

Voltage Drop Study Review Field Measurement Comparison to Calculated Voltage Drop

Introduction

Milsoft Utility Solutions, Inc. WindMil software package was used to produce all voltage drop studies as part of Clark Energy's 2006-2010 Construction Work Plan as well as other in-house studies related to system operation and performance. Each consumer's actual usage data and metered substation demands from East Kentucky Power for peak winter and summer loads were utilized in calculating each circuit's voltage drop and performance. Clark Energy has investigated the accuracy of calculated voltage drop versus measured voltages at multiple locations throughout the distribution system. This comparison was prepared with system loads occurring in July 2005.

Calculated Voltage Analysis Results

A sample of twenty four distribution feeders was selected to compare calculated WindMil voltage levels with actual field measurements. Field measurement data was retrieved manually without an actual peak time and date stamp from primary voltage regulators after the system summer peak in July of 2005 and before peak data was reset by the system winter peak. Voltage regulator data and WindMil results are provided on a 120 volt base and are summarized in the table on pages 2 - 3 of this report. This summary includes line sections and page numbers from the WindMil voltage drop calculations that correspond with regulator locations. Each page listed in the summary is included on pages 4 - 32 of this report. Regulator, line section and page number are highlighted in yellow on the WindMil report.

Voltage Comparison Results

Voltage levels calculated using the WindMil model compare favorably with minimum voltages recorded by each regulator. Calculated voltages vary by an average of 1.2 volts or 1% on a 120 volt base when compared to regulator data. The minor variances or those outside the recommended 2 volts can be attributed to noncoincident loading and tolerances of the equipment.

Comparison of Actual and Calculated Voltage Levels – July 2005 Load

REGULATOR NAME	LINE SECTION	CIRCUIT	PHASE	REGULATOR VOLTAGE	WINDMIL CALCULATED VOLTAGE	VOLTAGE VARIANCE	READING DATE	WINDMIL REPORT PAGE
RG.15	PL.6878	Blevins 2	B	121.0	122.3	-1.3	11/11/05	59/60
RG.15	PL.6878	Blevins 2	C	120.5	123.0	-2.5	11/11/05	59/60
RG.20	PL.28128	Bowen 1	A	121.0	122.6	-1.6	11/11/05	133
RG.20	PL.28128	Bowen 1	B	121.7	117.8	3.9	11/11/05	133
RG.20	PL.28128	Bowen 1	C	124.2	124.0	0.2	11/11/05	133
RG.22	PL.6947	Clay City 1	A	125.7	123.1	2.6	11/10/05	242
RG.12	PL.27920	Frenchburg 3	A	122.0	123.0	-1.0	11/11/05	344
RG.12	PL.27920	Frenchburg 3	B	122.1	120.7	1.4	11/11/05	344
RG.12	PL.27920	Frenchburg 3	C	122.5	123.2	-0.7	11/11/05	344
RG.11	PL.37744	Frenchburg 1	A	123.9	124.6	-0.7	11/10/05	374
RG.11	PL.37744	Frenchburg 1	B	123.6	124.4	-0.8	11/10/05	374
RG.11	PL.37744	Frenchburg 1	C	123.2	124.1	-0.9	11/10/05	374
RG.16	PL.9470	Frenchburg 1	A	119.5	120.5	-1.0	11/10/05	382
RG.16	PL.9470	Frenchburg 1	B	121.1	119.0	2.1	11/10/05	382
RG.16	PL.9470	Frenchburg 1	C	118.1	119.0	-0.9	11/10/05	382
RG.10	PL.27925	Frenchburg 4	A	125.4	123.4	2.0	11/10/05	436
RG.10	PL.27925	Frenchburg 4	B	125.3	125.7	-0.4	11/10/05	436
RG.10	PL.27925	Frenchburg 4	C	124.9	125.3	-0.4	11/10/05	436
RG.25	PL.20082	Hardwick Creek 2	A	124.9	126.3	-1.4	11/10/05	547
RG.25	PL.20082	Hardwick Creek 2	B	124.1	125.3	-1.2	11/10/05	547
RG.25	PL.20082	Hardwick Creek 2	C	124.6	125.1	-0.5	11/11/05	547
RG.28	PL.46110	Highrock	A	126.1	125.9	0.2	11/10/05	555
RG.21	PL.16159	Hunt 4	A	124.9	122.1	2.8	11/03/05	744
RG.21	PL.16159	Hunt 4	B	125.1	123.3	1.8	11/03/05	744
RG.21	PL.16159	Hunt 4	C	124.8	123.2	1.6	11/03/05	744
RG.23	PL.20618	Hunt 2	A	124.8	124.6	0.2	11/09/05	804
RG.3	PL.16752	Hunt 3	A	124.8	124.0	0.8	11/03/05	817
RG.3	PL.16752	Hunt 3	B	124.9	123.4	1.5	11/03/05	817
RG.3	PL.16752	Hunt 3	C	124.6	121.5	3.1	11/03/05	817
RG.4	PL.27919	Jeffersonville 1	A	126.1	125.6	0.5	11/10/05	930
RG.4	PL.27919	Jeffersonville 1	B	125.7	124.8	0.9	11/10/05	930
RG.4	PL.27919	Jeffersonville 1	C	124.0	124.2	-0.2	11/10/05	930
RG.8	PL.20620	Jeffersonville 2	A	124.0	124.6	-0.6	11/10/05	974
RG.8	PL.20620	Jeffersonville 2	B	123.1	124.0	-0.9	11/10/05	974
RG.8	PL.20620	Jeffersonville 2	C	124.5	125.6	-1.1	11/10/05	974
RG.30	PL.29071	Mariba 3	A	123.7	120.7	3.0	10/20/05	1086
RG.30	PL.29071	Mariba 3	B	126.1	123.7	2.4	10/20/05	1086
RG.30	PL.29071	Mariba 3	C	124.3	121.5	2.8	10/20/05	1086
RG.29	PL.22670	Miller Hunt 2	A	124.4	126.1	-1.7	11/09/05	1154
RG.29	PL.22670	Miller Hunt 2	B	124.5	126.1	-1.6	11/06/05	1154
RG.29	PL.22670	Miller Hunt 2	C	123.9	125.6	-1.7	11/09/05	1154
RG.5	PL.28137	Mt. Sterling 3	A	123.8	122.7	1.1	11/09/05	1199
RG.7	PL.28126	Mt. Sterling 2	A	125.9	124.6	1.3	11/09/05	1224

RG.14	PL.28140	Reidvillage 2	A	124.9	124.6	0.3	11/06/05	1343
RG.14	PL.28140	Reidvillage 2	B	125.2	125.8	-0.6	11/06/05	1343
RG.14	PL.28140	Reidvillage 2	C	124.0	124.9	-0.9	11/06/05	1343
RG.17	PL.9940	Sideview 4	A	123.4	124.1	-0.7	11/06/05	1446
RG.17	PL.9940	Sideview 4	B	122.7	119.4	3.3	11/06/05	1446
RG.17	PL.9940	Sideview 4	C	125.1	125.0	0.1	11/06/05	1446
RG.13	PL.26640	Sideview 2	A	125.6	125.5	0.1	11/08/05	1484
RG.13	PL.26640	Sideview 2	B	125.9	125.0	0.9	11/08/05	1484
RG.13	PL.26640	Sideview 2	C	126.3	125.6	0.7	11/08/05	1484
RG.9	PL.27921	Sideview 2	A	125.5	125.6	-0.1	11/08/05	1491
RG.9	PL.27921	Sideview 2	B	125.1	125.7	-0.6	11/08/05	1491
RG.9	PL.27921	Sideview 2	C	126.5	125.6	0.9	11/09/05	1491
RG.1	PL.30925	Three Forks 1	A	124.9	126.0	-1.1	11/09/05	1744/1745
RG.1	PL.30925	Three Forks 1	B	126.0	124.9	1.1	11/03/05	1744/1745
RG.1	PL.30925	Three Forks 1	C	125.9	123.4	2.5	11/03/05	1744/1745
RG.2	PL.25439	Union City 2	A	124.9	125.3	-0.4	11/09/05	1934
RG.2	PL.25439	Union City 2	B	125.7	124.7	1.0	11/09/05	1934
RG.2	PL.25439	Union City 2	C	125.6	125.7	-0.1	11/09/05	1934
RG.31	PL.43109	Tree Haven 4	A	126.6	125.7	0.9	11/06/05	1967
RG.31	PL.43109	Tree Haven 4	B	125.5	125.8	-0.3	11/06/05	1967
RG.31	PL.43109	Tree Haven 4	C	126.3	125.8	0.5	11/06/05	1967
RG.35	PL.10333	VanMeter 3	A	123.3	121.0	2.3	11/08/05	1973
RG.35	PL.10333	VanMeter 3	B	124.2	122.8	1.4	11/08/05	1973
RG.35	PL.10333	VanMeter 3	C	124.3	122.2	2.1	11/08/05	1973
RG.18	PL.27923	VanMeter 3	A	126.0	124.8	1.2	11/08/05	1976
RG.18	PL.27923	VanMeter 3	B	126.0	125.7	0.3	11/08/05	1976
RG.18	PL.27923	VanMeter 3	C	126.2	125.0	1.2	11/08/05	1976

Unbalanced Voltage Drop Report
Source: BLEVINS VALLEY

Detail

Database: G:\3884\70024\WORK PRODUCTS\WINDMIL MODELS\SUMMER\EXISTING JUL05 CWP.WM\
Title:
Case:

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Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Units Displayed In Volts -Base Voltage:120.0-					Thru KW	% PF	kW Loss	% Loss	mi From Src	Length (mi)	-----Element-----			
							Accum Drop	Thru Amps	% Cap	Thru KW	KVAR							Cons On	Cons Thru		
443910	PL.42729	A	Consumer	7.43Y	123.9	0.00	2.09	0.45	0	3	1	95	0.00	0.0	4.979	0.000	3	1	1	1	
PL.13174	PD.8549	A	4ACSR	7.44Y	123.9	0.00	2.06	0.46	0	3	1	95	0.00	0.0	4.919	0.048	0	0	0	1	
443911	PL.13174	A	Consumer	7.44Y	123.9	0.00	2.06	0.46	0	3	1	95	0.00	0.0	4.919	0.000	3	1	1	1	
PL.42730	PL.13171	A	4ACSR	7.44Y	124.0	0.00	1.97	0.83	1	6	2	95	0.00	0.0	4.744	0.005	0	0	0	1	
PD.8550	PL.42730	A	fuse6AMP	7.44Y	124.0	0.00	1.97	0.83	14	6	2	95	0.00	0.0	4.744	0.000	0	0	0	1	
PL.42731	PD.8550	A	4ACSR	7.44Y	124.0	0.00	1.98	0.83	1	6	2	95	0.00	0.0	4.801	0.057	0	0	0	1	
443913	PL.42731	A	Consumer	7.44Y	124.0	0.00	1.98	0.83	0	6	2	95	0.00	0.0	4.801	0.000	6	2	1	1	
PL.42734	PL.42737	A	4ACSR	7.46Y	124.3	0.00	1.74	0.54	0	4	2	89	0.00	0.0	4.411	0.005	0	0	0	2	
PD.8552	PL.42734	A	fuse6AMP	7.46Y	124.3	0.00	1.74	0.54	9	4	2	89	0.00	0.0	4.411	0.000	0	0	0	2	
PL.42735	PD.8552	A	4ACSR	7.46Y	124.3	0.00	1.74	0.54	0	4	2	89	0.00	0.0	4.461	0.050	0	0	0	2	
PL.29894	PL.42735	A	4ACSR	7.46Y	124.3	0.00	1.74	0.54	0	4	2	89	0.00	0.0	4.512	0.051	0	0	0	2	
4439015	PL.29894	A	Consumer	7.46Y	124.3	0.00	1.74	0.00	0	0	0	100	0.00	0.0	4.512	0.000	0	0	1	1	
PL.29895	PL.29894	A	4ACSR	7.46Y	124.3	0.00	1.74	0.54	0	4	2	89	0.00	0.0	4.591	0.080	0	0	0	1	
443914	PL.29895	A	Consumer	7.46Y	124.3	0.00	1.74	0.54	0	4	2	89	0.00	0.0	4.591	0.000	4	2	1	1	
PL.13210	PL.13209	A	4ACSR	7.48Y	124.6	0.00	1.41	2.08	2	14	6	92	0.00	0.0	3.991	0.038	0	0	0	3	
443907	PL.13210	A	Consumer	7.48Y	124.6	0.00	1.41	0.92	0	6	3	89	0.00	0.0	3.991	0.000	6	3	1	1	
4439016	PL.13210	A	Consumer	7.48Y	124.6	0.00	1.41	0.55	0	4	2	89	0.00	0.0	3.991	0.000	4	2	1	1	
443906	PL.13210	A	Consumer	7.48Y	124.6	0.00	1.41	0.60	0	4	2	89	0.00	0.0	3.991	0.000	4	2	1	1	
PL.43121	PL.12220	B C	6ACWC	7.37Y 7.41Y	122.8 123.5	0.19 0.18	3.16 2.49	45.17 56.77	38 48	306 386	133 169	92 92	1.02 0.1	0.1	3.871	0.084	0 0	0 0	0 0	89 117	
PL.43128	PL.43121	C	6ACWC	7.41Y	123.5	0.00	2.49	0.00	0	0	0	100	0.00	0.0	3.957	0.086	0	0	0	0	
443824	PL.43121	B	Consumer	7.37Y	122.8	0.00	3.16	0.33	0	2	1	89	0.00	0.0	3.871	0.000	2	1	1	1	
4438074	PL.43121	B	Consumer	7.37Y	122.8	0.00	3.16	0.36	0	2	1	89	0.00	0.0	3.871	0.000	2	1	1	1	
PL.43124	PL.43121	B C	4ACSR	7.37Y 7.41Y	122.8 123.5	0.00 -0.00	3.16 2.49	0.22 0.00	0 0	1 0	1 0	71 100	0.00 0.00	0.0	3.881	0.010	0 0	0 0	0 0	1 0	
PD.8129	PL.43124	B	fuse6AMP	7.37Y	122.8	0.00	3.16	0.22	4	1	1	71	0.00	0.0	3.881	0.000	0	0	0	1	
PL.43125	PD.8129	B	4ACSR	7.37Y	122.8	0.00	3.16	0.22	0	1	1	71	0.00	0.0	3.937	0.056	0	0	0	1	
443847	PL.43125	B	Consumer	7.37Y	122.8	0.00	3.16	0.22	0	1	1	71	0.00	0.0	3.937	0.000	1	1	1	1	
PL.43126	PL.43121	B C	6ACWC	7.36Y 7.41Y	122.7 123.4	0.10 0.09	3.25 2.58	44.26 56.77	38 48	299 385	130 169	92 92	0.51 0.1	0.1	3.913	0.042	0 0	0 0	0 0	86 117	
443821	PL.43126	C	Consumer	7.41Y	123.4	0.00	2.58	0.84	0	6	2	95	0.00	0.0	3.913	0.000	6	2	1	1	
PL.43127	PL.43126	B C	6ACWC	7.35Y 7.40Y	122.6 123.3	0.17 0.16	3.42 2.74	44.26 55.93	38 47	299 379	130 166	92 92	0.88 0.1	0.1	3.988	0.075	0 0	0 0	0 0	86 116	
PL.43120	PL.43127	B C	4ACSR	7.35Y 7.39Y	122.5 123.2	0.05 0.05	3.48 2.80	44.26 55.93	37 47	299 379	129 166	92 92	0.28 0.0	0.0	4.012	0.024	0 0	0 0	0 0	86 116	
PL.6878	PL.43120	B C	4ACSR	7.34Y 7.38Y	122.4 123.0	0.15 0.16	3.63 2.96	42.90 55.93	36 47	289 379	125 166	92 92	0.83 0.1	0.1	4.086	0.073	0 0	0 0	0 0	81 116	
443807	PL.6878	B	Consumer	7.34Y	122.4	0.00	3.63	0.13	0	1	0	100	0.00	0.0	4.086	0.000	1	0	1	1	
443857	PL.6878	B	Consumer	7.34Y	122.4	0.00	3.63	0.70	0	5	2	93	0.00	0.0	4.086	0.000	5	2	1	1	
443852	PL.6878	B	Consumer	7.34Y	122.4	0.00	3.63	0.51	0	3	1	95	0.00	0.0	4.086	0.000	3	1	1	1	
PL.28135	PL.6878	B C	4ACSR	7.34Y 7.38Y	122.3 123.0	0.02 0.03	3.65 2.98	41.56 55.93	35 47	280 378	122 165	92 92	0.13 0.0	0.0	4.098	0.012	0 0	0 0	0 0	78 116	

Unbalanced Voltage Drop Report
Source: BLEVINS VALLEY

Database: G:\3884\70024\WORK PRODUCTS\WINDMIL MODELS\SUMMER\EXISTING JUL05 CWP.WM\
Title:
Case:

Units Displayed In Volts																					
-Base Voltage:120.0-																					
Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	Element KW	KVAR	Cons On	Cons Thru	
RG.15	PL.28135	B C	1ph-100A-7	7.56Y 7.56Y	126.0 126.0	-3.65 -2.98	-0.00 -0.00	41.56 55.93	42 56	280 378	122 165	92 92	percent percent	Boost= Boost=	2.99 2.42	Tap= 4.8 Tap= 3.9					78
PL.28136	RG.15	B C	4ACSR	7.53Y 7.52Y	125.4 125.4	0.55 0.59	0.55 0.59	40.36 54.61	34 46	280 378	122 165	92 92	2.92 0	0.4 0	4.377 0	0.279 0	0 0	0 0	0 0	0 0	78 116
PL.13428	PL.28136	B C	4ACSR	7.51Y 7.51Y	125.2 125.2	0.23 0.25	0.78 0.84	40.36 54.49	34 46	279 376	121 164	92 92	1.21 0	0.2 0	4.493 0	0.116 0	0 0	0 0	0 0	0 0	78 115
PL.42696	PL.13428	B C	4ACSR	7.51Y 7.50Y	125.1 125.0	0.12 0.13	0.90 0.97	39.21 54.49	33 46	270 375	118 163	92 92	0.64 0	0.1 0	4.555 0	0.063 0	0 0	0 0	0 0	0 0	75 115
PD.8126-A	PL.42696	B C	Closed	7.51Y 7.50Y	125.1 125.0	0.00 0.00	0.90 0.97	39.21 54.49	0 0	270 375	118 163	92 92	0.00 0	0.0 0	4.555 0	0.000 0	0 0	0 0	0 0	0 0	75 115
PD.8126-B	PD.8126-A	B C	Closed	7.51Y 7.50Y	125.1 125.0	0.00 0.00	0.90 0.97	39.21 54.49	0 0	270 375	118 163	92 92	0.00 0	0.0 0	4.555 0	0.000 0	0 0	0 0	0 0	0 0	75 115
PL.42697	PD.8126-B	B C	4ACSR	7.51Y 7.50Y	125.1 125.0	0.01 0.01	0.91 0.98	39.21 54.49	33 46	270 375	118 163	92 92	0.04 0	0.0 0	4.559 0	0.004 0	0 0	0 0	0 0	0 0	75 115
PL.42694	PL.42697	C	4ACSR	7.50Y	125.0	0.00	0.98	1.46	1	10	4	93	0.00	0.0	4.563	0.004	0	0	0	0	3
PD.8125	PL.42694	C	fuse6AMP	7.50Y	125.0	0.00	0.98	1.46	25	10	4	93	0.00	0.0	4.563	0.000	0	0	0	0	3
PL.42695	PD.8125	C	4ACSR	7.50Y	125.0	0.01	0.99	1.46	1	10	4	93	0.00	0.0	4.640	0.077	0	0	0	0	3
PL.2567	PL.42695	C	4ACSR	7.50Y	125.0	0.00	0.99	0.26	0	2	1	89	0.00	0.0	4.765	0.125	0	0	0	0	1
PL.2566	PL.2567	C	4ACSR	7.50Y	125.0	0.00	0.99	0.26	0	2	1	89	0.00	0.0	4.831	0.066	0	0	0	0	1
444940	PL.2566	C	Consumer	7.50Y	125.0	0.00	0.99	0.26	0	2	1	89	0.00	0.0	4.831	0.000	2	1	1	1	1
PL.2584	PL.42695	C	4ACSR	7.50Y	125.0	0.00	0.99	0.91	1	6	3	89	0.00	0.0	4.674	0.034	0	0	0	0	1
444955	PL.2584	C	Consumer	7.50Y	125.0	0.00	0.99	0.91	0	6	3	89	0.00	0.0	4.674	0.000	6	3	1	1	1
444903	PL.42695	C	Consumer	7.50Y	125.0	0.00	0.99	0.29	0	2	1	89	0.00	0.0	4.640	0.000	2	1	1	1	1
PL.13430	PL.42697	B C	4ACSR	7.49Y 7.48Y	124.8 124.7	0.33 0.36	1.24 1.34	39.21 53.04	33 45	270 365	118 159	92 92	1.72 0	0.3 0	4.733 0	0.174 0	0 0	0 0	0 0	0 0	75 112
PL.6877	PL.13430	B C	4ACSR	7.48Y 7.47Y	124.7 124.6	0.08 0.09	1.32 1.43	39.21 53.04	33 45	269 364	117 158	92 92	0.41 0	0.1 0	4.775 0	0.042 0	0 0	0 0	0 0	0 0	75 112
444905	PL.6877	C	Consumer	7.47Y	124.6	0.00	1.43	0.93	0	6	3	89	0.00	0.0	4.775	0.000	6	3	1	1	1
PL.6873	PL.6877	B C	4ACSR	7.48Y 7.47Y	124.6 124.5	0.03 0.03	1.36 1.46	39.21 52.11	33 44	269 357	117 155	92 92	0.16 0	0.0 0	4.791 0	0.017 0	0 0	0 0	0 0	0 0	75 111
PL.32719	PL.6873	B C	4ACSR	7.47Y 7.46Y	124.4 124.3	0.20 0.21	1.56 1.68	38.19 51.42	32 43	262 352	114 153	92 92	1.00 0	0.2 0	4.898 0	0.107 0	0 0	0 0	0 0	0 0	71 110
PL.32720	PL.32719	B C	4ACSR	7.46Y 7.46Y	124.4 124.3	0.06 0.07	1.62 1.74	38.19 51.42	32 43	261 352	114 153	92 92	0.32 0	0.1 0	4.933 0	0.034 0	0 0	0 0	0 0	0 0	71 110
PL.42688	PL.32720	B C	4ACSR	7.46Y 7.45Y	124.4 124.2	0.02 0.02	1.64 1.77	38.19 51.42	32 43	261 352	114 153	92 92	0.11 0	0.0 0	4.945 0	0.012 0	0 0	0 0	0 0	0 0	71 110
444904	PL.42688	C	Consumer	7.45Y	124.2	0.00	1.77	0.39	0	3	1	95	0.00	0.0	4.945	0.000	3	1	1	1	1
PL.42689	PL.42688	B C	4ACSR	7.45Y 7.44Y	124.1 124.0	0.21 0.22	1.86 1.99	38.19 51.02	32 43	261 349	114 151	92 92	1.04 0	0.2 0	5.058 0	0.113 0	0 0	0 0	0 0	0 0	71 109
PL.41698	PL.42689	C	1/0EPRJCN	7.44Y	124.0	0.00	2.00	1.14	1	8	3	94	0.00	0.0	5.173	0.115	0	0	0	0	1
4449065	PL.41698	C	Consumer	7.44Y	124.0	0.00	2.00	1.17	0	8	3	94	0.00	0.0	5.173	0.000	8	3	1	1	1
PL.41700	PL.42689	B C	4ACSR	7.43Y 7.42Y	123.8 123.7	0.33 0.34	2.19 2.34	38.19 49.89	32 42	261 340	114 148	92 92	1.60 0	0.3 0	5.236 0	0.178 0	0 0	0 0	0 0	0 0	71 108
PL.13159	PL.41700	B C	4ACSR	7.42Y 7.41Y	123.6 123.5	0.19 0.21	2.38 2.55	34.76 48.62	29 41	236 331	104 144	92 92	0.89 0	0.2 0	5.346 0	0.109 0	0 0	0 0	0 0	0 0	66 105
444907	PL.13159	C	Consumer	7.41Y	123.5	0.00	2.55	0.00	0	0	0	100	0.00	0.0	5.346	0.000	0	0	0	0	0

Unbalanced Voltage Drop Report
Source: BOWEN

Detail

Database: G:\3884\70024\WORK PRODUCTS\WINDMIL MODELS\SUMMER\EXISTING JUL05 CWP.WM\
Title:
Case:

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Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Units Displayed In Volts					% PF	kW Loss	% Loss	mi From Src	Length (mi)	-----Element-----		Cons On	Cons Thru
							Accum Drop	Thru Amps	% Cap	Thru KW	KVAR						KW	KVAR		
PL.14025	PL.26620	A	1/0ACSR	7.40Y	123.3	0.09	2.72	47.18	23	329	117	94	0.88	0.1	4.321	0.093	0	0	0	28
		B		7.15Y	119.1	0.18	6.88	83.86	42	530	282	88					0	0	0	116
		C		7.46Y	124.3	0.03	1.68	37.04	18	263	84	95					0	0	0	17
085711	PL.14025	C	Consumer	7.46Y	124.3	0.00	1.68	0.04	0	0	0	100	0.00	0.0	4.321	0.000	0	0	1	1
PL.14026	PL.14025	A	1/0ACSR	7.39Y	123.2	0.12	2.84	47.18	23	329	117	94	1.25	0.1	4.452	0.131	0	0	0	28
		B		7.13Y	118.9	0.25	7.13	83.86	42	529	281	88					0	0	0	116
		C		7.46Y	124.3	0.04	1.71	37.01	18	263	83	95					0	0	0	16
PL.18388 C	PL.14026	A	6ACWC	7.39Y	123.1	0.01	2.86	47.18	40	328	117	94	0.17	0.0	4.459	0.007	0	0	0	28
		B		7.13Y	118.8	0.03	7.16	83.48	71	526	278	88					0	0	0	114 C
		C		7.46Y	124.3	0.01	1.72	37.01	31	263	83	95					0	0	0	16
PD.752-A	PL.18388	A	Closed	7.39Y	123.1	0.00	2.86	47.18	0	328	117	94	0.00	0.0	4.459	0.000	0	0	0	28
		B		7.13Y	118.8	0.00	7.16	83.48	0	526	278	88					0	0	0	114
		C		7.46Y	124.3	0.00	1.72	37.01	0	263	83	95					0	0	0	16
PD.752-B	PD.752-A	A	Closed	7.39Y	123.1	0.00	2.86	47.18	0	328	117	94	0.00	0.0	4.459	0.000	0	0	0	28
		B		7.13Y	118.8	0.00	7.16	83.48	0	526	278	88					0	0	0	114
		C		7.46Y	124.3	0.00	1.72	37.01	0	263	83	95					0	0	0	16
PL.14027 C	PD.752-B	A	6ACWC	7.38Y	123.0	0.12	2.97	47.18	40	328	117	94	1.38	0.1	4.518	0.059	0	0	0	28
		B		7.12Y	118.6	0.21	7.37	83.48	71	526	278	88					0	0	0	114 C
		C		7.45Y	124.2	0.06	1.78	37.01	31	263	83	95					0	0	0	16
PL.18954	PL.14027	C	4ACSR	7.45Y	124.2	0.00	1.78	0.48	0	3	2	83	0.00	0.0	4.530	0.012	0	0	0	1
PD.1813	PL.18954	C	fuse6AMP	7.45Y	124.2	0.00	1.78	0.48	8	3	2	83	0.00	0.0	4.530	0.000	0	0	0	1
PL.18955	PD.1813	C	4ACSR	7.45Y	124.2	0.00	1.78	0.48	0	3	2	83	0.00	0.0	4.593	0.064	0	0	0	1
085803	PL.18955	C	Consumer	7.45Y	124.2	0.00	1.78	0.48	0	3	2	83	0.00	0.0	4.593	0.000	3	2	1	1
085806	PL.18955	C	Consumer	7.45Y	124.2	0.00	1.78	0.00	0	0	0	100	0.00	0.0	4.593	0.000	0	0	0	0
PL.14028 C	PL.14027	A	6ACWC	7.37Y	122.9	0.14	3.11	47.18	40	328	117	94	1.61	0.1	4.586	0.069	0	0	0	28
		B		7.10Y	118.4	0.25	7.62	83.48	71	525	278	88					0	0	0	114 C
		C		7.45Y	124.2	0.07	1.84	36.57	31	260	81	96					0	0	0	15
PL.25269 C	PL.14028	A	6ACWC	7.37Y	122.9	0.03	3.14	47.18	40	328	117	94	0.40	0.0	4.603	0.017	0	0	0	28
		B		7.10Y	118.3	0.06	7.68	83.22	71	523	276	88					0	0	0	113 C
		C		7.45Y	124.1	0.02	1.86	36.57	31	260	81	96					0	0	0	15
PL.25097 C	PL.25269	A	6ACWC	7.36Y	122.7	0.12	3.26	47.18	40	327	117	94	1.43	0.1	4.665	0.061	0	0	0	28
		B		7.09Y	118.1	0.22	7.90	83.22	71	522	276	88					0	0	0	113 C
		C		7.44Y	124.1	0.06	1.92	36.57	31	260	81	96					0	0	0	15
PL.25098 L	PL.25097	A	6ACWC	7.35Y	122.6	0.17	3.44	47.18	40	327	117	94	2.07	0.2	4.753	0.088	0	0	0	28
		B		7.07Y	117.8	0.32	8.21	83.22	71	521	276	88					0	0	0	113 L
		C		7.44Y	124.0	0.08	2.00	36.57	31	260	80	96					0	0	0	15
591102	PL.25098	A	Consumer	7.35Y	122.6	0.00	3.44	0.03	0	0	0	100	0.00	0.0	4.753	0.000	0	0	1	1
PL.28128 L	PL.25098	A	1/0ACSR	7.35Y	122.6	0.01	3.45	47.15	23	326	117	94	0.07	0.0	4.760	0.007	0	0	0	27
		B		7.07Y	117.8	0.01	8.23	83.22	41	520	275	88					0	0	0	113 L
		C		7.44Y	124.0	0.00	2.01	36.57	18	260	80	96					0	0	0	15
RG.20 C	PL.28128	A	1ph-100A-7	7.56Y	126.0	-3.45	0.00	47.15	47	326	117	94	percent Boost= 2.81 Tap= 4.5							27
		B		7.56Y	126.0	-8.23	0.00	83.22	83	520	275	88	percent Boost= 6.98 Tap=11.2							C
		C		7.56Y	126.0	-2.01	0.00	36.57	37	260	80	96	percent Boost= 1.62 Tap= 2.6							
PL.22243 C	RG.20	A	6ACWC	7.55Y	125.9	0.09	0.09	45.86	39	326	117	94	1.02	0.1	4.809	0.048	0	0	0	27
		B		7.55Y	125.8	0.16	0.16	77.78	66	520	275	88					0	0	0	113 C
		C		7.56Y	126.0	0.05	0.05	35.99	31	260	80	96					0	0	0	15
C PD.3494 C C	PL.22243	A	fuse6AMP	7.55Y	125.9	0.00	0.09	45.86	783	326	117	94	0.00	0.0	4.809	0.000	0	0	0	27 C
		B		7.55Y	125.8	0.00	0.16	77.78	1329	519	274	88					0	0	0	113 C
		C		7.56Y	126.0	0.00	0.05	35.99	615	260	80	96					0	0	0	15 C
PL.23430 C	PD.3494	A	6ACWC	7.55Y	125.9	0.04	0.13	45.86	39	326	117	94	0.42	0.0	4.828	0.020	0	0	0	27
		B		7.55Y	125.8	0.07	0.23	77.78	66	519	274	88					0	0	0	113 C
		C		7.56Y	125.9	0.02	0.07	35.99	31	260	80	96					0	0	0	15
592204	PL.23430	B	Consumer	7.55Y	125.8	0.00	0.23	0.09	0	1	0	100	0.00	0.0	4.828	0.000	1	0	1	1

Unbalanced Voltage Drop Report
Source: CLAY CITY

Detail

Database: G:\3884\70024\WORK PRODUCTS\WINDMIL MODELS\SUMMER\EXISTING JUL05 CWP.WM\
Title:
Case:

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Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Units Displayed In Volts										-----Element-----			
							Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	KW	KVAR	Cons On	Cons Thru
PL.15494	PL.38902	A	4ACSR	7.39Y	123.2	0.00	2.76	0.72	1	5	2	93	0.00	0.0	1.740	0.036	0	0	0	3
629203	PL.15494	A	Consumer	7.39Y	123.2	0.00	2.76	0.28	0	2	1	89	0.00	0.0	1.740	0.000	2	1	1	1
629201	PL.15494	A	Consumer	7.39Y	123.2	0.00	2.76	0.01	0	0	0	100	0.00	0.0	1.740	0.000	0	0	1	1
628201	PL.15494	A	Consumer	7.39Y	123.2	0.00	2.76	0.43	0	3	1	95	0.00	0.0	1.740	0.000	3	1	1	1
629202	PL.15496	A	Consumer	7.39Y	123.2	0.00	2.76	0.26	0	2	1	89	0.00	0.0	1.698	0.000	2	1	1	1
629204	PL.15496	A	Consumer	7.39Y	123.2	0.00	2.76	0.29	0	2	1	89	0.00	0.0	1.698	0.000	2	1	1	1
PL.12610	PL.15496	A	4ACSR	7.39Y	123.2	0.01	2.77	44.21	37	305	118	93	0.03	0.0	1.705	0.006	0	0	0	114
PL.12611	PL.12610	A	1/0ACSR	7.39Y	123.2	0.02	2.79	42.71	21	294	114	93	0.03	0.0	1.721	0.017	0	0	0	109
628208	PL.12611	A	Consumer	7.39Y	123.2	0.00	2.79	0.03	0	0	0	100	0.00	0.0	1.721	0.000	0	0	1	1
PL.12612	PL.12611	A	1/0ACSR	7.39Y	123.1	0.08	2.87	42.68	21	294	114	93	0.16	0.1	1.800	0.078	0	0	0	108
PL.7747	PL.12612	A	1/0ACSR	7.39Y	123.1	0.01	2.88	37.21	19	256	100	93	0.02	0.0	1.814	0.015	0	0	0	96
629101	PL.7747	A	Consumer	7.39Y	123.1	0.00	2.88	0.55	0	4	1	97	0.00	0.0	1.814	0.000	4	1	1	1
PL.6947	PL.7747	A	1/0ACSR	7.39Y	123.1	0.01	2.90	36.66	18	252	98	93	0.02	0.0	1.830	0.016	0	0	0	95
RG.22	PL.6947	A	1ph-100A-7	7.56Y	126.0	-2.90	0.00	36.66	37	252	98	93	percent Boost= 2.35 Tap= 3.8				95			
PL.289	RG.22	A	1/0ACSR	7.56Y	125.9	0.06	0.06	35.81	18	252	98	93	0.10	0.0	1.900	0.070	0	0	0	95
PL.12619	PL.289	A	1/0ACSR	7.56Y	125.9	0.01	0.08	35.81	18	252	98	93	0.02	0.0	1.915	0.015	0	0	0	95
PL.38908	PL.12619	A	4ACSR	7.55Y	125.9	0.01	0.09	34.82	29	245	95	93	0.02	0.0	1.921	0.006	0	0	0	93
PD.6764-A	PL.38908	A	Closed	7.55Y	125.9	0.00	0.09	34.82	0	245	95	93	0.00	0.0	1.921	0.000	0	0	0	93
PD.6764-B	PD.6764-A	A	Closed	7.55Y	125.9	0.00	0.09	34.82	0	245	95	93	0.00	0.0	1.921	0.000	0	0	0	93
PL.38909	PD.6764-B	A	1/0ACSR	7.55Y	125.9	0.06	0.14	34.82	17	245	95	93	0.09	0.0	1.987	0.066	0	0	0	93
PL.4900	PL.38909	A	4ACSR	7.55Y	125.9	0.00	0.15	0.31	0	2	1	89	0.00	0.0	2.095	0.108	0	0	0	1
071456	PL.4900	A	Consumer	7.55Y	125.9	0.00	0.15	0.31	0	2	1	89	0.00	0.0	2.095	0.000	2	1	1	1
071401	PL.38909	A	Consumer	7.55Y	125.9	0.00	0.14	0.46	0	3	1	95	0.00	0.0	1.987	0.000	3	1	1	1
PL.4901	PL.38909	A	4ACSR	7.55Y	125.9	0.00	0.14	0.00	0	0	0	100	0.00	0.0	2.060	0.072	0	0	0	0
PL.38912	PL.38909	A	1/0ACSR	7.54Y	125.7	0.12	0.26	34.05	17	240	93	93	0.17	0.1	2.123	0.136	0	0	0	91
PL.4915	PL.38912	A	4ACSR	7.54Y	125.7	0.04	0.30	34.05	29	240	93	93	0.07	0.0	2.147	0.024	0	0	0	91
PL.31884	PL.4915	A	1/0ACSR	7.54Y	125.7	0.04	0.34	30.94	15	218	84	93	0.06	0.0	2.205	0.058	0	0	0	85
PL.4764	PL.31884	A	4ACSR	7.54Y	125.7	0.00	0.34	1.32	1	9	4	91	0.00	0.0	2.218	0.013	0	0	0	3
PD.3274	PL.4764	A	fuse8AMP	7.54Y	125.7	0.00	0.34	1.32	18	9	4	91	0.00	0.0	2.218	0.000	0	0	0	3
PL.8133	PD.3274	A	4ACSR	7.54Y	125.7	0.00	0.34	1.32	1	9	4	91	0.00	0.0	2.228	0.010	0	0	0	3
071335	PL.8133	A	Consumer	7.54Y	125.7	0.00	0.34	0.35	0	2	1	89	0.00	0.0	2.228	0.000	2	1	1	1
PL.8134	PL.8133	A	4ACSR	7.54Y	125.7	0.00	0.35	0.96	1	7	3	92	0.00	0.0	2.327	0.099	0	0	0	2
PL.24269	PL.8134	A	4ACSR	7.54Y	125.7	0.00	0.35	0.96	1	7	3	92	0.00	0.0	2.341	0.013	0	0	0	2
PL.4897	PL.24269	A	4ACSR	7.54Y	125.6	0.00	0.35	0.96	1	7	3	92	0.00	0.0	2.369	0.028	0	0	0	2
PL.4914	PL.4897	A	4ACSR	7.54Y	125.6	0.00	0.35	0.77	1	5	2	93	0.00	0.0	2.436	0.067	0	0	0	1
0714150	PL.4914	A	Consumer	7.54Y	125.6	0.00	0.35	0.00	0	0	0	100	0.00	0.0	2.436	0.000	0	0	0	0
0714129	PL.4914	A	Consumer	7.54Y	125.6	0.00	0.35	0.77	0	5	2	93	0.00	0.0	2.436	0.000	5	2	1	1
071415	PL.4897	A	Consumer	7.54Y	125.6	0.00	0.35	0.20	0	1	1	71	0.00	0.0	2.369	0.000	1	1	1	1

KEY-> L = Low Voltage H = High Voltage C = Capacity Over Limit (%capacity or load amps) G = Generator Out of kvar Limits P = Power Factor Low

Unbalanced Voltage Drop Report
Source: FRENCHBURG

Database: G:\3884\70024\WORK PRODUCTS\WINDMIL MODELS\SUMMER\EXISTING JUL05 CWP.WM\
Title:
Case:

Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Units Displayed In Volts -Base Voltage:120.0-										mi From Src	Length (mi)	-----Element-----		
							Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss	% Loss	KW	KVAR			Cons On	Cons Thru	
034395	PL.21588	A	Consumer	7.39Y	123.2	0.00	2.75	0.36	0	2	1	89	0.00	0.0	2.278	0.000	2	1	1	1	
PL.42950	PL.21588	A	4ACSR	7.39Y	123.2	0.00	2.75	1.65	1	11	5	91	0.00	0.0	2.282	0.005	0	0	0	0	11
PD.8195	PL.42950	A	fuse6AMP	7.39Y	123.2	0.00	2.75	1.65	28	11	5	91	0.00	0.0	2.282	0.000	0	0	0	0	11
PL.42951	PD.8195	A	4ACSR	7.39Y	123.2	0.00	2.75	1.65	1	11	5	91	0.00	0.0	2.304	0.022	0	0	0	0	11
034375	PL.42951	A	Consumer	7.39Y	123.2	0.00	2.75	0.19	0	1	1	71	0.00	0.0	2.304	0.000	1	1	1	1	
034376	PL.42951	A	Consumer	7.39Y	123.2	0.00	2.75	0.09	0	1	0	100	0.00	0.0	2.304	0.000	1	0	1	1	
034373	PL.42951	A	Consumer	7.39Y	123.2	0.00	2.75	0.26	0	2	1	89	0.00	0.0	2.304	0.000	2	1	1	1	
034380	PL.42951	A	Consumer	7.39Y	123.2	0.00	2.75	0.19	0	1	1	71	0.00	0.0	2.304	0.000	1	1	1	1	
034372	PL.42951	A	Consumer	7.39Y	123.2	0.00	2.75	0.24	0	2	1	89	0.00	0.0	2.304	0.000	2	1	1	1	
034377	PL.42951	A	Consumer	7.39Y	123.2	0.00	2.75	0.09	0	1	0	100	0.00	0.0	2.304	0.000	1	0	1	1	
034374	PL.42951	A	Consumer	7.39Y	123.2	0.00	2.75	0.10	0	1	0	100	0.00	0.0	2.304	0.000	1	0	1	1	
034378	PL.42951	A	Consumer	7.39Y	123.2	0.00	2.75	0.13	0	1	0	100	0.00	0.0	2.304	0.000	1	0	1	1	
034398	PL.42951	A	Consumer	7.39Y	123.2	0.00	2.75	0.05	0	0	0	100	0.00	0.0	2.304	0.000	0	0	1	1	
034379	PL.42951	A	Consumer	7.39Y	123.2	0.00	2.75	0.26	0	2	1	89	0.00	0.0	2.304	0.000	2	1	1	1	
034397	PL.42951	A	Consumer	7.39Y	123.2	0.00	2.75	0.04	0	0	0	100	0.00	0.0	2.304	0.000	0	0	1	1	
PL.26032	PL.21588	A	2ACSR	7.39Y	123.2	0.03	2.79	46.77	30	341	56	99	0.61	0.0	2.309	0.031	0	0	0	33	
C		B		7.28Y	121.3	0.08	4.68	89.85	58	626	192	96					0	0	0	134	
		C		7.41Y	123.5	0.04	2.52	60.50	39	437	102	97					0	0	0	62	
PL.17419	PL.26032	A	2ACSR	7.39Y	123.2	0.04	2.82	46.42	30	339	55	99	0.66	0.0	2.343	0.034	0	0	0	30	
C		B		7.27Y	121.2	0.09	4.78	89.85	58	625	191	96					0	0	0	134	
		C		7.41Y	123.4	0.04	2.56	60.50	39	436	102	97					0	0	0	62	
034306	PL.17419	A	Consumer	7.39Y	123.2	0.00	2.82	0.20	0	1	1	71	0.00	0.0	2.343	0.000	1	1	1	1	
		C		7.41Y	123.4	0.00	2.56	0.20	0	1	1	92					1	1	1	1	
034351	PL.17419	A	Consumer	7.39Y	123.2	0.00	2.82	0.19	0	1	1	71	0.00	0.0	2.343	0.000	1	1	1	1	
		C		7.41Y	123.4	0.00	2.56	0.19	0	1	1	90					1	1	1	1	
034309	PL.17419	A	Consumer	7.39Y	123.2	0.00	2.82	0.05	0	0	0	100	0.00	0.0	2.343	0.000	0	0	1	1	
		C		7.41Y	123.4	0.00	2.56	0.05	0	0	0	92					0	0	1	1	
034305	PL.17419	A	Consumer	7.39Y	123.2	0.00	2.82	0.16	0	1	0	100	0.00	0.0	2.343	0.000	1	0	1	1	
		C		7.41Y	123.4	0.00	2.56	0.16	0	1	0	92					1	0	1	1	
PL.17420	PL.17419	A	2ACSR	7.39Y	123.1	0.07	2.90	45.85	29	335	53	99	1.29	0.1	2.411	0.067	0	0	0	28	
C		B		7.26Y	121.0	0.18	4.96	89.85	58	625	191	96					0	0	0	134	
		C		7.40Y	123.4	0.08	2.64	59.92	38	432	100	97					0	0	0	60	
PL.6297	PL.17420	A	2ACSR	7.38Y	123.0	0.08	2.97	45.85	29	335	53	99	1.31	0.1	2.481	0.070	0	0	0	28	
C		B		7.25Y	120.9	0.18	5.14	88.15	57	613	185	96					0	0	0	130	
		C		7.40Y	123.3	0.09	2.73	59.92	38	432	100	97					0	0	0	60	
034334	PL.6297	B	Consumer	7.25Y	120.9	0.00	5.14	0.52	0	3	2	83	0.00	0.0	2.481	0.000	3	2	1	1	
0343106	PL.6297	B	Consumer	7.25Y	120.9	0.00	5.14	0.98	0	6	3	89	0.00	0.0	2.481	0.000	6	3	1	1	
PL.27920	PL.6297	A	2ACSR	7.38Y	123.0	0.05	3.02	45.85	29	334	53	99	0.86	0.1	2.528	0.047	0	0	0	28	
C		B		7.24Y	120.7	0.12	5.26	86.66	56	602	180	96					0	0	0	128	
		C		7.39Y	123.2	0.06	2.79	59.92	38	432	100	97					0	0	0	60	
RG.12	PL.27920	A	1ph-100A-7	7.56Y	126.0	-3.02	0.00	45.85	46	334	53	99	percent Boost= 2.46 Tap= 3.9							28	
C		B		7.56Y	126.0	-5.26	-0.00	86.66	87	601	180	96	percent Boost= 4.36 Tap= 7.0							C	
		C		7.56Y	126.0	-2.79	0.00	59.92	60	432	100	97	percent Boost= 2.27 Tap= 3.6								
PL.28681	RG.12	A	2ACSR	7.56Y	126.0	0.03	0.03	44.75	29	334	53	99	0.53	0.0	2.559	0.031	0	0	0	28	
C		B		7.56Y	125.9	0.08	0.08	83.04	53	601	180	96					0	0	0	128	
		C		7.56Y	126.0	0.04	0.04	58.59	38	432	100	97					0	0	0	60	

KEY-> L = Low Voltage H = High Voltage C = Capacity Over Limit (%capacity or load amps) G = Generator Out of kvar Limits P = Power Factor Low

Unbalanced Voltage Drop Report
Source: FRENCHBURG

Detail

Database: G:\3884\70024\WORK PRODUCTS\WINDMIL MODELS\SUMMER\EXISTING JUL05 CWP.WM\
Title:
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		Units Displayed In Volts														-----Element-----				
		-Base Voltage:120.0-																		
Element Name	Parent Name	Cnf	Type/ Conductor	Fri kV	Base Volt	Element Drop	Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	KW	KVAR	Cons On	Cons Thru
PL.40638	PL.43490	A	336ACSR	7.48Y	124.7	0.18	1.26	49.15	11	337	150	91	1.27	0.1	1.174	0.515	0	0	0	145
		B		7.47Y	124.6	0.25	1.43	53.16	12	364	161	92					0	0	0	115
		C		7.46Y	124.3	0.28	1.66	61.25	14	418	188	91					0	0	0	116
PL.27277	PL.40638	C	4ACSR	7.46Y	124.3	0.00	1.66	0.00	0	0	0	100	0.00	0.0	1.184	0.010	0	0	0	1
PD.1198	PL.27277	C	fuse6AMP	7.46Y	124.3	0.00	1.66	0.00	0	0	0	100	0.00	0.0	1.184	0.000	0	0	0	1
PL.27278	PD.1198	C	4ACSR	7.46Y	124.3	0.00	1.66	0.00	0	0	0	100	0.00	0.0	1.221	0.037	0	0	0	1
PL.1722	PL.27278	C	4ACSR	7.46Y	124.3	0.00	1.66	0.00	0	0	0	100	0.00	0.0	1.247	0.026	0	0	0	1
PL.1723	PL.1722	C	4ACSR	7.46Y	124.3	0.00	1.66	0.00	0	0	0	100	0.00	0.0	1.320	0.072	0	0	0	1
031423	PL.1723	C	Consumer	7.46Y	124.3	0.00	1.66	0.00	0	0	0	100	0.00	0.0	1.320	0.000	0	0	1	1
0314030	031423	C	Consumer	7.46Y	124.3	0.00	1.66	0.00	0	0	0	100	0.00	0.0	1.320	0.000	0	0	0	0
PL.37743	PL.40638	A	6ACWC	7.48Y	124.7	0.03	1.29	49.15	42	336	149	91	0.38	0.0	1.194	0.019	0	0	0	145
		B		7.47Y	124.5	0.04	1.47	53.16	45	364	160	92					0	0	0	115
		C		7.46Y	124.3	0.05	1.70	61.25	52	417	187	91					0	0	0	115 C
PD.6214-A	PL.37743	A	Closed	7.48Y	124.7	0.00	1.29	49.15	0	336	149	91	0.00	0.0	1.194	0.000	0	0	0	145
		B		7.47Y	124.5	0.00	1.47	53.16	0	364	160	92					0	0	0	115
		C		7.46Y	124.3	0.00	1.70	61.25	0	417	187	91					0	0	0	115
PD.6214-B	PD.6214-A	A	Closed	7.48Y	124.7	0.00	1.29	49.15	0	336	149	91	0.00	0.0	1.194	0.000	0	0	0	145
		B		7.47Y	124.5	0.00	1.47	53.16	0	364	160	92					0	0	0	115
		C		7.46Y	124.3	0.00	1.70	61.25	0	417	187	91					0	0	0	115
PL.37744	PD.6214-B	A	6ACWC	7.48Y	124.6	0.12	1.41	49.15	42	336	149	91	1.33	0.1	1.261	0.067	0	0	0	145
		B		7.46Y	124.4	0.14	1.61	53.16	45	364	160	92					0	0	0	115
		C		7.45Y	124.1	0.16	1.87	61.25	52	417	187	91					0	0	0	115 C
RG.11	PL.37744	A	1ph-100A-7	7.56Y	126.0	-1.41	-0.00	49.15	49	336	149	91	percent Boost= 1.13 Tap= 1.8						145	
		B		7.56Y	126.0	-1.61	-0.00	53.16	53	363	160	92	percent Boost= 1.30 Tap= 2.1							
		C		7.56Y	126.0	-1.87	-0.00	61.25	61	416	186	91	percent Boost= 1.50 Tap= 2.4							
PL.28134	RG.11	A	6ACWC	7.55Y	125.9	0.10	0.10	48.60	41	336	149	91	1.07	0.1	1.316	0.055	0	0	0	145
		B		7.55Y	125.9	0.12	0.12	52.48	44	363	160	92					0	0	0	115
		C		7.55Y	125.9	0.13	0.13	60.34	51	416	186	91					0	0	0	115 C
PL.40617	PL.28134	B	4ACSR	7.55Y	125.9	0.00	0.12	0.54	0	4	2	89	0.00	0.0	1.320	0.004	0	0	0	3
PD.7236	PL.40617	B	fuse6AMP	7.55Y	125.9	0.00	0.12	0.54	9	4	2	89	0.00	0.0	1.320	0.000	0	0	0	3
PL.40618	PD.7236	B	4ACSR	7.55Y	125.9	0.00	0.12	0.54	0	4	2	89	0.00	0.0	1.369	0.049	0	0	0	3
PL.9730	PL.40618	B	4ACSR	7.55Y	125.9	0.00	0.12	0.54	0	4	2	89	0.00	0.0	1.500	0.131	0	0	0	2
PL.9731	PL.9730	B	4ACSR	7.55Y	125.9	0.00	0.12	0.54	0	4	2	89	0.00	0.0	1.520	0.020	0	0	0	1
031425	PL.9731	B	Consumer	7.55Y	125.9	0.00	0.12	0.54	0	4	2	89	0.00	0.0	1.520	0.000	4	2	1	1
031426	PL.9730	B	Consumer	7.55Y	125.9	0.00	0.12	0.00	0	0	0	100	0.00	0.0	1.500	0.000	0	0	1	1
031407	PL.40618	B	Consumer	7.55Y	125.9	0.00	0.12	0.00	0	0	0	100	0.00	0.0	1.369	0.000	0	0	1	1
PL.40650	PL.28134	A	6ACWC	7.55Y	125.8	0.09	0.19	48.60	41	336	149	91	0.99	0.1	1.368	0.052	0	0	0	145
		B		7.55Y	125.8	0.11	0.23	51.94	44	359	158	92					0	0	0	112
		C		7.54Y	125.7	0.12	0.26	60.34	51	416	186	91					0	0	0	115 C
PD.7244-A	PL.40650	A	Closed	7.55Y	125.8	0.00	0.19	48.60	0	335	148	91	0.00	0.0	1.368	0.000	0	0	0	145
		B		7.55Y	125.8	0.00	0.23	51.94	0	359	158	92					0	0	0	112
		C		7.54Y	125.7	0.00	0.26	60.34	0	416	186	91					0	0	0	115
PD.7244-B	PD.7244-A	A	Closed	7.55Y	125.8	0.00	0.19	48.60	0	335	148	91	0.00	0.0	1.368	0.000	0	0	0	145
		B		7.55Y	125.8	0.00	0.23	51.94	0	359	158	92					0	0	0	112
		C		7.54Y	125.7	0.00	0.26	60.34	0	416	186	91					0	0	0	115
PL.40651	PD.7244-B	A	6ACWC	7.54Y	125.7	0.09	0.28	48.60	41	335	148	91	0.97	0.1	1.418	0.051	0	0	0	145
		B		7.54Y	125.7	0.11	0.33	51.94	44	359	158	92					0	0	0	112
		C		7.54Y	125.6	0.12	0.38	60.34	51	416	186	91					0	0	0	115 C
031409	PL.40651	B	Consumer	7.54Y	125.7	0.00	0.33	0.33	0	2	1	89	0.00	0.0	1.418	0.000	2	1	1	1

KEY-> L = Low Voltage H = High Voltage C = Capacity Over Limit (%capacity or load amps) G = Generator Out of kvar Limits P = Power Factor Low

Unbalanced Voltage Drop Report
Source: FRENCHBURG

Detail

Database: G:\3884\70024\WORK PRODUCTS\WINDMIL MODELS\SUMMER\EXISTING JUL05 CWP.WM\
Title:
Case:

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Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Units Displayed In Volts -Base Voltage:120.0-					kVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	-----Element-----		Cons On	Cons Thru
							Accum Drop	Thru Amps	% Cap	Thru kW	kW							kVAR	kVAR		
PD.7279-B	PD.7279-A	A	Closed	7.26Y	121.0	0.00	5.05	27.35	0	181	81	91	0.00	0.0	4.188	0.000	0	0	0	75	
		B		7.23Y	120.5	0.00	5.50	41.85	0	277	123	91					0	0	0	79	
		C		7.21Y	120.2	0.00	5.78	42.20	0	277	125	91					0	0	0	77	
PL.40893	PD.7279-B	A	6ACWC	7.26Y	120.9	0.01	5.06	27.35	23	181	81	91	0.13	0.0	4.202	0.014	0	0	0	75	
		B		7.23Y	120.5	0.02	5.52	41.85	35	277	123	91					0	0	0	79	
		C		7.21Y	120.2	0.02	5.80	42.20	36	277	125	91					0	0	0	77	
457314	PL.40893	A	Consumer	7.26Y	120.9	0.00	5.06	1.25	0	8	4	89	0.00	0.0	4.202	0.000	8	4	0	0	
		B		7.23Y	120.5	0.00	5.52	1.26	0	8	4	90					8	4	0	0	
		C		7.21Y	120.2	0.00	5.80	1.26	0	8	4	90					8	4	0	0	
PL.9471	PL.40893	A	6ACWC	7.25Y	120.9	0.08	5.14	16.73	14	111	49	91	1.42	0.2	4.378	0.177	0	0	0	56	
		B		7.21Y	120.2	0.33	5.85	40.60	34	268	119	91					0	0	0	79	
		C		7.20Y	119.9	0.27	6.07	40.94	35	269	121	91					0	0	0	77	
PL.19583	PL.9471	A	6ACWC	7.24Y	120.7	0.13	5.27	16.73	14	111	49	91	2.10	0.3	4.644	0.266	0	0	0	56	
		B		7.18Y	119.7	0.49	6.34	40.60	34	268	118	91					0	0	0	79	
		C		7.17Y	119.5	0.39	6.46	40.04	34	263	118	91					0	0	0	73	
PL.19584	PL.19583	A	6ACWC	7.24Y	120.7	0.05	5.32	16.73	14	111	49	91	0.87	0.1	4.754	0.110	0	0	0	56	
		B		7.17Y	119.5	0.20	6.55	40.60	34	266	118	91					0	0	0	79	
		C		7.16Y	119.4	0.16	6.63	40.04	34	262	118	91					0	0	0	73	
PL.41760	PL.19584	C	4ACSR	7.16Y	119.4	0.00	6.63	2.31	2	15	7	91	0.00	0.0	4.761	0.007	0	0	0	2	
PD.7510	PL.41760	C	fuse6AMP	7.16Y	119.4	0.00	6.63	2.31	39	15	7	91	0.00	0.0	4.761	0.000	0	0	0	2	
PL.41761	PD.7510	C	4ACSR	7.16Y	119.4	0.01	6.64	2.31	2	15	7	91	0.00	0.0	4.867	0.106	0	0	0	2	
PL.2913	PL.41761	C	4ACSR	7.16Y	119.4	0.01	6.65	2.31	2	15	7	91	0.00	0.0	4.925	0.058	0	0	0	2	
457343	PL.2913	C	Consumer	7.16Y	119.4	0.00	6.65	0.89	0	6	3	89	0.00	0.0	4.925	0.000	6	3	1	1	
457320	PL.2913	C	Consumer	7.16Y	119.4	0.00	6.65	1.42	0	9	4	91	0.00	0.0	4.925	0.000	9	4	1	1	
PL.9470	PL.19584	A	6ACWC	7.23Y	120.5	0.14	5.46	16.73	14	111	49	91	2.02	0.3	5.024	0.270	0	0	0	56	
		B		7.14Y	119.0	0.50	7.05	40.60	34	266	118	91					0	0	0	79	
		C		7.14Y	119.0	0.37	7.00	37.73	32	247	110	91					0	0	0	71	
RG.16	PL.9470	A	1ph-100A-7	7.56Y	126.0	-5.46	-0.00	16.73	17	111	49	91	percent Boost= 4.53 Tap= 7.2							56	
		B		7.56Y	126.0	-7.05	-0.00	40.60	41	265	117	91	percent Boost= 5.93 Tap= 9.5								
		C		7.56Y	126.0	-7.00	-0.00	37.73	38	246	110	91	percent Boost= 5.88 Tap= 9.4								
OH48	RG.16	A	6ACWC	7.56Y	126.0	0.03	0.03	16.01	14	111	49	91	0.38	0.1	5.081	0.057	0	0	0	56	
		B		7.55Y	125.9	0.10	0.10	38.32	32	265	117	91					0	0	0	79	
		C		7.56Y	125.9	0.07	0.07	35.64	30	246	110	91					0	0	0	71	
457334	OH48	C	Consumer	7.56Y	125.9	0.00	0.07	0.43	0	3	1	95	0.00	0.0	5.081	0.000	3	1	1	1	
457317	OH48	A	Consumer	7.56Y	126.0	0.00	0.03	0.00	0	0	0	100	0.00	0.0	5.081	0.000	0	0	0	0	
457322	OH48	C	Consumer	7.56Y	125.9	0.00	0.07	0.80	0	6	2	95	0.00	0.0	5.081	0.000	6	2	1	1	
457319	OH48	C	Consumer	7.56Y	125.9	0.00	0.07	0.31	0	2	1	89	0.00	0.0	5.081	0.000	2	1	1	1	
PL.7037	OH48	B	4ACSR	7.55Y	125.9	0.05	0.15	27.63	23	191	84	92	0.07	0.0	5.120	0.038	0	0	0	58	
		C		7.56Y	125.9	-0.00	0.07	4.51	4	31	14	92					0	0	0	9	
PL.15561	PL.7037	B	4ACSR	7.55Y	125.8	0.08	0.23	27.63	23	191	84	92	0.12	0.1	5.185	0.065	0	0	0	58	
		C		7.56Y	125.9	-0.01	0.06	3.08	3	21	9	92					0	0	0	8	
PL.15562	PL.15561	B	4ACSR	7.55Y	125.8	0.01	0.24	27.63	23	191	84	92	0.01	0.0	5.190	0.005	0	0	0	58	
		C		7.56Y	125.9	-0.00	0.06	3.08	3	21	9	92					0	0	0	8	
PL.9468	PL.15562	B	4ACSR	7.54Y	125.7	0.02	0.26	27.63	23	191	84	92	0.03	0.0	5.205	0.015	0	0	0	58	
		C		7.56Y	125.9	-0.00	0.06	3.08	3	21	9	92					0	0	0	8	
PL.9469	PL.9468	B	4ACSR	7.52Y	125.4	0.36	0.62	27.63	23	191	84	92	0.52	0.2	5.488	0.284	0	0	0	58	
		C		7.56Y	126.0	-0.03	0.03	3.08	3	21	9	92					0	0	0	8	
456360	PL.9469	B	Consumer	7.52Y	125.4	0.00	0.62	0.04	0	0	0	100	0.00	0.0	5.488	0.000	0	0	1	1	
PL.9745	PL.9469	B	4ACSR	7.51Y	125.2	0.15	0.77	27.58	23	190	83	92	0.21	0.1	5.602	0.114	0	0	0	57	
		C		7.56Y	126.0	-0.01	0.01	3.08	3	21	9	92					0	0	0	8	