Wilson Consulting, INC
Roger Wilson, PE
411 Linden Lane
Nicholasville, Kentucky 40356

November 23, 2004

Beth O'Donnell, Executive Director
Kentucky Public Service Commission
PO Box 615
Frankfort KY 40602

RE: Nolin RECC Elizabethtown, KY – Case Number 2004-00160

Dear Ms. O'Donnell:

Enclosed you will find the information that addresses the "informal Conference on October 21, 2004" with the PSC staff and Nolin RECC. The data includes the original and five copies.

Should you need any further explanation or additional information please contact me at (859)985-2474 or the Nolin RECC Office (270)765-6153.

Sincerely,

Roger Wilson, PE
Wilson Consulting, Inc

WILSON CONSULTING, INC
411 LINDEN LANE
NICHOLASVILLE KY
PHONE (859)885-4613

PSC response case number 2004-001601

To: Case File No. 2004-00160

From: Nolin RECC

Date: November 20, 2004

Subject: Response to Informal Conference on October 21, 2004

#2 ACSR Vs.1/0 ACSR THREE PHASE CONVERSION

We will address each concern in item number order with relation to the written request from the Public Service Commission's letter of October 26, 3004. The #2 ACSR wire will be in value to the installed cost of the 1/0 ACSR at the 1150 kW level and greater. (Voltage drop was addressed with the original study and was not considered in these options.)

Item 375-- Projected line load is 445 kW in this work plan. The area growth would require 250% or alteration to the existing feed in order to make economics evaluation. No change from the existing work plan is suggested.

Item 385-- Projected line load is 310 kW in this work plan. The area growth would require 370% or alteration to the existing feed in order to make economics evaluation. No change from the existing work plan is suggested. (Approaches edge of service area.)

Item 386-- Projected line load is 100 kW in this work plan. The area growth would require 1150% or alteration to the existing feed in order to make economics evaluation. No change from the existing work plan is suggested. (Approaches edge of service area.)

Item 387-- Projected line load is 291 kW in this work plan. The area growth would require 395% or alteration to the existing feed in order to make economics evaluation. (Take-off conductor is 1/0 ACSR consider upgrade to 3 miles conversion.)

Item 388-- Projected line load is 145 kW in this work plan. The area growth would require 793% or alteration to the existing feed in order to make economics evaluation. (Take-off conductor is 1/0 ACSR consider upgrade to 1.1 miles of conversion.)

Item 389-- Projected line load is 186 kW in this work plan. The area growth would require 618% or alteration to the existing feed in order to make economics evaluation. (Take-off conductor is 1/0 ACSR consider upgrade to 4.5 miles of conversion.)

Item 392-- Projected line load is 160 kW in this work plan. The area growth would require 718% or alteration to the existing feed in order to make economics evaluation. (Project is in the edge of growth area and small amount of line, 2000 feet of conversion.)

Item 393-- Projected line load is 100 kW in this work plan. The area growth would require 115% or alteration to the existing feed in order to make economics evaluation. (Project is in the edge of growth area and small amount of line, 3000 feet of conversion.)

Solution to postponement of conversion to 336.4 ACSR from 3/0 ACSR

A voltage regulator bank was placed at various locations along the line sections to obtain the best voltage drop for the existing line and the future 2005 load. The best voltage regulator bank placement was found to be at the end of line section number 11. The voltage drop was calculated to be 117 Volts at the lowest extreme. The line sections were changed from 3/0 ACSR to 336.4 ACSR moving from the substation to the load until the 121 Volt drop was met. The line sections changed were 664, 614, and 894. The conclusion is that a regulator bank placed at the end of line section 11 will provide service during the peak condition and not exceed voltage drop requirement.

AMR evaluation study

COST-BENEFIT WORKBOOK

A. PROJECT & OPERATIONAL COSTS

Number of Electro-Mechanical Meters	11,100
Number of Solid State Meters	16,900
Number of Multi-Utility Meters	
Number of 3 Phase Meters	1,400
Number Remote Service Switches	50
Number of Load Control Units	10
Number of Substations	21
Number of New Servers	1
Total Yearly Overtime Costs for Meter Readers & Supervisors	
Average Loaded Cost/Year/Meter Reader	41951
Average Loaded Cost/Year/Meter Reader Supervisor	51001
Average Loaded Cost/Year/Customer Service	36959
Average Loaded Cost/Year/Linemen	73654
Average Loaded Cost/Year/Supervisor	60893
Annual Revenue	$40,000,000
Purchased Power Cost/Year	$33,000,000
Transportation/# of Vehicles	6
Cost Per Meter Read	0.92

Cost Ranges for Major Items

Hardware Costs	**Unit Cost**	**Number**	**Total**
Electro-Mechanical Transceiver	68	11100	754800
Soild State Transceiver	73	16900	1233700
Muti-Utility Transceiver	125	0	0
3 Phase Transceiver	150	1400	210000
RSS Collar	250	50	12500
Load Control	150	10	1500
Substation Equipment	20000	21	420000
Total Hardware Costs			$2,632,500

Customer Supplied Equipment	**Unit Cost**	**Number**	**Total**
Server Class PC	5000	1	5000
SQL Server Licencse	2500	1	2500
Capacitor Banks	1000	21	21000
Total Supplied Equip. Costs			$28,500

Approximate Deployment Costs	**Unit Cost**	**Number**	**Total**
Retro fit	7.25	11100	80475
Installs	8	12581	100648
Total Deployment Costs			$181,123

Software and Services	
TS2 Software	12200
Total Software and Services	$12,200
Total Implementation Cost	**$2,854,323**

Yearly Operation

Annual System Service & Technology Support

Base Fee	$5,000
.30 Cents Per Endpoint Over 10,000	$5,820
Total Yearly Operation Costs	**$10,820**

B. YEARLY PRODUCTIVITY AND COST SAVINGS

Item 1: Equipment Maintenance Annual Cost	
Repairs	5000
Replacements	20000
Misc.	1500
Total Equipment Cost	26500
Item 2: Meter Reader Cost	
Daily Hours Savings/person	8
FTEs affected	5
Average Cost of Each FTE	41951
Productivity Improvement %	100%
Value of Productivity Gain	209755
Item 3: Data Entry/Clerical Cost	
Daily Hours Savings/person	8
FTEs affected	1
Average Cost of Each FTE	51001
Productivity Improvement %	50%
Value of Productivity Gain	25500.5
Item 4: Customer Support Cost	
Daily Hours Savings/Person	2
# of FTE Techs Affected	3
Average Cost of Each FTE	36959
Productivity Improvement %	20%
Value of Productivity Gain	22175
Item 5: Linemen Cost	
Daily Hours Savings/Person	2
# of FTE Techs Affected	4
Average Cost of Each FTE	73654
Productivity Improvement %	25%
Value of Productivity Gain	73654
Item 6: Supervisor Cost	
Daily Hours Savings/Person	3
# of FTE Techs Affected	2
Average Cost of Each FTE	60893
Productivity Improvement %	20%
Value of Productivity Gain	24357

Item 7: Reduction in Vehicle Cost & Maintenance	
# of Vehicles Affected	6
Vehicle Cost/Year	9250
Cost Savings	36963
Item 8: Savings in Overtime Costs (37%)	0
Item 9: Reduction of Line Loss	247500
Item 10: Enhanced Revenue Through Maint.	40000
Item 11: Cost Savings Meter Reading	0.87
# of Meters	29400
Reads Per Year Per Meter	12
Cost Savings	306936
Item 12: Savings in Site Visits	40
# of Site Visits	5000
Cost Savings	200000
Item 13: Savings in Meter Reread costs	30
# Of Rereads	500
Cost Savings	15000

Summary	**Savings**
Item 1: Equipment Maintenance Annual Cost	26500
Item 2: Meter Reader Cost	209755
Item 3: Data Entry/Clerical Cost	25500.5
Item 4: Customer Support Cost	22175
Item 5: Linemen Cost	73654
Item 6: Supervisor Cost	24357
Item 7: Reduction in Vehicle Cost & Maintenance	36963
Item 8: Savings in Overtime Costs (37%)	0
Item 9: Reduction of Line Loss	247500
Item 10: Enhanced Revenue Through Maint.	40000
Item 11: Cost Savings Meter Reading	306936
Item 12: Savings in Site Visits	200000
Item 13: Savings in Meter Reread costs	15000
Yearly Savings after Full System Implementation/Operation	**$1,228,341**

C. VALUE OF CUMULATIVE COSTS AND PRODUCTIVITY SAVINGS OVER 5 YEARS

	Invested	Return
At End Of	2854323	614171
Year 1	2865143	1842512
Year 2	2875963	3070853
Year 3	2886783	4299194
Year 4	2897603	5527535
Year 5	2908423	6755876

Detail

Balanced Voltage Drop Report
Source: 9021

Database: C:\MILSOFT\DATA\NOLIN\PSCREQUESTRINEYVILLEVRINSTALLOPTION
Title: 2003-2004 Work Plan
Case: NOLIN RECC
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Units Displayed In Volts
-Base Voltage:120.0-

mi	Element																	
% Element Loss	From Name Src	Length (mi)	Parent Name KW	KVAR	Cons Cnf On	Cons Conductor Thru	Type/	Pri kV	Base Volt	Element Drop	Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss
	9021					ABC	SRC-9009-j	7.56Y	126.0	0.00	0.00	346.46	0	7840	-528	-100	0.00
0.0	0.00	0.00	0	0	0	1800											
	8210		9021			ABC	Node	7.56Y	126.0	0.00	0.00	346.46	0	7840	-528	-100	0.00
0.0	0.00	0.00	0	0	0	1800											
---------- Feeder NO. 3 Beginning with Node Element 8213 ----------																	
	8213		8210			ABC	Node	7.56Y	126.0	0.00	0.00	141.31	0	3200	-172	-100	0.00
0.0	0.00	0.00	0	0	0	677											
	OCR-8213		8213			ABC	208-400-14	7.56Y	126.0	0.00	0.00	141.31	35	3200	-172	-100	0.00
0.0	0.00	0.00	0	0	0	677											
	FDR7213		OCR-8213			ABC	090-336 AC	7.54Y	125.7	0.29	0.29	141.31	27	3200	-172	-100	8.43
0.3	0.51	0.51	0	0	0	677											
	613		FDR7213			ABC	090-336 AC	7.50Y	124.9	0.79	1.08	141.31	27	3192	-192	-100	23.35
0.7	2.01	1.50	253	-20	50	677											
	OCR-691		613			ABC	061-50-4H	7.50Y	124.9	0.00	1.08	98.22	196	2202	-170	-100	0.00
0.0	2.01	0.00	0	0	0	468											
	691		OCR-691			ABC	090-336 AC	7.49Y	124.8	0.09	1.17	98.22	19	2202	-170	-100	1.73
0.1	2.30	0.30	776	-62	170	468											
	603		691			A	110-#4 ACS	7.43Y	123.8	0.99	2.16	26.60	19	199	-15	-100	1.11
0.6	4.20	1.90	198	-16	40	40											
	835		691			ABC	098-#3/0 A	7.49Y	124.8	0.01	1.18	4.61	2	103	-8	-100	0.01
0.0	2.60	0.30	66	-5	14	20											

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  823              835              ABC  098-#3/0 A   7.49Y 124.8   0.01    1.19    1.65   1      37     -3  -100    0.00
0.0    2.90   0.30      0      0    0    6

  662              823              A    110-#4 ACS   7.48Y 124.7   0.08    1.26    4.94   4      37     -3  -100    0.02
0.0    3.70   0.80     37     -3    6    6

  604              691              ABC  098-#3/0 A   7.47Y 124.5   0.36    1.53   50.11  17    1123    -88  -100    2.36
0.2    3.60   1.30   1120    -90  238  238

  776              613              ABC  090-336 AC   7.49Y 124.9   0.04    1.12   31.82   6     713    -55  -100    0.25
0.0    2.31   0.30      0      0    0  159

  OCR-612          776              ABC  061-50-4H    7.49Y 124.9   0.00    1.12   20.88  42     468    -36  -100    0.00
0.0    2.31   0.00      0      0    0  101

  612              OCR-612          ABC  102-#1/0 A   7.46Y 124.4   0.50    1.61   20.88   9     468    -36  -100    1.35
0.3    5.81   3.50    467    -38  101  101

  611              776              ABC  090-336 AC   7.49Y 124.9   0.03    1.15   10.95   2     245    -20  -100    0.05
0.0    3.81   1.50    245    -20   58   58

---------- Feeder NO.     2  Beginning with Node Element 8212          ----------------

  8212             8210             ABC  Node         7.56Y 126.0   0.00    0.00   25.15   0     569    -41  -100    0.00
0.0    0.00   0.00      0      0    0  111

  OCR-8212         8212             ABC  208-400-14   7.56Y 126.0   0.00    0.00   25.15   6     569    -41  -100    0.00
0.0    0.00   0.00      0      0    0  111

  FDR7212          OCR-8212         ABC  090-336 AC   7.56Y 125.9   0.06    0.06   25.15   5     569    -41  -100    0.33
0.1    0.63   0.63      0      0    0  111

  616              FDR7212          ABC  102-#1/0 A   7.50Y 125.0   0.91    0.98   25.15  11     569    -42  -100    3.91
0.7    3.93   3.30    218    -18   44  111

  OCR-617          616              A    005-25-H O   7.50Y 125.0   0.00    0.98   46.33 185     346    -28  -100    0.00
0.0    3.93   0.00      0      0    0   67

  617              OCR-617          A    102-#1/0 A   7.50Y 125.0   0.00    0.98   46.33  20     346    -28  -100    0.00
0.0    3.93   0.00    346    -28   67   67

---------- Feeder NO.     1  Beginning with Node Element 8211          ----------------

  8211             8210             ABC  Node         7.56Y 126.0   0.00    0.00  180.01   0    4071   -314  -100    0.00
0.0    0.00   0.00      0      0    0 1012

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KEY->   L = Low Voltage     H = High Voltage    C = Capacity Over Limit    G = Generator Out of kvar Limits
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Balanced Voltage Drop Report
Source: 9021

Database: C:\MILSOFT\DATA\NOLIN\PSCREQUESTRINEYVILLEVRINSTALLOPTION
Title: 2003-2004 Work Plan
Case: NOLIN RECC

Units Displayed In Volts
-Base Voltage:120.0-

mi Element	Element Name	From Name	Length (mi)	Parent Name	KW	KVAR	Cons Cnf On	Type/ Cons Conductor Thru	Pri kV	Base Volt	Element Drop	Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss
	OCR-8211			8211			ABC	208-400-14	7.56Y	126.0	0.00	0.00	180.01	45	4071	-314	-100	0.00
0.0	0.00	0.00		0	0	0	1012											
	FDR7211			OCR-8211			ABC	090-336 AC	7.54Y	125.6	0.38	0.38	180.01	34	4071	-314	-100	15.05
0.4	0.56	0.56		0	0	0	1012											
	NODE1735			FDR7211			ABC	Node	7.54Y	125.6	0.00	0.38	0.00	0	0	0	0	0.00
0.0	0.56	0.00		0	0	0	0											
	664			FDR7211			ABC	090-336 AC	7.53Y	125.4	0.20	0.57	180.01	34	4055	-349	-100	8.06
0.2	0.86	0.30		23	-2	3	1012											
	OCR-614			664			ABC	007-50-H O	7.53Y	125.4	0.00	0.57	163.98	328	3687	-339	-100	0.00
0.0	0.86	0.00		0	0	0	939											
	614			OCR-614			ABC	090-336 AC	7.45Y	124.2	1.19	1.77	163.98	31	3687	-339	-100	44.49
1.2	3.21	2.35		707	-57	111	939											
	894			614			ABC	090-336 AC	7.43Y	123.8	0.46	2.23	132.37	25	2935	-386	-99	16.30
0.6	4.32	1.12		0	0	0	828											
	11			894			ABC	098-#3/0 A	7.24Y	120.6	3.15	5.37	125.25	42	2755	-447	-99	90.47
3.3	7.12	2.80		164	23	45	775											
C	REG1818			11			ABC	Regulator	7.56Y	126.0	-5.37	0.00	118.15	118	2501	-573	-97	0.00
0.0	7.12	0.00		0	0	0	730 C											
	OCR-11			REG1818			ABC	007-50-H O	7.56Y	126.0	0.00	0.00	59.45	119	1267	-460	-94	0.00
0.0	7.12	0.00		0	0	0	359											
	10			OCR-11			AB	110-#4 ACS	7.53Y	125.4	0.56	0.56	11.69	8	175	25	99	0.49

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0.3    9.42   2.30    174     25   50   50

  510             OCR-11          ABC  098-#3/0 A   7.54Y 125.7   0.29    0.29   52.70  18   1092   -485   -91   5.92
0.5    8.12   1.00     26      4    5  309

  850             510             ABC  098-#3/0 A   7.54Y 125.7   0.02    0.31    4.10   1     92     13   99   0.01
0.0    8.52   0.40     23      3    8   24

  509             850             ABC  098-#3/0 A   7.54Y 125.7   0.01    0.32    3.07   1     69     10   99   0.00
0.0    9.22   0.70     69     10   16   16

  789             510             ABC  098-#3/0 A   7.54Y 125.6   0.13    0.42   48.36  16    969   -508   -89   3.04
0.3    8.72   0.60      0      0    0  280

  6025            789             ABC  Capacitor    7.54Y 125.6   0.00    0.42   48.36 716    966   -512   -88   0.00
0.0    8.72   0.00      0      0    0  280

  721             6025            ABC  098-#3/0 A   7.52Y 125.3   0.30    0.71   43.22  14    966    145   99   1.99
0.2    9.22   0.50     18      3    6  280

  508             721             ABC  098-#3/0 A   7.48Y 124.6   0.67    1.38   42.40  14    946    140   99   3.88
0.4   10.62   1.40    353     50   75  274

  OCR-508         508             ABC  062-70-4H    7.48Y 124.6   0.00    1.38   26.52  38    589     86   99   0.00
0.0   10.62   0.00      0      0    0  199

  OCR-503         OCR-508         A    011-70-L O   7.48Y 124.6   0.00    1.38   38.95  56    288     43   99   0.00
0.0   10.62   0.00      0      0    0   86

  503             OCR-503         A    102-#1/0 A   7.44Y 123.9   0.70    2.08   38.95  17    288     43   99   1.24
0.4   11.62   1.00    101     14   26   86

  504             503             A    110-#4 ACS   7.43Y 123.8   0.15    2.23    6.58   5     48      7   99   0.04
0.1   12.62   1.00     48      7   12   12

  505             503             A    110-#4 ACS   7.41Y 123.4   0.49    2.57   18.66  13    137     20   99   0.50
0.4   12.22   0.60      7      1    2   48

  506             505             A    110-#4 ACS   7.40Y 123.3   0.11    2.68    7.28   5     53      8   99   0.03
0.1   12.92   0.70     53      8   17   17

  507             505             A    110-#4 ACS   7.37Y 122.8   0.63    3.20   10.49   7     77     11   99   0.25
0.3   14.92   2.70     77     11   29   29

  FUSE-502        OCR-508         A    085-50N FU   7.48Y 124.6   0.00    1.38    7.80   8     58      8   99   0.00
0.0   10.62   0.00      0      0    0   24

  502             FUSE-502        A    110-#4 ACS   7.46Y 124.3   0.28    1.66    7.80   6     58      8   99   0.08
0.1   12.22   1.60     58      8   24   24
```

KEY-> L = Low Voltage H = High Voltage C = Capacity Over Limit G = Generator Out of kvar Limits

Balanced Voltage Drop Report
Source: 9021

Database: C:\MILSOFT\DATA\NOLIN\PSCREQUESTRINEYVILLEVRINSTALLOPTION
Title: 2003-2004 Work Plan
Case: NOLIN RECC

Units Displayed In Volts
-Base Voltage:120.0-

mi Element	From Name	Length (mi)	Parent Name KW	KVAR	Cons Cnf On	Type/ Cons Conductor Thru	Pri kV	Base Volt	Element Drop	Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss
501		OCR-508			ABC	098-#3/0 A	7.47Y	124.5	0.10	1.48	10.94	4	243	35	99	0.15
0.1	11.42	0.80	88	13	44	89										
494		501			ABC	098-#3/0 A	7.47Y	124.5	0.05	1.53	6.95	2	154	22	99	0.04
0.0	12.42	1.00	149	21	42	45										
SW1802-A		494			ABC	Open	7.47Y	124.5	0.00	1.53	0.00	0	0	0	0	0.00
0.0	12.42	0.00	0	0	0	0										
OCR-493		494			ABC	011-70-L O	7.47Y	124.5	0.00	1.53	0.00	0	0	0	0	0.00
0.0	12.42	0.00	0	0	0	0										
492		494			ABC	098-#3/0 A	7.47Y	124.5	0.00	1.53	0.24	0	5	1	98	0.00
0.0	12.62	0.20	5	1	3	3										
OH1744		REG1818			ABC	090-336 AC	7.53Y	125.5	0.45	0.46	54.60	10	1233	-113	-100	5.79
0.5	9.45	2.33	0	0	0	371										
497		OH1744			ABC	110-#4 ACS	7.37Y	122.9	2.66	3.12	54.60	39	1227	-126	-99	23.30
1.9	11.46	2.00	694	99	238	371										
OCR-497		497			ABC	006-35-H O	7.37Y	122.9	0.00	3.12	0.00	0	0	0	0	0.00
0.0	11.46	0.00	0	0	0	0										
496		497			ABC	110-#4 ACS	7.32Y	121.9	0.96	4.07	25.38	18	510	-235	-91	5.86
1.1	13.06	1.60	123	18	31	133										
498		496			ABC	102-#1/0 A	7.32Y	122.0	-0.02	4.05	19.05	8	325	-263	-78	0.62
0.2	13.96	0.90	192	27	41	78										
CAP1764		498			ABC	Capacitor	7.32Y	122.0	0.00	4.05	-14.12	0	0	-310	0	0.00

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0.0   13.96   0.00      0      0    0    0

  499              498              ABC  102-#1/0 A   7.31Y 121.9   0.06    4.11    6.08   3    132      19   99    0.05
0.0   14.66   0.70     51      7   21   37

  493              499              ABC  102-#1/0 A   7.31Y 121.9   0.02    4.13    3.75   2     82      12   99    0.01
0.0   15.26   0.60     82     12   16   16

  SW1802-B         493              ABC  Open         7.31Y 121.9   0.00    4.13    0.00   0      0       0    0    0.00
0.0   15.26   0.00      0      0    0    0

  FUSE-495         496              A    083-30N FU   7.32Y 121.9   0.00    4.07    7.74  13     56       8   99    0.00
0.0   13.06   0.00      0      0    0   24

  495              FUSE-495         A    110-#4 ACS   7.30Y 121.7   0.26    4.33    7.74   6     56       8   99    0.07
0.1   14.56   1.50     56      8   24   24

  FUSE-496         496              ABC  083-30N FU   7.32Y 121.9   0.00    4.07    0.00   0      0       0    0    0.00
0.0   13.06   0.00      0      0    0    0

  OCR-12           894              A    005-25-H O   7.43Y 123.8   0.00    2.23   22.33  89    164      24   99    0.00
0.0    4.32   0.00      0      0    0   53

  12               OCR-12           A    110-#4 ACS   7.37Y 122.8   0.99    3.22   22.33  16    164      24   99    0.83
0.5    6.32   2.00    163     23   53   53

  OCR-895          614              C    005-25-H O   7.45Y 124.2   0.00    1.77    0.00   0      0       0    0    0.00
0.0    3.21   0.00      0      0    0    0

  895              OCR-895          C    110-#4 ACS   7.45Y 124.2   0.00    1.77    0.00   0      0       0    0    0.00
0.0    4.36   1.15      0      0    0    0

  OCR-615          664              ABC  007-50-H O   7.53Y 125.4   0.00    0.57   15.01  30    338     -27 -100    0.00
0.0    0.86   0.00      0      0    0   70

  615              OCR-615          ABC  106-#2 ACS   7.50Y 124.9   0.49    1.06   15.01   8    338     -27 -100    0.92
0.3    3.76   2.90    337    -27   70   70
```

```
         Load  Adjustment Capacitance    Charging  Gen&Motors Loops&Metas      Losses   No Load Losses      Total
KW       7568           0           0           0           0           0         272             0.00       7840
Lowest Voltage = 120.63  on Element 11
```

KEY-> L = Low Voltage H = High Voltage C = Capacity Over Limit G = Generator Out of kvar Limits

Detail

Balanced Voltage Drop Report
Source: 9021

Database: C:\MILSOFT\DATA\NOLIN\PSCREQUESTRINEYVILLEVRINSTALLOPTION
Title: 2003-2004 Work Plan
Case: NOLIN RECC
10/27/2004 11:30 Page 4

Units Displayed In Volts
-Base Voltage:120.0-

mi	Element															
% Element Loss	From Name	Src	Length (mi)	Parent Name KW	KVAR	Cons Cnf On	Cons Conductor Thru	Type/ kV	Pri Volt	Base Element Drop	Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss
KVAR			9	0	-967			0	0		0	430					-528

KEY-> L = Low Voltage H = High Voltage C = Capacity Over Limit G = Generator Out of kvar Limits

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