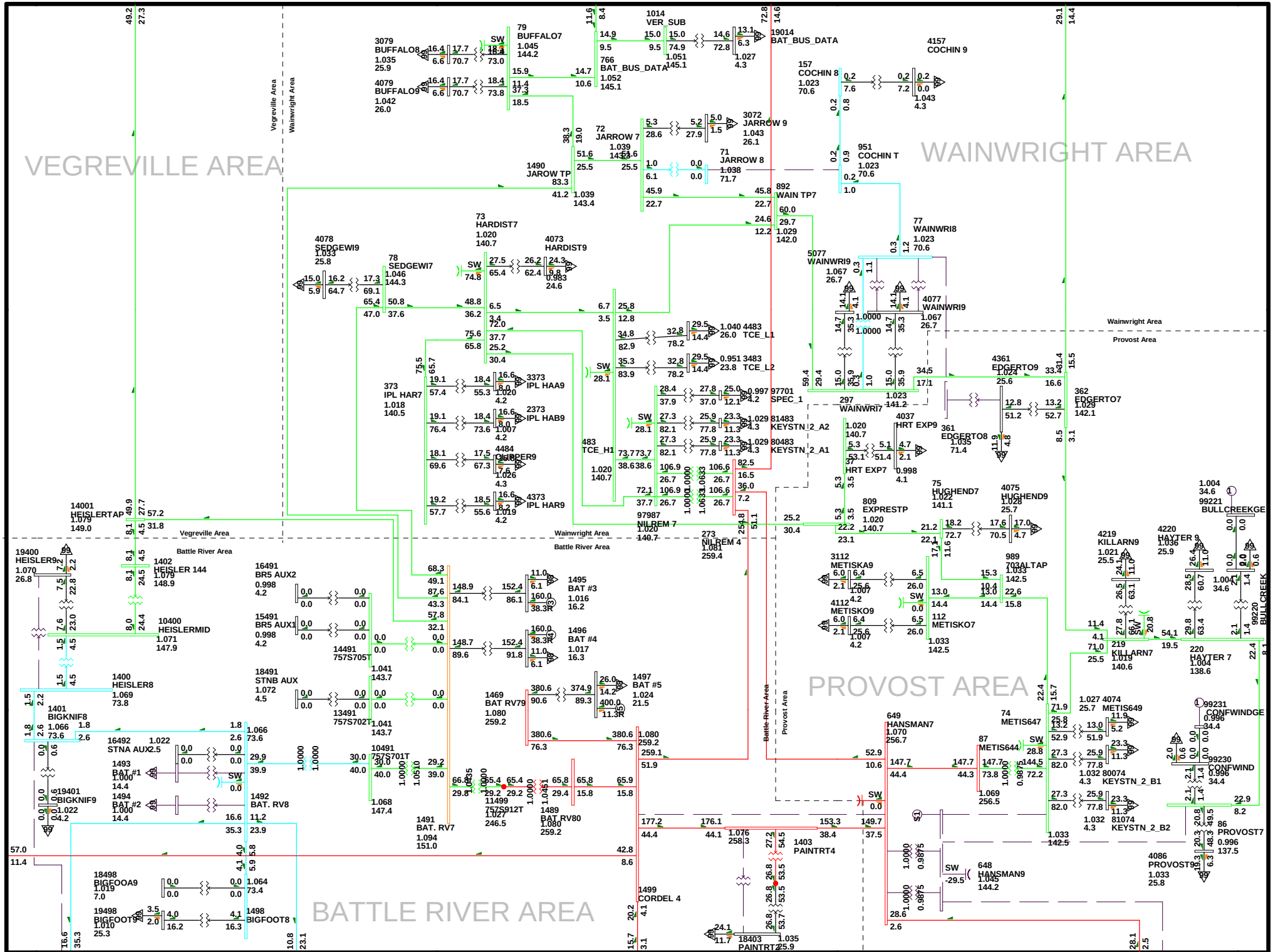
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 11:00
D1-30

2017WP-Alt 2 BR#5 ON-8.a

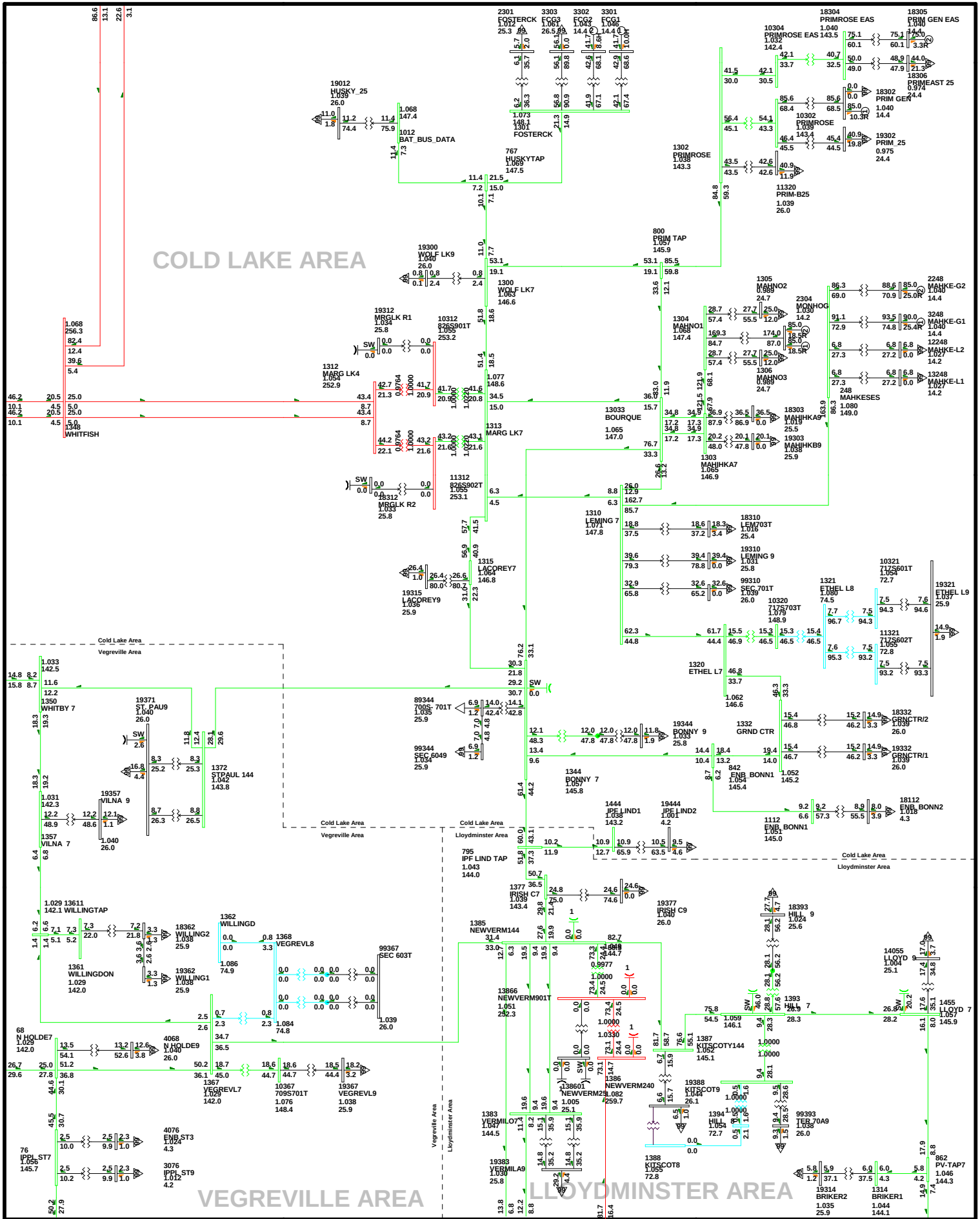
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 11:00
D1-30

2017WP-Alt 2 BR#5 ON-8.b

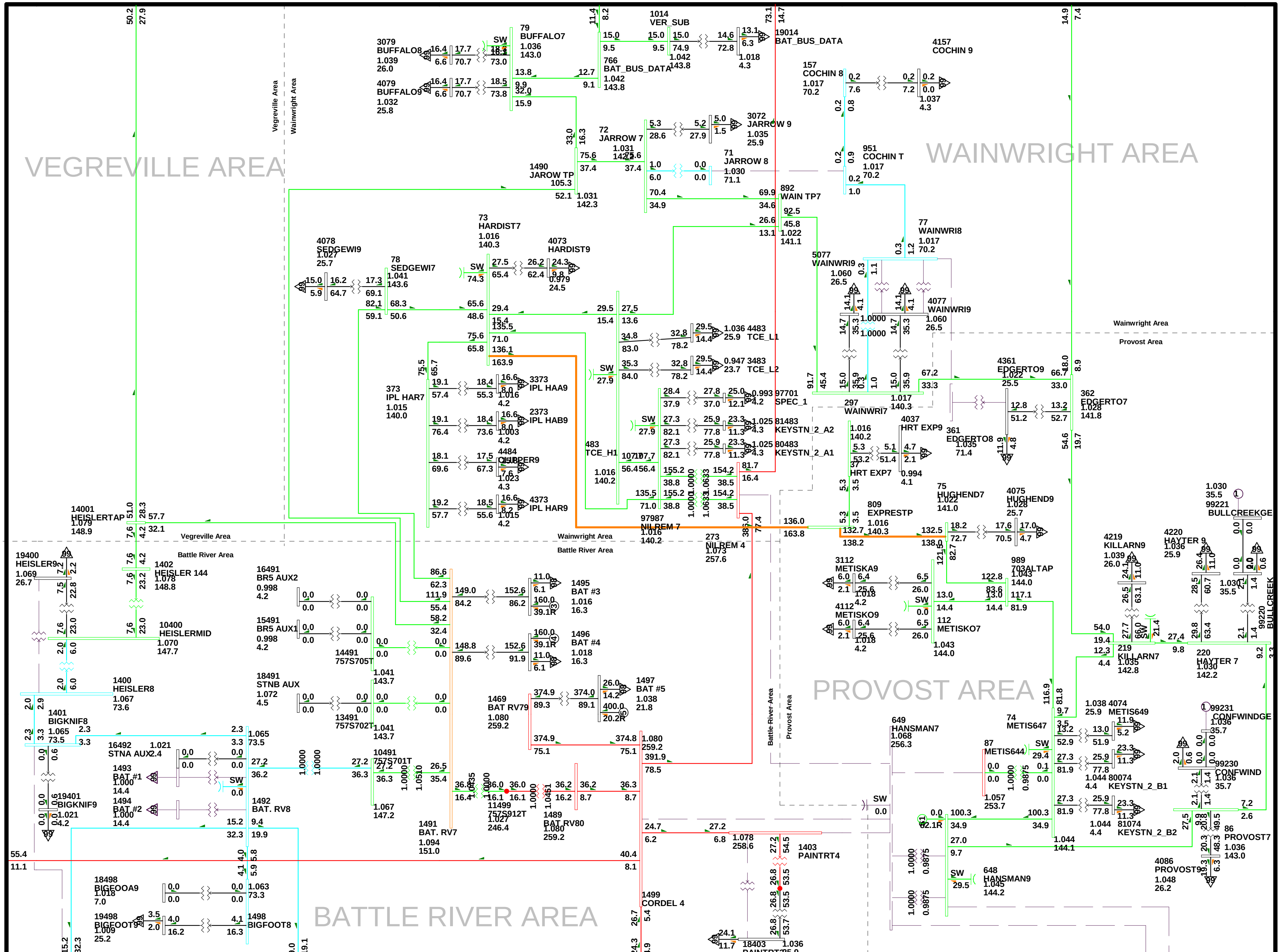
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 11:00
D1-31

2017WP-Alt 2 BR#5 ON-9.a

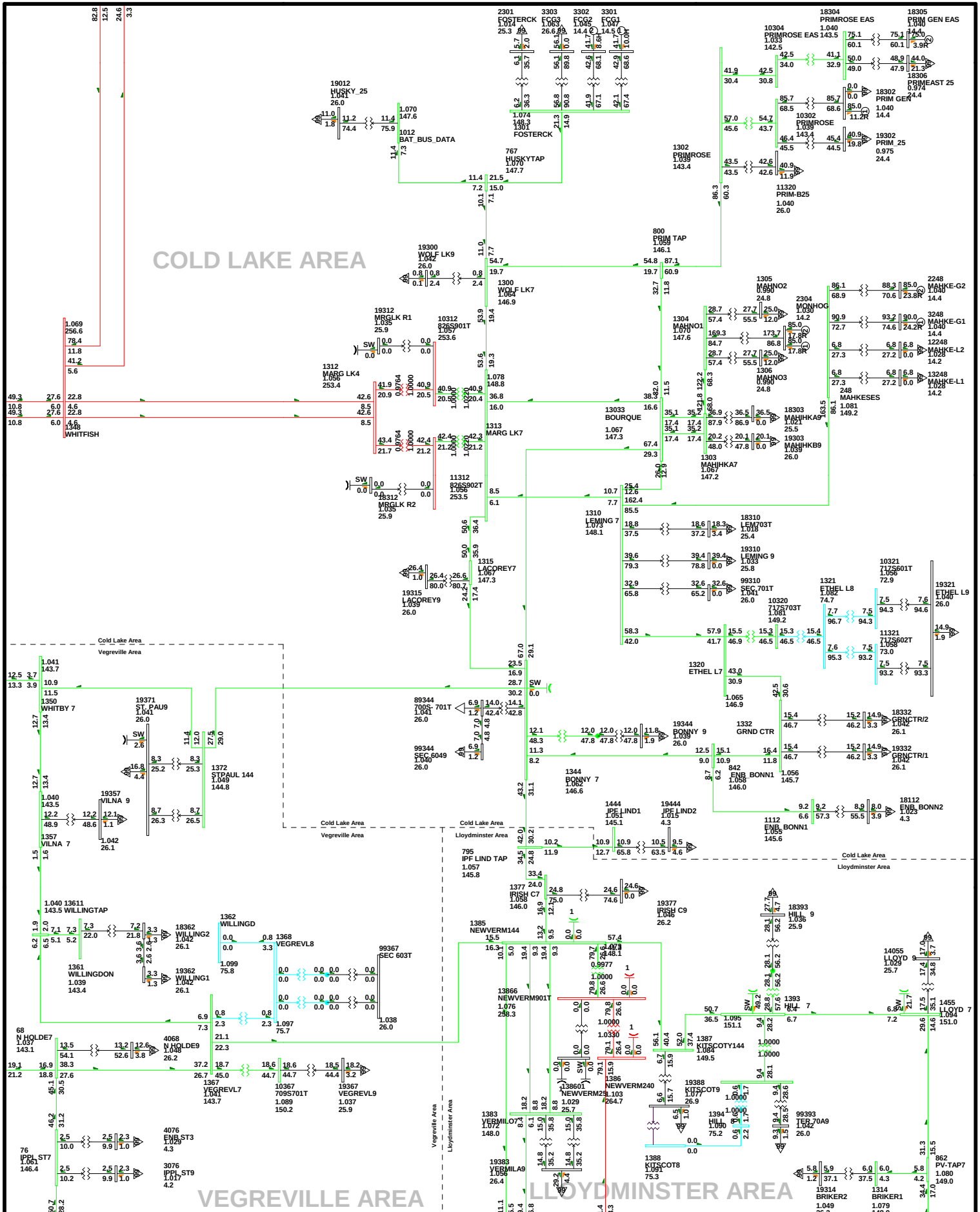
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 11:00
D1-31

2017WP-Alt 2 BR#5 ON-9.b

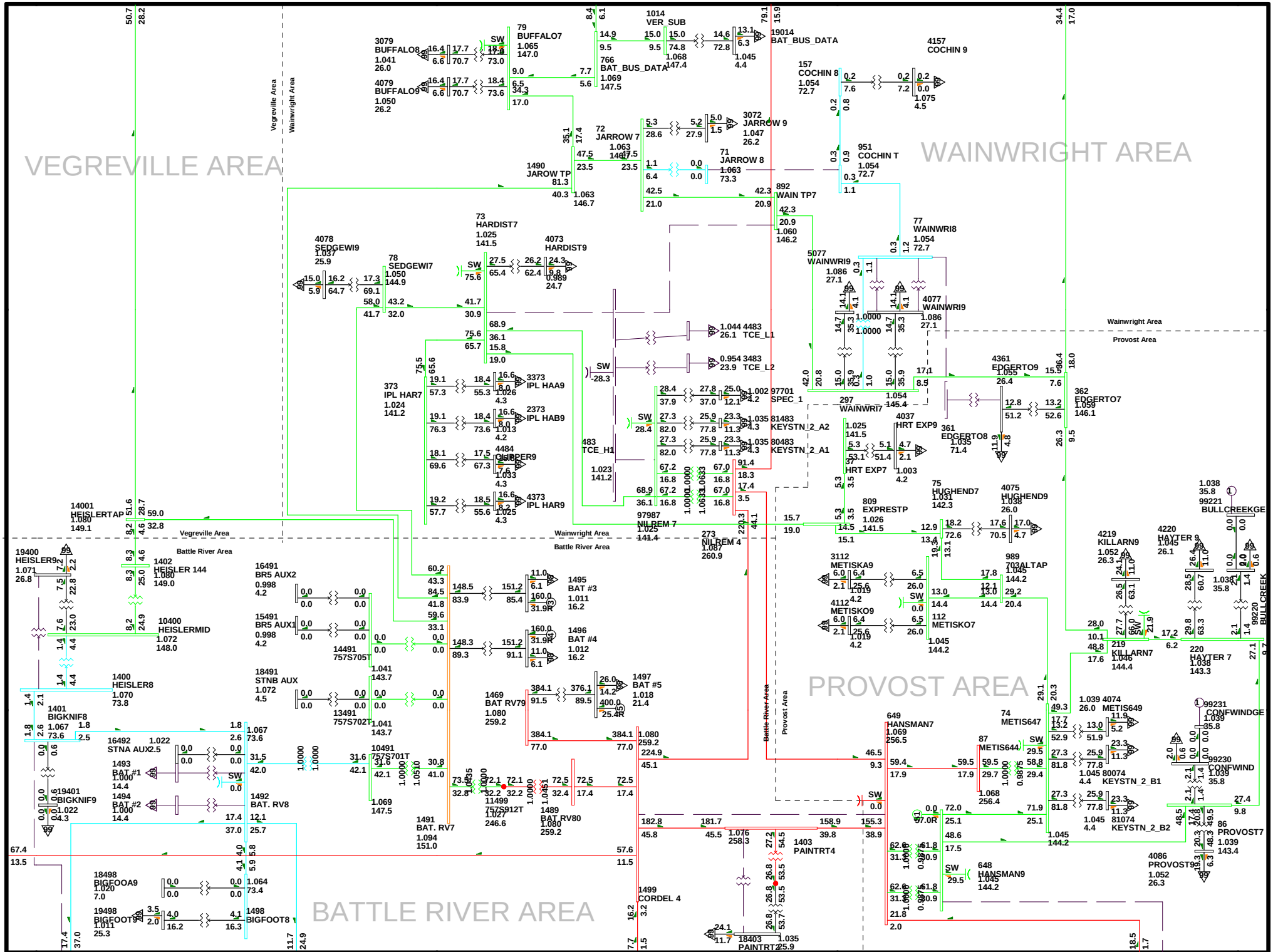
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 11:00
D1-32

2017WP-Alt 2 BR#5 ON-10.a

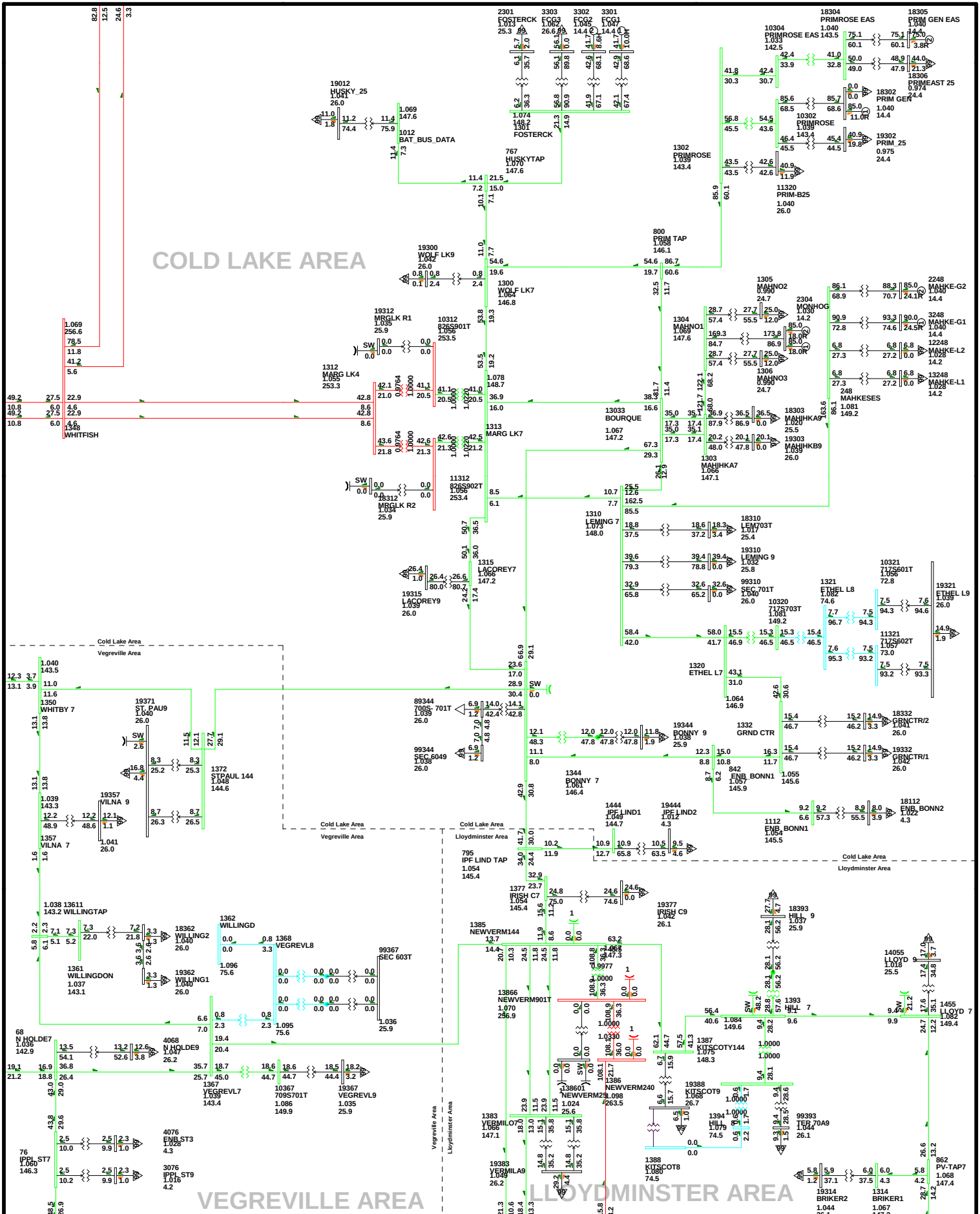
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 11:00
D1-32

2017WP-Alt 2 BR#5 ON-10.b

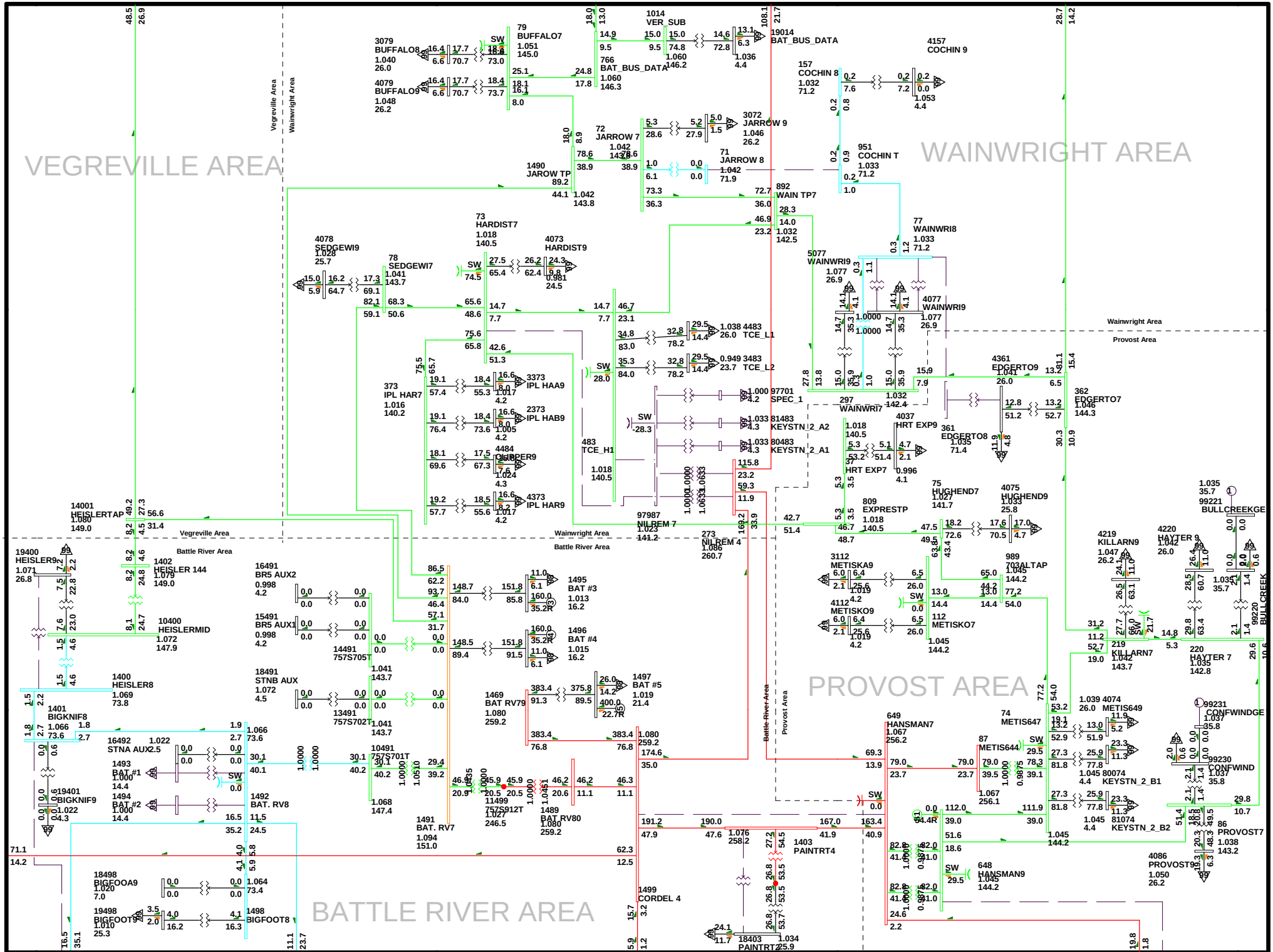
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 11:55
D1-33

2017WP-Alt 2 BR#5 ON-11.a

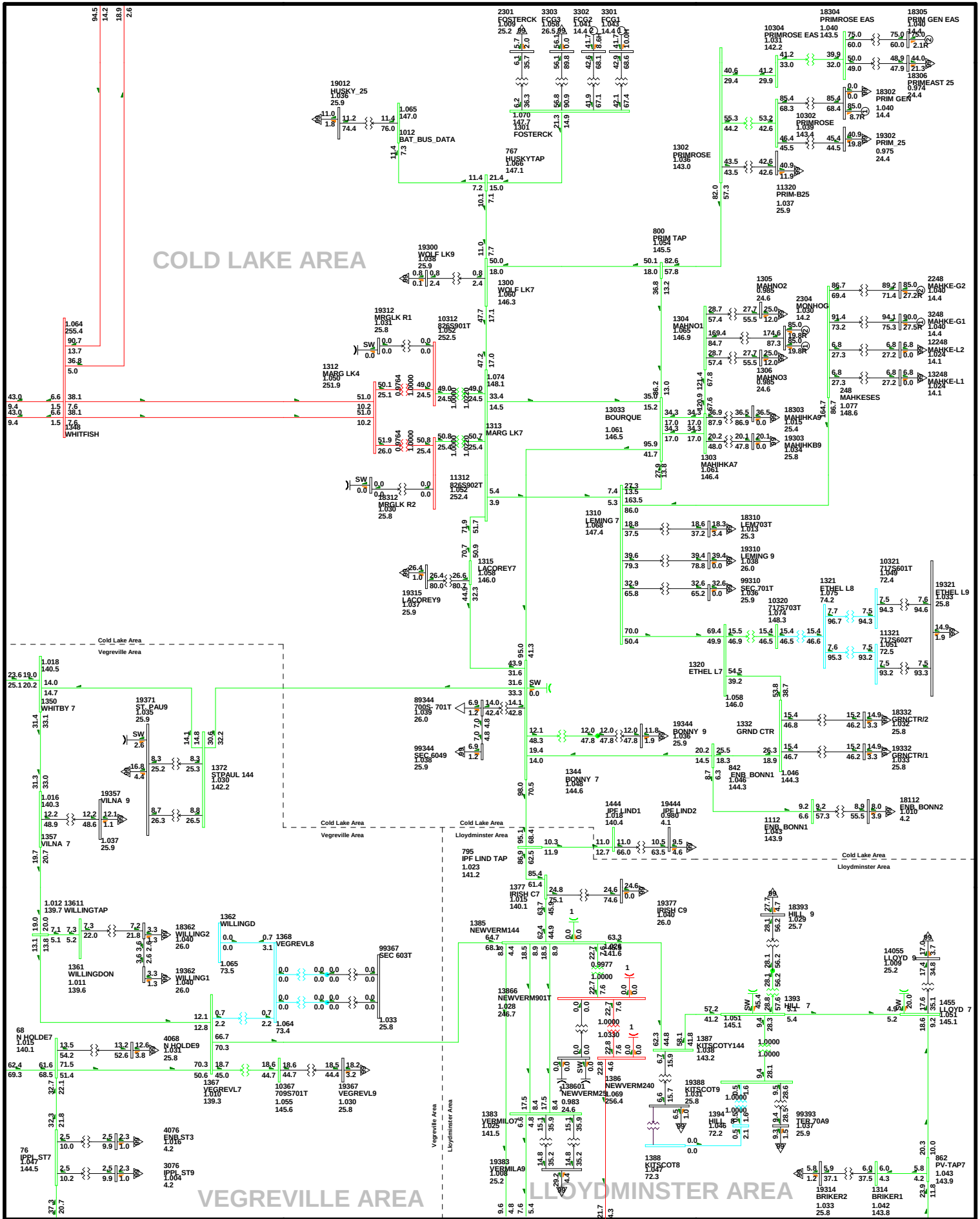
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 11:55
D1-33

2017WP-Alt 2 BR#5 ON-11.b

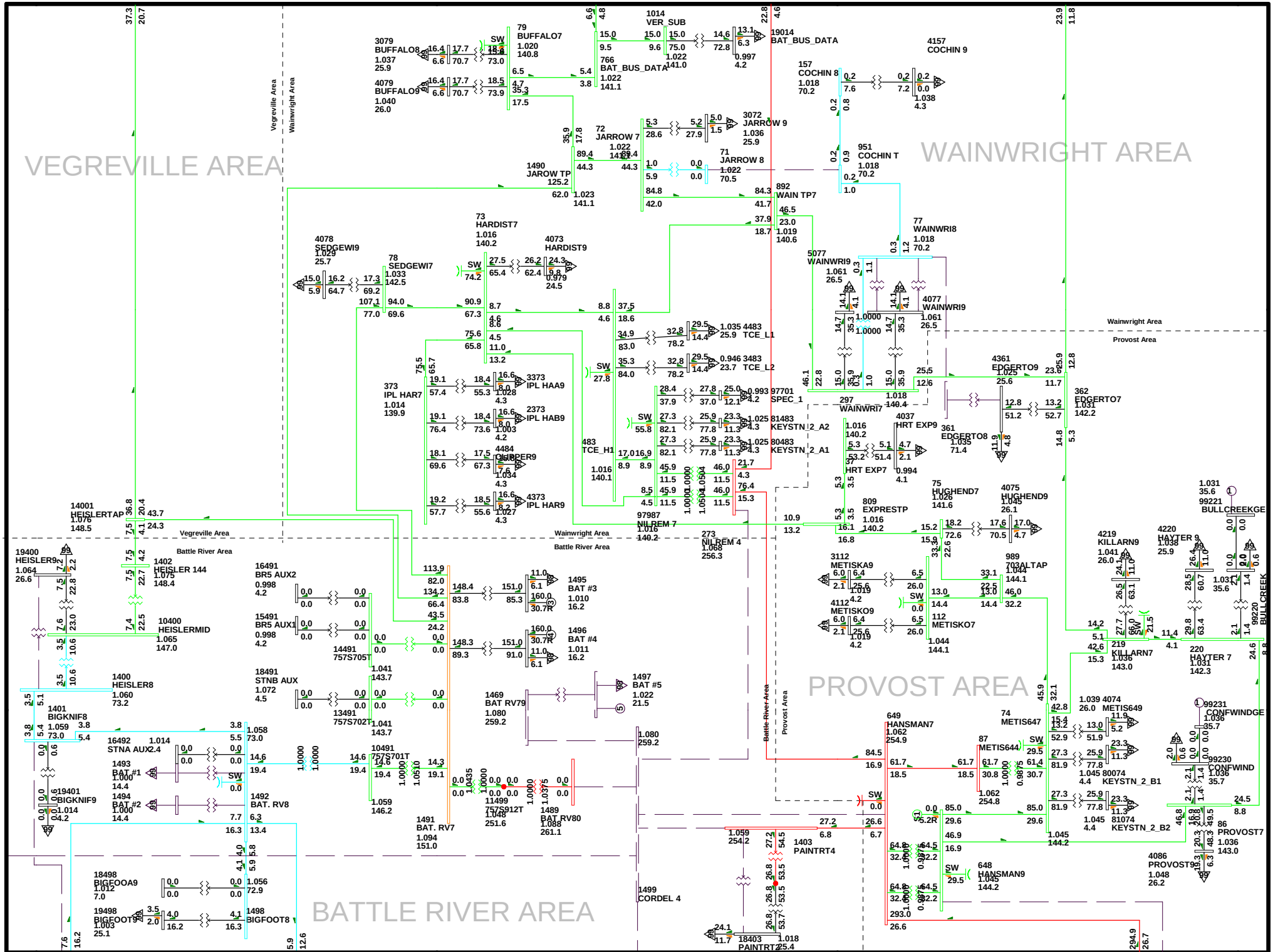
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 11:00
D1-34

2017WP-Alt 2 BR#5 ON-12.a

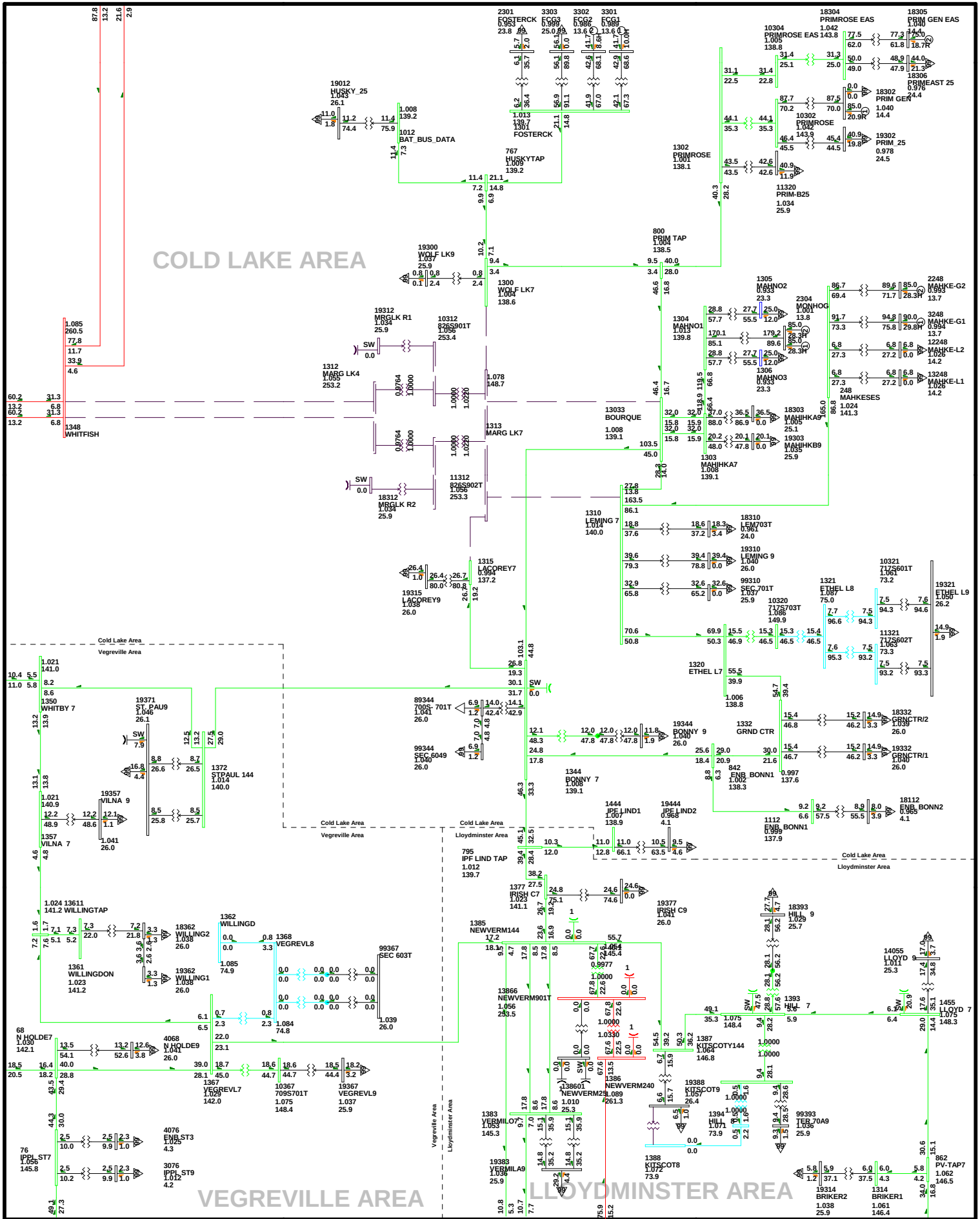
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 11:00
D1-34

2017WP-Alt 2 BR#5 ON-12.b

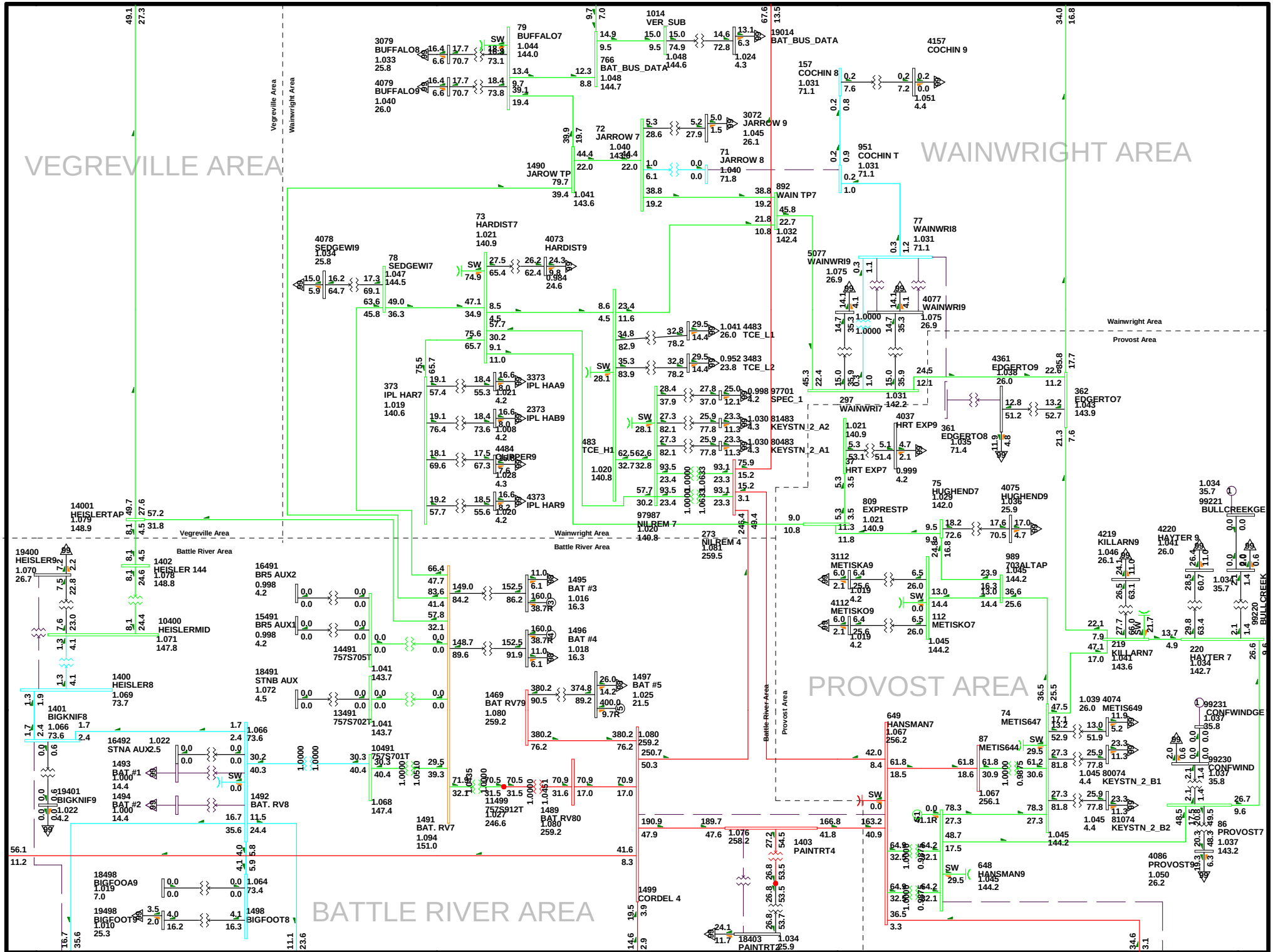
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 11:01
D1-35

2017WP-Alt 2 BR#5 ON-13.a

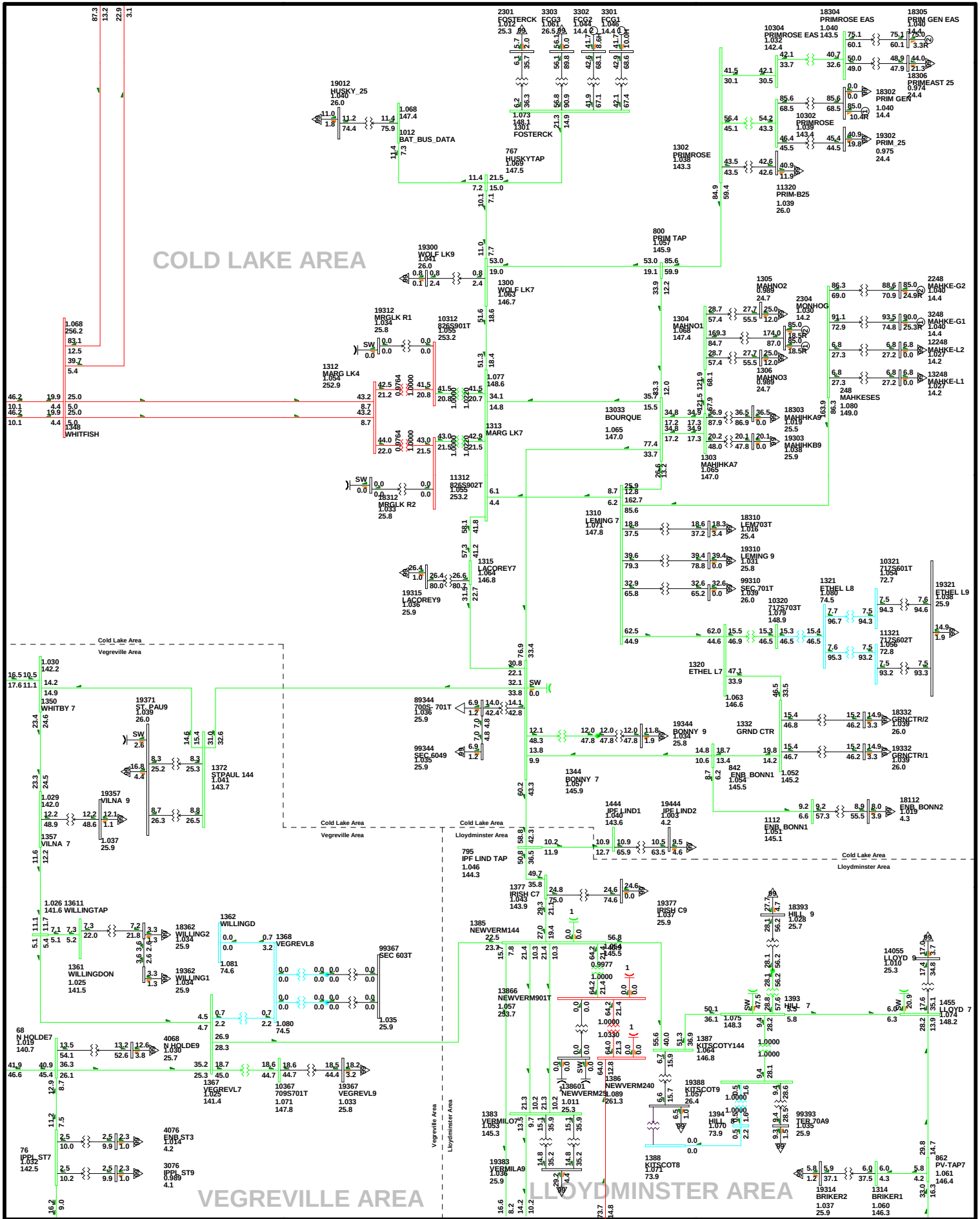
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 11:01
D1-35

2017WP-Alt 2 BR#5 ON-13.b

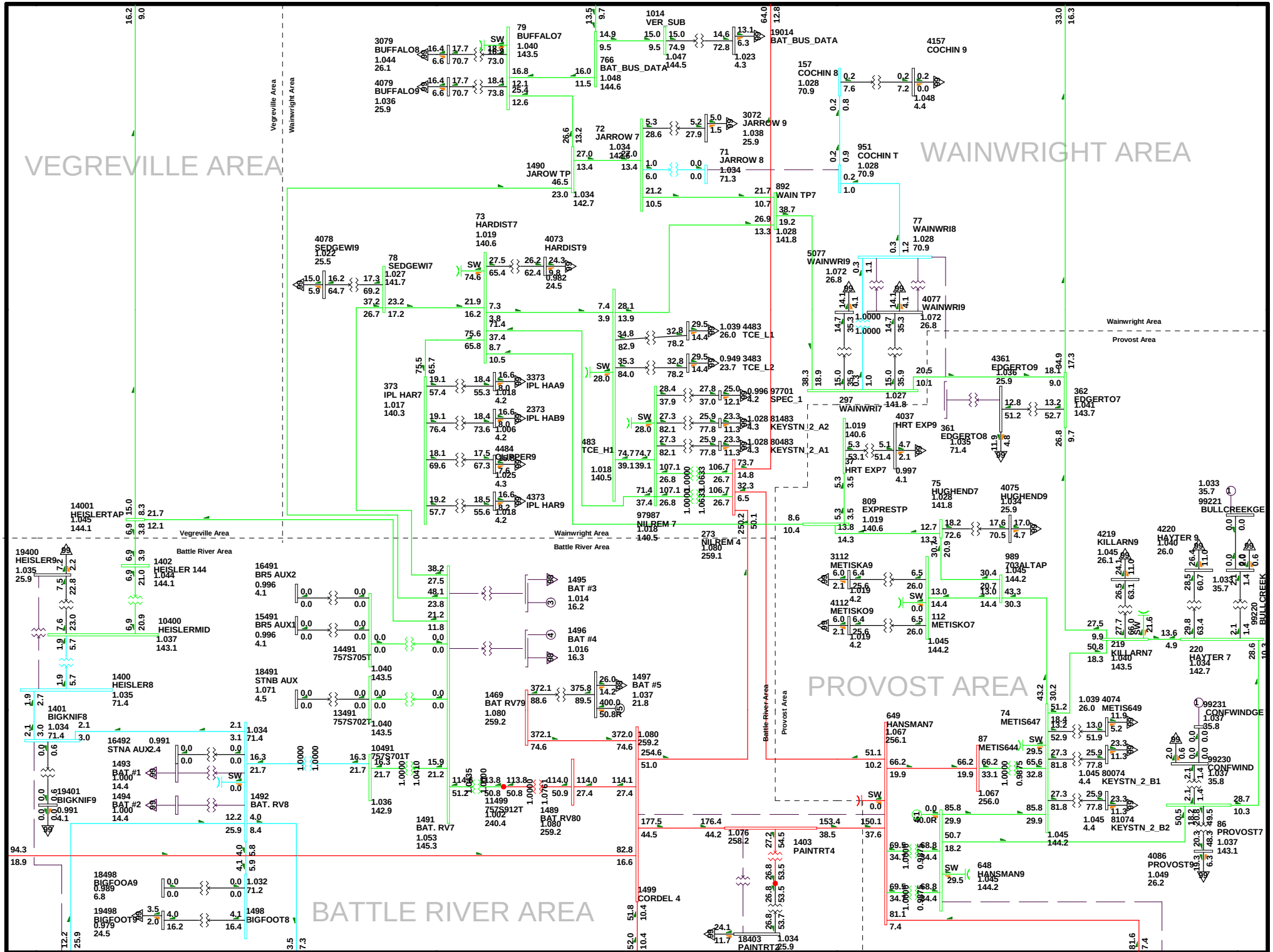
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 11:01
D1-36

2017WP-Alt 2 BR#5 ON-14.a

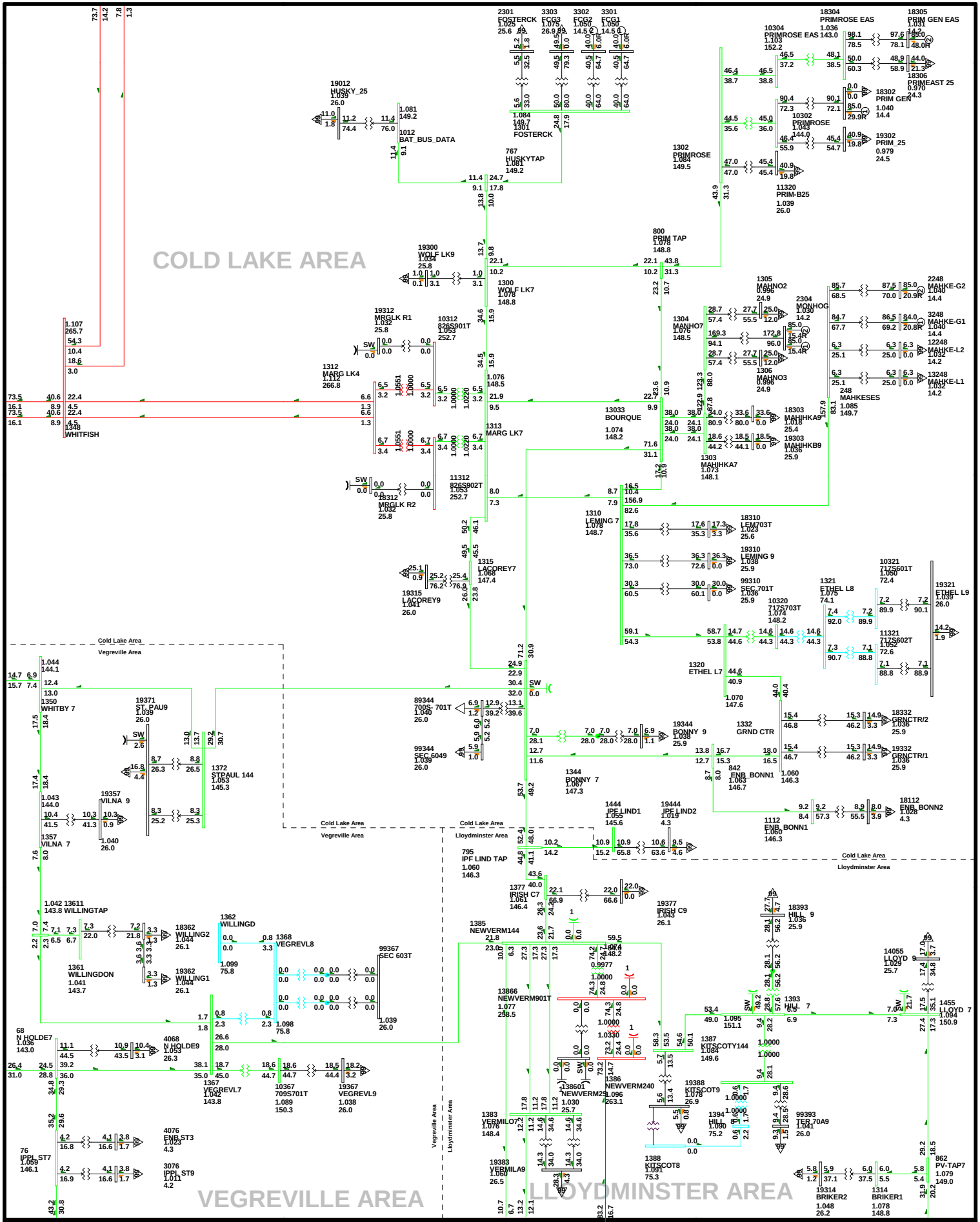
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 11:01
D1-36

2017WP-Alt 2 BR#5 ON-14.b

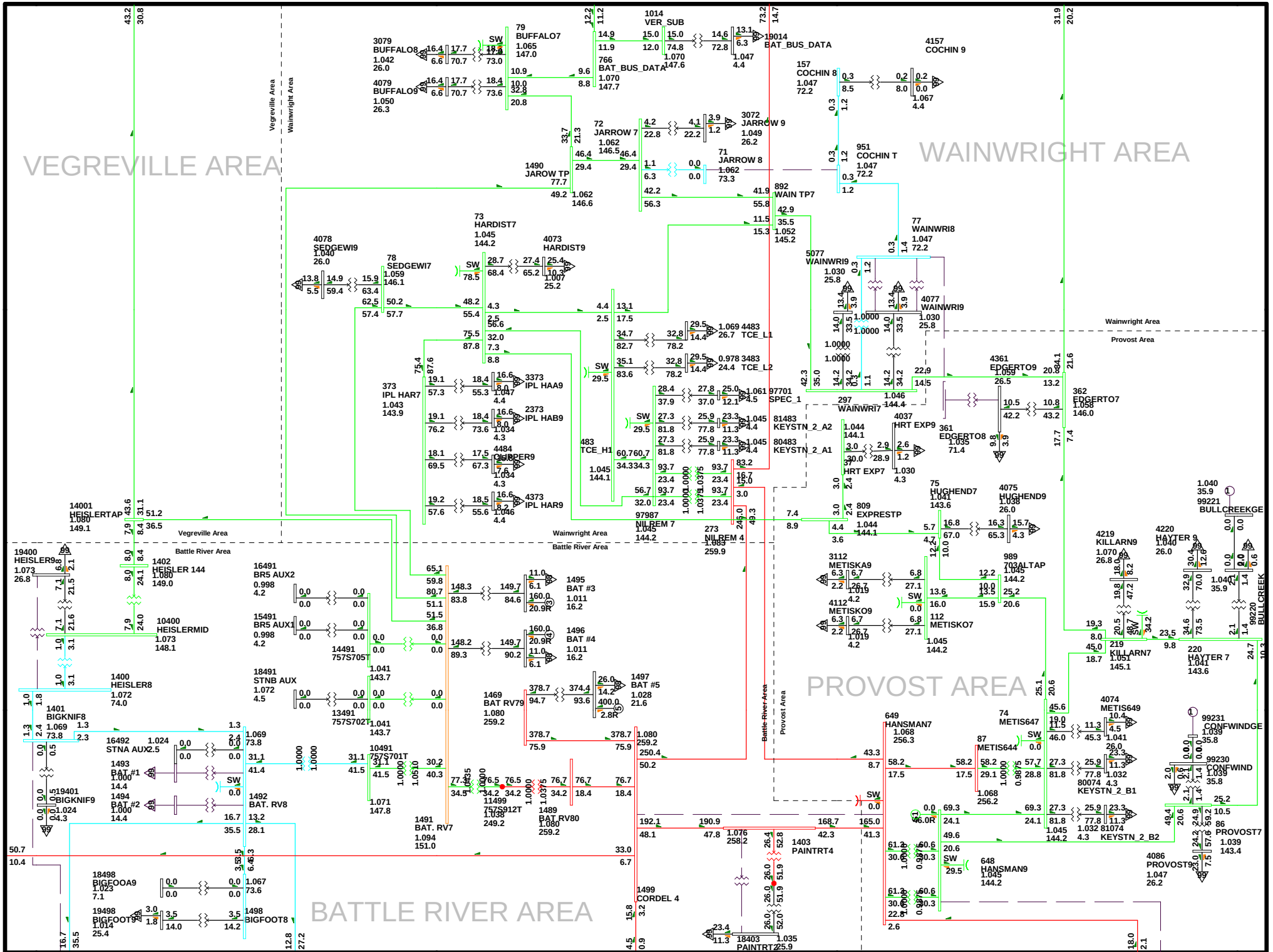
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 11:07
D1-00

2017SP-Alt 2 BR#5 ON-1.a

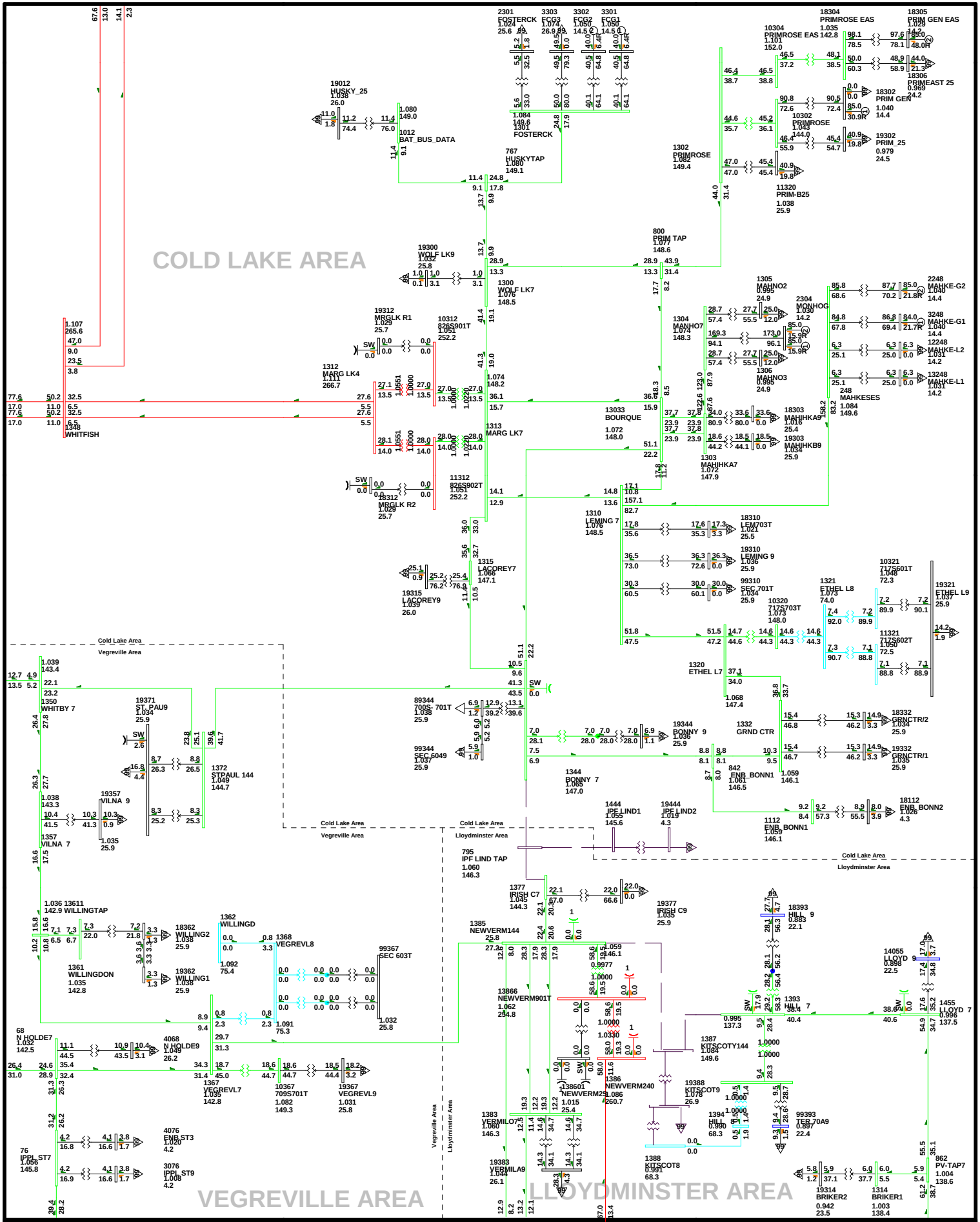
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 11:07
D1-00

2017SP-Alt 2 BR#5 ON-1.b

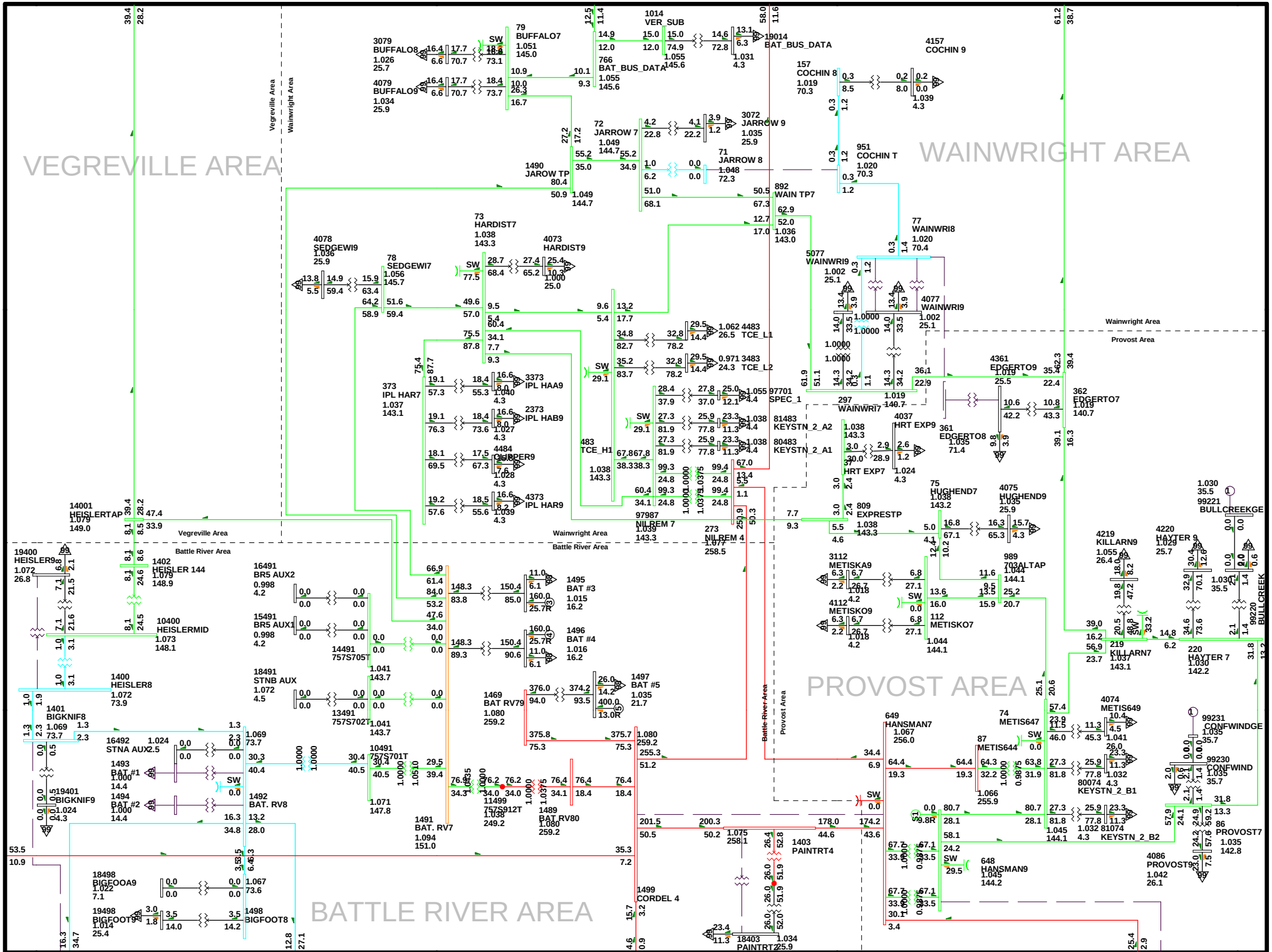
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 11:07
D1-23

2017SP-Alt 2 BR#5 ON-2.a

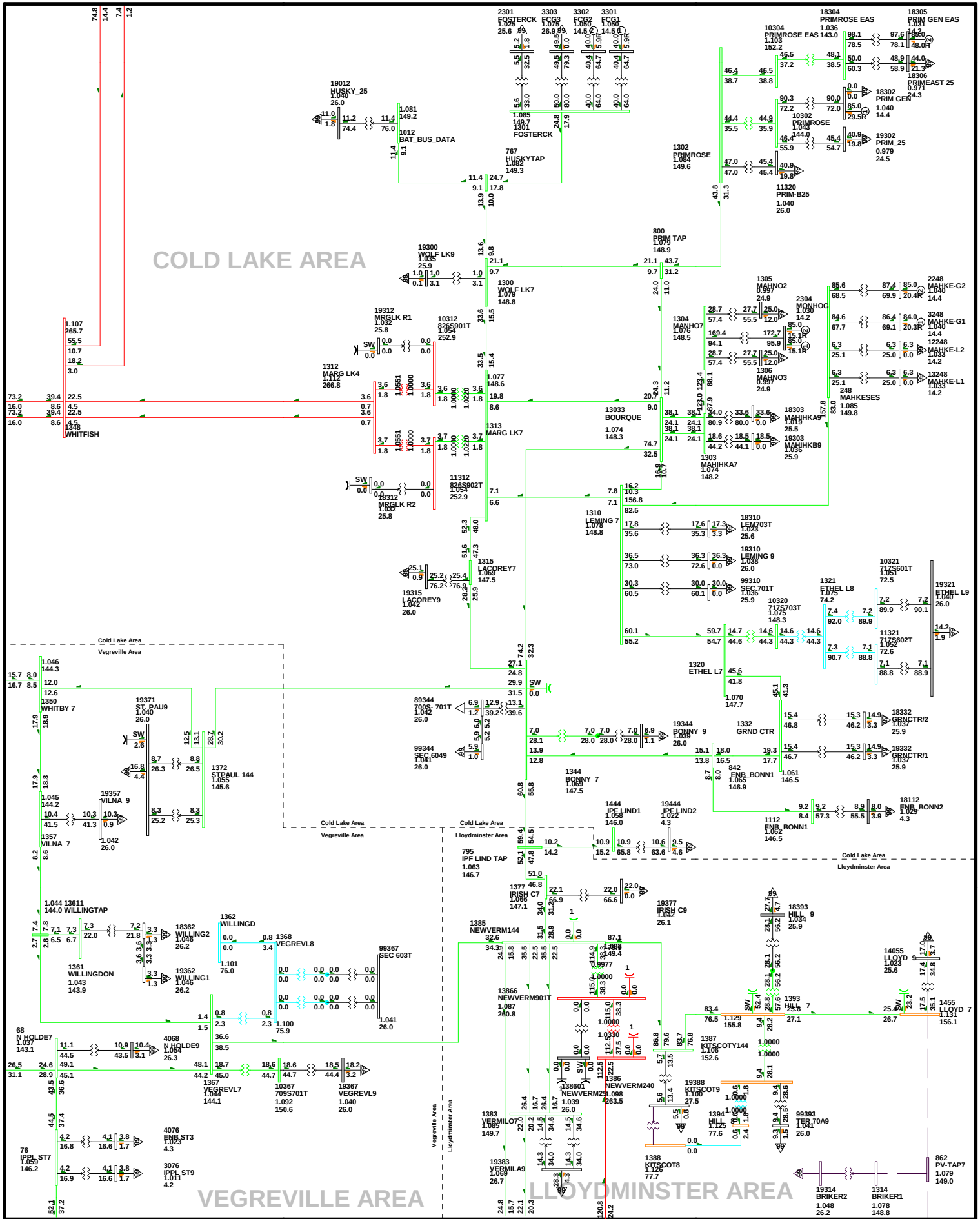
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 11:07
D1-23

2017SP-Alt 2 BR#5 ON-2.b

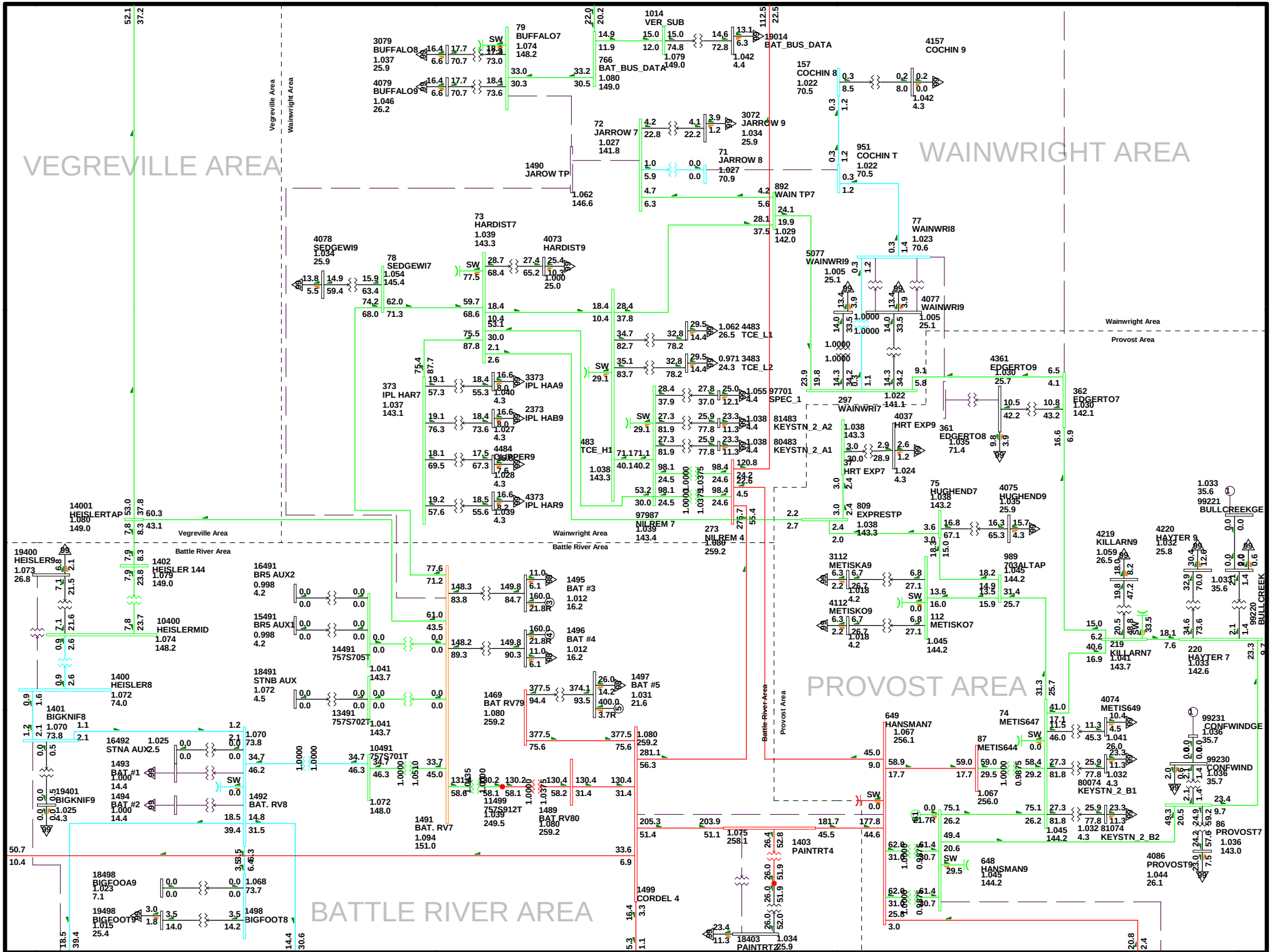
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 11:07
D1-24

2017SP-Alt 2 BR#5 ON-3.a

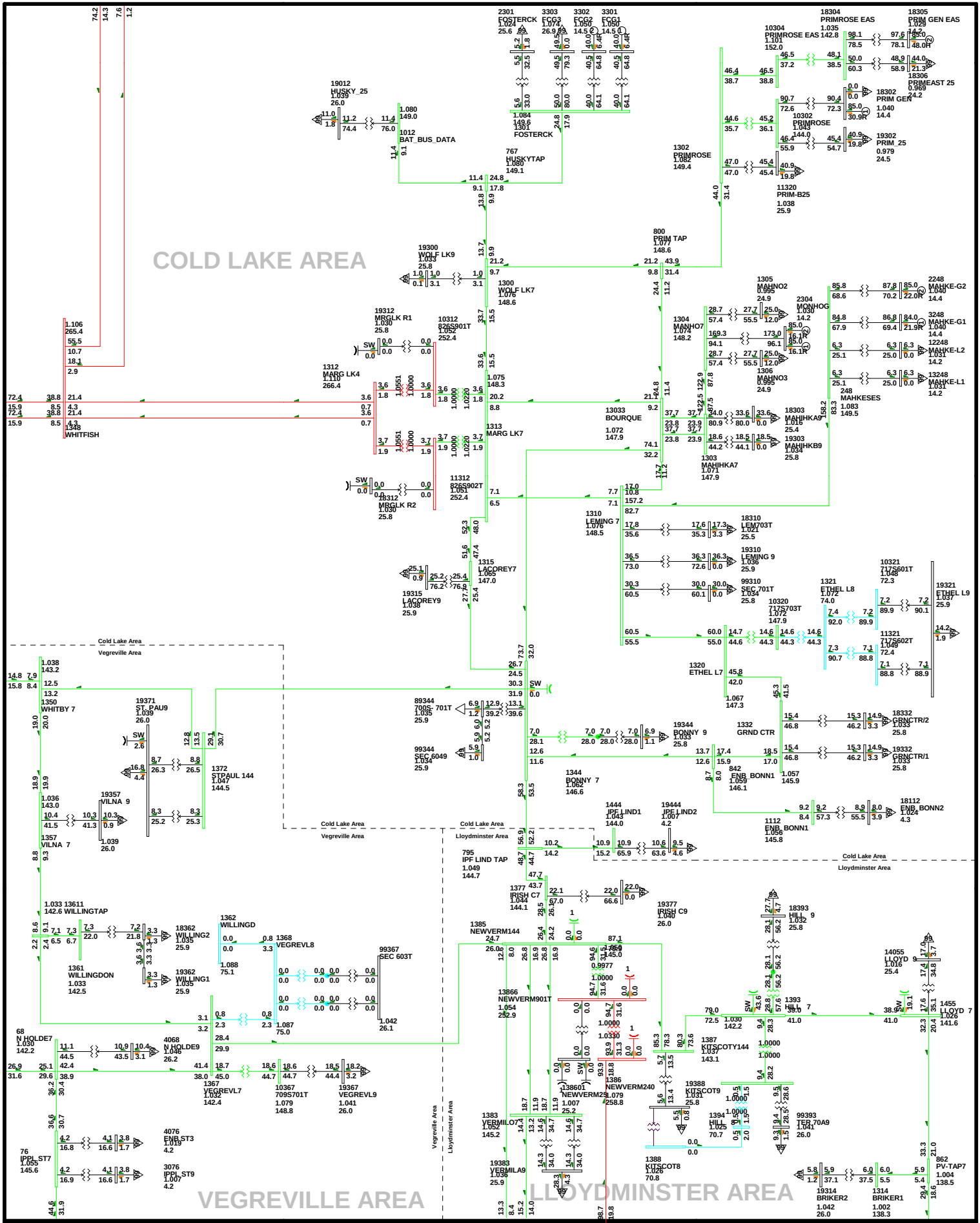
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 11:07
D1-24

2017SP-Alt 2 BR#5 ON-3.b

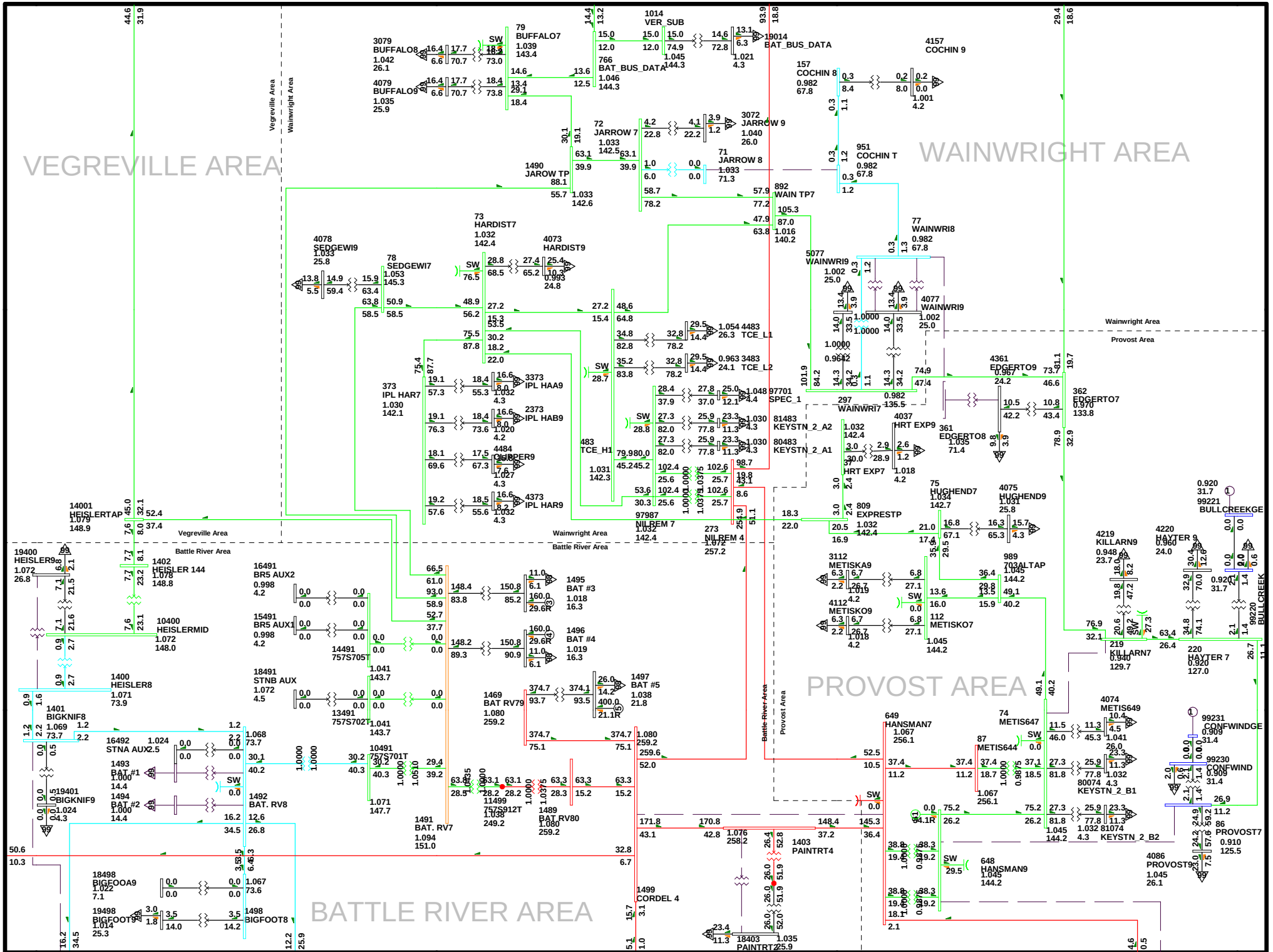
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000

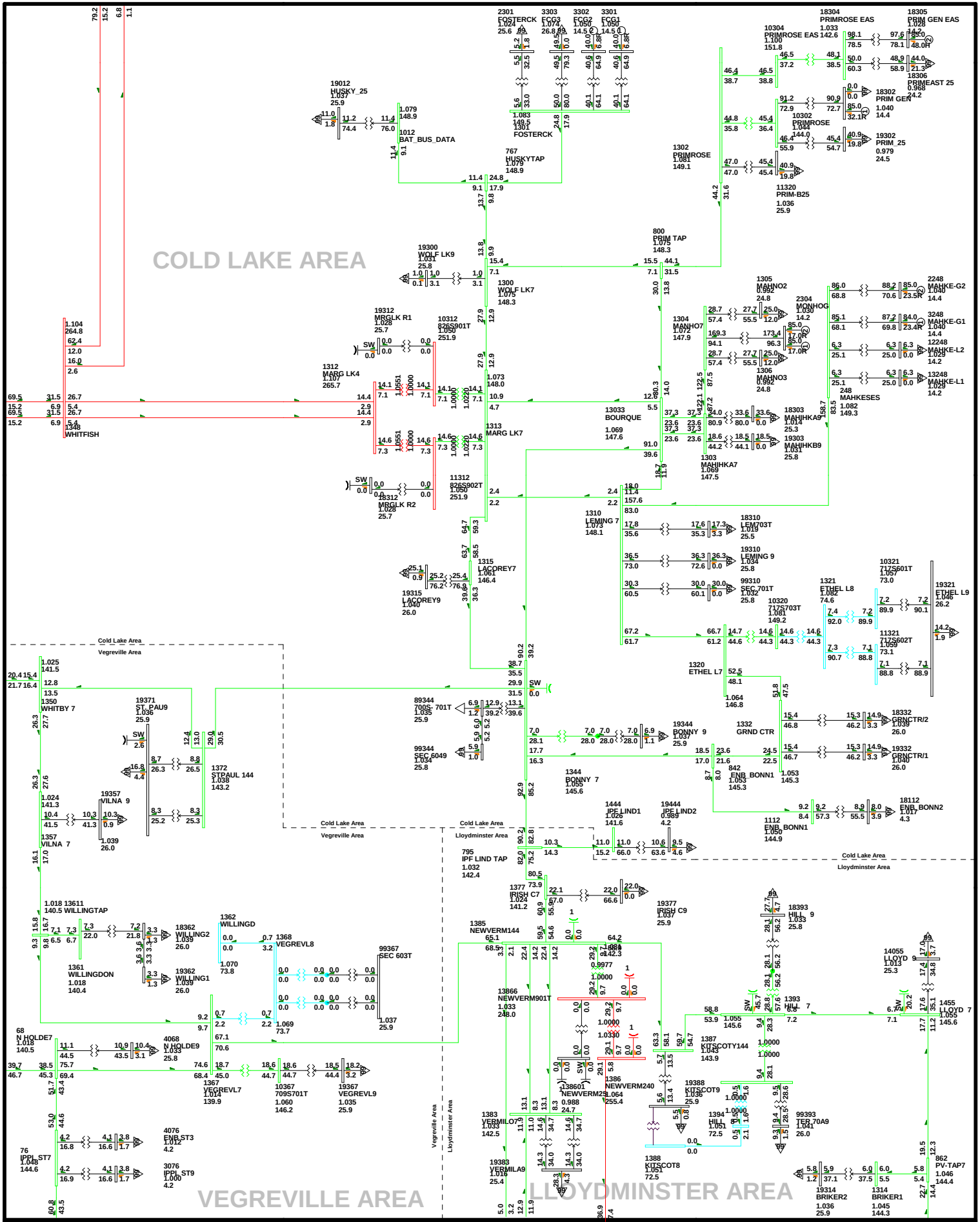


CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 12:32
D1-25

2017SP-Alt 2 BR#5 ON-4.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

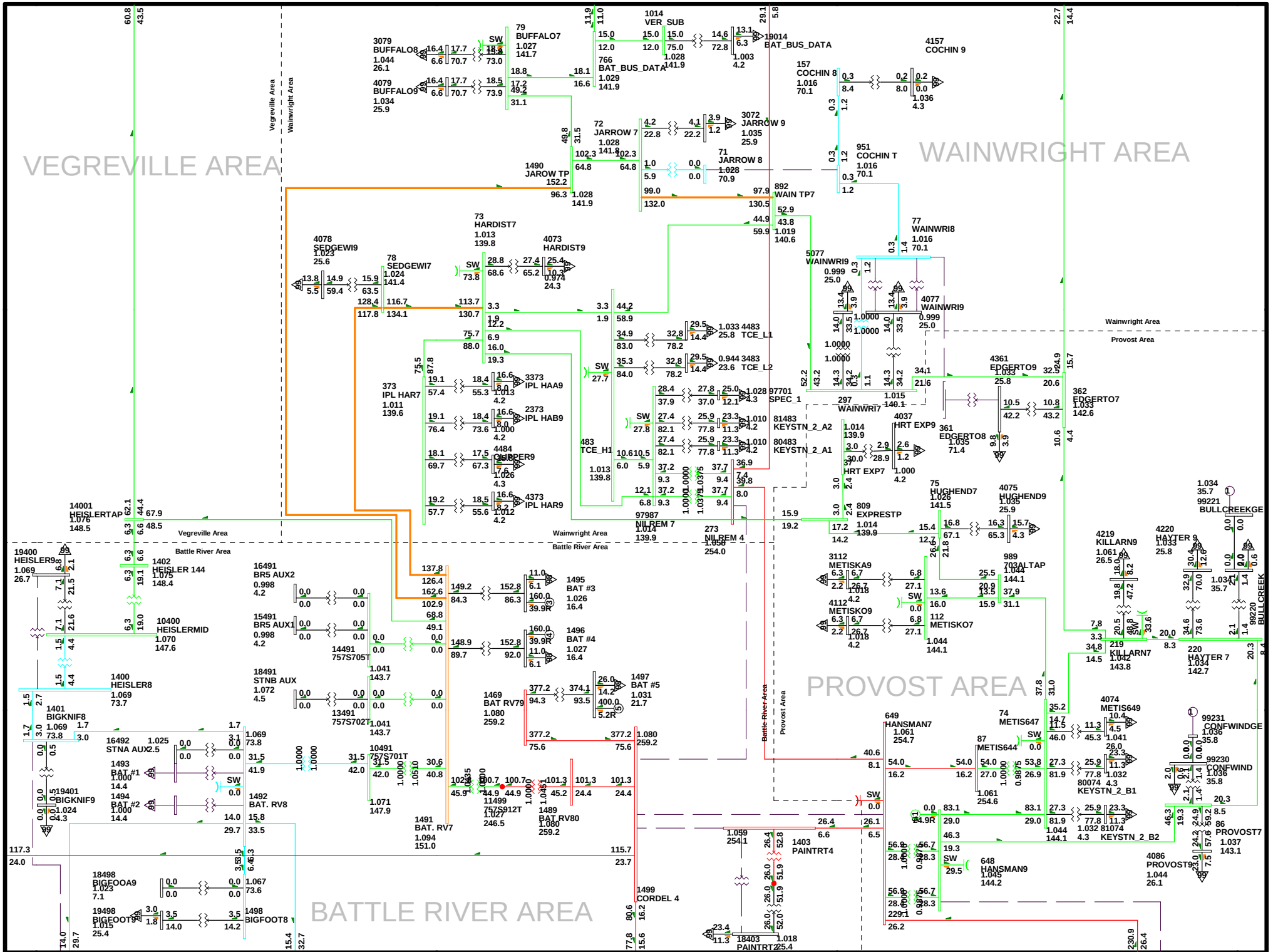

VEGREVILLE AREA
WAINWRIGHT AREA
PROVOST AREA
BATTLE RIVER AREA
Vegreville Area
Wainwright Area
Battle River Area
Provost Area
3079 BUFFALO8 1.042 26.1
4079 BUFFALO9 1.035 25.9
79 BUFFALO7 1.039 143.4
766 BAT_BUS_DATA 1.046 144.3
1014 VER_SUB
19014 BAT_BUS_DATA 1.021 4.3
4157 COCHIN 9
157 COCHIN 8 0.982 67.8
1.001 4.2
72 JARROW 7 1.033 142.5
3072 JARROW 9 1.040 26.0
71 JARROW 8 1.033 71.3
951 COCHIN T 0.982 67.8
1490 JAROW TP 88.1 1.033 142.6
892 WAIN TP7 105.3 1.016 140.2
77 WAINWRI8 0.982 67.8
5077 WAINWRI9 1.002 25.0
4077 WAINWRI9 1.002 25.0
4078 SEDGEWI9 1.033 25.8
78 SEDGEWI7 1.053 145.3
73 HARDIST7 1.032 142.4
4073 HARDIST9 0.993 24.8
373 IPL HAR7 1.030 142.1
3373 IPL HAA9 1.032 4.3
2373 IPL HAB9 1.020 4.2
4484 QUIPPER9 1.027 4.3
4373 IPL HAR9 1.032 4.3
483 TCE_H1 1.031 142.3
1054 4483 26.3 TCE_L1
0.963 3483 24.1 TCE_L2
97701 SPEC_1 1.048 4.4
81483 KEYSTN_2_A2 1.030 4.3
80483 KEYSTN_2_A1 1.030 4.3
4037 HRT EXP9 1.035 71.4
297 WAINWRI7 0.982 135.5
HRT EXP7 1.018 4.2
4361 EDGERTO9 0.967
362 EDGERTO7 0.970 133.8
361 EDGERTO8 1.032 142.4
97987 NILREM 7 1.032 142.4
273 NILREM 4 1.072 257.2
809 EXPRESTP 1.032 142.4
75 HUGHEND7 1.034 142.7
4075 HUGHEND9 1.031 25.8
989 703ALTAP 1.045 144.2
3112 METISKA9
4112 METISKO9 1.018 4.2
112 METISKO7 1.045 144.2
14001 HEISLERTAP 1.079 148.9
19400 HEISLER9 1.072 26.8
1402 HEISLER 144 1.078 148.8
10400 HEISLERMID 1.072 148.0
1400 HEISLER8 1.071 73.9
1401 BIGKNIF8 1.069 73.7
19401 BIGKNIF9 1.024 4.3
16491 BR5 AUX2 0.998 4.2
15491 BR5 AUX1 0.998 4.2
14491 757S705T 1.041 143.7
18491 STNB AUX 1.072 4.5
13491 757S702T 1.041 143.7
16492 STNA AUX 1.024 2.5
10491 757S701T 1.071 147.7
1493 BAT #1 1.000 14.4
1494 BAT #2 1.000 14.4
1492 BAT. RV8 12.6 26.8
1495 BAT #3 1.018 16.3
1496 BAT #4 1.019 16.3
1497 BAT #5 1.038 21.8
1469 BAT RV79 1.080 259.2
11499 757S912T 1.038 249.2
1489 BAT RV80 1.080 259.2
1491 BAT. RV7 1.094 151.0
1499 CORDEL 4
1403 PAINTRT4
18403 PAINTRT 1.035 25.9
649 HANSMAN7 1.067 256.1
74 METIS647
87 METIS644 1.067 256.1
4074 METIS649 1.041 26.0
80074 KEYSTN_2_B1 1.032 4.3
81074 KEYSTN_2_B2 1.032 4.3
648 HANSMAN9 1.045 144.2
4086 PROVOST9 1.045 26.1
86 PROVOST7 0.910 125.5
18498 BIGFOOA9 1.022 7.1
19498 BIGFOOT9 1.014 25.3
1498 BIGFOOT8 1.067 73.6
4219 KILLARN9 0.948 23.7
219 KILLARN7 0.940 129.7
4220 HAYTER 9 0.960 24.0
220 HAYTER 7 0.920 127.0
99221 BULLCREEKGE 0.920 31.7
99220 BULLCREEK 0.920 31.7
99231 CONFWINDGE 0.909 31.4
99230 CONFWIND 0.909 31.4
26.9
11.2
50.6
10.3
34.5
T6.2
12.2
25.9
5.1
1.0
15.7
3.1
32.8
6.7
4.6
0.5
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000
CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 12:32
D1-25
2017SP-Alt 2 BR#5 ON-4.b



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 11:07
D1-26

2017SP-Alt 2 BR#5 ON-5.a

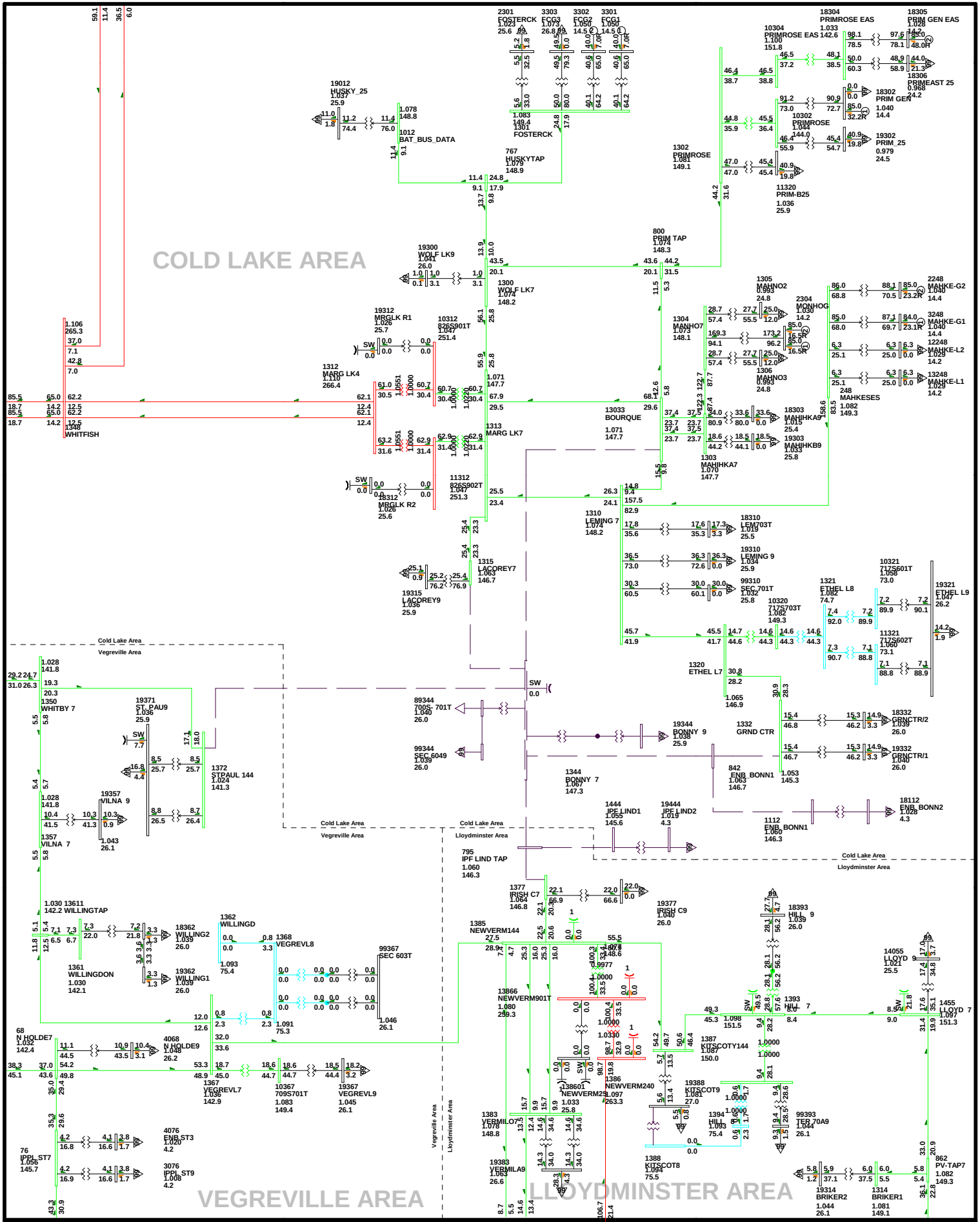
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 11:07
D1-26

2017SP-Alt 2 BR#5 ON-5.b

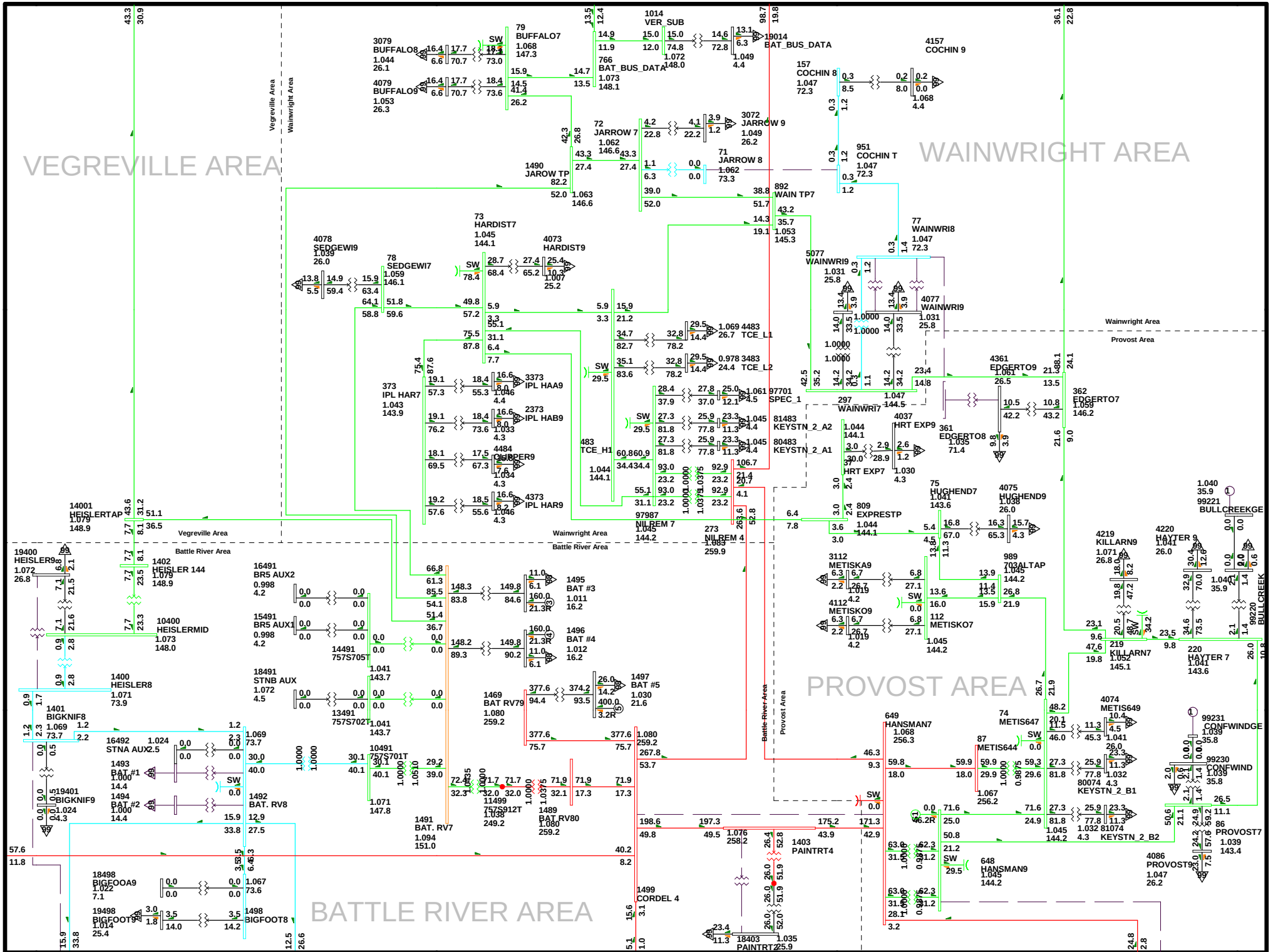
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 11:07
D1-27

2017SP-Alt 2 BR#5 ON-6.a

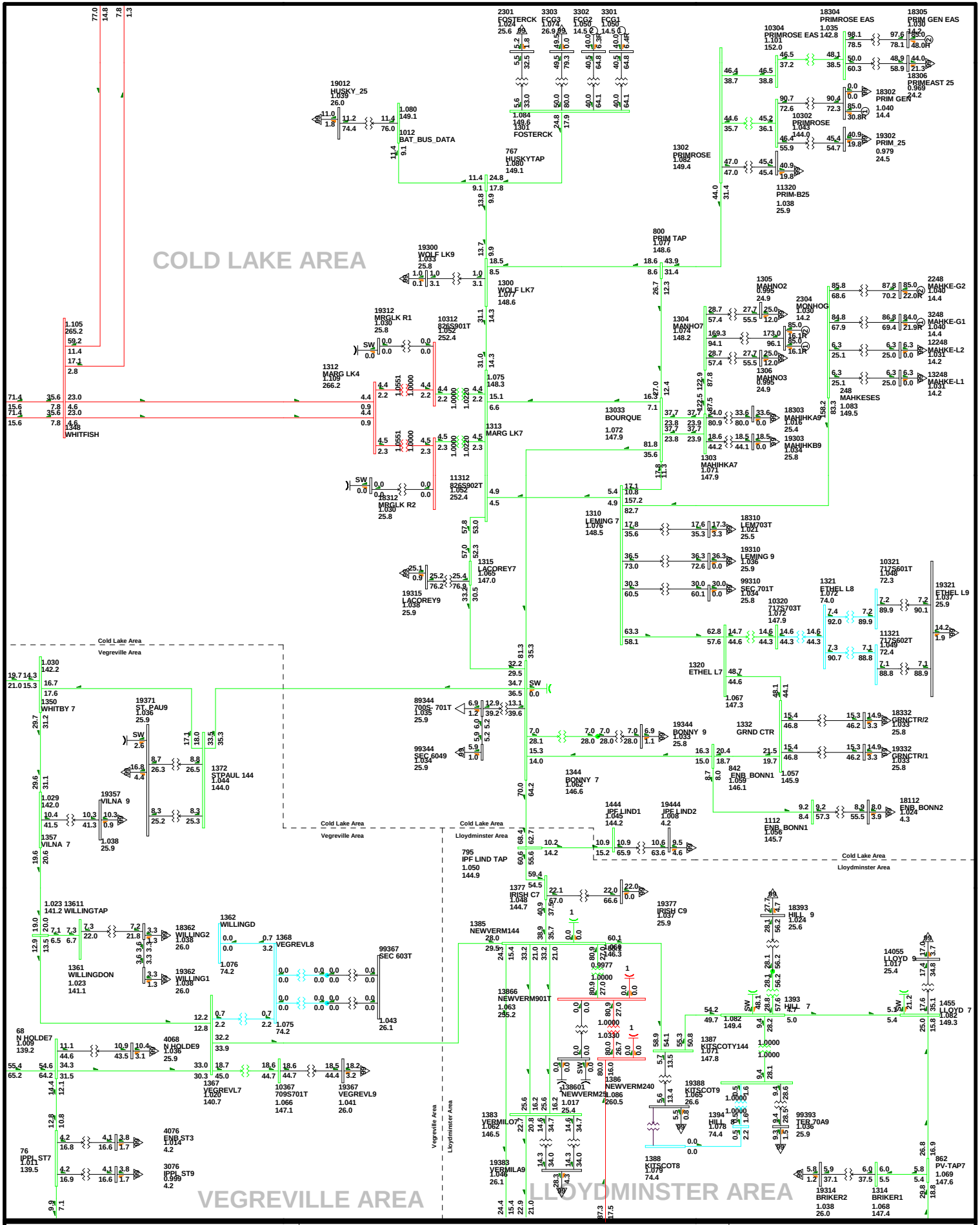
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 11:07
D1-27

2017SP-Alt 2 BR#5 ON-6.b

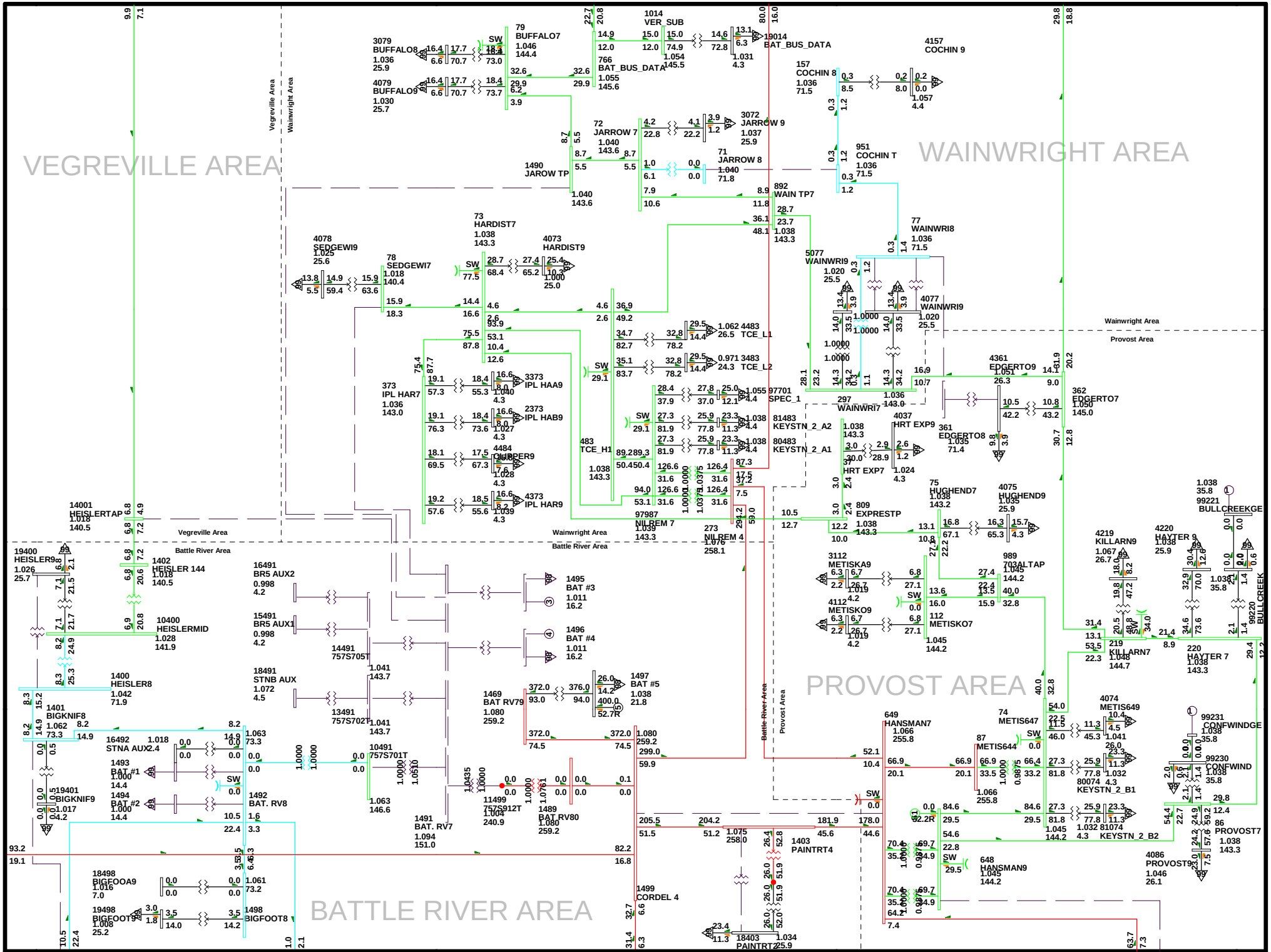
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 11:07
D1-28

2017SP-Alt 2 BR#5 ON-7.a

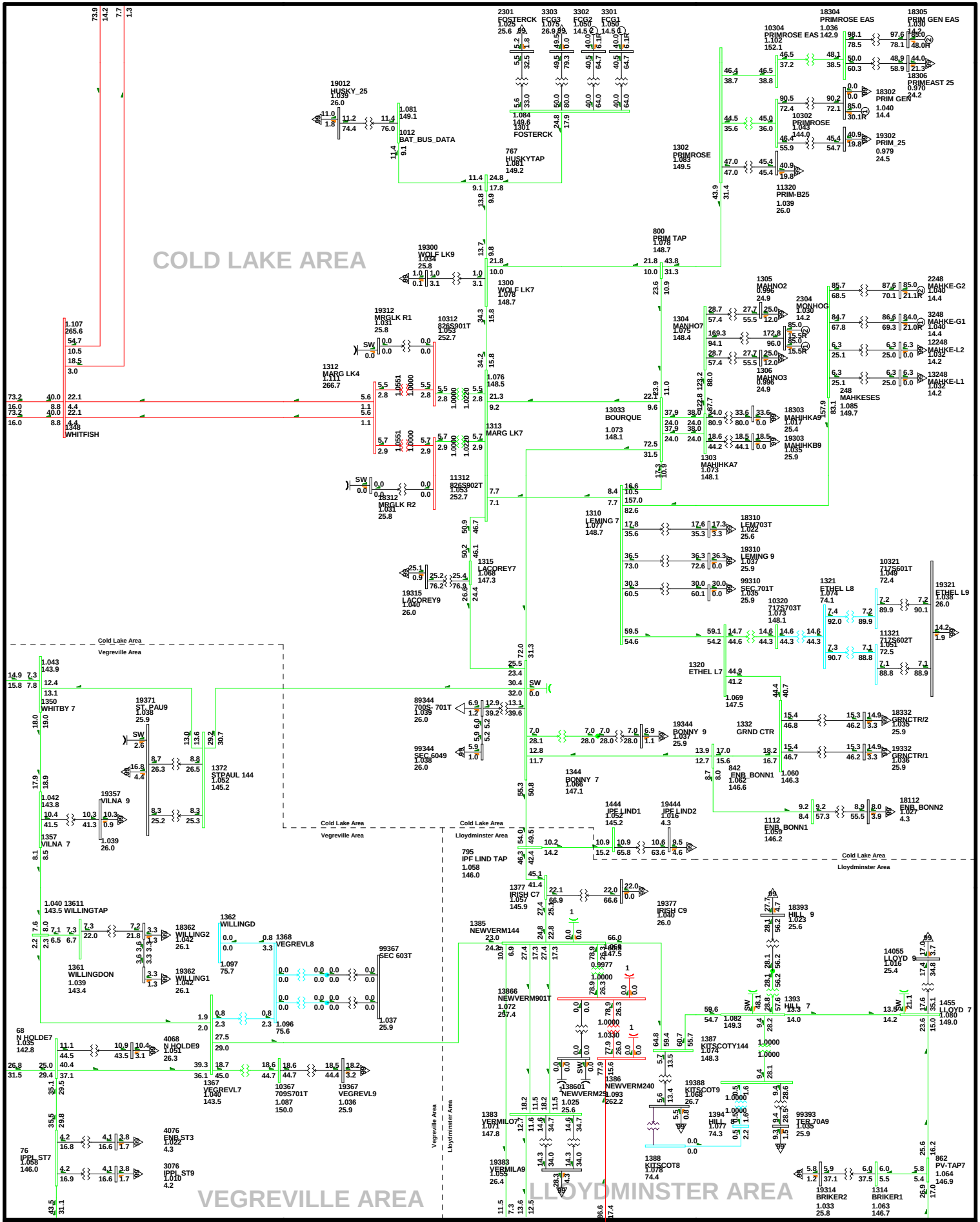
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 11:07
D1-28

2017SP-Alt 2 BR#5 ON-7.b

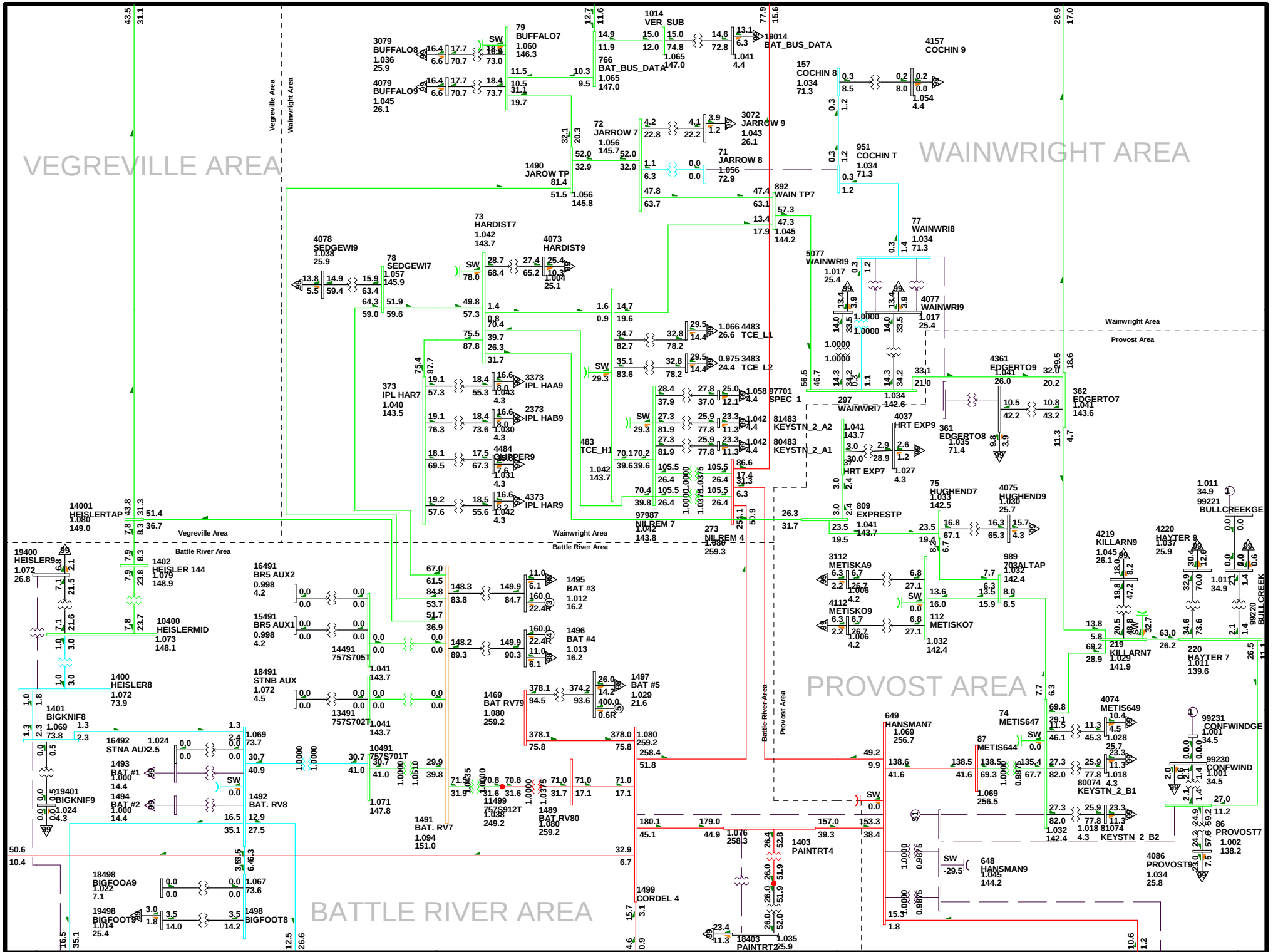
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000

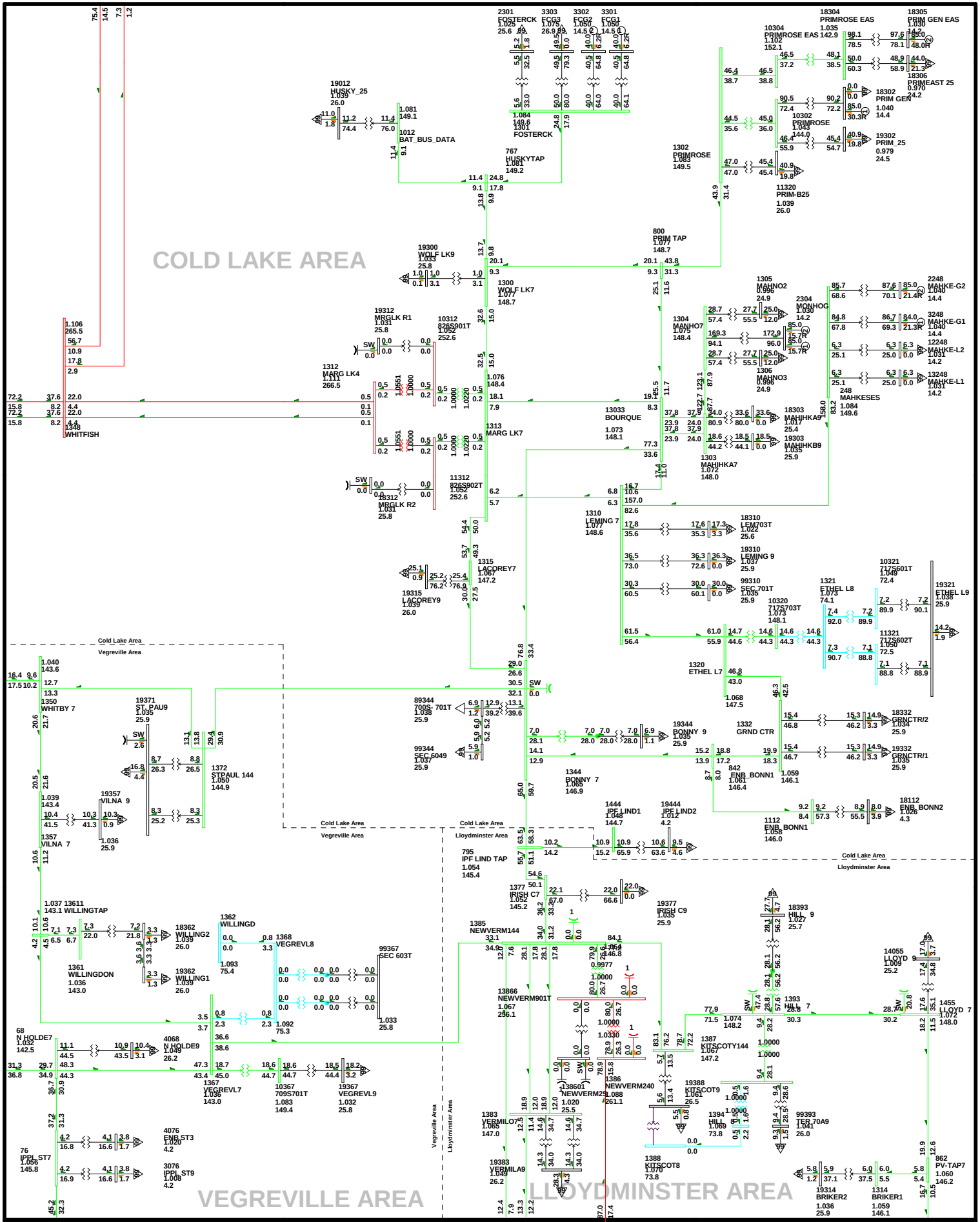


CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 11:07
D1-30

2017SP-Alt 2 BR#5 ON-8.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

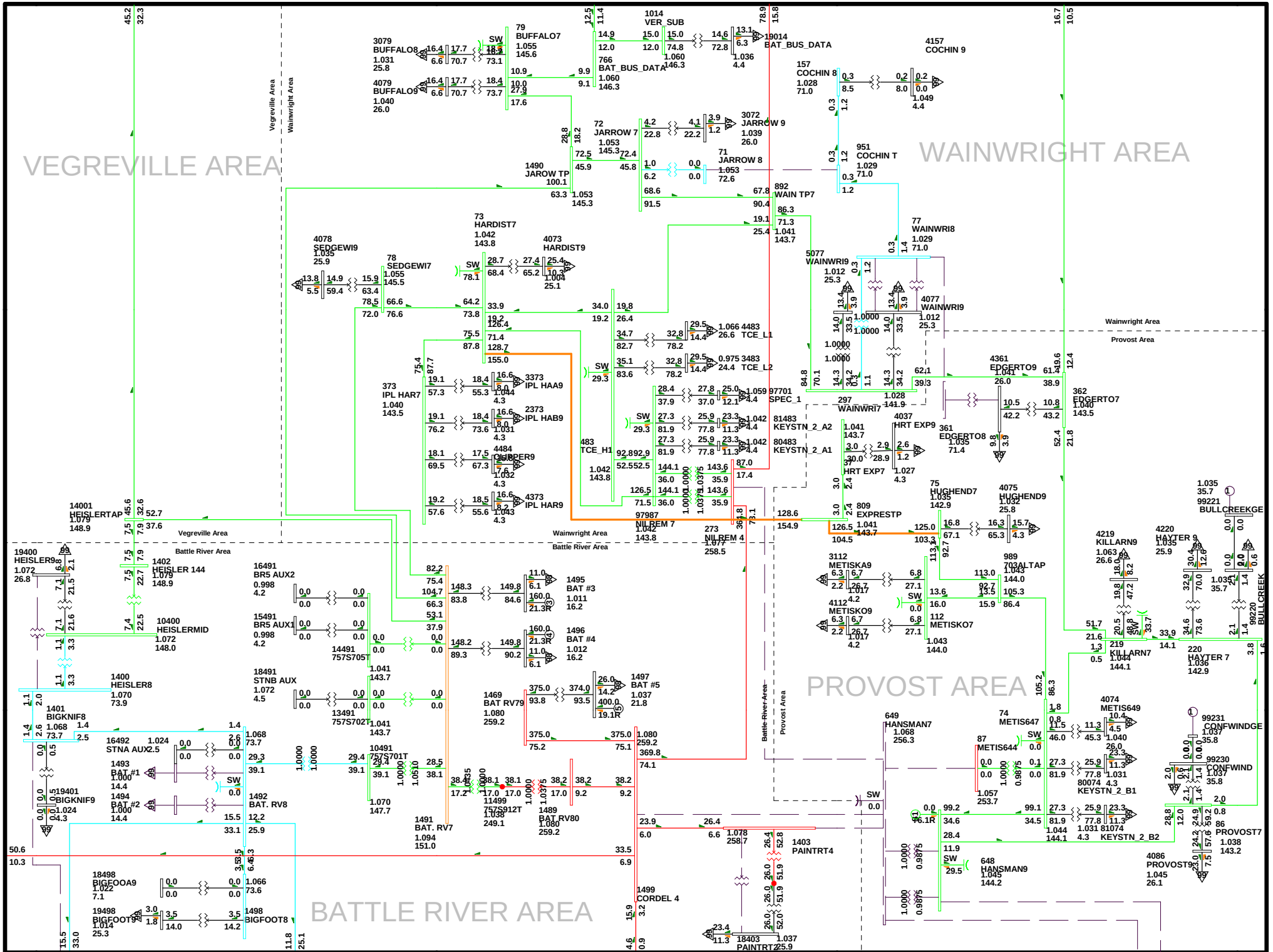

VEGREVILLE AREA
WAINWRIGHT AREA
PROVOST AREA
BATTLE RIVER AREA
Vegreville Area
Wainwright Area
Battle River Area
Provost Area
3079 BUFFALO8 1.036 25.9
4079 BUFFALO9 1.045 26.1
79 BUFFALO7 1.060 146.3
1014 VER_SUB
766 BAT_BUS_DATA 1.065 147.0
19014 BAT_BUS_DATA
4157 COCHIN 9
157 COCHIN 8 1.034 71.3
1.054 4.4
72 JARROW 7 1.056 145.7
3072 JARROW 9 1.043 26.1
71 JARROW 8 1.056 72.9
951 COCHIN T 1.034 71.3
1490 JAROW TP 81.4
892 WAIN TP7
73 HARDIST7 1.042 143.7
4073 HARDIST9 1.004 25.1
4078 SEDGEWI9 1.038 25.9
78 SEDGEWI7 1.057 145.9
77 WAINWRI8 1.034 71.3
5077 WAINWRI9 1.017 25.4
4077 WAINWRI9 1.017 25.4
1.066 4483 TCE_L1 26.6
0.975 3483 TCE_L2 24.4
373 IPL HAR7 1.040 143.5
3373 IPL HAA9 1.043 4.3
2373 IPL HAB9 1.030 4.3
4484 QUIPPER9 1.031 4.3
4373 IPL HAR9 1.042 4.3
483 TCE_H1 1.042 143.7
97987 NILREM 7 1.042 143.8
273 NILREM 4 1.080 259.3
97701 SPEC_1 1.058 4.4
81483 KEYSTN_2_A2
80483 KEYSTN_2_A1
297 WAINWRI7 1.034 142.6
4037 HRT EXP9 1.035 71.4
HRT EXP7 1.027 4.3
361 EDGERTO8 1.041 143.7
4361 EDGERTO9 1.041 26.0
362 EDGERTO7 1.041 143.6
75 HUGHEND7 1.033 142.5
4075 HUGHEND9 1.030 25.7
809 EXPRESTP 1.041 143.7
3112 METISKA9 1.006 4.2
4112 METISKO9 1.006 4.2
112 METISKO7 1.032 142.4
989 703ALTAP 1.032 142.4
14001 HEISLERTAP 1.080 149.0
19400 HEISLER9 1.072 26.8
1402 HEISLER 144 1.079 148.9
10400 HEISLERMID 1.073 148.1
1400 HEISLER8 1.072 73.9
1401 BIGKNIF8 1.069 73.8
19401 BIGKNIF9 1.024 4.3
1493 BAT #1 1.000 14.4
1494 BAT #2 1.000 14.4
1492 BAT. RV8 12.9
16492 STNA AUX 1.024 2.5
16491 BR5 AUX2 0.998 4.2
15491 BR5 AUX1 0.998 4.2
18491 STNB AUX 1.072 4.5
14491 757S705T
13491 757S702T
10491 757S701T
11499 757S912T 1.038 249.2
1491 BAT. RV7 1.094 151.0
1495 BAT #3 1.012 16.2
1496 BAT #4 1.013 16.2
1497 BAT #5 1.029 21.6
1469 BAT RV79 1.080 259.2
1489 BAT RV80 1.080 259.2
1499 CORDEL 4
1403 PAINTRT4
18403 PAINTRT3 1.035 25.9
18498 BIGFOOA9 1.022 7.1
19498 BIGFOOT9 1.014 25.4
1498 BIGFOOT8 1.067 73.6
649 HANSMAN7 1.069 256.7
74 METIS647
87 METIS644 1.069 256.5
648 HANSMAN9 1.045 144.2
4074 METIS649 1.028 25.7
80074 KEYSTN_2_B1 1.018 4.3
81074 KEYSTN_2_B2 1.018 4.3
4086 PROVOST9 1.034 25.8
86 PROVOST7 1.002 138.2
4219 KILLARN9 1.045 26.1
219 KILLARN7 1.029 141.9
4220 HAYTER 9 1.037 25.9
220 HAYTER 7 1.011 139.6
99221 BULLCREEKGE
99220 BULL CREEK
99231 CONFWINDGE 1.001 34.5
99230 CONFWIND 1.001 34.5
CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 11:07
D1-30
2017SP-Alt 2 BR#5 ON-8.b
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000

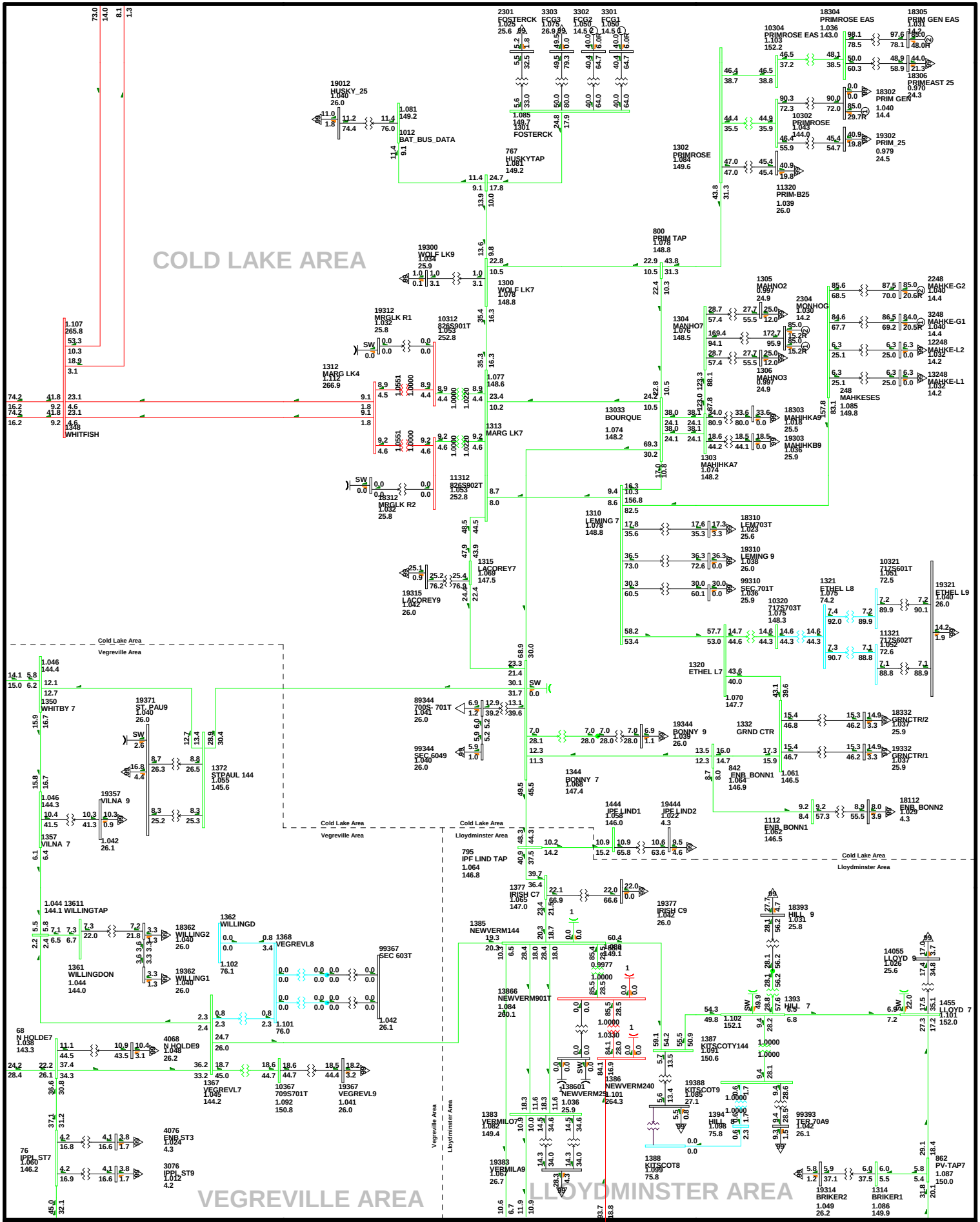


CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 11:07
D1-31

2017SP-Alt 2 BR#5 ON-9.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

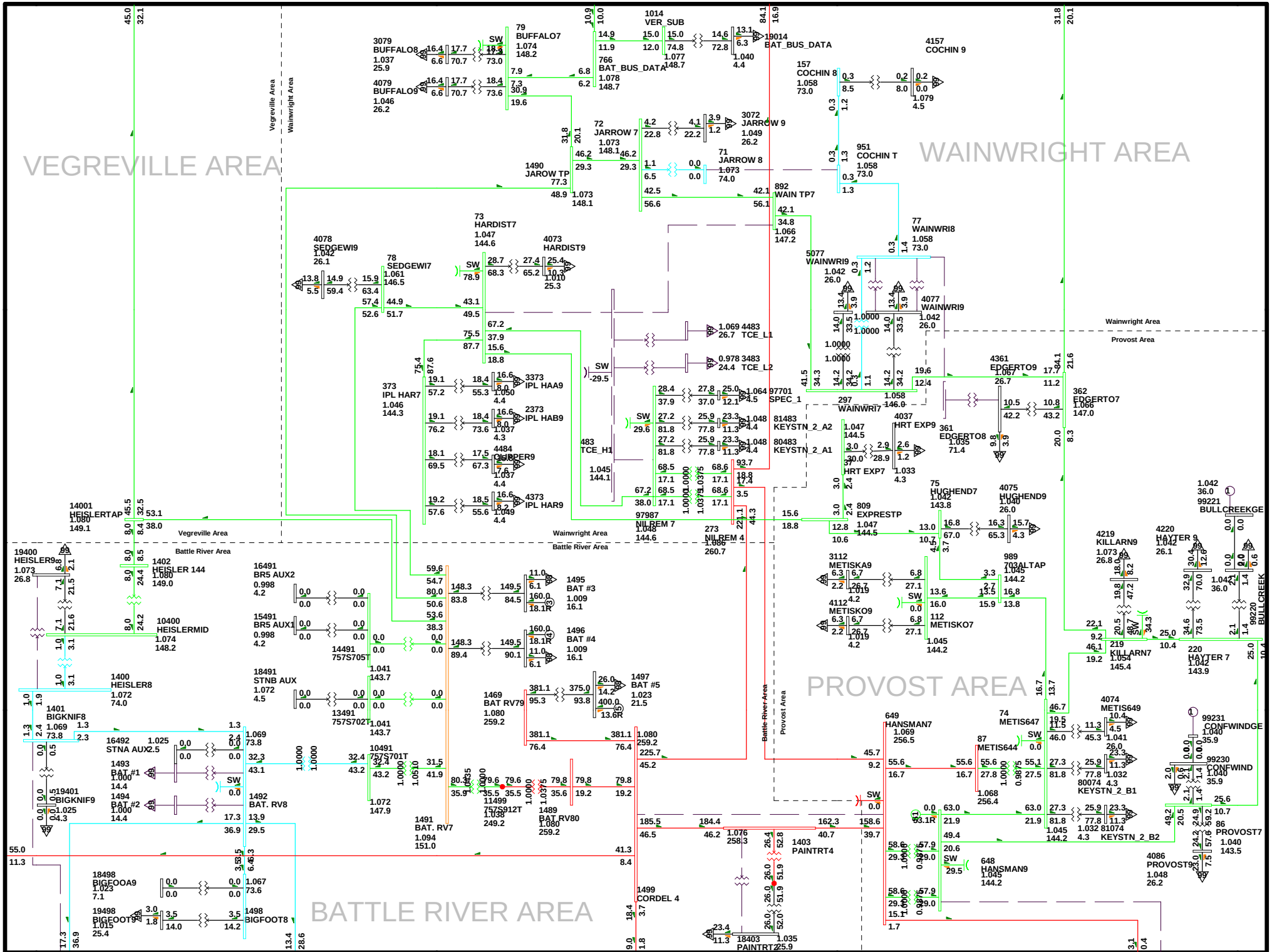

VEGREVILLE AREA
WAINWRIGHT AREA
PROVOST AREA
BATTLE RIVER AREA
Vegreville Area
Wainwright Area
Battle River Area
Provost Area
3079 BUFFALO8 1.031 25.8
4079 BUFFALO9 1.040 26.0
79 BUFFALO7 1.055 145.6
1014 VER_SUB
766 BAT_BUS_DATA 1.060 146.3
19014 BAT_BUS_DATA
4157 COCHIN 9
157 COCHIN 8 1.028 71.0
1049 4.4
72 JARROW 7 1.053 145.3
3072 JARROW 9 1.039 26.0
71 JARROW 8 1.053 72.6
1490 JAROW TP 100.1 1.053 145.3
951 COCHIN T 1.029 71.0
892 WAIN TP7
73 HARDIST7 1.042 143.8
4073 HARDIST9 1.004 25.1
4078 SEDGEWI9 1.035 25.9
78 SEDGEWI7 1.055 145.5
77 WAINWRI8 1.029 71.0
5077 WAINWRI9 1.012 25.3
4077 WAINWRI9 1.012 25.3
373 IPL HAR7 1.040 143.5
3373 IPL HAA9
2373 IPL HAB9
4484 QUIPPER9 1.032
4373 IPL HAR9
1.066 4483 TCE_L1
0.975 3483 TCE_L2
483 TCE_H1
1.059 97701 SPEC_1
81483 KEYSTN_2_A2
80483 KEYSTN_2_A1
297 WAINWRI7
4037 HRT EXP9
HRT EXP7 1.027 4.3
361 EDGERTO8 1.035 71.4
4361 EDGERTO9 1.041 26.0
362 EDGERTO7 1.040 143.5
75 HUGHEND7 1.035 142.9
4075 HUGHEND9 1.032 25.8
809 EXPRESTP
97987 NIL REM 7 1.042 143.8
273 NIL REM 4 1.077 258.5
14001 HEISLERTAP 1.079 148.9
19400 HEISLER9 1.072 26.8
1402 HEISLER 144 1.079 148.9
10400 HEISLERMID 1.072 148.0
1400 HEISLER8 1.070 73.9
1401 BIGKNIF8 1.068 73.7
19401 BIGKNIF9 1.024 4.3
16491 BR5 AUX2 0.998 4.2
15491 BR5 AUX1 0.998 4.2
14491 757S705T
18491 STNB AUX 1.072 4.5
13491 757S702T 1.041 143.7
16492 STNA AUX 1.024 2.5
10491 757S701T 1.070 147.7
1493 BAT #1 1.000 14.4
1494 BAT #2 1.000 14.4
1492 BAT. RV8 12.2 25.9
1491 BAT. RV7 1.094 151.0
1495 BAT #3 1.011 16.2
1496 BAT #4 1.012 16.2
1497 BAT #5 1.037 21.8
1469 BAT RV79 1.080 259.2
11499 757S912T 1.038 249.1
1489 BAT RV80 1.080 259.2
1403 PAINTRT4
1499 CORDEL 4
18403 PAINTRT3 1.037 25.9
18498 BIGFOOA9 1.022 7.1
19498 BIGFOOT9 1.014 25.3
1498 BIGFOOT8 1.066 73.6
649 HANSMAN7 1.068 256.3
648 HANSMAN9 1.045 144.2
74 METIS647
87 METIS644 1.057 253.7
4074 METIS649 1.040 26.0
80074 KEYSTN_2_B1
81074 KEYSTN_2_B2
3112 METISKA9 1.017 4.2
4112 METISKO9 1.017 4.2
112 METISKO7 1.043 144.0
989 703ALTAP 1.043 144.0
4086 PROVOST9 1.045 26.1
86 PROVOST7 1.038 143.2
4219 KILLARN9 1.063 26.6
219 KILLARN7 1.044 144.1
4220 HAYTER 9 1.035 25.9
220 HAYTER 7 1.036 142.9
99221 BULLCREEKGE 1.035 35.7
99220 BULLCREEK 1.035 35.7
99231 CONFWINDGE 1.037 35.8
99230 CONFWIND 1.037 35.8
CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 11:08
D1-31
2017SP-Alt 2 BR#5 ON-9.b
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 11:08
D1-32

2017SP-Alt 2 BR#5 ON-10.a

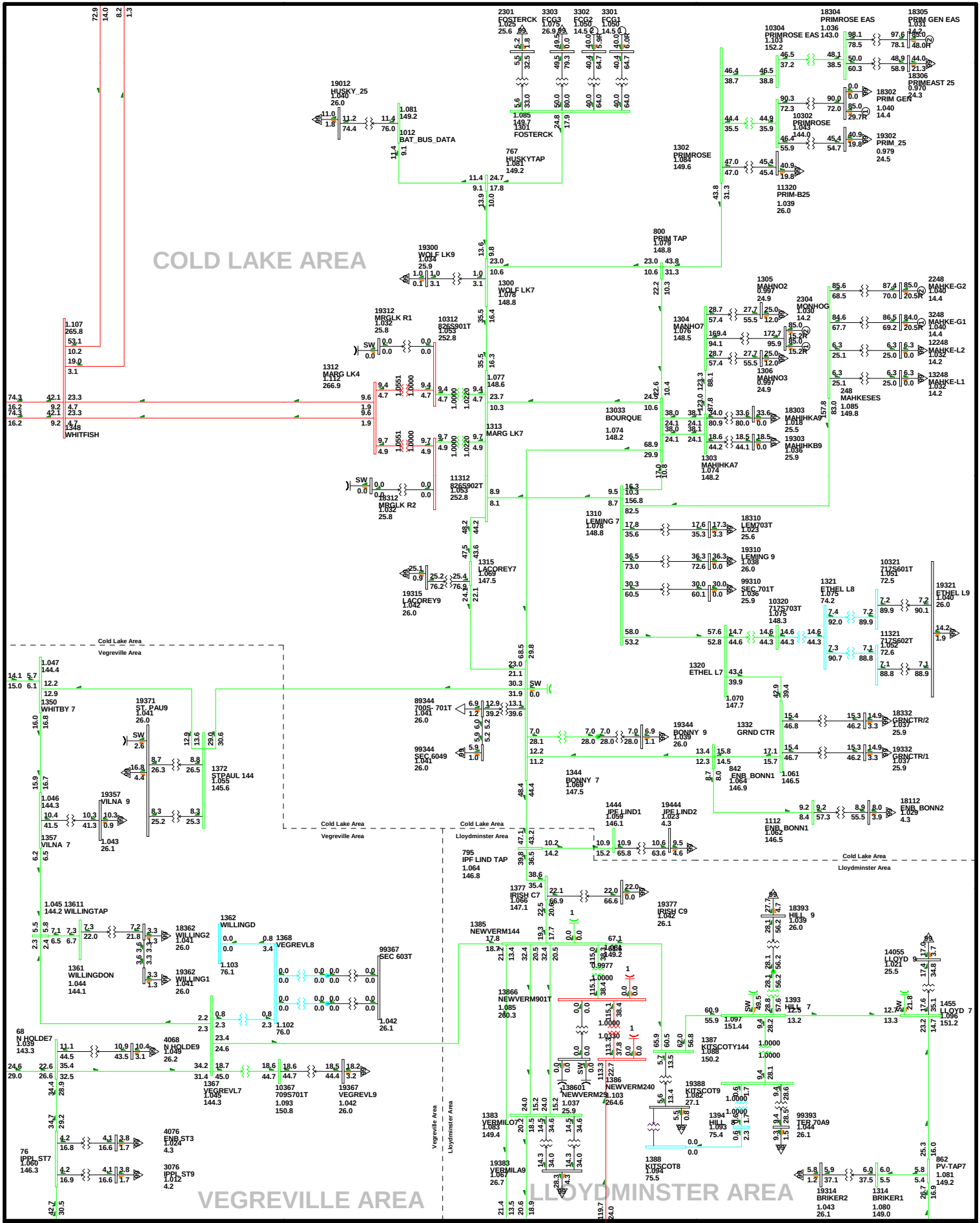
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 11:08
D1-32

2017SP-Alt 2 BR#5 ON-10.b

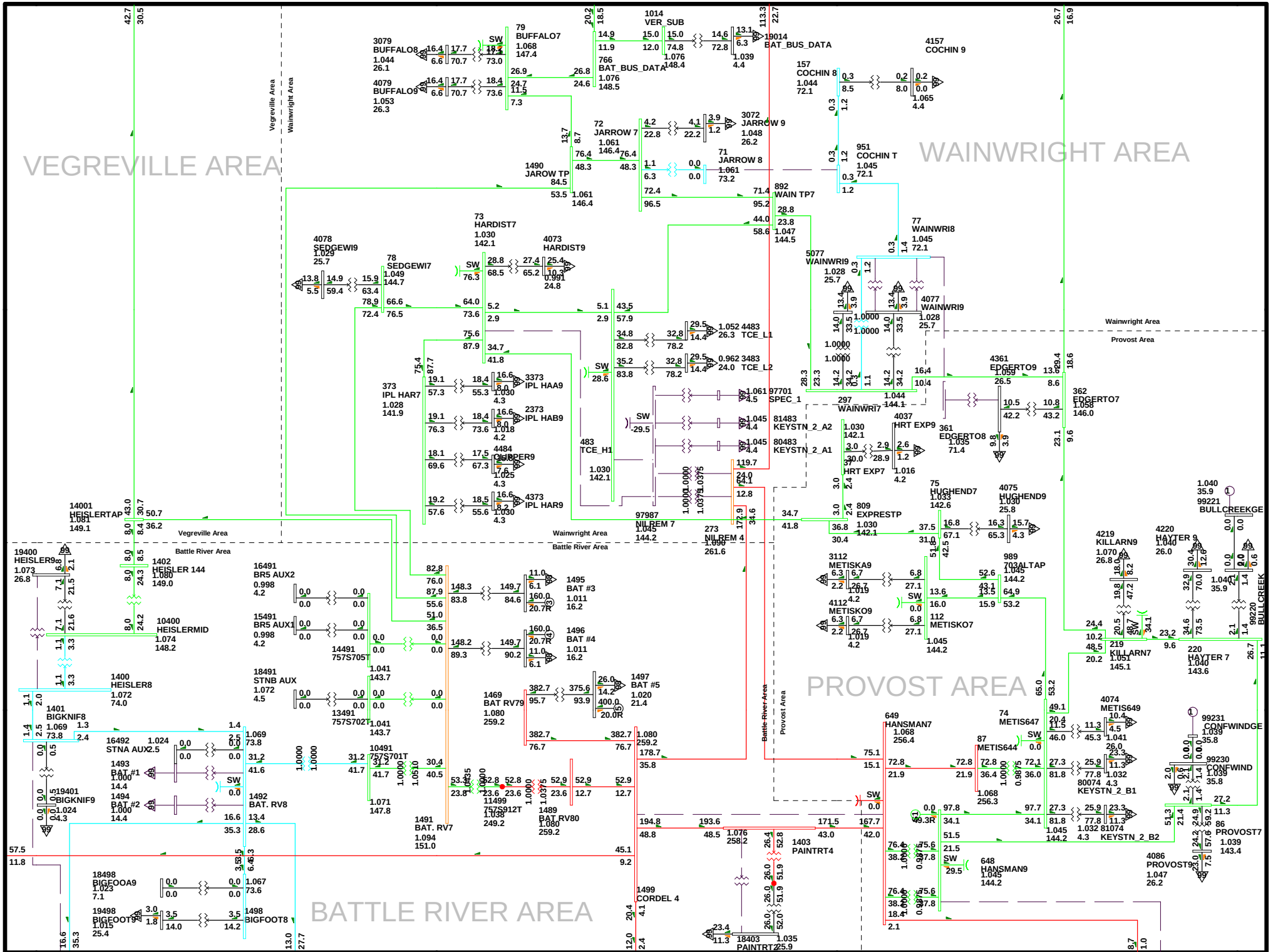
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000

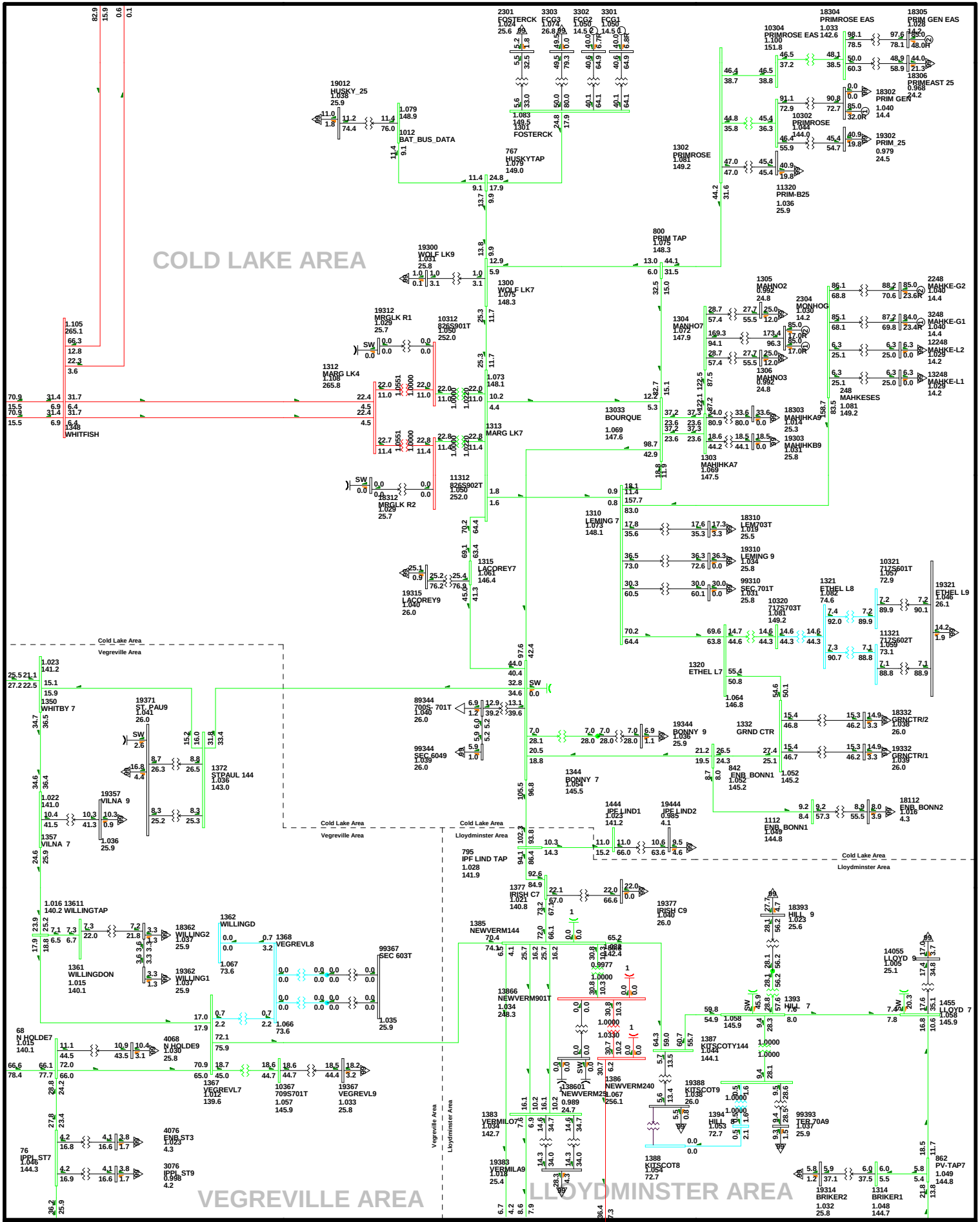


CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 11:56
D1-33

2017SP-Alt 2 BR#5 ON-11.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

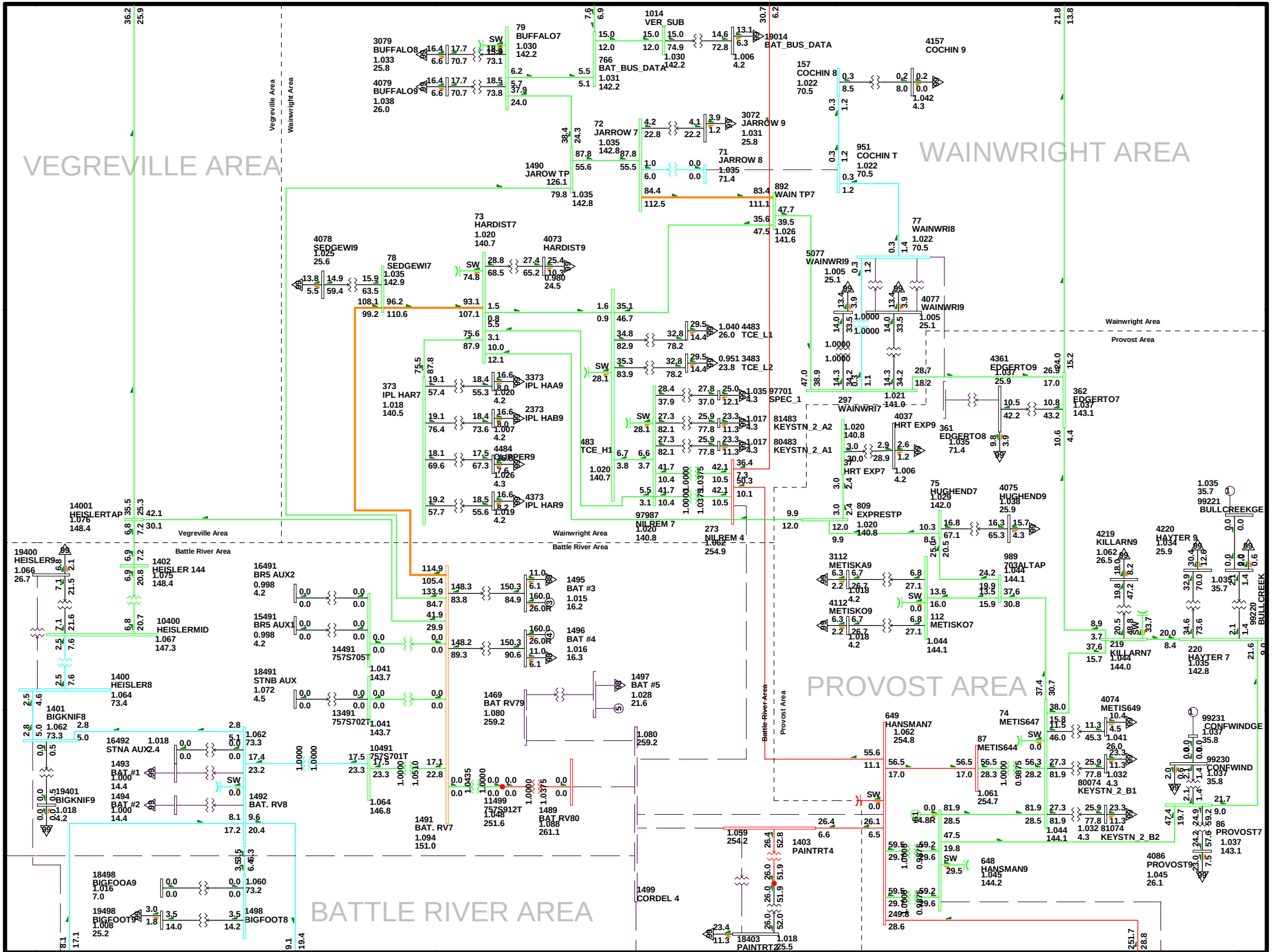

VEGREVILLE AREA
WAINWRIGHT AREA
PROVOST AREA
BATTLE RIVER AREA
Vegreville Area
Wainwright Area
Battle River Area
Provost Area
3079 BUFFALO8 1.044 26.1
4079 BUFFALO9 1.053 26.3
79 BUFFALO7 1.068 147.4
1014 VER_SUB
766 BAT_BUS_DATA 1.076 148.5
19014 BAT_BUS_DATA
4157 COCHIN 9
157 COCHIN 8 1.044 72.1
951 COCHIN T 1.045 72.1
1065 4.4
72 JARROW 7 1.061 146.4
3072 JARROW 9 1.048 26.2
71 JARROW 8 1.061 73.2
1490 JAROW TP 84.5
892 WAIN TP7 95.2
73 HARDIST7 1.030 142.1
4073 HARDIST9 1.031 24.8
4078 SEDGEWI9 1.029 25.7
78 SEDGEWI7 1.049 144.7
77 WAINWRI8 1.045 72.1
5077 WAINWRI9 1.028 25.7
4077 WAINWRI9 1.028 25.7
4361 EDGERTO9 1.059
362 EDGERTO7 1.058 146.0
361 EDGERTO8 1.035 71.4
4037 HRT EXP9
HRT EXP7 1.016 4.2
297 WAINWRI7 1.044 144.1
373 IPL HAR7 1.028 141.9
3373 IPL HAA9 1.030 4.3
2373 IPL HAB9 1.018 4.2
4484 QUIPPER9 1.025 4.3
4373 IPL HAR9 1.030 4.3
483 TCE_H1 1.030 142.1
4483 TCE_L1 26.3
3483 TCE_L2 24.0
97701 SPEC_1 4.5
81483 KEYSTN_2_A2 4.4
80483 KEYSTN_2_A1 4.4
97987 NILREM 7 1.045 144.2
273 NILREM 4 1.090 261.6
14001 HEISLERTAP 1.081 149.1
19400 HEISLER9 1.073 26.8
1402 HEISLER 144 1.080 149.0
10400 HEISLERMID 1.074 148.2
1400 HEISLER8 1.072 74.0
1401 BIGKNIF8 1.069 73.8
19401 BIGKNIF9 1.024 04.3
1493 BAT #1 1.000 14.4
1494 BAT #2 1.000 14.4
1492 BAT. RV8 13.4
16491 BR5 AUX2 0.998 4.2
15491 BR5 AUX1 0.998 4.2
14491 757S705T
18491 STNB AUX 1.072 4.5
13491 757S702T
16492 STNA AUX
10491 757S701T
11499 757S912T 1.038 249.2
1491 BAT. RV7 1.094 151.0
1495 BAT #3 1.011 16.2
1496 BAT #4 1.011 16.2
1497 BAT #5 1.020 21.4
1469 BAT RV79 1.080 259.2
1489 BAT RV80 1.080 259.2
1499 CORDEL 4
1403 PAINTRT4
18403 PAINTRT 1.035 25.9
18498 BIGFOOA9 1.023 7.1
19498 BIGFOOT9 1.015 25.4
1498 BIGFOOT8 14.2
649 HANSMAN7 1.068 256.4
74 METIS647
87 METIS644 1.068 256.3
4074 METIS649 1.045 144.2
80074 KEYSTN_2_B1 4.3
81074 KEYSTN_2_B2 4.3
648 HANSMAN9 1.045 144.2
4086 PROVOST9 1.047 26.2
75 HUGHEND7 1.033 142.6
4075 HUGHEND9 1.030 25.8
809 EXPRESTP 1.030 142.1
3112 METISKA9 1.019 4.2
4112 METISKO9 1.019 4.2
112 METISKO7 1.045 144.2
989 703ALTAP 1.045 144.2
4219 KILLARN9 1.070 26.8
219 KILLARN7 1.051 145.1
4220 HAYTER 9 1.040 26.0
220 HAYTER 7 1.040 143.6
99221 BULLCREEKGE 1.040 35.9
99220 BULL CREEK 1.040 35.9
99231 CONFWINDGE 1.039 35.8
99230 CONFWIND 1.039 35.8
86 PROVOST7 1.039 143.4
2017SP-Alt 2 BR#5 ON-11.b
CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 11:56
D1-33
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000

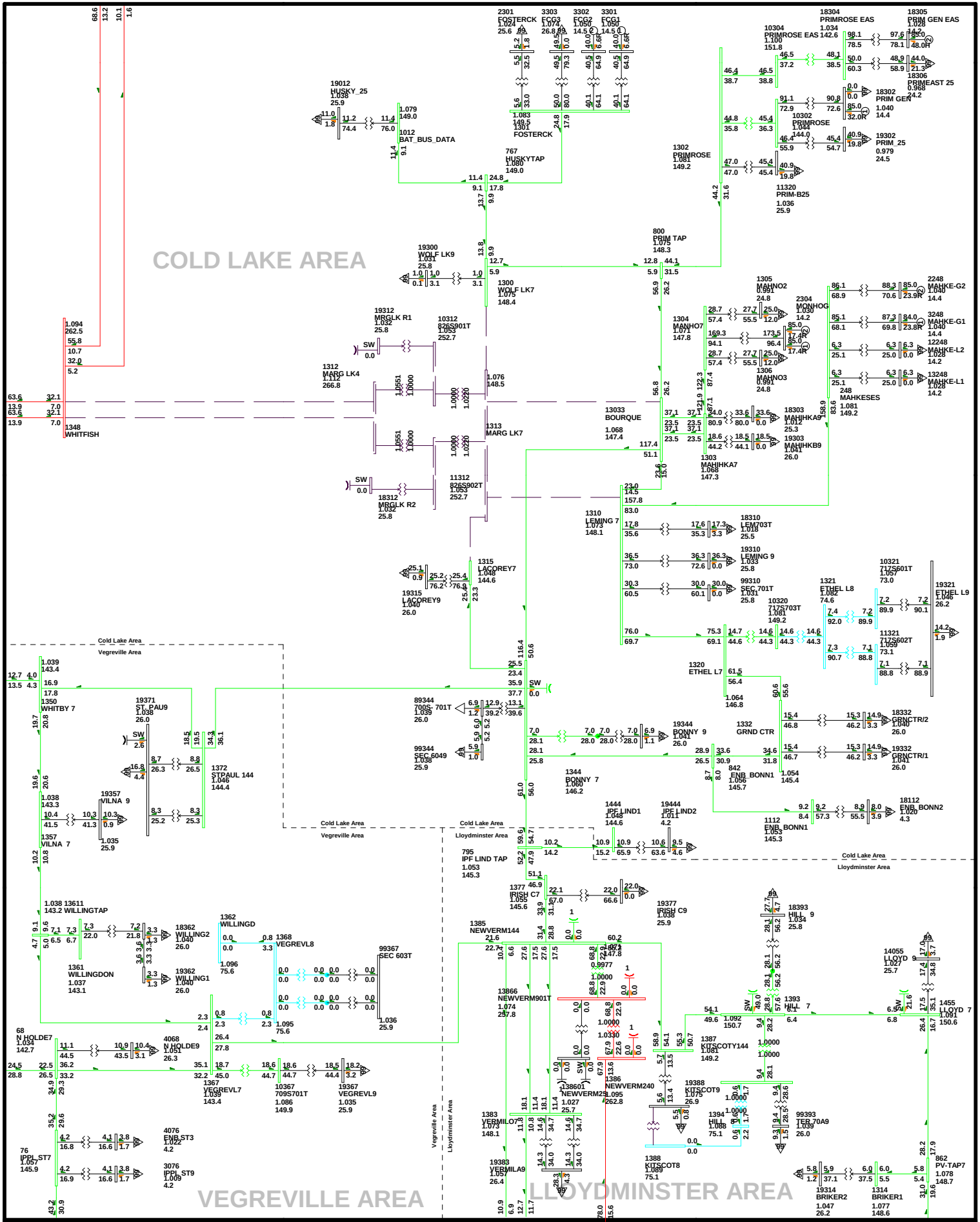


CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 11:08
D1-34

2017SP-Alt 2 BR#5 ON-12.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

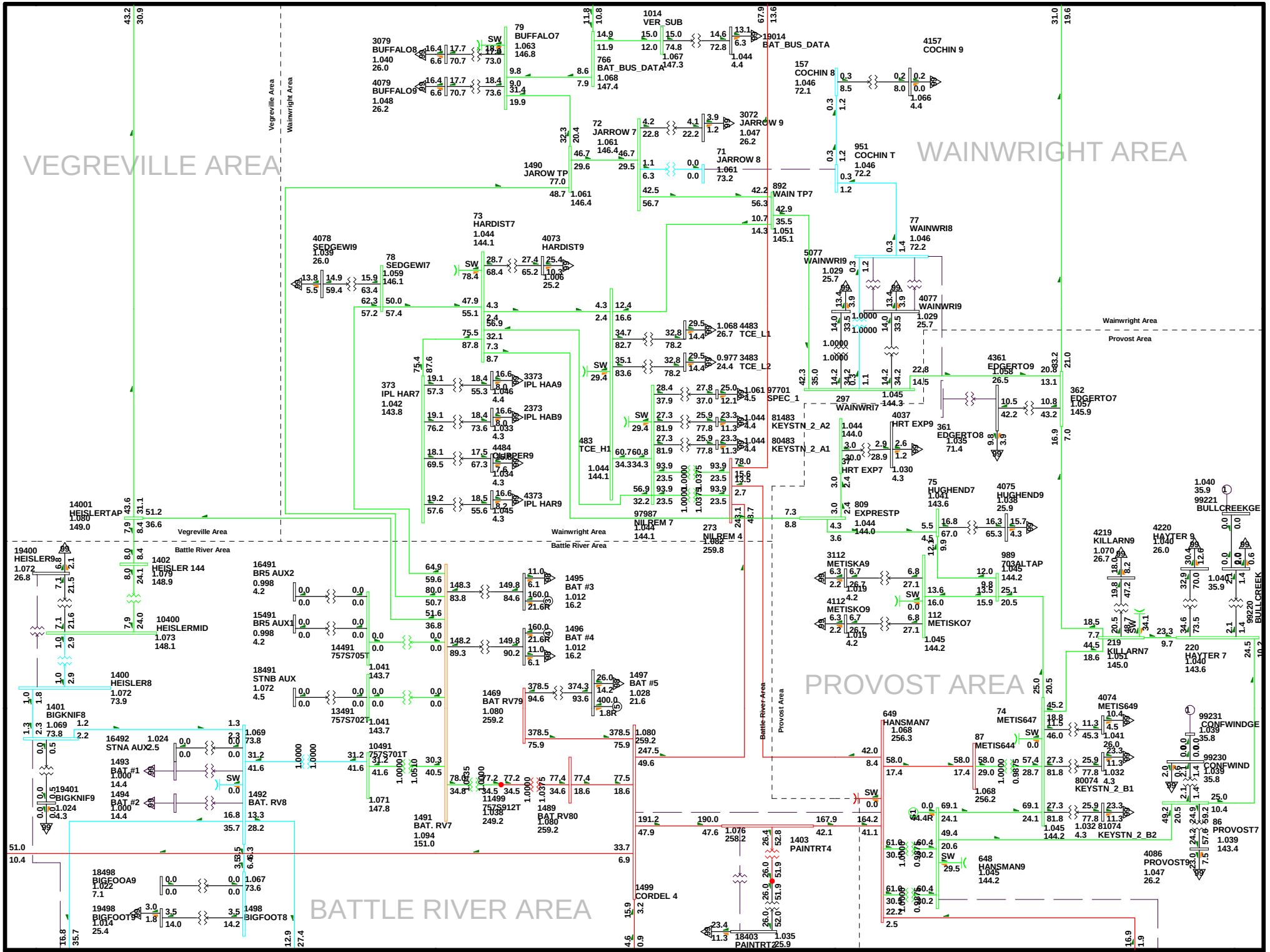

VEGREVILLE AREA
WAINWRIGHT AREA
PROVOST AREA
BATTLE RIVER AREA
Vegreville Area
Wainwright Area
Battle River Area
Provost Area
3079 BUFFALO8 1.033 25.8
4079 BUFFALO9 1.038 26.0
79 BUFFALO7 1.030 142.2
766 BAT_BUS_DATA 1.031 142.2
1014 VER_SUB
19014 BAT_BUS_DATA 1.006 4.2
4157 COCHIN 9
157 COCHIN 8 1.022 70.5
1042 4.3
72 JARROW 7 1.035 142.8
3072 JARROW 9 1.031 25.8
71 JAROW 8 1.035 71.4
1490 JAROW TP 126.1
951 COCHIN T 1.022 70.5
892 WAIN TP7
73 HARDIST7 1.020 140.7
4073 HARDIST9
4078 SEDGEWI9 1.025 25.6
78 SEDGEWI7 1.035 142.9
77 WAINWRI8 1.022 70.5
5077 WAINWRI9 1.005 25.1
4077 WAINWRI9 1.005 25.1
373 IPL HAR7 1.018 140.5
3373 IPL HAA9
2373 IPL HAB9
4484 QUIPPER9 1.026 4.3
4373 IPL HAR9
483 TCE_H1
4483 TCE_L1
3483 TCE_L2
97701 SPEC_1
81483 KEYSTN_2_A2
80483 KEYSTN_2_A1
297 WAINWRI7
4037 HRT EXP9
HRT EXP7 1.006 4.2
361 EDGERTO8 1.035 71.4
4361 EDGERTO9 1.037 25.9
362 EDGERTO7 1.037 143.1
75 HUGHEND7 1.029 142.0
4075 HUGHEND9 1.038 25.9
809 EXPRESTP 1.020 140.8
97987 NILREM 7 1.020 140.8
273 NILREM 4 1.062 254.9
14001 HEISLERTAP 1.076 148.4
19400 HEISLER9 1.066 26.7
1402 HEISLER 144 1.075 148.4
10400 HEISLERMID 1.067 147.3
1400 HEISLER8 1.064 73.4
1401 BIGKNIF8 1.062 73.3
19401 BIGKNIF9 1.018 4.2
16491 BR5 AUX2 0.998 4.2
15491 BR5 AUX1 0.998 4.2
14491 757S705T
18491 STNB AUX 1.072 4.5
13491 757S702T
16492 STNA AUX 1.018 2.4
10491 757S701T
1493 BAT #1 1.000 14.4
1494 BAT #2 1.000 14.4
1492 BAT. RV8 9.6 20.4
1491 BAT. RV7 1.094 151.0
1495 BAT #3 1.015 16.2
1496 BAT #4 1.016 16.3
1497 BAT #5 1.028 21.6
1469 BAT RV79 1.080 259.2
11499 757S912T 1.048 251.6
1489 BAT RV80 1.088 261.1
1499 CORDEL 4
1403 PAINTRT4 1.059 254.2
18403 PAINTRT 1.018 25.5
18498 BIGFOOA9 1.016 7.0
19498 BIGFOOT9 1.008 25.2
1498 BIGFOOT8 1.060 73.2
649 HANSMAN7 1.062 254.8
648 HANSMAN9 1.045 144.2
74 METIS647
87 METIS644 1.061 254.7
4074 METIS649 1.041 26.0
80074 KEYSTN_2_B1 4.3
81074 KEYSTN_2_B2 4.3
3112 METISKA9
4112 METISKO9
112 METISKO7 1.044 144.1
989 703ALTAP 1.044 144.1
4086 PROVOST9 1.045 26.1
86 PROVOST7 1.037 143.1
99231 CONFWINDGE 1.037 35.8
99230 CONFWIND 1.037 35.8
99221 BULLCREEKGE 1.035 35.7
99220 BULLCREEK 1.035 35.7
4219 KILLARN9 1.062 26.5
219 KILLARN7 1.044 144.0
4220 HAYTER 9 1.034 25.9
220 HAYTER 7 1.035 142.8
1035 1.035 35.7
CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 11:08
D1-34
2017SP-Alt 2 BR#5 ON-12.b
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 11:08
D1-35

2017SP-Alt 2 BR#5 ON-13.a

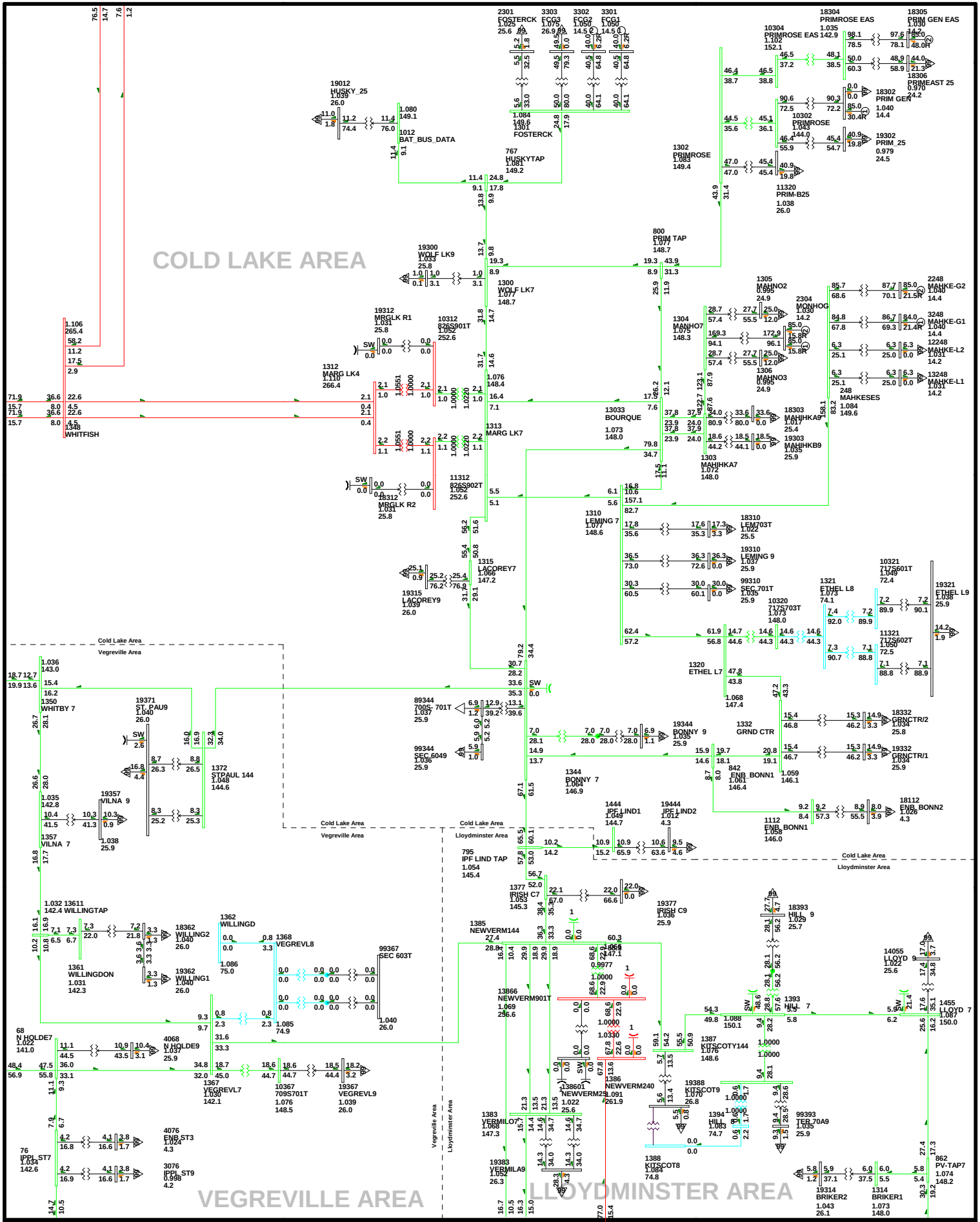
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 11:08
D1-35

2017SP-Alt 2 BR#5 ON-13.b

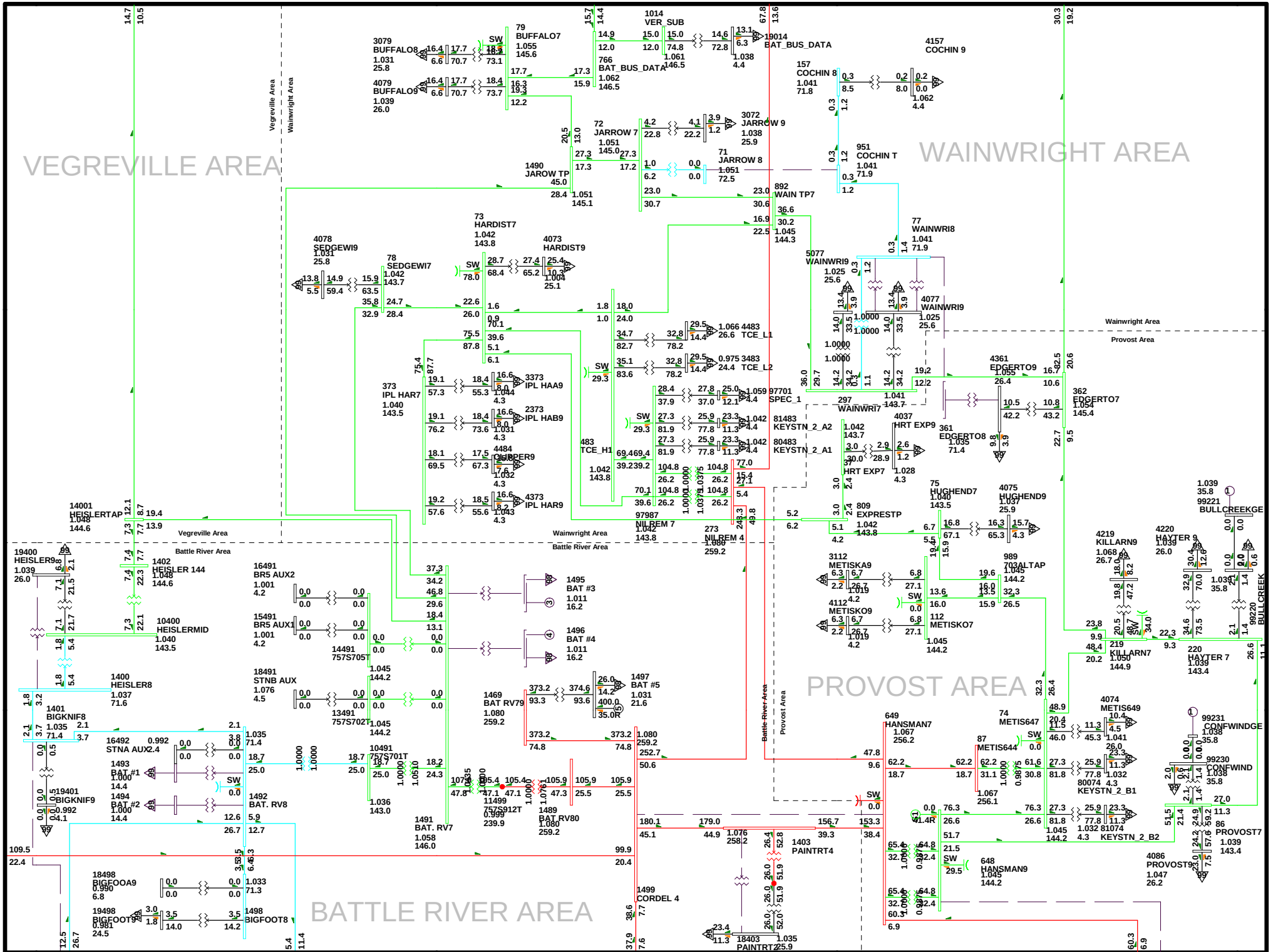
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 11:08
D1-36

2017SP-Alt 2 BR#5 ON-14.a

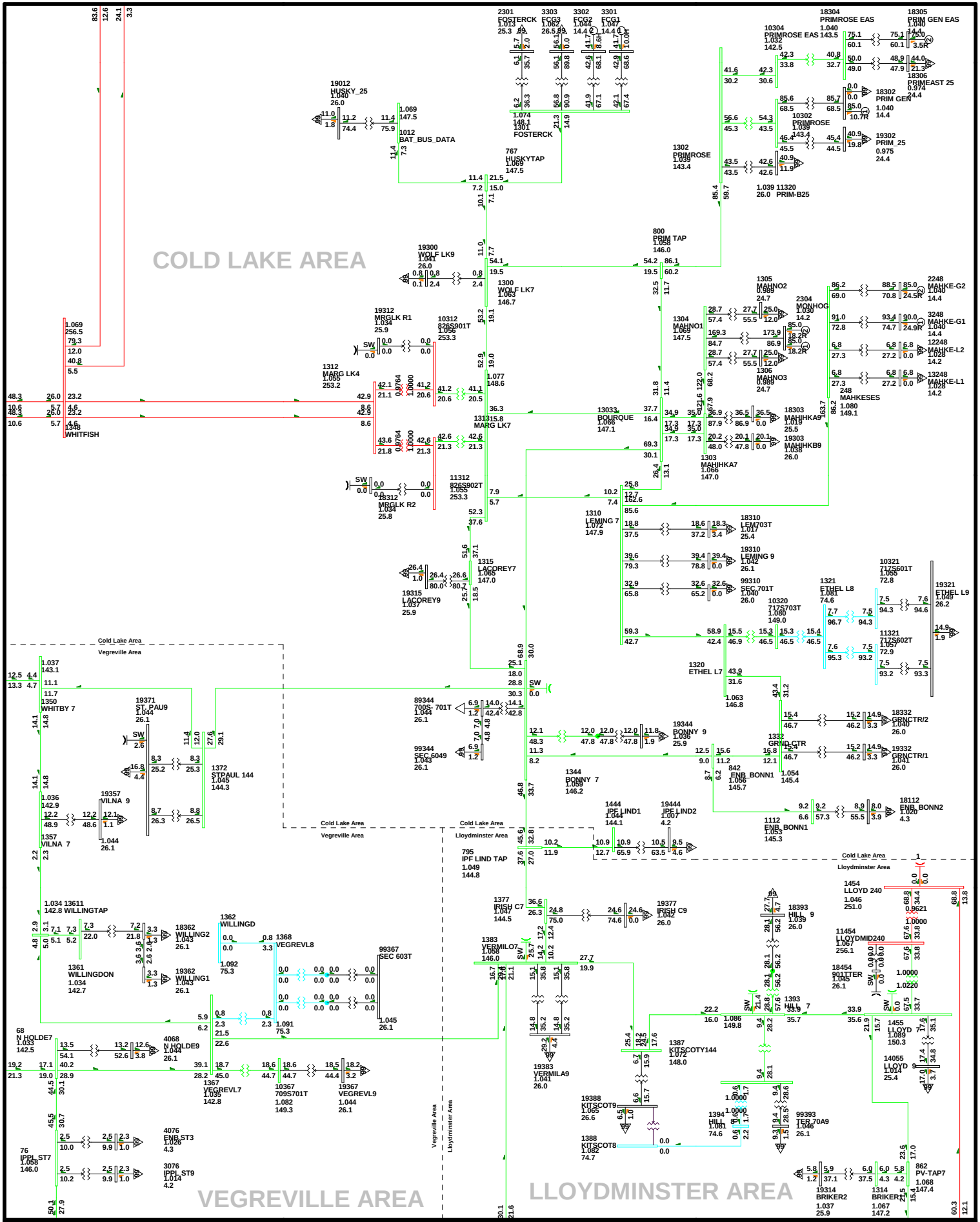
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 11:08
D1-36

2017SP-Alt 2 BR#5 ON-14.b

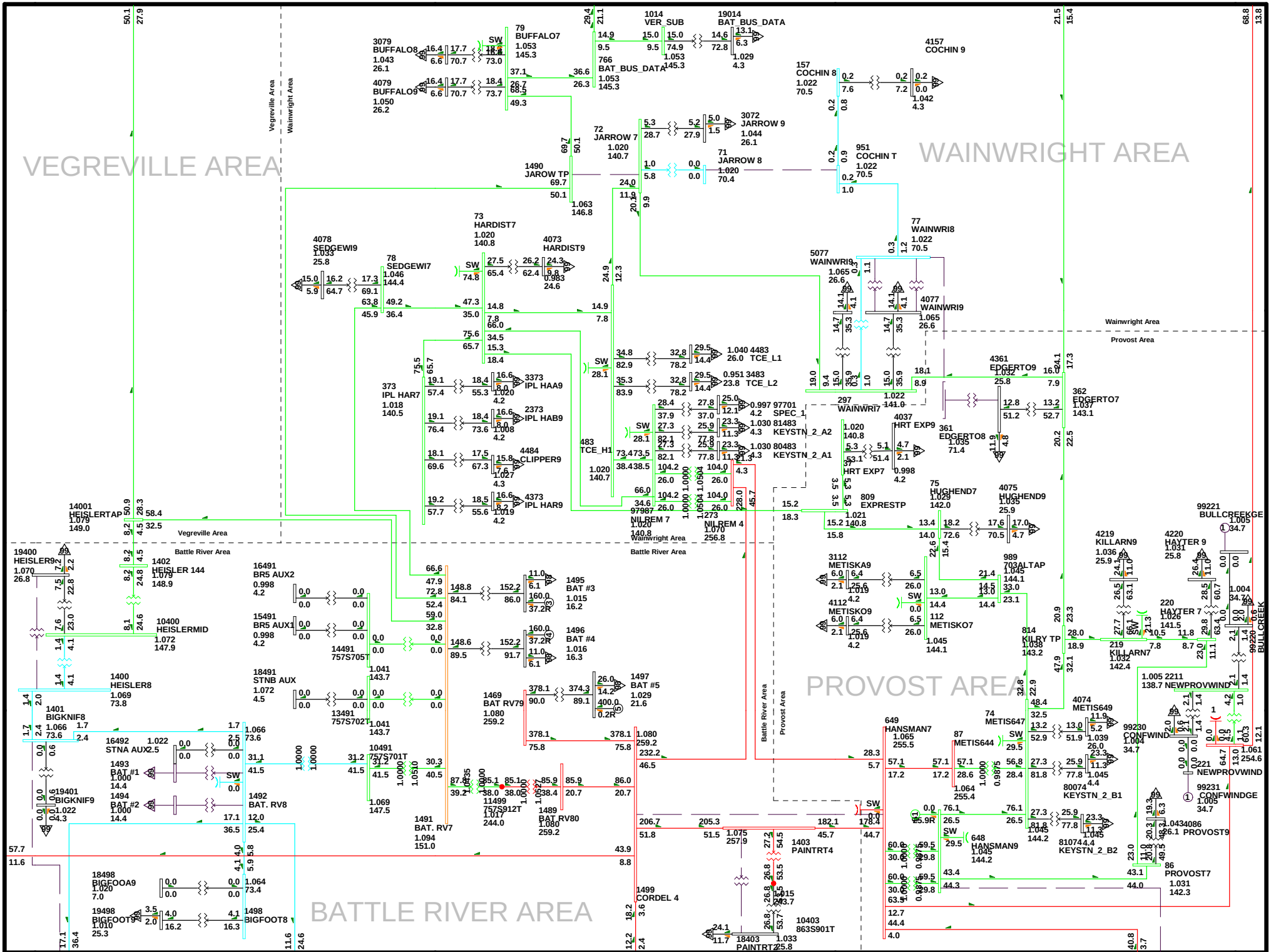
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000

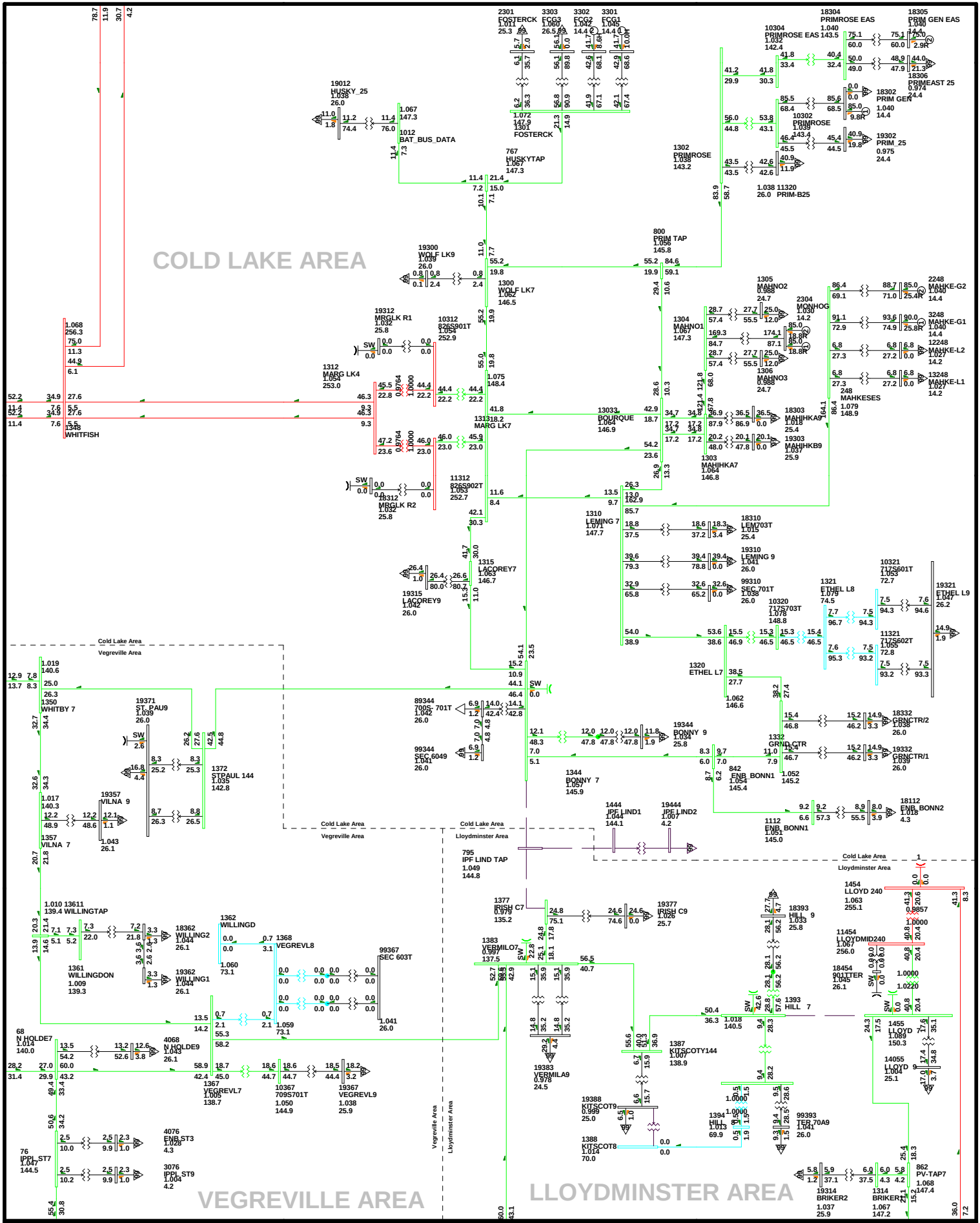


CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 11:14
D1-00

2017WP-Alt 3 BR#5 ON-1.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000<=240.000

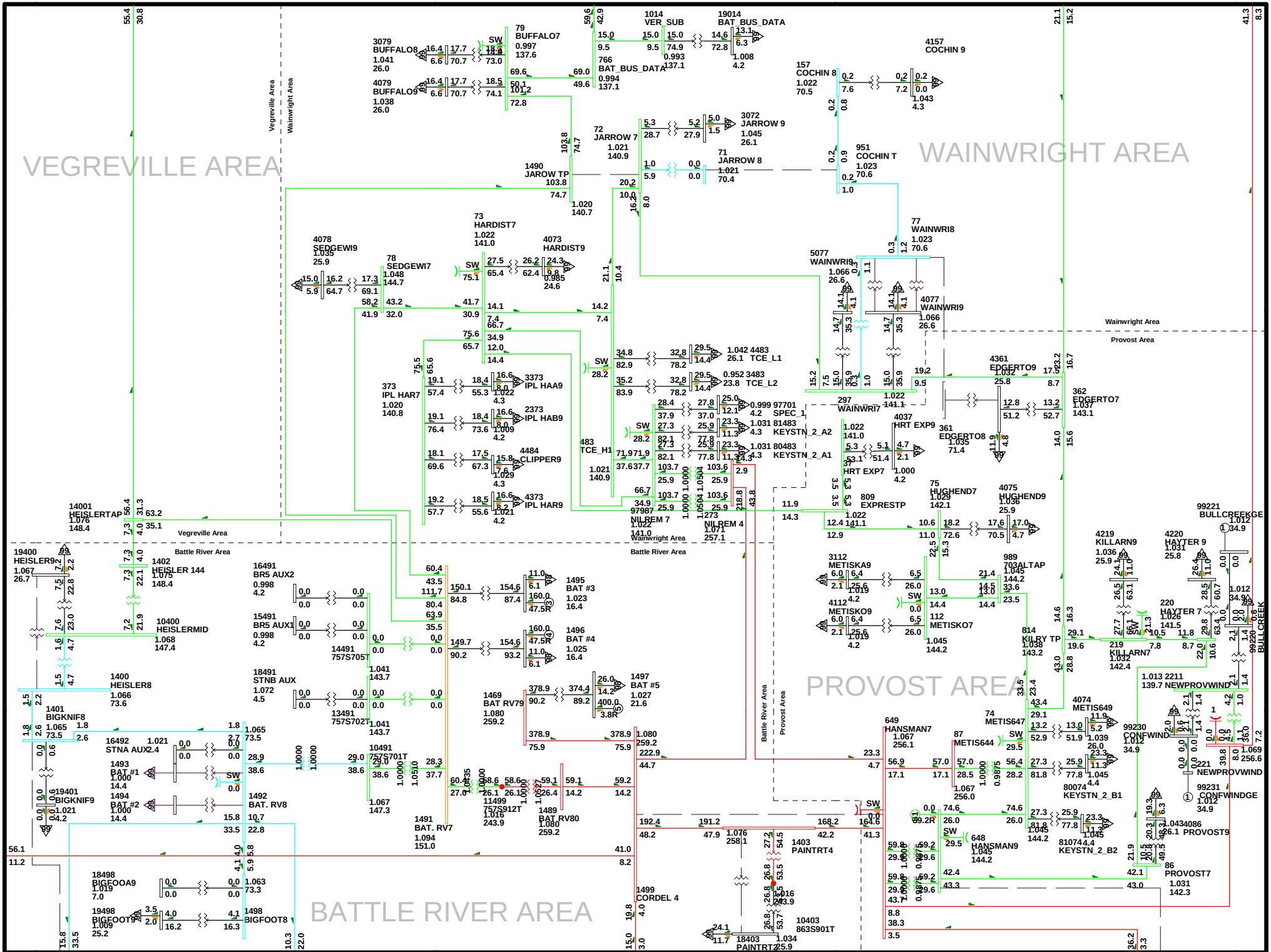

VEGREVILLE AREA
WAINWRIGHT AREA
PROVOST AREA
BATTLE RIVER AREA
Vegreville Area
Wainwright Area
Provost Area
Battle River Area
3079 BUFFALO8 1.043 26.1
4079 BUFFALO9 1.050 26.2
79 BUFFALO7 1.053 145.3
766 BAT_BUS_DATA 1.053 145.3
1014 VER_SUB
19014 BAT_BUS_DATA
4157 COCHIN 9
157 COCHIN 8 1.022 70.5
1.042 4.3
72 JARROW 7 1.020 140.7
3072 JARROW 9 1.044 26.1
71 JARROW 8 1.020 70.4
951 COCHIN T 1.022 70.5
1490 JAROW TP 69.7 50.1 1.063 146.8
73 HARDIST7 1.020 140.8
4073 HARDIST9 0.983 24.6
4078 SEDGEWI9 1.033 25.8
78 SEDGEWI7 1.046 144.4
77 WAINWRI8 1.022 70.5
5077 WAINWRI9 1.065 26.6
4077 WAINWRI9 1.065 26.6
297 WAINWRI7 1.022 141.0
4037 HRT EXP9 1.030 81483 4.3
361 EDGERTO8 1.035 71.4
4361 EDGERTO9 1.032 25.8
362 EDGERTO7 1.037 143.1
373 IPL HAR7 1.018 140.5
3373 IPL HAA9 1.020 4.2
2373 IPL HAB9 1.008 4.2
4484 CLIPPER9 1.027 4.3
4373 IPL HAR9 1.019 4.2
483 TCE_H1 1.020 140.7
1.040 4483 26.0 TCE_L1
0.951 3483 23.8 TCE_L2
0.997 97701 4.2 SPEC_1
1.030 81483 4.3 KEYSTN_2_A2
1.030 80483 4.3 KEYSTN_2_A1
HRT EXP7 1.020 140.8
0.998 4.2
809 EXPRESTP 1.021 140.8
75 HUGHEND7 1.029 142.0
4075 HUGHEND9 1.035 25.9
97987 NIL REM 7 1.020 140.8
1273 NIL REM 4 1.070 256.8
14001 HEISLERTAP 1.079 149.0
32.5
19400 HEISLER9 1.070 26.8
1402 HEISLER 144 1.079 148.9
10400 HEISLERMID 1.072 147.9
1400 HEISLER8 1.069 73.8
1401 BIGKNIF8 1.066 73.6
19401 BIGKNIF9 1.022 14.3
16491 BR5 AUX2 0.998 4.2
15491 BR5 AUX1 0.998 4.2
14491 757S705T
18491 STNB AUX 1.072 4.5
13491 757S702T
16492 STNA AUX 1.022 2.5
10491 757S701T
1493 BAT #1 1.000 14.4
1494 BAT #2 1.000 14.4
1492 BAT. RV8 1.069 147.5
1491 BAT. RV7 1.094 151.0
1495 BAT #3 1.015 16.2
1496 BAT #4 1.016 16.3
1497 BAT #5 1.029 21.6
1469 BAT RV79 1.080 259.2
11499 757S912T 1.017 244.0
1489 BAT RV80 1.080 259.2
1499 CORDEL 4 1.075 257.9
1403 PAINTRT4 1.015 283.7
10403 863S901T 1.033 25.8
18403 PAINTRT2
18498 BIGFOOA9 1.020 7.0
19498 BIGFOOT9 1.010 25.3
1498 BIGFOOT8 1.064 73.4
649 HANSMAN7 1.065 255.5
87 METIS644 1.064 255.4
74 METIS647 1.045 144.1
4074 METIS649 1.004 34.7
80074 KEYSTN_2_B1
810074 KEYSTN_2_B2
648 HANSMAN9 1.045 144.2
3112 METISKA9 1.019 4.2
4112 METISKO9 1.019 4.2
112 METISKO7 1.045 144.1
814 KILRY TP 1.038 143.2
219 KILLARN7 1.032 142.4
4219 KILLARN9 1.036 25.9
989 703ALTAP 1.045 144.1
99230 CONFWIND 1.004 34.7
99231 CONFWINDGE 1.005 34.7
99221 BULLCREEKGE 1.005 34.7
220 HAYTER 7 1.026 141.5
4220 HAYTER 9 1.031 25.8
221 NEWPROVWIND
1.005 2211 138.7 NEWPROVWIND
1.0434086 26.1 PROVOST9
86 PROVOST7 1.031 142.3
CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 11:14
D1-00
2017WP-Alt 3 BR#5 ON-1.b
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV 0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
MON, APR 12 2010 10:53
D1-20

2017WP-Alt 3 BR#5 ON-2.a

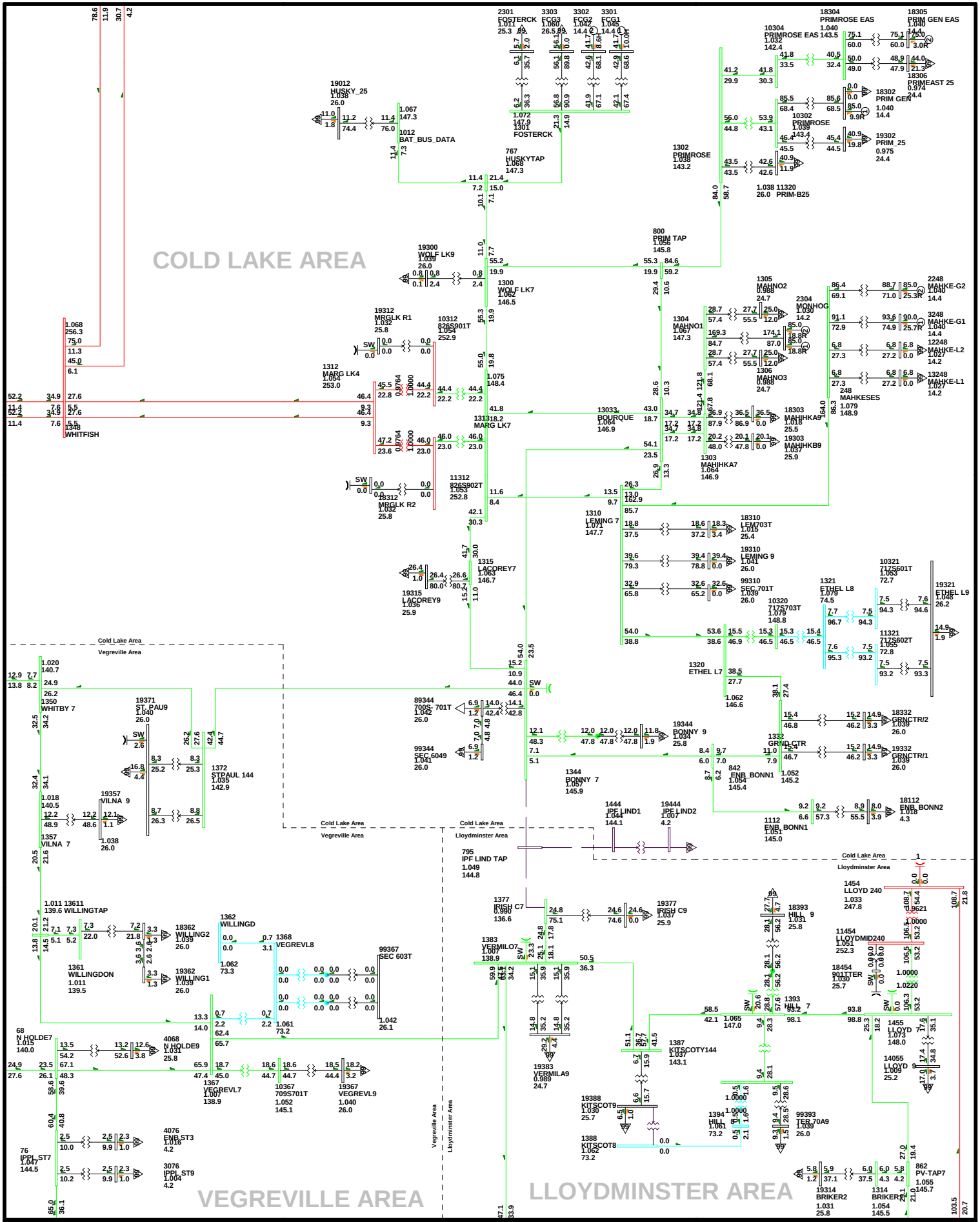
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
MON, APR 12 2010 10:53
D1-20

2017WP-Alt 3 BR#5 ON-2.b

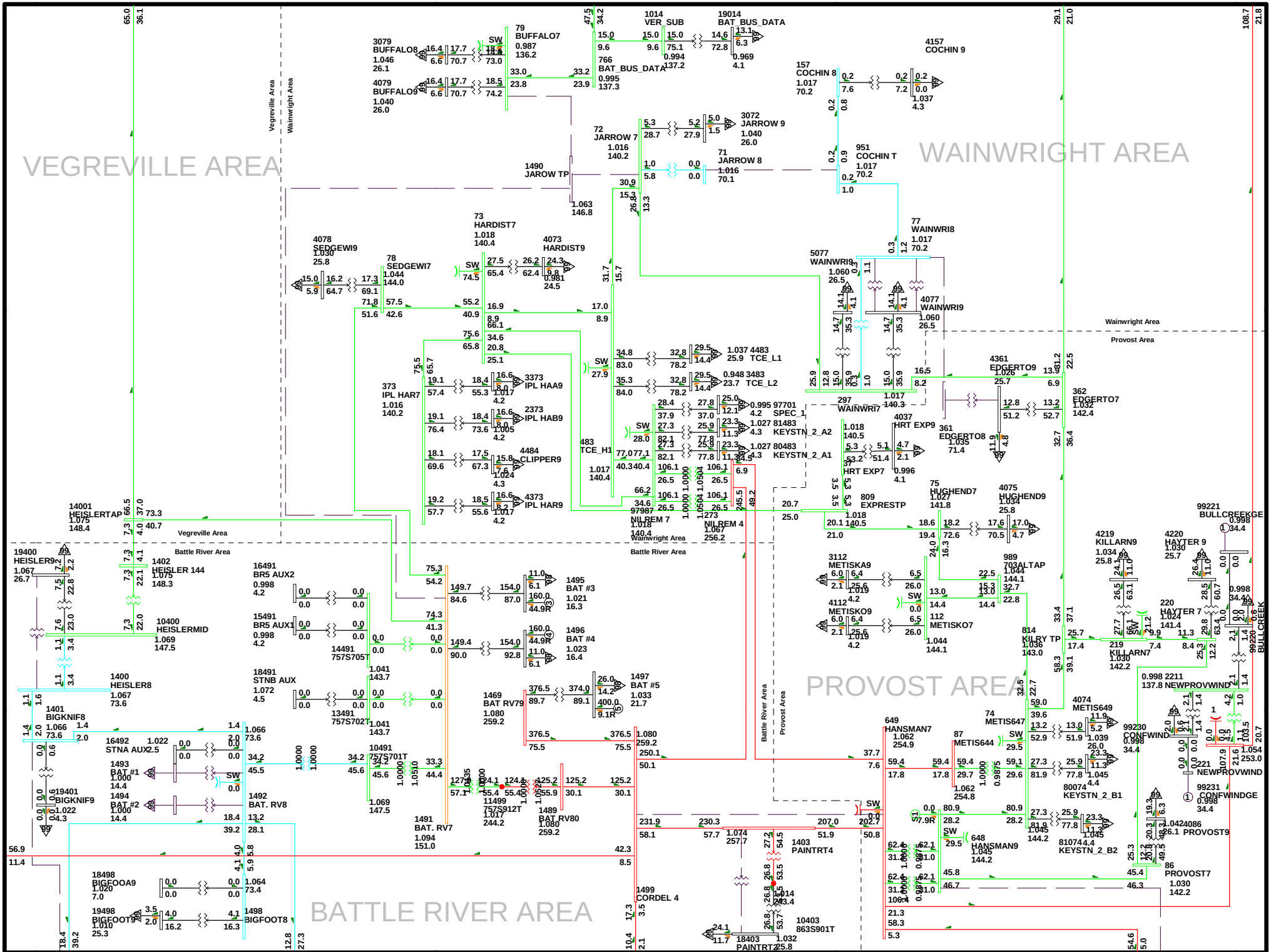
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 11:14
D1-21

2017WP-Alt 3 BR#5 ON-3.a

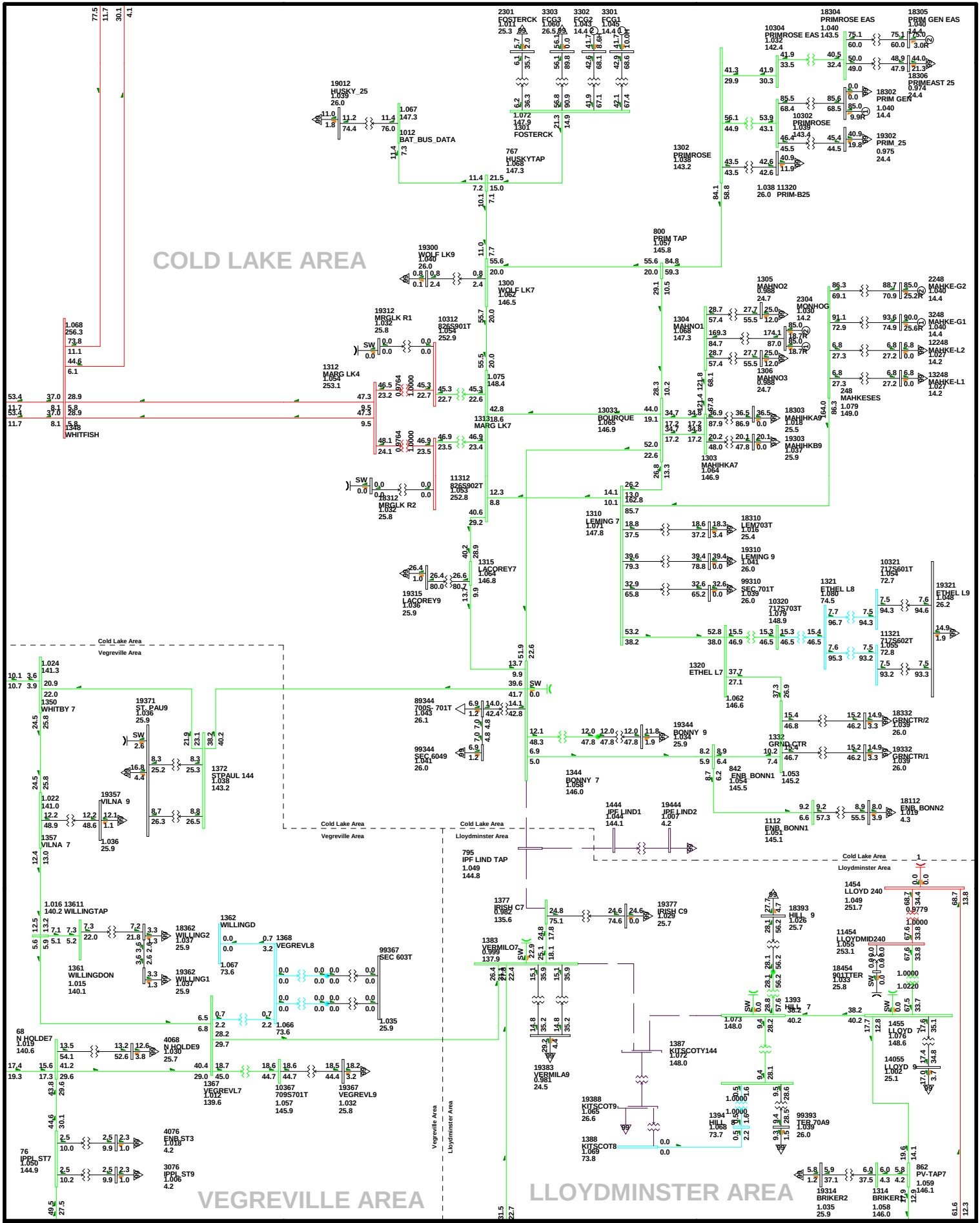
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000<=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 11:14
D1-21

2017WP-Alt 3 BR#5 ON-3.b

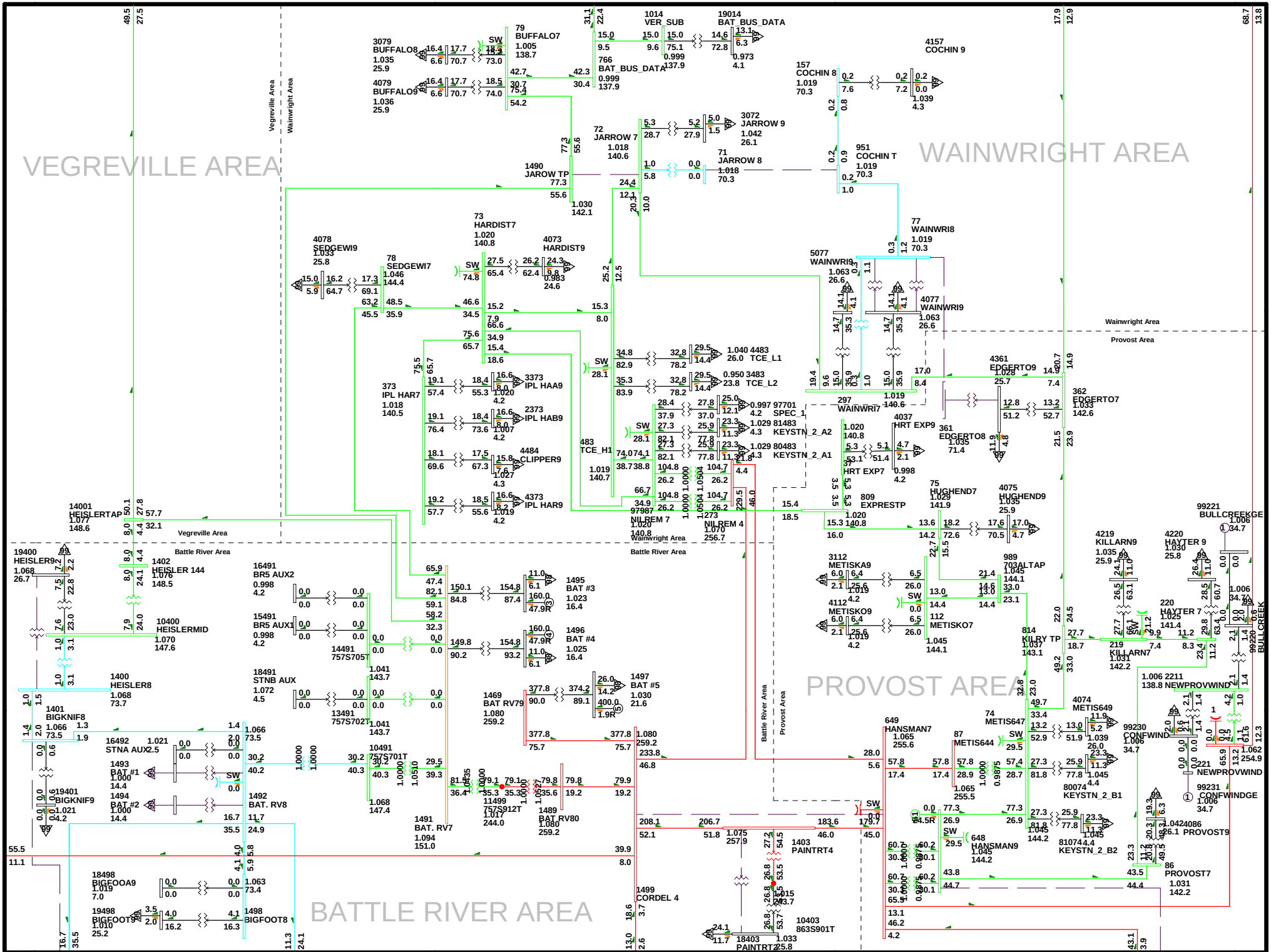
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV 0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
MON, APR 12 2010 10:52
D1-22

2017WP-Alt 3 BR#5 ON-4.a

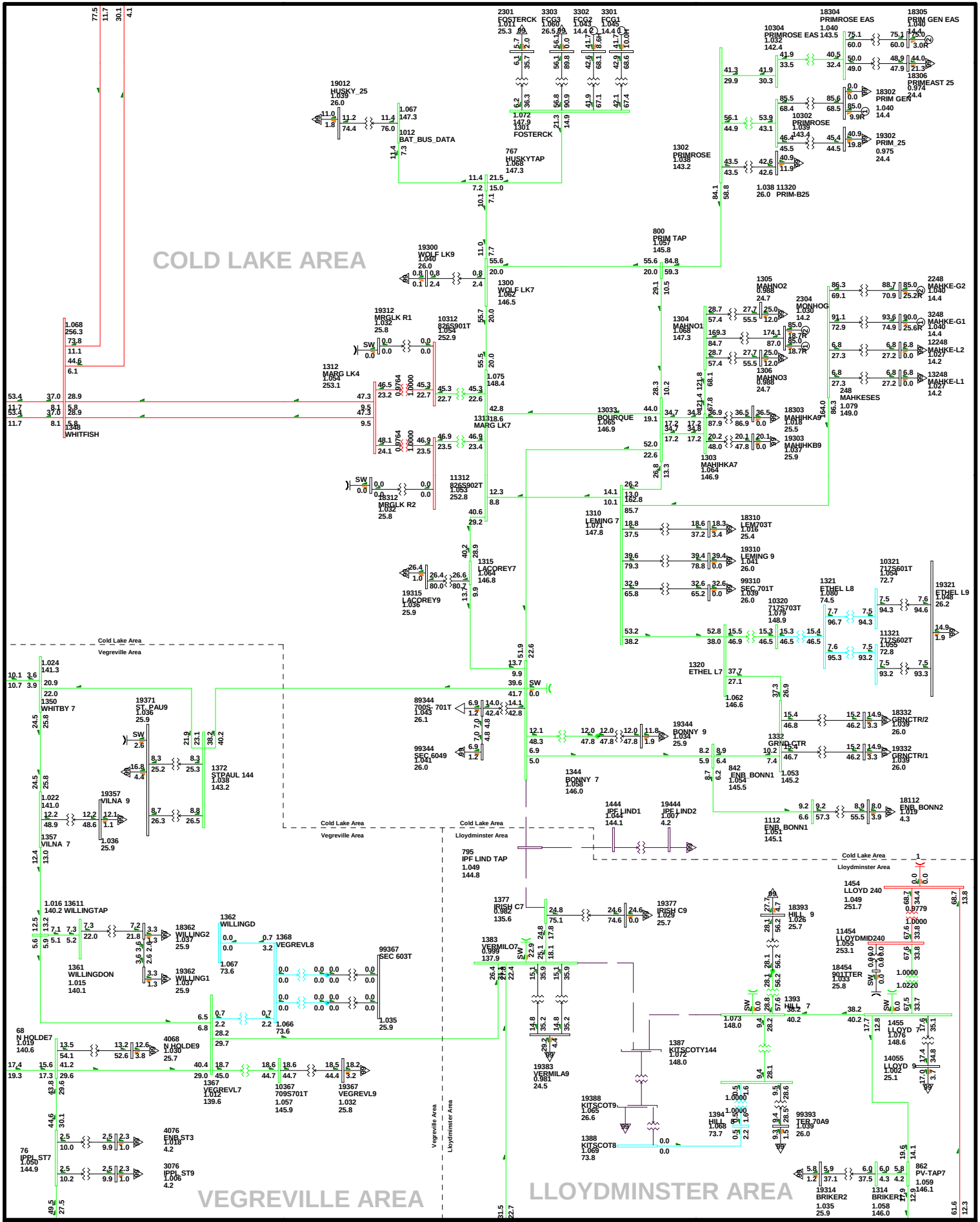
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
MON, APR 12 2010 10:52
D1-22

2017WP-Alt 3 BR#5 ON-4.b

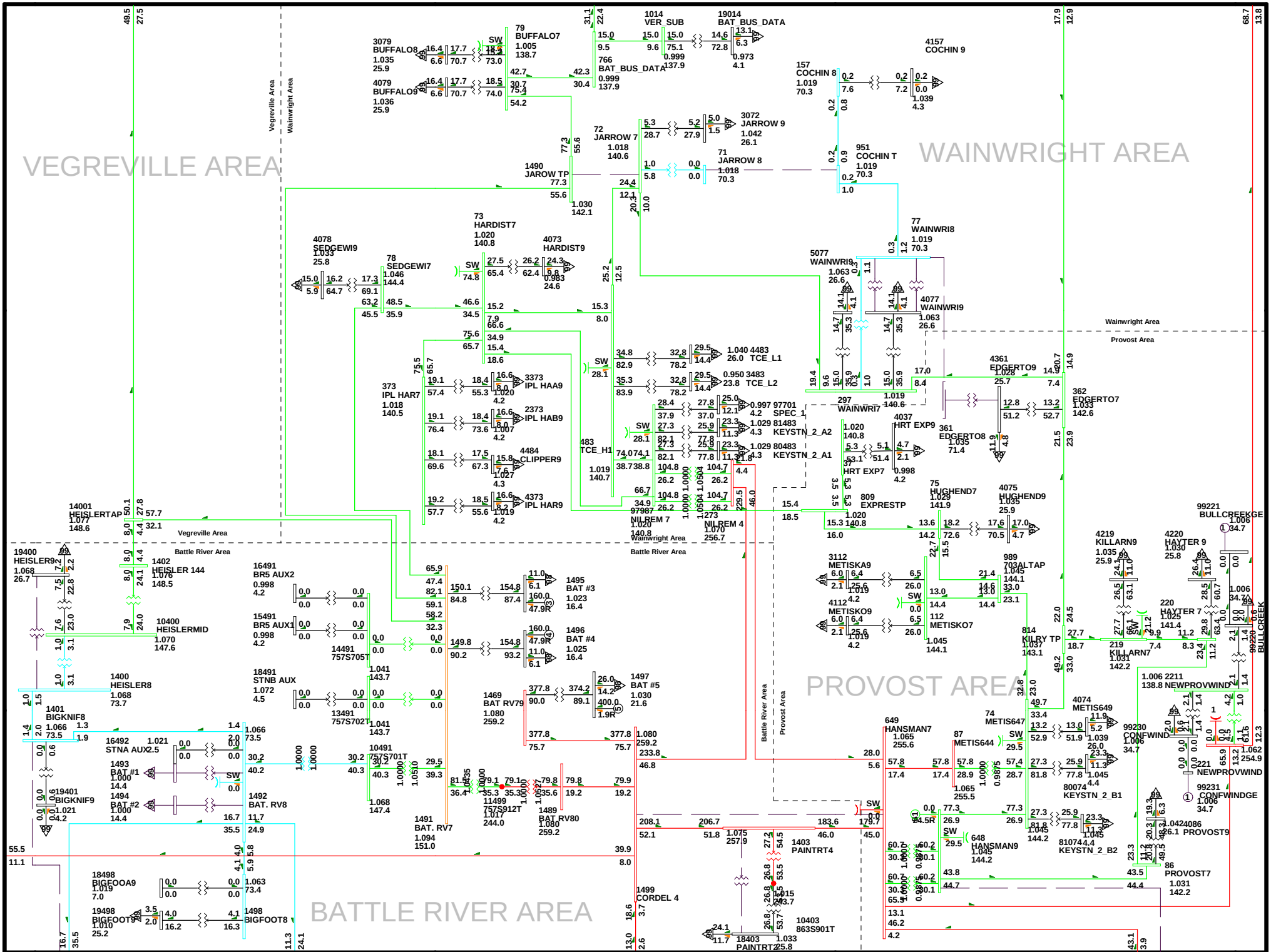
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV 0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 11:14
D1-23

2017WP-Alt 3 BR#5 ON-5.a

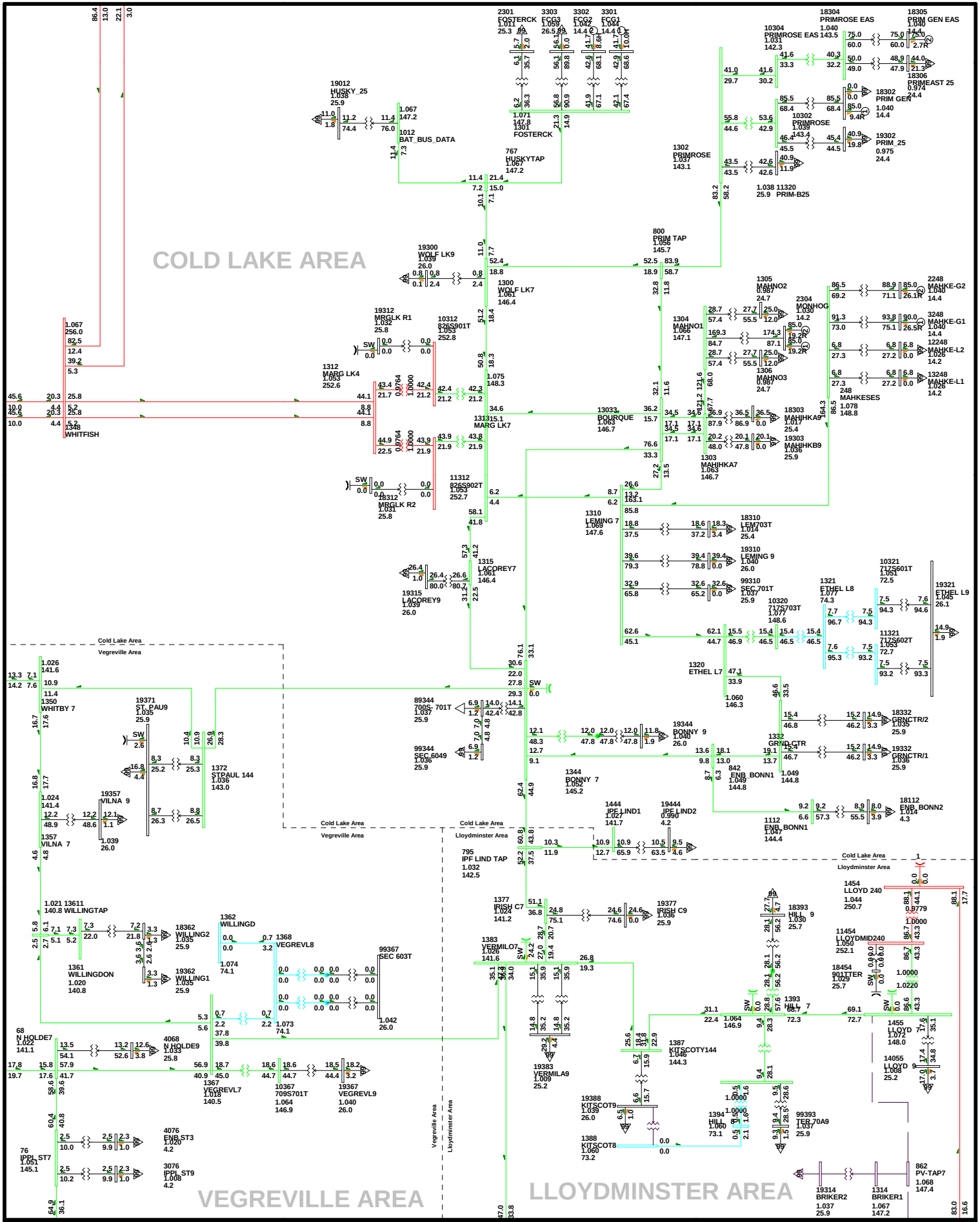
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000<=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 11:14
D1-23

2017WP-Alt 3 BR#5 ON-5.b

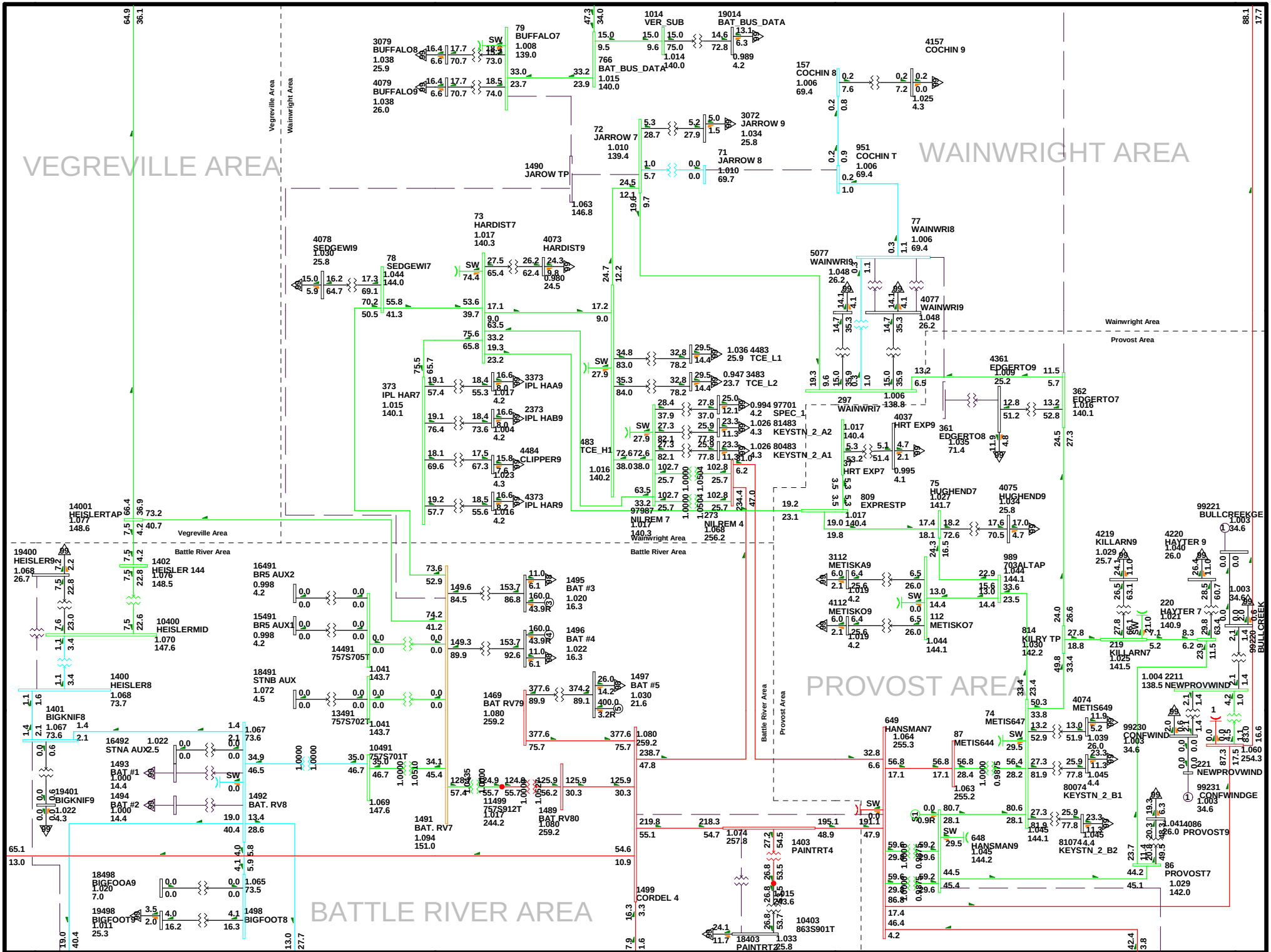
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV 0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000

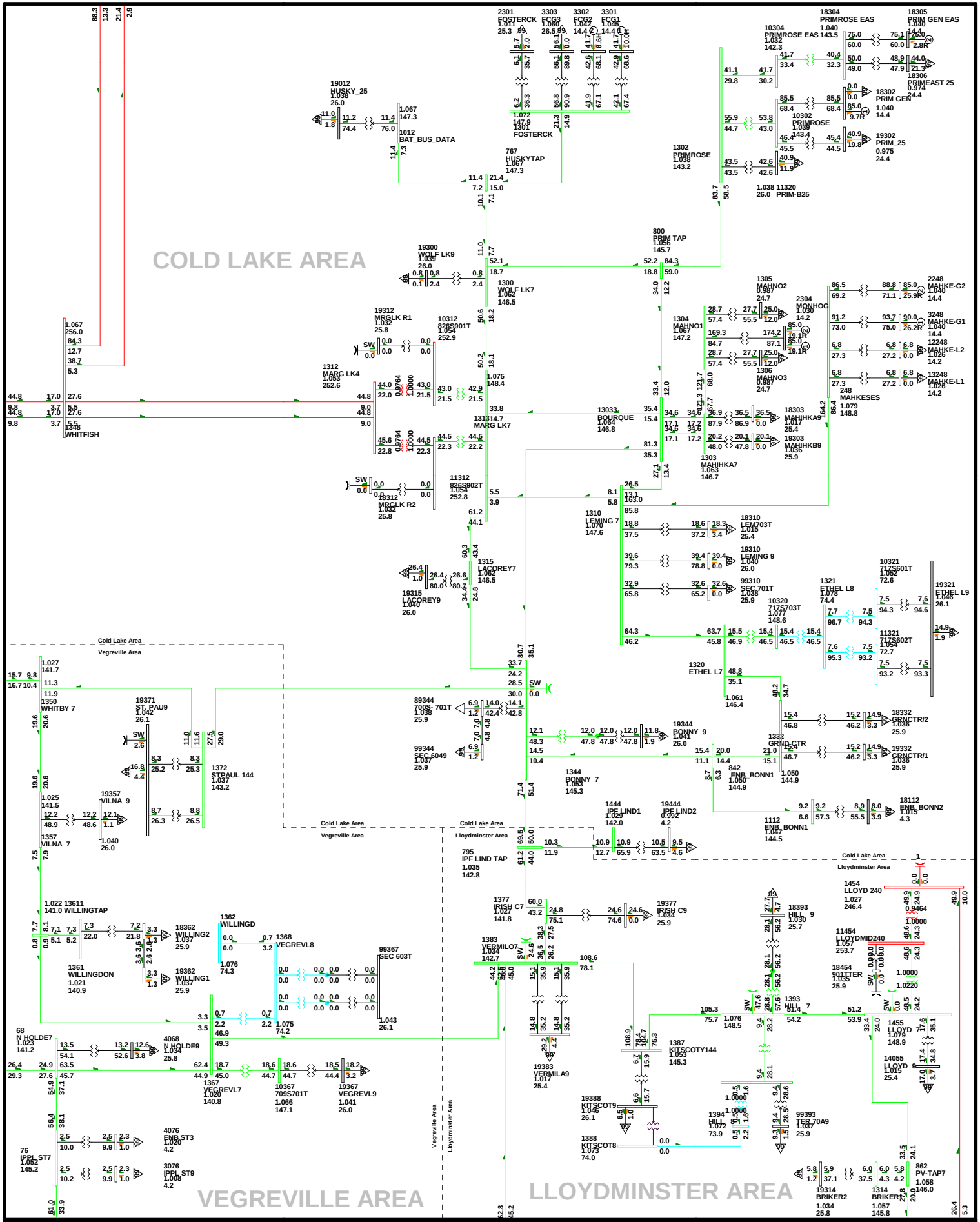


CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 11:14
D1-24

2017WP-Alt 3 BR#5 ON-6.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000<=240.000

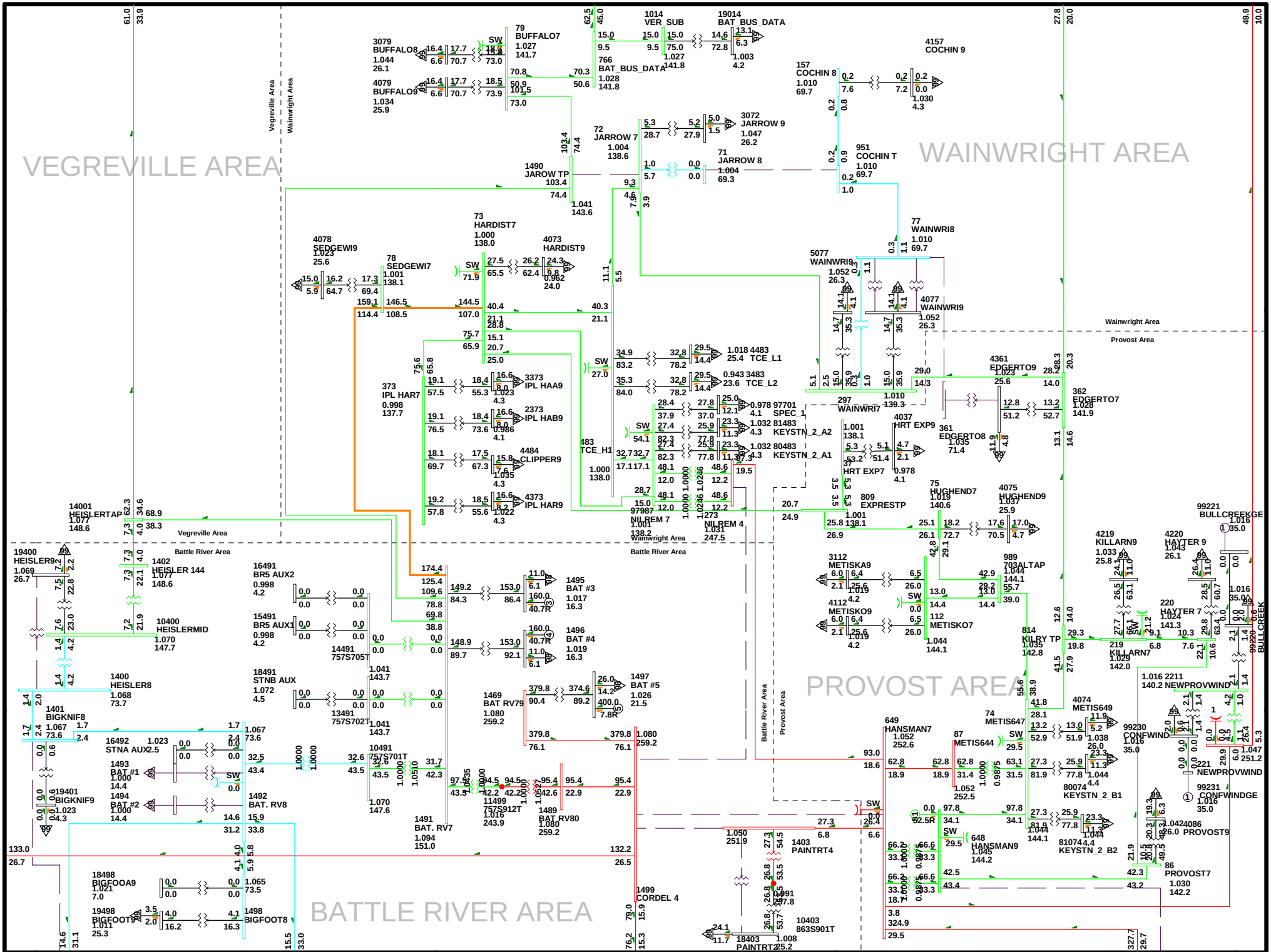

VEGREVILLE AREA
WAINWRIGHT AREA
PROVOST AREA
BATTLE RIVER AREA
Vegreville Area
Wainwright Area
Provost Area
Battle River Area
3079 BUFFALO8 1.038 25.9
4079 BUFFALO9 1.038 26.0
79 BUFFALO7 1.008 139.0
766 BAT_BUS_DATA 1.015 140.0
1014 VER_SUB
19014 BAT_BUS_DATA
1490 JAROW TP
1.063 146.8
72 JARROW 7 1.010 139.4
71 JARROW 8 1.010 69.7
3072 JARROW 9 1.034 25.8
157 COCHIN 8 1.006 69.4
4157 COCHIN 9
951 COCHIN T 1.006 69.4
1.025 4.3
4078 SEDGEWI9 1.030 25.8
78 SEDGEWI7 1.044 144.0
73 HARDIST7 1.017 140.3
4073 HARDIST9 0.980 24.5
373 IPL HAR7 1.015 140.1
3373 IPL HAA9 1.017 4.2
2373 IPL HAB9 1.004 4.2
4484 CLIPPER9 1.023 4.3
4373 IPL HAR9 1.016 4.2
483 TCE_H1 1.016 140.2
1.036 4483 25.9 TCE_L1
0.947 3483 23.7 TCE_L2
0.994 97701 4.2 SPEC_1
1.026 81483 4.3 KEYSTN_2_A2
1.026 80483 4.3 KEYSTN_2_A1
97987 NIL REM 7 1.017 140.3
1273 NIL REM 4 1.068 256.2
77 WAINWRI8 1.006 69.4
5077 WAINWRI9 1.048 26.2
4077 WAINWRI9 1.048 26.2
297 WAINWRI7 1.006 138.8
4037 HRT EXP9 1.017 140.4
HRT EXP7 0.995 4.1
361 EDGERTO8 1.035 71.4
4361 EDGERTO9 1.009 25.2
362 EDGERTO7 1.016 140.1
809 EXPRESTP 1.017 140.4
75 HUGHEND7 1.027 141.7
4075 HUGHEND9 1.034 25.8
3112 METISKA9 1.019 4.2
4112 METISKO9 1.019 4.2
112 METISKO7 1.044 144.1
989 703ALTAP 1.044 144.1
814 KILRY TP 1.030 142.2
4074 METIS649 1.039 26.0
74 METIS647 1.045 144.1
87 METIS644 1.045 144.2
80074 KEYSTN_2_B1
810074 KEYSTN_2_B2
648 HANSMAN9 1.045 144.2
649 HANSMAN7 1.064 255.3
4219 KILLARN9 1.029 25.7
219 KILLARN7 1.025 141.5
4220 HAYTER 9 1.040 26.0
220 HAYTER 7 1.021 140.9
99221 BULLCREEKGE 1.003 34.6
99220 BULLCREEK
99230 CONFWIND 1.003 34.6
99231 CONFWINDGE 1.003 34.6
221 NEWPROVWIND
1.004 2211 138.5 NEWPROVWIND
1.0414086 26.0 PROVOST9
86 PROVOST7 1.029 142.0
14001 HEISLERTAP 1.077 148.6
1402 HEISLER 144 1.076 148.5
10400 HEISLERMID 1.070 147.6
19400 HEISLER9 1.068 26.7
1400 HEISLER8 1.068 73.7
1401 BIGKNIF8 1.067 73.6
19401 BIGKNIF9 1.022 4.3
16492 STNA AUX 1.022 2.5
1493 BAT #1 1.000 14.4
1494 BAT #2 1.000 14.4
1492 BAT. RV8 13.4
18498 BIGFOOA9 1.020 7.0
19498 BIGFOOT9 1.011 25.3
1498 BIGFOOT8 1.011 16.3
16491 BR5 AUX2 0.998 4.2
15491 BR5 AUX1 0.998 4.2
14491 757S705T
18491 STNB AUX 1.072 4.5
13491 757S702T
10491 757S701T
1495 BAT #3 1.020 16.3
1496 BAT #4 1.022 16.3
1497 BAT #5 1.030 21.6
1469 BAT RV79 1.080 259.2
1491 BAT. RV7 1.094 151.0
11499 757S912T 1.017 244.2
1489 BAT RV80 1.080 259.2
1499 CORDEL 4 1.015 83.6
10403 863S901T 1.033 25.8
18403 PAINTRT2
1403 PAINTRT4 1.074 257.8
CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 11:14
D1-24
2017WP-Alt 3 BR#5 ON-6.b
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV 0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 11:14
D1-26

2017WP-Alt 3 BR#5 ON-7.a

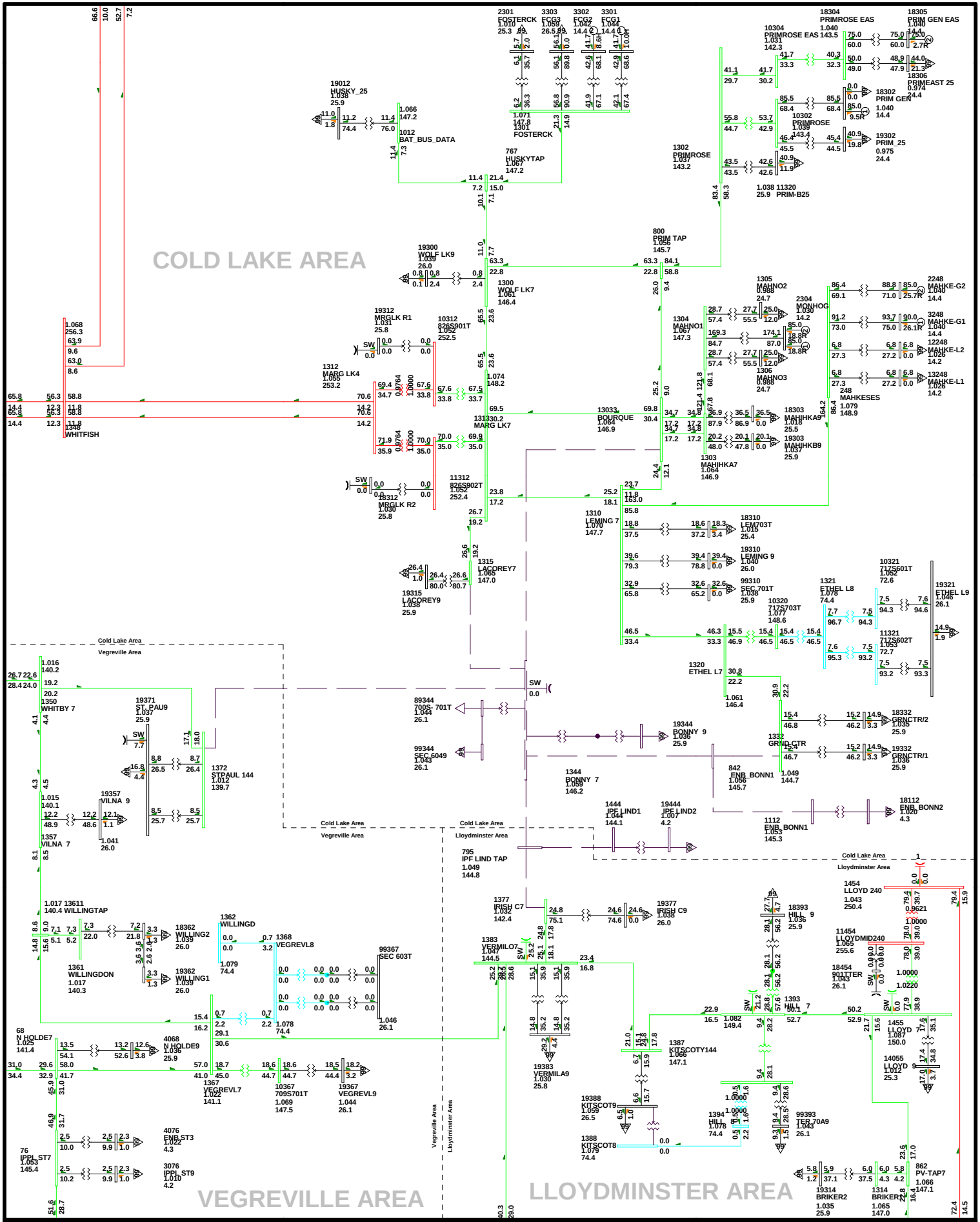
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000<=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 11:15
D1-26

2017WP-Alt 3 BR#5 ON-7.b

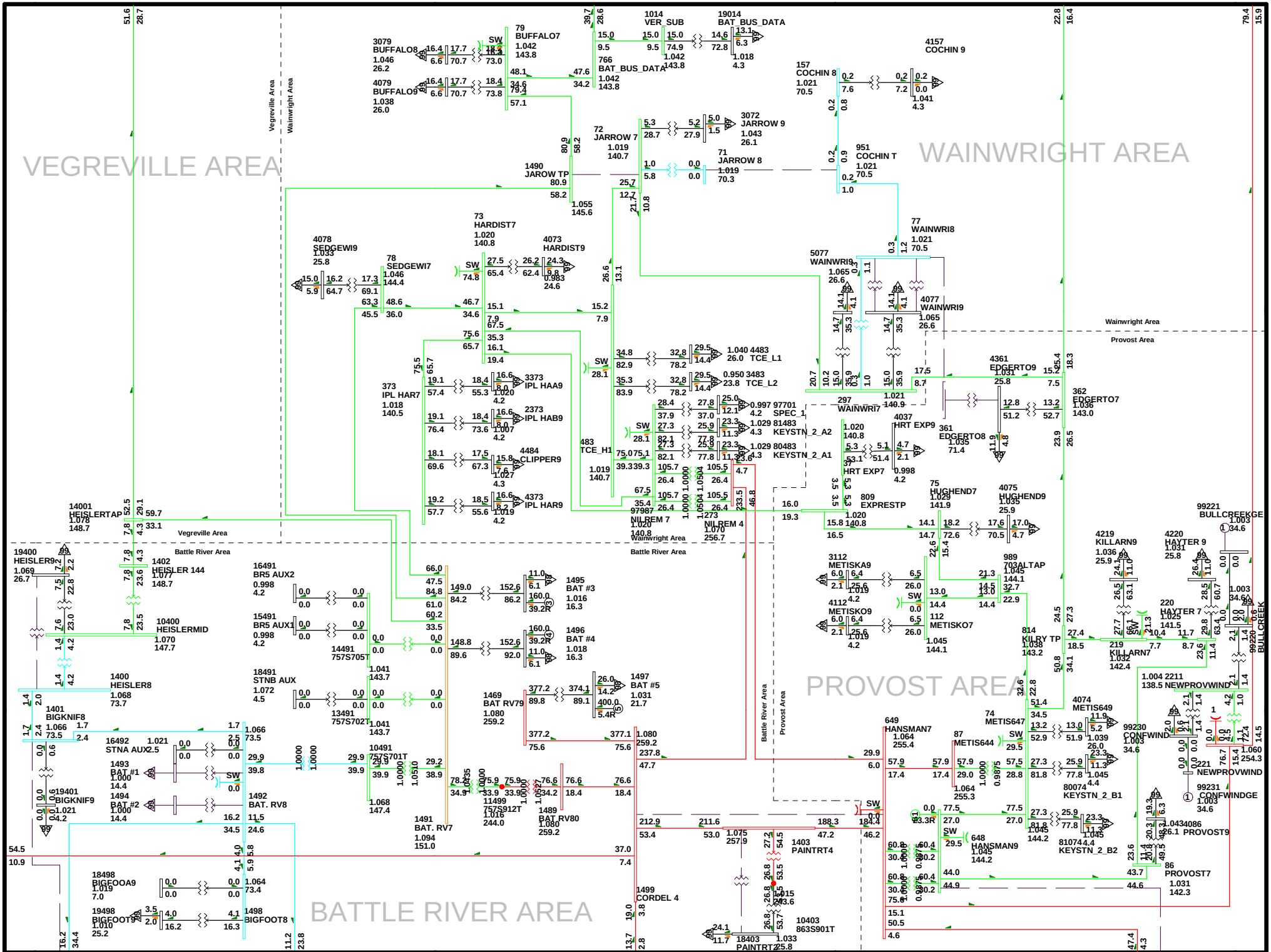
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV 0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 11:15
D1-27

2017WP-Alt 3 BR#5 ON-8.a

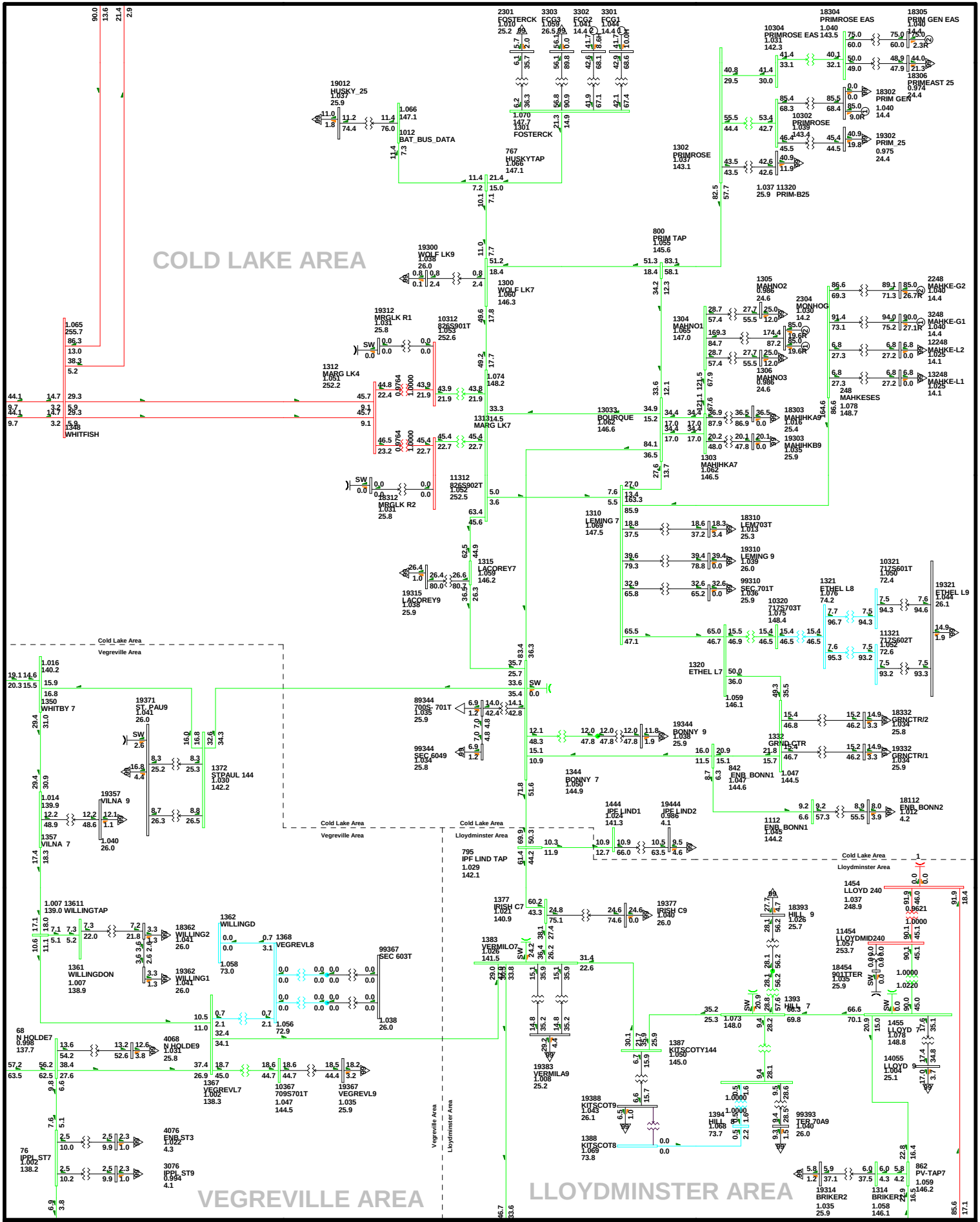
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000<=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 11:15
D1-27

2017WP-Alt 3 BR#5 ON-8.b

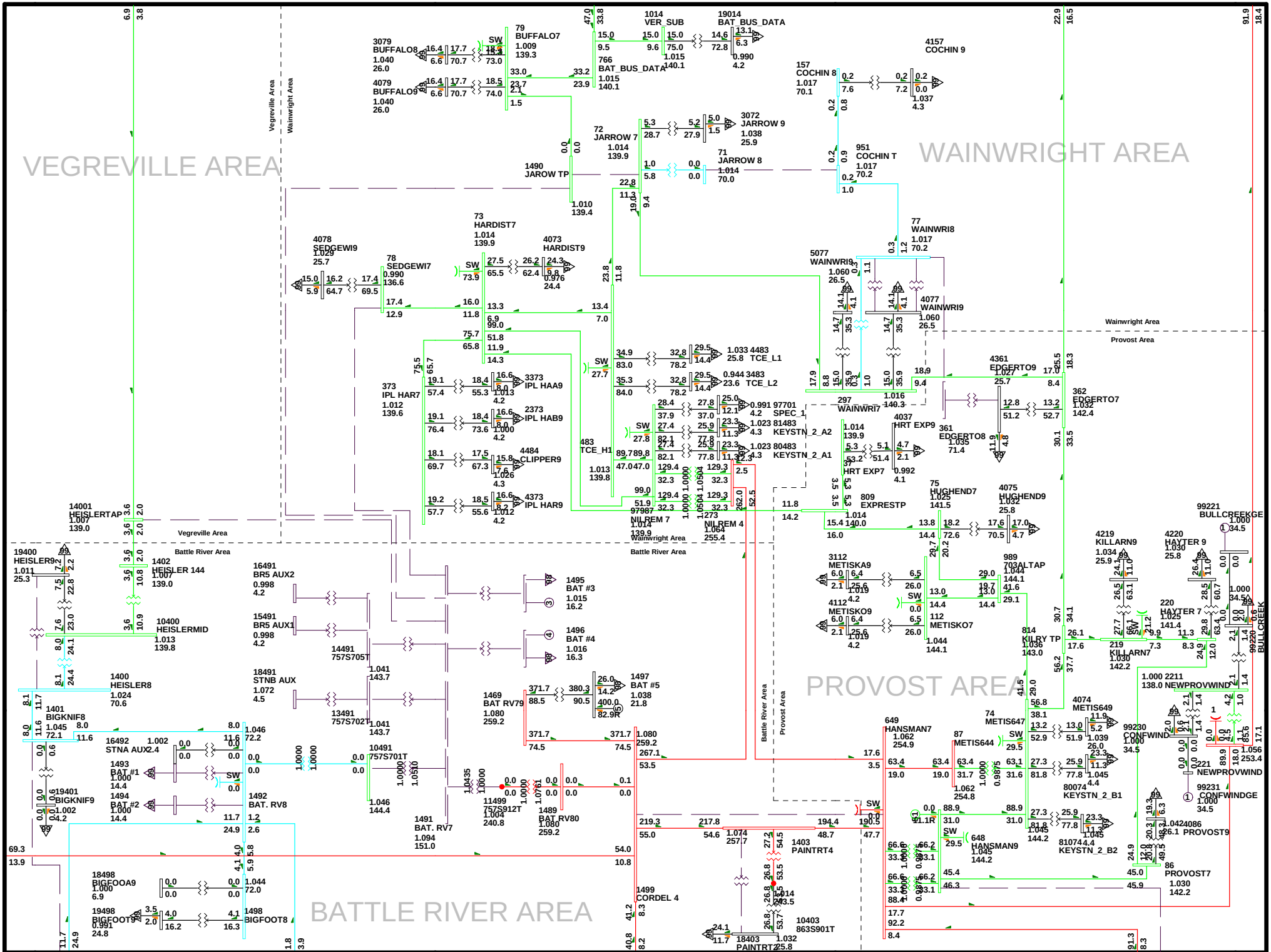
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV 0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 11:15
D1-28

2017WP-Alt 3 BR#5 ON-9.a

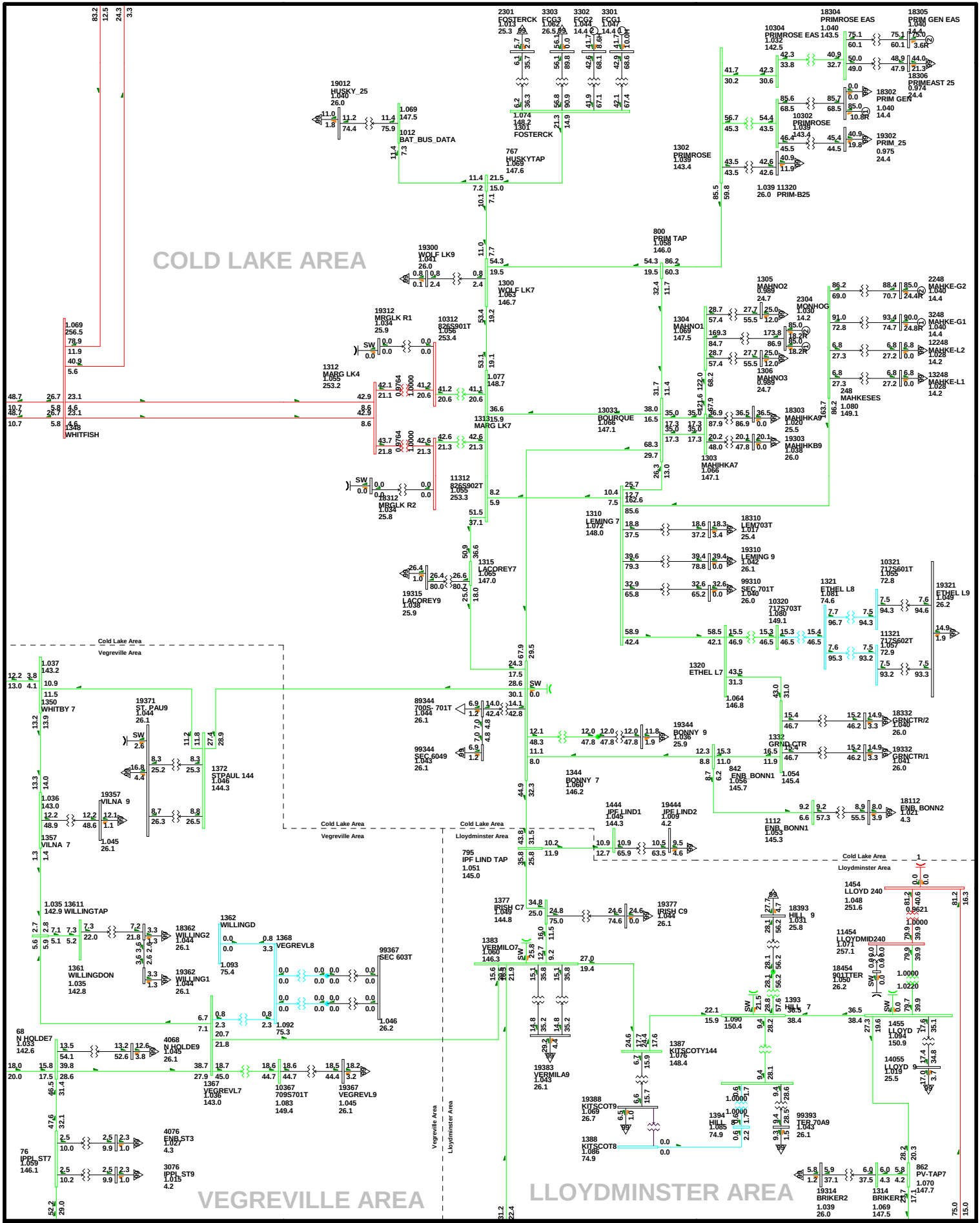
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000<=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 11:15
D1-28

2017WP-Alt 3 BR#5 ON-9.b

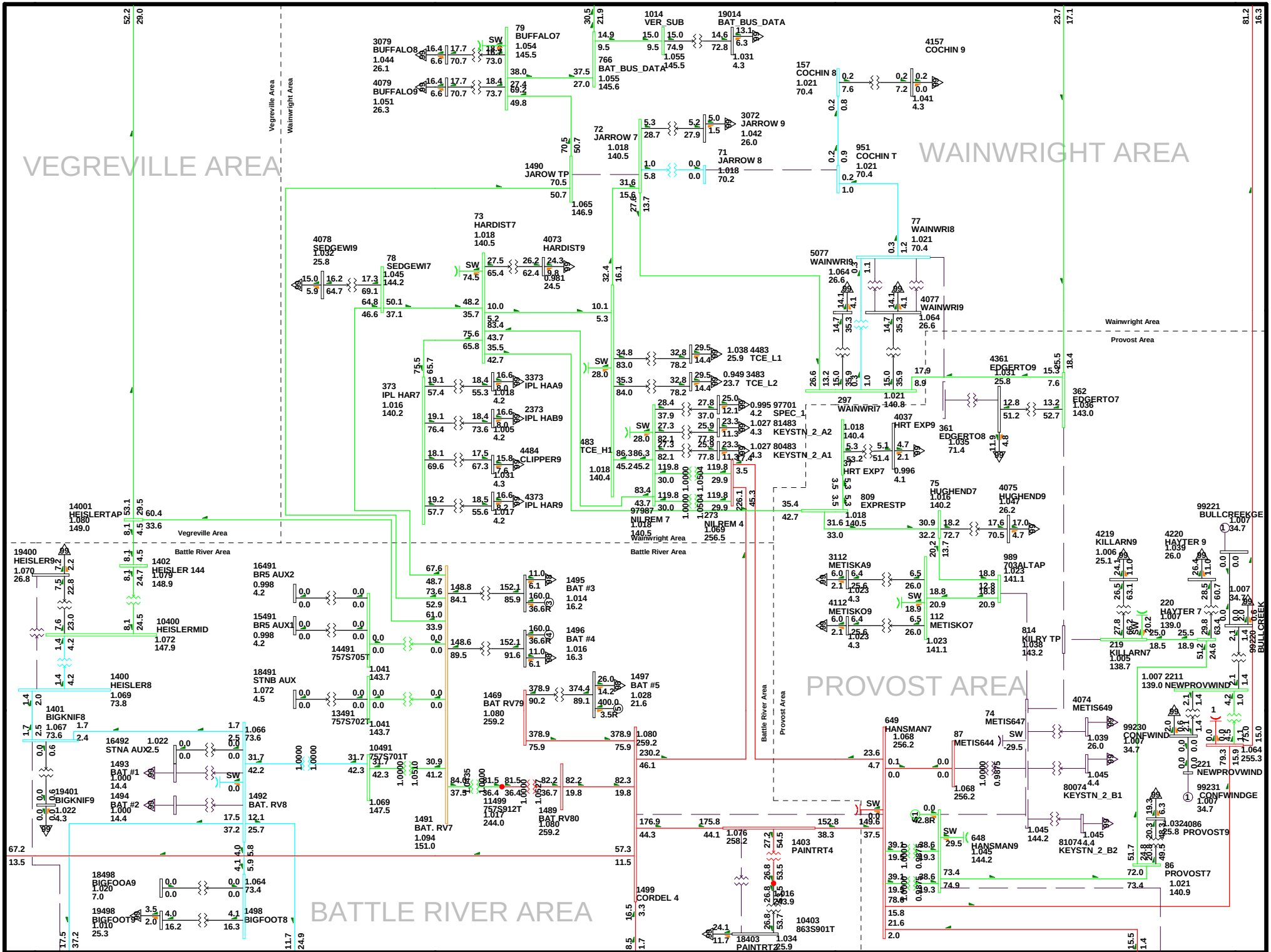
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV 0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
MON, APR 12 2010 10:51
D1-29

2017WP-Alt 3 BR#5 ON-10.a

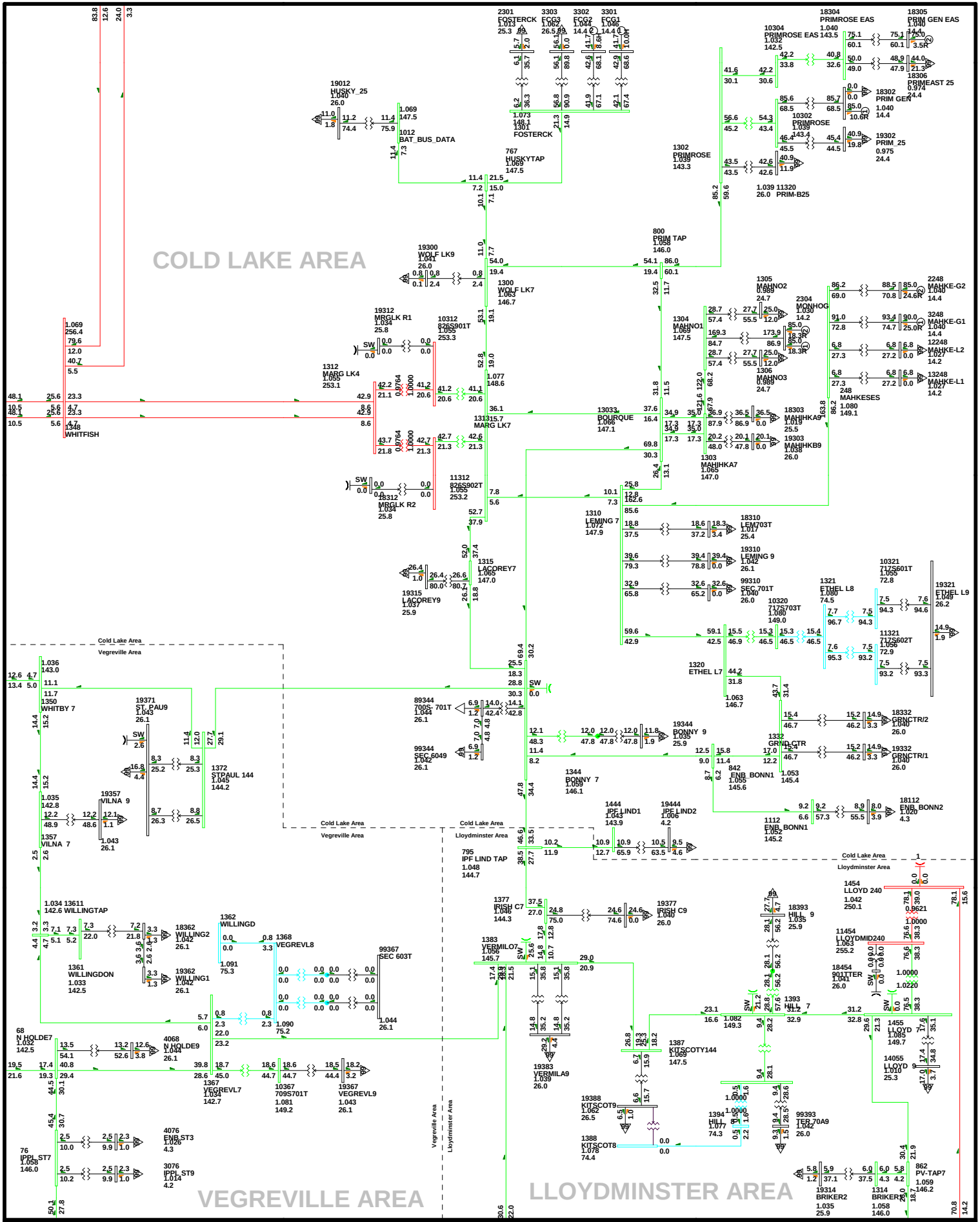
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
MON, APR 12 2010 10:51
D1-29

2017WP-Alt 3 BR#5 ON-10.b

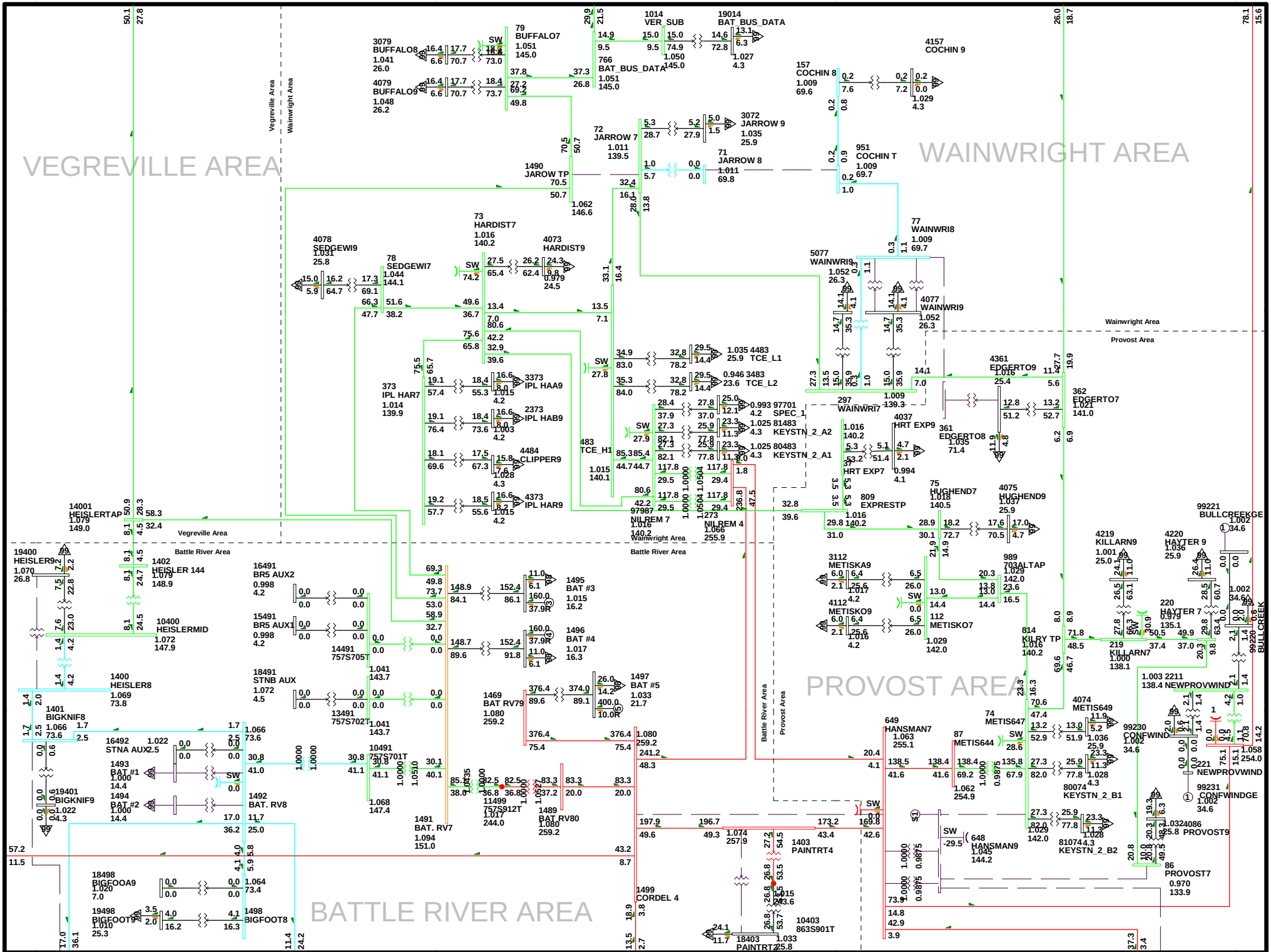
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 11:15
D1-30

2017WP-Alt 3 BR#5 ON-11.a

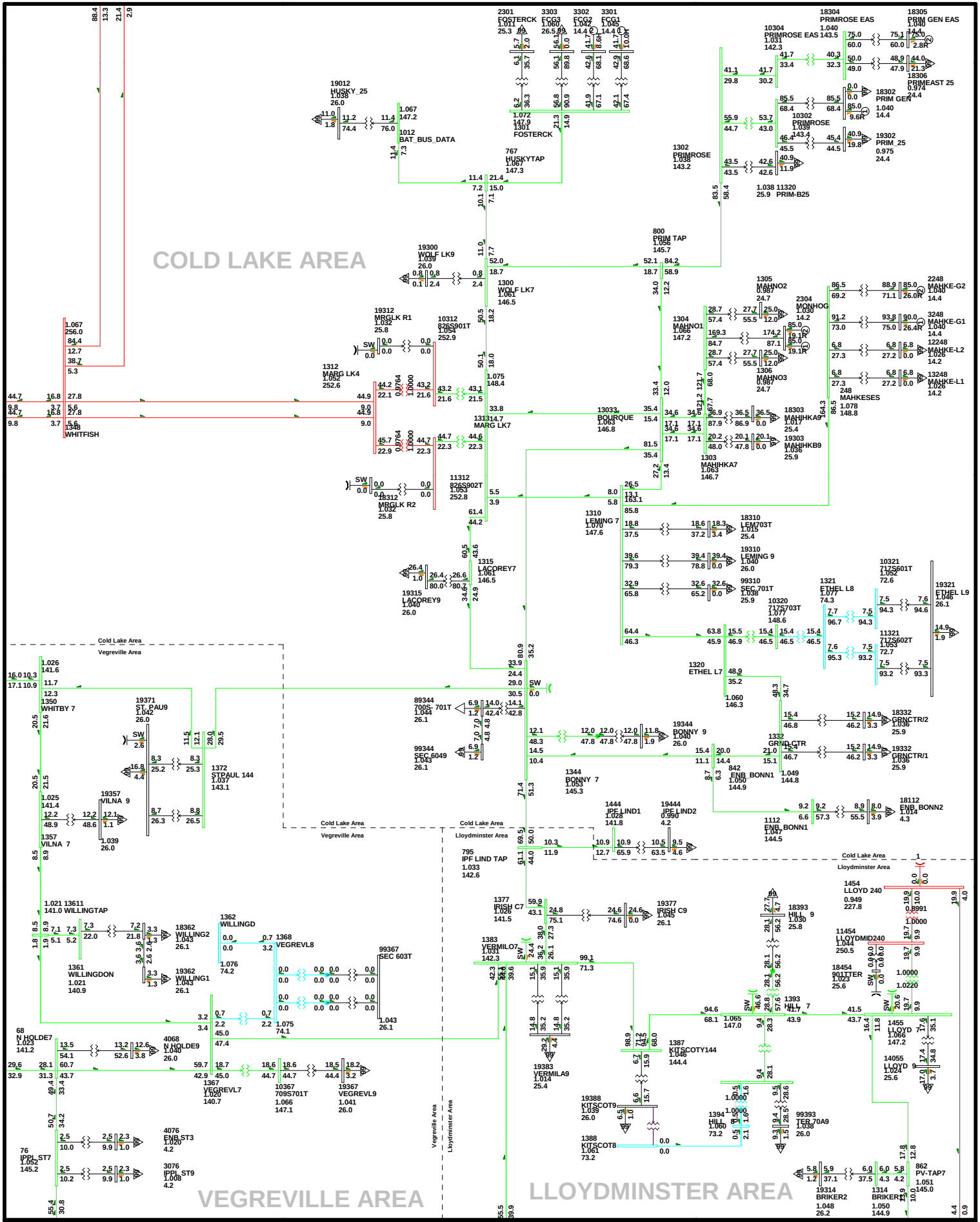
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000<=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 11:15
D1-30

2017WP-Alt 3 BR#5 ON-11.b

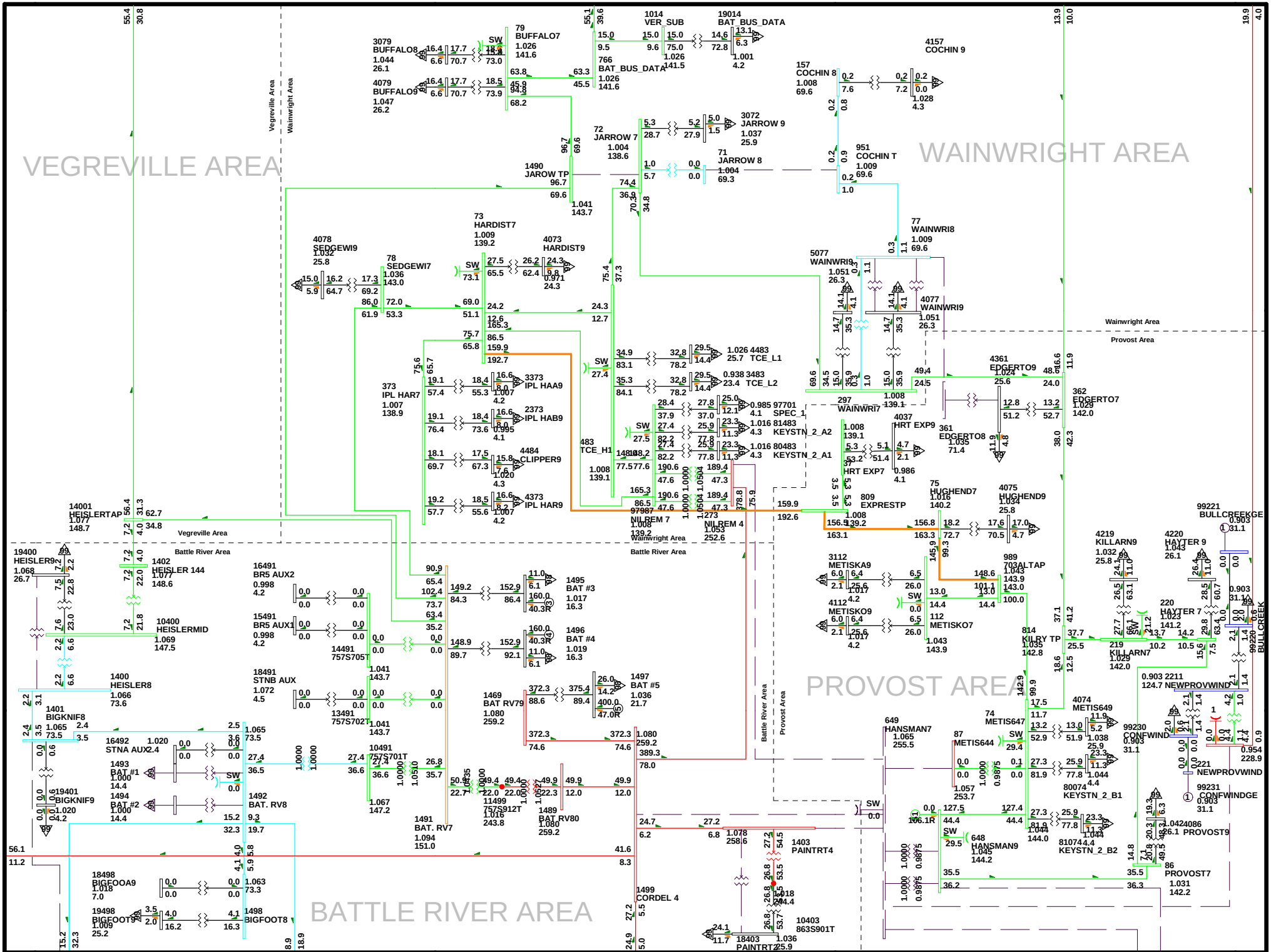
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV 0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 11:15
D1-31

2017WP-Alt 3 BR#5 ON-12.a

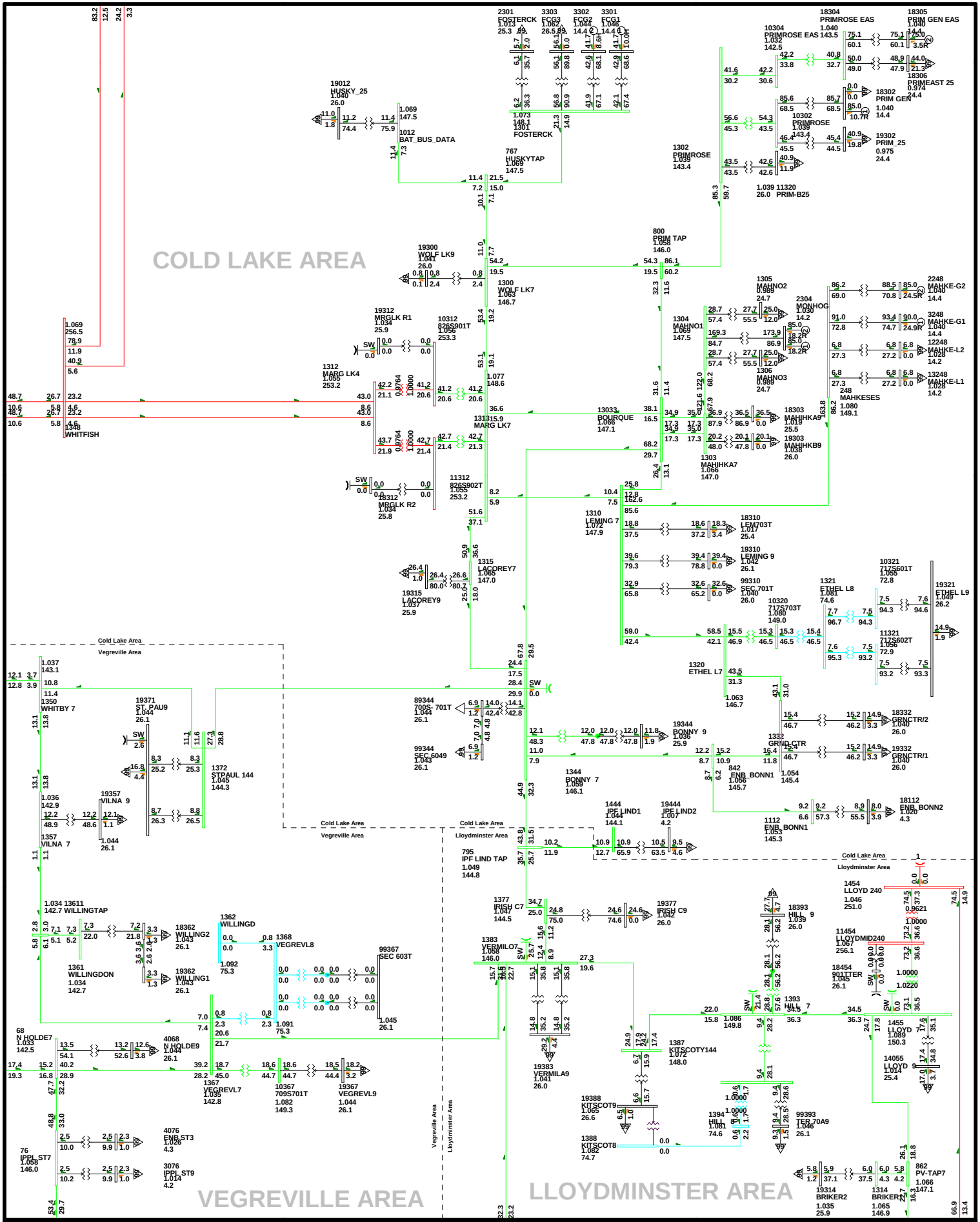
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000<=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 11:15
D1-31

2017WP-Alt 3 BR#5 ON-12.b

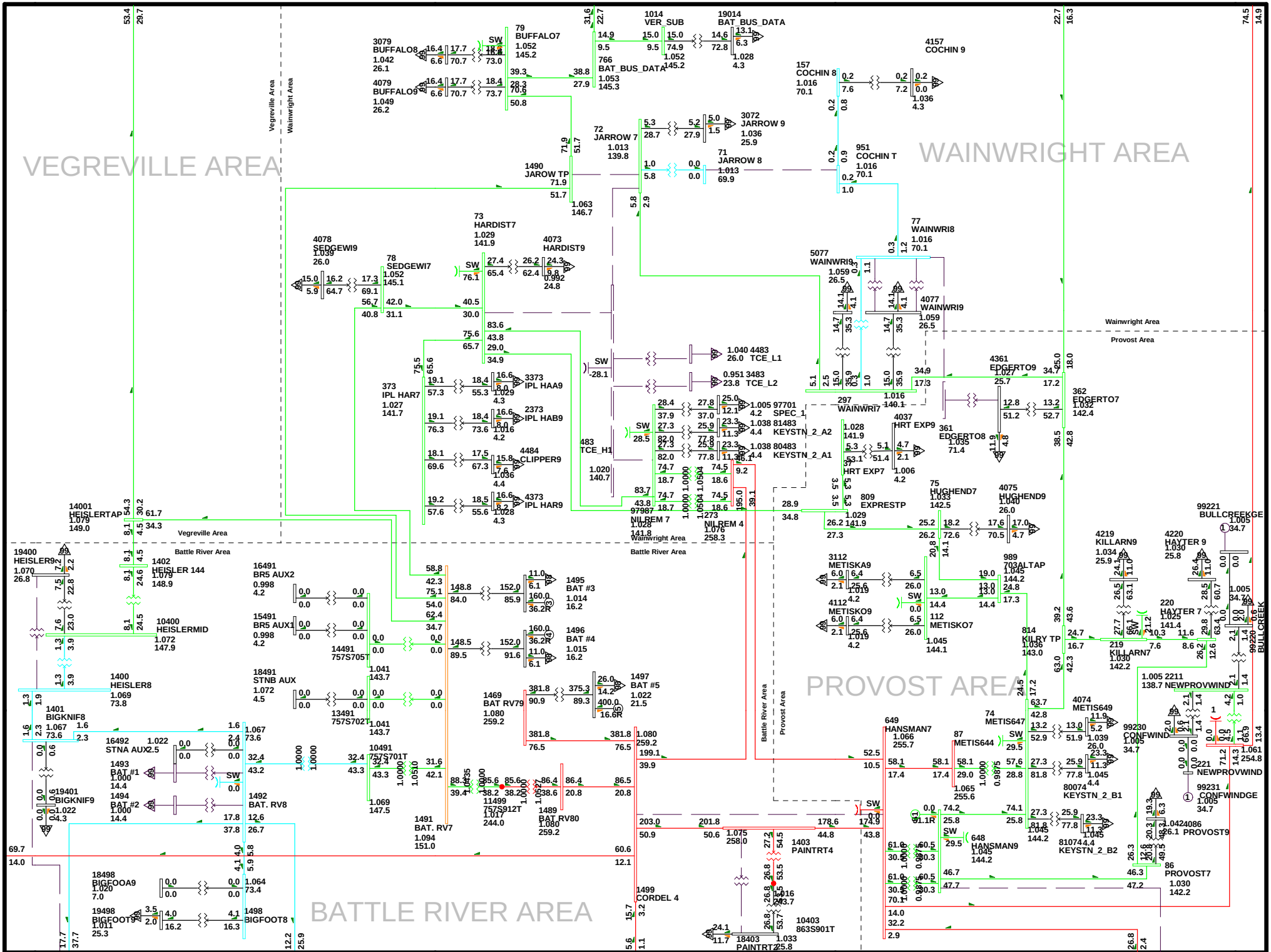
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV 0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 11:15
D1-32

2017WP-Alt 3 BR#5 ON-13.a

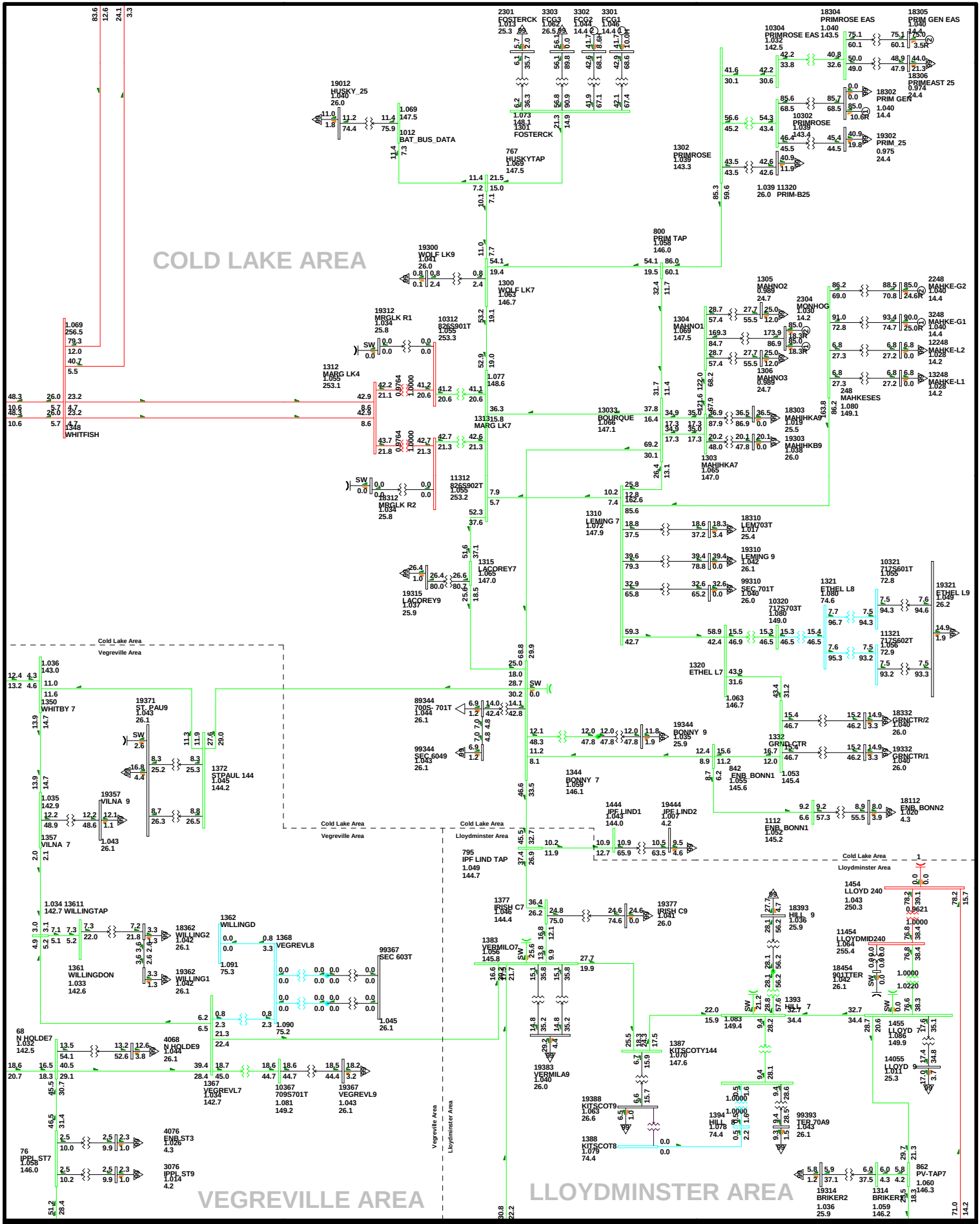
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000<=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 11:15
D1-32

2017WP-Alt 3 BR#5 ON-13.b

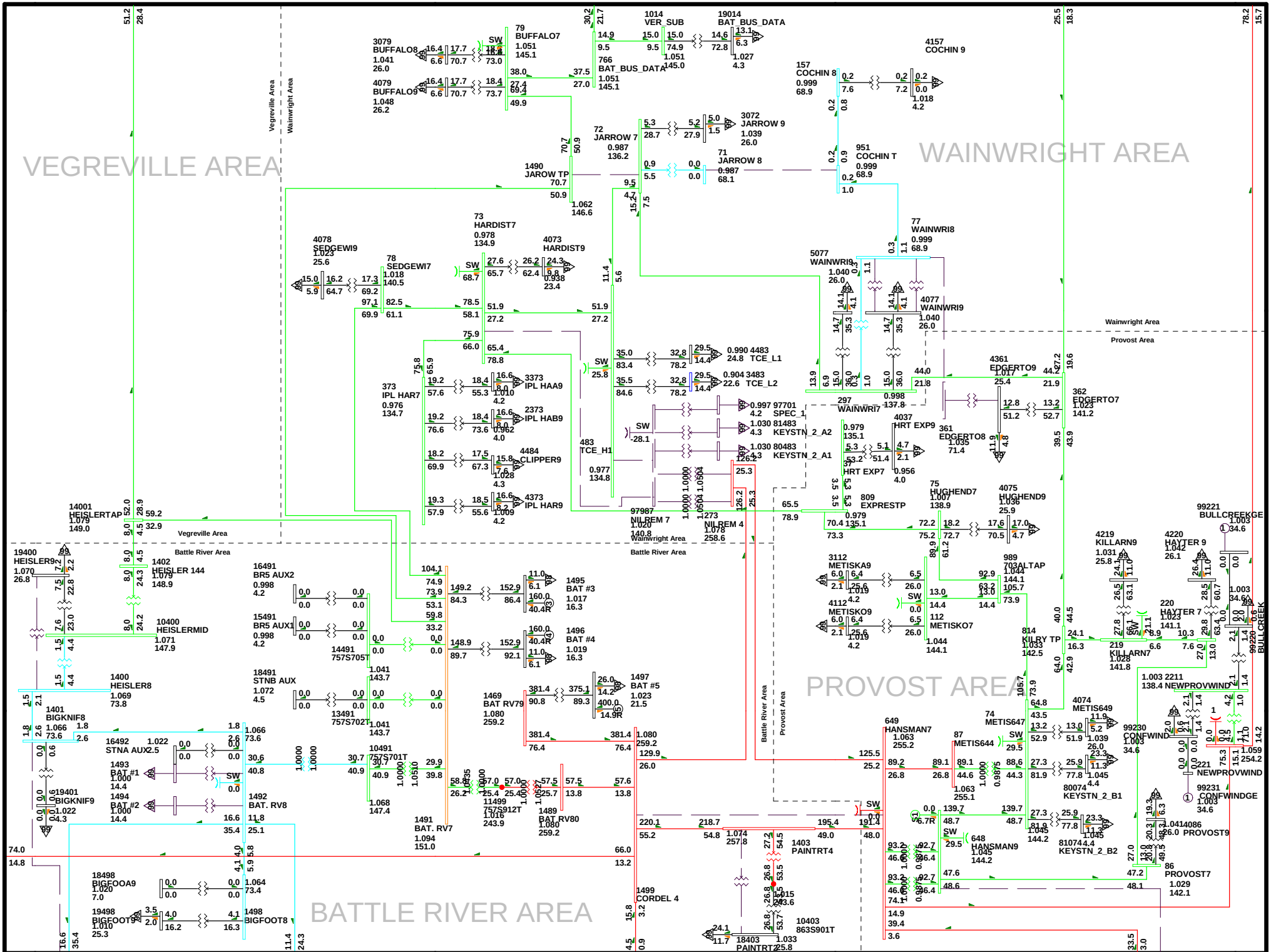
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV 0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 11:59
D1-33

2017WP-Alt 3 BR#5 ON-14.a

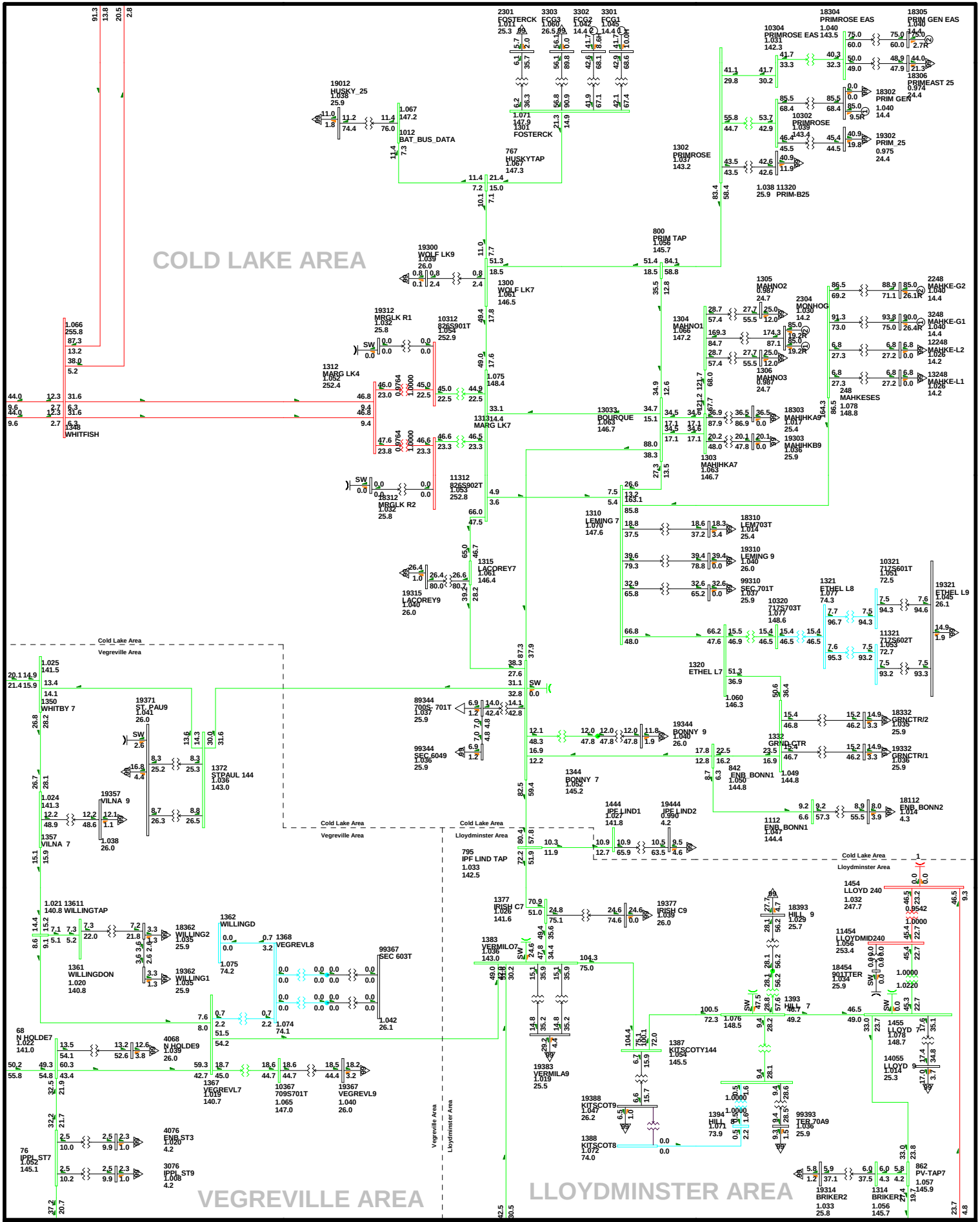
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 11:59
D1-33

2017WP-Alt 3 BR#5 ON-14.b

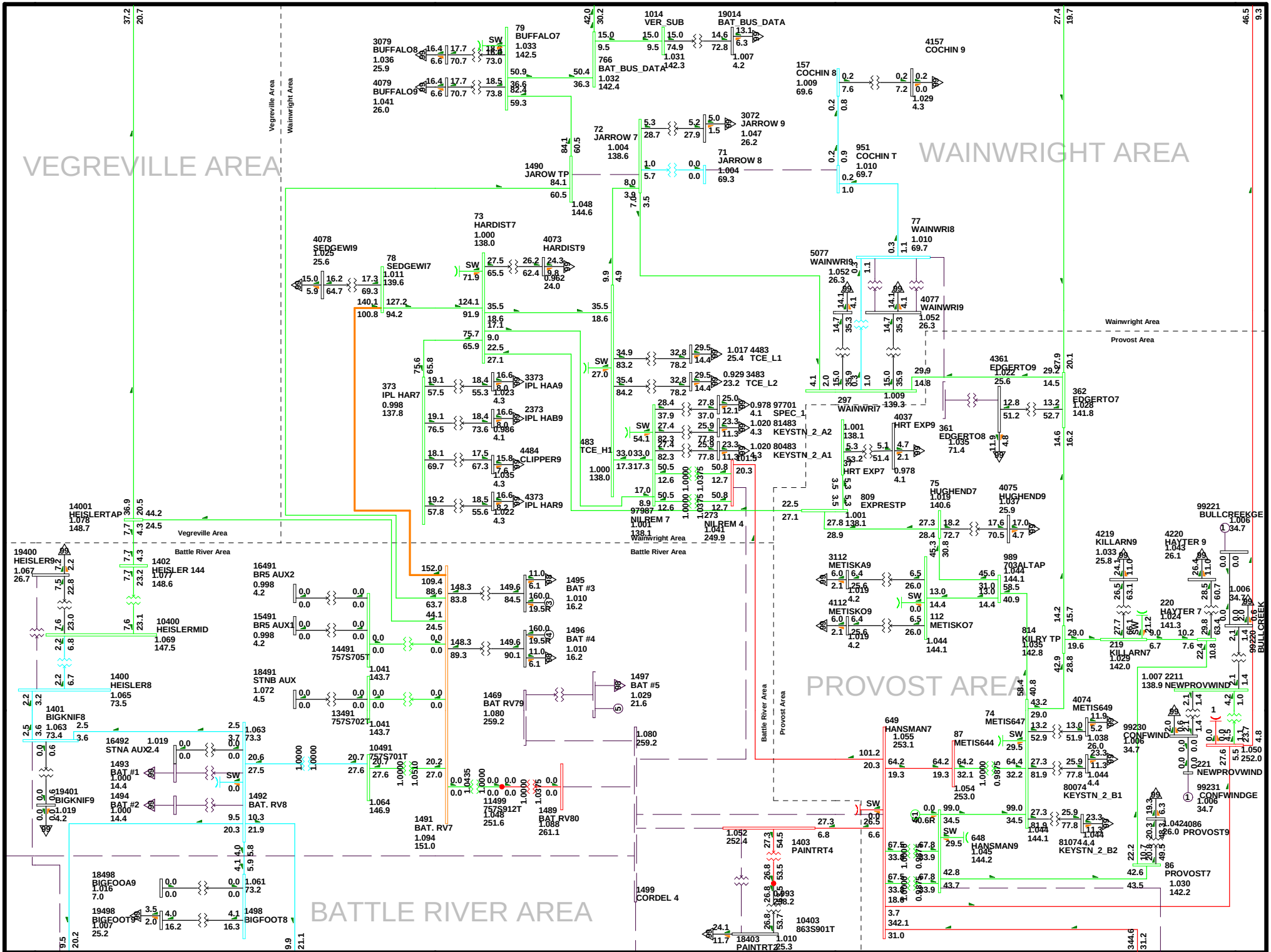
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV 0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 11:15
D1-34

2017WP-Alt 3 BR#5 ON-15.a

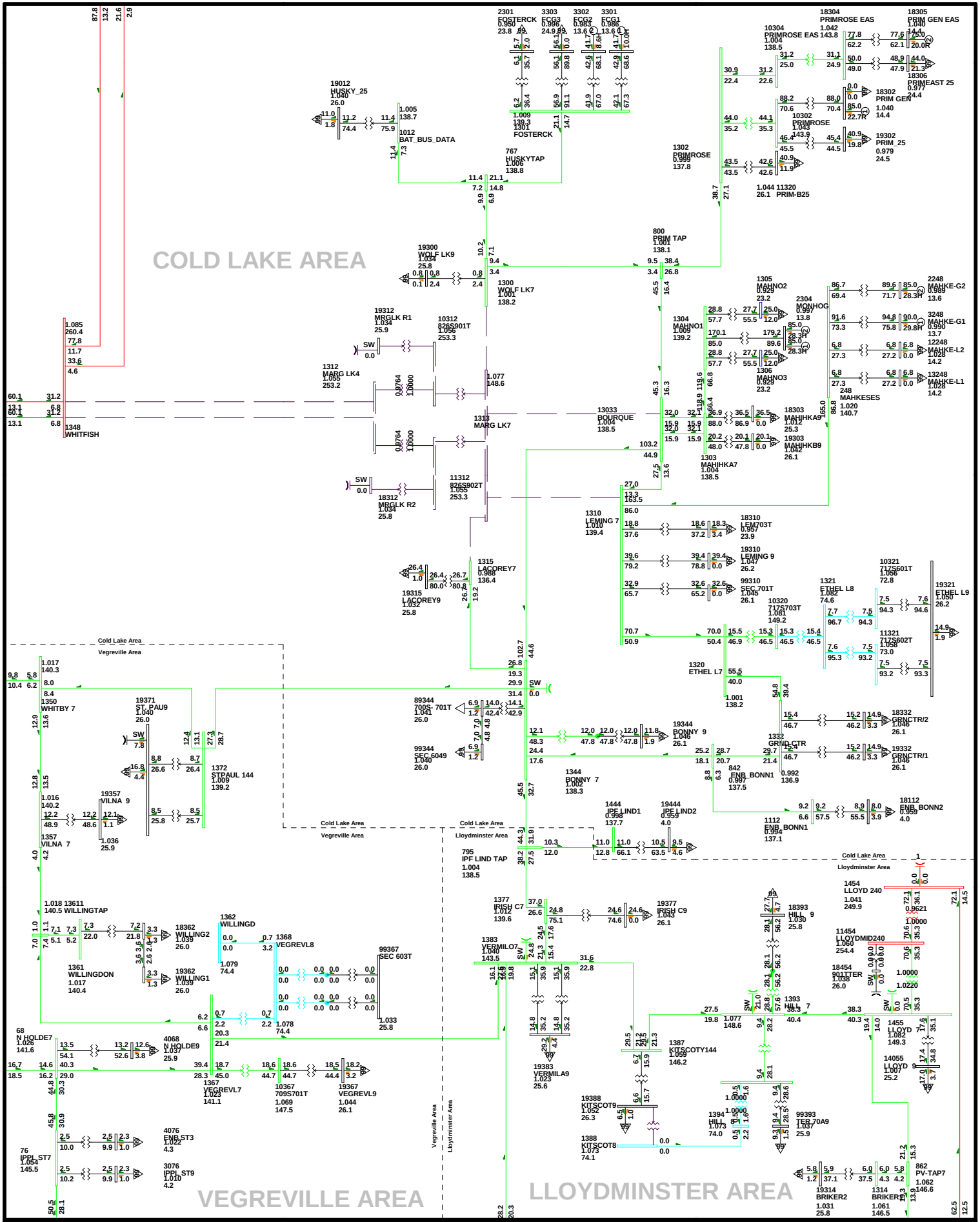
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000<=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 11:15
D1-34

2017WP-Alt 3 BR#5 ON-15.b

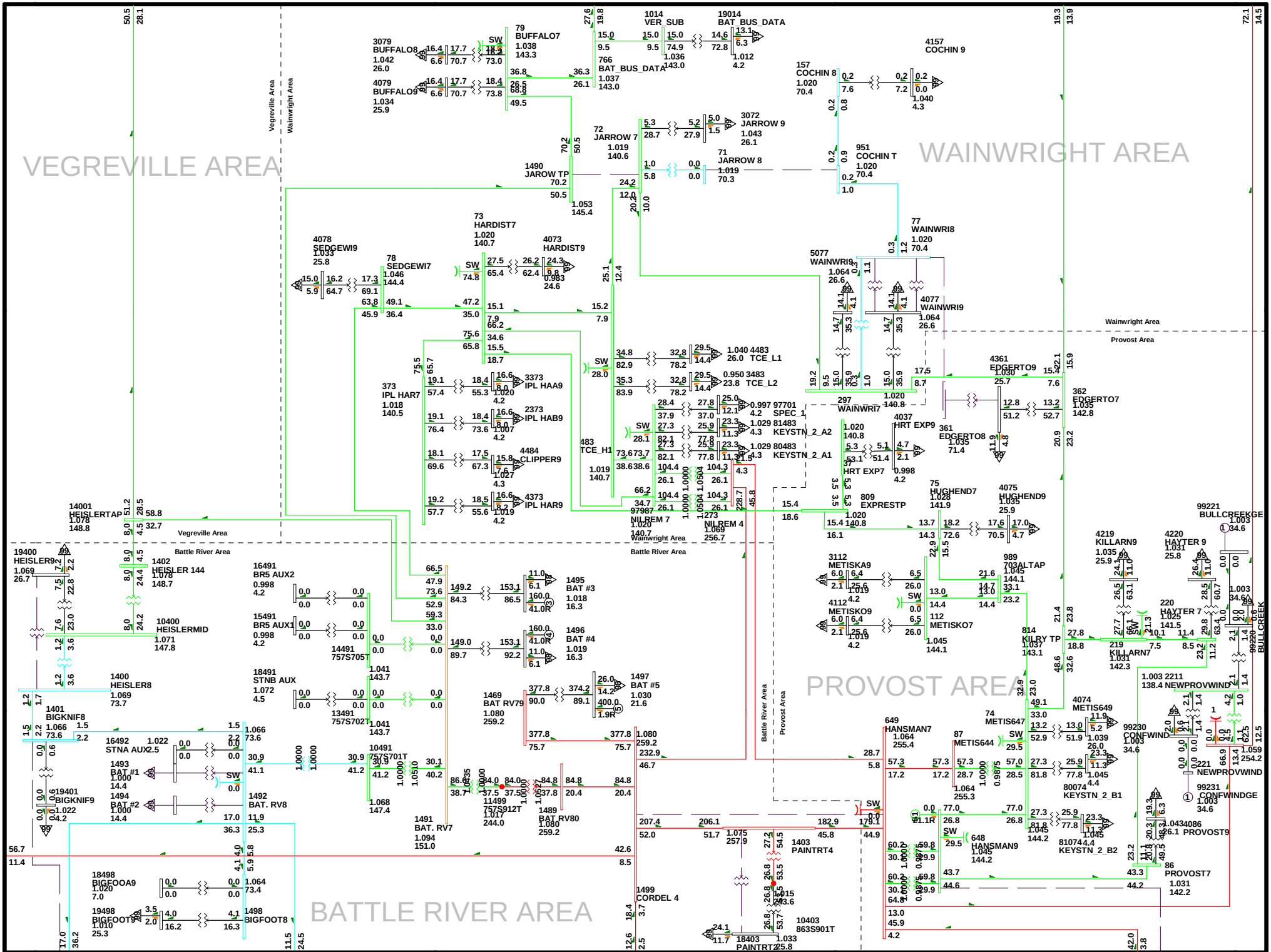
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV 0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000

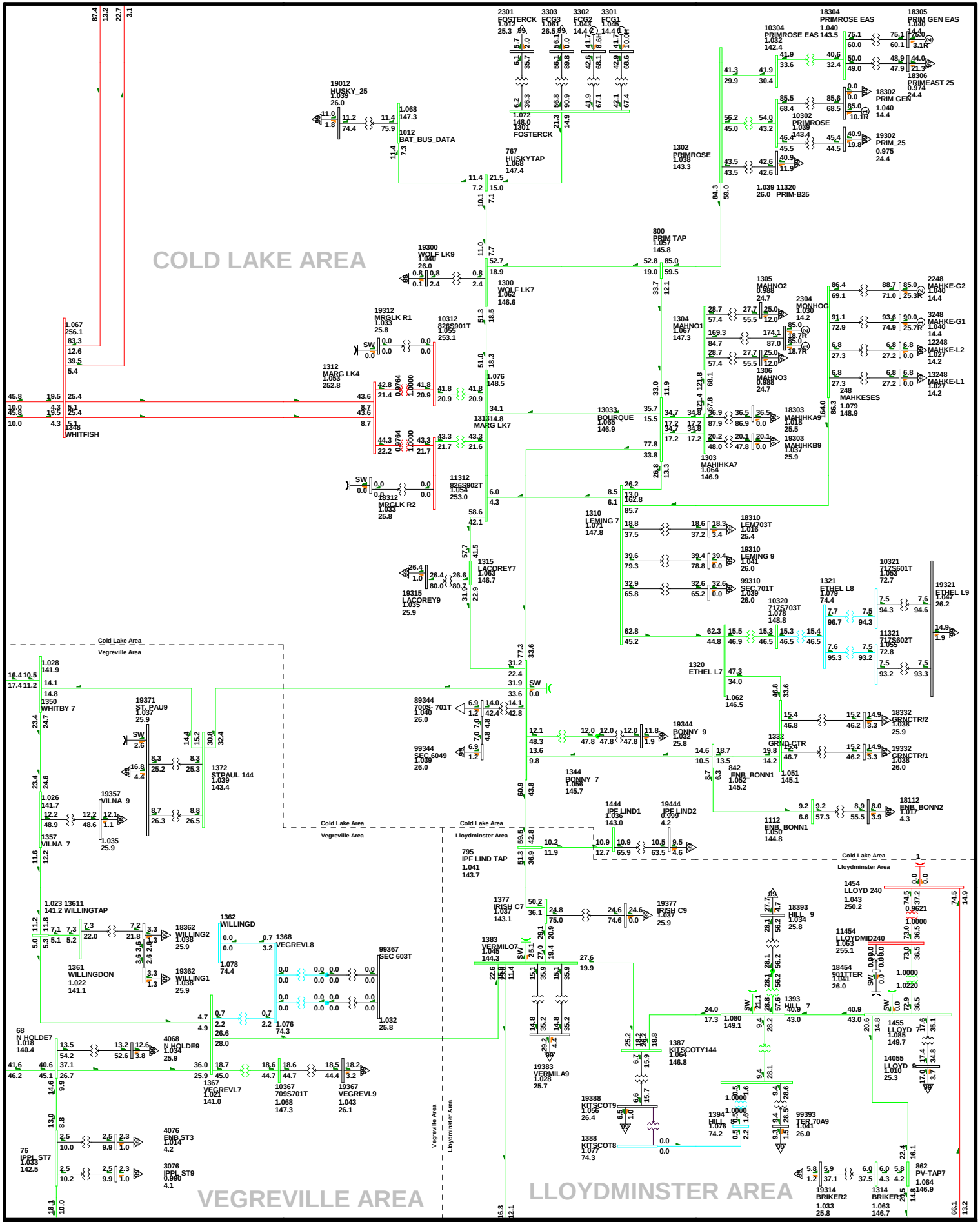


CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 11:15
D1-35

2017WP-Alt 3 BR#5 ON-16.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000<=240.000

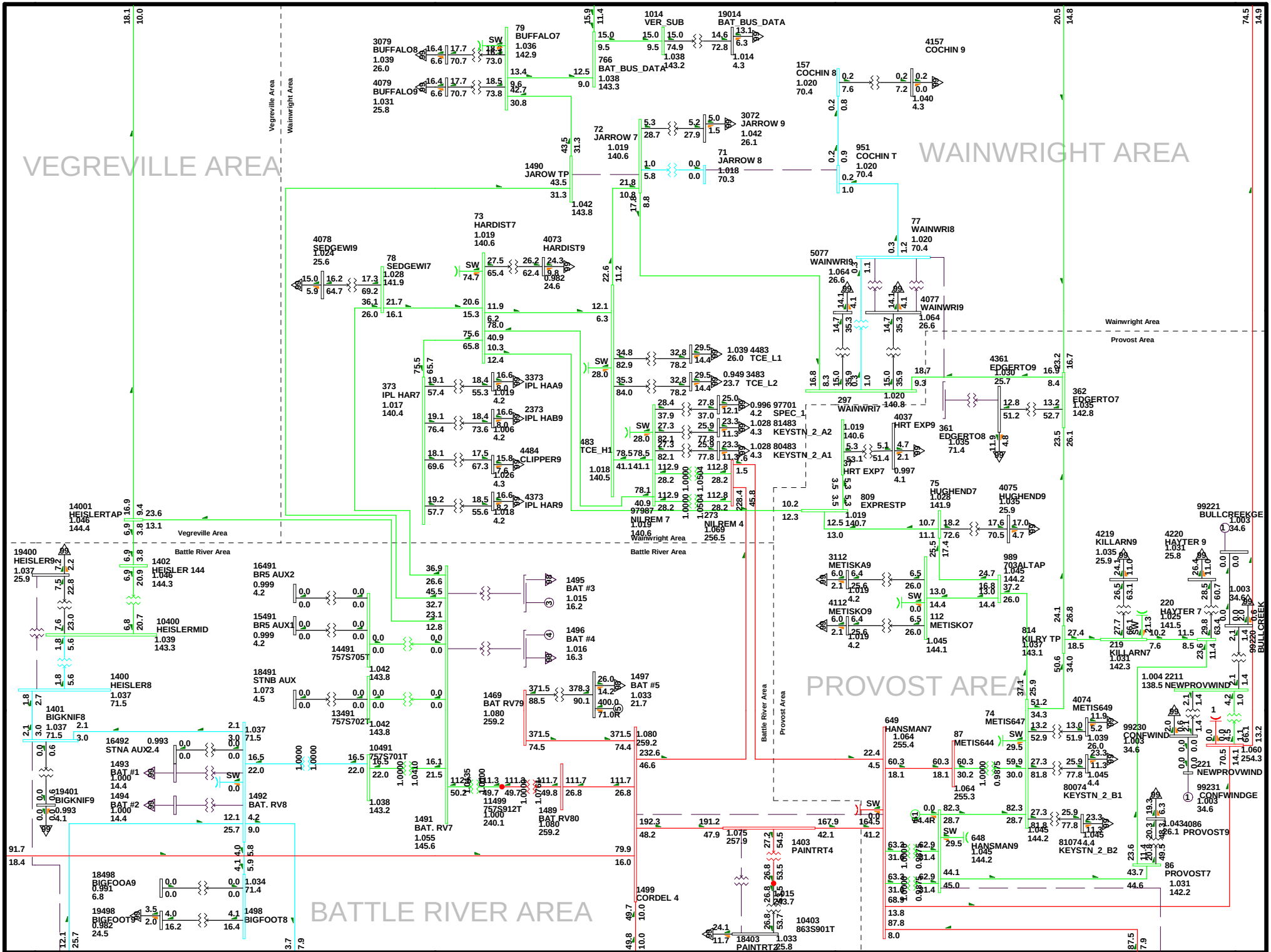

VEGREVILLE AREA
WAINWRIGHT AREA
PROVOST AREA
BATTLE RIVER AREA
Vegreville Area
Wainwright Area
Provost Area
Battle River Area
3079 BUFFALO8 1.042 26.0
4079 BUFFALO9 1.034 25.9
79 BUFFALO7 1.038 143.3
766 BAT_BUS_DATA 1.037 143.0
1014 VER_SUB 1.036 143.0
19014 BAT_BUS_DATA 1.012 4.2
4157 COCHIN 9
157 COCHIN 8 1.020 70.4
1040 4.3
951 COCHIN T 1.020 70.4
72 JARROW 7 1.019 140.6
3072 JARROW 9 1.043 26.1
71 JARROW 8 1.019 70.3
1490 JAROW TP 70.2 50.5 1.053 145.4
73 HARDIST7 1.020 140.7
4073 HARDIST9 0.983 24.6
4078 SEDGEWI9 1.033 25.8
78 SEDGEWI7 1.046 144.4
373 IPL HAR7 1.018 140.5
3373 IPL HAA9 1.020 4.2
2373 IPL HAB9 1.007 4.2
4484 CLIPPER9 1.027 4.3
4373 IPL HAR9 1.019 4.2
483 TCE_H1 1.019 140.7
1.040 4483 26.0 TCE_L1
0.950 3483 23.8 TCE_L2
0.997 97701 4.2 SPEC_1
1.029 81483 4.3 KEYSTN_2_A2
1.029 80483 4.3 KEYSTN_2_A1
97987 NIL REM 7 1.020 140.7
1273 NIL REM 4 1.069 256.7
77 WAINWRI8 1.020 70.4
5077 WAINWRI9 1.064 26.6
4077 WAINWRI9 1.064 26.6
297 WAINWRI7 1.020 140.8
4037 HRT EXP9 1.035 71.4
HRT EXP7 1.020 140.8
0.998 4.2
361 EDGERTO8 1.035 71.4
4361 EDGERTO9 1.030 25.7
362 EDGERTO7 1.035 142.8
809 EXPRESTP 1.020 140.8
75 HUGHEND7 1.028 141.9
4075 HUGHEND9 1.035 25.9
14001 HEISLERTAP 1.078 148.8
19400 HEISLER9 1.069 26.7
1402 HEISLER 144 1.078 148.7
10400 HEISLERMID 1.071 147.8
1400 HEISLER8 1.069 73.7
1401 BIGKNIF8 1.066 73.6
19401 BIGKNIF9 1.022 4.2
16491 BR5 AUX2 0.998 4.2
15491 BR5 AUX1 0.998 4.2
14491 757S705T
18491 STNB AUX 1.072 4.5
13491 757S702T
16492 STNA AUX 1.022 2.5
10491 757S701T
1493 BAT #1 1.000 14.4
1494 BAT #2 1.000 14.4
1492 BAT. RV8 11.9
18498 BIGFOOA9 1.020 7.0
19498 BIGFOOT9 1.010 25.3
1498 BIGFOOT8 16.3
1495 BAT #3 1.018 16.3
1496 BAT #4 1.019 16.3
1497 BAT #5 1.030 21.6
1469 BAT RV79 1.080 259.2
1489 BAT RV80 1.080 259.2
1491 BAT. RV7 1.094 151.0
11499 757S912T 1.017 244.0
1499 CORDEL 4
1403 PAINTRT4
10403 863S901T
18403 PAINTRT2 1.033 25.8
649 HANSMAN7 1.064 255.4
87 METIS644
74 METIS647
4074 METIS649 1.003 34.6
648 HANSMAN9 1.045 144.2
80074 KEYSTN_2_B1
810074 KEYSTN_2_B2
3112 METISKA9 1.019 4.2
4112 METISKO9 1.019 4.2
112 METISKO7 1.045 144.1
989 703ALTAP 1.045 144.1
814 KILRY TP 1.037 143.1
4219 KILLARN9 1.035 25.9
219 KILLARN7 1.031 142.3
4220 HAYTER 9 1.031 25.8
220 HAYTER 7 1.025 141.5
99221 BULLCREEKGE 1.003 34.6
99230 CONFWIND 1.003 34.6
99231 CONFWINDGE 1.003 34.6
99220 BULL CREEK
221 NEWPROVWIND
1.003 2211 138.4 NEWPROVWIND
86 PROVOST7 1.031 142.2
1.043 4086 26.1 PROVOST9
CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 11:16
D1-35
2017WP-Alt 3 BR#5 ON-16.b
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV 0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 11:16
D1-36

2017WP-Alt 3 BR#5 ON-17.a

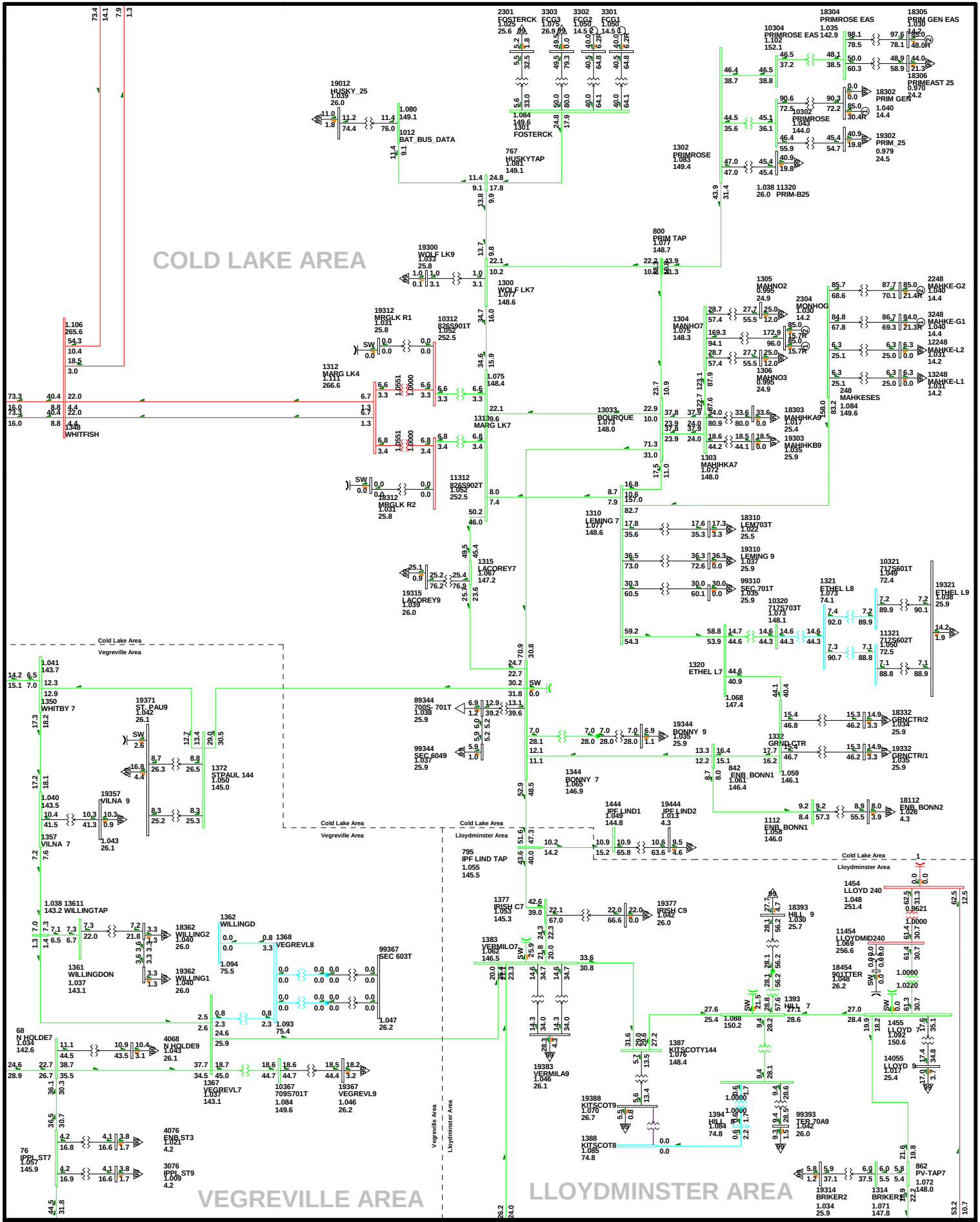
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000<=240.000



CENTRAL AREA STUDY
2017 WINTER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 11:16
D1-36

2017WP-Alt 3 BR#5 ON-17.b

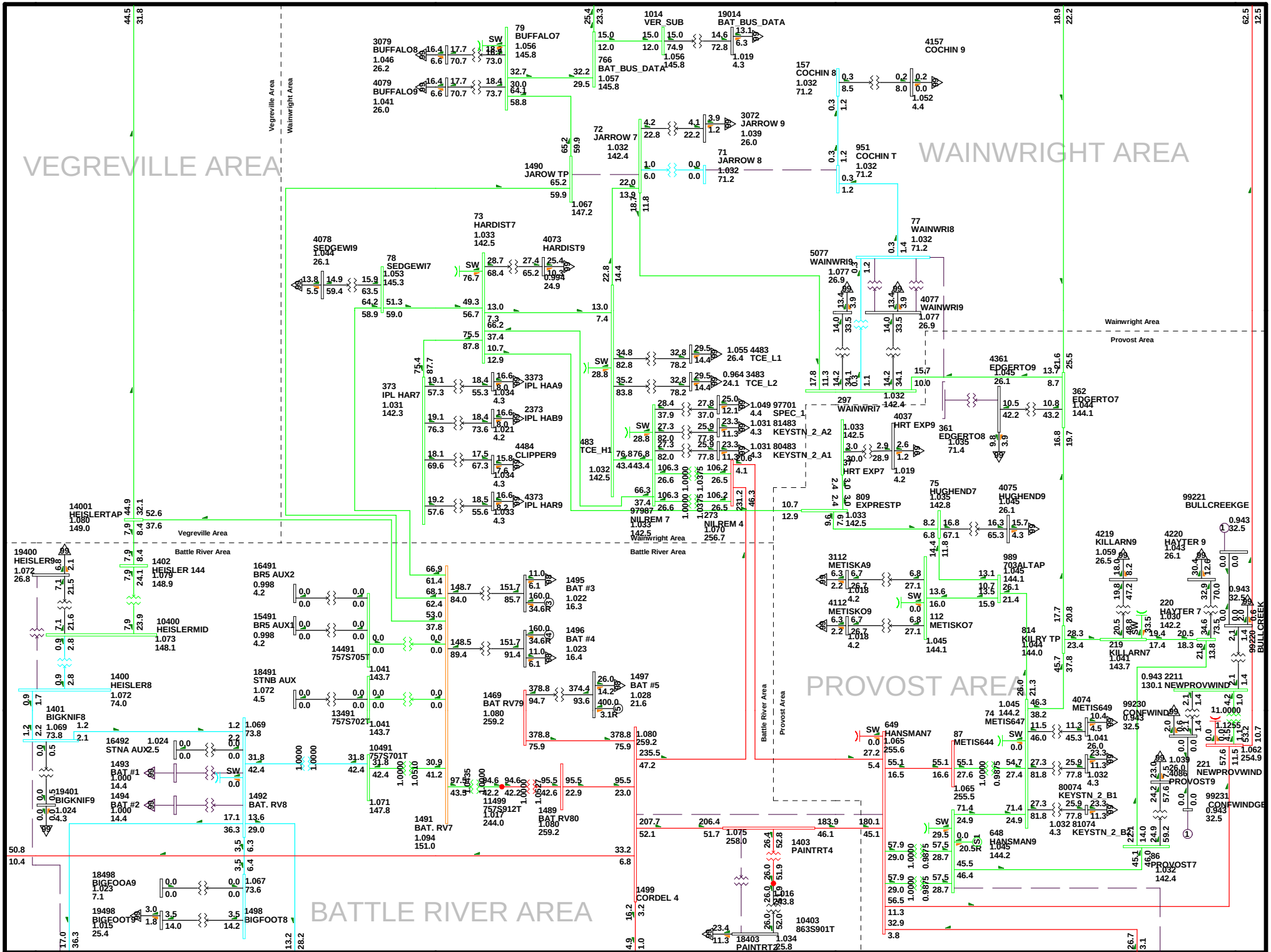
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE B
Equipment - MW/Mvar
100.0%RATEB
1.090OV 0.920UV
kV: >0.000<=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 11:19
D1-00

2017SP-Alt 3 BR#5 ON-1.a

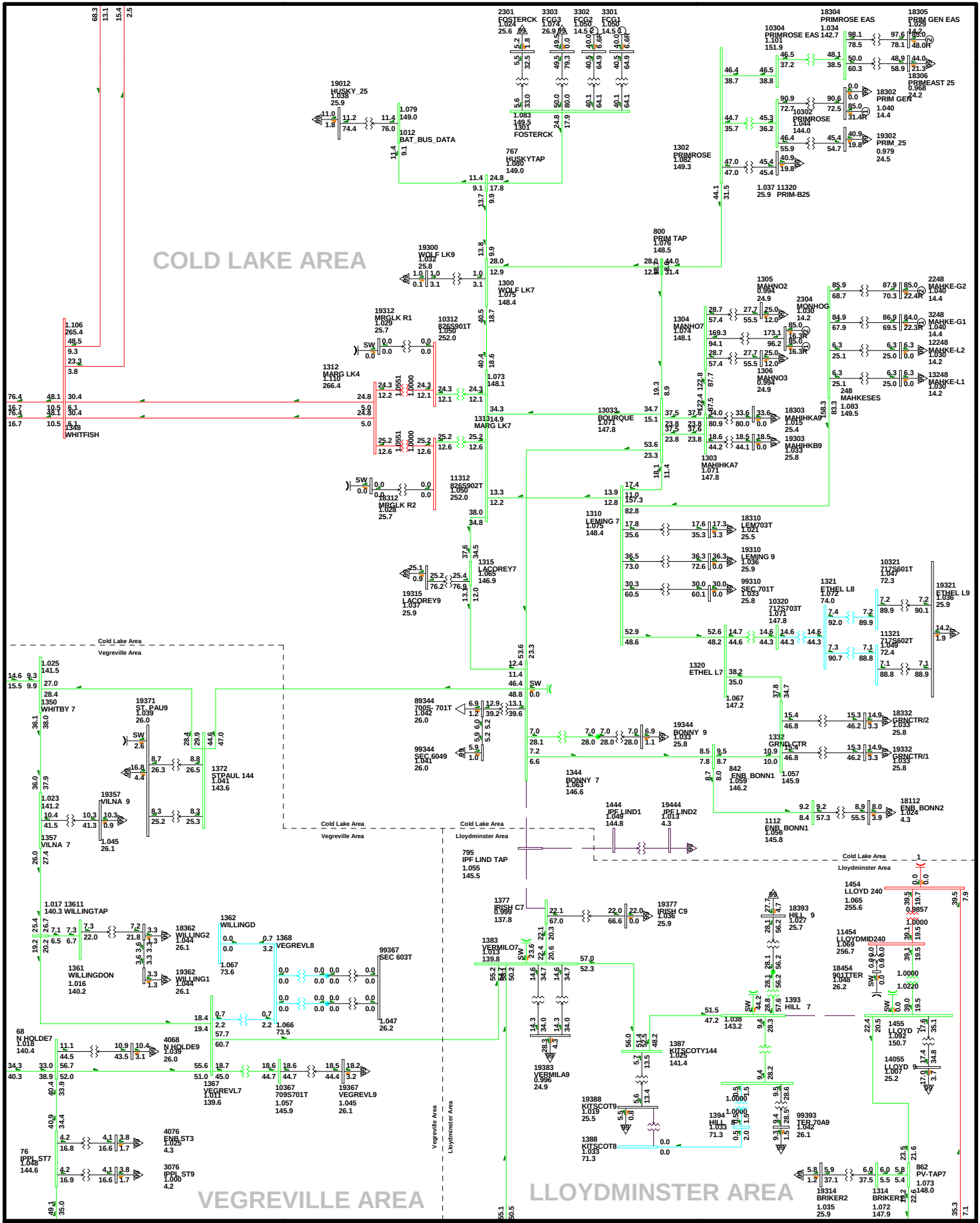
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 11:19
D1-00

2017SP-Alt 3 BR#5 ON-1.b

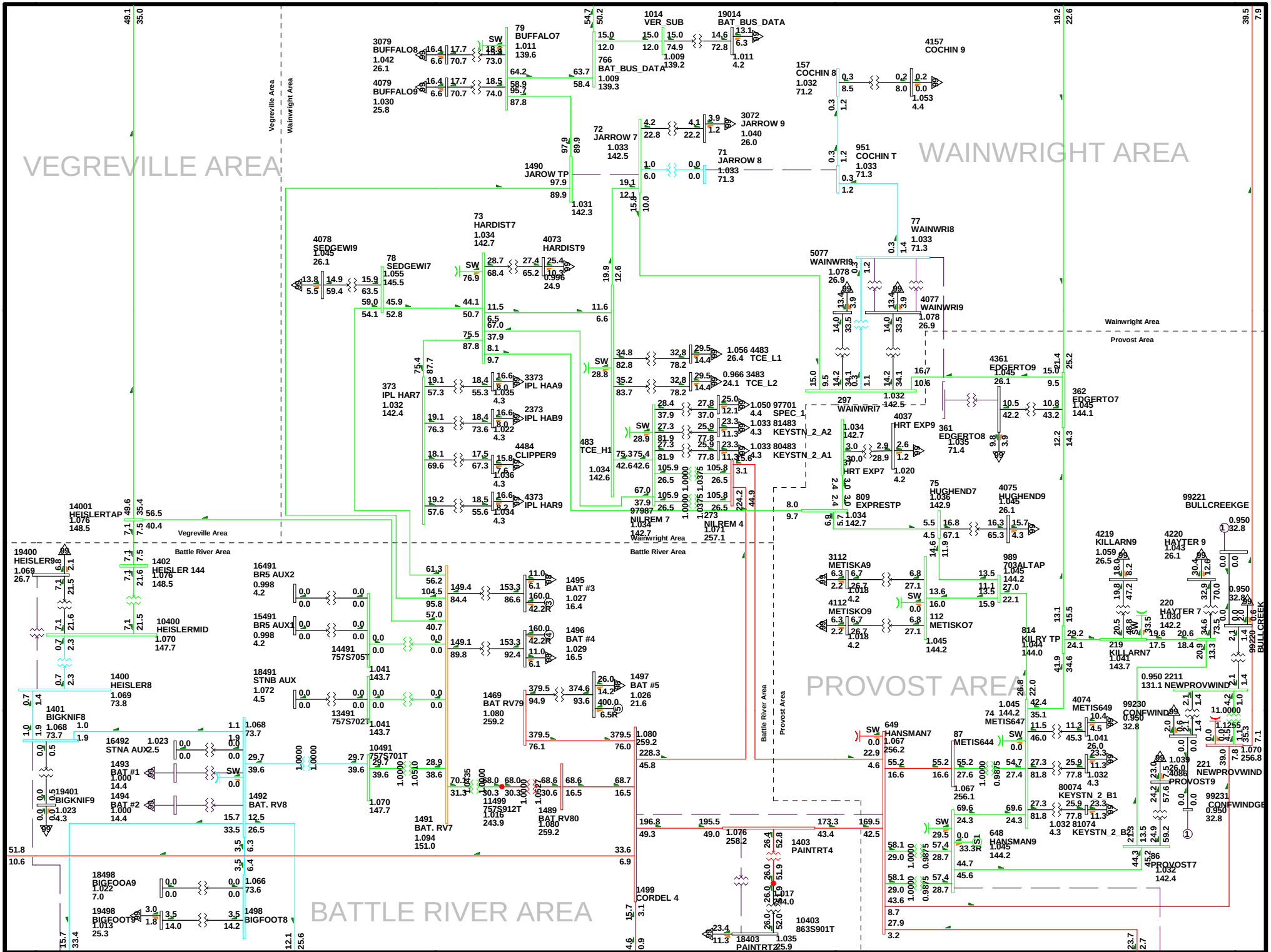
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
MON, APR 12 2010 10:55
D1-20

2017SP-Alt 3 BR#5 ON-2.a

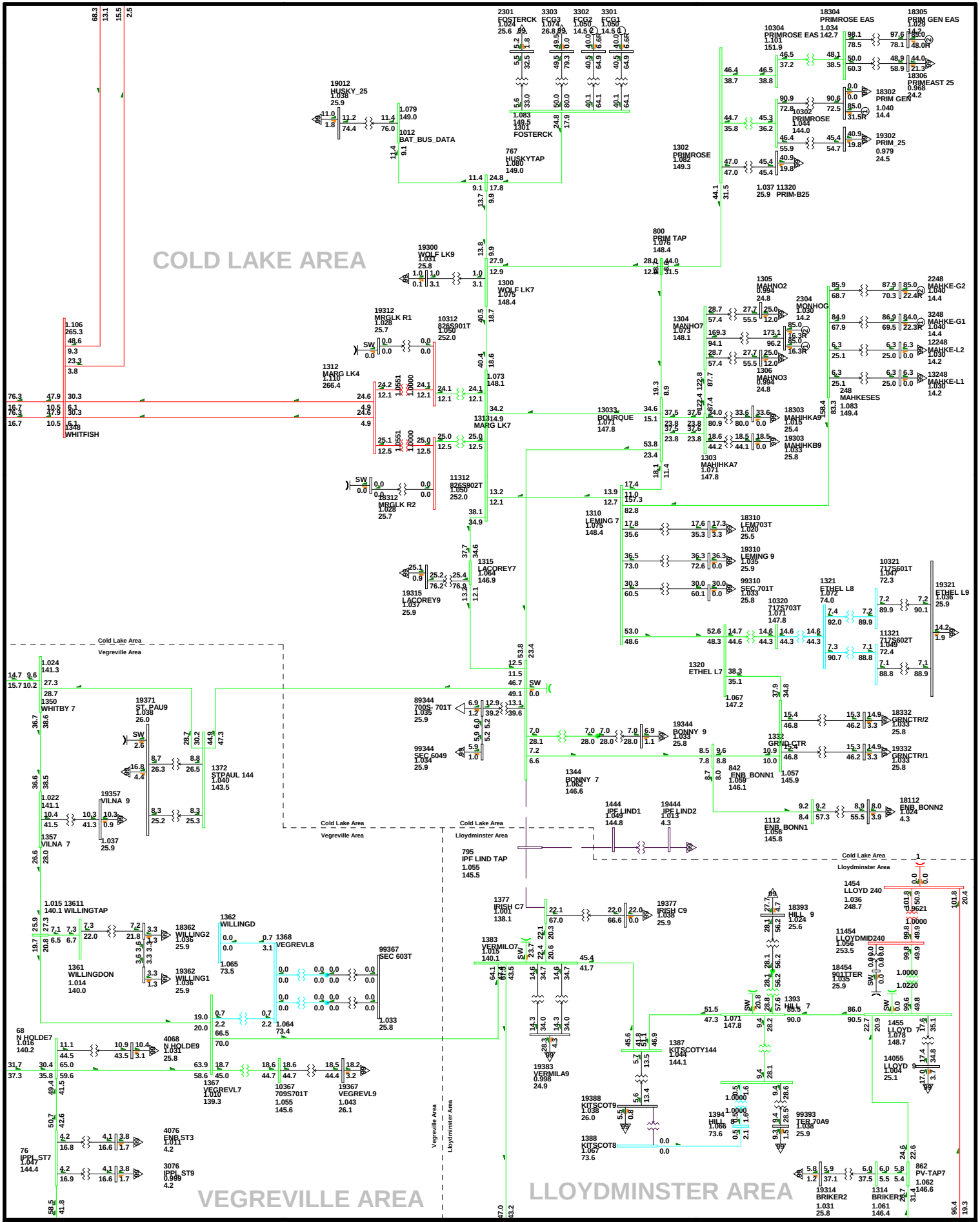
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
MON, APR 12 2010 10:55
D1-20

2017SP-Alt 3 BR#5 ON-2.b

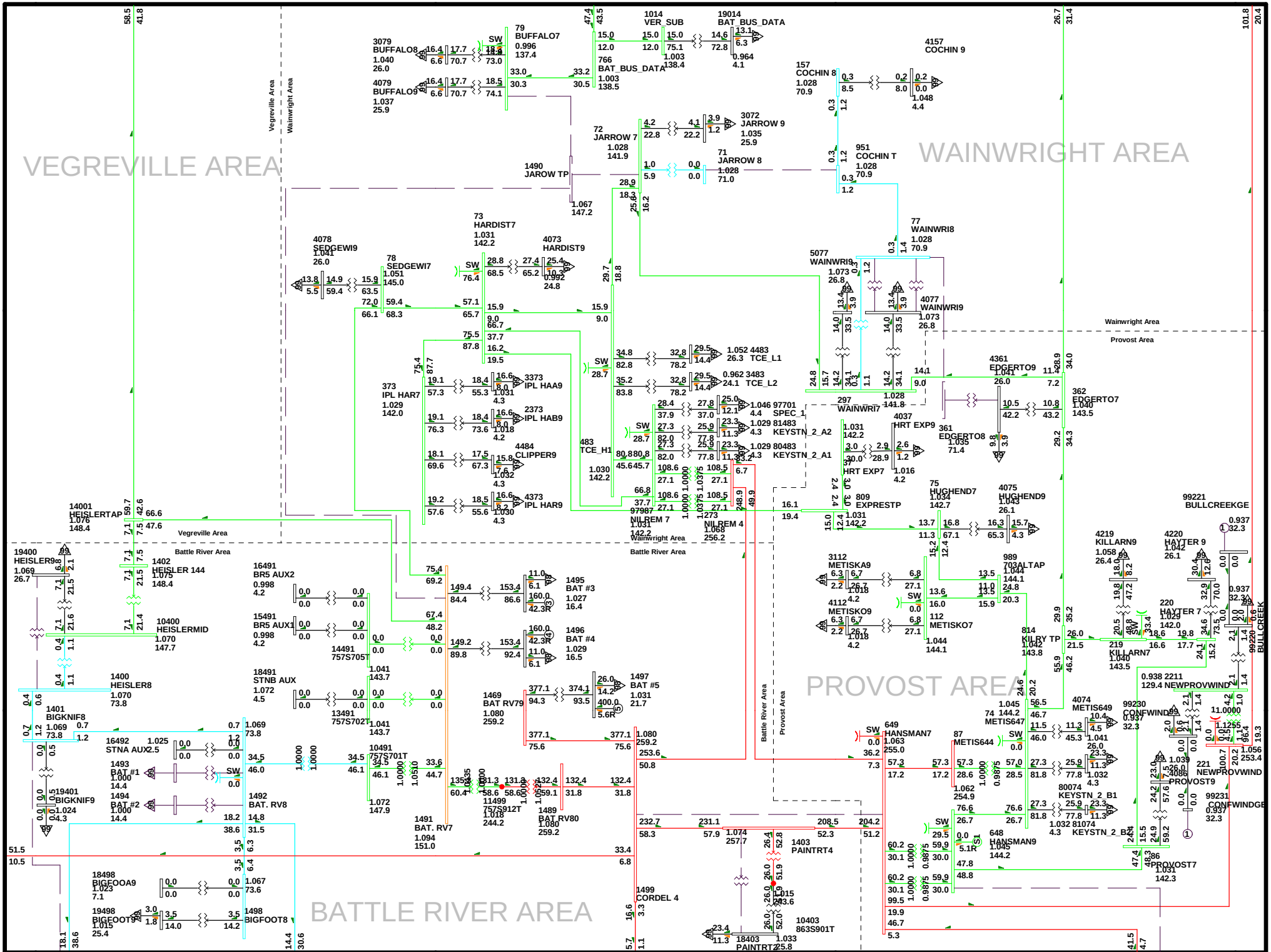
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 11:19
D1-21

2017SP-Alt 3 BR#5 ON-3.a

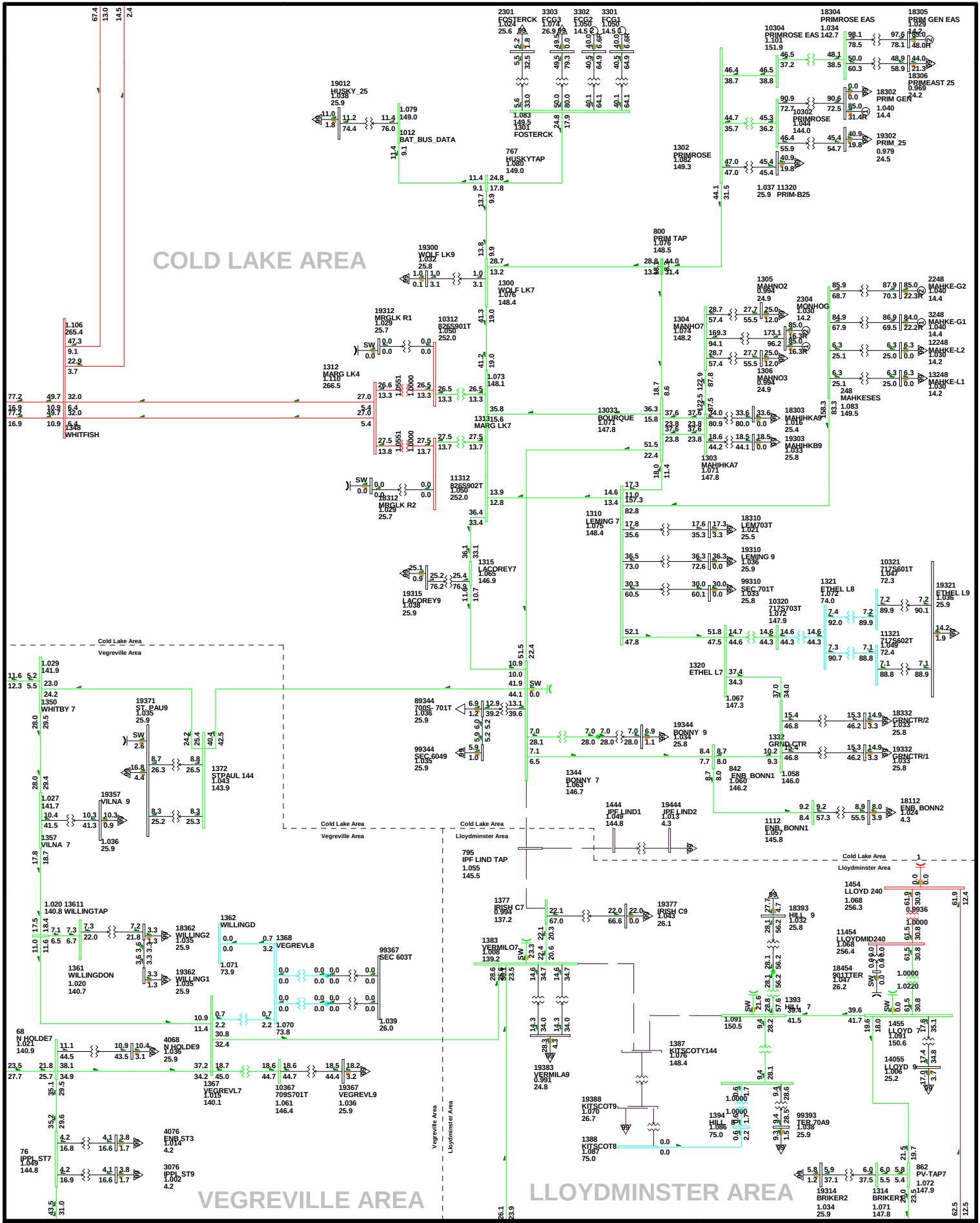
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 11:19
D1-21

2017SP-Alt 3 BR#5 ON-3.b

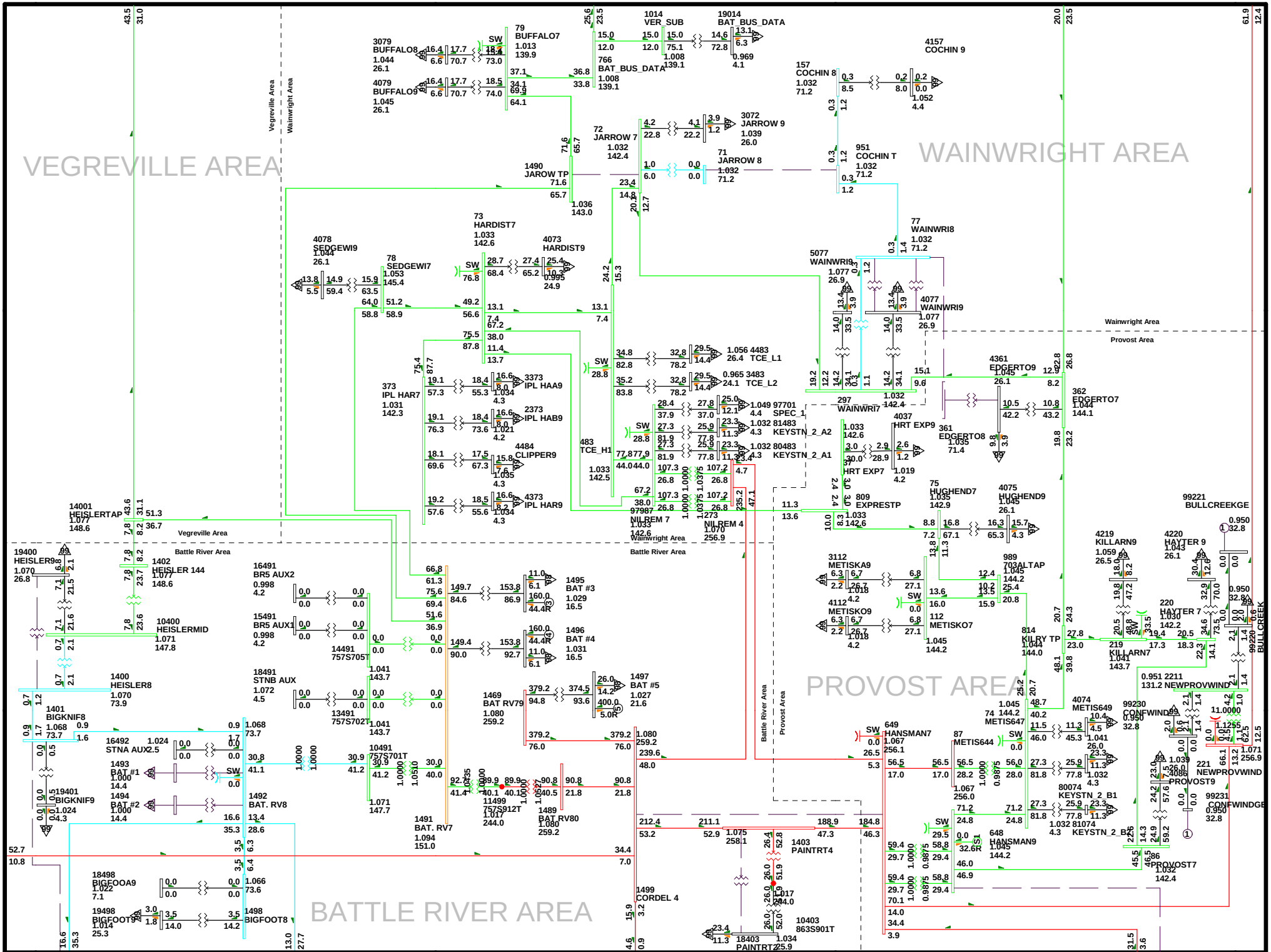
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

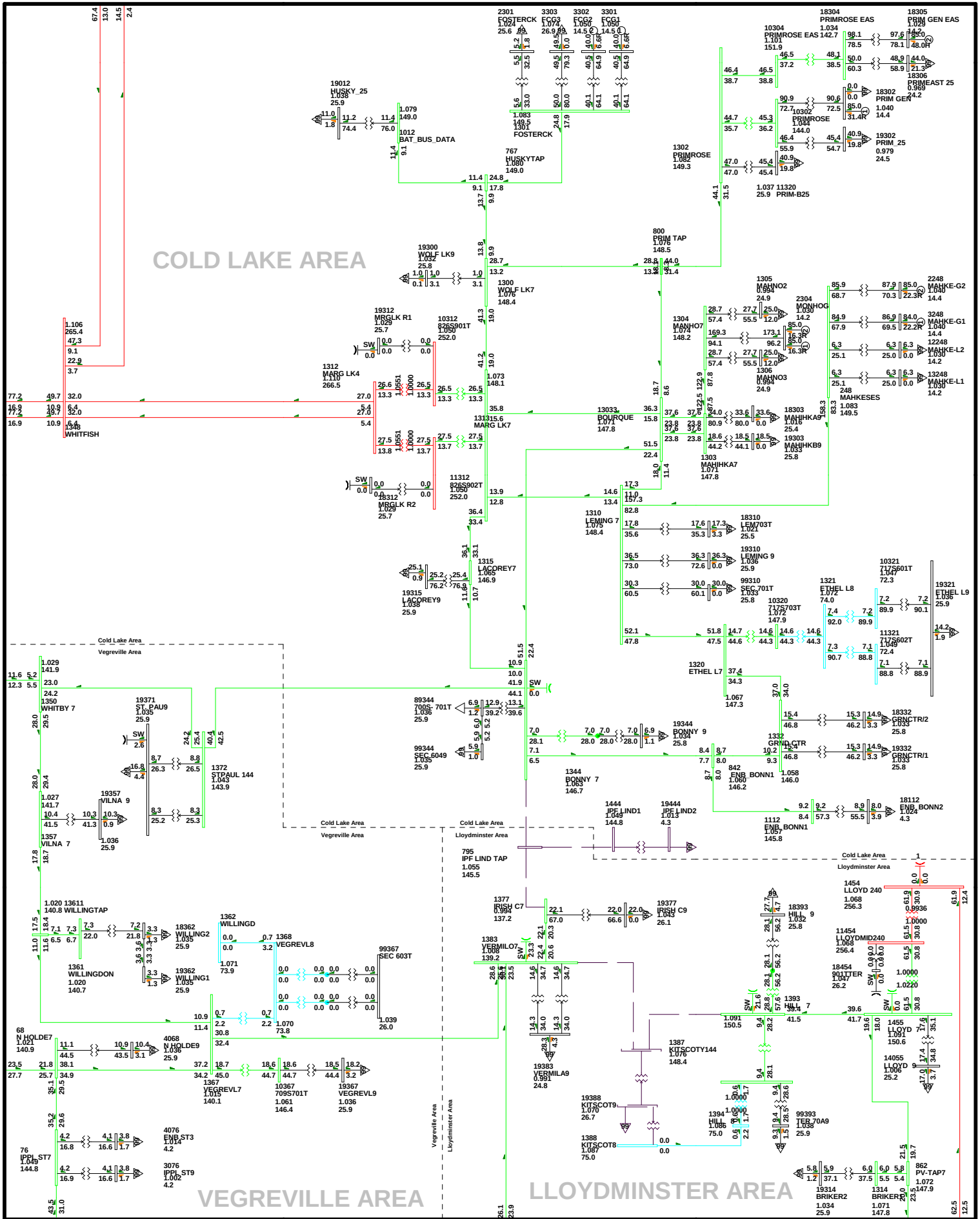


CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
MON, APR 12 2010 10:55
D1-22

2017SP-Alt 3 BR#5 ON-4.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

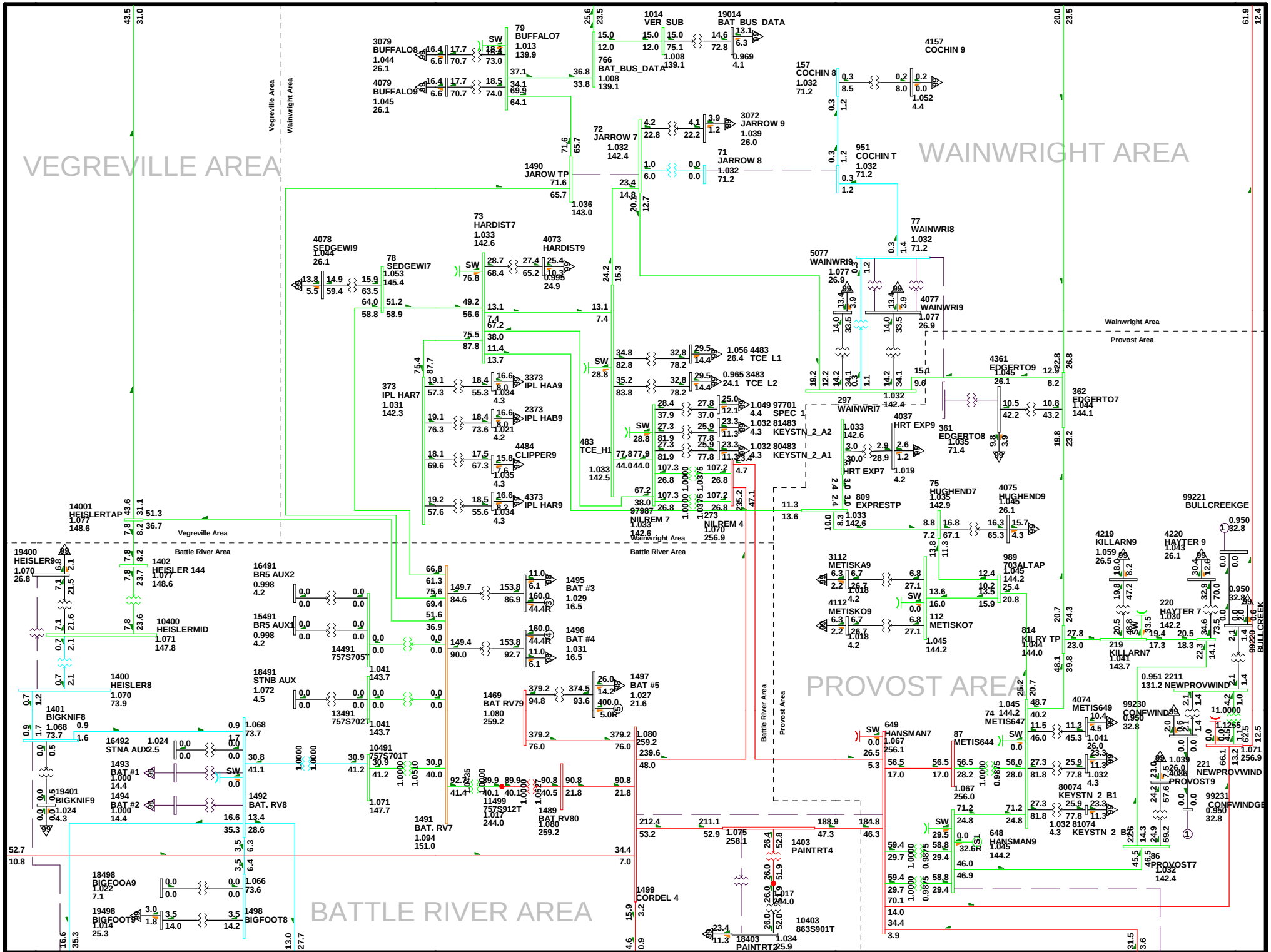

VEGREVILLE AREA
WAINWRIGHT AREA
PROVOST AREA
BATTLE RIVER AREA
Vegreville Area
Wainwright Area
Provost Area
Battle River Area
3079 BUFFALO8 1.044 26.1
4079 BUFFALO9 1.045 26.1
79 BUFFALO7 1.013 139.9
1014 VER_SUB
19014 BAT_BUS_DATA
766 BAT_BUS_DATA 1.008 139.1
4157 COCHIN 9
157 COCHIN 8 1.032 71.2
951 COCHIN T 1.032 71.2
72 JARROW 7 1.032 142.4
3072 JAROW 9 1.039 26.0
71 JARROW 8 1.032 71.2
1490 JAROW TP 71.6 65.7 1.036 143.0
73 HARDIST7 1.033 142.6
4073 HARDIST9
4078 SEDGEWI9 1.044 26.1
78 SEDGEWI7 1.053 145.4
373 IPL HAR7 1.031 142.3
3373 IPL HAA9
2373 IPL HAB9
4484 CLIPPER9
4373 IPL HAR9
483 TCE_H1 1.033 142.5
1.056 4483 26.4 TCE_L1
0.965 3483 24.1 TCE_L2
97701 SPEC_1
81483 KEYSTN_2_A2
80483 KEYSTN_2_A1
77 WAINWRI8 1.032 71.2
5077 WAINWRI5 1.077 26.9
4077 WAINWRI9 1.077 26.9
297 WAINWRI7 1.032 142.4
4037 HRT EXP9 1.033 142.6
HRT EXP7 1.019 4.2
361 EDGERTO8 1.035 71.4
4361 EDGERTO9 1.045 26.1
362 EDGERTO7 1.044 144.1
809 EXPRESTP 1.033 142.6
75 HUGHEND7 1.035 142.9
4075 HUGHEND9 1.045 26.1
97987 NIL REM 7 1.033 142.6
1273 NIL REM 4 1.070 256.9
99221 BULLCREEKGE
14001 HEISLERTAP 1.077 148.6
19400 HEISLER9 1.070 26.8
1402 HEISLER 144 1.077 148.6
10400 HEISLERMID 1.071 147.8
1400 HEISLER8 1.070 73.9
1401 BIGKNIF8 1.068 73.7
19401 BIGKNIF9 1.024 04.3
16491 BR5 AUX2 0.998 4.2
15491 BR5 AUX1 0.998 4.2
14491 757S705T
18491 STNB AUX 1.072 4.5
13491 757S702T
16492 STNA AUX 1.024 2.5
10491 757S701T
1493 BAT #1 1.000 14.4
1494 BAT #2 1.000 14.4
1492 BAT. RV8
1491 BAT. RV7 1.094 151.0
1495 BAT #3 1.029 16.5
1496 BAT #4 1.031 16.5
1497 BAT #5 1.027 21.6
1469 BAT RV79 1.080 259.2
11499 757S912T 1.017 244.0
1489 BAT RV80 1.080 259.2
1499 CORDEL 4
1403 PAINTRT4
10403 863S901T
18403 PAINTRT2 1.034 25.9
18498 BIGFOOA9 1.022 7.1
19498 BIGFOOT9 1.014 25.3
1498 BIGFOOT8
649 HANSMAN7 1.067 256.1
87 METIS644
74 METIS647 1.045 144.2
4074 METIS649
80074 KEYSTN_2_B1
81074 KEYSTN_2_B2
648 HANSMAN9 1.045 144.2
99230 CONFWIND9 0.950 32.8
99231 CONFWINDGE 0.950 32.8
0.951 2211 131.2 NEWPROVWIND
221 NEWPROVWIND
PROVOST9 1.039 -4086
PROVOST7 1.032 142.4
814 KILRY TP 1.044 144.0
219 KILLARN7 1.041 143.7
4219 KILLARN9 1.059 26.5
220 HAYTER 7 1.030 142.2
4220 HAYTER 9 1.043 26.1
3112 METISKA9
4112 METISKO9
112 METISKO7 1.045 144.2
989 703ALTAP 1.045 144.2
CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
MON, APR 12 2010 10:55
D1-22
2017SP-Alt 3 BR#5 ON-4.b
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

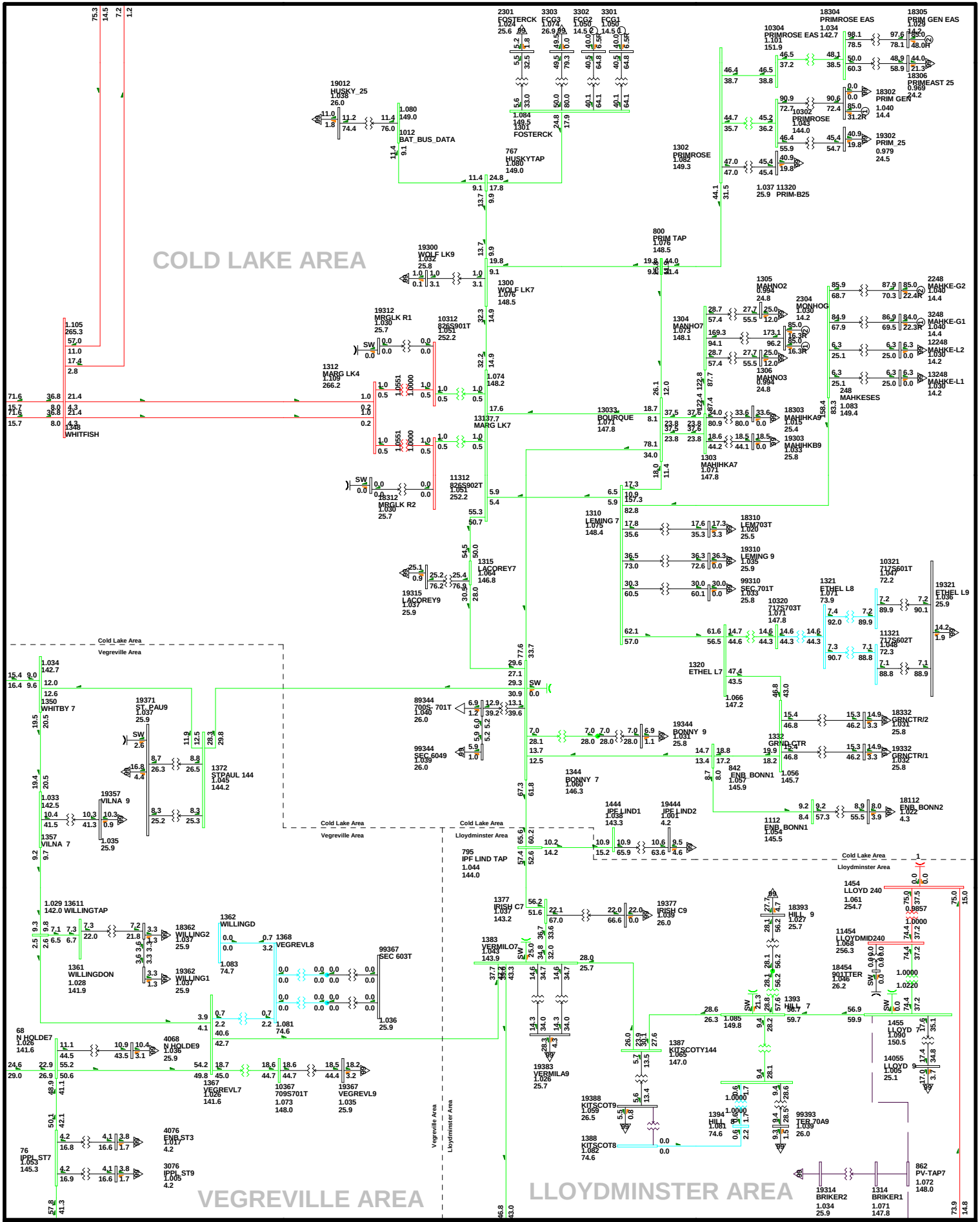


CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 11:20
D1-23

2017SP-Alt 3 BR#5 ON-5.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

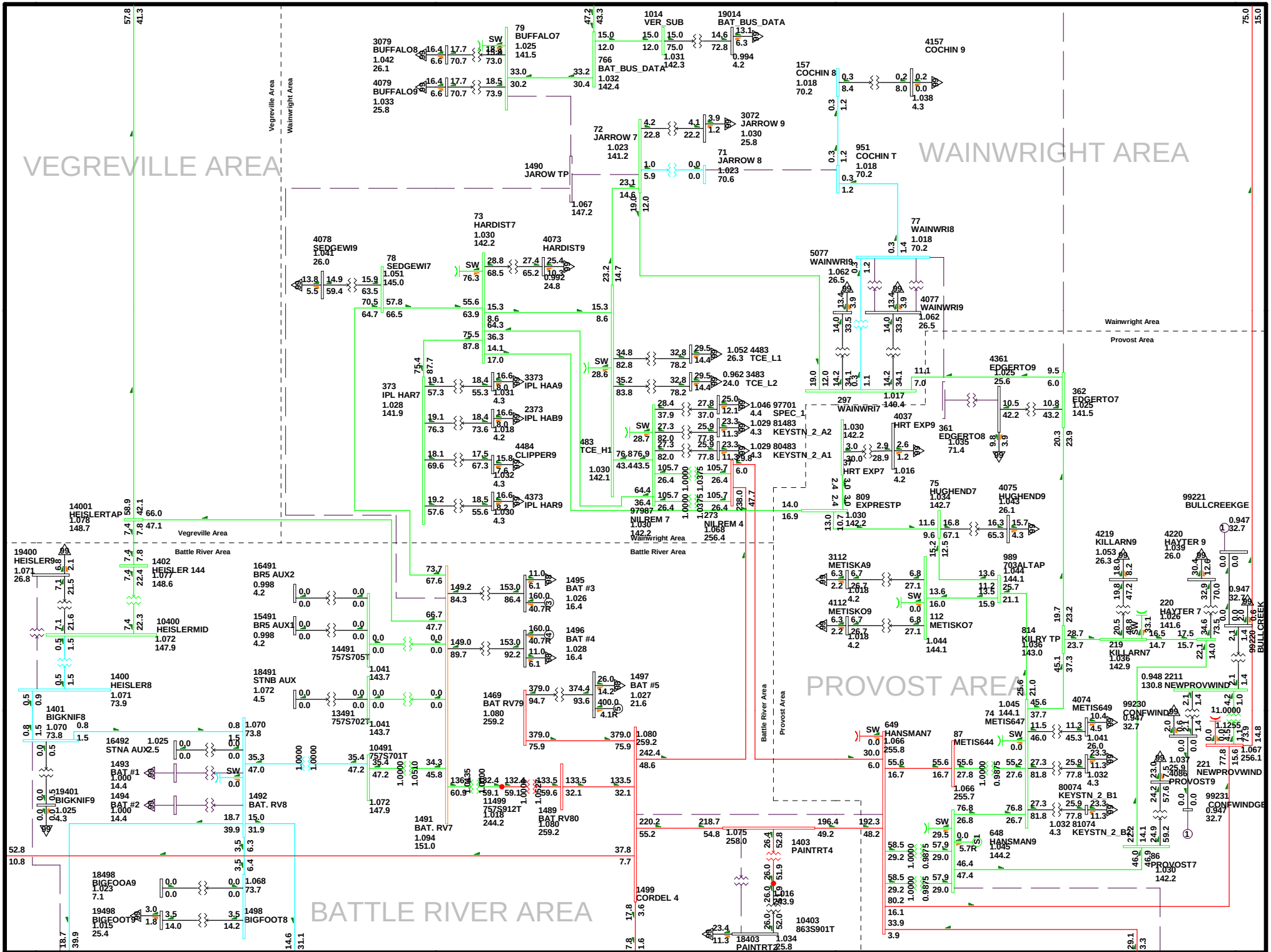

VEGREVILLE AREA
WAINWRIGHT AREA
PROVOST AREA
BATTLE RIVER AREA
Vegreville Area
Wainwright Area
Provost Area
Battle River Area
3079 BUFFALO8 1.044 26.1
4079 BUFFALO9 1.045 26.1
79 BUFFALO7 1.013 139.9
766 BAT_BUS_DATA 1.008 139.1
1014 VER_SUB 1.008 139.1
19014 BAT_BUS_DATA 0.969 4.1
4157 COCHIN 9
157 COCHIN 8 1.032 71.2
1.052 4.4
951 COCHIN T 1.032 71.2
72 JARROW 7 1.032 142.4
3072 JARROW 9 1.039 26.0
71 JARROW 8 1.032 71.2
1490 JAROW TP 71.6 65.7 1.036 143.0
73 HARDIST7 1.033 142.6
4073 HARDIST9
4078 SEDGEWI9 1.044 26.1
78 SEDGEWI7 1.053 145.4
77 WAINWRI8 1.032 71.2
5077 WAINWRI9 1.077 26.9
4077 WAINWRI9 1.077 26.9
297 WAINWRI7 1.032 142.4
4037 HRT EXP9
HRT EXP7 1.019 4.2
361 EDGERTO8 1.035 71.4
4361 EDGERTO9 1.045 26.1
362 EDGERTO7 1.044 144.1
373 IPL HAR7 1.031 142.3
3373 IPL HAA9 1.034 4.3
2373 IPL HAB9 1.021 4.2
4484 CLIPPER9 1.035 4.3
4373 IPL HAR9 1.034 4.3
483 TCE_H1 1.033 142.5
1.056 4483 26.4 TCE_L1
0.965 3483 24.1 TCE_L2
1.049 97701 4.4 SPEC_1
1.032 81483 4.3 KEYSTN_2_A2
1.032 80483 4.3 KEYSTN_2_A1
97987 NIL REM 7 1.033 142.6
1273 NIL REM 4 1.070 256.9
809 EXPRESTP 1.033 142.6
75 HUGHEND7 1.035 142.9
4075 HUGHEND9 1.045 26.1
14001 HEISLERTAP 1.077 148.6
1402 HEISLER 144 1.077 148.6
10400 HEISLERMID 1.071 147.8
19400 HEISLER9 1.070 26.8
1400 HEISLER8 1.070 73.9
1401 BIGKNIF8 1.068 73.7
19401 BIGKNIF9 1.024 24.3
16492 STNA AUX 1.024 2.5
1493 BAT #1 1.000 14.4
1494 BAT #2 1.000 14.4
1492 BAT. RV8 13.4
16491 BR5 AUX2 0.998 4.2
15491 BR5 AUX1 0.998 4.2
18491 STNB AUX 1.072 4.5
14491 757S705T 1.041 143.7
13491 757S702T 1.041 143.7
10491 757S701T 1.071 147.7
1491 BAT. RV7 1.094 151.0
1495 BAT #3 1.029 16.5
1496 BAT #4 1.031 16.5
1497 BAT #5 1.027 21.6
1469 BAT RV79 1.080 259.2
11499 757S912T 1.017 244.0
1489 BAT RV80 1.080 259.2
1499 CORDEL 4 1.017 244.0
1403 PAINTRT4
10403 863S901T 1.034 25.9
18403 PAINTRT2 1.034 25.9
18498 BIGFOOA9 1.022 7.1
19498 BIGFOOT9 1.014 25.3
1498 BIGFOOT8 1.014 14.2
3112 METISKA9 1.018 4.2
4112 METISKO9 1.018 4.2
112 METISKO7 1.045 144.2
814 KILRY TP 1.044 144.0
219 KILLARN7 1.041 143.7
4219 KILLARN9 1.059 26.5
989 703ALTAP 1.045 144.2
74 METIS647 1.045 144.2
4074 METIS649
87 METIS644
649 HANSMAN7 1.067 256.1
648 HANSMAN9 1.045 144.2
80074 KEYSTN_2_B1 1.032 81074 4.3
KEYSTN_2_B2
99230 CONFWIND9 0.950 32.8
99231 CONFWIND8 0.950 32.8
99221 BULLCREEKGE 0.950 32.8
4220 HAYTER 9 1.043 26.1
220 HAYTER 7 1.030 142.2
221 NEWPROVWIND 1.039 26.0
0.951 2211 131.2 NEWPROVWIND
4086 PROVOST9 1.039 26.0
86 PROVOST7 1.032 142.4
99229 BULLCREEK
CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 11:20
D1-23
2017SP-Alt 3 BR#5 ON-5.b
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

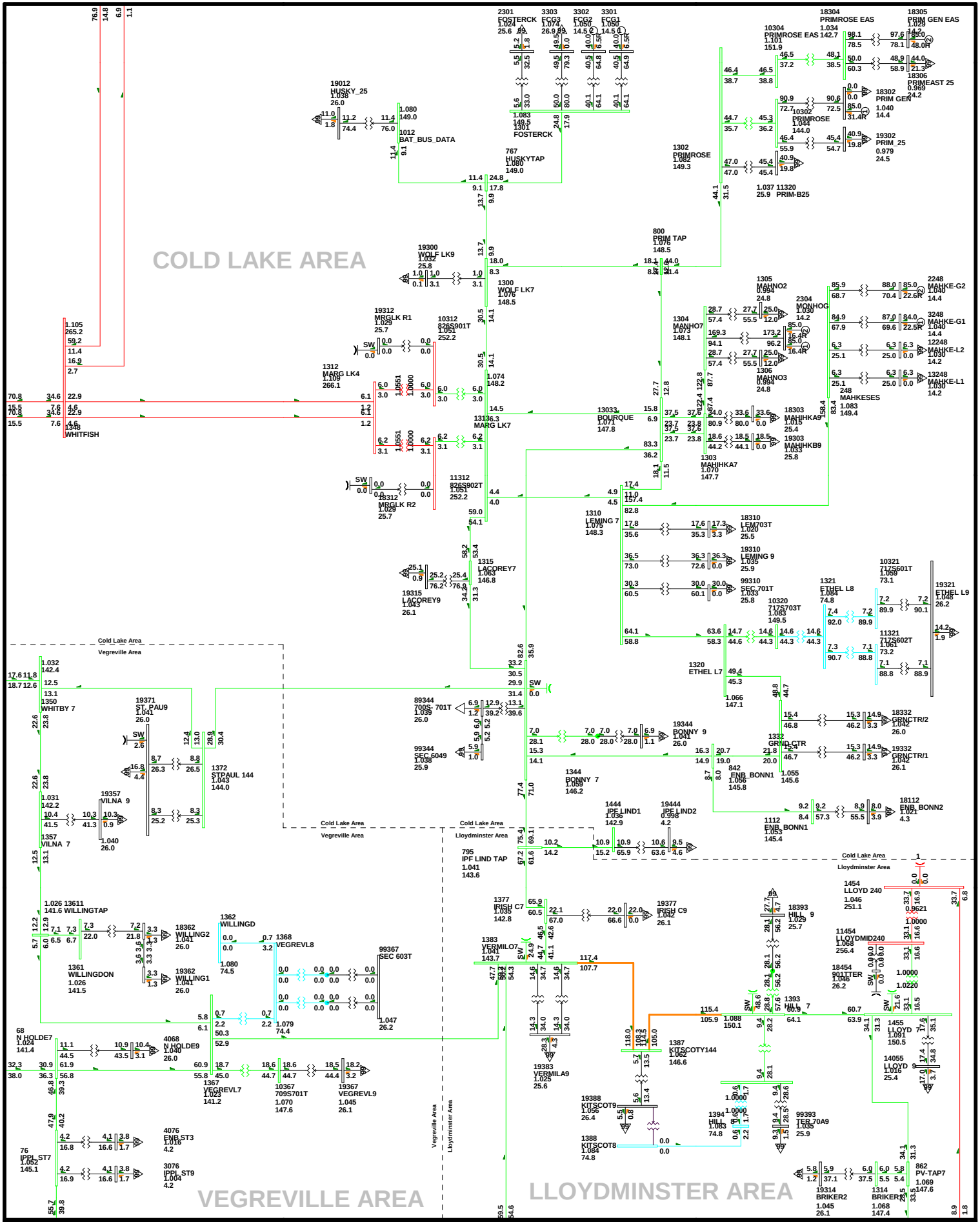


CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 11:20
D1-24

2017SP-Alt 3 BR#5 ON-6.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

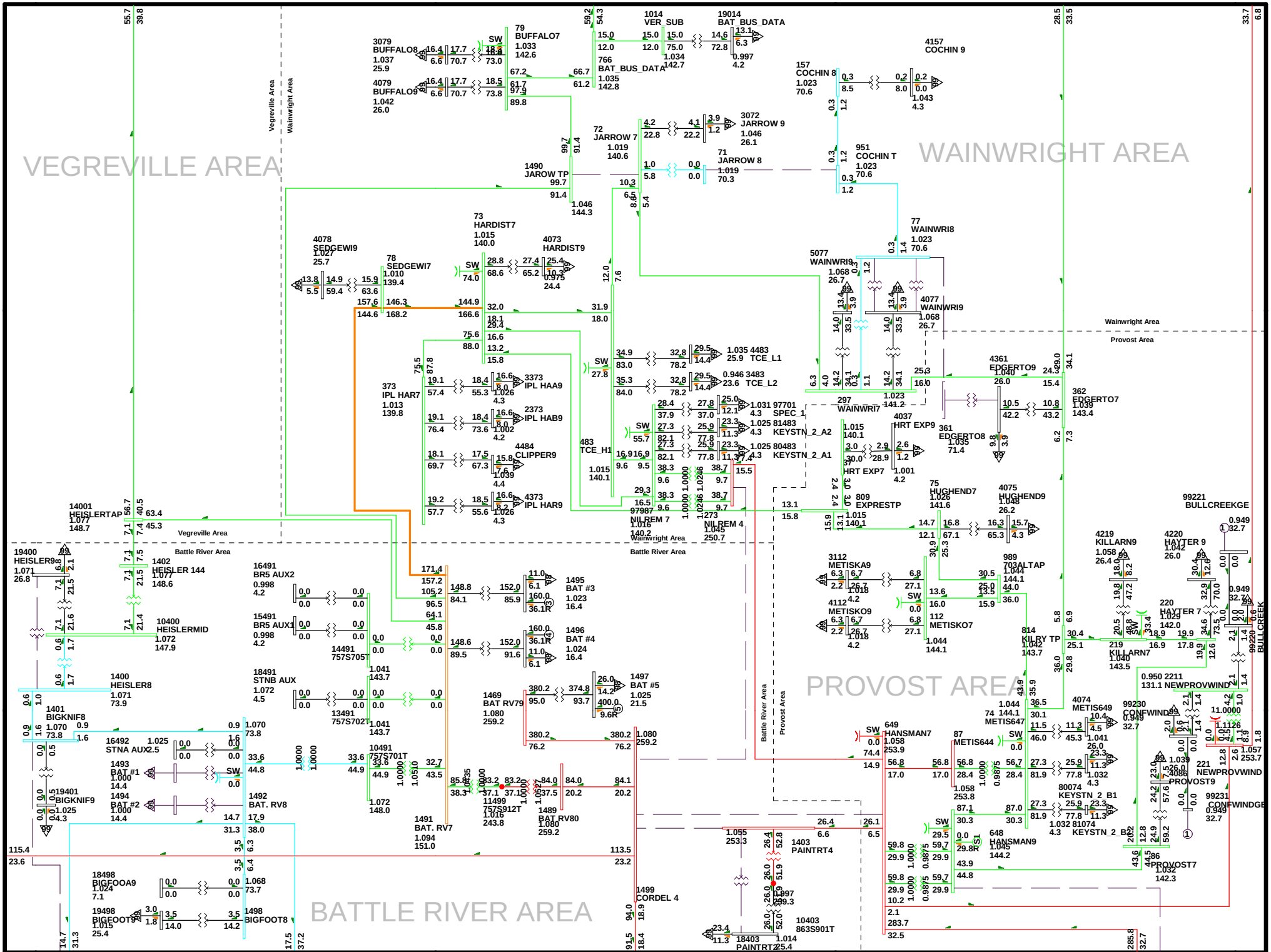

VEGREVILLE AREA
WAINWRIGHT AREA
PROVOST AREA
BATTLE RIVER AREA
Vegreville Area
Wainwright Area
Provost Area
Battle River Area
3079 BUFFALO8 1.042 26.1
4079 BUFFALO9 1.033 25.8
79 BUFFALO7 1.025 141.5
766 BAT_BUS_DATA 1.032 142.4
1014 VER_SUB 1.031 142.3
19014 BAT_BUS_DATA 0.994 4.2
4157 COCHIN 9
157 COCHIN 8 1.018 70.2
1.038 4.3
72 JAROW 7 1.023 141.2
3072 JARROW 9 1.030 25.8
71 JARROW 8 1.023 70.6
1490 JAROW TP 1.067 147.2
951 COCHIN T 1.018 70.2
73 HARDIST7 1.030 142.2
4073 HARDIST9 0.992 24.8
4078 SEDGEWI9 1.041 26.0
78 SEDGEWI7 1.051 145.0
77 WAINWRI8 1.018 70.2
5077 WAINWRI9 1.062 26.5
4077 WAINWRI9 1.062 26.5
373 IPL HAR7 1.028 141.9
3373 IPL HAA9 1.031 4.3
2373 IPL HAB9 1.018 4.2
4484 CLIPPER9 1.032 4.3
4373 IPL HAR9 1.030 4.3
483 TCE_H1 1.030 142.1
1.052 4483 26.3 TCE_L1
0.962 3483 24.0 TCE_L2
1.046 97701 4.4 SPEC_1
1.029 81483 4.3 KEYSTN_2_A2
1.029 80483 4.3 KEYSTN_2_A1
297 WAINWRI7 1.017 140.4
4037 HRT EXP9 1.030 142.2
HRT EXP7 1.016 4.2
361 EDGERTO8 1.035 71.4
4361 EDGERTO9 1.025 25.6
362 EDGERTO7 1.025 141.5
97987 NIL REM 7 1.030 142.2
1273 NIL REM 4 1.068 256.4
809 EXPRESTP 1.030 142.2
75 HUGHEND7 1.034 142.7
4075 HUGHEND9 1.043 26.1
14001 HEISLERAP 1.078 148.7
19400 HEISLER9 1.071 26.8
1402 HEISLER 144 1.077 148.6
10400 HEISLERMID 1.072 147.9
1400 HEISLER8 1.071 73.9
1401 BIGKNIF8 1.070 73.8
19401 BIGKNIF9 1.025 24.3
16491 BR5 AUX2 0.998 4.2
15491 BR5 AUX1 0.998 4.2
14491 757S705T
18491 STNB AUX 1.072 4.5
13491 757S702T
16492 STNA AUX 1.025 2.5
10491 757S701T
1493 BAT #1 1.000 14.4
1494 BAT #2 1.000 14.4
1492 BAT. RV8 1.072 147.9
1491 BAT. RV7 1.094 151.0
1495 BAT #3 1.026 16.4
1496 BAT #4 1.028 16.4
1497 BAT #5 1.027 21.6
1469 BAT RV79 1.080 259.2
11499 757S912T 1.018 244.2
1489 BAT RV80 1.080 259.2
1499 CORDEL 4 1.016 83.9
1403 PAINTRT4 1.034 25.8
10403 863S901T 1.034 25.8
18403 PAINTRT3 1.034 25.8
18498 BIGFOOA9 1.023 7.1
19498 BIGFOOT9 1.015 25.4
1498 BIGFOOT8 1.068 73.7
649 HANSMAN7 1.066 255.8
87 METIS644 1.066 255.7
74 144.1 METIS647 1.045 144.1
4074 METIS649 1.041 26.0
80074 KEYSTN_2_B1 1.032 4.3
81074 KEYSTN_2_B2 1.032 4.3
648 HANSMAN9 1.045 144.2
1486 PROVOST7 1.030 142.2
3112 METISKA9 1.018 4.2
4112 METISKO9 1.018 4.2
112 METISKO7 1.044 144.1
989 703ALTAP 1.044 144.1 25.7
814 KILRY TP 1.036 143.0
4219 KILLARN9 1.053 26.3
219 KILLARN7 1.036 142.9
4220 HAYTER 9 1.039 26.0
220 HAYTER 7 1.026 141.6
99221 BULLCREEKGE 0.947 32.7
99229 BULLCREEK 0.947 32.7
0.948 2211 130.8 NEWPROVWIND
99230 CONFWIND9 0.947 32.7
221 NEWPROVWIND 1.067 256.1
99231 CONFWINDGE 0.947 32.7
4086 PROVOST9 1.037 25.9
1499 CORDEL 4 1.016 83.9
CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 11:20
D1-24
2017SP-Alt 3 BR#5 ON-6.b
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 11:20
D1-26

2017SP-Alt 3 BR#5 ON-7.a

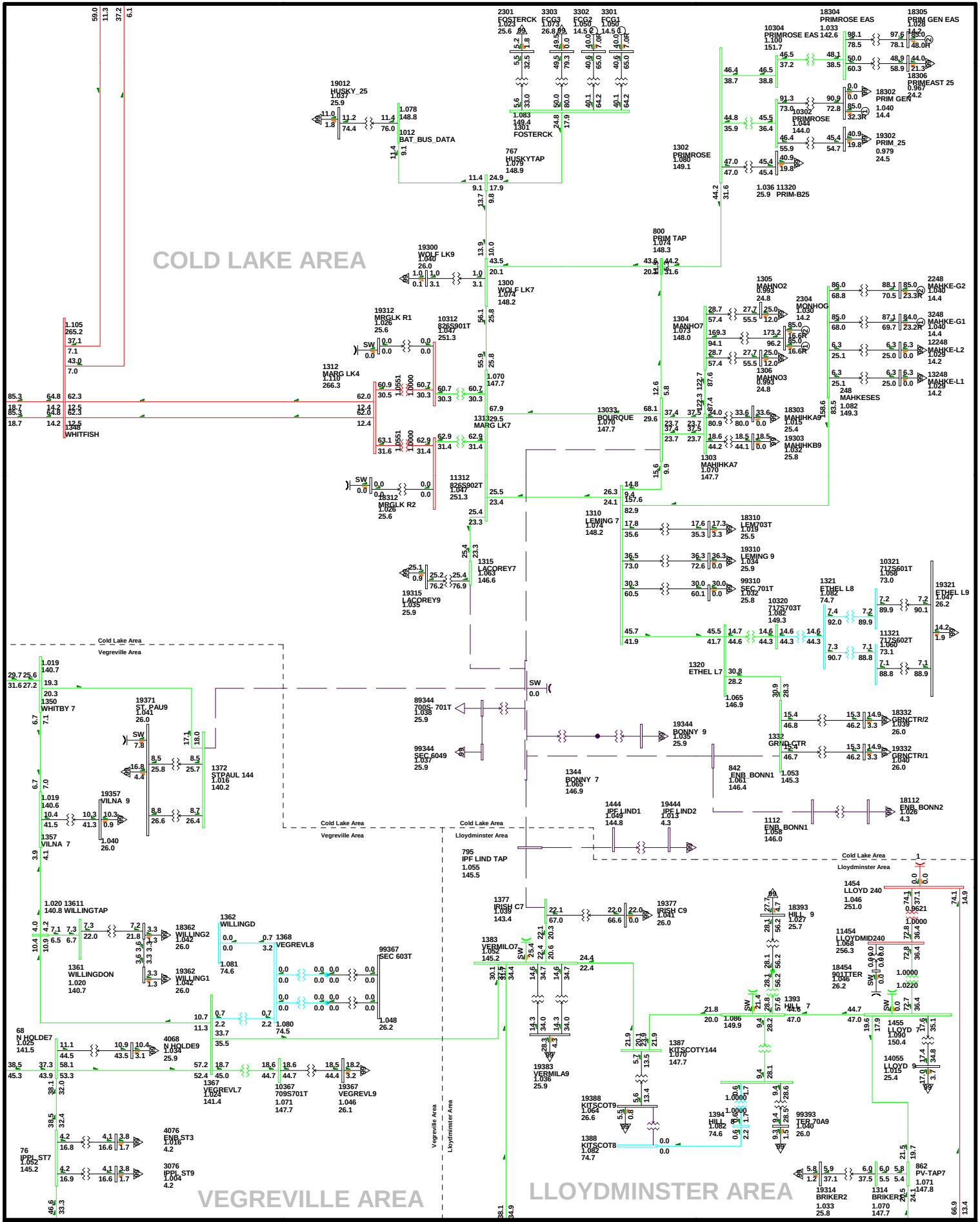
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 11:20
D1-26

2017SP-Alt 3 BR#5 ON-7.b

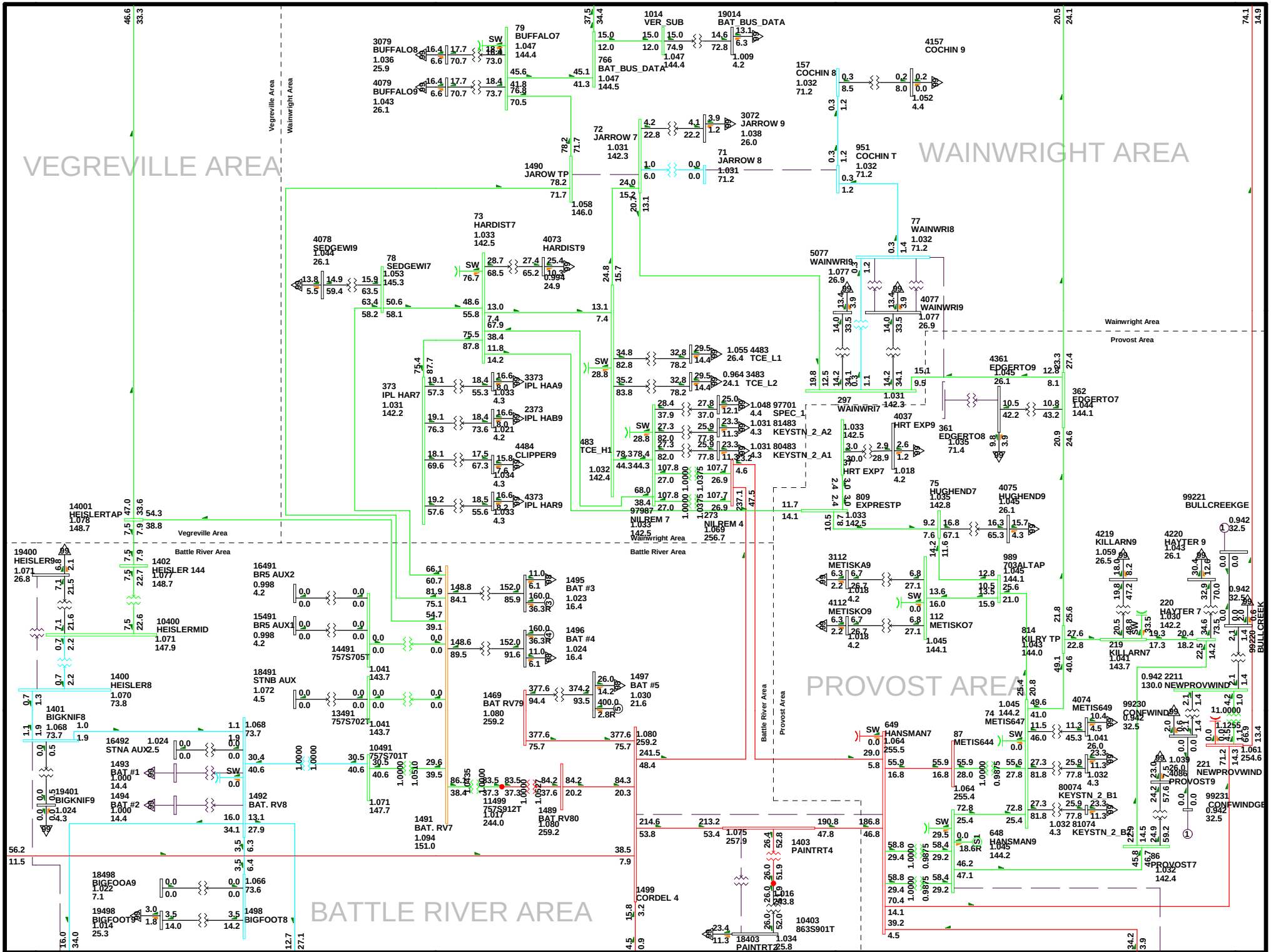
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 11:20
D1-27

2017SP-Alt 3 BR#5 ON-8.a

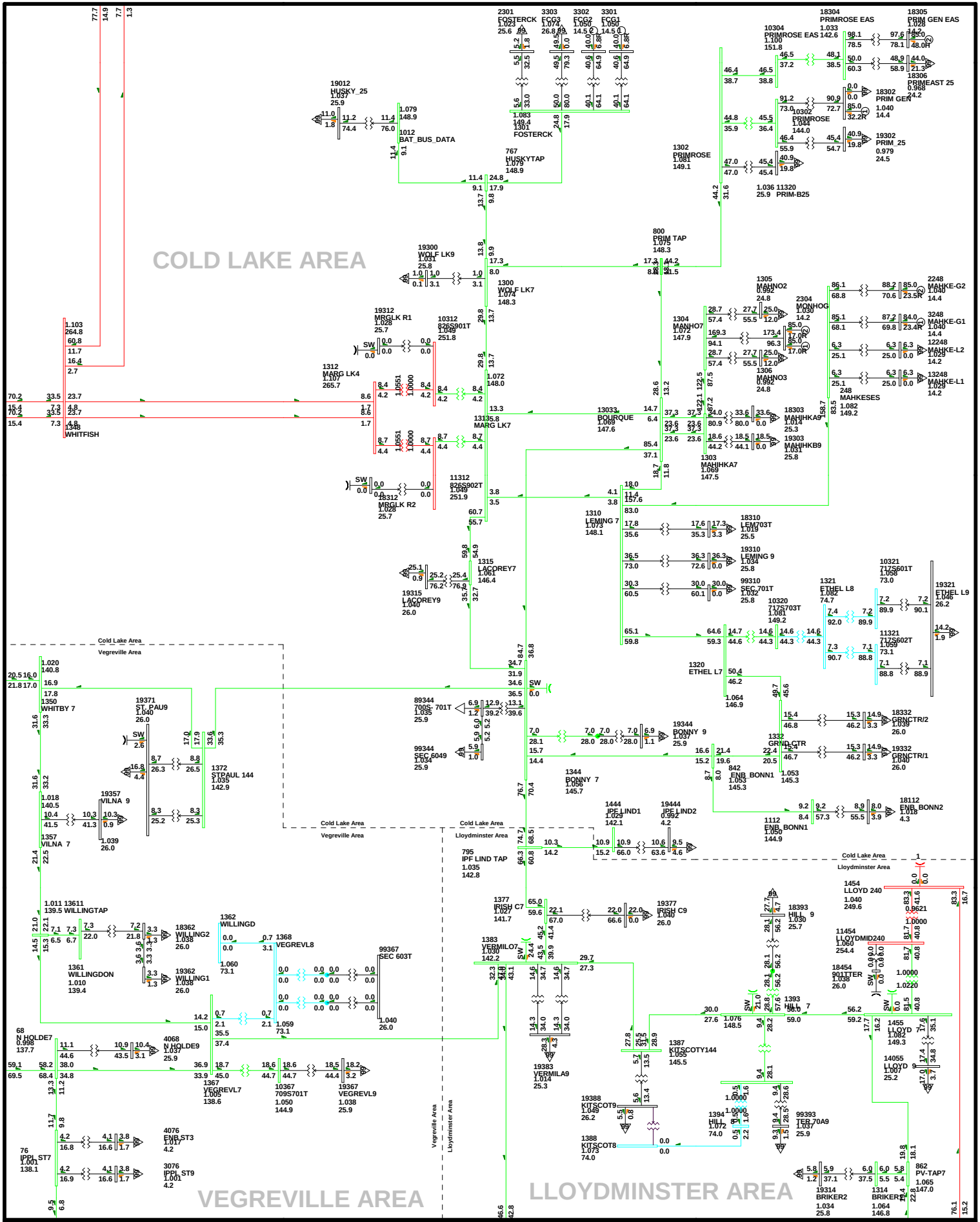
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 11:20
D1-27

2017SP-Alt 3 BR#5 ON-8.b

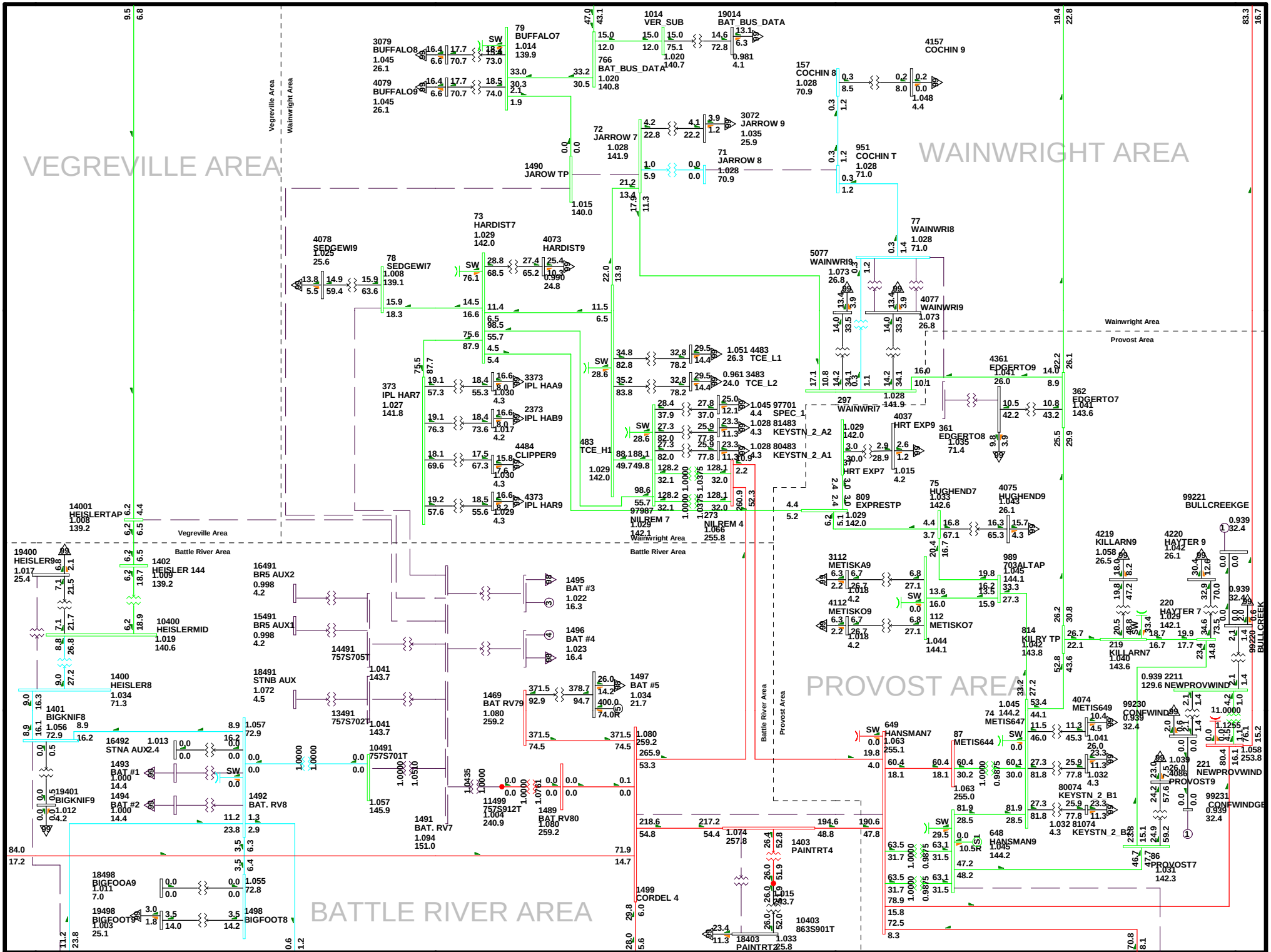
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 11:20
D1-28

2017SP-Alt 3 BR#5 ON-9.a

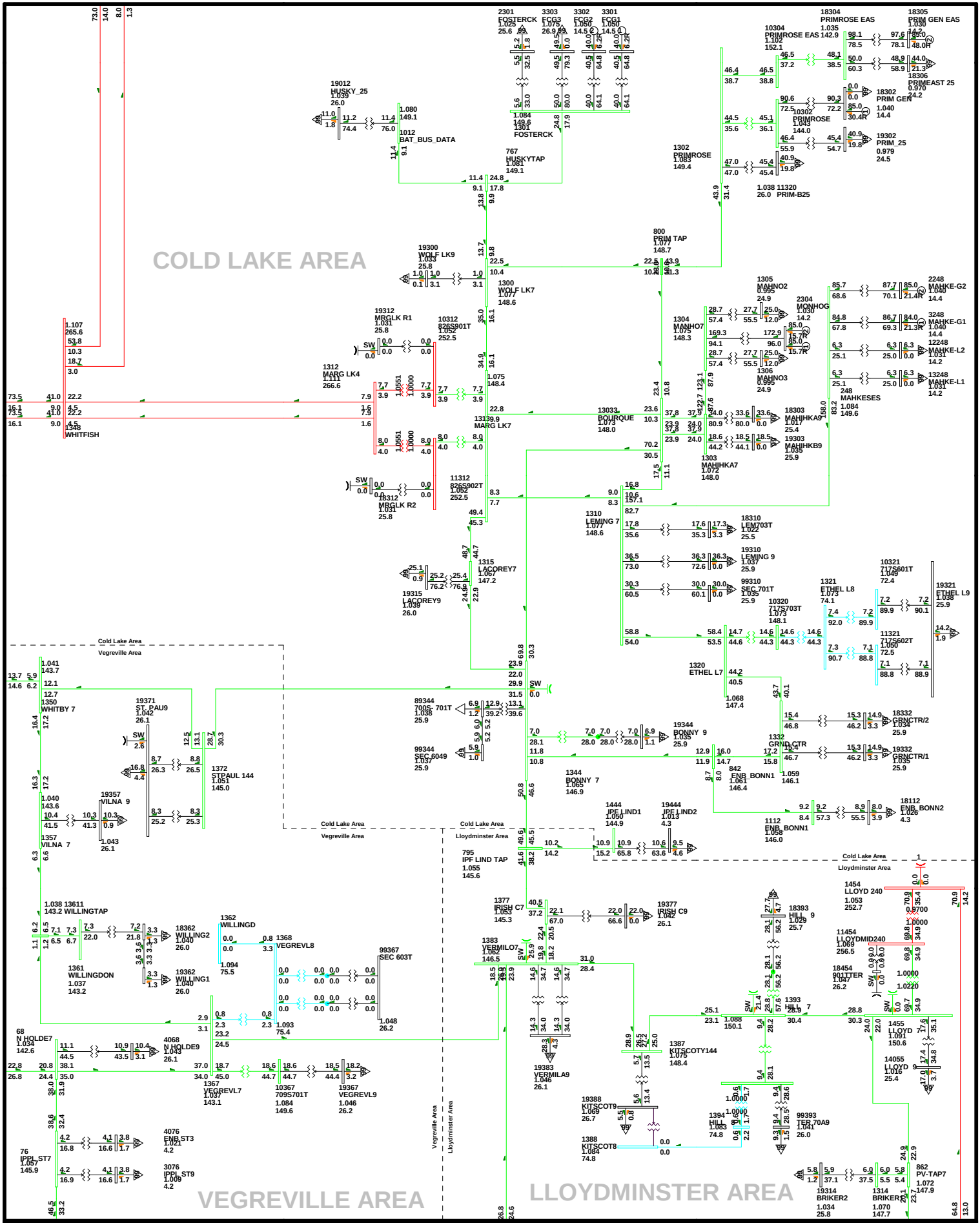
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 11:20
D1-28

2017SP-Alt 3 BR#5 ON-9.b

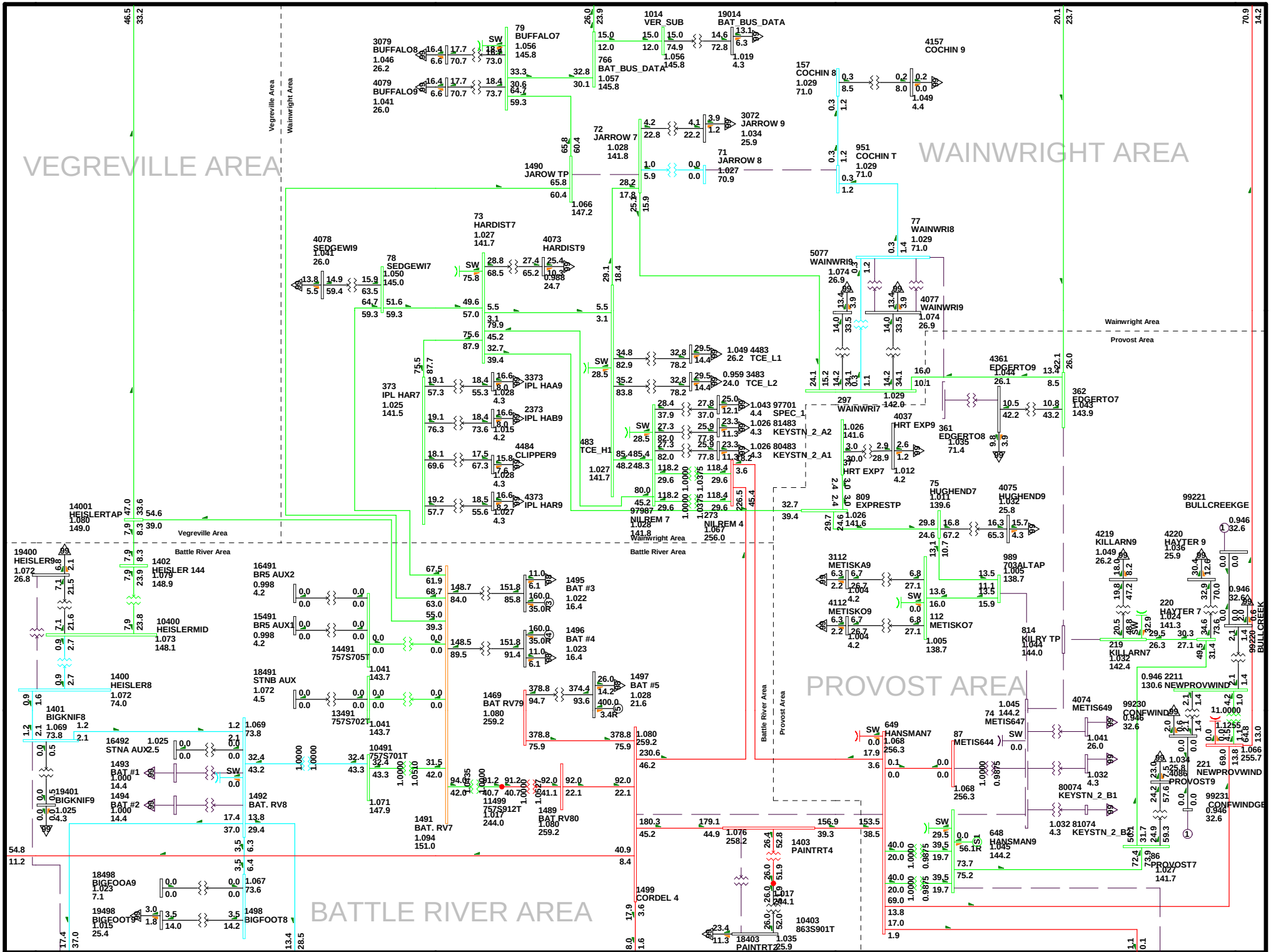
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
MON, APR 12 2010 10:54
D1-29

2017SP-Alt 3 BR#5 ON-10.a

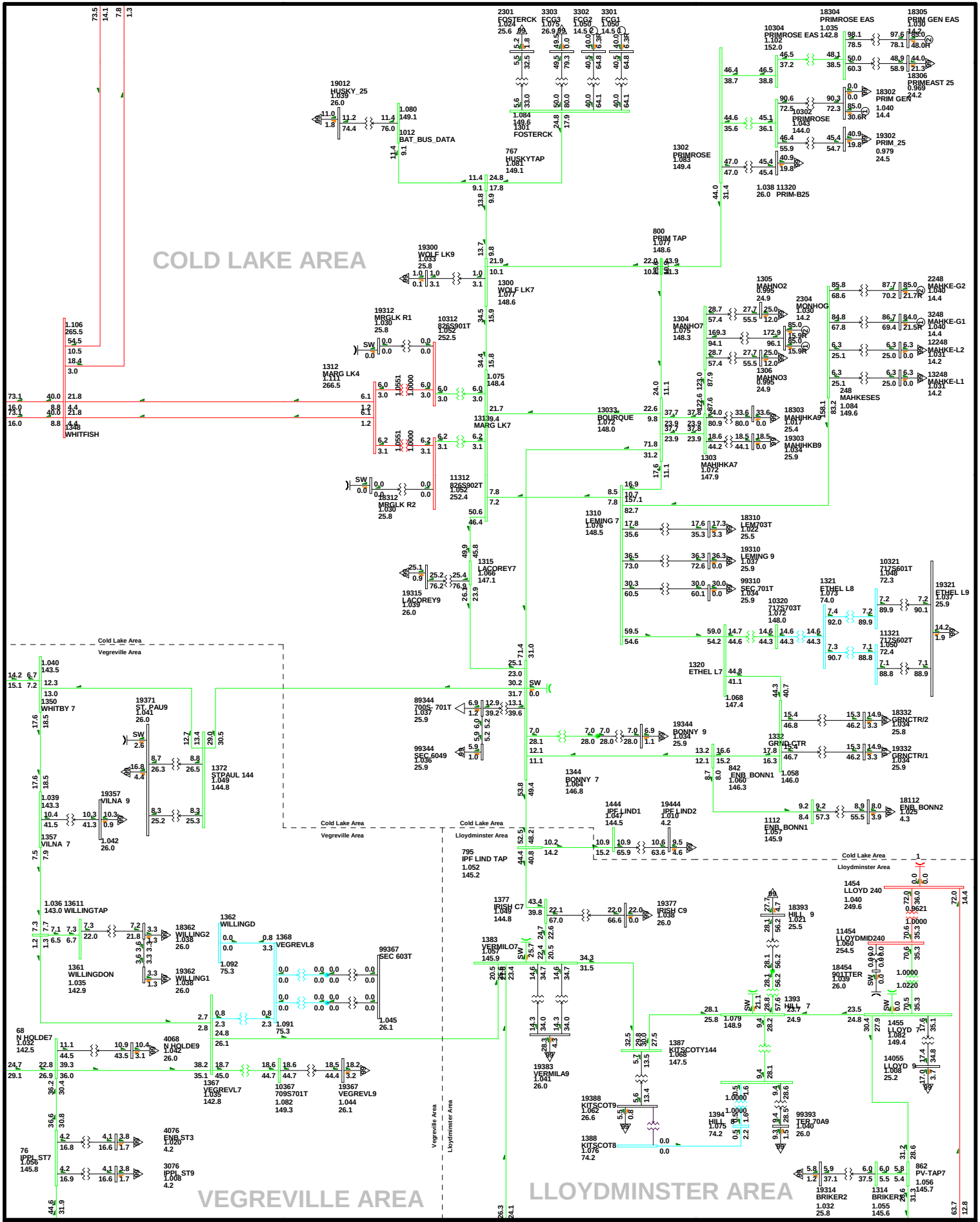
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
MON, APR 12 2010 10:54
D1-29

2017SP-Alt 3 BR#5 ON-10.b

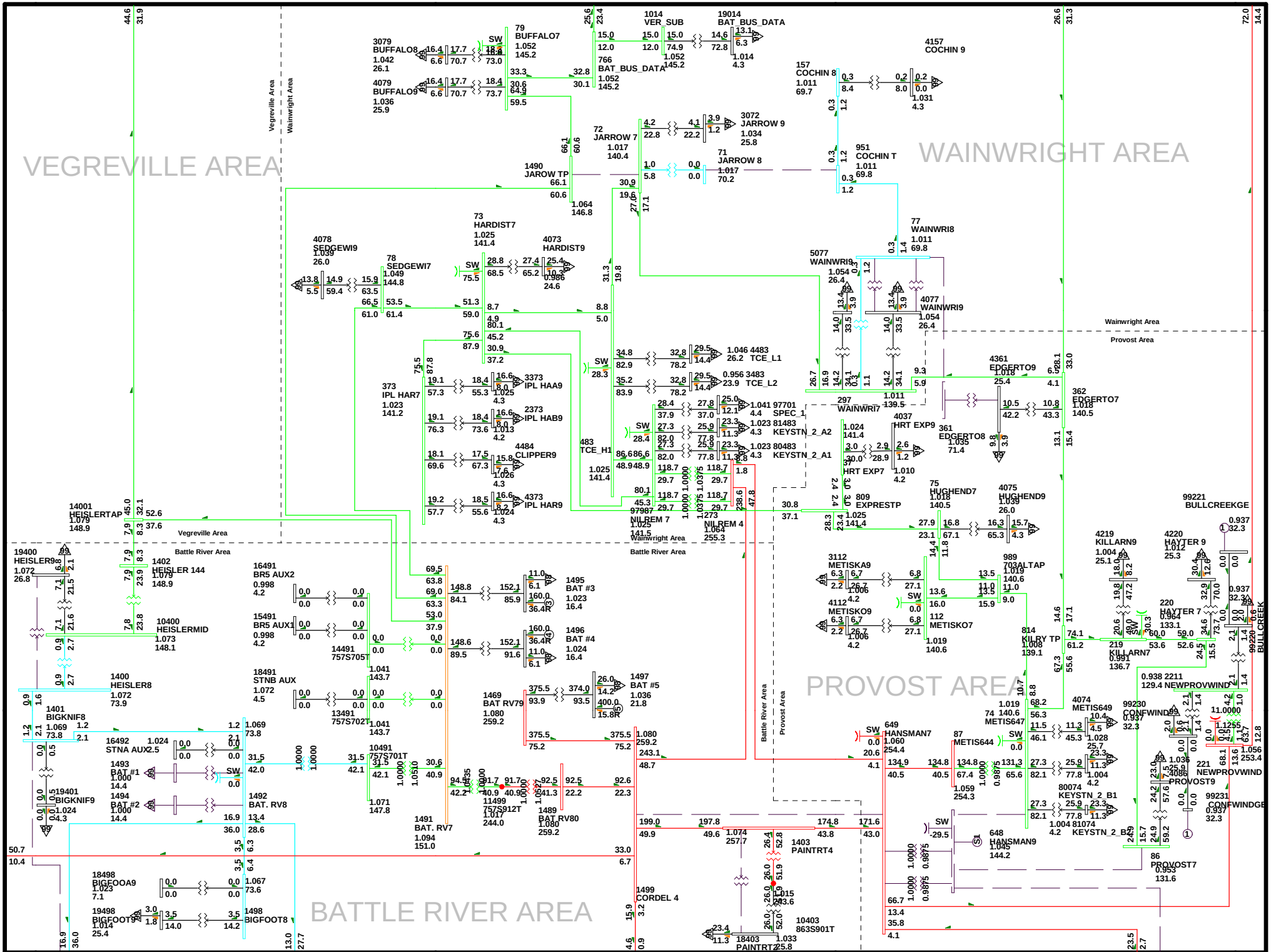
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 11:20
D1-30

2017SP-Alt 3 BR#5 ON-11.a

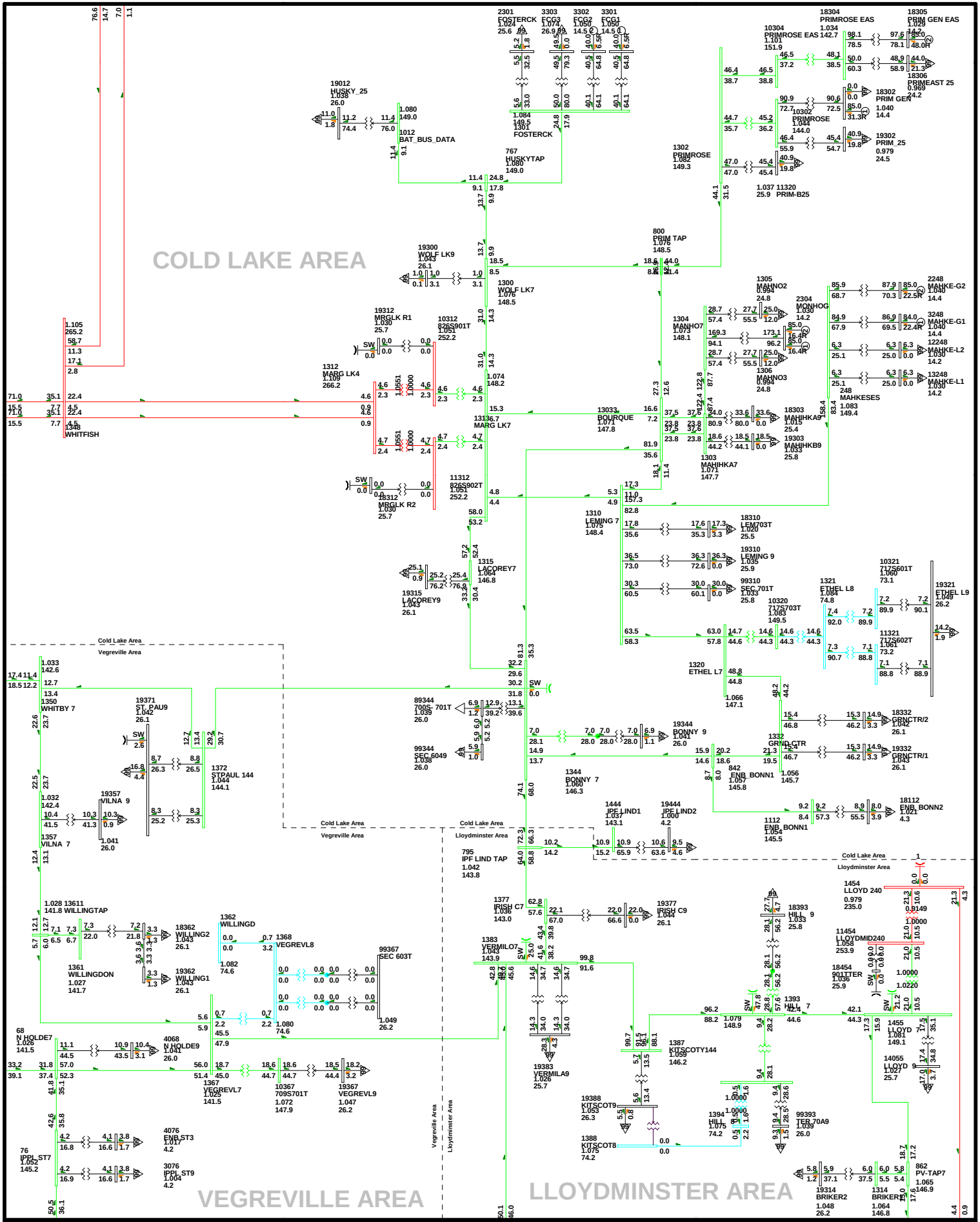
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 11:20
D1-30

2017WP-Alt 3 BR#5 ON-11.b

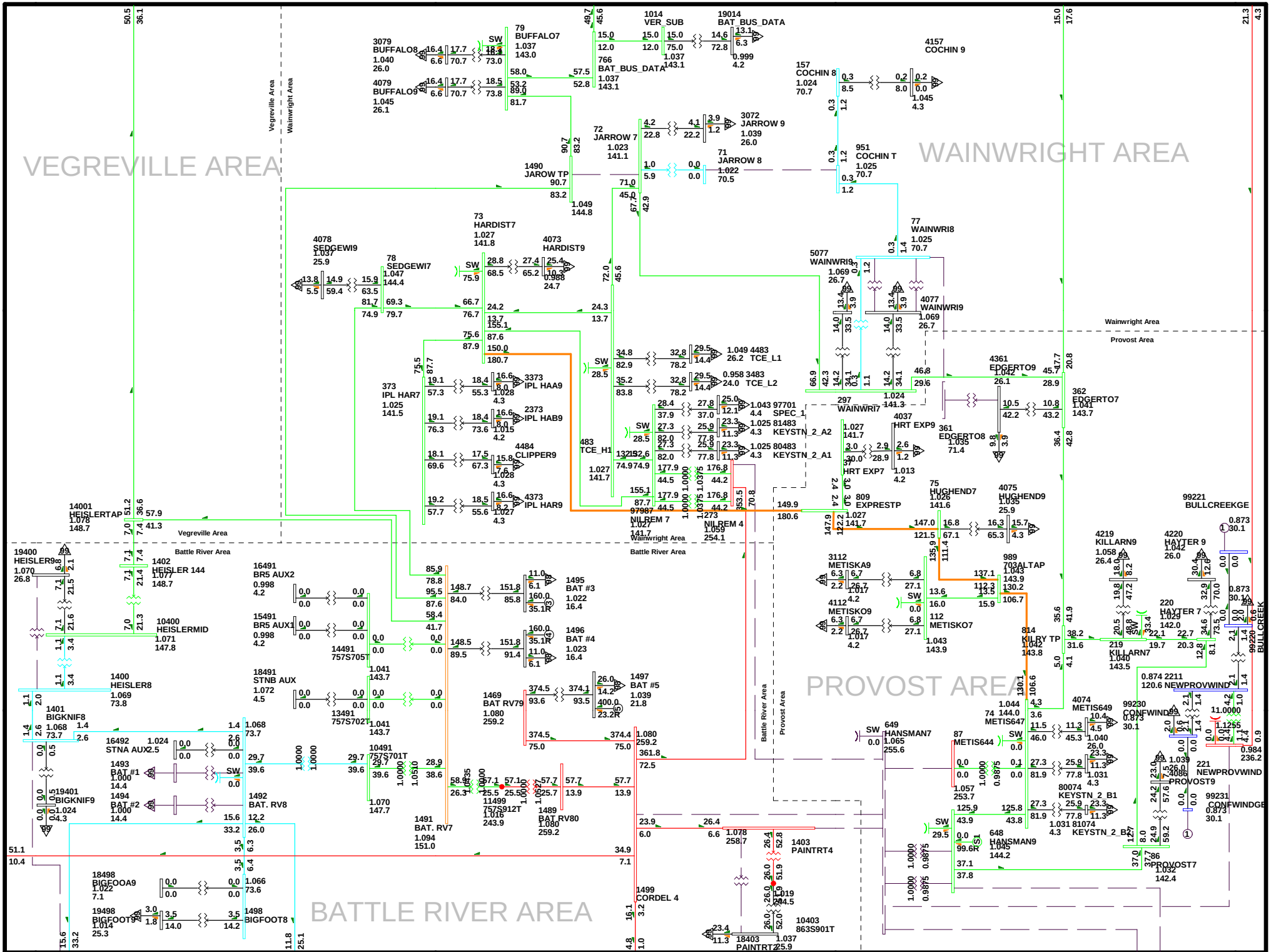
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 11:20
D1-31

2017SP-Alt 3 BR#5 ON-12.a

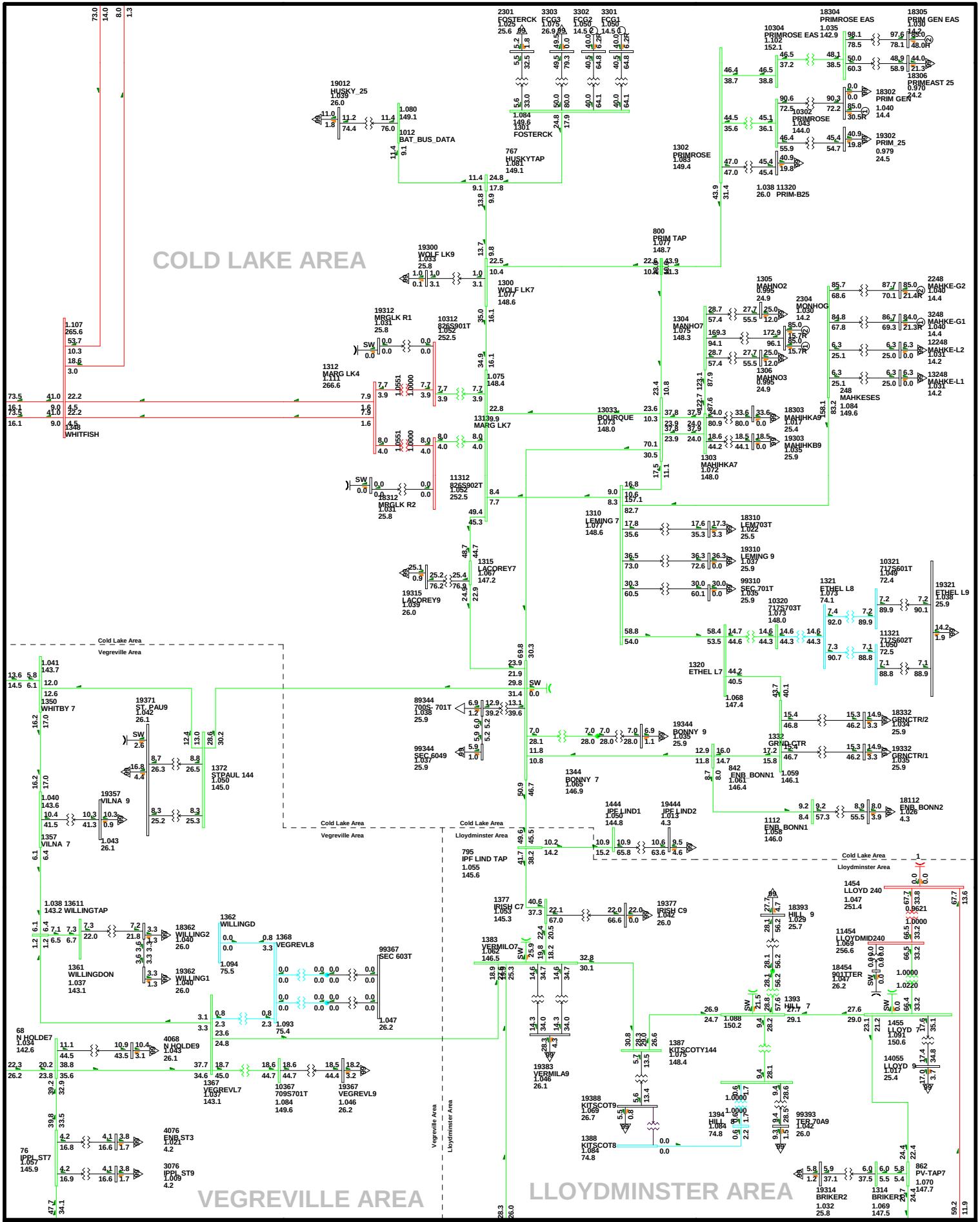
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 11:20
D1-31

2017SP-Alt 3 BR#5 ON-12.b

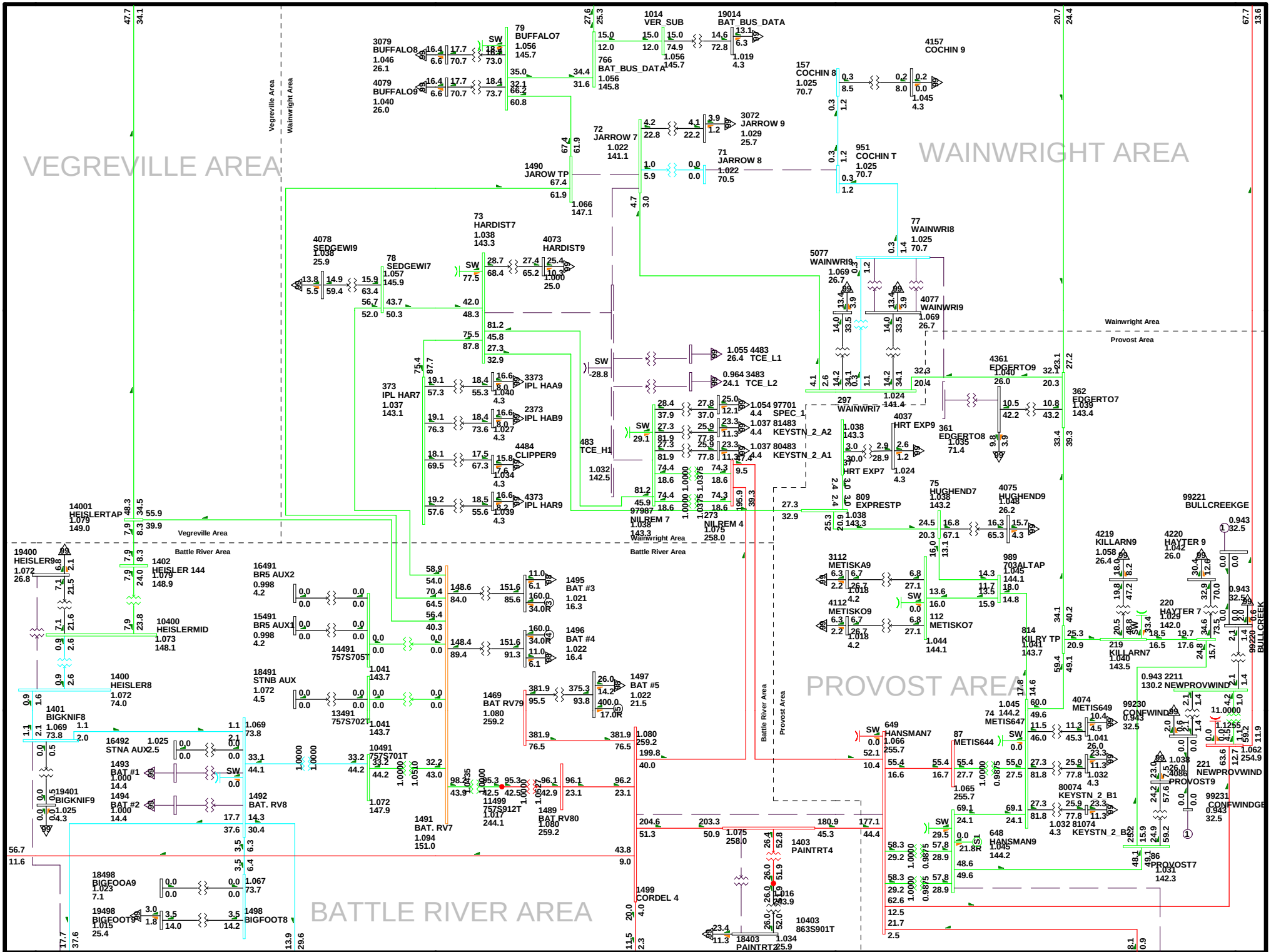
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

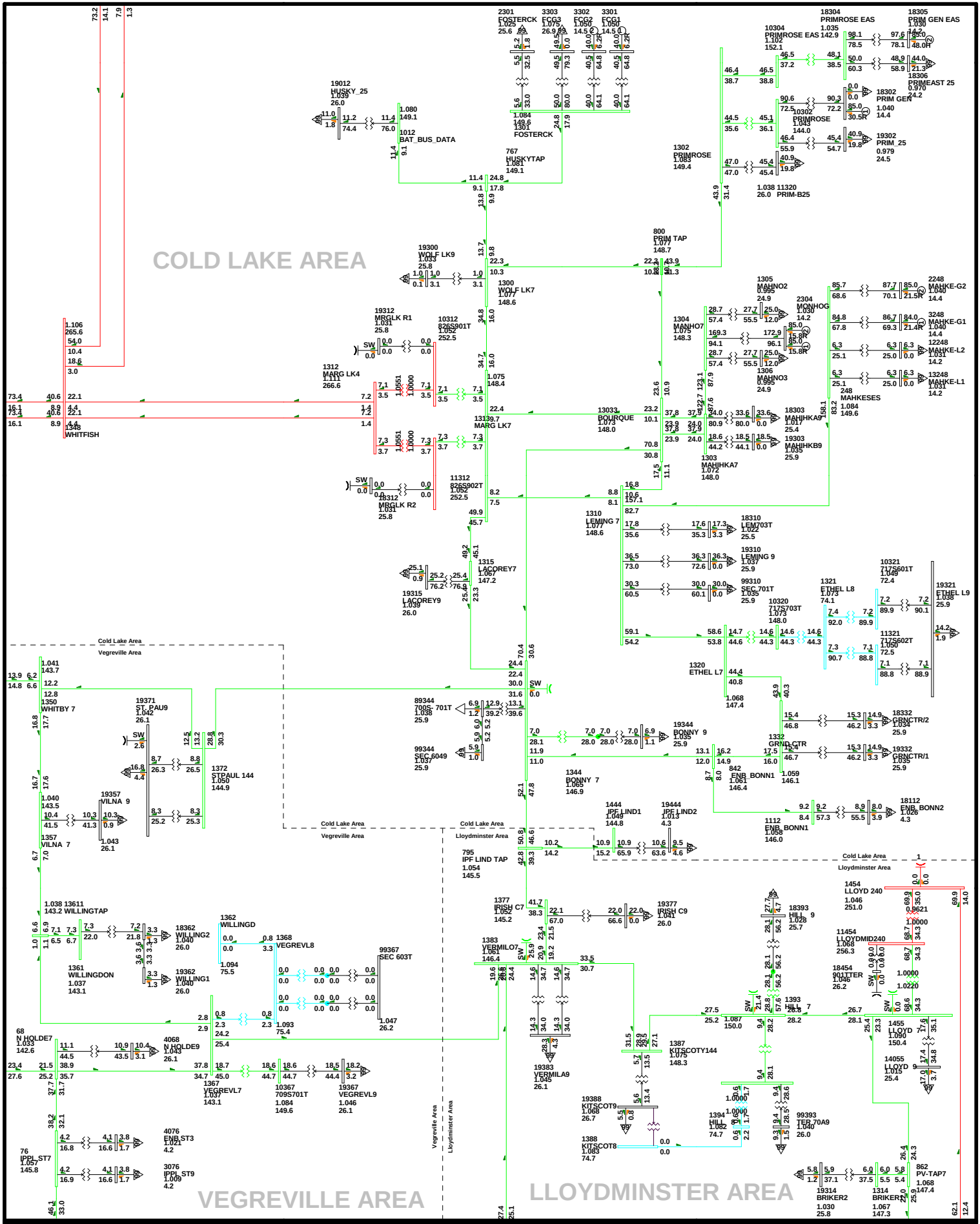


CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 11:20
D1-32

2017SP-Alt 3 BR#5 ON-13.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

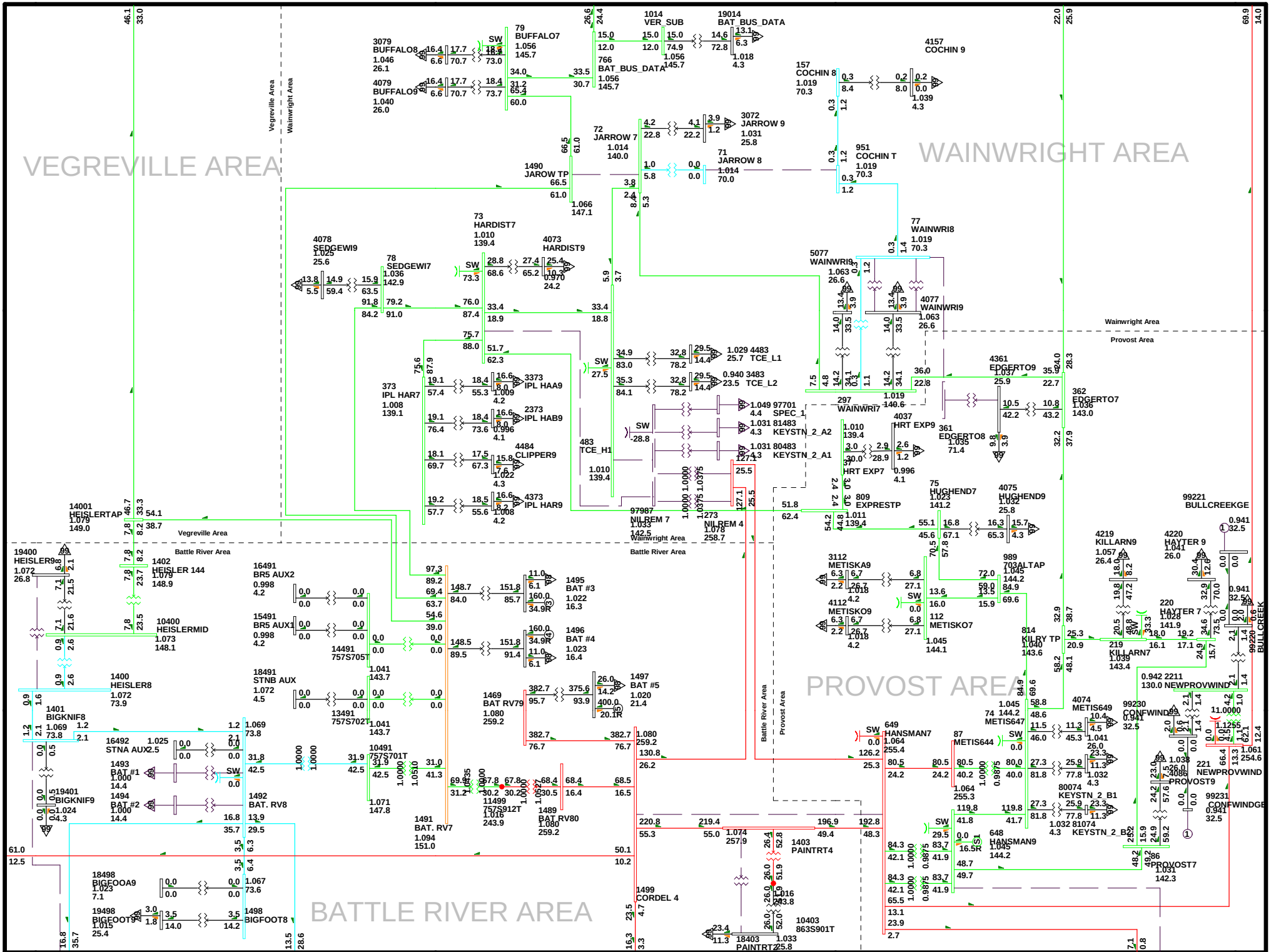

VEGREVILLE AREA
WAINWRIGHT AREA
PROVOST AREA
BATTLE RIVER AREA
Vegreville Area
Wainwright Area
Provost Area
Battle River Area
3079 BUFFALO8 1.046 26.1
4079 BUFFALO9 1.040 26.0
79 BUFFALO7 1.056 145.7
1014 VER_SUB
19014 BAT_BUS_DATA
766 BAT_BUS_DATA 1.056 145.8
4157 COCHIN 9
157 COCHIN 8 1.025 70.7
951 COCHIN T 1.025 70.7
1.045 4.3
72 JAROW 7 1.022 141.1
3072 JARROW 9 1.029 25.7
71 JAROW 8 1.022 70.5
1490 JAROW TP 67.4 61.9 1.066 147.1
73 HARDIST7 1.038 143.3
4073 HARDIST9 1.000 25.0
4078 SEDGEWI9 1.038 25.9
78 SEDGEWI7 1.057 145.9
77 WAINWRI8 1.025 70.7
5077 WAINWRI9 1.069 26.7
4077 WAINWRI9 1.069 26.7
373 IPL HAR7 1.037 143.1
3373 IPL HAA9 1.040 4.3
2373 IPL HAB9 1.027 4.3
4484 CLIPPER9 1.034 4.3
4373 IPL HAR9 1.039 4.3
483 TCE_H1 1.032 142.5
1.055 4483 26.4 TCE_L1
0.964 3483 24.1 TCE_L2
1.054 97701 4.4 SPEC_1
1.037 81483 4.4 KEYSTN_2_A2
1.037 80483 4.4 KEYSTN_2_A1
297 WAINWRI7 1.024 141.4
4037 HRT EXP9
HRT EXP7 1.024 4.3
361 EDGERTO8 1.035 71.4
4361 EDGERTO9 1.040 26.0
362 EDGERTO7 1.039 143.4
97987 NIL REM 7 1.038 143.3
1273 NIL REM 4 1.075 258.0
809 EXPRESTP 1.038 143.3
75 HUGHEND7 1.038 143.2
4075 HUGHEND9 1.048 26.2
99221 BULLCREEKGE 0.943 32.5
14001 HEISLERTAP 1.079 149.0
19400 HEISLER9 1.072 26.8
1402 HEISLER 144 1.073 148.9
10400 HEISLERMID 1.073 148.1
1400 HEISLER8 1.072 74.0
1401 BIGKNIF8 1.069 73.8
19401 BIGKNIF9 1.025 04.3
16491 BR5 AUX2 0.998 4.2
15491 BR5 AUX1 0.998 4.2
14491 757S705T
18491 STNB AUX 1.072 4.5
13491 757S702T
16492 STNA AUX 1.025 2.5
10491 757S701T
1493 BAT #1 1.000 14.4
1494 BAT #2 1.000 14.4
1492 BAT. RV8 14.3
1491 BAT. RV7 1.094 151.0
1495 BAT #3 1.021 16.3
1496 BAT #4 1.022 16.4
1497 BAT #5 1.022 21.5
1469 BAT RV79 1.080 259.2
11499 757S912T 1.017 244.1
1489 BAT RV80 1.080 259.2
1499 CORDEL 4 1.016 263.9
1403 PAINTRT4
18403 PAINTRT2 1.034 25.9
10403 863S901T
18498 BIGFOOA9 1.023 7.1
19498 BIGFOOT9 1.015 25.4
1498 BIGFOOT8 14.2
3112 METISKA9 1.018 4.2
4112 METISKO9 1.018 4.2
112 METISKO7 1.044 144.1
989 703ALTAP 1.045 144.1
814 KILRY TP 1.041 143.7
4219 KILLARN9 1.058 26.4
219 KILLARN7 1.040 143.5
4220 HAYTER 9 1.042 26.0
220 HAYTER 7 1.029 142.0
99230 CONFWIND9 0.943 32.5
0.943 2211 130.2 NEWPROVWIND
221 NEWPROVWIND 1.062 254.9
99231 CONFWINDGE 0.943 32.5
649 HANSMAN7 1.066 255.7
87 METIS644 1.065 255.7
74 METIS647 1.045 144.2
4074 METIS649 1.041 26.0
80074 KEYSTN_2_B1 1.032
81074 KEYSTN_2_B2 1.032 4.3
648 HANSMAN9 1.045 144.2
86 PROVOST7 1.031 142.3
4086 PROVOST9 1.038 26.0
99 1.038 26.0
CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 11:21
D1-32
2017SP-Alt 3 BR#5 ON-13.b
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

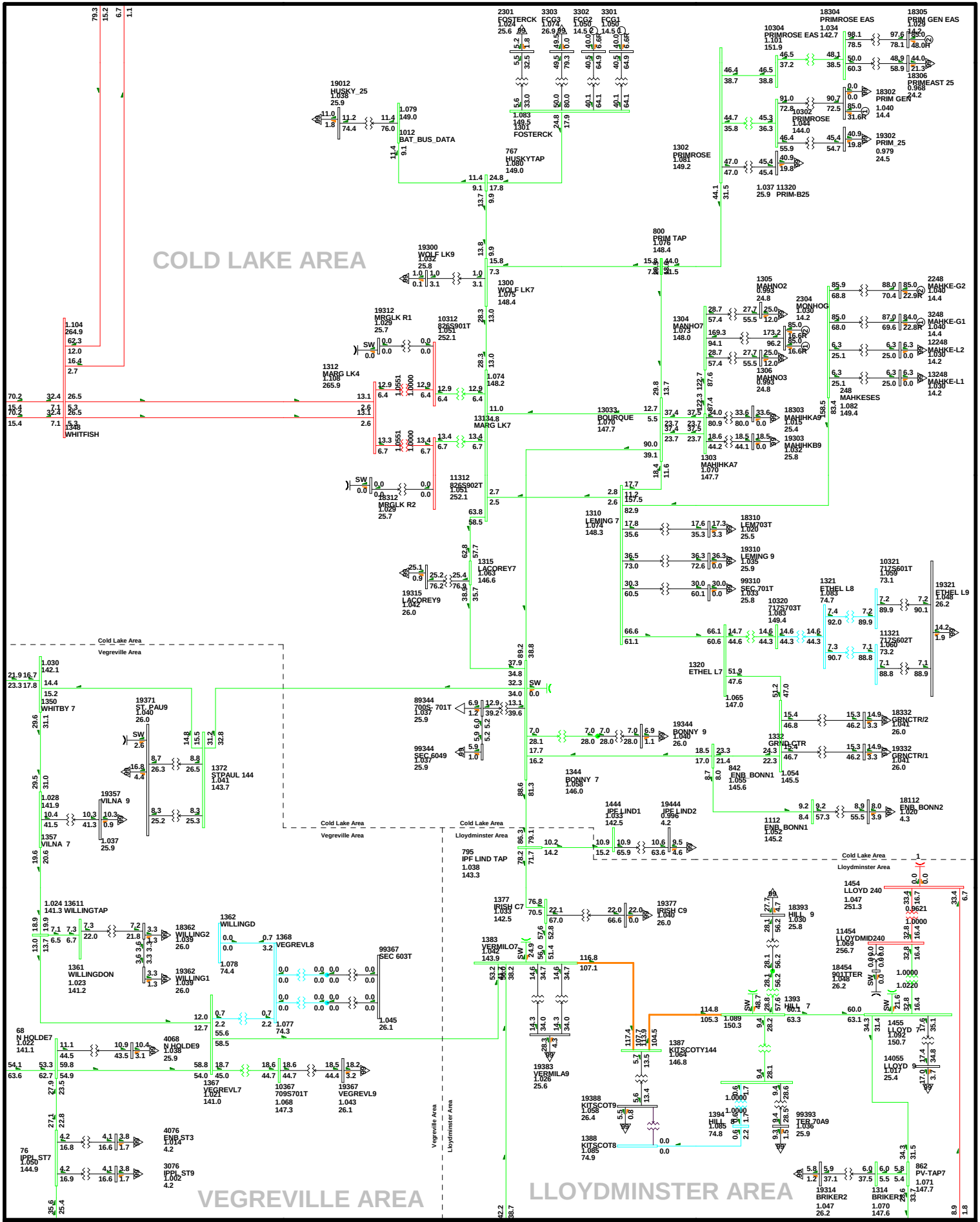


CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 12:00
D1-33

2017SP-Alt 3 BR#5 ON-14.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000

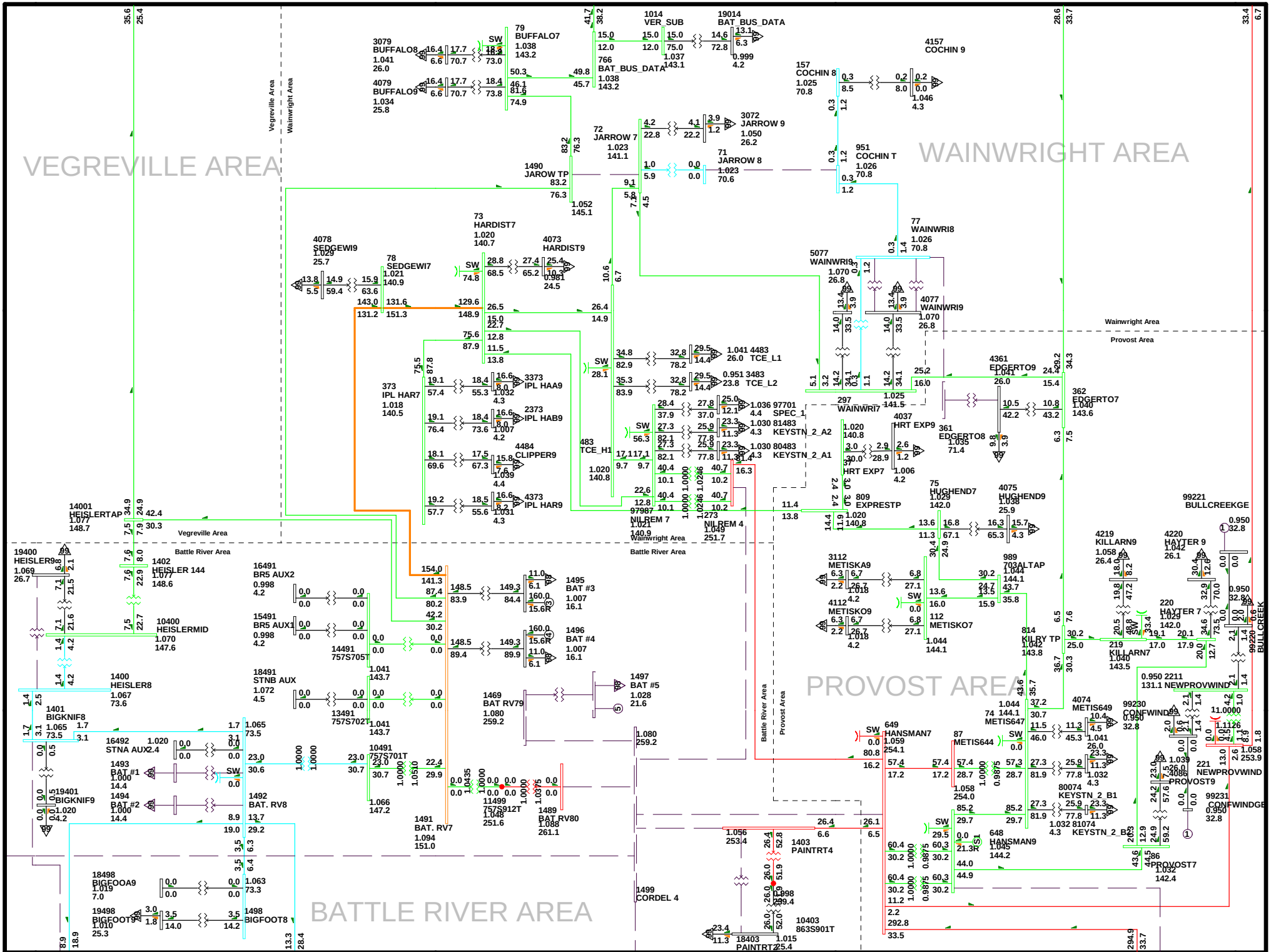

VEGREVILLE AREA
WAINWRIGHT AREA
PROVOST AREA
BATTLE RIVER AREA
Vegreville Area
Wainwright Area
Provost Area
Battle River Area
3079 BUFFALO8 1.046 26.1
4079 BUFFALO9 1.040 26.0
79 BUFFALO7 1.056 145.7
766 BAT_BUS_DATA 1.056 145.7
1014 VER_SUB
19014 BAT_BUS_DATA
4157 COCHIN 9
157 COCHIN 8 1.019 70.3
1039 4.3
951 COCHIN T 1.019 70.3
72 JARROW 7 1.014 140.0
3072 JAROW 9 1.031 25.8
71 JARROW 8 1.014 70.0
1490 JAROW TP 66.5 61.0
1.066 147.1
73 HARDIST7 1.010 139.4
4073 HARDIST9 1.070 24.2
4078 SEDGEWI9 1.025 25.6
78 SEDGEWI7 1.036 142.9
77 WAINWRI8 1.019 70.3
5077 WAINWRI9 1.063 26.6
4077 WAINWRI9 1.063 26.6
373 IPL HAR7 1.008 139.1
3373 IPL HAA9 1.009 4.2
2373 IPL HAB9 0.996 4.1
4484 CLIPPER9 1.022 4.3
4373 IPL HAR9 1.008 4.2
483 TCE_H1 1.010 139.4
1.029 4483 25.7 TCE_L1
0.940 3483 23.5 TCE_L2
1.049 97701 4.4 SPEC_1
1.031 81483 4.3 KEYSTN_2_A2
1.031 80483 4.3 KEYSTN_2_A1
97987 NIL REM 7 1.033 142.5
1273 NIL REM 4 1.078 258.7
297 WAINWRI7 1.019 140.6
4037 HRT EXP9
361 EDGERTO8 1.035 71.4
HRT EXP7 0.996 4.1
4361 EDGERTO9 1.037 25.9
362 EDGERTO7 1.036 143.0
809 EXPRESTP 1.011 139.4
75 HUGHEND7 1.023 141.2
4075 HUGHEND9 1.032 25.8
14001 HEISLERTAP 1.079 149.0
19400 HEISLER9 1.072 26.8
1402 HEISLER 144 1.073 148.9
10400 HEISLERMID 1.073 148.1
1400 HEISLER8 1.072 73.9
1401 BIGKNIF8 1.069 73.8
19401 BIGKNIF9 1.024 04.3
16491 BR5 AUX2 0.998 4.2
15491 BR5 AUX1 0.998 4.2
14491 757S705T
18491 STNB AUX 1.072 4.5
13491 757S702T
16492 STNA AUX 1.025 2.5
1493 BAT #1 1.000 14.4
1494 BAT #2 1.000 14.4
10491 757S701T
1492 BAT. RV8
1491 BAT. RV7 1.094 151.0
1495 BAT #3 1.022 16.3
1496 BAT #4 1.023 16.4
1497 BAT #5 1.020 21.4
1469 BAT RV79 1.080 259.2
11499 757S912T 1.016 243.9
1489 BAT RV80 1.080 259.2
1499 CORDEL 4
1403 PAINTRT4
10403 863S901T
18403 PAINTRT4 1.033 25.8
18498 BIGFOOA9 1.023 7.1
19498 BIGFOOT9 1.015 25.4
1498 BIGFOOT8
649 HANSMAN7 1.064 255.4
87 METIS644
74 METIS647 1.045 144.2
4074 METIS649
648 HANSMAN9 1.045 144.2
80074 KEYSTN_2_B1
81074 KEYSTN_2_B2
3112 METISKA9
4112 METISKO9
112 METISKO7 1.045 144.1
814 KILRY TP 1.040 143.6
989 703ALTAP 1.045 144.2
4219 KILLARN9 1.057 26.4
219 KILLARN7 1.039 143.4
4220 HAYTER 9 1.041 26.0
220 HAYTER 7 1.028 141.9
99221 BULLCREEKGE
99229 BULLCREEK
0.942 2211 130.0 NEWPROVWIND
99230 CONFWIND9 0.941 32.5
99231 CONFWINDGE 0.941 32.5
221 NEWPROVWIND 1.061 254.6
PROVOST9 1.038 26.0
4086 PROVOST7 1.031 142.3
CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 12:00
D1-33
2017SP-Alt 3 BR#5 ON-14.b
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 11:21
D1-34

2017SP-Alt 3 BR#5 ON-15.a

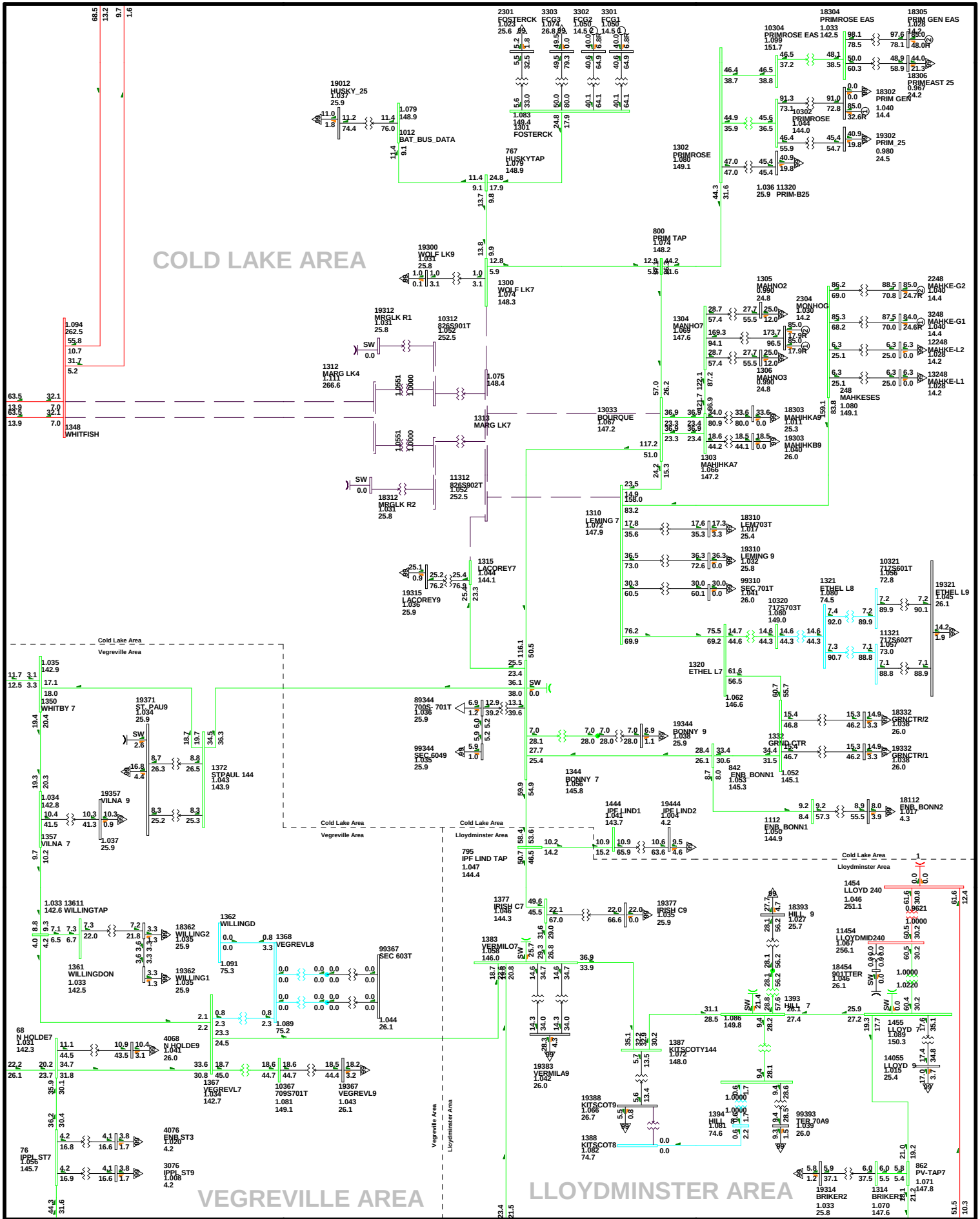
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 11:21
D1-34

2017SP-Alt 3 BR#5 ON-15.b

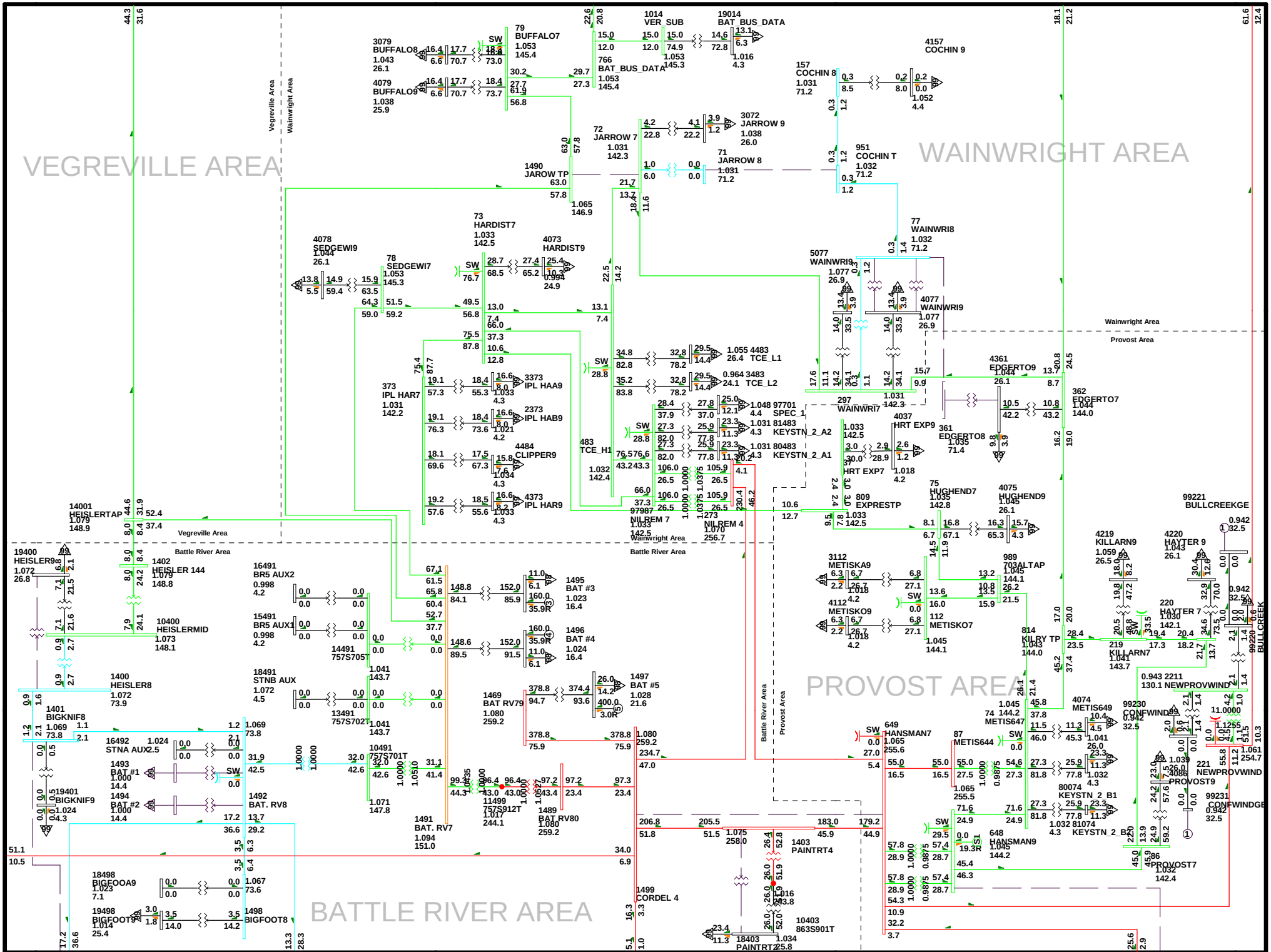
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 11:21
D1-35

2017SP-Alt 3 BR#5 ON-16.a

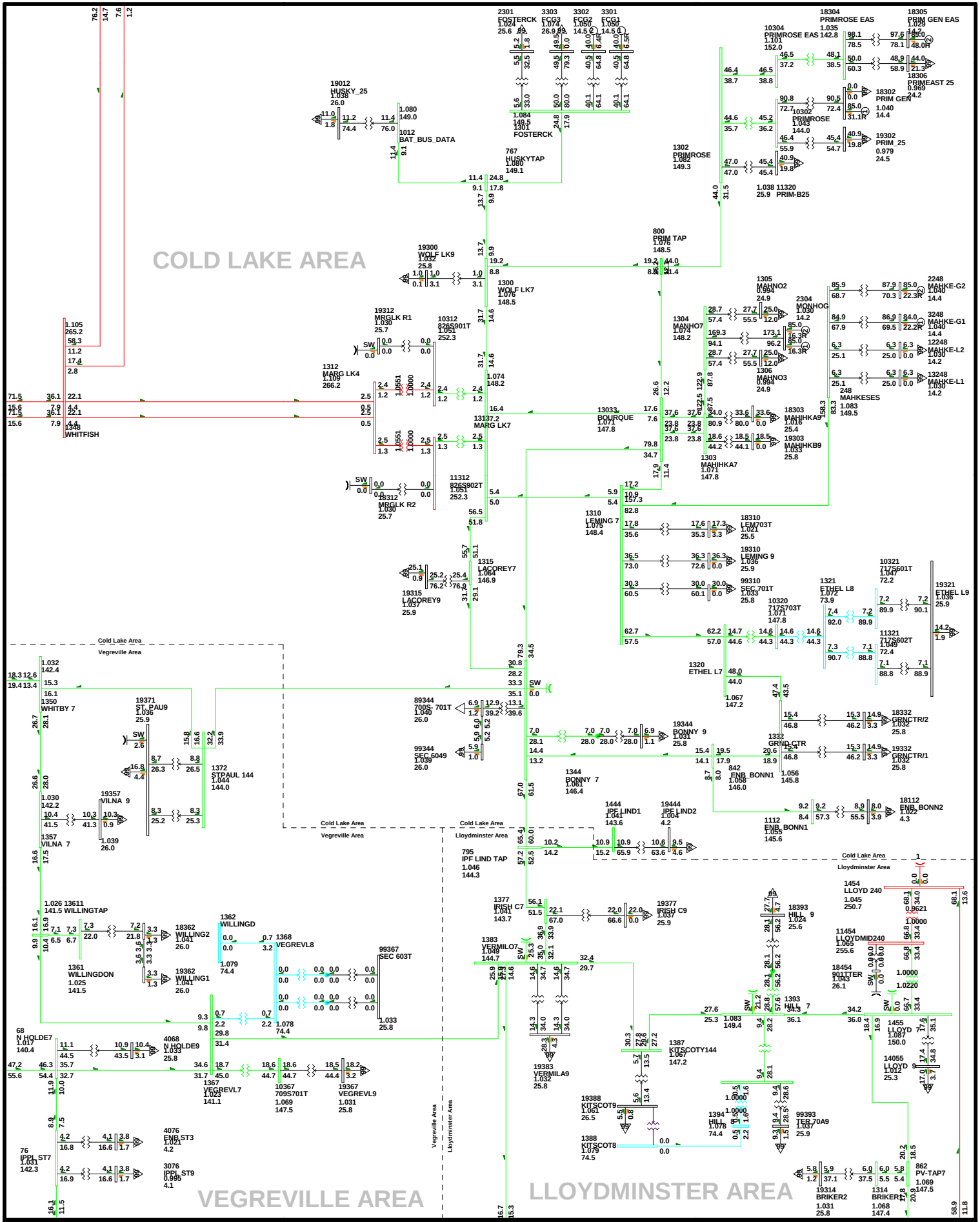
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 11:21
D1-35

2017SP-Alt 3 BR#5 ON-16.b

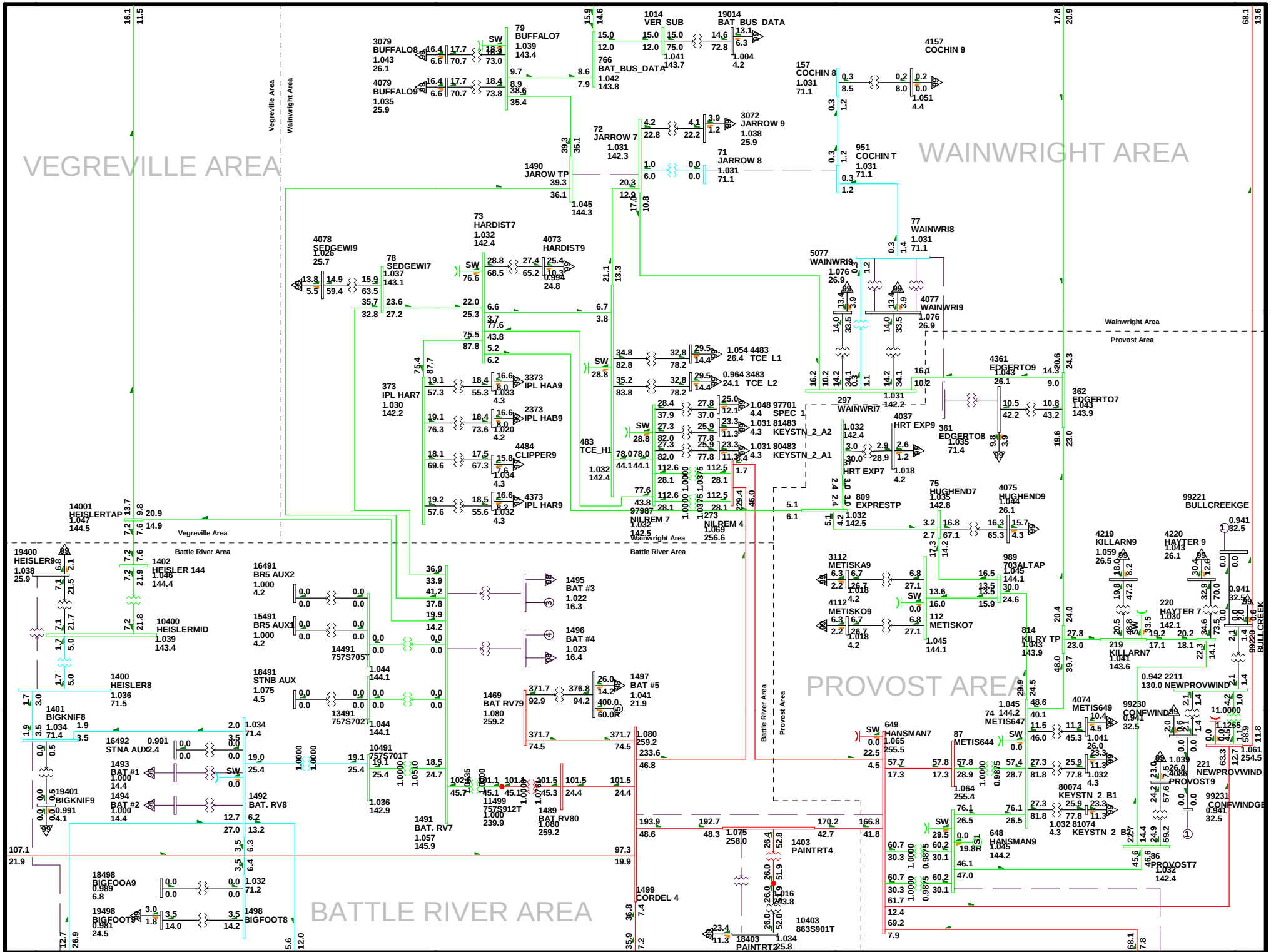
Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 11:21
D1-36

2017SP-Alt 3 BR#5 ON-17.a

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.120OV 0.940UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000



CENTRAL AREA STUDY
2017 SUMMER PEAK BASE CASE REVISION 7.2
FRI, APR 09 2010 11:21
D1-36

2017SP-Alt 3 BR#5 ON-17.b

Bus - VOLTAGE (kV/PU)
Branch - MVA/% OF RATE A
Equipment - MW/Mvar
100.0%RATEA
1.090OV 0.920UV
kV: >0.000 <=35.000 <=69.000 <=138.000 <=240.000