




A Touchstone Energy Cooperative 

Case 2004-00160

2003-2005 CONSTRUCTION WORK PLAN

Prepared by
NOLIN RURAL ELECTRIC COOPERATIVE CORPORATION
&
ENVISION ENERGY SERVICES
Roger Wilson, PE

June 13, 2003


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2003-2005 CONSTRUCTION WORK PLAN

FOR NOLIN RURAL ELECTRIC COOPERATIVE CORPORATION

KENTUCKY 51-HARDIN
ELIZABETHTOWN, KENTUCKY

PREPARED BY:

NOLIN RURAL ELECTRIC COOPERATIVE CORPORATION
&
ENVISION ENERGY SERVICES

JUNE 13, 2003

I hereby certify that this 2003-2005 Construction Work Plan was prepared by me or under my direct supervision and that I am a duly registered professional engineer under the laws of this State Kentucky.

(Date)

By: _____
(Engineer, P.E.)

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**EXECUTIVE
SUMMARY**

PURPOSE OF REPORT

This report documents the January 2003 engineering analysis of, and summarizes the proposed construction for, Nolin Rural Electric Cooperative Corporation's (NRECC) electric distribution system for the two-year planning period of 2003-2005.

The report also provides engineering support, in the form of descriptions, costs and justification of required new facilities, for a loan application to RUS to finance proposed construction.

RESULTS OF PROPOSED CONSTRUCTION

Upon completion of the facilities proposed herein, the system will provide adequate and dependable service to 26,388 residential/farm consumers using an average of 1, 280 KWh per consumer per month, 1,358 commercial and small industrial consumers, and 3 large industrial consumers. The construction proposed will allow the NRECC distribution system to sustain a 200 MW peak demand.

GENERAL BASIS OF STUDY

The 2004 projected number of consumers and total peak system load were interpolated directly from the cooperative's 2002 Power Requirements Study (PRS) as approved by RUS. The peak system load projections were increased slightly to include additional new specific loads that were not anticipated when the PRS was prepared.

The cooperative has an approved Long-Range Plan (LRP) with new load projections and recommendations. NRECC has worked very closely with ENVISON ENERGY SERVICES in developing load projections and assumptions to be made for the construction work plan. All of the construction proposed herein is consistent with the LRP unless otherwise noted and explained.

The cooperative's August 8, 2001 operations and maintenance review, (Review Rating Summary; RUS Form 300), was used to determine construction required to replace physically deteriorated equipment and material, upgrade portions of the system to conform with code or safety requirements, and/or improve reliability or quality of service.

New distribution, transmission, and power supply requirements were considered simultaneously as a "one system" approach for the orderly and economical development of the total system. All of the proposed construction and recommendations herein, relative to power supply and delivery, were discussed and approved by the cooperative's power supplier, East Kentucky Power Cooperative (EKPC).

A complete list of the lines and equipment and their estimated cost, (all based on recent historical data), required to serve new members is developed in Section III-A. A similar list and cost of necessary service upgrades to existing members is in Section III-B.

An analysis, using as a basis RUS guidelines and the design criteria herein, of thermal loading, voltages, physical conditions and reliability was performed on all of the substations, distribution lines, and major equipment of the existing system. Milsoft's WINDWIL was used to analyze the

distribution circuits during the estimated 2002- 2003 winter extreme peak loading period of 200MW.

For each deficiency that was determined, alternate solutions were investigated and economically evaluated so that the most effective construction, if required, could be proposed.

SERVICE AREA & POWER SUPPLY

Nolin Rural Electric Cooperative Corporation, whose headquarters are in Elizabethtown, Kentucky, provides service in the rural areas of two counties and small portions of six counties in the central portion of the state as shown on the following map. The service area is comprised mostly of rolling, forested hills and has two small lakes. NRECC's service area surrounds Elizabethtown and Hodgenville, both of which are served by an investor-owned utility.

Most of the economy of the area is based on commercial industries and agriculture. NRECC has and will continue to serve the moderate growth of new commercial, manufacturing, and residential consumers adjacent to Elizabethtown. However, an industrial park is being proposed in the southern portion of the Elizabethtown area, served totally by NRECC, which may have dramatic impact on that portion of the system.

The following data is from NRECC's 12/2002 REA Form 7:

Number of Consumers:	29,008
MWh Purchased:	699,684
MWh Sold:	673,480
Total Utility Plant:	\$65,441,951
Consumers/Mile:	10.6

Seventy primary distribution circuits are served from 20 separate distribution transformers and 17 different substation sites. All of the circuits are energized at 7,200/12,470 volts, grounded WYE. Installed conductor sizes range from #4 ACSR to 366.4 MCM ACSR. Almost all primary construction is overhead with a small percentage of new and existing plants being underground primary. The underground primary ranges in sizes from #2 AL to 500MCM AL.

East Kentucky Power Cooperative provides all of the power and energy needs to Nolin Rural Electric Cooperative Corporation, plus 15 other distribution cooperatives, by virtue of a standard "all power requirement" contract. EKPC is a RUS financed G&T cooperative with offices in Winchester, Kentucky.

EKPC constructs, owns, operates, and maintains the 20 substations and 69,000-volt transmission lines, which supply NRECC's distribution system. The substation low-side voltage is 7,200/12,470 volts, grounded WYE.

**SUMMARY OF PROPOSED 2-YEAR
CONSTRUCTION WITH COST**

CODE	DESCRIPTION	#	COST	MILES	ESTIMATED COST		TOTAL
					YEAR 1	YEAR 2	
100	NEW DISTRIBUTION LINES						
101	UNDERGROUND LINES						
102	OVERHEAD LINES						
		470	\$1,555		\$365,425	\$365,425	\$730,850
		1088	\$1,484		\$807,296	\$807,296	\$1,614,592
					\$1,172,721	\$1,172,721	\$2,345,442
375	CWP ITEM 4_4_O (CARTER--1PH-3PH 2)	1		3	\$143,383		\$143,383
377	CWP ITEM 3_2_O (WRHUDES CK--1PH-3PH 3/0)	1		2.8	\$163,829		\$163,829
378	CWP ITEM 3_2_A (BOBWADE RD--3PH-3PH 3/0)	1		1	\$58,510		\$58,510
379	CWP ITEM 5_1_O (MT.SHERMAN--1PH-3PH 3/0)	1		1	\$58,510		\$58,510
380	CWP ITEM 5_1_A (BENNETT ROAD--1PH-3PH 3/0)	1		1.6		\$93,617	\$93,617
381	CWP ITEM 5_3_O (JENKINS RD--1PH-1PH 1/0)	1		2.6		\$90,879	\$90,879
382	CWP ITEM 5_3_A (MUNFORDVILLE--1PH-3PH 2)	1		1	\$47,794		\$47,794
383	CWP ITEM 5_4_0 (AIRLINE ROAD-- 1PH-3PH 3/0)	1		0.9	\$52,659		\$52,659
384	CWP ITEM 6_4_0 (DRYRIDGE ROAD--1PH-3PH 3/0)	1		1	\$58,510		\$58,510
385	CWP ITEM 6_3_0 (ROCKCREEK--1PH-3PH 2)	1		2.3		\$109,927	\$109,927
386	CWP ITEM 7_2_0 (MILLERTOWN-- 1PH-3PH 2)	1		0.6	\$28,677		\$28,677
387	CWP ITEM 8_1_O (HARDINBURG--1PH-3PH 2)	1		3		\$143,383	\$143,383
388	CWP ITEM 8_1_A (CONSTANTINE--1PH-3PH 2)	1		1.1		\$52,574	\$52,574
389	CWP ITEM 8_2_O (ST.JOHNS--1PH-3PH 2)	1		4.5	\$215,074		\$215,074
390	CWP ITEM 8_3_0 (SALTRIVER-- 3PH-3PH 336.4)	1		3.6	\$335,638		\$335,638
391	CWP ITEM 9_3_0 (SOUTHWOODLAND 3PH-3PH 336)	1		1.7	\$158,496		\$158,496
392	CWP ITEM 16_3_0 (SPRINGFIELD 1PH-3PH 2)	1		0.4	\$19,118		\$19,118
393	CWP ITEM 16_3_A (VALLEYCREEK 1PH-3PH 2)	1		0.6	\$28,677		\$28,677
394	CWP ITEM 21_1_0 (NEWSUBFD 3PH 336)	1		1.6		\$149,172	\$149,172
395	CWP ITEM 21_1_A (BLUE BALL RD 3PH-3PH 336)	1		0.5		\$62,656	\$62,656
396	CWP ITEM 21_1_B (JENKINS 3PH-3PH 336)	1		3.6	\$335,638		\$335,638
397	CWP ITEM 21_1_C (FULLER 1PH-3PH 336)	1		2.7	\$251,728		\$251,728
398	CWP ITEM 21_1_D (N LONG GROVE 3PH-3PH 336)	1		2.8	\$261,052		\$261,052
399	CWP ITEM 6_2_0 (BACONCKRD 1PH-3PH 336)	1		3.2	\$298,345		\$298,345
				47.1	\$1,368,876	\$1,550,625	\$3,217,845
601	TRANSFORMER & METERS						
	UG TRANSFORMERS	142	\$1,766		\$125,386	\$125,386	\$250,772
	OH TRANSFORMERS	1,088	\$660		\$359,040	\$359,040	\$718,080
	METERS- NEW	500	\$82		\$20,500	\$20,500	\$41,000
	METERS- TURTLE EQUIPED	12,000	\$150		\$900,000	\$900,000	\$1,800,000
					\$1,404,926	\$1,404,926	\$2,809,852
602	SERVICE UP-GRADES						
		85	\$961		\$40,843	\$40,843	\$81,685
603	SECTIONALIZING				\$40,843	\$40,843	\$81,685
604	VOLTAGE REGULATORS						
605	CAP.100KVAR (3_4_0--LS396--RED MILL RD)	1	\$2,000		\$2,000		\$2,000
605	CAP.100KVAR (6-4--LS99--DRY RIDGE)	1	\$2,000		\$2,000		\$2,000
605	CAP.100KVAR (5-3--LS284--JENKINS)	1	\$2,000		\$2,000		\$2,000
605	CAP.100KVAR (16-3A--LS532--VALLEYCRK)	1	\$2,000		\$2,000		\$2,000
605	CAP.100KVAR (9-3B--LS.586 & 677)	2	\$2,000			\$4,000	\$4,000
605	CAP.100KVAR (21-3--LS499--THOMAS)	1	\$2,000			\$2,000	\$2,000
					\$8,000	\$6,000	\$14,000
606	POLE REPLACEMENTS						
		254	\$1,236		\$156,972	\$156,972	\$313,944
		240	\$1,300		\$156,000	\$156,000	\$312,000
701	SECURITY LIGHTS				\$312,972	\$312,972	\$625,944
		534	\$421		\$112,407	\$112,407	\$224,814
702	TURTLE COMPUTER EQUIPMENT				\$112,407	\$112,407	\$224,814
					\$150,000	\$120,000	\$270,000
	TOTAL WORK PLAN	9	\$30,000		\$150,000	\$120,000	\$9,589,582

SUMMARY OF 2001-2002 CONSTRUCTION WITH STATUS

CODE	DESCRIPTION	COST	PROGRESS
350	11-2-A	\$148,500	in progress
351	19-1-A	\$234,360	complete
352	4-3-A	\$207,120	complete
353	12-3-A	\$124,992	complete
354	18-2-A	\$340,560	delete
355	8-1-A	\$195,300	complete
356	6-4-A	\$37,289	complete
357	5-1-A	\$49,718	complete
358	11-1-A	\$62,496	complete
359	6-1-A	\$82,848	complete
360	4-3-B	\$82,848	in-progress
361	5-4-A	\$44,746	in-progress
362	7-2-A	\$281,232	complete
363	4-2-A	\$17,401	delete
364	4-3-C	\$24,859	complete
365	6-4-B	\$37,289	complete
366	3-3-A	\$149,154	complete

**BASIS OF STUDY AND PROPOSED
CONSTRUCTION**

DESIGN CRITERIA

Each of the following design criteria items was reviewed by the RUS General Field Representative on June 17, 2003 and his provisional concurrence was attained.

Construction proposed herein is required to meet the following minimum standards of adequacy for voltages, thermal loading, safety and reliability on the system.

1. Voltage levels on primary distribution lines are to fall between 117.6 and 126 Volts on a 120 base.
2. The following equipment is not to be thermally loaded by more than the percentage shown on its nameplate rating (winter loading)
 - Power Transformers 130% Winter ; 100% Summer
 - Voltage Regulators 130% Winter ; 100% Summer
 - Auto-Transformer 130% Winter ; 100% Summer
 - Reclosers 100% Winter or Summer
 - Line Fuses 80% Winter or Summer
3. Primary conductors are not to be loaded over 75% of their thermal rating. A case by case limit is used for the major tie lines between substations to allow for different back feed situations.
4. Poles and/or crossarms are to be replaced if found to be physically deteriorated by visual inspection and/or tests.
5. Conductors (and associated poles and hardware as required) will be considered for replacement if found to be poor condition, having excessive sag or in need of being changed out on a systematic basis.
6. Primary distribution lines are to be rebuilt and/or relocated if they are found to be unsafe or fail to meet the applicable National electrical Safety Code clearances.
7. New lines and line conversions to be built according to the standard primary voltage levels as determined after review of the Long Range Plan, present loading and future load growth projection.

8. New primary conductor sizes to be determined on a case by case basis using the Economic Conductor Sizing Computer Program and presently valid constants and variables. The final proposed conductor may be modified to conform with the cooperative's standard sized and recommendations of the Long Range Plan.
9. All new primary construction is to be overhead except where underground is required to comply with governmental or environmental regulations, local restrictions or favorable economics.
10. All new distributions lines are to be designed and built according to RUS standard construction specifications and guidelines.
11. The fault current available at regulator or auto-transformer locations should not exceed 25 times normal base current at the location in question.
12. The fault current available at oil circuit recloser should not exceed the nameplate rating.
13. System improvements to correct voltage drop and improve phase balance will be made on single and two-phase lines with loads exceeding 50 amps or 70 consumers (based on Operating and Engineering practices).
14. Power factor correction is to be made when the substation power factor decreases below 95% lagging at peak load or 95% leading at minimum load. Power factor correction with capacitors are to be located for maximum loss reduction with considerations given for voltage improvements.

(The preceding criteria is used for design purposes only. It is not meant to be inclusive of all criteria that can or should be used in making recommendations for construction work.)

DISTRIBUTION LINE AND EQUIPMENT COSTS

DESCRIPTION	2000-2002 COST/MILE	2003-2005 PROPOSED
SINGLE PHASE OVHD		
#4 ACSR	\$19,077	\$22,892.40
#2 ACSR	\$26,576	\$31,891.20
#1/0 ACSR	\$29,128	\$34,953.60
SINGLE PHASE STR.		
#1/0 STR AL 15KV	\$34,040	\$40,848.00
THREE PHASE OVHD		
#2 ACSR	\$41,202	\$47,794.32
#1/0 ACSR	\$47,625	\$55,245.00
#3/0 ACSR	\$50,440	\$58,510.40
#336.4 MCM ACSR	\$80,373	\$93,232.68
#336.4 SC	\$93,356	\$108,292.96
#336.4 MCM ACSR—D.C.	N/A	\$125,311.00
THREE-PHASE URD		
#1/0 STR AL	\$78,081	\$90,573.96
#4/0 STR AL	\$123,822	\$143,633.52
#500 MCM STR AL	\$169,950	\$197,142.00

NOTE: The cost provided was obtained from a 24-month historical average cost from data in the 219 forms.

8% increase contractor

12% increase Nolin

8% increase Al.

ANALYSIS OF LONG RANGE PLAN

Nolin Rural Electric Cooperative Corporation has completed a Long Range Plan in 2000 that projected system improvements and load growth through 2020. The study was performed by Hi-Line Engineering from Marietta, Georgia.

The report planned for the development of Nolin RECC's distribution system to a future configuration with the capacity to serve approximately 2.1 times the winter peak load of 1998-1999. The Long Range Plan for the distribution system called for maintaining the current distribution voltages. Three new substations were recommended to be constructed. Tunnel Hill II and Elizabethtown II are now completed and Rineyville will be constructed as part of this work plan.

The Long Range Plan was conducted with the final loading of the Nolin RECC's distribution system being equal to 289.6 MW. The first five-year loading block anticipated a system of peak of 194 MW. The actual loading for the system in 2003 was 175MW in the month of January, indicating a very close tracking to the Long Range Plan. The system is growing with a strong residential and commercial growth with expectations of continued development. The Power Requirement Study for Nolin RECC mirrors the growth pattern as well as the actual development model.

The Long Range Plan is adequate for this work plan. With the advent of growth in particular areas and summer peak loading becoming a concern, it would be advantageous to observe the actual characteristic growth patterns in relationship to the Long Range Plan's distribution of loads for the second block of five year loading. A fully developed Long Range Plan would not be necessary, but observing the load growth would insure accuracy for the future blocks of growth.

SECTIONALIZING STUDIES

Nolin Rural Electric Cooperative Corporation performed a study in 2001. The practice of annually analyzing the over-current coordination of all new or significant changes in circuits is good engineering practice.

Upon completion of the Construction Work Plan an annual study will be performed. The study will consist of listing OCRs, fuses, and other devices required to adequately protect the circuits investigated due to changes. NRECC will continue a maintenance program that will provide testing or changing approximately one-fourth of the systems OCRs annually.

ANALYSIS OF 2002 OPERATIONS & MAINTENANCE SURVEY

In August 8, 2001, an Operation and Maintenance Survey (O & M Survey) of the NRECC distribution system was conducted. Line and pole inspection records, voltage and current test records, special equipments records, outage records, and a field survey of the underground distribution system comprised the basis for the system analysis and rating.

Transmission lines and distribution substations are owned and maintained by East Kentucky Power Cooperative (EKPC) and has been excluded from the rating process.

In general, the overhead and underground distribution facilities were found to be in satisfactory condition. All of the operations and maintenance, and engineering programs were found to be satisfactory.

It is recommended to continue the program of inspecting approximately 8500 poles per year. The method of inspection is ground patrol and use of personnel that are doing normal mapping projects. It is anticipated that approximately 2 percent of the poles will be found to be physically deteriorated and require replacement. The estimated cycle to inspect all of NRECC's distribution poles is 4 years.

NRECC has a program to clear its overhead distribution line rights-of-way on a 5-year cycle. This requires clearing of approximately 500 miles each year by contract tree trimming crews. Due to increased growth of shade trees in urban areas, it is recommended that NRECC evaluate increased tree trimming in these urban areas. The tree-trimming program may be increased to cut in urban areas on a two-year cycle. An alternate program would be a tree replacement plan for danger trees.

NRECC will continue to work with the telephone and cable television companies to remove poles that have been abandon by the cooperative and still have joint-use-attachments to the old poles.

Contract labor was utilized in the last 2-year CWP to assist NRECC's in-house construction crews. This additional assistance will be required to complete the proposed projects as submitted in the 2003-2005 CWP.

**SUBSTATION HISTORICAL PEAK KW DEMANDS
FOR INDIVIDUAL SUMMER MONTHS**

SUBSTATION	TRANSFORMER		SUMMER RATING	HISTORICAL	PROJECTED	HISTORICAL	PROJECTED
	#	KVA		PEAK KW	PEAK KW	MAX LOAD % NP	MAX LOAD %
COLESBURG	3	5,600	5,600	2,833	4,000	51%	71%
ELIZABETHTOWN I	3	11,200	11,200	11,019	8,200	98%	73%
ELIZABETHTOWN II	1	11,200	11,200	0	8,100	0%	72%
GLENDALE	3	10,000	10,000	6,803	9,100	68%	91%
HODGENVILLE	1	11,200	11,200	7,125	9,400	64%	84%
MAGNOLIA	1	11,200	11,200	6,341	8,800	57%	79%
STEPHENSBURG	3	10,000	10,000	5,024	6,400	50%	64%
UPTON !	3	4,200	4,200	3,050	4,300	73%	102%
VERTREES	3	10,000	10,000	5,193	7,100	52%	71%
VINEGROVE	3	14,000	14,000	10,287	10,000	73%	71%
RADCLIFF	3	14,000	14,000	6,929	9,800	49%	70%
TUNNEL HILL I	3	14,000	14,000	8,873	13,200	63%	94%
TUNNEL HILL II	1	11,200	11,200	1,715	2,700	15%	24%
THARP !	3	11,200	11,200	13,522	10,300	121%	92%
SMITHERSVILLE I	1	14,000	14,000	5,322	8,100	38%	58%
SMITHERSVILLE II	1	14,000	14,000	5,542	8,000	40%	57%
FORT KNOX	1	14,000	14,000	8,484	13,300	61%	95%
KARGLE I	1	25,200	25,200	5,866	5,800	61%	61%
KARGLE II	1	1	1	9,504	9,500	0%	0%
WILLIAMS !	1	11,200	11,200	8,557	12,500	76%	112%
LOGSDON	1	11,200	11,200	6,406	9,400	57%	84%
RINEYVILLE	1	11,200	11,200	0	7,400	0%	66%
TOTALS				138,395	185,400		

NOTES: PROJECTED (extreme) PEAKS FROM THE PRS 2002 DATA (2005) AND REVISED RINEYVILLE ADDITION
HISTORICAL PEAK FROM THE ACTUAL PEAK SUMMER MONTH NON-CP BILLING FROM EKPC

! FEEDER CHANGES PROPOSED FOR SUBSTATIONS' LOADING BALANCE-- SEE CHANGES

**SUBSTATION HISTORICAL PEAK DEMANDS
FOR INDIVIDUAL WINTER MONTHS**

SUBSTATION	TRANSFORMER		WINTER RATING	HISTORICAL	PROJECTED	HISTORICAL	PROJECTED
	#	KVA		PEAK KW	PEAK KW	MAX LOAD % NP	MAX LOAD %
COLESBURG	3	5,600	7,280	3,741	4,500	51%	62%
ELIZABETHTOWN I	3	11,200	14,560	10,968	7,500	75%	52%
ELIZABETHTOWN II	1	11,200	14,560	0	7,400	0%	51%
GLENDALE	3	10,000	13,000	9,930	11,900	76%	92%
HODGENVILLE	1	11,200	14,560	10,230	11,700	70%	80%
MAGNOLIA	1	11,200	14,560	8,610	10,200	59%	70%
STEPHENSBURG	3	10,000	13,000	6,826	6,900	53%	53%
UPTON I	3	4,200	5,460	4,697	5,300	86%	97%
VERTREES	3	10,000	13,000	6,826	8,800	53%	68%
VINEGROVE	3	14,000	18,200	12,355	11,400	68%	63%
RADCLIFF	3	14,000	18,200	10,189	12,700	56%	70%
TUNNEL HILL I	3	14,000	18,200	13,379	8,100	74%	45%
TUNNEL HILL II	1	11,200	14,560	1,939	3,000	13%	21%
THARP I	3	11,200	14,560	14,860	10,000	102%	69%
SMITHERSVILLE I	1	14,000	18,200	15,857	11,100	87%	61%
SMITHERSVILLE II	1	14,000	18,200	0	8,100	0%	45%
FORT KNOX	1	14,000	18,200	8,536	16,300	47%	90%
KARGLE I	1	25,200	32,760	7,270	6,100	52%	47%
KARGLE II	1	1	1	9,802	9,200	0%	0%
WILLIAMS I	1	11,200	14,560	13,167	15,400	90%	106%
LOGSDON	1	11,200	14,560	6,700	8,200	46%	56%
RINEYVILLE	1	11,200	14,560	0	7,100	0%	49%
TOTALS				175,882	200,900		

NOTES: PROJECTED (extreme) PEAKS FROM THE PRS 2002 DATA (2005) AND REVISED RINEYVILLE ADDITION
HISTORICAL PEAK FROM THE ACTUAL JANUARY 2003 NON-CP BILLING FROM EKPC

I FEEDER CHANGES PROPOSED FOR SUBSTATIONS' LOADING BALANCE-- SEE CHANGES

**SUBSTATION FEEDER CHANGES ON PEAK KW DEMANDS
FOR INDIVIDUAL SUMMER MONTHS**

SUBSTATION	TRANSFORMER #	KVA	SUMMER RATING	HISTORICAL PEAK KW	PROJECTED PEAK KW	HISTORICAL MAX LOAD % NP	PROJECTED MAX LOAD %
COLESBURG	3	5,600	5,600	2,833	4,000	51%	71%
ELIZABETHTOWN I	3	11,200	11,200	11,019	8,200	98%	73%
ELIZABETHTOWN II	1	11,200	11,200	0	8,100	0%	72%
GLENDALE	3	10,000	10,000	6,803	9,100	68%	91%
HODGENVILLE	1	11,200	11,200	7,125	9,400	64%	84%
MAGNOLIA	1	11,200	11,200	6,341	9,057	57%	81%
STEPHENSBURG	3	10,000	10,000	5,024	7,382	50%	74%
UPTON (1)	3	4,200	4,200	3,050	4,043	73%	96%
VERTREES	3	10,000	10,000	5,193	7,100	52%	71%
VINEGROVE	3	14,000	14,000	10,287	10,000	73%	71%
RADCLIFF	3	14,000	14,000	6,929	9,800	49%	70%
TUNNEL HILL I	3	14,000	14,000	8,873	13,200	63%	94%
TUNNEL HILL II	1	11,200	11,200	1,715	5,525	15%	49%
THARP (2)	3	11,200	11,200	13,522	9,318	121%	83%
SMITHERSVILLE I	1	14,000	14,000	5,322	8,100	38%	58%
SMITHERSVILLE II	1	14,000	14,000	5,542	8,000	40%	57%
FORT KNOX	1	14,000	14,000	8,484	13,300	61%	95%
KARGLE I	1	25,200	25,200	5,866	5,800	61%	61%
KARGLE II	1	1	1	9,504	9,500	0%	0%
WILLIAMS (3)	1	11,200	11,200	8,557	8,690	76%	78%
LOGSDON	1	11,200	11,200	6,406	9,400	57%	84%
RINEYVILLE	1	11,200	11,200	0	7,400	0%	66%
TOTALS				138,395	184,415		

NOTES: PROJECTED PEAKS FROM SUMMER DATA REVISED RINEYVILLE & TRANSFERS

- (1) UPTON LOAD TRANSFERRED TO MANOLIA (LS 159)
- (2) THARP LOAD TRANSFERRED TO STEPHENSBURG (LS 485)
- (3) WILLIAMS LOAD TRANSFERRED TO TUNNELHILL II (LS 470)

HISTORICAL OUTAGES SUMMARY

YEAR	POWER SUPPLIER	MAJOR STORM	SCHEDULE	ALL OTHER	TOTAL
1995	.14	.47	.02	1.5	2.13
1996	.03	.44	.04	.61	1.12
1997	.03	.51	.06	1.09	1.69
1998	.01	0	.02	1.37	1.4
1999	.08	.32	.14	1.05	1.59
2000	.2	.08	.02	.77	1.07
2001	.05	.0	.01	.86	.92
2002	.37	.0	.01	1.05	1.43
<i>5 year ave.</i>	.13	.08	.04	1.02	1.28

REQUIRED CONSTRUCTION ITEMS

**HISTORICAL COST REQUIRED TO SERVE
NEW MEMBERS AND EXISTING MEMBERS**

	2000-2002 ACTUAL NUMBER	2000-2002 ACTUAL COST	2003-2005 PROPOSED NUMBER	2003-2005 PROPOSED COST	TOTAL COST
NEW SERVICES					
OVERHEAD	989	\$1,349	1088	\$1,484	\$1,614,592
UNDERGROUND	427	\$1,414	470	\$1,555	\$ 730,850
NEW TRANSFORMER					
OVERHEAD	1024	\$601	1088	\$660	\$ 718,080
UNDERGROUND	129	\$1,605	142	\$1,766	\$ 250,772
INSTALLED METERS					
METERS	1,700	\$82	500	\$82	\$ 41,000
TURTLE METERS	1,000	\$150	12,000	\$150	\$1,800,000
SERVICE DROPS					
SERVICE DROP UPGRADES	87	\$874	85	\$961	\$ 81,685
SECURITY LIGHTS					
SECURITY LIGHTS	534	\$383	534	\$421	\$ 224,814
POLE REPLACEMENTS					
POLE REPLACEMENTS	212	\$1,124	254	\$1,236	\$ 313,944
POLES FOR CODE	200	\$1,181	240	\$1,300	\$ 312,000

NOTE: The costs provided are obtained from 24 months of historical average figures from the 219 forms.

'Actual Cost' was inflated by 5% per year for escalation to the 'Proposed Cost'.

NEW DISTRIBUTION CONSTRUCTION ITEM—LINE CONVERSION

YEAR:	2003
CFR CODE:	375
CWP ITEM NUMBER:	4 4 0
ESTIMATED COST:	\$143,383
GENERIC NAME:	Carter Brothers Road

DESCRIPTION OF PROPOSED CONSTRUCTION

An existing single phase #4ACSR line is converted to three phase #2 ACSR and identified as line sections 291 and 374. The two line sections total three miles.

REASON FOR PROPOSED CONSTRUCTION

The voltage drop at the end of the furthest point was calculated to be 115.6 Volts at the adjusted kW growth. The lines serve 98 consumers at 73 Amperes. The line construction replaces old #4 ACSR wire and poles for a new more reliable feed.

RESULTS OF PROPOSED CONSTRUCTION

The three phase configuration provides a better balance of phases at the substation level; the voltage is corrected to above 118 Volts; and the line is upgraded to newer poles and wire for improved serve and reliability.

ALTERNATE CORRECTIVE PLANS INVESTIGATED

Capacitors and Voltage regulators were not considered as a viable alternate because of substation balance and the large voltage drop.

NEW DISTRIBUTION CONSTRUCTION ITEM—LINE CONVERSION

YEAR:	2003
CFR CODE:	377
CWP ITEM NUMBER:	3 2 0
ESTIMATED COST:	\$163,829
GENERIC NAME:	West Rhudes Road

DESCRIPTION OF PROPOSED CONSTRUCTION

An existing single phase #4 ACSR line is converted to three phase 3/0 ACSR and identified as line section 402 and 404. The two line sections total 2.8 miles.

REASON FOR PROPOSED CONSTRUCTION

The voltage drop at the end of the furthest point was calculated to be 116.6 Volts at the adjusted kW growth. The lines serve 106 consumers at 37 Ampere. The line will provide an acceptable link to the Stephensburg and Tharp Substations. The line construction replaces old #4 ACSR wire and poles for a new more reliable feed.

RESULTS OF PROPOSED CONSTRUCTION

The three phase configuration provides a better balance of phases at the substation level. The voltage is corrected to above 118 Volts. The line is upgraded to newer poles and wire for better reliability. The three phase line will provide a portion of back-feed to a southern portion of Tharp and the possible need to realign the feeders of both substations.

ALTERNATE CORRECTIVE PLANS INVESTIGATED

This area served by the Glendale feeder has a strong possible industrial link. The upgrade of individual line segments would be more expensive. The addition of capacitors and/or voltage regulators would impede the future needs of realignment of the feeders.

NEW DISTRIBUTION CONSTRUCTION ITEM—LINE CONVERSION

YEAR:	2003
CFR CODE:	378
CWP ITEM NUMBER:	3 2 A
ESTIMATED COST:	\$58,510
GENERIC NAME:	Bob Wade Road

DESCRIPTION OF PROPOSED CONSTRUCTION

An existing three phase #4 ACSR line is re-conducted three phase 3/0 ACSR for line section identified as line section number 401. The line section length is 1.0 miles.

- (served from Tharp in the Milsoft model)

REASON FOR PROPOSED CONSTRUCTION

The line section completes the upgrade needs of the southern portion of Tharp substation from the CFR Code 377 project. The line construction replaces old #4 ACSR wire and poles for a new more reliable feed.

RESULTS OF PROPOSED CONSTRUCTION

The line is upgraded to newer poles and wire for better reliability. The three-phase line will provide a back-feed to a southern portion of Tharp and the need to realign the feeders of both substations. This will provide an option for not building a TharpII or GlendaleII substation.

ALTERNATE CORRECTIVE PLANS INVESTIGATED

No alternate is available.

NEW DISTRIBUTION CONSTRUCTION ITEM—LINE CONVERSION

YEAR:	2003
CFR CODE:	379
CWP ITEM NUMBER:	5 1 0
ESTIMATED COST:	\$58,510
GENERIC NAME:	Mt. Sherman Road

DESCRIPTION OF PROPOSED CONSTRUCTION

An existing single phase #4 ACSR line is converted to three phase #3/0 ACSR line identified as line section 195 and 198. The length of the construction project is 1.0 miles.

REASON FOR PROPOSED CONSTRUCTION

The voltage drop at the end of the furthest point was calculated to be 113.1 Volts at the adjusted kW growth. The lines serve 185 consumers at 79 Amperes. The line construction replaces old #4 ACSR wire and poles for a new more reliable feed.

RESULTS OF PROPOSED CONSTRUCTION

The three phase configuration provides a better balance of phases at the substation level; the voltage is corrected to above 118 Volts; and the line is upgraded to newer poles and wire for improved serve and reliability.

ALTERNATE CORRECTIVE PLANS INVESTIGATED

Capacitors and Voltage regulators were not considered as a viable alternate because of substation balance and the large voltage drop.

NEW DISTRIBUTION CONSTRUCTION ITEM—LINE CONVERSION

YEAR:	2004
CFR CODE:	380
CWP ITEM NUMBER:	5 1 A
ESTIMATED COST:	\$93,617
GENERIC NAME:	Bennett Road

DESCRIPTION OF PROPOSED CONSTRUCTION

An existing single phase #4 ACSR line is converted to three phase #3/0 ACSR line identified as line section 233. The length of the construction project is 1.6 miles.

REASON FOR PROPOSED CONSTRUCTION

The voltage drop at the end of the furthest point was calculated to be 114.9 Volts at the adjusted kW growth. The lines serve 67 consumers at 48 Amperes. The line construction replaces old #4 ACSR wire and poles for a new more reliable feed.

RESULTS OF PROPOSED CONSTRUCTION

The three phase configuration provides a better balance of phases at the substation level; the voltage is corrected to above 118 Volts; and the line is upgraded to newer poles and wire for improved serve and reliability.

ALTERNATE CORRECTIVE PLANS INVESTIGATED

Capacitors and Voltage regulators were not considered as a viable alternate because of substation balance and the large voltage drop.

NEW DISTRIBUTION CONSTRUCTION ITEM—LINE CONVERSION

YEAR:	2004
CFR CODE:	381
CWP ITEM NUMBER:	5 3 0
ESTIMATED COST:	\$90,879
GENERIC NAME:	Jenkins Road

DESCRIPTION OF PROPOSED CONSTRUCTION

An existing single phase #4 ACSR line is converted to single phase #1/0 ACSR line identified as line sections 260 and 832. The length of the construction project is 2.6 miles.

REASON FOR PROPOSED CONSTRUCTION

The voltage drop at the end of the furthest point was calculated to be 117.5 Volts at the adjusted kW growth. The lines serve 47 consumers at 28 Amperes. The area has been reported to have several wire splices and poles that have failed inspection. The line construction replaces old #4 ACSR wire and poles for a new more reliable feed.

RESULTS OF PROPOSED CONSTRUCTION

The single phase construction increases the voltage to above 118 Volts; and the line is upgraded to newer poles and wire for improved serve and reliability. The existing line is very old and has been a problem with wire breakage.

ALTERNATE CORRECTIVE PLANS INVESTIGATED

Capacitors and Voltage regulators were not considered as a viable alternate because of maintenance issues.

NEW DISTRIBUTION CONSTRUCTION ITEM—LINE CONVERSION

YEAR:	2003
CFR CODE:	383
CWP ITEM NUMBER:	5 4 0
ESTIMATED COST:	\$52,659
GENERIC NAME:	Airline Road

DESCRIPTION OF PROPOSED CONSTRUCTION

An existing single phase #4 ACSR line is converted to three phase #3/0 ACSR line identified as line section 233. The length of the construction project is .9 miles.

REASON FOR PROPOSED CONSTRUCTION

The voltage drop at the end of the furthest point was calculated to be 114.8 Volts at the adjusted kW growth. The lines serve 167 consumers at 101 Amperes. The line construction replaces old #4 ACSR wire and poles for a new more reliable feed.

RESULTS OF PROPOSED CONSTRUCTION

The three phase configuration provides a better balance of phases at the substation level; the voltage is corrected to above 118 Volts; and the line is upgraded to newer poles and wire for improved serve and reliability.

ALTERNATE CORRECTIVE PLANS INVESTIGATED

Capacitors and Voltage regulators were not considered as a viable alternate because of substation balance and the large voltage drop.

NEW DISTRIBUTION CONSTRUCTION ITEM—LINE CONVERSION

YEAR:	2003
CFR CODE:	384
CWP ITEM NUMBER:	6 4 0
ESTIMATED COST:	\$58,510
GENERIC NAME:	Dry Ridge Road

DESCRIPTION OF PROPOSED CONSTRUCTION

An existing single phase #4 ACSR line is converted to three phase #3/0 ACSR line identified as line section 105. The length of the construction project is 1.0 mile. Switched Capacitor bank is installed to assist in voltage drop.

REASON FOR PROPOSED CONSTRUCTION

The voltage drop at the end of the furthest point was calculated to be 114.2 Volts at the adjusted kW growth. The lines serve 120 consumers at 64 Amperes. The line construction replaces old #4 ACSR wire and poles for a new more reliable feed.

RESULTS OF PROPOSED CONSTRUCTION

The three phase configuration provides a better balance of phases at the substation level; the voltage is corrected to above 118 Volts; and the line is upgraded to newer poles and wire for improved serve and reliability.

ALTERNATE CORRECTIVE PLANS INVESTIGATED

Voltage regulators were not considered as a viable alternate because of substation balance and the large voltage drop.

NEW DISTRIBUTION CONSTRUCTION ITEM—LINE CONVERSION

YEAR:	2004
CFR CODE:	385
CWP ITEM NUMBER:	6 3 0
ESTIMATED COST:	\$109,927
GENERIC NAME:	Rock Creek Road

DESCRIPTION OF PROPOSED CONSTRUCTION

An existing single phase #4 ACSR line is converted to three phase #2 ACSR line identified as line section 90. The length of the construction project is 2.3 miles

REASON FOR PROPOSED CONSTRUCTION

The voltage drop at the end of the furthest point was calculated to be 114.2 Volts at the adjusted kW growth. The lines serve 249 consumers at 94 Amperes. The line construction replaces old #4 ACSR wire and poles for a new more reliable feed.

RESULTS OF PROPOSED CONSTRUCTION

The three phase configuration provides a better balance of phases at the substation level; the voltage is corrected to above 118 Volts; and the line is upgraded to newer poles and wire for improved serve and reliability.

ALTERNATE CORRECTIVE PLANS INVESTIGATED

Capacitors and Voltage regulators were not considered as a viable alternate because of substation balance and the large voltage drop.

NEW DISTRIBUTION CONSTRUCTION ITEM—LINE CONVERSION

YEAR:	2003
CFR CODE:	386
CWP ITEM NUMBER:	7 2 0
ESTIMATED COST:	\$28,676
GENERIC NAME:	Millertown Road

DESCRIPTION OF PROPOSED CONSTRUCTION

An existing single phase #4 ACSR line is converted to three phase #2 ACSR line identified as line section 170. The length of the construction project is .6 miles.

REASON FOR PROPOSED CONSTRUCTION

The voltage drop at the end of the furthest point was calculated to be 117.2 Volts at the adjusted kW growth. The lines serve 86 consumers at 49 Amperes. The line construction replaces old #4 ACSR wire and poles for a new more reliable feed.

RESULTS OF PROPOSED CONSTRUCTION

The three phase configuration provides a better balance of phases at the substation level; the voltage is corrected to above 118 Volts; and the line is upgraded to newer poles and wire for improved serve and reliability.

ALTERNATE CORRECTIVE PLANS INVESTIGATED

Capacitors and Voltage regulators were not considered as a viable alternate because of substation balance and the large voltage drop.

NEW DISTRIBUTION CONSTRUCTION ITEM—LINE CONVERSION

YEAR:	2004
CFR CODE:	387
CWP ITEM NUMBER:	8 1 0
ESTIMATED COST:	\$143,383
GENERIC NAME:	Hardinsburg Road

DESCRIPTION OF PROPOSED CONSTRUCTION

An existing single phase #4 ACSR line is converted to three phase #2 ACSR line identified as line section 54. The length of the construction project is 3.0 miles.

REASON FOR PROPOSED CONSTRUCTION

The voltage drop at the end of the furthest point was calculated to be 116.9 Volts at the adjusted kW growth. The lines serve 172 consumers at 77 Amperes. The line construction replaces old #4 ACSR wire and poles for a new more reliable feed.

RESULTS OF PROPOSED CONSTRUCTION

The three phase configuration provides a better balance of phases at the substation level; the voltage is corrected to above 118 Volts; and the line is upgraded to newer poles and wire for improved serve and reliability.

ALTERNATE CORRECTIVE PLANS INVESTIGATED

Capacitors and Voltage regulators were not considered as a viable alternate because of substation balance and the large voltage drop.

NEW DISTRIBUTION CONSTRUCTION ITEM—LINE CONVERSION

YEAR:	2004
CFR CODE:	388
CWP ITEM NUMBER:	8_1_A
ESTIMATED COST:	\$52,574
GENERIC NAME:	Constantine Road

DESCRIPTION OF PROPOSED CONSTRUCTION

An existing single phase #4 ACSR line is converted to three phase #2 ACSR line identified as line section 57. The length of the construction project is 1.1 miles.

REASON FOR PROPOSED CONSTRUCTION

The voltage drop at the end of the furthest point was calculated to be 114.9 Volts at the adjusted kW growth. The lines serve 135 consumers at 67 Amperes. The line construction replaces old #4 ACSR wire and poles for a new more reliable feed.

RESULTS OF PROPOSED CONSTRUCTION

The three phase configuration provides a better balance of phases at the substation level; the voltage is corrected to above 118 Volts; and the line is upgraded to newer poles and wire for improved serve and reliability.

ALTERNATE CORRECTIVE PLANS INVESTIGATED

Capacitors and Voltage regulators were not considered as a viable alternate because of substation balance and the large voltage drop.

NEW DISTRIBUTION CONSTRUCTION ITEM—LINE CONVERSION

YEAR:	2003
CFR CODE:	389
CWP ITEM NUMBER:	8 2 0
ESTIMATED COST:	\$215,074
GENERIC NAME:	St. Johns – Long Hollow Road

DESCRIPTION OF PROPOSED CONSTRUCTION

An existing single phase #4 ACSR line is converted to three phase #2 ACSR line identified as line sections 4 and 6. The length of the construction project is 4.5 miles.

REASON FOR PROPOSED CONSTRUCTION

The voltage drop at the end of the furthest point was calculated to be 110.6 Volts at the adjusted kW growth. The lines serve 141 consumers at 80 Amperes. The end of the line segment has an exceptionally high residential growth in northern Hardin County. There is an existing subdivision at the very end of the line. The line construction replaces old #4 ACSR wire and poles for a new more reliable feed.

RESULTS OF PROPOSED CONSTRUCTION

The three phase configuration provides a better balance of phases at the substation level; the voltage is corrected to above 118 Volts; and the line is upgraded to newer poles and wire for improved serve and reliability. The property along the St. John Road is expected to be one of the high growth areas.

ALTERNATE CORRECTIVE PLANS INVESTIGATED

Capacitors and Voltage regulators were not considered as a viable alternate because of substation balance and the large voltage drop.

NEW DISTRIBUTION CONSTRUCTION ITEM—LINE CONVERSION

YEAR:	2003
CFR CODE:	390
CWP ITEM NUMBER:	8 3 0
ESTIMATED COST:	\$335,638
GENERIC NAME:	Salt River Road

DESCRIPTION OF PROPOSED CONSTRUCTION

An existing three phase #1/0 ACSR line is converted to three phase #336.4 ACSR line identified as line sections 33, 35, and 37. The length of the construction project is 3.6 miles.

REASON FOR PROPOSED CONSTRUCTION

The voltage drop at the end of the furthest point was calculated to be 116.0 Volts at the adjusted kW growth. The southern route serves mostly rural areas, but there are several long taps off this line. The existing line has several old poles and the wire has many splices from maintenance and normal construction practice. The line is the only tie to Stephensburg Substation feeder four.

RESULTS OF PROPOSED CONSTRUCTION

The three phase configuration provides a better balance of phases at the substation level; the voltage is corrected to above 118 Volts; and the line is upgraded to newer poles and wire for improved serve and reliability. The tie to Stephensburg will assist in developing a realignment plan for loads in the Glendale, Tharp, and Vine Grove during the future winter summer loads.

ALTERNATE CORRECTIVE PLANS INVESTIGATED

Capacitors and Voltage regulators were not considered as a viable alternate because of the age of the 1/0 three phase line and the multiple locations that would be required to be upgraded. Maintaining the existing wire size out of the substation, given the present maintenance issues, would stifle using the circuit for future realignment studies.

NEW DISTRIBUTION CONSTRUCTION ITEM—LINE CONVERSION

YEAR:	2003
CFR CODE:	391
CWP ITEM NUMBER:	9 3 0
ESTIMATED COST:	\$223,758
GENERIC NAME:	Rogersville Road – South Woodland Drive

DESCRIPTION OF PROPOSED CONSTRUCTION

An existing three phase #3/0 ACSR line is converted to three-phase #336.4 ACSR line identified as line sections 579, 580, and 581. A section of the conversion work is anticipated to be spacer cable because of the density of the development and accessibility of right of way. The length of the construction project is 1.7 miles. Two switched capacitor bank are installed for added voltage support.

REASON FOR PROPOSED CONSTRUCTION

The voltage drop at the end of the furthest point was calculated to be 116.2 Volts at the adjusted kW growth. The feeders from the Vine Grove Substation are over 85% of capacity. The growth is very intense and dense population.

RESULTS OF PROPOSED CONSTRUCTION

The three phase configuration provides a corrected voltage to above 118 Volts for the multiple areas of taps and feeder lines toward the end of the service area. The larger wire will add more capacity to the growth area and maintain a stable voltage for down line consumers.

ALTERNATE CORRECTIVE PLANS INVESTIGATED

Voltage regulation was not considered as a viable alternate because of the large amperage load for the area and the physical location regulators would be placed. Due to the density of the area, a separate feeder was not feasible. Realigning feeders would relocate problem areas in the same manner.

NEW DISTRIBUTION CONSTRUCTION ITEM—LINE CONVERSION

YEAR:	2003
CFR CODE:	392
CWP ITEM NUMBER:	16 3 0
ESTIMATED COST:	\$19,118
GENERIC NAME:	Springfield Road

DESCRIPTION OF PROPOSED CONSTRUCTION

An existing single phase #4 ACSR line is converted to three phase #2 ACSR line identified as line section 536. The length of the construction project is 0.4 miles.

REASON FOR PROPOSED CONSTRUCTION

The voltage drop at the end of the furthest point was calculated to be 117.4 Volts at the adjusted kW growth. The lines serve 90 consumers at 55 Amperes. The existing line is very old and has been a problem with wire breakage.

RESULTS OF PROPOSED CONSTRUCTION

The three-phase configuration provides a better balance of phases at the substation level; the voltage is corrected to above 118 Volts; and the line is upgraded to newer poles and wire for improved serve and reliability. The area has been reported to have several wire splices and poles that have failed inspection

ALTERNATE CORRECTIVE PLANS INVESTIGATED

Capacitors and Voltage regulators were not considered as a viable alternate because of substation balance and the large voltage drop.

NEW DISTRIBUTION CONSTRUCTION ITEM—LINE CONVERSION

YEAR:	2003
CFR CODE:	393
CWP ITEM NUMBER:	16 3 A
ESTIMATED COST:	\$28,677
GENERIC NAME:	Valley Creek Road

DESCRIPTION OF PROPOSED CONSTRUCTION

An existing single phase #4 ACSR line is converted to three phase #2 ACSR line identified as line section 528. The length of the construction project is 0.6 miles. A switched capacitor bank is installed for added voltage support.

REASON FOR PROPOSED CONSTRUCTION

The voltage drop at the end of the furthest point was calculated to be 116.1 Volts at the adjusted kW growth. The lines serve 76 consumers at 61 Amperes. The line construction replaces old #4 ACSR wire and poles for a new more reliable feed.

RESULTS OF PROPOSED CONSTRUCTION

The three phase configuration provides a better balance of phases at the substation level; the voltage is corrected to above 118 Volts; and the line is upgraded to newer poles and wire for improved serve and reliability.

ALTERNATE CORRECTIVE PLANS INVESTIGATED

Voltage regulators were not considered as a viable alternate because of substation balance and the large voltage drop.

NEW DISTRIBUTION CONSTRUCTION ITEM—LINE CONVERSION

YEAR:	2004
CFR CODE:	394
CWP ITEM NUMBER:	21 1 0
ESTIMATED COST:	\$149,172
GENERIC NAME:	Rineyville substation feeders

DESCRIPTION OF PROPOSED CONSTRUCTION

The three - three phase 336.4 ACSR lines are built from the substation's bays, along the road, to the existing lines. They will be identified as line section 7211, 7212, and 7213. The length of the construction project is estimated to be 1.6 miles.

REASON FOR PROPOSED CONSTRUCTION

The project provides connection to the existing lines from the new substation.

RESULTS OF PROPOSED CONSTRUCTION

The project develops supply feeders for the existing Tharp and Vine Grove area

ALTERNATE CORRECTIVE PLANS INVESTIGATED

Alternates were investigated during the substation justification study.

NEW DISTRIBUTION CONSTRUCTION ITEM—LINE CONVERSION

YEAR:	2004
CFR CODE:	395
CWP ITEM NUMBER:	21 1 A
ESTIMATED COST:	\$62,656
GENERIC NAME:	Blue Ball Road

DESCRIPTION OF PROPOSED CONSTRUCTION

The three phase 1/0 ACSR is converted to a double circuit three phase 336.4 ACSR wire. The line section number is 664. The construction project is estimated to be 0.5 miles.

REASON FOR PROPOSED CONSTRUCTION

The project builds a reliable adequate feeder to the existing loads from the new substation.

RESULTS OF PROPOSED CONSTRUCTION

The project develops a feeder supplies for the Tharp and Vertress area.

ALTERNATE CORRECTIVE PLANS INVESTIGATED

Alternates were investigated during the substation justification study.

NEW DISTRIBUTION CONSTRUCTION ITEM—LINE CONVERSION

YEAR:	2004
CFR CODE:	396
CWP ITEM NUMBER:	21 1 B
ESTIMATED COST:	\$335,638
GENERIC NAME:	Jenkins – Rinyeville Big Springs Road

DESCRIPTION OF PROPOSED CONSTRUCTION

An existing three phase #3/0ACSR line is converted to three phase #336.4 ACSR line identified as line sections 614 and 894. The length of the construction project is 3.6 miles.

REASON FOR PROPOSED CONSTRUCTION

The project builds a reliable feeder to the existing loads from the new substation.

RESULTS OF PROPOSED CONSTRUCTION

The three phase line will provide the needed relief for the Tharp Substation. The conversion will be the normal supply for the residential grow under construction in the western area now served by the Tharp Substation.

ALTERNATE CORRECTIVE PLANS INVESTIGATED

Alternates were investigated during the substation justification study.

NEW DISTRIBUTION CONSTRUCTION ITEM—LINE CONVERSION

YEAR:	2004
CFR CODE:	397
CWP ITEM NUMBER:	21 1 C
ESTIMATED COST:	\$251,728
GENERIC NAME:	Fuller - Rineyville School Road

DESCRIPTION OF PROPOSED CONSTRUCTION

An existing single phase #4 ACSR is converted to a three phase 336.4 ACSR lines and identified as a tap off line section 11 and a tap off line section 497. The length of the construction project is estimated to be 2.7 miles.

REASON FOR PROPOSED CONSTRUCTION

Re-building an existing line to feed a subdivision from the new substation and remove the load off Tharp Substation. The line construction replaces old #4 ACSR wire and poles for a new more reliable feed. The line construction replaces old #4 ACSR wire and poles for a new more reliable feed.

RESULTS OF PROPOSED CONSTRUCTION

Develop a different feed to supply the developing subdivision west of Tharp the area.

ALTERNATE CORRECTIVE PLANS INVESTIGATED

Alternates were investigated during the substation justification study.

NEW DISTRIBUTION CONSTRUCTION ITEM—LINE CONVERSION

YEAR:	2004
CFR CODE:	398
CWP ITEM NUMBER:	21 1 D
ESTIMATED COST:	\$261,052
GENERIC NAME:	Long Grove Road

DESCRIPTION OF PROPOSED CONSTRUCTION

An existing three phase #4 ACSR line is converted to three phase #336.4 ACSR line identified as line section 11. The length of the construction project is 2.8 miles. A switched capacitor bank is installed for added voltage support.

REASON FOR PROPOSED CONSTRUCTION

The voltage drop at the end of the furthest point was calculated to be less than 118 Volts at the adjusted kW growth when it was switched from the Tharp Substation. The line construction replaces old #4 ACSR wire and poles for a new more reliable feed.

RESULTS OF PROPOSED CONSTRUCTION

The three phase configuration provides a better balance of phases at the substation level; the voltage is corrected to above 118 Volts; and the line is upgraded to newer poles and wire for improved serve and reliability. It provides a dependable back feed to the large residential load of Tharp Substation.

ALTERNATE CORRECTIVE PLANS INVESTIGATED

Voltage regulators were not considered as a viable alternate because of the large voltage drop and the need of back feed capability.

NEW DISTRIBUTION CONSTRUCTION ITEM—LINE CONVERSION

YEAR:	2003
CFR CODE:	399
CWP ITEM NUMBER:	6 2 0
ESTIMATED COST:	\$298,342
GENERIC NAME:	Bacon Creek Road

DESCRIPTION OF PROPOSED CONSTRUCTION

An existing single phase #4 ACSR line is converted to three-phase #336.4 ACSR line identified as line section 114 and 115. The length of the construction project is 3.2 miles.

REASON FOR PROPOSED CONSTRUCTION

Stephensburg Substation is lightly loaded in comparison to the Glendale and Tharp Substations. The three-phase line will provide options to back feed or permanently off load Tharp and/or Glendale Substation. The line construction replaces old #4 ACSR wire and poles for a new more reliable feed.

RESULTS OF PROPOSED CONSTRUCTION

Tharp Substation will be 92% loaded in the extreme projected loading in the winter months. Glendale Substation is projected as 91% loaded during the same period. The work will also improve the reliability of the system by changing out old wire and poles. The project makes more efficient use of the existing resources and prolongs the installation of an additional substation.

ALTERNATE CORRECTIVE PLANS INVESTIGATED

An option of a new substation was not investigated at this time because of the obvious cost savings vs. a substation.

NEW DISTRIBUTION CONSTRUCTION ITEM—Automatic Meter Reading Project

YEAR:	2003-2005
CFR CODE:	601 & 702
CWP ITEM NUMBER:	NA
ESTIMATED COST:	\$2,674,345
GENERIC NAME:	Turtle AMR

OBJECTIVE

Fully deploy the Hunt Technologies Turtle™ Automatic Meter Reading (AMR) system to read all residential and commercial customer meters by 2005.

SCOPE

Purchase 27,400 Hunt Turtle™ internal module transmitters for all Class 200 and 320 single-phase, self-contained non-demand meters for full AMR deployment and inventory needs through 2005. Contract personnel will provide all needed meter change-outs, meter testing, module installation, and programming.

Purchase 1,400 Hunt Technologies Turtle™ external module transmitters and associated equipment for all single and three-phase demand and/or instrument transformer-rated meters for AMR deployment and inventory needs through 2005. Contract personnel will provide all module and associated equipment installation and programming.

Purchase 21 Hunt Technology Standard Receivers™ related equipment, and telephone communications equipment for AMR deployment and inventory needs at 18 distribution substations through 2005. Contractor, Nolin Rural Electric Cooperative Corporation, and East Kentucky Power Cooperative personnel will provide all installation and programming.

Upgrade existing office computing resources and related hardware needed to fully deploy Hunt Technologies TurtleWare™ software and train personnel.

RATIONALE

Reduce costs associated with manual meter reading with contracted personnel by deploying the proposed AMR system. An economic evaluation of total costs for the proposed AMR system was performed and AMR system was found to be less than contract meter reading. A few other tangible and intangible benefits of the AMR system are summarized as follows:

- Reduced contract labor by redirecting some personnel resources to other tasks, e.g. eliminate use of service personnel to perform routine meter read-ins and -outs, meter re-reads, etc. Potential to implement “virtual” turn on's or off's.
- Assist in resolving power quality and maintenance problems by identifying possible sources of electrical RF noise caused by failing equipment and connections.
- Assist in identification of distribution transformer loading problems.
- Assist in identification of possible power theft.

ALTERNATIVES

Continue manual reading of all meters using a contracted meter-reading firm. The evaluation indicates this to be the more expensive solution.

COST

Total deployment cost through 2005 is \$2,674,345.

FINANCING

Loan funds will be used to finance the proposed project.

Database: C:\MILSOFT\DATA\NOLIN\JAN_EXIT03GROWTHOLDL(THCHG
Title: 2003-2005 Work Plan (Substation growth without changes)
Case: NOLIN RECC

Element Name	Parent Name	Cnf	Type/ Conductor	Pri KV	Base Volt	Element Drop	Units Displayed In Volts										mi From Src	Length (mi)	-----Element-----		Cons On	Cons Thru
							-Base Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss	% Loss	KW	KVAR						
901		ABC	SRC-9001-j	7.56Y	126.0	0.00	0.00	194.42	0	4409	-52	-100	0.00	0.0	0.00	0.00	0	0	0	1007		
-8011	9001	ABC	201-280-10	7.56Y	126.0	0.00	0.00	92.72	23	2066	-393	-98	0.00	0.0	0.00	0.00	0	0	0	442		
----- Feeder NO. 1 Beginning with Node Element 8011 -----																						
8011	BAY-8011	ABC	Node	7.56Y	126.0	0.00	0.00	92.72	1374	2066	-393	-98	0.00	0.0	0.00	0.00	0	0	0	442		
511	8011	ABC	098-#3/0 A	7.50Y	125.0	1.01	1.01	92.72	31	2066	-393	-98	22.33	1.1	1.30	1.30	195	80	30	442		
OCR-512	511	ABC	062-70-4H	7.50Y	125.0	0.00	1.01	31.81	45	715	-32	-100	0.00	0.0	1.30	0.00	0	0	0	174		
512	OCR-512	ABC	102-#1/0 A	7.49Y	124.8	0.22	1.23	31.81	14	715	-32	-100	1.35	0.2	1.80	0.50	0	0	0	174		
FUSE-514	512	B	083-30N FU	7.49Y	124.8	0.00	1.23	11.72	20	81	33	93	0.00	0.0	1.80	0.00	0	0	0	30		
514	FUSE-514	B	110-#4 ACS	7.47Y	124.5	0.22	1.46	11.72	8	81	33	93	0.09	0.1	2.60	0.80	81	33	30	30		
513	512	B	110-#4 ACS	7.48Y	124.7	0.09	1.32	4.10	3	28	12	92	0.01	0.0	2.70	0.90	28	12	9	9		
515	512	ABC	102-#1/0 A	7.43Y	123.9	0.87	2.11	27.13	12	604	-78	-99	4.92	0.8	5.00	3.20	160	66	44	135		
CAP1698	515	ABC	Capacitor	7.43Y	123.9	0.00	2.11	-14.34	0	0	-320	0	0.00	0.0	5.00	0.00	0	0	0	0		
OCR-516	515	B	005-25-H O	7.43Y	123.9	0.00	2.11	63.44	254	439	171	93	0.00	0.0	5.00	0.00	0	0	0	91		
516	OCR-516	B	110-#4 ACS	7.19Y	119.8	4.06	6.16	63.44	45	439	171	93	10.59	2.4	7.00	2.00	275	113	59	91		
517	516	B	110-#4 ACS	7.15Y	119.2	0.61	6.77	19.05	14	130	42	95	0.48	0.4	8.00	1.00	80	33	22	24		
323	517	B	110-#4 ACS	7.14Y	118.9	0.29	7.06	7.12	5	50	9	98	0.08	0.2	9.80	1.80	50	9	2	2		
518	516	B	110-#4 ACS	7.18Y	119.7	0.12	6.29	3.46	2	23	9	93	0.01	0.1	8.50	1.50	23	9	8	8		
519	511	ABC	098-#3/0 A	7.47Y	124.5	0.47	1.48	54.49	18	1133	-468	-92	9.59	0.8	2.80	1.50	11	5	5	238		
CAP1692	519	ABC	Capacitor	7.47Y	124.5	0.00	1.48	-14.41	0	0	-323	0	0.00	0.0	2.80	0.00	0	0	0	0		
520	519	A	110-#4 ACS	7.46Y	124.4	0.15	1.63	6.37	5	44	18	93	0.03	0.1	3.80	1.00	44	18	5	5		
OCR-521	519	ABC	011-70-L O	7.47Y	124.5	0.00	1.48	48.31	69	1068	-178	-99	0.00	0.0	2.80	0.00	0	0	0	228		
521	OCR-521	ABC	098-#3/0 A	7.41Y	123.5	1.02	2.50	48.31	16	1068	-178	-99	11.28	1.1	5.20	2.40	90	37	28	228		
6026	521	ABC	Capacitor	7.41Y	123.5	0.00	2.50	44.68	662	967	-228	-97	0.00	0.0	5.20	0.00	0	0	0	200		
FUSE-522	6026	A	083-30N FU	7.41Y	123.5	0.00	2.50	7.24	12	50	20	93	0.00	0.0	5.20	0.00	0	0	0	15		
522	FUSE-522	A	110-#4 ACS	7.40Y	123.3	0.17	2.68	7.24	5	50	20	93	0.04	0.1	6.20	1.00	50	20	15	15		
	6026	ABC	098-#3/0 A	7.28Y	121.3	2.21	4.71	44.77	15	917	387	92	11.74	1.3	8.80	3.60	292	120	69	185		
	523	ABC	102-#1/0 A	7.24Y	120.7	0.62	5.33	30.41	13	614	254	92	2.14	0.3	10.30	1.50	350	144	68	116		
525	524	A	110-#4 ACS	7.22Y	120.3	0.38	5.71	9.39	7	63	26	92	0.12	0.2	12.00	1.70	63	26	9	9		
OCR-330	524	A	061-50-4H	7.24Y	120.7	0.00	5.33	14.74	29	99	41	92	0.00	0.0	10.30	0.00	0	0	0	18		
330	OCR-330	A	110-#4 ACS	7.21Y	120.1	0.52	5.86	14.74	11	99	41	92	0.27	0.3	11.80	1.50	98	40	18	18		
526	524	ABC	102-#1/0 A	7.24Y	120.6	0.02	5.36	4.99	2	100	41	93	0.01	0.0	10.80	0.50	95	39	16	21		
551	526	ABC	098-#3/0 A	7.24Y	120.6	0.00	5.36	0.24	0	5	2	93	0.00	0.0	11.30	0.50	5	2	5	5		
BAY-8012	9001	ABC	201-280-10	7.56Y	126.0	0.00	0.00	44.03	11	995	85	100	0.00	0.0	0.00	0.00	0	0	0	223		
----- Feeder NO. 2 Beginning with Node Element 8012 -----																						
8012	BAY-8012	ABC	Node	7.56Y	126.0	0.00	0.00	44.03	652	995	85	100	0.00	0.0	0.00	0.00	0	0	0	223		
541	8012	ABC	098-#3/0 A	7.53Y	125.5	0.52	0.52	44.03	15	995	85	100	3.78	0.4	0.90	0.90	0	0	0	223		
CAP1695	541	ABC	Capacitor	7.53Y	125.5	0.00	0.52	-14.52	0	0	-328	0	0.00	0.0	0.90	0.00	0	0	0	0		
OCR-542	541	A	010-50-L O	7.53Y	125.5	0.00	0.52	35.65	71	248	102	92	0.00	0.0	0.90	0.00	0	0	0	48		
542	OCR-542	A	110-#4 ACS	7.50Y	125.1	0.42	0.94	35.65	25	248	102	92	0.53	0.2	1.40	0.50	248	102	48	48		
OCR-569	541	A	061-50-4H	7.53Y	125.5	0.00	0.52	65.53	131	456	189	92	0.00	0.0	0.90	0.00	0	0	0	97		
569	OCR-569	A	110-#4 ACS	7.40Y	123.3	2.21	2.73	65.53	47	456	189	92	5.79	1.3	2.00	1.10	319	131	72	97		
568	569	A	110-#4 ACS	7.37Y	122.8	0.45	3.19	19.15	14	131	54	92	0.30	0.2	3.00	1.00	131	54	25	25		
543	541	ABC	098-#3/0 A	7.52Y	125.3	0.17	0.69	13.74	5	287	118	92	0.20	0.1	2.40	1.50	287	118	78	78		
BAY-8013	9001	ABC	201-280-10	7.56Y	126.0	0.00	0.00	60.52	15	1348	257	98	0.00	0.0	0.00	0.00	0	0	0	342		
----- Feeder NO. 3 Beginning with Node Element 8013 -----																						
8013	BAY-8013	ABC	Node	7.56Y	126.0	0.00	0.00	60.52	897	1348	257	98	0.00	0.0	0.00	0.00	0	0	0	342		
565	8013	ABC	098-#3/0 A	7.48Y	124.7	1.28	1.28	60.52	20	1348	257	98	10.67	0.8	1.80	1.80	400	164	91	342		
566	565	ABC	098-#3/0 A	7.42Y	123.7	1.02	2.29	41.93	14	938	80	100	6.76	0.7	3.90	2.10	165	68	63	251		
OCR-560	566	ABC	011-70-L O	7.42Y	123.7	0.00	2.29	14.34	20	295	122	92	0.00	0.0	3.90	0.00	0	0	0	81		
560	OCR-560	ABC	106-#2 ACS	7.41Y	123.5	0.18	2.48	14.34	8	295	122	92	0.39	0.1	4.40	0.50	34	14	13	81		
	560	A	110-#4 ACS	7.41Y	123.5	0.04	2.52	2.05	1	14	6	92	0.00	0.0	4.80	0.40	0	0	0	9		
-552	553	A	083-30N FU	7.41Y	123.5	0.00	2.52	2.05	3	14	6	92	0.00	0.0	4.80	0.00	0	0	0	9		
552	FUSE-552	A	110-#4 ACS	7.40Y	123.4	0.08	2.59	2.05	1	14	6	92	0.01	0.0	6.40	1.60	14	6	9	9		
556	560	ABC	098-#3/0 A	7.40Y	123.3	0.20	2.67	12.00	4	247	102	92	0.21	0.1	6.40	2.00	247	101	59	59		
OCR-561	566	A	007-50-H O	7.42Y	123.7	0.00	2.29	6.80	14	47	19	93	0.00	0.0	3.90	0.00	0	0	0	24		

Database: C:\MILSOFT\DATA\NOLIN\JAN_EXIT03GROWTHOLDLc .THCHG
Title: 2003-2005 Work Plan (Substation growth without changes)
Case: NOLIN RECC

Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Units Displayed In Volts					% PF	kW Loss	% Loss	mi From Src	-----Element-----				
							-Base Voltage:120.0-	Accum Drop	Thru Amps	% Cap	Thru KW					KVAR	Length (mi)	KW	KVAR	Cons On
561	OCR-561	A	110-#4 ACS	7.41Y	123.4	0.27	2.57	6.80	5	47	19	93	0.06	0.1	5.60	1.70	47	19	24	24
-562	566	ABC	060-35-4H	7.42Y	123.7	0.00	2.29	20.01	57	424	-137	-95	0.00	0.0	3.90	0.00	0	0	0	83
562	OCR-562	ABC	106-#2 ACS	7.41Y	123.6	0.14	2.43	20.01	11	424	-137	-95	0.66	0.2	4.30	0.40	13	5	2	83
719	562	ABC	106-#2 ACS	7.40Y	123.4	0.16	2.59	19.52	11	410	-143	-94	0.75	0.2	4.80	0.50	42	17	4	81
563	719	ABC	106-#2 ACS	7.40Y	123.3	0.15	2.74	4.68	3	94	44	91	0.10	0.1	6.10	1.30	21	9	8	9
1472	563	ABC	110-#4 ACS	7.40Y	123.3	0.01	2.75	3.65	3	73	35	90	0.00	0.0	6.19	0.09	73	35	1	1
564	719	ABC	106-#2 ACS	7.41Y	123.5	-0.06	2.53	15.37	9	273	-204	-80	1.71	0.6	7.30	2.50	272	112	68	68
CAP1696	564	ABC	Capacitor	7.41Y	123.5	0.00	2.53	-14.29	0	0	-318	0	0.00	0.0	7.30	0.00	0	0	0	0

	Load	Adjustment	Capacitance	Charging	Gen&Motors	Loops&Metas	Losses	No Load	Losses	Total	
KW	4302	0	0	0	0	0	107		0.00	4409	Lowest Voltage = 118.94 on Element 323
KVAR	1763	0	-1924	0	0	0	109			-52	

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

Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Units Displayed In Volts				KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	-----Element-----			
							-Base Voltage:120.0-	Accum Drop	Thru Amps	% Cap							Thru KW	Cons On	Cons Thru	
902		ABC	SRC-9002-j	7.56Y	126.0	0.00	0.00	342.38	0	7488	2056	96	0.00	0.0	0.00	0.00	0	0	0	2009
8024	9002	ABC	203-400-10	7.56Y	126.0	0.00	0.00	17.94	4	404	49	99	0.00	0.0	0.00	0.00	0	0	0	340
445	OCR-8024	ABC	090-336 AC	7.56Y	125.9	0.07	0.07	17.94	3	404	49	99	0.19	0.0	0.70	0.70	7	1	22	340
OCR-446	445	ABC	010-50-L O	7.56Y	125.9	0.00	0.07	17.64	35	397	48	99	0.00	0.0	0.70	0.00	0	0	0	318
446	OCR-446	ABC	090-336 AC	7.55Y	125.9	0.03	0.10	17.64	3	397	48	99	0.05	0.0	1.30	0.60	397	48	318	318
----- Feeder NO. 1 Beginning with Node Element 8024 -----																				
8024	OCR-8024	ABC	Node	7.56Y	126.0	0.00	0.00	0.00	0	0	0	0	0.00	0.0	0.00	0.00	0	0	0	0
OCR-8025	9002	ABC	202-560-14	7.56Y	126.0	0.00	0.00	324.65	58	7084	2007	96	0.00	0.0	0.00	0.00	0	0	0	1669
----- Feeder NO. 5 Beginning with Node Element 8025 -----																				
8025	OCR-8025	ABC	Node	7.56Y	126.0	0.00	0.00	324.65	4810	7084	2007	96	0.00	0.0	0.00	0.00	0	0	0	1669
444	8025	ABC	090-336 AC	7.44Y	124.0	2.00	2.00	324.65	61	7084	2007	96	72.31	1.0	0.90	0.90	668	283	99	1669
447	444	ABC	090-336 AC	7.34Y	122.4	1.60	3.60	252.63	48	5517	1162	98	49.12	0.9	1.90	1.00	527	88	126	1459
455	447	ABC	098-#3/0 A	7.34Y	122.3	0.10	3.71	38.62	13	845	102	99	0.43	0.1	2.30	0.40	844	101	168	168
OCR-448	447	ABC	221-400-12	7.34Y	122.4	0.00	3.60	167.03	30	3625	632	99	0.00	0.0	1.90	0.00	0	0	0	1133
448	OCR-448	ABC	090-336 AC	7.28Y	121.3	1.05	4.66	167.03	32	3625	632	99	21.55	0.6	3.00	1.10	721	107	549	1133
736	448	ABC	090-336 AC	7.27Y	121.2	0.17	4.83	90.62	17	1959	280	99	1.58	0.1	3.50	0.50	1522	182	324	400
OCR-449	736	ABC	012-100-L	7.27Y	121.2	0.00	4.83	20.43	20	436	94	98	0.00	0.0	3.50	0.00	0	0	0	76
449	OCR-449	ABC	090-336 AC	7.27Y	121.1	0.03	4.86	20.43	4	436	94	98	0.06	0.0	3.80	0.30	307	37	63	76
784	449	ABC	090-336 AC	7.27Y	121.1	0.02	4.88	6.45	1	129	57	91	0.01	0.0	4.55	0.75	129	57	13	13
858	448	ABC	098-#3/0 A	7.26Y	121.1	0.27	4.93	43.23	14	924	196	98	1.21	0.1	3.80	0.80	861	164	182	184
1436	858	ABC	110-#4 ACS	7.26Y	121.1	0.01	4.93	3.15	2	62	30	90	0.00	0.0	3.89	0.09	62	30	2	2
----- Feeder NO. 2 Beginning with Node Element 6021 -----																				
6021	447	ABC	Node	7.34Y	122.4	0.00	3.60	23.78	352	472	228	90	0.00	0.0	1.90	0.00	0	0	0	32
1423	6021	ABC	110-#4 ACS	7.34Y	122.4	0.01	3.61	4.88	3	97	47	90	0.01	0.0	1.99	0.09	97	47	19	19
1427	6021	ABC	110-#4 ACS	7.34Y	122.4	0.04	3.64	18.90	13	375	181	90	0.08	0.0	1.99	0.09	375	181	13	13
?	444	ABC	110-#4 ACS	7.44Y	123.9	0.08	2.08	41.03	29	827	394	90	0.36	0.0	0.99	0.09	826	394	111	111
3023	9002	ABC	203-400-10	7.56Y	126.0	0.00	0.00	0.00	0	0	0	0	0.00	0.0	0.00	0.00	0	0	0	0
----- Feeder NO. 3 Beginning with Node Element 8023 -----																				
8023	OCR-8023	ABC	Node	7.56Y	126.0	0.00	0.00	0.00	0	0	0	0	0.00	0.0	0.00	0.00	0	0	0	0

	Load	Adjustment	Capacitance	Charging	Gen&Motors	Loops&Metas	Losses	No Load	Losses	Total	
KW	7341	0	0	0	0	0	147		0.00	7488	Lowest Voltage = 121.07 on Element 1436
KVAR	1719	0	0	0	0	0	337			2056	

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

Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Units Displayed In Volts					mi From Src	Length (mi)	Element						
							Accum Drop	Thru Amps	% Cap	Thru KW	KVAR			% PF	kW Loss	% Loss	KW	KVAR	Cons On	Cons Thru
9003		ABC	SRC-9003-j	7.56Y	126.0	0.00	0.00	527.65	0	11959	433	100	0.00	0.0	0.00	0.00	0	0	0	2424
	9003	ABC	Node	7.56Y	126.0	0.00	0.00	459.53	0	10413	429	100	0.00	0.0	0.00	0.00	0	0	0	2197
OCR-8032	7031	ABC	205-400-10	7.56Y	126.0	0.00	0.00	283.74	71	6402	655	99	0.00	0.0	0.00	0.00	0	0	0	1448
----- Feeder NO. 2 Beginning with Node Element 8032 -----																				
8032	OCR-8032	ABC	Node	7.56Y	126.0	0.00	0.00	283.74	0	6402	655	99	0.00	0.0	0.00	0.00	0	0	0	1448
375	8032	ABC	090-336 AC	7.52Y	125.4	0.64	0.64	283.74	54	6402	655	99	26.46	0.4	0.40	0.40	113	12	22	1448
381	375	ABC	090-336 AC	7.46Y	124.3	1.06	1.69	278.69	53	6262	581	100	44.00	0.7	1.10	0.70	220	24	66	1426
382	381	ABC	110-#4 ACS	7.46Y	124.3	0.05	1.74	5.26	4	117	13	99	0.03	0.0	1.60	0.50	117	13	168	168
383	381	ABC	090-336 AC	7.42Y	123.6	0.70	2.39	263.57	50	5881	443	100	28.48	0.5	1.60	0.50	116	13	38	1192
OCR-384	363	A	061-50-4H	7.42Y	123.6	0.00	2.39	62.05	124	457	52	99	0.00	0.0	1.60	0.00	0	0	0	133
384	OCR-384	A	110-#4 ACS	7.25Y	120.8	2.85	5.24	62.05	44	457	52	99	6.69	1.5	3.70	2.10	451	49	133	133
385	383	ABC	090-336 AC	7.31Y	121.9	1.74	4.13	237.66	45	5279	312	100	65.80	1.2	3.10	1.50	424	46	87	1021
6022	385	ABC	Capacitor	7.31Y	121.9	0.00	4.13	218.35	0	4789	115	100	0.00	0.0	3.10	0.00	0	0	0	934
OCR-400	6022	ABC	012-100-L	7.31Y	121.9	0.00	4.13	131.55	132	2865	344	99	0.00	0.0	3.10	0.00	0	0	0	677
400	OCR-400	ABC	090-336 AC	7.29Y	121.5	0.38	4.51	131.55	25	2665	344	99	7.00	0.2	3.60	0.50	105	11	17	677
OCR-848	400	A	061-50-4H	7.29Y	121.5	0.00	4.51	55.63	111	403	44	99	0.00	0.0	3.60	0.00	0	0	0	248
848	OCR-848	A	110-#4 ACS	7.25Y	120.8	0.73	5.24	55.63	40	403	44	99	1.54	0.4	4.20	0.60	402	43	248	248
406	400	ABC	090-336 AC	7.27Y	121.2	0.28	4.79	106.20	20	2351	272	99	4.09	0.2	4.10	0.50	481	52	78	412
876	406	ABC	090-336 AC	7.27Y	121.1	0.09	4.88	86.06	16	1866	211	99	1.13	0.1	4.28	0.18	0	0	0	334
OCR-877	876	B	084-40N FU	7.27Y	121.1	0.00	4.88	58.72	73	424	47	99	0.00	0.0	4.28	0.00	0	0	0	64
877	OCR-877	B	110-#4 ACS	7.18Y	119.6	1.50	6.38	58.72	42	424	47	99	3.33	0.8	5.45	1.17	421	45	64	64
849	876	ABC	090-336 AC	7.27Y	121.1	0.01	4.89	4.38	1	95	10	99	0.01	0.0	5.28	1.00	95	10	16	16
OCR-407	876	ABC	009-35-L	7.27Y	121.1	0.00	4.88	17.39	50	377	41	99	0.00	0.0	4.28	0.00	0	0	0	64
407	OCR-407	ABC	106-#2 ACS	7.25Y	120.8	0.35	5.23	17.39	10	377	41	99	0.70	0.2	5.92	1.64	376	41	64	64
OCR-401	876	ABC	060-35-4H	7.27Y	121.1	0.00	4.88	44.71	128	969	110	99	0.00	0.0	4.28	0.00	0	0	0	190
401	OCR-401	ABC	098-#3/0 A	7.23Y	120.5	0.66	5.54	44.71	15	969	110	99	4.23	0.4	5.58	1.30	309	33	82	190
	401	ABC	098-#3/0 A	7.21Y	120.1	0.33	5.87	29.50	10	636	70	99	1.24	0.2	6.78	1.20	393	42	47	106
404	402	ABC	098-#3/0 A	7.20Y	120.0	0.10	5.96	11.24	4	242	26	99	0.12	0.0	9.08	1.30	242	26	59	59
403	401	A	110-#4 ACS	7.22Y	120.4	0.06	5.60	2.78	2	20	2	100	0.01	0.0	6.58	1.00	20	2	2	2
OCR-386	6022	ABC	012-100-L	7.31Y	121.9	0.00	4.13	47.18	47	1029	114	99	0.00	0.0	3.10	0.00	0	0	0	180
386	OCR-386	ABC	102-#1/0 A	7.27Y	121.2	0.69	4.82	47.18	21	1029	114	99	3.55	0.3	4.90	1.80	1025	110	180	180
399	6022	A	102-#1/0 A	7.23Y	120.5	1.41	5.54	128.05	56	895	276	96	5.51	0.6	4.00	0.90	889	269	77	77
OCR-8034	7031	ABC	203-400-10	7.56Y	126.0	0.00	0.00	136.94	34	3106	-3	-100	0.00	0.0	0.00	0.00	0	0	0	548
----- Feeder NO. 4 Beginning with Node Element 8034 -----																				
8034	OCR-8034	ABC	Node	7.56Y	126.0	0.00	0.00	136.94	0	3106	-3	-100	0.00	0.0	0.00	0.00	0	0	0	548
696	8034	ABC	090-336 AC	7.52Y	125.3	0.75	0.75	136.94	26	3106	-3	-100	18.75	0.6	1.20	1.20	0	0	0	548
415	696	ABC	090-336 AC	7.46Y	124.3	0.98	1.72	136.94	26	3087	-47	-100	25.24	0.8	2.90	1.70	179	19	25	548
CAP1637	415	ABC	Capacitor	7.46Y	124.3	0.00	1.72	-14.36	0	0	-322	0	0.00	0.0	2.90	0.00	0	0	0	0
414	415	ABC	090-336 AC	7.38Y	123.1	1.21	2.93	129.19	24	2883	197	100	24.53	0.9	4.70	1.80	70	8	21	523
389	414	ABC	102-#1/0 A	7.35Y	122.5	0.61	3.53	39.42	17	857	170	98	3.66	0.4	5.60	0.90	16	2	2	148
357	389	ABC	102-#1/0 A	7.32Y	121.9	0.54	4.07	34.61	15	747	155	98	2.87	0.4	6.50	0.90	0	0	1	125
FUSE-355	357	A	080-15N FU	7.32Y	121.9	0.00	4.07	12.80	43	93	10	99	0.00	0.0	6.50	0.00	0	0	0	20
355	FUSE-355	A	110-#4 ACS	7.29Y	121.5	0.42	4.49	12.80	9	93	10	99	0.20	0.2	8.00	1.50	93	10	20	20
354	357	ABC	102-#1/0 A	7.27Y	121.2	0.71	4.79	25.56	11	546	130	97	2.50	0.5	8.30	1.80	147	16	31	86
363	354	ABC	102-#1/0 A	7.26Y	120.9	0.27	5.06	18.86	8	396	112	96	0.64	0.2	9.40	1.10	166	89	6	55
OCR-797	363	C	005-25-H O	7.26Y	120.9	0.00	5.06	7.75	31	56	6	99	0.00	0.0	9.40	0.00	0	0	0	24
797	OCR-797	C	110-#4 ACS	7.24Y	120.7	0.24	5.30	7.75	6	56	6	99	0.07	0.1	10.80	1.40	56	6	24	24
362	363	C	110-#4 ACS	7.20Y	120.0	0.97	6.03	21.21	15	153	17	99	0.78	0.5	11.50	2.10	152	16	25	25
FUSE-356	357	A	080-15N FU	7.32Y	121.9	0.00	4.07	14.50	46	105	12	99	0.00	0.0	6.50	0.00	0	0	0	18
356	FUSE-356	A	110-#4 ACS	7.27Y	121.1	0.79	4.87	14.50	10	105	12	99	0.43	0.4	9.00	2.50	105	11	18	18
390	389	ABC	110-#4 ACS	7.34Y	122.3	0.13	3.66	4.08	3	90	10	99	0.09	0.1	6.50	0.90	15	2	6	21
390	390	A	110-#4 ACS	7.32Y	122.0	0.29	3.95	8.28	6	60	7	99	0.09	0.2	8.10	1.60	60	7	10	10
392	390	ABC	110-#4 ACS	7.34Y	122.3	0.01	3.67	0.63	0	14	1	100	0.00	0.0	7.20	0.70	11	1	1	3
394	392	ABC	110-#4 ACS	7.34Y	122.3	0.00	3.67	0.14	0	3	0	100	0.00	0.0	7.40	0.20	3	0	2	2
OCR-386	414	ABC	011-70-L O	7.38Y	123.1	0.00	2.93	67.25	125	1932	-37	-100	0.00	0.0	4.70	0.00	0	0	0	354

Database: C:\MILSOFT\DATA\NOLIN\JAN_EXIT03GROWTHOLDLK ITHCHG
Title: 2003-2005 Work Plan (Substation growth without changes)
Case: NOLIN RECC

Element Name	Parent Name	Cnf	Type/ Conductor	Pri KV	Base Volt	Element Drop	Units Displayed In Volts				Thru KW	KVAR	PF	kW Loss	% Loss	mi From Src	Length (mi)	Element			
							-Base Accum Drop	Thru Amps	Cap	Thru KW								KW	KVAR	Cons On	Cons Thru
8	OCR-388	ABC	090-336 AC	7.34Y	122.4	0.71	3.64	87.25	16	1932	-37	-100	11.59	0.6	6.70	2.00	195	21	52	354	
1638	388	ABC	Capacitor	7.34Y	122.4	0.00	3.64	-14.16	0	0	-312	0	0.00	0.0	6.70	0.00	0	0	0	0	
395	388	ABC	090-336 AC	7.32Y	122.0	0.38	4.02	56.47	11	1276	177	99	3.04	0.2	7.80	1.10	47	5	17	225	
OCR-396	395	ABC	007-50-H O	7.32Y	122.0	0.00	4.02	56.31	113	1225	165	99	0.00	0.0	7.80	0.00	0	0	0	208	
396	OCR-396	ABC	098-#3/0 A	7.25Y	120.8	1.15	5.17	56.31	19	1225	165	99	6.32	0.7	9.90	2.10	702	68	104	208	
295	396	A	110-#4 ACS	7.21Y	120.1	0.72	5.68	22.74	16	162	29	98	0.60	0.4	11.30	1.40	162	29	50	50	
397	396	ABC	098-#3/0 A	7.25Y	120.6	0.04	5.21	5.63	2	122	13	99	0.03	0.0	11.00	1.10	122	13	27	27	
398	396	A	110-#4 ACS	7.23Y	120.5	0.35	5.52	32.10	23	231	25	99	0.43	0.2	10.40	0.50	231	25	27	27	
OCR-387	388	A	061-50-4H	7.34Y	122.4	0.00	3.64	61.75	124	451	50	99	0.00	0.0	6.70	0.00	0	0	0	77	
387	OCR-387	A	110-#4 ACS	7.26Y	121.0	1.35	4.99	61.75	44	451	50	99	3.15	0.7	7.70	1.00	447	48	77	77	
697	696	A	110-#4 ACS	7.52Y	125.3	0.00	0.75	0.00	0	0	0	0	0.00	0.0	2.20	1.00	0	0	0	0	
OCR-8035	7031	ABC	207-340-10	7.56Y	126.0	0.00	0.00	41.12	12	906	-222	-97	0.00	0.0	0.00	0.00	0	0	0	201	
----- Feeder NO. 5 Beginning with Node Element 6035 -----																					
8035	OCR-8035	ABC	Node	7.56Y	126.0	0.00	0.00	41.12	0	906	-222	-97	0.00	0.0	0.00	0.00	0	0	0	201	
412	8035	ABC	096-#3/0 A	7.54Y	125.7	0.31	0.31	41.12	14	906	-222	-97	3.27	0.4	1.00	1.00	120	13	34	201	
416	412	ABC	098-#3/0 A	7.53Y	125.5	0.20	0.51	33.76	11	723	-245	-95	2.12	0.3	1.90	0.90	43	5	9	157	
6020	416	ABC	Capacitor	7.53Y	125.5	0.00	0.51	32.05	0	678	-252	-94	0.00	0.0	1.90	0.00	0	0	0	148	
OCR-417	6020	A	007-50-H O	7.53Y	125.5	0.00	0.51	38.56	77	289	33	99	0.00	0.0	1.90	0.00	0	0	0	46	
417	OCR-417	A	110-#4 ACS	7.40Y	123.3	2.19	2.71	38.56	28	289	33	99	3.20	1.1	4.50	2.60	285	31	46	46	
801	6020	ABC	098-#3/0 A	7.52Y	125.3	0.21	0.72	16.68	6	374	41	99	0.56	0.1	2.82	0.92	0	0	0	93	
OCR-802	801	ABC	010-50-L O	7.52Y	125.3	0.00	0.72	10.42	21	234	25	99	0.00	0.0	2.82	0.00	0	0	0	56	
802	OCR-802	ABC	098-#3/0 A	7.51Y	125.2	0.11	0.83	10.42	3	234	25	99	0.19	0.1	3.62	0.60	0	0	0	56	
795	802	ABC	098-#3/0 A	7.51Y	125.1	0.06	0.90	10.42	3	233	25	99	0.09	0.0	4.22	0.60	119	13	30	56	
176	795	ABC	098-#3/0 A	7.50Y	125.0	0.06	0.96	5.09	2	114	12	99	0.04	0.0	5.42	1.20	61	7	12	26	
175	176	A	110-#4 ACS	7.50Y	125.0	0.08	1.03	4.99	4	37	4	99	0.01	0.0	6.12	0.70	37	4	9	9	
	176	ABC	098-#3/0 A	7.50Y	125.0	0.00	0.96	0.70	0	16	2	99	0.00	0.0	5.92	0.50	16	2	5	5	
	801	A	110-#4 ACS	7.48Y	124.6	0.69	1.41	18.79	13	140	15	99	0.49	0.3	4.50	1.68	140	15	37	37	
FUSE-418	6020	A	083-30N FU	7.53Y	125.5	0.00	0.51	2.05	3	15	2	99	0.00	0.0	1.90	0.00	0	0	0	9	
418	FUSE-418	A	110-#4 ACS	7.53Y	125.4	0.04	0.56	2.05	1	15	2	99	0.00	0.0	2.90	1.00	15	2	9	9	
OCR-413	412	A	010-50-L O	7.54Y	125.7	0.00	0.31	7.90	16	59	6	99	0.00	0.0	1.00	0.00	0	0	0	10	
413	OCR-413	A	110-#4 ACS	7.52Y	125.4	0.33	0.64	7.90	6	59	6	99	0.10	0.2	2.90	1.90	59	6	10	10	
OCR-8031	9003	ABC	207-340-10	7.56Y	126.0	0.00	0.00	68.17	20	1546	4	100	0.00	0.0	0.00	0.00	0	0	0	227	
----- Feeder NO. 1 Beginning with Node Element 8031 -----																					
8031	OCR-8031	ABC	Node	7.56Y	126.0	0.00	0.00	68.17	0	1546	4	100	0.00	0.0	0.00	0.00	0	0	0	227	
376	8031	ABC	090-336 AC	7.55Y	125.9	0.12	0.12	68.17	13	1546	4	100	1.47	0.1	0.40	0.40	97	10	24	227	
377	376	ABC	098-#3/0 A	7.50Y	125.0	0.89	1.01	63.88	21	1447	-9	-100	9.87	0.7	1.70	1.30	248	27	46	203	
378	377	ABC	110-#4 ACS	7.47Y	124.5	0.52	1.54	19.75	14	407	179	92	1.69	0.4	2.40	0.70	47	5	29	33	
1414	378	ABC	110-#4 ACS	7.47Y	124.4	0.02	1.55	9.88	7	199	96	90	0.02	0.0	2.49	0.09	199	96	3	3	
1426	378	ABC	110-#4 ACS	7.47Y	124.4	0.01	1.55	7.87	6	159	77	90	0.01	0.0	2.49	0.09	159	77	1	1	
6038	377	ABC	Capacitor	7.50Y	125.0	0.00	1.01	34.86	0	745	-244	-95	0.00	0.0	1.70	0.00	0	0	0	120	
379	6038	ABC	102-#1/0 A	7.49Y	124.8	0.21	1.22	33.32	14	745	61	99	0.87	0.1	2.30	0.60	532	57	89	120	
OCR-380	379	A	060-35-4H	7.49Y	124.8	0.00	1.22	26.53	82	212	23	99	0.00	0.0	2.30	0.00	0	0	0	31	
380	OCR-380	A	110-#4 ACS	7.47Y	124.5	0.25	1.47	28.53	20	212	23	99	0.27	0.1	2.70	0.40	212	23	31	31	
1462	377	ABC	110-#4 ACS	7.50Y	125.0	0.00	1.02	1.63	1	37	18	90	0.00	0.0	1.79	0.09	37	18	4	4	

KW	KVAR	Load	Adjustment	Capacitance	Charging	Gen&Motors	Loops&Metas	Losses	No Load	Losses	Total	Lowest Voltage = 119.62 on Element 677			
11624	1667	0	0	0	0	0	0	335	0.00	11959					
		0	-190%	0	0	0	0	672		433					

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

Database: C:\MILSOFT\DATA\NOLIN\JAN_EXIT03GROWTHOLDLO...LTHCHG
Title: 2003-2005 Work Plan (Substation growth without changes)
Case: NOLIN RECC

Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Units Displayed In Volts					KVAR	PF	kW Loss	Loss	mi From Src	Length (mi)	Element		
							Accum Drop	Thru Amps	% Cap	Thru KW	% Loss							KW	KVAR	Cons On
4		ABC	SRC-9004-J	7.56Y	126.0	0.00	0.00	492.66	0	11021	1840	99	0.00	0.0	0.00	0.00	0	0	0	2911
1	9004	ABC	Node	7.56Y	126.0	0.00	0.00	343.68	0	7653	1477	98	0.00	0.0	0.00	0.00	0	0	0	1783
OCR-8041	7041	ABC	205-400-10	7.56Y	126.0	0.00	0.00	103.94	26	2276	615	97	0.00	0.0	0.00	0.00	0	0	0	459
----- Feeder NO. 1 Beginning with Node Element 8041 -----																				
8041	OCR-8041	ABC	Node	7.56Y	126.0	0.00	0.00	103.94	0	2276	615	97	0.00	0.0	0.00	0.00	0	0	0	459
288	8041	ABC	100-#2/0 A	7.38Y	122.9	3.06	3.06	103.94	38	2276	615	97	44.94	2.0	2.00	2.00	51	9	22	459
658	288	ABC	100-#2/0 A	7.31Y	121.9	1.04	4.10	101.64	38	2180	553	97	15.11	0.7	2.70	0.70	37	7	12	437
727	658	ABC	100-#2/0 A	7.29Y	121.5	0.40	4.51	67.58	25	1428	399	96	3.79	0.3	3.10	0.40	39	7	17	258
OCR-290	727	ABC	012-100-L	7.29Y	121.5	0.00	4.51	65.79	66	1386	387	96	0.00	0.0	3.10	0.00	0	0	0	241
290	OCR-290	ABC	100-#2/0 A	7.23Y	120.5	1.00	5.50	65.79	24	1386	387	96	6.30	0.6	4.30	1.20	422	140	56	241
OCR-291	290	ABC	007-50-H O	7.23Y	120.5	0.00	5.50	20.83	42	445	61	98	0.00	0.0	4.30	0.00	0	0	0	100
291	OCR-291	ABC	106-#2 ACS	7.19Y	119.6	0.65	6.15	20.83	12	445	61	98	1.96	0.4	5.80	1.50	166	30	32	100
374	291	ABC	106-#2 ACS	7.16Y	119.6	0.25	6.40	13.02	7	276	50	98	0.36	0.1	7.30	1.50	276	49	68	68
292	290	ABC	100-#2/0 A	7.21Y	120.1	0.37	5.87	24.63	9	511	157	96	1.23	0.2	5.30	1.00	28	5	8	85
293	292	A	110-#4 ACS	7.19Y	119.6	0.34	6.21	7.62	5	54	10	98	0.14	0.3	6.30	1.00	0	0	1	24
393	293	A	110-#4 ACS	7.17Y	119.5	0.26	6.47	7.62	5	54	10	98	0.07	0.1	7.80	1.50	54	10	23	23
OCR-294	292	A	006-35-H O	7.21Y	120.1	0.00	5.87	15.42	44	109	20	98	0.00	0.0	5.30	0.00	0	0	0	23
294	OCR-294	A	110-#4 ACS	7.18Y	119.6	0.52	6.39	15.42	11	109	20	98	0.29	0.3	6.80	1.50	109	20	23	23
296	292	ABC	100-#2/0 A	7.20Y	119.9	0.19	6.06	15.73	6	318	121	93	0.26	0.1	6.80	1.50	318	120	30	30
OCR-289	658	ABC	061-50-4H	7.31Y	121.9	0.00	4.10	32.45	65	700	130	98	0.00	0.0	2.70	0.00	0	0	0	167
289	OCR-289	ABC	110-#4 ACS	7.29Y	121.5	0.38	4.49	32.45	23	700	130	98	1.42	0.2	3.30	0.60	699	129	167	167
OCR-8042	7041	ABC	203-400-10	7.56Y	126.0	0.00	0.00	135.63	34	3016	605	98	0.00	0.0	0.00	0.00	0	0	0	804
----- Feeder NO. 2 Beginning with Node Element 8042 -----																				
8042	OCR-8042	ABC	Node	7.56Y	126.0	0.00	0.00	135.63	0	3016	605	98	0.00	0.0	0.00	0.00	0	0	0	804
297	8042	ABC	102-#1/0 A	7.47Y	124.4	1.57	1.57	135.63	59	3016	605	98	31.99	1.1	0.70	0.70	242	50	97	804
297	297	ABC	102-#1/0 A	7.43Y	123.6	0.65	2.22	64.55	26	1420	273	98	6.46	0.5	1.30	0.60	50	9	20	397
303	302	ABC	010-50-L O	7.43Y	123.6	0.00	2.22	30.51	61	668	125	98	0.00	0.0	1.30	0.00	0	0	0	197
OCR-303	303	ABC	102-#1/0 A	7.38Y	123.0	0.76	2.98	30.51	13	668	125	98	3.55	0.5	2.80	1.50	35	6	18	197
OCR-304	303	B	060-35-4H	7.38Y	123.0	0.00	2.98	15.47	44	112	20	98	0.00	0.0	2.80	0.00	0	0	0	29
304	OCR-304	B	110-#4 ACS	7.36Y	122.7	0.35	3.33	15.47	11	112	20	98	0.20	0.2	3.80	1.00	112	20	29	29
305	303	ABC	102-#1/0 A	7.36Y	122.7	0.31	3.30	23.75	10	517	95	98	0.99	0.2	3.80	1.00	234	42	67	150
FUSE-306	305	A	081-20N FU	7.36Y	122.7	0.00	3.30	3.03	6	22	4	98	0.00	0.0	3.80	0.00	0	0	0	11
306	FUSE-306	A	110-#4 ACS	7.36Y	122.6	0.10	3.39	3.03	2	22	4	98	0.01	0.0	5.20	1.40	22	4	11	11
OCR-307	305	A	060-35-4H	7.36Y	122.7	0.00	3.30	36.00	103	261	48	98	0.00	0.0	3.80	0.00	0	0	0	72
307	OCR-307	A	110-#4 ACS	7.25Y	120.8	1.67	5.17	36.00	26	261	48	98	3.03	1.2	5.40	1.60	143	26	42	72
308	307	A	110-#4 ACS	7.21Y	120.1	0.72	5.89	16.02	11	114	21	98	0.42	0.4	7.40	2.00	114	20	30	30
309	302	ABC	102-#1/0 A	7.39Y	123.2	0.54	2.76	31.75	14	695	133	98	2.64	0.4	2.30	1.00	12	2	1	180
310	309	A	110-#4 ACS	7.37Y	122.8	0.40	3.16	17.68	13	129	23	98	0.26	0.2	3.30	1.00	128	23	24	24
311	309	ABC	102-#1/0 A	7.36Y	122.6	0.61	3.37	25.28	11	551	105	98	2.31	0.4	3.60	1.50	63	11	16	155
313	311	ABC	110-#4 ACS	7.33Y	122.2	0.39	3.76	22.38	16	485	91	98	1.48	0.3	4.24	0.44	6	1	2	139
317	313	ABC	102-#1/0 A	7.33Y	122.2	0.06	3.82	4.16	2	90	18	98	0.03	0.0	5.84	1.60	83	15	19	20
SW1566-A	317	ABC	Open	7.33Y	122.2	0.00	3.82	0.00	0	0	0	0	0.00	0.0	5.84	0.00	0	0	0	0
1412	317	ABC	110-#4 ACS	7.33Y	122.2	0.00	3.83	0.36	0	7	3	92	0.00	0.0	5.94	0.09	7	3	1	1
FUSE-314	313	C	081-20N FU	7.33Y	122.2	0.00	3.76	2.47	6	18	3	99	0.00	0.0	4.24	0.00	0	0	0	8
314	FUSE-314	C	110-#4 ACS	7.33Y	122.2	0.06	3.82	2.47	2	18	3	99	0.01	0.0	5.24	1.00	18	3	8	8
OCR-315	313	C	006-35-H O	7.33Y	122.2	0.00	3.76	44.22	126	319	59	96	0.00	0.0	4.24	0.00	0	0	0	92
315	OCR-315	C	110-#4 ACS	7.17Y	119.6	2.69	6.45	44.22	32	319	59	96	4.37	1.4	6.94	2.70	315	56	92	92
316	313	C	110-#4 ACS	7.33Y	122.1	0.14	3.91	7.10	5	51	9	96	0.04	0.1	5.14	0.90	51	9	17	17
OCR-707	297	ABC	010-50-L O	7.47Y	124.4	0.00	1.57	60.09	120	1322	252	98	0.00	0.0	0.70	0.00	0	0	0	309
707	OCR-707	ABC	102-#1/0 A	7.35Y	122.5	1.96	3.53	60.09	26	1322	252	98	15.45	1.2	3.20	2.50	621	111	137	309
-299	707	A	081-20N FU	7.35Y	122.5	0.00	3.53	25.99	65	168	34	98	0.00	0.0	3.20	0.00	0	0	0	38
FUSE-300	707	A	110-#4 ACS	7.30Y	121.6	0.86	4.41	25.99	19	168	34	98	0.64	0.4	4.70	1.50	187	34	38	38
300	FUSE-300	A	081-20N FU	7.35Y	122.5	0.00	3.53	20.35	51	147	27	98	0.00	0.0	3.20	0.00	0	0	0	45
OCR-301	707	A	060-35-4H	7.35Y	122.5	0.00	3.53	46.59	139	351	65	98	0.00	0.0	3.20	0.00	0	0	0	89

Balanced Voltage Drop Report
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Title: 2003-2005 Work Plan (Substation growth without changes)
Case: NOLIN RECC

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Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Units Displayed In Volts					KVAR	% PF	kW Loss	% Loss	mi From Src	-----Element-----			
							-Base Voltage:120.0-	Accum Drop	Thru Amps	% Cap	Thru KW						Length (mi)	KW	KVAR	Cons On
	OCR-301	A	110-#4 ACS	7.16Y	119.4	3.06	6.59	46.59	35	351	65	98	5.47	1.6	6.00	2.80	34%	62	89	89
	297	A	110-#4 ACS	7.47Y	124.4	0.00	1.57	0.02	0	0	0	0	0.00	0.0	2.50	1.80	0	0	1	1
OCR-8045	7041	ABC	203-400-10	7.56Y	126.0	0.00	0.00	104.74	26	2361	258	99	0.00	0.0	0.00	0.00	0	0	0	520
----- Feeder NO. 5 Beginning with Node Element 8045 -----																				
8045	OCR-8045	ABC	Node	7.56Y	126.0	0.00	0.00	104.74	0	2361	258	99	0.00	0.0	0.00	0.00	0	0	0	520
798	6045	ABC	090-336 AC	7.53Y	125.6	0.42	0.42	104.74	20	2361	258	99	6.36	0.3	0.70	0.70	19	3	9	520
365	798	ABC	090-336 AC	7.51Y	125.1	0.47	0.88	103.87	20	2336	239	99	7.09	0.3	1.50	0.80	40	7	6	511
OCR-366	365	A	010-50-L O	7.51Y	125.1	0.00	0.88	18.34	37	135	24	98	0.00	0.0	1.50	0.00	0	0	0	21
366	OCR-366	A	110-#4 ACS	7.48Y	124.7	0.37	1.26	18.34	13	135	24	98	0.25	0.2	2.40	0.90	135	24	21	21
367	365	ABC	090-336 AC	7.48Y	124.6	0.47	1.36	95.97	16	2153	192	100	6.79	0.3	2.40	0.90	44	6	10	484
368	367	ABC	110-#4 ACS	7.48Y	124.6	0.01	1.37	1.00	1	22	4	98	0.00	0.0	3.00	0.60	22	4	2	2
369	367	ABC	090-336 AC	7.46Y	124.3	0.33	1.69	92.98	18	2080	164	100	4.73	0.2	3.10	0.70	133	62	18	472
OCR-370	369	ABC	011-70-L O	7.46Y	124.3	0.00	1.69	19.53	28	430	79	98	0.00	0.0	3.10	0.00	0	0	0	86
370	OCR-370	ABC	110-#4 ACS	7.39Y	123.2	1.11	2.80	19.53	14	430	79	98	3.50	0.8	4.70	1.60	78	14	12	86
OCR-312	370	A	006-35-H O	7.39Y	123.2	0.00	2.80	28.68	82	209	38	98	0.00	0.0	4.70	0.00	0	0	0	50
312	OCR-312	A	110-#4 ACS	7.28Y	121.3	1.87	4.67	28.68	20	209	38	98	1.97	0.9	7.60	2.90	207	37	50	50
OCR-319	370	A	006-35-H O	7.39Y	123.2	0.00	2.80	19.25	55	140	25	98	0.00	0.0	4.70	0.00	0	0	0	24
319	OCR-319	A	110-#4 ACS	7.33Y	122.1	1.08	3.89	19.25	14	140	25	98	0.77	0.5	7.20	2.50	139	25	24	24
OCR-371	369	ABC	011-70-L O	7.46Y	124.3	0.00	1.69	67.59	97	1512	13	100	0.00	0.0	3.10	0.00	0	0	0	368
371	OCR-371	ABC	098-#3/0 A	7.37Y	122.8	1.52	3.21	67.59	23	1512	13	100	17.95	1.2	5.10	2.00	167	30	35	368
327	371	ABC	098-#3/0 A	7.32Y	122.1	0.72	3.93	46.91	16	1078	-83	-100	6.87	0.6	6.60	1.50	148	46	23	265
OCR-326	327	ABC	061-50-4H	7.32Y	122.1	0.00	3.93	35.79	72	769	-164	-98	0.00	0.0	6.60	0.00	0	0	0	201
326	OCR-326	ABC	098-#3/0 A	7.31Y	121.8	0.27	4.20	35.79	12	769	-164	-98	2.36	0.3	7.60	1.00	143	26	23	201
6037	326	ABC	Capacitor	7.31Y	121.8	0.00	4.20	29.79	0	624	-193	-96	0.00	0.0	7.60	0.00	0	0	0	178
324	6037	ABC	102-#1/0 A	7.29Y	121.4	0.38	4.58	23.46	10	505	95	96	1.33	0.3	8.60	1.00	59	11	10	142
	324	ABC	102-#1/0 A	7.27Y	121.2	0.26	4.84	9.67	4	207	40	98	0.34	0.2	10.60	2.00	89	16	28	50
.586-B	320	ABC	Open	7.27Y	121.2	0.00	4.84	0.00	0	0	0	0	0.00	0.0	10.60	0.00	0	0	0	0
FUSE-318	320	A	081-20N FU	7.27Y	121.2	0.00	4.84	16.57	41	118	24	98	0.00	0.0	10.60	0.00	0	0	0	22
318	FUSE-318	A	110-#4 ACS	7.22Y	120.4	0.75	5.59	16.57	12	118	24	98	0.45	0.4	12.60	2.00	118	23	22	22
OCR-321	324	ABC	006-35-H O	7.29Y	121.4	0.00	4.58	11.07	32	238	44	98	0.00	0.0	8.60	0.00	0	0	0	82
321	OCR-321	ABC	102-#1/0 A	7.25Y	120.8	0.66	5.24	11.07	5	236	44	98	0.91	0.4	13.50	4.90	139	25	50	62
OCR-322	321	A	005-25-H O	7.25Y	120.8	0.00	5.24	13.76	55	98	18	98	0.00	0.0	13.50	0.00	0	0	0	32
322	OCR-322	A	110-#4 ACS	7.16Y	119.4	1.39	6.63	13.78	10	98	18	98	0.71	0.7	18.00	4.50	97	17	32	32
325	6037	ABC	102-#1/0 A	7.31Y	121.8	0.03	4.24	5.49	2	116	21	98	0.02	0.0	8.30	0.70	118	21	36	36
OCR-328	327	A	007-50-H O	7.32Y	122.1	0.00	3.93	21.36	43	154	28	98	0.00	0.0	6.60	0.00	0	0	0	41
328	OCR-328	A	110-#4 ACS	7.29Y	121.5	0.55	4.48	21.36	15	154	28	98	0.63	0.4	7.20	0.60	14	2	3	41
FUSE-329	328	A	081-20N FU	7.29Y	121.5	0.00	4.48	19.44	49	140	25	98	0.00	0.0	7.20	0.00	0	0	0	38
329	FUSE-329	A	110-#4 ACS	7.26Y	121.1	0.44	4.92	19.44	14	140	25	96	0.31	0.2	8.20	1.00	139	25	38	38
OCR-372	371	ABC	006-35-H O	7.37Y	122.8	0.00	3.21	11.46	33	249	45	98	0.00	0.0	5.10	0.00	0	0	0	68
372	OCR-372	ABC	098-#3/0 A	7.36Y	122.7	0.09	3.30	11.46	4	249	45	98	0.13	0.1	5.80	0.70	121	22	43	68
373	372	A	110-#4 ACS	7.34Y	122.3	0.44	3.74	17.74	13	129	23	96	0.29	0.2	6.90	1.10	128	23	25	25
OCR-8044	9004	ABC	203-400-10	7.56Y	126.0	0.00	0.00	57.60	14	1281	257	98	0.00	0.0	0.00	0.00	0	0	0	529
----- Feeder NO. 4 Beginning with Node Element 8044 -----																				
8044	OCR-8044	ABC	Node	7.56Y	126.0	0.00	0.00	57.60	0	1281	257	98	0.00	0.0	0.00	0.00	0	0	0	529
347	8044	ABC	090-336 AC	7.55Y	125.8	0.23	0.23	57.60	11	1281	257	98	1.64	0.1	0.60	0.60	23	4	10	529
OCR-348	347	A	010-50-L O	7.55Y	125.8	0.00	0.23	6.31	17	62	11	98	0.00	0.0	0.60	0.00	0	0	0	14
348	OCR-348	A	110-#4 ACS	7.54Y	125.6	0.15	0.38	6.31	6	62	11	98	0.05	0.1	1.40	0.80	62	11	14	14
349	347	ABC	090-336 AC	7.53Y	125.4	0.35	0.58	53.76	10	1194	236	96	2.39	0.2	1.60	1.00	14	2	9	505
350	349	ABC	102-#1/0 A	7.38Y	123.0	2.38	2.96	53.16	23	1178	230	98	17.14	1.5	4.80	3.20	435	78	258	496
OCR-351	350	A	010-50-L O	7.38Y	123.0	0.00	2.96	14.75	29	107	20	98	0.00	0.0	4.80	0.00	0	0	0	56
	OCR-351	A	110-#4 ACS	7.33Y	122.1	0.95	3.90	14.75	11	107	20	98	0.71	0.7	6.40	1.60	23	4	25	56
	351	A	110-#4 ACS	7.32Y	122.1	0.04	3.94	1.44	1	10	2	98	0.00	0.0	7.60	1.20	10	2	7	7
FUSE-352	351	A	061-20N FU	7.33Y	122.1	0.00	3.90	10.11	25	73	13	98	0.00	0.0	6.40	0.00	0	0	0	24
352	FUSE-352	A	110-#4 ACS	7.31Y	121.8	0.34	4.25	10.11	7	73	13	96	0.13	0.2	7.90	1.50	73	13	24	24
OCR-358	350	ABC	011-70-L O	7.38Y	123.0	0.00	2.96	28.40	41	618	116	98	0.00	0.0	4.80	0.00	0	0	0	182

Balanced Voltage Drop Report
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Title: 2003-2005 Work Plan (Substation growth without changes)
Case: NOLIN RECC

Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Units Displayed In Volts					KVAR	PF	kW Loss	% Loss	mi From Src	Length (mi)	Element			
							Accum Drop	Thru Amps	Cap	Thru KW	Base Voltage:120.0-							KW	KVAR	Cons On	Cons Thru
	OCR-358	ABC	098-#3/0 A	7.33Y	122.1	0.96	3.92	28.40	9	618	116	98	4.08	0.7	7.20	2.40	20	4	8	182	
	358	A	110-#4 ACS	7.32Y	122.0	0.13	4.05	5.64	4	42	8	98	0.03	0.1	8.20	1.00	42	8	7	7	
853	358	ABC	098-#3/0 A	7.32Y	122.0	0.12	4.04	23.19	6	501	92	98	0.42	0.1	7.60	0.40	59	11	20	156	
799	853	ABC	098-#3/0 A	7.31Y	121.8	0.15	4.19	20.46	7	442	60	98	0.44	0.1	8.20	0.60	112	20	24	136	
411	799	ABC	098-#3/0 A	7.31Y	121.8	0.02	4.21	2.57	1	56	10	98	0.00	0.0	9.20	1.00	56	10	21	21	
OCR-359	799	A	060-35-4H	7.31Y	121.8	0.00	4.19	30.04	66	216	39	98	0.00	0.0	8.20	0.00	0	0	0	71	
359	OCR-359	A	110-#4 ACS	7.21Y	120.1	1.69	5.88	30.04	21	216	39	98	1.87	0.9	10.70	2.50	214	38	71	71	
OCR-360	799	C	060-35-4H	7.31Y	121.8	0.00	4.19	8.07	23	56	10	99	0.00	0.0	8.20	0.00	0	0	0	20	
360	OCR-360	C	110-#4 ACS	7.29Y	121.5	0.32	4.52	8.07	6	56	10	99	0.13	0.2	9.20	1.00	12	2	5	20	
FUSE-361	360	C	080-15N FU	7.29Y	121.5	0.00	4.52	6.34	21	45	8	98	0.00	0.0	9.20	0.00	0	0	0	15	
361	FUSE-361	C	110-#4 ACS	7.27Y	121.1	0.36	4.67	6.34	5	45	8	98	0.08	0.2	11.70	2.50	45	8	15	15	
OCR-353	356	A	060-35-4H	7.33Y	122.1	0.00	3.92	6.94	20	50	9	98	0.00	0.0	7.20	0.00	0	0	0	11	
353	OCR-353	A	110-#4 ACS	7.31Y	121.9	0.22	4.13	6.94	5	50	9	98	0.06	0.1	8.60	1.40	50	9	11	11	
OCR-6043	9004	ABC	203-400-10	7.56Y	126.0	0.00	0.00	92.13	23	2087	105	100	0.00	0.0	0.00	0.00	0	0	0	595	
----- Feeder NO. 3 Beginning with Node Element 6043 -----																					
8043	OCR-6043	ABC	Node	7.56Y	126.0	0.00	0.00	92.13	0	2087	105	100	0.00	0.0	0.00	0.00	0	0	0	599	
673	8043	ABC	090-336 AC	7.54Y	125.6	0.38	0.38	92.13	17	2087	105	100	5.66	0.3	0.80	0.80	0	0	0	599	
331	673	ABC	090-336 AC	7.51Y	125.2	0.45	0.83	92.13	17	2091	92	100	6.78	0.3	1.80	1.00	97	17	23	599	
332	331	A	110-#4 ACS	7.47Y	124.5	0.63	1.46	21.56	15	159	29	98	0.50	0.3	3.10	1.30	159	28	46	46	
333	331	ABC	090-336 AC	7.49Y	124.8	0.32	1.15	80.69	15	1818	30	100	4.30	0.2	2.80	1.00	440	79	117	530	
OCR-334	333	B	061-50-4H	7.49Y	124.8	0.00	1.15	19.15	38	141	26	98	0.00	0.0	2.80	0.00	0	0	0	49	
334	OCR-334	B	110-#4 ACS	7.45Y	124.2	0.69	1.84	19.15	14	141	26	98	0.49	0.3	4.40	1.60	141	25	49	49	
335	333	ABC	090-336 AC	7.49Y	124.8	0.09	1.24	54.96	10	1232	-84	-100	1.01	0.1	3.20	0.40	0	0	2	364	
336	335	A	110-#4 ACS	7.46Y	124.7	0.09	1.33	2.46	2	18	3	99	0.01	0.0	4.90	1.70	18	3	2	2	
337	335	ABC	090-336 AC	7.47Y	124.6	0.21	1.44	54.16	10	1213	-90	-100	2.44	0.2	4.40	1.20	231	41	39	360	
338	337	ABC	011-70-L O	7.47Y	124.6	0.00	1.44	44.12	63	960	-137	-99	0.00	0.0	4.40	0.00	0	0	0	321	
	OCR-338	ABC	090-336 AC	7.47Y	124.4	0.13	1.57	44.12	8	980	-137	-99	1.52	0.2	5.40	1.00	71	13	28	321	
6028	338	ABC	Capacitor	7.47Y	124.4	0.00	1.57	41.09	0	907	-153	-99	0.00	0.0	5.40	0.00	0	0	0	293	
734	6028	ABC	090-336 AC	7.46Y	124.3	0.13	1.70	41.22	8	907	169	98	0.71	0.1	5.90	0.50	5	1	4	293	
FUSE-339	734	A	083-30N FU	7.46Y	124.3	0.00	1.70	20.69	34	152	28	98	0.00	0.0	5.90	0.00	0	0	0	48	
339	FUSE-339	A	110-#4 ACS	7.39Y	123.1	1.16	2.67	20.69	15	152	28	98	0.89	0.6	6.40	2.50	151	27	48	48	
340	734	ABC	090-336 AC	7.45Y	124.1	0.15	1.66	34.11	6	750	139	98	0.65	0.1	6.60	0.70	36	7	9	241	
730	340	ABC	102-#1/0 A	7.44Y	124.0	0.10	1.96	12.40	5	273	49	98	0.20	0.1	7.10	0.50	9	2	4	75	
OCR-341	730	ABC	006-35-H O	7.44Y	124.0	0.00	1.96	11.98	34	263	48	98	0.00	0.0	7.10	0.00	0	0	0	75	
341	OCR-341	ABC	102-#1/0 A	7.43Y	123.9	0.15	2.11	11.98	5	263	48	98	0.27	0.1	7.90	0.80	42	8	18	75	
FUSE-342	341	A	080-15N FU	7.43Y	123.9	0.00	2.11	13.92	46	102	18	98	0.00	0.0	7.90	0.00	0	0	0	33	
342	FUSE-342	A	110-#4 ACS	7.40Y	123.3	0.63	2.74	13.92	10	102	18	98	0.32	0.3	9.90	2.00	102	18	33	33	
FUSE-343	341	A	080-15N FU	7.43Y	123.9	0.00	2.11	16.27	54	119	21	98	0.00	0.0	7.90	0.00	0	0	0	24	
343	FUSE-343	A	110-#4 ACS	7.41Y	123.5	0.37	2.48	16.27	12	119	21	98	0.22	0.2	8.90	1.00	119	21	24	24	
728	340	ABC	090-336 AC	7.45Y	124.1	0.05	1.90	20.06	4	441	82	98	0.12	0.0	7.00	0.40	70	13	42	153	
OCR-344	728	C	007-50-H O	7.45Y	124.1	0.00	1.90	50.57	101	370	69	98	0.00	0.0	7.00	0.00	0	0	0	95	
344	OCR-344	C	110-#4 ACS	7.27Y	121.1	2.99	4.89	50.57	36	370	69	98	6.42	1.7	9.00	2.00	251	45	60	95	
FUSE-345	344	C	081-20N FU	7.27Y	121.1	0.00	4.89	13.65	34	98	18	98	0.00	0.0	9.00	0.00	0	0	0	26	
345	FUSE-345	C	110-#4 ACS	7.21Y	120.2	0.92	5.81	13.65	10	98	18	98	0.46	0.5	12.00	3.00	97	17	26	26	
FUSE-346	344	C	081-20N FU	7.27Y	121.1	0.00	4.89	2.11	5	15	3	98	0.00	0.0	9.00	0.00	0	0	0	9	
346	FUSE-346	C	110-#4 ACS	7.26Y	121.0	0.14	5.03	2.11	2	15	3	98	0.01	0.1	12.00	3.00	15	3	9	9	
----- Feeder NO. 3 Beginning with Node Element 6041 -----																					
6041	728	ABC	Node	7.45Y	124.1	0.00	1.90	0.00	0	0	0	0	0.00	0.0	7.00	0.00	0	0	0	16	
1416	6041	ABC	110-#4 ACS	7.45Y	124.1	0.00	1.90	0.00	0	0	0	0	0.00	0.0	7.09	0.09	0	0	5	5	
1417	6041	ABC	110-#4 ACS	7.45Y	124.1	0.00	1.90	0.00	0	0	0	0	0.00	0.0	7.09	0.09	0	0	5	5	
	6041	ABC	110-#4 ACS	7.45Y	124.1	0.00	1.90	0.00	0	0	0	0	0.00	0.0	7.09	0.09	0	0	6	6	

	Load	Adjustment	Capacitance	Charging	Gen&Motors	Loops&Metas	Losses	No Load	Losses	Total	Lowest Voltage = 119.37 on Element 322	
KW	10737	0	0	0	0	0	284		0.00	11021		
KVAR	2124	0	-632	0	0	0	347			1540		

Balanced Voltage Drop Report
Source: 9005

Database: C:\MILSOFT\DATA\NOLIN\JAN_EXIT03GROWTHOLDLOW...ITHCHG
Title: 2003-2005 Work Plan (Substation growth without changes)
Case: NOLIN RECC

Element Name	Parent Name	Cnf	Type/ Conductor	Pri KV	Base Volt	Element Drop	Units Displayed In Volts					mi From Src	Length (mi)	Element		Cons On	Cons Thru			
							-Base Accum Drop	Thru Amps	% Cap	Thru KW	% KVAR			kW Loss	% Loss			KW	KVAR	
5		ABC	SRC-9005-j	7.56Y	126.0	0.00	0.00	450.87	0	10210	-567	-100	0.00	0.0	0.00	0.00	0	0	0	2536
----- Feeder NO. 2 Beginning with Node Element 8052 -----																				
8052	9005	ABC	Node	7.56Y	126.0	0.00	0.00	37.00	0	833	99	99	0.00	0.0	0.00	0.00	0	0	0	187
OCR-8052	8052	ABC	206-320-10	7.56Y	126.0	0.00	0.00	37.00	12	833	99	99	0.00	0.0	0.00	0.00	0	0	0	187
859	OCR-8052	ABC	098-#3/0 A	7.51Y	125.2	0.83	0.83	37.00	12	833	99	99	4.66	0.6	1.80	1.60	133	11	23	167
178	859	ABC	098-#3/0 A	7.49Y	124.9	0.25	1.08	31.09	10	696	83	99	1.26	0.2	2.40	0.60	0	0	1	164
179	178	A	106-#2 ACS	7.49Y	124.8	0.09	1.18	7.77	4	58	5	100	0.03	0.0	3.20	0.80	58	5	12	12
180	178	ABC	106-#2 ACS	7.47Y	124.5	0.42	1.50	28.50	16	636	77	99	1.98	0.3	3.00	0.80	30	2	7	151
182	160	A	106-#2 ACS	7.28Y	121.4	3.08	4.58	67.97	38	504	65	99	11.44	2.3	4.50	1.50	0	0	3	108
REG1667	182	A	Regulator	7.56Y	126.0	-4.58	0.00	67.95	68	492	55	99	0.00	0.0	4.50	0.00	0	0	0	105
183	REG1667	A	106-#2 ACS	7.39Y	123.2	2.80	2.80	65.46	36	492	55	99	9.62	2.0	6.00	1.50	45	4	12	105
184	183	A	106-#2 ACS	7.31Y	121.8	1.44	4.24	59.43	33	437	42	100	4.47	1.0	6.90	0.90	80	6	15	93
186	184	A	110-#4 ACS	7.15Y	119.2	2.56	6.80	45.41	32	330	30	100	6.08	1.8	6.40	1.50	66	7	17	73
187	186	A	110-#4 ACS	7.10Y	118.3	0.67	7.68	25.60	18	182	15	100	1.05	0.6	9.50	1.10	100	6	15	41
188	187	A	110-#4 ACS	7.08Y	117.9	0.39	8.06	11.22	8	79	6	100	0.17	0.2	11.10	1.60	79	6	26	26
191	186	A	110-#4 ACS	7.15Y	119.2	0.00	6.80	0.00	0	0	0	0	0.00	0.0	10.00	1.60	0	0	0	0
227	186	A	110-#4 ACS	7.14Y	119.1	0.12	6.92	7.81	6	56	4	100	0.04	0.1	9.10	0.70	56	4	15	15
185	184	A	106-#2 ACS	7.30Y	121.7	0.04	4.29	3.02	2	22	2	100	0.01	0.0	7.90	1.00	22	2	5	5
181	180	A	106-#2 ACS	7.47Y	124.5	0.00	1.51	0.36	0	3	0	100	0.00	0.0	3.70	0.70	3	0	1	1
190	180	ABC	106-#2 ACS	7.47Y	124.4	0.05	1.56	4.38	2	98	8	100	0.04	0.0	3.50	0.50	0	0	1	35
667	190	ABC	106-#2 ACS	7.46Y	124.4	0.06	1.61	4.38	2	98	8	100	0.04	0.0	4.10	0.60	26	2	8	34
189	667	A	110-#4 ACS	7.44Y	124.0	0.40	2.01	9.67	7	72	6	100	0.15	0.2	6.00	1.90	72	6	26	26
OCR-8051	9005	ABC	203-400-10	7.56Y	126.0	0.00	0.00	212.37	53	4817	-4	-100	0.00	0.0	0.00	0.00	0	0	0	1184
----- Feeder NO. 1 Beginning with Node Element 8051 -----																				
8051	OCR-8051	ABC	Node	7.56Y	126.0	0.00	0.00	212.37	3146	4817	-4	-100	0.00	0.0	0.00	0.00	0	0	0	1184
	8051	ABC	090-336 AC	7.46Y	124.3	1.68	1.68	212.37	40	4817	-4	-100	66.40	1.4	1.80	1.80	106	9	19	1184
-192	177	ABC	013-140-L	7.46Y	124.3	0.00	1.68	207.67	148	4644	-167	-100	0.00	0.0	1.80	0.00	0	0	0	1165
192	OCR-192	ABC	090-336 AC	7.44Y	124.0	0.35	2.02	207.67	39	4644	-167	-100	14.27	0.3	2.20	0.40	39	11	6	1165
193	192	A	110-#4 ACS	7.43Y	123.8	0.13	2.16	6.14	4	46	4	100	0.03	0.1	3.20	1.00	45	4	13	13
194	192	ABC	090-336 AC	7.33Y	122.2	1.73	3.76	203.92	38	4546	-214	-100	75.15	1.7	4.40	2.20	77	6	23	1146
195	194	ABC	098-#3/0 A	7.33Y	122.1	0.13	3.88	35.63	12	745	-244	-95	1.37	0.2	4.90	0.50	3	0	1	185
CAP1688	195	ABC	Capacitor	7.33Y	122.1	0.00	3.88	-14.13	0	0	-311	0	0.00	0.0	4.90	0.00	0	0	0	0
OCR-196	195	B	006-35-H O	7.33Y	122.1	0.00	3.88	20.22	58	148	12	100	0.00	0.0	4.90	0.00	0	0	0	36
196	OCR-196	B	110-#4 ACS	7.28Y	121.3	0.81	4.69	20.22	14	148	12	100	0.70	0.5	6.40	1.50	112	9	29	36
197	196	B	110-#4 ACS	7.27Y	121.2	0.11	4.81	4.79	3	35	3	100	0.02	0.1	7.50	1.10	35	3	7	7
668	196	B	110-#4 ACS	7.28Y	121.3	0.00	4.69	0.00	0	0	0	0	0.00	0.0	6.90	0.50	0	0	0	0
OCR-198	195	ABC	007-50-H O	7.33Y	122.1	0.00	3.88	27.09	54	593	53	100	0.00	0.0	4.90	0.00	0	0	0	148
198	OCR-198	ABC	098-#3/0 A	7.32Y	121.9	0.17	4.05	27.09	9	593	53	100	0.71	0.1	5.40	0.50	78	6	29	148
FUSE-199	198	A	081-20N FU	7.32Y	121.9	0.00	4.05	3.23	8	24	2	100	0.00	0.0	5.40	0.00	0	0	0	3
199	FUSE-199	A	110-#4 ACS	7.31Y	121.8	0.11	4.16	3.23	2	24	2	100	0.01	0.1	7.00	1.60	24	2	3	3
200	198	B	110-#4 ACS	7.18Y	119.7	2.26	6.31	67.34	48	491	44	100	7.40	1.5	6.40	1.00	219	18	42	116
FUSE-201	200	B	081-20N FU	7.18Y	119.7	0.00	6.31	6.63	22	62	5	100	0.00	0.0	6.40	0.00	0	0	0	17
201	FUSE-201	B	110-#4 ACS	7.17Y	119.5	0.19	6.49	6.63	6	62	5	100	0.06	0.1	7.40	1.00	62	5	17	17
202	200	B	110-#4 ACS	7.10Y	118.4	1.28	7.59	26.30	20	203	17	100	1.39	0.7	8.50	2.10	201	16	57	57
203	194	ABC	090-336 AC	7.28Y	121.4	0.89	4.64	165.96	31	3649	-150	-100	29.50	0.8	5.80	1.40	348	28	145	938
OCR-830	203	A	006-35-H O	7.28Y	121.4	0.00	4.64	11.53	33	84	7	100	0.00	0.0	5.80	0.00	0	0	0	34
830	OCR-830	A	110-#4 ACS	7.27Y	121.1	0.25	4.89	11.53	8	64	7	100	0.11	0.1	6.80	1.00	64	7	34	34
205	203	ABC	090-336 AC	7.26Y	121.0	0.37	5.01	146.36	26	3167	-254	-100	11.96	0.4	6.50	0.70	159	13	38	759
OCR-207	205	ABC	011-70-L O	7.26Y	121.0	0.00	5.01	67.66	97	1463	-176	-99	0.00	0.0	6.50	0.00	0	0	0	395
REG1631	OCR-207	ABC	Regulator	7.56Y	126.0	-5.01	0.00	67.66	68	1463	-176	-99	0.00	0.0	6.50	0.00	0	0	0	395
	REG1631	ABC	090-336 AC	7.54Y	125.6	0.37	0.36	64.97	12	1463	-176	-99	6.05	0.4	6.50	2.00	238	19	51	395
	207	A	110-#4 ACS	7.53Y	125.4	0.21	0.58	3.93	3	30	2	100	0.03	0.1	11.00	2.50	30	2	6	6
208	207	ABC	090-336 AC	7.54Y	125.6	0.04	0.41	53.41	10	1189	-212	-98	0.59	0.1	8.90	0.30	41	3	15	338
8033	208	ABC	Capacitor	7.54Y	125.6	0.00	0.41	51.66	755	1148	-216	-98	0.00	0.0	8.80	0.00	0	0	0	323
735	8033	ABC	090-336 AC	7.51Y	125.1	0.45	0.86	51.01	10	1148	112	100	3.40	0.3	10.40	1.60	29	2	10	323

Database: C:\MILSOFT\DATA\NOLIN\JAN_EXIT03GROWTHOLDL... ITHCHG
Title: 2003-2005 Work Plan (Substation growth without changes)
Case: NOLIN RECC

Element Name	Parent Name	Cnf	Type/ Conductor	Pri KV	Base Volt	Element Drop	Units Displayed In Volts					KW	KVAR	PF	kW Loss	kVA Loss	mi From Src	-----Element-----			
							-Base Accum Drop	Thru Amps	% Cap	Thru KW	Length (mi)							KW	KVAR	Cons On	Cons Thru
	735	ABC	102-#1/0 A	7.47Y	124.6	0.58	1.44	41.41	18	929	\$7	100	3.89	0.4	11.30	0.90	60	5	21	278	
-210	209	C	005-25-H O	7.47Y	124.6	0.00	1.44	20.00	80	149	12	100	0.00	0.0	11.30	0.00	0	0	0	32	
210	OCR-210	C	110-#4 ACS	7.41Y	123.4	1.12	2.56	20.00	14	149	12	100	0.86	0.6	13.90	2.60	148	12	32	32	
212	209	ABC	102-#1/0 A	7.43Y	123.8	0.77	2.21	32.07	14	716	66	100	3.60	0.5	13.00	1.70	165	13	42	225	
OCR-213	212	A	005-25-H O	7.43Y	123.8	0.00	2.21	9.80	39	73	6	100	0.00	0.0	13.00	0.00	0	0	0	2	
213	OCR-213	A	110-#4 ACS	7.42Y	123.6	0.20	2.41	9.80	7	73	6	100	0.08	0.1	13.95	0.95	73	6	2	2	
214	212	A	110-#4 ACS	7.42Y	123.7	0.06	2.27	2.91	2	22	2	100	0.01	0.0	14.00	1.00	22	2	12	12	
OCR-215	212	ABC	007-50-H O	7.43Y	123.8	0.00	2.21	20.42	41	453	41	100	0.00	0.0	13.00	0.00	0	0	0	169	
215	OCR-215	ABC	102-#1/0 A	7.42Y	123.6	0.20	2.40	20.42	9	453	41	100	0.86	0.1	13.60	0.60	2	0	1	169	
216	215	B	110-#4 ACS	7.41Y	123.5	0.09	2.50	4.34	3	32	3	100	0.02	0.0	14.60	1.00	32	3	11	11	
217	215	ABC	102-#1/0 A	7.40Y	123.3	0.29	2.69	18.87	8	418	38	100	0.87	0.2	14.60	1.00	42	3	19	157	
218	217	B	110-#4 ACS	7.40Y	123.3	0.06	2.75	2.77	2	20	2	100	0.01	0.0	15.60	1.00	20	2	10	10	
219	217	ABC	102-#1/0 A	7.38Y	123.0	0.28	2.97	16.05	7	355	32	100	0.75	0.2	15.70	1.10	1	0	5	128	
OCR-220	219	B	006-35-H O	7.38Y	123.0	0.00	2.97	32.18	92	237	21	100	0.00	0.0	15.70	0.00	0	0	0	74	
220	OCR-220	B	110-#4 ACS	7.19Y	119.8	3.22	6.19	32.18	23	237	21	100	4.60	1.9	19.20	3.50	158	13	53	74	
221	220	B	110-#4 ACS	7.17Y	119.5	0.36	6.55	10.33	7	74	6	100	0.14	0.2	20.80	1.60	74	6	21	21	
OCR-222	219	B	005-25-H O	7.38Y	123.0	0.00	2.97	15.84	63	117	10	100	0.00	0.0	15.70	0.00	0	0	0	49	
222	OCR-222	B	110-#4 ACS	7.36Y	122.6	0.41	3.38	15.84	11	117	10	100	0.37	0.3	16.30	0.60	0	0	1	49	
223	222	B	110-#4 ACS	7.35Y	122.6	0.06	3.44	1.88	1	14	1	100	0.00	0.0	17.70	1.40	14	1	11	11	
224	222	B	110-#4 ACS	7.31Y	121.8	0.83	4.21	13.96	10	102	9	100	0.60	0.6	17.90	1.60	25	2	11	37	
225	224	B	110-#4 ACS	7.31Y	121.8	0.02	4.23	1.48	1	11	1	100	0.00	0.0	19.40	0.50	11	1	3	3	
226	224	B	110-#4 ACS	7.28Y	121.4	0.37	4.59	8.62	6	63	5	100	0.12	0.2	19.90	2.00	63	5	23	23	
FUSE-211	735	A	083-30N FU	7.51Y	125.1	0.00	0.86	24.94	42	187	15	100	0.00	0.0	10.40	0.00	0	0	0	35	
211	FUSE-211	A	110-#4 ACS	7.46Y	124.3	0.81	1.67	24.94	18	187	15	100	0.77	0.4	11.90	1.50	186	15	35	35	
228	205	ABC	098-#3/0 A	7.24Y	120.6	0.40	5.41	65.20	22	1414	-130	-100	5.19	0.4	7.10	0.60	104	8	22	284	
	228	A	110-#4 ACS	7.23Y	120.5	0.09	5.50	5.05	4	36	3	100	0.02	0.0	7.90	0.80	36	3	5	5	
	228	ABC	098-#3/0 A	7.21Y	120.2	0.39	5.80	58.81	20	1268	-147	-99	4.69	0.4	7.80	0.70	162	13	33	257	
OCR-231	230	ABC	061-50-4H	7.21Y	120.2	0.00	5.80	30.67	61	616	-247	-93	0.00	0.0	7.80	0.00	0	0	0	145	
231	OCR-231	ABC	102-#1/0 A	7.20Y	120.0	0.15	5.95	30.67	13	616	-247	-93	1.70	0.3	8.80	1.00	286	23	63	145	
REG1690	231	A	Regulator	7.56Y	126.0	-5.96	0.00	33.69	34	242	21	100	0.00	0.0	8.80	0.00	0	0	0	67	
233	REG1690	A	110-#4 ACS	7.46Y	124.3	1.72	1.72	32.10	23	242	21	100	2.70	1.1	10.40	1.60	107	9	30	67	
234	233	A	110-#4 ACS	7.40Y	123.3	0.95	2.67	17.71	13	132	11	100	0.89	0.7	11.80	1.40	31	2	21	37	
235	234	A	110-#4 ACS	7.39Y	123.2	0.14	2.81	9.49	7	70	6	100	0.05	0.1	12.50	0.70	70	6	11	11	
FUSE-236	234	A	081-20N FU	7.40Y	123.3	0.00	2.67	4.08	10	30	2	100	0.00	0.0	11.80	0.00	0	0	0	5	
236	FUSE-236	A	110-#4 ACS	7.40Y	123.3	0.07	2.74	4.08	3	30	2	100	0.01	0.0	12.60	0.80	30	2	5	5	
CAP1689	231	ABC	Capacitor	7.20Y	120.0	0.00	5.95	-13.89	0	0	-300	0	0.00	0.0	8.80	0.00	0	0	0	0	
232	231	A	102-#1/0 A	7.20Y	119.9	0.12	6.08	11.99	5	86	7	100	0.05	0.1	9.80	1.00	86	7	15	15	
OCR-237	230	ABC	011-70-L O	7.21Y	120.2	0.00	5.80	22.77	33	466	82	99	0.00	0.0	7.80	0.00	0	0	0	79	
237	OCR-237	ABC	098-#3/0 A	7.17Y	119.6	0.63	6.44	22.77	8	486	82	99	1.62	0.3	10.90	3.10	382	31	78	79	
1457	237	ABC	110-#4 ACS	7.17Y	119.6	0.01	6.45	5.26	4	102	49	90	0.01	0.0	10.99	0.09	102	49	1	1	
OCR-206	205	A	060-35-4H	7.26Y	121.0	0.00	5.01	19.31	55	140	12	100	0.00	0.0	6.50	0.00	0	0	0	42	
206	OCR-206	A	110-#4 ACS	7.20Y	119.9	1.04	6.05	19.31	14	140	12	100	0.77	0.6	9.00	2.50	139	11	42	42	
OCR-8054	9005	ABC	206-320-10	7.56Y	126.0	0.00	0.00	104.15	33	2342	-310	-99	0.00	0.0	0.00	0.00	0	0	0	670	
----- Feeder NO. 4 Beginning with Node Element 8054 -----																					
8054	OCR-8054	ABC	Node	7.56Y	126.0	0.00	0.00	104.15	1543	2342	-310	-99	0.00	0.0	0.00	0.00	0	0	0	670	
238	8054	ABC	098-#3/0 A	7.50Y	125.1	0.94	0.94	104.15	35	2342	-310	-99	21.10	0.9	0.90	0.90	10	1	3	670	
239	238	A	110-#4 ACS	7.50Y	125.1	0.00	0.95	0.19	0	1	0	100	0.00	0.0	1.70	0.80	1	0	2	2	
240	238	ABC	098-#3/0 A	7.47Y	124.6	0.49	1.43	103.67	35	2309	-334	-99	10.97	0.5	1.40	0.50	161	13	221	665	
241	240	A	110-#4 ACS	7.47Y	124.5	0.06	1.50	2.67	2	20	2	100	0.01	0.0	2.50	1.10	20	2	11	11	
242	240	ABC	098-#3/0 A	7.41Y	123.6	0.98	2.42	95.61	32	2118	-361	-99	21.38	1.0	2.50	1.10	59	5	10	433	
243	242	AB	007-50-H O	7.41Y	123.6	0.00	2.42	24.34	49	360	30	100	0.00	0.0	2.50	0.00	0	0	0	79	
	OCR-243	AB	106-#2 ACS	7.40Y	123.3	0.31	2.73	24.34	14	360	30	100	0.84	0.2	3.00	0.50	33	3	16	79	
FUSE-244	243	A	081-20N FU	7.40Y	123.3	0.00	2.73	16.30	41	120	10	100	0.00	0.0	3.00	0.00	0	0	0	23	
244	FUSE-244	A	110-#4 ACS	7.36Y	122.7	0.60	3.33	16.30	12	120	10	100	0.37	0.3	4.70	1.70	120	10	23	23	
245	243	B	106-#2 ACS	7.39Y	122.4	0.62	3.99	27.98	16	206	17	100	0.66	0.4	9.00	2.00	206	16	40	40	

Balanced Voltage Drop Report
Source: 9005

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Database: C:\MILSOFT\DATA\NOLIN\JAN_EXIT03GROWTHOLDLCAW\WITHCHG
Title: 2003-2005 Work Plan (Substation growth without changes)
Case: NOLIN RECC

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Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Units Displayed In Volts						mi From Src	Length (mi)	-----Element-----					
							-Base Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF			kW Loss	% Loss	KW	KVAR	Cons On	Cons Thru
	242	ABC	098-#3/0 A	7.38Y	123.0	0.62	3.03	77.73	26	1677	-420	-97	12.44	0.7	3.50	1.00	104	8	15	344
	246	ABC	098-#3/0 A	7.36Y	122.7	0.28	3.32	73.28	24	1560	-443	-96	5.72	0.4	4.00	0.50	35	3	6	329
6019	247	ABC	Capacitor	7.36Y	122.7	0.00	3.32	71.81	1064	1520	-452	-96	0.00	0.0	4.00	0.00	0	0	0	323
FUSE-248	6019	A	084-40N FU	7.36Y	122.7	0.00	3.32	10.76	13	79	6	100	0.00	0.0	4.00	0.00	0	0	0	15
248	FUSE-248	A	110-#4 ACS	7.33Y	122.2	0.47	3.78	10.76	8	79	6	100	0.19	0.2	6.00	2.00	79	6	15	15
249	6019	ABC	098-#3/0 A	7.30Y	121.7	1.03	4.34	65.58	22	1441	-145	-99	13.76	1.0	5.50	1.50	28	2	7	308
250	249	ABC	098-#3/0 A	7.28Y	121.3	0.33	4.67	64.32	21	1399	-163	-99	4.45	0.3	6.00	0.50	12	1	3	301
OCR-251	250	ABC	011-70-L O	7.28Y	121.3	0.00	4.67	63.76	91	1382	-169	-99	0.00	0.0	6.00	0.00	0	0	0	298
251	OCR-251	ABC	098-#3/0 A	7.24Y	120.7	0.67	5.34	63.76	21	1382	-169	-99	8.81	0.6	7.10	1.10	151	12	29	298
255	251	ABC	098-#3/0 A	7.22Y	120.3	0.35	5.69	43.06	14	910	-217	-97	3.78	0.4	8.10	1.00	67	5	17	213
CAP1672	255	ABC	Capacitor	7.22Y	120.3	0.00	5.69	40.11	0	839	-227	-97	0.00	0.0	8.10	0.00	0	0	0	196
257	CAP1672	ABC	098-#3/0 A	7.21Y	120.2	0.14	5.83	36.38	12	785	71	100	0.86	0.1	8.40	0.30	0	0	1	179
REG1671	257	ABC	Regulator	7.56Y	126.0	-5.83	0.00	36.38	36	784	70	100	0.00	0.0	8.40	0.00	0	0	0	178
OCR-265	REG1671	C	007-50-H O	7.56Y	126.0	0.00	0.00	36.88	74	278	25	100	0.00	0.0	8.40	0.00	0	0	0	60
265	OCR-265	C	110-#4 ACS	7.45Y	124.1	1.91	1.91	36.88	26	278	25	100	3.49	1.3	9.90	1.50	111	9	17	60
264	265	C	110-#4 ACS	7.45Y	124.1	0.00	1.91	0.00	0	0	0	0	0.00	0.0	10.70	0.80	0	0	0	0
266	265	C	110-#4 ACS	7.40Y	123.3	0.77	2.68	21.94	16	163	14	100	0.80	0.5	11.00	1.10	85	7	24	43
364	266	C	110-#4 ACS	7.36Y	122.6	0.72	3.40	10.44	7	77	6	100	0.29	0.4	14.20	3.20	77	6	19	19
OCR-261	REG1671	B	007-50-H O	7.56Y	126.0	0.00	0.00	32.31	65	243	22	100	0.00	0.0	8.40	0.00	0	0	0	47
261	OCR-261	B	110-#4 ACS	7.49Y	124.8	1.20	1.20	32.31	23	243	22	100	2.15	0.9	9.30	0.90	23	2	2	47
262	261	B	110-#4 ACS	7.39Y	123.2	1.56	2.76	29.21	21	218	19	100	2.31	1.1	10.80	1.50	76	6	18	45
263	262	B	110-#4 ACS	7.35Y	122.4	0.82	3.58	18.90	13	139	11	100	0.59	0.4	12.80	2.00	139	11	27	27
OCR-258	REG1671	A	007-50-H O	7.56Y	126.0	0.00	0.00	34.90	70	263	23	100	0.00	0.0	8.40	0.00	0	0	0	71
258	OCR-258	A	110-#4 ACS	7.42Y	123.6	2.41	2.41	34.90	25	263	23	100	3.66	1.4	10.90	2.50	188	15	58	71
259	258	A	110-#4 ACS	7.40Y	123.4	0.22	2.62	6.70	5	49	4	100	0.06	0.1	12.40	1.50	49	4	11	11
OCR-256	258	A	110-#4 ACS	7.41Y	123.5	0.06	2.47	2.96	2	22	2	100	0.01	0.0	11.80	0.90	22	2	2	2
OCR-256	CAP1672	A	007-50-H O	7.22Y	120.3	0.00	5.69	7.49	15	54	4	100	0.00	0.0	8.10	0.00	0	0	0	17
256	OCR-256	A	110-#4 ACS	7.20Y	120.0	0.27	5.96	7.49	5	54	4	100	0.08	0.1	9.80	1.70	54	4	17	17
OCR-252	251	ABC	006-35-H O	7.24Y	120.7	0.00	5.34	14.44	41	313	26	100	0.00	0.0	7.10	0.00	0	0	0	56
252	OCR-252	ABC	102-#1/0 A	7.23Y	120.4	0.21	5.56	14.44	6	313	26	100	0.49	0.2	8.10	1.00	42	3	7	56
253	252	A	110-#4 ACS	7.16Y	119.4	1.04	6.60	28.32	20	204	17	100	1.13	0.6	9.80	1.70	203	16	37	37
254	252	C	110-#4 ACS	7.20Y	120.0	0.40	5.96	9.23	7	66	5	100	0.14	0.2	10.10	2.00	66	5	12	12
OCR-8053	9005	ABC	206-320-10	7.56Y	126.0	0.00	0.00	99.04	31	2218	-352	-99	0.00	0.0	0.00	0.00	0	0	0	497
----- Feeder NO. 3 Beginning with Node Element 8053 -----																				
8053	OCR-8053	ABC	Node	7.56Y	126.0	0.00	0.00	99.04	1467	2218	-352	-99	0.00	0.0	0.00	0.00	0	0	0	497
267	8053	ABC	098-#3/0 A	7.51Y	125.1	0.86	0.86	99.04	33	2218	-352	-99	19.06	0.9	0.90	0.90	12	1	2	497
OCR-268	267	A	061-50-4H	7.51Y	125.1	0.00	0.86	24.32	49	182	16	100	0.00	0.0	0.90	0.00	0	0	0	44
268	OCR-268	A	110-#4 ACS	7.43Y	123.8	1.36	2.22	24.32	17	182	16	100	1.59	0.9	2.60	1.70	87	7	21	44
669	268	A	110-#4 ACS	7.40Y	123.4	0.41	2.62	12.58	9	93	8	100	0.20	0.2	4.10	1.50	93	7	23	23
670	268	A	110-#4 ACS	7.43Y	123.8	0.00	2.22	0.00	0	0	0	0	0.00	0.0	3.00	0.40	0	0	0	0
269	267	ABC	098-#3/0 A	7.46Y	124.3	0.82	1.68	90.71	30	2006	-390	-98	17.61	0.9	1.90	1.00	32	3	10	451
OCR-270	269	A	061-50-4H	7.46Y	124.3	0.00	1.68	11.21	22	83	7	100	0.00	0.0	1.90	0.00	0	0	0	17
270	OCR-270	A	110-#4 ACS	7.42Y	123.7	0.61	2.29	11.21	8	83	7	100	0.26	0.3	4.40	2.50	83	7	17	17
271	269	ABC	098-#3/0 A	7.41Y	123.6	0.74	2.42	85.77	29	1873	-419	-98	15.79	0.8	2.90	1.00	23	2	7	424
OCR-671	271	B	061-50-4H	7.41Y	123.6	0.00	2.42	37.92	76	280	26	100	0.00	0.0	2.90	0.00	0	0	0	56
671	OCR-671	B	110-#4 ACS	7.25Y	120.8	2.77	5.20	37.92	27	260	26	100	5.58	2.0	4.80	1.90	62	5	10	59
272	671	B	110-#4 ACS	7.21Y	120.2	0.61	5.81	29.47	21	213	18	100	1.02	0.5	5.30	0.50	15	1	6	49
FUSE-273	272	B	081-20N FU	7.21Y	120.2	0.00	5.81	8.37	21	60	5	100	0.00	0.0	5.30	0.00	0	0	0	13
273	FUSE-273	B	110-#4 ACS	7.20Y	120.0	0.22	6.03	8.37	6	60	5	100	0.07	0.1	6.50	1.20	60	5	13	13
274	272	B	110-#4 ACS	7.20Y	119.9	0.25	6.06	19.07	14	137	11	100	0.27	0.2	5.60	0.30	0	0	0	30
OCR-276	274	B	110-#4 ACS	7.19Y	119.6	0.19	6.25	8.69	6	62	5	100	0.06	0.1	6.60	1.00	62	5	9	9
FUSE-276	274	B	081-20N FU	7.20Y	119.9	0.00	6.06	10.38	26	74	6	100	0.00	0.0	5.60	0.00	0	0	0	21
276	FUSE-276	B	110-#4 ACS	7.18Y	119.6	0.34	6.40	10.38	7	74	6	100	0.13	0.2	7.10	1.50	74	6	21	21
277	271	ABC	098-#3/0 A	7.38Y	123.0	0.55	2.97	72.95	24	1555	-465	-96	11.40	0.7	3.90	1.00	23	2	3	358
8002	277	ABC	Capacitor	7.38Y	123.0	0.00	2.97	71.56	1064	1520	-479	-95	0.00	0.0	3.90	0.00	0	0	0	355

Database: C:\MILSOFT\DATA\NOLIN\JAN_EXIT03GROWTHOLDLOWLTHCHG
Title: 2003-2005 Work Plan (Substation growth without changes)
Case: NOLIN RECC

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			
							Accum Drop	Thru Amps	% Cap	Thru KW	KW							Cons On	Cons Thru		
-278	6002	A	007-50-H O	7.38Y	123.0	0.00	2.97	17.59	35	129	11	100	0.00	0.0	3.90	0.00	0	0	0	22	
	OCR-278	A	110-#4 ACS	7.34Y	122.3	0.68	3.65	17.59	13	129	11	100	0.46	0.4	5.70	1.80	129	10	22	22	
OCR-279	6002	ABC	011-70-L O	7.38Y	123.0	0.00	2.97	40.83	58	876	-226	-97	0.00	0.0	3.90	0.00	0	0	0	230	
279	OCR-279	ABC	098-#3/0 A	7.36Y	122.7	0.33	3.30	40.83	14	876	-226	-97	3.54	0.4	5.00	1.10	120	10	33	230	
FUSE-280	279	A	083-30N FU	7.36Y	122.7	0.00	3.30	6.30	10	46	4	100	0.00	0.0	5.00	0.00	0	0	0	12	
280	FUSE-280	A	110-#4 ACS	7.35Y	122.5	0.19	3.49	6.30	4	46	4	100	0.05	0.1	6.40	1.40	46	4	12	12	
281	279	ABC	098-#3/0 A	7.34Y	122.4	0.29	3.59	33.79	11	706	-243	-95	3.12	0.4	6.40	1.40	90	7	29	185	
FUSE-282	281	A	083-30N FU	7.34Y	122.4	0.00	3.59	4.37	7	32	3	100	0.00	0.0	6.40	0.00	0	0	0	15	
282	FUSE-282	A	110-#4 ACS	7.34Y	122.3	0.09	3.69	4.37	3	32	3	100	0.02	0.0	7.40	1.00	32	3	15	15	
283	281	ABC	098-#3/0 A	7.34Y	122.3	0.07	3.66	28.81	10	581	-256	-92	0.81	0.1	6.90	0.50	75	6	22	141	
OCR-284	283	ABC	006-35-H O	7.34Y	122.3	0.00	3.66	25.85	74	505	-263	-89	0.00	0.0	6.90	0.00	0	0	0	119	
284	OCR-284	ABC	102-#1/0 A	7.34Y	122.3	0.07	3.73	25.85	11	505	-263	-89	0.81	0.2	7.40	0.50	65	5	10	119	
CAP1684	284	ABC	Capacitor	7.34Y	122.3	0.00	3.73	-14.15	0	0	-311	0	0.00	0.0	7.40	0.00	0	0	0	0	
815	284	ABC	102-#1/0 A	7.31Y	121.9	0.39	4.12	20.03	9	439	42	100	1.23	0.3	8.70	1.30	82	5	20	109	
816	815	C	102-#1/0 A	7.28Y	121.3	0.53	4.66	51.54	22	375	36	100	1.48	0.4	9.20	0.50	2	0	2	89	
817	816	C	102-#1/0 A	7.20Y	120.0	1.31	5.97	51.22	22	371	34	100	3.13	0.8	10.80	1.60	163	13	39	87	
832	817	C	102-#1/0 A	7.19Y	119.8	0.18	6.15	28.65	12	206	17	100	0.24	0.1	11.20	0.40	91	7	15	48	
260	832	C	102-#1/0 A	7.17Y	119.5	0.33	6.48	15.94	7	114	9	100	0.19	0.2	13.20	2.00	114	9	33	33	
OCR-285	6002	ABC	011-70-L O	7.38Y	123.0	0.00	2.97	23.35	33	515	51	100	0.00	0.0	3.90	0.00	0	0	0	103	
285	OCR-285	ABC	106-#2 ACS	7.36Y	122.7	0.32	3.29	23.35	13	515	51	100	1.23	0.2	4.50	0.60	70	6	13	103	
OCR-286	285	B	006-35-H O	7.36Y	122.7	0.00	3.29	24.32	69	178	15	100	0.00	0.0	4.50	0.00	0	0	0	37	
286	OCR-286	B	110-#4 ACS	7.30Y	121.6	1.10	4.40	24.32	17	178	15	100	1.03	0.6	6.60	2.10	177	14	37	37	
OCR-287	285	C	007-50-H O	7.36Y	122.7	0.00	3.29	36.18	72	265	30	99	0.00	0.0	4.50	0.00	0	0	0	53	
287	OCR-287	C	110-#4 ACS	7.19Y	119.8	2.92	6.22	36.18	26	265	30	99	4.01	1.5	8.20	3.70	261	27	53	53	

	Load	Adjustment	Capacitance	Charging	Gen&Motors	Loops&Metas	Losses	No Load	Losses	Total	
KW	9699	0	0	0	0	0	511		0.00	10210	Lowest Voltage = 117.94 on Element 188
KVAR	834	0	-2161	0	0	0	780			-567	

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

Balanced Voltage Drop Report
Source: 9006

Database: C:\MILSOFT\DATA\NOLIN\JAN_EXIT03GROWTHOLDLOWLWTHCHG
Title: 2003-2005 Work Plan (Substation growth without changes)
Case: NOLIN RECC

Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Units Displayed: In Volts				Thru KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	Element			
							-Base Voltage:120.0-	Accum Drop	Thru Amps	% Cap								Cons On	Cons Thru		
6		ABC	SRC-9006-3	7.56Y	126.0	0.00	0.00	290.06	0	6513	924	99	0.00	0.0	0.00	0.00	0	0	0	2153	
----- Feeder NO. 1 Beginning with Node Element 7061 -----																					
7061	9006	ABC	Node	7.56Y	126.0	0.00	0.00	229.89	3406	5159	752	99	0.00	0.0	0.00	0.00	0	0	0	1622	
OCR-8061	7061	ABC	011-70-L O	7.56Y	126.0	0.00	0.00	48.54	69	1098	82	100	0.00	0.0	0.00	0.00	0	0	0	329	
----- Feeder NO. 1 Beginning with Node Element 8061 -----																					
8061	OCR-8061	ABC	Node	7.56Y	126.0	0.00	0.00	48.54	719	1098	82	100	0.00	0.0	0.00	0.00	0	0	0	329	
61	8061	ABC	090-336 AC	7.55Y	125.8	0.24	0.24	48.54	9	1098	82	100	1.77	0.2	0.90	0.90	1	0	3	329	
62	61	ABC	090-336 AC	7.52Y	125.3	0.50	0.74	48.51	9	1095	77	100	3.79	0.3	2.90	2.00	39	14	13	326	
6016	62	ABC	Capacitor	7.52Y	125.3	0.00	0.74	46.76	693	1053	55	100	0.00	0.0	2.90	0.00	0	0	0	313	
OCR-63	6016	A	007-50-H O	7.52Y	125.3	0.00	0.74	10.82	22	77	27	94	0.00	0.0	2.90	0.00	0	0	0	23	
63	OCR-63	A	110-#4 ACS	7.48Y	124.7	0.59	1.32	10.82	8	77	27	94	0.22	0.3	5.20	2.30	76	27	23	23	
64	6016	ABC	090-336 AC	7.51Y	125.1	0.15	0.88	46.06	9	976	354	94	0.69	0.1	3.30	0.40	25	9	4	290	
65	64	ABC	090-336 AC	7.49Y	124.9	0.26	1.15	36.99	7	783	284	94	1.01	0.1	4.20	0.90	14	5	3	223	
66	65	ABC	098-#3/0 A	7.43Y	123.6	1.06	2.23	36.33	12	768	277	94	4.59	0.6	6.60	2.40	333	116	96	220	
OCR-67	66	ABC	007-50-H O	7.43Y	123.6	0.00	2.23	20.49	41	430	153	94	0.00	0.0	6.60	0.00	0	0	0	124	
67	OCR-67	ABC	102-#1/0 A	7.42Y	123.6	0.15	2.38	20.49	9	430	153	94	0.42	0.1	7.00	0.40	36	13	6	124	
FUSE-68	67	A	081-20N FU	7.42Y	123.6	0.00	2.38	16.65	42	116	41	94	0.00	0.0	7.00	0.00	0	0	0	40	
68	FUSE-68	A	110-#4 ACS	7.36Y	122.6	0.98	3.36	16.65	12	116	41	94	0.57	0.5	9.50	2.50	116	41	40	40	
69	67	ABC	102-#1/0 A	7.41Y	123.4	0.20	2.58	13.23	6	277	99	94	0.34	0.1	8.00	1.00	98	35	32	78	
FUSE-70	69	ABC	081-20N FU	7.41Y	123.4	0.00	2.58	5.79	14	121	43	94	0.00	0.0	8.00	0.00	0	0	0	33	
70	FUSE-70	ABC	102-#1/0 A	7.40Y	123.3	0.08	2.66	5.79	3	121	43	94	0.04	0.0	9.50	1.50	121	43	33	33	
FUSE-71	69	B	081-20N FU	7.41Y	123.4	0.00	2.58	8.22	21	57	20	94	0.00	0.0	8.00	0.00	0	0	0	13	
71	FUSE-71	B	110-#4 ACS	7.39Y	123.1	0.33	2.91	8.22	6	57	20	94	0.10	0.2	9.70	1.70	57	20	13	13	
OCR-72	64	B	010-50-L O	7.51Y	125.1	0.00	0.88	23.72	47	168	60	94	0.00	0.0	3.30	0.00	0	0	0	63	
72	OCR-72	B	106-#2 ACS	7.44Y	124.0	1.07	1.95	23.72	13	168	60	94	1.13	0.7	4.80	1.50	40	14	13	63	
73	72	B	005-25-H O	7.44Y	124.0	0.00	1.95	17.34	69	122	43	94	0.00	0.0	4.80	0.00	0	0	0	45	
OCR-73	73	B	110-#4 ACS	7.37Y	122.8	1.22	3.16	17.34	12	122	43	94	0.75	0.6	7.80	3.00	121	43	45	45	
74	72	B	110-#4 ACS	7.44Y	124.0	0.03	1.98	0.75	1	5	2	93	0.00	0.0	6.30	1.50	5	2	5	5	
OCR-8063	7061	ABC	207-340-10	7.56Y	126.0	0.00	0.00	84.47	25	1869	418	96	0.00	0.0	0.00	0.00	0	0	0	606	
----- Feeder NO. 3 Beginning with Node Element 8063 -----																					
8063	OCR-8063	ABC	Node	7.56Y	126.0	0.00	0.00	84.47	1251	1869	418	96	0.00	0.0	0.00	0.00	0	0	0	606	
982	8063	ABC	090-336 AC	7.42Y	123.7	2.27	2.27	84.47	16	1869	416	96	23.76	1.3	3.99	3.99	0	0	0	606	
OCR-88	982	ABC	007-50-H O	7.42Y	123.7	0.00	2.27	57.30	115	1195	448	94	0.00	0.0	3.99	0.00	0	0	0	359	
REG1658	OCR-88	ABC	Regulator	7.56Y	126.0	-2.27	0.00	57.30	57	1195	448	94	0.00	0.0	3.99	0.00	0	0	0	359	
88	REG1658	ABC	090-336 AC	7.49Y	124.9	1.10	1.10	56.26	11	1195	448	94	6.13	0.5	6.59	2.60	158	56	48	359	
OCR-89	88	A	006-35-H O	7.49Y	124.9	0.00	1.10	54.65	156	384	141	94	0.00	0.0	6.59	0.00	0	0	0	130	
89	OCR-89	A	102-#1/0 A	7.29Y	121.4	3.45	4.55	54.65	24	384	141	94	5.57	1.4	11.59	5.00	379	134	130	130	
90	88	C	106-#2 ACS	7.19Y	119.9	5.03	6.13	91.77	51	646	237	94	19.40	3.0	8.59	2.00	249	88	60	181	
OCR-885	90	C	005-25-H O	7.19Y	119.9	0.00	6.13	0.00	0	0	0	0	0.00	0.0	8.59	0.00	0	0	0	0	
885	OCR-885	C	110-#4 ACS	7.19Y	119.9	0.00	6.13	0.00	0	0	0	0	0.00	0.0	9.70	1.11	0	0	0	0	
OCR-91	90	C	005-25-H O	7.19Y	119.9	0.00	6.13	17.14	69	116	41	94	0.00	0.0	8.59	0.00	0	0	0	38	
91	OCR-91	C	110-#4 ACS	7.13Y	118.9	0.97	7.10	17.14	12	116	41	94	0.58	0.5	10.99	2.40	116	41	38	38	
OCR-92	90	C	005-25-H O	7.19Y	119.9	0.00	6.13	38.44	154	261	90	95	0.00	0.0	8.59	0.00	0	0	0	63	
L 92	OCR-92	C	110-#4 ACS	7.01Y	116.9	2.99	9.12	36.44	27	261	90	95	4.34	1.7	11.49	2.90	219	78	66	63 L	
L FUSE-138	92	C	079-10N FU	7.01Y	116.9	0.00	9.12	5.60	28	38	10	97	0.00	0.0	11.49	0.00	0	0	0	17 L	
L 138	FUSE-138	C	110-#4 ACS	7.00Y	116.6	0.26	9.38	5.60	4	38	10	97	0.05	0.1	13.49	2.00	38	10	17	17 L	
OCR-87	982	A	005-25-H O	7.42Y	123.7	0.00	2.27	8.89	36	62	22	94	0.00	0.0	3.99	0.00	0	0	0	27	
87	OCR-87	A	110-#4 ACS	7.40Y	123.3	0.46	2.73	6.69	6	62	22	94	0.14	0.2	6.19	2.20	62	22	27	27	
86	982	ABC	090-336 AC	7.42Y	123.7	0.08	2.35	26.87	5	589	-107	-96	0.80	0.1	5.69	1.70	140	50	67	220	
722	86	ABC	090-336 AC	7.42Y	123.6	0.01	2.36	21.34	4	448	-159	-93	0.00	0.0	6.29	0.60	27	10	15	153	
722	722	ABC	062-70-4H	7.42Y	123.6	0.00	2.36	20.35	29	420	-169	-93	0.00	0.0	6.29	0.00	0	0	0	138	
OCR-85	OCR-722	A	007-50-H O	7.42Y	123.6	0.00	2.36	28.85	56	202	72	94	0.00	0.0	6.29	0.00	0	0	0	56	
85	OCR-85	A	110-#4 ACS	7.36Y	122.6	1.02	3.37	28.85	21	202	72	94	1.03	0.5	7.79	1.50	201	71	56	56	
6017	OCR-722	ABC	Capacitor	7.42Y	123.6	0.00	2.36	14.61	216	219	-240	-67	0.00	0.0	6.29	0.00	0	0	0	62	
84	6017	ABC	090-336 AC	7.41Y	123.6	0.09	2.45	10.44	2	219	78	94	0.06	0.0	7.79	1.50	110	39	40	62	

Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Units Displayed In Volts				KVAR	PF	kW Loss	Loss	mi From Src	Length (mi)	Element			
							Accum Drop	Thru Amps	Cap	Thru KW							Cons On	Cons Thru	Cons On	Cons Thru
OCR-83	84	C	090-35-4H	7.41Y	123.6	0.00	2.45	3.68	11	26	9	94	0.00	0.0	7.79	0.00	0	0	0	20
	OCR-83	C	110-#4 ACS	7.41Y	123.5	0.10	2.54	3.68	3	26	9	94	0.01	0.0	8.89	1.10	26	9	20	20
82	84	ABC	090-336 AC	7.41Y	123.5	0.03	2.47	3.94	1	83	30	94	0.01	0.0	9.46	1.66	83	30	22	22
NODE1567	84	ABC	Node	7.41Y	123.6	0.00	2.45	0.00	0	0	0	0	0.00	0.0	7.79	0.00	0	0	0	0
OCR-8064	7061	ABC	207-340-10	7.56Y	126.0	0.00	0.00	97.29	29	2192	252	99	0.00	0.0	0.00	0.00	0	0	0	687
----- Feeder NO. 4 Beginning with Node Element 8064 -----																				
8064	OCR-8064	ABC	Node	7.56Y	126.0	0.00	0.00	97.29	1441	2192	252	99	0.00	0.0	0.00	0.00	0	0	0	687
93	8064	ABC	090-336 AC	7.48Y	124.7	1.33	1.33	97.29	18	2192	252	99	16.52	0.8	2.50	2.50	143	51	41	667
94	93	ABC	090-336 AC	7.42Y	123.7	0.97	2.30	90.77	17	2031	158	100	13.60	0.7	4.60	2.10	122	43	44	646
97	94	ABC	098-#3/0 A	7.33Y	122.1	1.58	3.88	72.83	24	1622	-15	-100	20.76	1.3	6.60	2.00	179	64	55	511
CAP1663	97	ABC	Capacitor	7.33Y	122.1	0.00	3.88	64.84	0	1421	-103	-100	0.00	0.0	6.60	0.00	0	0	0	456
OCR-99	CAP1663	ABC	062-70-4H	7.33Y	122.1	0.00	3.88	56.40	81	1164	427	94	0.00	0.0	6.60	0.00	0	0	0	391
99	OCR-99	ABC	098-#3/0 A	7.29Y	121.6	0.54	4.42	56.40	19	1164	427	94	4.08	0.4	7.20	0.60	21	6	20	391
101	99	ABC	098-#3/0 A	7.23Y	120.6	1.00	5.42	53.26	18	1095	399	94	6.80	0.6	8.50	1.30	205	73	71	349
OCR-102	101	ABC	060-35-4H	7.23Y	120.6	0.00	5.42	30.33	87	619	225	94	0.00	0.0	8.50	0.00	0	0	0	197
REG1659	OCR-102	ABC	Regulator	7.56Y	126.0	-5.42	0.00	30.33	30	619	225	94	0.00	0.0	8.50	0.00	0	0	0	197
102	REG1659	ABC	098-#3/0 A	7.53Y	125.5	0.49	0.49	29.03	10	619	225	94	1.91	0.3	9.60	1.10	37	13	15	197
103	102	ABC	098-#3/0 A	7.50Y	124.9	0.57	1.06	26.31	9	559	202	94	1.96	0.4	11.00	1.40	38	14	14	169
OCR-105	103	A	005-25-H O	7.50Y	124.9	0.00	1.06	34.45	138	243	88	94	0.00	0.0	11.00	0.00	0	0	0	79
105	OCR-105	A	110-#4 ACS	7.41Y	123.6	1.36	2.42	34.45	25	243	88	94	2.35	1.0	11.90	0.90	34	12	9	79
708	105	A	106-#2 ACS	7.36Y	122.6	0.95	3.37	29.62	16	207	74	94	1.31	0.6	12.90	1.00	25	9	6	70
49	708	A	110-#4 ACS	7.35Y	122.5	0.10	3.47	4.29	3	30	11	94	0.02	0.1	13.90	1.00	30	11	15	15
FUSE-48	708	A	079-10N FU	7.36Y	122.6	0.00	3.37	19.15	96	133	47	94	0.00	0.0	12.90	0.00	0	0	0	45
48	FUSE-48	A	106-#2 ACS	7.33Y	122.1	0.49	3.86	19.15	11	133	47	94	0.30	0.2	14.40	1.50	132	47	45	45
857	708	A	110-#4 ACS	7.35Y	122.6	0.06	3.43	2.64	2	18	6	95	0.01	0.0	13.90	1.00	18	6	4	4
77-106	103	B	005-25-H O	7.50Y	124.9	0.00	1.06	39.10	156	276	99	94	0.00	0.0	11.00	0.00	0	0	0	76
	OCR-106	B	110-#4 ACS	7.36Y	122.6	2.30	3.36	39.10	26	276	99	94	3.16	1.1	13.50	2.50	273	97	76	76
FUSE-104	102	A	080-15N FU	7.53Y	125.5	0.00	0.49	2.97	10	21	7	95	0.00	0.0	9.60	0.00	0	0	0	13
104	FUSE-104	A	110-#4 ACS	7.52Y	125.4	0.14	0.63	2.97	2	21	7	95	0.01	0.1	11.60	2.00	21	7	13	13
107	101	ABC	098-#3/0 A	7.22Y	120.3	0.28	5.70	12.95	4	265	94	94	0.33	0.1	11.20	2.70	264	94	81	81
100	99	A	106-#2 ACS	7.28Y	121.4	0.17	4.59	6.35	4	44	15	95	0.04	0.1	8.80	1.60	44	15	22	22
OCR-96	CAP1663	C	061-50-4H	7.33Y	122.1	0.00	3.88	37.33	75	256	92	94	0.00	0.0	6.60	0.00	0	0	0	65
96	OCR-96	C	110-#4 ACS	7.17Y	119.6	2.55	6.43	37.33	27	258	92	94	3.34	1.3	9.50	2.90	254	90	65	65
OCR-95	94	A	060-35-4H	7.42Y	123.7	0.00	2.30	39.13	112	273	99	94	0.00	0.0	4.60	0.00	0	0	0	91
95	OCR-95	A	106-#2 ACS	7.31Y	121.8	1.85	4.15	39.13	22	273	99	94	2.79	1.0	6.60	2.00	166	59	55	91
FUSE-96	95	A	080-15N FU	7.31Y	121.8	0.00	4.15	15.14	50	104	37	94	0.00	0.0	6.60	0.00	0	0	0	36
96	FUSE-96	A	110-#4 ACS	7.24Y	120.7	1.18	5.33	15.14	11	104	37	94	0.63	0.6	9.90	3.30	104	37	36	36
OCR-8065	9006	ABC	011-70-L O	7.56Y	126.0	0.00	0.00	15.89	23	339	122	94	0.00	0.0	0.00	0.00	0	0	0	96
----- Feeder NO. 5 Beginning with Node Element 8065 -----																				
8065	OCR-8065	ABC	Node	7.56Y	126.0	0.00	0.00	15.89	235	339	122	94	0.00	0.0	0.00	0.00	0	0	0	96
110	8065	ABC	098-#3/0 A	7.53Y	125.4	0.58	0.58	15.89	5	339	122	94	1.19	0.4	2.50	2.50	55	20	26	96
111	110	ABC	098-#3/0 A	7.52Y	125.3	0.12	0.70	13.31	4	283	101	94	0.22	0.1	3.10	0.60	12	4	7	70
OCR-112	111	A	007-50-H O	7.52Y	125.3	0.00	0.70	17.03	34	121	43	94	0.00	0.0	3.10	0.00	0	0	0	23
112	OCR-112	A	110-#4 ACS	7.50Y	125.0	0.28	0.99	17.03	12	121	43	94	0.17	0.1	3.60	0.70	120	43	23	23
OCR-113	111	C	007-50-H O	7.52Y	125.3	0.00	0.70	21.22	42	150	54	94	0.00	0.0	3.10	0.00	0	0	0	40
113	OCR-113	C	110-#4 ACS	7.40Y	123.4	1.91	2.61	21.22	15	150	54	94	1.62	1.1	6.10	3.00	108	36	24	40
FUSE-114	113	C	081-20N FU	7.40Y	123.4	0.00	2.61	5.78	14	40	14	94	0.00	0.0	6.10	0.00	0	0	0	16
114	FUSE-114	C	110-#4 ACS	7.40Y	123.3	0.14	2.75	5.78	4	40	14	94	0.03	0.1	7.10	1.00	40	14	16	16
OCR-8062	9006	ABC	207-340-10	7.56Y	126.0	0.00	0.00	44.80	13	1015	50	100	0.00	0.0	0.00	0.00	0	0	0	435
----- Feeder NO. 2 Beginning with Node Element 8062 -----																				
	OCR-8062	ABC	Node	7.56Y	126.0	0.00	0.00	44.80	664	1015	50	100	0.00	0.0	0.00	0.00	0	0	0	435
	8062	ABC	102-#1/0 A	7.48Y	124.7	1.29	1.29	44.80	19	1015	50	100	9.98	1.0	1.90	1.90	19	7	7	435
76	75	B	110-#4 ACS	7.47Y	124.4	0.26	1.57	13.23	9	93	33	94	0.13	0.1	2.80	0.90	93	33	33	33
77	75	ABC	102-#1/0 A	7.45Y	124.1	0.57	1.86	39.77	17	893	1	100	4.01	0.4	2.90	1.00	47	17	17	395
OCR-116	77	B	007-50-H O	7.45Y	124.1	0.00	1.86	43.62	67	306	110	94	0.00	0.0	2.90	0.00	0	0	0	92

Database: C:\MILSOFT\DATA\NOLIN\JAN_EXIT03GROWTHOLDLG..ITHCHG
Title: 2003-2005 Work Plan (Substation growth without changes)
Case: NOLIN RECC

Element Name	Parent Name	Cnf	Type/ Conductor	Pri KV	Base Volt	Element Drop	Units Displayed In Volts					KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	Element			
							-Base Voltage:120.0-	Accum Drop	Thru Amps	% Cap	Thru KW								KW	KVAR	Cons On	Cons Thru
9	OCR-118	B	106-#2 ACS	7.43Y	123.8	0.36	2.22	43.82	24	306	110	94	0.67	0.2	3.20	0.30	114	40	29	92		
	118	B	106-#2 ACS	7.37Y	122.9	0.89	3.11	27.38	15	191	69	94	1.14	0.6	4.20	1.00	19	7	6	63		
FUSE-120	119	B	081-20N FU	7.37Y	122.9	0.00	3.11	1.95	5	14	5	94	0.00	0.0	4.20	0.00	0	0	0	3		
120	FUSE-120	B	106-#2 ACS	7.37Y	122.9	0.03	3.15	1.95	1	14	5	94	0.00	0.0	5.20	1.00	14	5	3	3		
121	119	B	106-#2 ACS	7.34Y	122.3	0.61	3.72	22.69	13	157	56	94	0.66	0.4	5.00	0.80	5	2	3	54		
FUSE-122	121	B	081-20N FU	7.34Y	122.3	0.00	3.72	1.17	3	8	3	94	0.00	0.0	5.00	0.00	0	0	0	5		
122	FUSE-122	B	106-#2 ACS	7.34Y	122.3	0.01	3.73	1.17	1	8	3	94	0.00	0.0	5.70	0.70	8	3	5	5		
FUSE-123	121	B	081-20N FU	7.34Y	122.3	0.00	3.72	0.88	2	6	2	95	0.00	0.0	5.00	0.00	0	0	0	4		
123	FUSE-123	B	106-#2 ACS	7.34Y	122.3	0.01	3.73	0.88	0	6	2	95	0.00	0.0	5.70	0.70	6	2	4	4		
124	121	B	106-#2 ACS	7.31Y	121.8	0.44	4.16	19.85	11	137	49	94	0.40	0.3	5.70	0.70	22	8	5	42		
125	124	B	106-#2 ACS	7.29Y	121.6	0.26	4.43	11.64	6	80	28	94	0.10	0.1	7.10	1.40	80	28	23	23		
OCR-126	124	B	005-25-H O	7.31Y	121.8	0.00	4.16	5.08	20	35	12	95	0.00	0.0	5.70	0.00	0	0	0	14		
126	OCR-126	B	110-#4 ACS	7.30Y	121.6	0.25	4.41	5.08	4	35	12	95	0.04	0.1	7.80	2.10	35	12	14	14		
79	77	ABC	102-#1/0 A	7.46Y	124.3	-0.13	1.73	14.54	6	211	-247	-65	0.92	0.4	4.80	1.90	114	40	31	63		
723	79	ABC	102-#1/0 A	7.47Y	124.5	-0.21	1.52	13.56	6	96	-288	-32	0.62	0.6	6.10	1.30	96	34	32	32		
6018	723	ABC	Capacitor	7.47Y	124.5	0.00	1.52	-14.41	213	0	-323	0	0.00	0.0	6.10	0.00	0	0	0	0		
OCR-76	77	ABC	007-50-H O	7.45Y	124.1	0.00	1.86	15.46	31	325	117	94	0.00	0.0	2.90	0.00	0	0	0	223		
78	OCR-76	ABC	090-336 AC	7.43Y	123.8	0.36	2.22	15.46	3	325	117	94	0.54	0.2	6.23	3.33	75	27	122	223		
80	78	ABC	102-#1/0 A	7.42Y	123.7	0.05	2.27	2.33	1	49	17	94	0.01	0.0	8.53	2.30	49	17	31	31		
OCR-81	78	B	006-35-H O	7.43Y	123.8	0.00	2.22	28.70	82	201	72	94	0.00	0.0	6.23	0.00	0	0	0	70		
81	OCR-81	B	110-#4 ACS	7.24Y	120.7	3.04	5.26	28.70	20	201	72	94	3.07	1.5	10.73	4.50	198	70	70	70		
OCR-79	77	ABC	011-70-L O	7.45Y	124.1	0.00	1.86	0.00	0	0	0	0	0.00	0.0	2.90	0.00	0	0	0	0		
1413	75	ABC	110-#4 ACS	7.48Y	124.7	0.00	1.29	0.00	0	0	0	0	0.00	0.0	1.99	0.09	0	0	0	0		

Load	Adjustment	Capacitance	Charging	Gen&Motors	Loops&Metas	Losses	No Load	Losses	Total	
6328	0	0	0	0	0	185		0.00	6513	Lowest Voltage = 116.62 on Element 138
2241	0	-1590	0	0	0	272			924	

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

Database: C:\MILSOFT\DATA\NOLIN\JAN_EXIT03GROWTHOLDLO. _THCHG
Title: 2003-2005 Work Plan (Substation growth without changes)
Case: NOLIN RECC

Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Units Displayed In Volts					KVAR	PF	kW Loss	% Loss	mi From Src	-----Element-----			
							-Base Accum Drop	Thru Amps	% Cap	Thru KW	Length (mi)						KW	KVAR	Cons On	Cons Thru
77		ABC	SRC-9007-3	7.56Y	126.0	0.00	0.00	228.86	0	5100	941	98	0.00	0.0	0.00	0.00	0	0	0	1432
-8071	9007	ABC	207-340-10	7.56Y	126.0	0.00	0.00	88.99	26	1943	548	96	0.00	0.0	0.00	0.00	0	0	0	582
----- Feeder NO. 1 Beginning with Node Element 8071 -----																				
6071	OCR-8071	ABC	Node	7.56Y	126.0	0.00	0.00	88.99	1318	1943	548	96	0.00	0.0	0.00	0.00	0	0	0	582
153	8071	ABC	098-#3/0 A	7.45Y	124.1	1.89	1.89	88.99	30	1943	548	96	23.84	1.2	1.40	1.40	21	5	3	582
OCR-154	153	B	060-35-4H	7.45Y	124.1	0.00	1.89	30.06	66	217	56	97	0.00	0.0	1.40	0.00	0	0	0	60
154	OCR-154	B	110-#4 ACS	7.35Y	122.5	1.66	3.55	30.06	21	217	56	97	1.79	0.8	3.80	2.40	215	55	60	60
OCR-155	153	A	060-35-4H	7.45Y	124.1	0.00	1.89	27.94	60	201	52	97	0.00	0.0	1.40	0.00	0	0	0	72
155	OCR-155	A	110-#4 ACS	7.33Y	122.1	2.00	3.88	27.94	20	201	52	97	2.00	1.0	4.50	3.10	199	51	72	72
156	153	ABC	098-#3/0 A	7.36Y	122.7	1.41	3.30	66.71	23	1460	407	96	13.55	0.9	2.60	1.40	99	25	22	447
OCR-157	156	A	060-35-4H	7.36Y	122.7	0.00	3.30	13.53	39	96	25	97	0.00	0.0	2.80	0.00	0	0	0	25
157	OCR-157	A	110-#4 ACS	7.32Y	122.1	0.62	3.92	13.53	10	96	25	97	0.30	0.3	4.80	2.00	96	25	25	25
158	156	ABC	098-#3/0 A	7.34Y	122.3	0.45	3.74	59.60	20	1271	342	97	3.81	0.3	3.30	0.50	17	4	10	400
159	156	ABC	098-#3/0 A	7.32Y	122.1	0.20	3.94	11.31	4	241	62	97	0.31	0.1	4.50	1.20	18	5	7	80
OCR-729	159	ABC	007-50-H O	7.32Y	122.1	0.00	3.94	10.44	21	222	57	97	0.00	0.0	4.50	0.00	0	0	0	73
729	OCR-729	ABC	098-#3/0 A	7.31Y	121.9	0.18	4.12	10.44	3	222	57	97	0.24	0.1	5.90	1.40	82	21	34	73
FUSE-160	729	A	081-20N FU	7.31Y	121.9	0.00	4.12	13.12	33	93	24	97	0.00	0.0	5.90	0.00	0	0	0	23
160	FUSE-160	A	110-#4 ACS	7.26Y	121.3	0.60	4.72	13.12	9	93	24	97	0.28	0.3	7.90	2.00	93	24	23	23
161	729	ABC	098-#3/0 A	7.31Y	121.9	0.02	4.14	2.21	1	47	12	97	0.00	0.0	7.30	1.40	47	12	16	16
OCR-162	158	ABC	062-70-4H	7.34Y	122.3	0.00	3.74	47.51	68	1010	271	97	0.00	0.0	3.30	0.00	0	0	0	310
162	OCR-162	ABC	098-#3/0 A	7.32Y	122.0	0.29	4.03	47.51	16	1010	271	97	1.95	0.2	3.70	0.40	5	1	3	310
163	162	A	110-#4 ACS	7.30Y	121.7	0.30	4.33	21.89	16	155	40	97	0.24	0.2	4.30	0.60	155	40	27	27
164	162	ABC	098-#3/0 A	7.26Y	121.0	0.95	4.98	39.99	13	648	228	97	5.37	0.6	5.30	1.60	33	8	14	280
OCR-165	164	B	006-35-H O	7.26Y	121.0	0.00	4.98	33.00	94	232	60	97	0.00	0.0	5.30	0.00	0	0	0	66
165	OCR-165	B	110-#4 ACS	7.17Y	119.5	1.52	6.50	33.00	24	232	60	97	1.80	0.8	7.30	2.00	230	59	66	66
	164	ABC	098-#3/0 A	7.23Y	120.4	0.59	5.57	27.45	9	578	153	97	2.26	0.4	6.80	1.50	56	14	24	200
	166	ABC	Capacitor	7.23Y	120.4	0.00	5.57	24.61	368	520	136	97	0.00	0.0	6.80	0.00	0	0	0	176
168	6034	ABC	098-#3/0 A	7.20Y	120.1	0.35	5.92	24.81	8	520	136	97	1.21	0.2	7.80	1.00	58	15	12	176
OCR-169	168	A	005-25-H O	7.20Y	120.1	0.00	5.92	8.24	33	57	15	97	0.00	0.0	7.80	0.00	0	0	0	25
169	OCR-169	A	110-#4 ACS	7.18Y	119.7	0.34	6.27	8.24	6	57	15	97	0.10	0.2	9.60	1.80	57	15	25	25
170	168	ABC	098-#3/0 A	7.18Y	119.7	0.37	6.30	19.30	6	404	105	97	0.98	0.2	9.20	1.40	66	17	20	139
OCR-171	170	A	006-35-H O	7.18Y	119.7	0.00	6.30	21.49	61	149	39	97	0.00	0.0	9.20	0.00	0	0	0	49
171	OCR-171	A	110-#4 ACS	7.09Y	118.2	1.49	7.78	21.49	15	149	39	97	1.15	0.8	12.20	3.00	148	38	49	49
OCR-172	170	ABC	007-50-H O	7.18Y	119.7	0.00	6.30	8.95	18	187	49	97	0.00	0.0	9.20	0.00	0	0	0	70
172	OCR-172	ABC	098-#3/0 A	7.17Y	119.5	0.19	6.49	8.95	3	187	49	97	0.23	0.1	10.70	1.50	28	7	15	70
147	172	A	106-#2 ACS	7.10Y	118.3	1.25	7.73	18.61	10	129	34	97	0.78	0.6	14.80	4.10	128	33	45	45
173	172	A	110-#4 ACS	7.15Y	119.2	0.31	6.80	4.24	3	29	8	96	0.07	0.2	12.40	1.70	4	1	1	10
854	173	A	110-#4 ACS	7.14Y	119.1	0.13	6.93	3.72	3	26	7	97	0.02	0.1	13.90	1.50	26	7	9	9
OCR-8072	9007	ABC	207-340-10	7.56Y	126.0	0.00	0.00	90.43	27	1929	698	94	0.00	0.0	0.00	0.00	0	0	0	396
----- Feeder NO. 2 Beginning with Node Element 8072 -----																				
8072	OCR-8072	ABC	Node	7.56Y	126.0	0.00	0.00	90.43	1340	1929	698	94	0.00	0.0	0.00	0.00	0	0	0	396
127	8072	ABC	098-#3/0 A	7.32Y	122.1	3.93	3.93	90.43	30	1929	698	94	45.53	2.4	3.00	3.00	356	92	96	396
OCR-126	127	A	007-50-H O	7.32Y	122.1	0.00	3.93	18.40	37	131	34	97	0.00	0.0	3.00	0.00	0	0	0	40
128	OCR-126	A	110-#4 ACS	7.28Y	121.4	0.67	4.60	18.40	13	131	34	97	0.61	0.5	3.90	0.90	31	8	7	40
129	126	A	110-#4 ACS	7.27Y	121.1	0.31	4.90	7.53	6	55	14	97	0.09	0.2	5.60	1.70	55	14	19	19
130	128	A	110-#4 ACS	7.27Y	121.2	0.17	4.77	6.23	4	44	11	97	0.04	0.1	5.10	1.20	44	11	14	14
131	127	ABC	098-#3/0 A	7.18Y	119.6	2.46	6.38	67.75	23	1394	521	94	21.70	1.6	5.40	2.40	165	42	65	258
OCR-132	131	C	006-35-H O	7.18Y	119.6	0.00	6.38	12.67	36	88	23	97	0.00	0.0	5.40	0.00	0	0	0	22
132	OCR-132	C	110-#4 ACS	7.12Y	118.6	0.99	7.37	12.67	9	88	23	97	0.45	0.5	6.80	3.40	88	22	22	22
133	131	ABC	098-#3/0 A	7.17Y	119.5	0.16	6.54	21.15	7	441	114	97	0.47	0.1	5.90	0.50	14	4	6	141
134	133	ABC	007-50-H O	7.17Y	119.5	0.00	6.54	6.46	13	134	35	97	0.00	0.0	5.90	0.00	0	0	0	50
	OCR-134	A	110-#4 ACS	7.11Y	118.5	0.95	7.48	19.37	14	134	35	97	0.68	0.5	7.90	2.00	126	32	48	50
OCR-873	134	A	005-25-H O	7.11Y	116.5	0.00	7.48	1.15	5	8	2	97	0.00	0.0	7.90	0.00	0	0	0	2
873	OCR-873	A	110-#4 ACS	7.11Y	118.4	0.07	7.56	1.15	1	8	2	97	0.00	0.0	10.70	2.80	8	2	2	2
135	133	ABC	098-#3/0 A	7.16Y	119.3	0.13	6.67	14.03	5	292	76	97	0.25	0.1	6.60	0.70	61	16	33	65

Database: C:\MILSOFT\DATA\NOLIN\JAN_EXIT03GROWTHOLDL...THCHG
Title: 2003-2005 Work Plan (Substation growth without changes)
Case: NOLIN RECC

Units Displayed In Volts																				
Element Name	Parent Name	Cnf	Type/ Conductor	Pri KV	Base Volt	Element Drop	-Base Voltage:120.0-				KVAR	PF	kW Loss	% Loss	mi From Src	Length (mi)	-----Element-----			
							Accum Drop	Thru Amps	% Cap	Thru KW							KW	KVAR	Cons On	Cons Thru
-136	135	AB	110-#4 ACS	7.14Y	116.9	0.41	7.08	16.67	12	231	60	97	0.74	0.3	7.20	0.60	17	4	2	52
	710	B	006-35-H O	7.14Y	116.9	0.00	7.08	16.31	47	113	29	97	0.00	0.0	7.20	0.00	0	0	0	29
136	OCR-136	B	110-#4 ACS	7.07Y	117.8	1.13	6.21	16.31	12	113	29	97	0.66	0.6	10.20	3.00	112	29	29	29
OCR-137	710	A	006-35-H O	7.14Y	118.9	0.00	7.08	14.58	42	101	26	97	0.00	0.0	7.20	0.00	0	0	0	21
137	OCR-137	A	110-#4 ACS	7.06Y	117.7	1.18	6.26	14.58	10	101	26	97	0.62	0.6	10.70	3.50	100	26	21	21
833	131	ABC	106-#2 ACS	7.14Y	119.0	0.57	6.95	34.82	19	679	318	91	2.05	0.3	6.60	1.20	677	318	30	30
OCR-8075	9007	ABC	207-340-10	7.56Y	126.0	0.00	0.00	55.80	16	1228	-304	-97	0.00	0.0	0.00	0.00	0	0	0	454
----- Feeder NO. 5 Beginning with Node Element 8075 -----																				
8075	OCR-8075	ABC	Node	7.56Y	126.0	0.00	0.00	55.80	827	1228	-304	-97	0.00	0.0	0.00	0.00	0	0	0	454
139	8075	ABC	098-#3/0 A	7.49Y	124.8	1.25	1.25	55.60	19	1228	-304	-97	16.60	1.5	3.10	3.10	171	44	47	454
CAP1700	139	ABC	Capacitor	7.49Y	124.8	0.00	1.25	-14.44	0	0	-324	0	0.00	0.0	3.10	0.00	0	0	0	0
OCR-726	139	ABC	011-70-L O	7.49Y	124.8	0.00	1.25	46.32	66	1039	-45	-100	0.00	0.0	3.10	0.00	0	0	0	407
726	OCR-726	ABC	098-#3/0 A	7.46Y	124.3	0.41	1.66	46.32	15	1039	-45	-100	3.55	0.3	3.90	0.60	57	15	12	407
6015	726	ABC	Capacitor	7.46Y	124.3	0.00	1.66	43.62	649	979	-83	-100	0.00	0.0	3.90	0.00	0	0	0	395
OCR-140	6015	A	080-35-4H	7.46Y	124.3	0.00	1.66	15.02	43	109	26	97	0.00	0.0	3.90	0.00	0	0	0	41
140	OCR-140	A	110-#4 ACS	7.44Y	123.9	0.42	2.08	15.02	11	109	28	97	0.29	0.3	4.70	0.80	51	13	25	41
167	140	A	110-#4 ACS	7.42Y	123.7	0.17	2.26	5.03	4	36	9	97	0.03	0.1	6.20	1.50	36	9	12	12
834	140	A	110-#4 ACS	7.43Y	123.9	0.05	2.14	2.96	2	21	5	97	0.01	0.0	5.50	0.80	21	5	4	4
OCR-141	6015	B	005-25-H O	7.46Y	124.3	0.00	1.66	11.30	45	62	21	97	0.00	0.0	3.90	0.00	0	0	0	29
141	OCR-141	B	110-#4 ACS	7.44Y	123.9	0.42	2.07	11.30	8	82	21	97	0.17	0.2	5.50	1.60	62	21	29	29
142	6015	ABC	098-#3/0 A	7.43Y	123.9	0.49	2.15	36.46	12	789	210	97	2.55	0.3	4.60	0.90	17	4	5	325
143	142	A	110-#4 ACS	7.42Y	123.7	0.18	2.32	6.34	5	46	12	97	0.04	0.1	6.00	1.20	46	12	18	18
144	142	ABC	098-#3/0 A	7.40Y	123.3	0.50	2.65	33.57	11	724	191	97	2.41	0.3	5.80	1.00	12	3	6	302
145	144	ABC	098-#3/0 A	7.38Y	123.0	0.33	2.98	20.93	7	450	118	97	0.94	0.2	6.90	1.10	56	14	41	222
146	145	ABC	098-#3/0 A	7.38Y	123.0	0.00	2.98	0.00	0	0	0	0	0.00	0.0	7.60	0.70	0	0	1	1
-148	145	ABC	006-35-H O	7.38Y	123.0	0.00	2.98	18.35	52	393	102	97	0.00	0.0	6.90	0.00	0	0	0	180
	OCR-148	ABC	102-#1/0 A	7.36Y	122.6	0.41	3.38	18.35	8	393	102	97	1.09	0.3	8.20	1.30	32	8	20	180
690	148	A	110-#4 ACS	7.25Y	120.6	1.84	5.23	23.17	17	165	43	97	2.08	1.3	10.20	2.00	45	12	11	59
152	690	A	110-#4 ACS	7.21Y	120.2	0.58	5.80	16.75	12	118	30	97	0.35	0.3	11.70	1.50	117	30	48	48
699	148	ABC	102-#1/0 A	7.35Y	122.5	0.08	3.47	9.12	4	195	50	97	0.07	0.0	9.20	1.00	195	50	99	101
1424	699	ABC	110-#4 ACS	7.35Y	122.5	0.00	3.47	0.00	0	0	0	0	0.00	0.0	9.29	0.09	0	0	2	2
149	144	B	110-#4 ACS	7.35Y	122.5	0.82	3.47	36.22	26	259	67	97	1.58	0.6	6.30	0.50	10	3	1	74
OCR-150	149	B	006-35-H O	7.35Y	122.5	0.00	3.47	18.31	52	130	34	97	0.00	0.0	6.30	0.00	0	0	0	37
150	OCR-150	B	110-#4 ACS	7.27Y	121.1	1.41	4.87	18.31	13	130	34	97	1.06	0.6	8.80	2.50	86	22	16	37
661	150	B	110-#4 ACS	7.26Y	121.0	0.14	5.02	6.08	4	43	11	97	0.03	0.1	9.80	1.00	43	11	21	21
OCR-724	149	B	005-25-H O	7.35Y	122.5	0.00	3.47	16.52	66	116	30	97	0.00	0.0	6.30	0.00	0	0	0	36
724	OCR-724	B	110-#4 ACS	7.34Y	122.4	0.14	3.61	16.52	12	118	30	97	0.12	0.1	6.50	0.20	12	3	4	36
151	724	B	110-#4 ACS	7.32Y	122.0	0.37	3.98	6.40	5	46	12	97	0.08	0.2	9.00	2.50	45	12	17	17
725	724	B	110-#4 ACS	7.32Y	122.0	0.35	3.97	8.49	6	60	16	97	0.11	0.2	8.30	1.80	60	15	15	15

	Load	Adjustment	Capacitance	Charging	Gen&Motors	Loops&Metas	Losses	No Load	Losses	Total	
KW	4928	0	0	0	0	0	171				Lowest Voltage = 117.74 on Element 137
KVAR	1406	0	-646	0	0	0	181	0.00	5100	941	

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

Database: C:\MILSOFT\DATA\NOLIN\JAN_EXIT03GROWTHOLDLOC_1THCHG
Title: 2003-2005 Work Plan (Substation growth without changes)
Case: NOLIN RECC

Element Name	Parent Name	Cnf	Type/ Conductor	Pri KV	Base Volt	Element Drop	Units Displayed In Volts					KW	KVAR	PF	kW Loss	% Loss	mi From Src	Length (mi)	Element		Cons On	Cons Thru
							-Base Accum Drop	Thru Amps	Cap	Thru KW	KW								KVAR	PF		
76		ABC	SRC-9008-j	7.56Y	126.0	0.00	0.00	366.93	0	8658	1433	99	0.00	0.0	0.00	0.00	0	0	0	2032		
----- Feeder NO. 1 Beginning with Node Element 7081 -----																						
7081	9008	ABC	Node	7.56Y	126.0	0.00	0.00	337.00	4993	7558	1141	99	0.00	0.0	0.00	0.00	0	0	0	1688		
OCR-8081	7081	ABC	158-280-10	7.56Y	126.0	0.00	0.00	135.31	48	2986	709	97	0.00	0.0	0.00	0.00	0	0	0	585		
----- Feeder NO. 1 Beginning with Node Element 8081 -----																						
8081	OCR-8081	ABC	Node	7.56Y	126.0	0.00	0.00	135.31	2005	2986	709	97	0.00	0.0	0.00	0.00	0	0	0	585		
1	8081	ABC	090-336 AC	7.47Y	124.5	1.46	1.46	135.31	26	2986	709	97	23.61	0.8	1.60	1.60	117	31	29	585		
OCR-2	1	A	060-35-4H	7.47Y	124.5	0.00	1.46	11.45	33	83	21	97	0.00	0.0	1.60	0.00	0	0	0	34		
2	OCR-2	A	110-#4 ACS	7.45Y	124.2	0.29	1.75	11.45	8	83	21	97	0.12	0.1	2.70	1.10	83	21	34	34		
731	1	ABC	090-336 AC	7.46Y	124.4	0.15	1.62	88.64	17	1974	224	99	1.95	0.1	1.90	0.30	11	3	6	519		
3	731	ABC	090-336 AC	7.44Y	123.9	0.45	2.07	88.15	17	1962	216	99	5.82	0.3	2.60	0.90	6	2	3	513		
OCR-4	3	ABC	007-50-H O	7.44Y	123.9	0.00	2.07	28.42	57	613	161	97	0.00	0.0	2.60	0.00	0	0	0	161		
4	OCR-4	ABC	106-#2 ACS	7.37Y	122.9	1.05	3.12	28.42	16	613	161	97	4.37	0.7	4.40	1.60	155	40	30	161		
FUSE-5	4	B	081-20N FU	7.37Y	122.9	0.00	3.12	5.27	13	38	10	97	0.00	0.0	4.40	0.00	0	0	0	19		
5	FUSE-5	B	110-#4 ACS	7.36Y	122.7	0.15	3.26	5.27	4	38	10	97	0.03	0.1	5.60	1.20	38	10	19	19		
FUSE-6	4	ABC	081-20N FU	7.37Y	122.9	0.00	3.12	19.47	49	417	109	97	0.00	0.0	4.40	0.00	0	0	0	112		
6	FUSE-6	ABC	106-#2 ACS	7.31Y	121.8	1.11	4.23	19.47	11	417	109	97	2.82	0.7	7.40	3.00	232	60	57	112		
OCR-7	6	B	005-25-H O	7.31Y	121.8	0.00	4.23	25.66	103	182	47	97	0.00	0.0	7.40	0.00	0	0	0	55		
7	OCR-7	B	110-#4 ACS	7.20Y	120.0	1.78	6.00	25.66	18	182	47	97	1.64	0.9	10.40	3.00	180	46	55	55		
8	3	ABC	098-#3/O A	7.43Y	123.8	0.12	2.20	21.23	7	458	119	97	0.37	0.1	3.20	0.40	25	6	9	122		
OCR-535	8	ABC	007-50-H O	7.43Y	123.8	0.00	2.20	20.07	40	433	113	97	0.00	0.0	3.20	0.00	0	0	0	113		
535	OCR-535	ABC	096-#3/O A	7.41Y	123.6	0.23	2.42	20.07	7	433	113	97	0.63	0.1	4.00	0.80	49	13	10	113		
FUSE-9	535	A	081-20N FU	7.41Y	123.6	0.00	2.42	12.93	32	93	24	97	0.00	0.0	4.00	0.00	0	0	0	30		
9	FUSE-9	A	110-#4 ACS	7.39Y	123.1	0.48	2.90	12.93	9	93	24	97	0.22	0.2	5.60	1.60	93	24	30	30		
792	535	ABC	098-#3/O A	7.40Y	123.4	0.17	2.59	13.47	4	290	75	97	0.22	0.1	5.70	1.70	290	75	73	73		
J	3	ABC	102-#1/O A	7.39Y	123.2	0.76	2.83	39.53	17	878	-79	-100	5.92	0.7	4.30	1.50	52	13	20	227		
14	13	ABC	Capacitor	7.39Y	123.2	0.00	2.83	37.25	552	820	-98	-99	0.00	0.0	4.30	0.00	0	0	0	207		
15	6030	C	110-#4 ACS	7.36Y	122.9	0.22	3.06	8.12	6	58	15	97	0.07	0.1	5.50	1.20	58	15	12	12		
16	6030	ABC	102-#1/O A	7.36Y	122.7	0.43	3.27	35.56	15	762	203	97	2.24	0.3	5.00	0.70	45	12	11	195		
OCR-16	15	A	007-50-H O	7.36Y	122.7	0.00	3.27	24.05	48	171	45	97	0.00	0.0	5.00	0.00	0	0	0	47		
17	OCR-16	A	110-#4 ACS	7.29Y	121.6	1.16	4.43	24.05	17	171	45	97	1.00	0.6	7.10	2.10	170	44	47	47		
18	15	ABC	102-#1/O A	7.36Y	122.6	0.14	3.40	25.46	11	544	144	97	0.52	0.1	5.30	0.30	2	1	3	137		
OCR-20	17	ABC	007-50-H O	7.36Y	122.6	0.00	3.40	8.99	18	192	50	97	0.00	0.0	5.30	0.00	0	0	0	55		
20	OCR-20	ABC	102-#1/O A	7.34Y	122.4	0.21	3.61	8.99	4	192	50	97	0.19	0.1	7.90	2.60	192	50	55	55		
5081	17	A	Regulator	7.56Y	126.0	-3.40	0.00	49.12	49	349	94	97	0.00	0.0	5.30	0.00	0	0	0	79		
OCR-18	5081	A	007-50-H O	7.56Y	126.0	0.00	0.00	47.60	96	349	94	97	0.00	0.0	5.30	0.00	0	0	0	79		
18	OCR-18	A	110-#4 ACS	7.24Y	120.7	5.29	5.29	47.60	34	349	94	97	10.73	3.1	6.60	3.50	215	55	42	79		
OCR-19	18	A	005-25-H O	7.24Y	120.7	0.00	5.29	15.71	63	110	29	97	0.00	0.0	6.80	0.00	0	0	0	32		
19	OCR-19	A	110-#4 ACS	7.20Y	119.9	0.80	6.08	15.71	11	110	29	97	0.45	0.4	11.00	2.20	110	28	32	32		
665	18	A	110-#4 ACS	7.24Y	120.7	0.03	5.31	1.93	1	14	3	98	0.00	0.0	9.40	0.60	14	3	5	5		
1464	1	ABC	110-#4 ACS	7.47Y	124.5	0.07	1.54	38.99	28	788	379	90	0.32	0.0	1.69	0.09	787	379	3	3		
OCR-8082	7081	ABC	207-340-10	7.56Y	126.0	0.00	0.00	109.67	32	2438	494	98	0.00	0.0	0.00	0.00	0	0	0	560		
----- Feeder NO. 2 Beginning with Node Element 8082 -----																						
8082	OCR-8082	ABC	Node	7.56Y	126.0	0.00	0.00	109.67	1625	2438	494	98	0.00	0.0	0.00	0.00	0	0	0	580		
21	8082	ABC	098-#3/O A	7.51Y	125.2	0.79	0.79	109.67	37	2438	494	98	12.84	0.5	0.50	0.50	45	12	25	580		
FUSE-22	21	A	083-30N FU	7.51Y	125.2	0.00	0.79	9.74	16	71	18	97	0.00	0.0	0.50	0.00	0	0	0	16		
22	FUSE-22	A	110-#4 ACS	7.49Y	124.9	0.34	1.12	9.74	7	71	18	97	0.12	0.2	2.00	1.50	71	18	16	16		
23	21	ABC	098-#3/O A	7.42Y	123.7	1.47	2.26	104.37	35	2309	450	98	23.01	1.0	1.50	1.00	69	18	29	539		
FUSE-24	23	A	083-30N FU	7.42Y	123.7	0.00	2.26	4.42	7	32	8	97	0.00	0.0	1.50	0.00	0	0	0	18		
24	FUSE-24	A	110-#4 ACS	7.41Y	123.6	0.16	2.42	4.42	3	32	8	97	0.03	0.1	3.10	1.60	32	8	18	18		
25	23	ABC	098-#3/O A	7.35Y	122.5	1.25	3.51	99.71	33	2185	398	98	18.86	0.9	2.40	0.90	71	18	10	492		
26	25	A	083-30N FU	7.35Y	122.5	0.00	3.51	8.60	14	61	16	97	0.00	0.0	2.40	0.00	0	0	0	23		
FUSE-26	26	A	110-#4 ACS	7.33Y	122.2	0.30	3.81	8.60	6	61	16	97	0.09	0.2	3.90	1.50	61	16	23	23		
27	25	ABC	098-#3/O A	7.26Y	121.4	1.13	4.64	84.77	25	1846	254	99	13.40	0.7	3.60	1.20	614	251	76	419		
8009	27	ABC	Capacitor	7.28Y	121.4	0.00	4.64	55.78	826	1218	27	100	0.00	0.0	3.80	0.00	0	0	0	343		

Database: C:\MILSOFT\DATA\NOLIN\JAN_EXIT03GROWTHOLDLW .JTHCHG
Title: 2003-2005 Work Plan (Substation growth without changes)
Case: NOLIN RECC

Element Name	Parent Name	Cnf	Type/ Conductor	Pri KV	Base Volt	Element Drop	Units Displayed In Volts					mi From Src	Length (mi)	-----Element-----						
							-Base Accum Drop	Thru Amps	% Cap	Thru KW	KVAR			% PF	kW Loss	% Loss	KW	KVAR	Cons On	Cons Thru
-28	6009	A	060-35-4H	7.25Y	121.4	0.00	4.64	30.46	87	215	56	97	0.00	0.0	3.60	0.00	0	0	0	64
	OCR-28	A	110-#4 ACS	7.16Y	119.3	2.11	6.75	30.46	22	215	56	97	2.30	1.1	6.60	3.00	212	55	64	64
715	6009	ABC	098-#3/0 A	7.24Y	120.6	0.75	5.39	47.67	16	1004	278	96	4.89	0.5	4.70	1.10	122	32	51	279
OCR-29	715	ABC	007-50-H O	7.24Y	120.6	0.00	5.39	41.87	84	876	241	96	0.00	0.0	4.70	0.00	0	0	0	228
29	OCR-29	ABC	098-#3/0 A	7.18Y	119.6	1.02	6.41	41.87	14	876	241	96	5.10	0.6	6.80	2.10	420	108	123	228
30	29	A	110-#4 ACS	7.16Y	119.4	0.23	6.63	16.57	12	115	30	97	0.14	0.1	7.40	0.60	115	30	30	30
FUSE-31	29	A	081-20N FU	7.18Y	119.6	0.00	6.41	16.06	40	112	29	97	0.00	0.0	6.80	0.00	0	0	0	19
31	FUSE-31	A	110-#4 ACS	7.14Y	119.0	0.63	7.03	16.06	11	112	29	97	0.36	0.3	8.50	1.70	111	29	19	19
32	29	ABC	098-#3/0 A	7.17Y	119.5	0.10	6.51	10.89	4	224	68	96	0.10	0.0	8.00	1.20	224	68	56	56
OCR-851	25	A	006-35-H O	7.35Y	122.5	0.00	3.51	26.50	76	186	49	97	0.00	0.0	2.40	0.00	0	0	0	40
851	OCR-851	A	110-#4 ACS	7.29Y	121.6	0.92	4.43	26.50	19	188	49	97	0.87	0.5	3.90	1.50	188	48	40	40
OCR-8083	7081	ABC	207-340-10	7.56Y	126.0	0.00	0.00	94.14	28	2134	-63	-100	0.00	0.0	0.00	0.00	0	0	0	523
----- Feeder NO. 3 Beginning with Node Element 8083 -----																				
8083	OCR-8083	ABC	Node	7.56Y	126.0	0.00	0.00	94.14	1395	2134	-63	-100	0.00	0.0	0.00	0.00	0	0	0	523
33	8083	ABC	090-336 AC	7.52Y	125.3	0.74	0.74	94.14	18	2134	-63	-100	13.76	0.6	2.00	2.00	159	41	51	523
OCR-34	33	C	007-50-H O	7.52Y	125.3	0.00	0.74	34.58	69	251	67	97	0.00	0.0	2.00	0.00	0	0	0	123
34	OCR-34	C	106-#2 ACS	7.38Y	122.9	2.32	3.07	34.58	19	251	67	97	2.70	1.1	6.10	4.10	249	64	123	123
35	33	ABC	090-336 AC	7.49Y	124.6	0.49	1.23	76.38	14	1710	-202	-99	9.53	0.6	4.00	2.00	37	10	8	349
OCR-36	35	A	060-35-4H	7.49Y	124.8	0.00	1.23	71.25	204	533	29	100	0.00	0.0	4.00	0.00	0	0	0	32
36	OCR-36	A	110-#4 ACS	7.18Y	119.6	5.13	6.36	71.25	51	533	29	100	14.28	2.7	7.40	3.40	518	20	32	32
37	35	ABC	090-336 AC	7.48Y	124.7	0.06	1.29	51.69	10	1131	-263	-97	3.86	0.3	6.50	2.50	392	171	18	309
732	37	ABC	098-#3/0 A	7.48Y	124.7	0.04	1.34	38.25	13	735	-444	-86	1.22	0.2	6.90	0.40	46	16	5	291
6035	732	ABC	Capacitor	7.48Y	124.7	0.00	1.34	-14.43	214	0	-324	0	0.00	0.0	6.90	0.00	0	0	0	0
OCR-108	732	A	004-15-H	7.48Y	124.7	0.00	1.34	2.68	18	19	7	94	0.00	0.0	6.90	0.00	0	0	0	14
108	OCR-108	A	110-#4 ACS	7.47Y	124.5	0.16	1.49	2.68	2	19	7	94	0.01	0.1	9.40	2.50	19	7	14	14
	732	ABC	098-#3/0 A	7.47Y	124.5	0.16	1.49	30.50	10	669	-144	-96	1.17	0.2	7.50	0.60	24	9	20	272
	109	ABC	Capacitor	7.47Y	124.5	0.00	1.49	29.53	437	643	-154	-97	0.00	0.0	7.50	0.00	0	0	0	252
38	6036	ABC	102-#1/0 A	7.45Y	124.1	0.36	1.85	29.68	13	643	169	97	1.54	0.2	8.20	0.70	47	12	21	252
OCR-39	38	A	061-50-4H	7.45Y	124.1	0.00	1.85	19.99	40	144	38	97	0.00	0.0	8.20	0.00	0	0	0	44
39	OCR-39	A	110-#4 ACS	7.34Y	122.3	1.80	3.65	19.99	14	144	38	97	1.49	1.0	11.20	3.00	100	26	25	44
OCR-40	39	A	005-25-H O	7.34Y	122.3	0.00	3.65	6.03	24	43	11	97	0.00	0.0	11.20	0.00	0	0	0	19
40	OCR-40	A	110-#4 ACS	7.32Y	121.9	0.42	4.07	6.03	4	43	11	97	0.09	0.2	14.20	3.00	43	11	19	19
44	38	ABC	102-#1/0 A	7.44Y	123.9	0.21	2.06	20.85	9	451	117	97	0.64	0.1	8.80	0.60	45	12	20	187
OCR-856	44	ABC	061-50-4H	7.44Y	123.9	0.00	2.06	9.12	18	197	51	97	0.00	0.0	8.80	0.00	0	0	0	88
856	OCR-856	ABC	102-#1/0 A	7.43Y	123.8	0.10	2.17	9.12	4	197	51	97	0.13	0.1	9.50	0.70	34	9	13	88
50	856	ABC	102-#1/0 A	7.43Y	123.8	0.07	2.24	7.42	3	160	42	97	0.08	0.0	10.10	0.60	27	7	10	71
OCR-704	50	A	005-25-H O	7.43Y	123.8	0.00	2.24	16.46	74	133	35	97	0.00	0.0	10.10	0.00	0	0	0	61
704	OCR-704	A	110-#4 ACS	7.41Y	123.4	0.34	2.58	16.46	13	133	35	97	0.33	0.3	10.50	0.40	3	1	6	61
52	704	A	110-#4 ACS	7.35Y	122.4	1.00	3.58	17.39	12	125	32	97	0.63	0.5	13.00	2.50	124	32	49	49
FUSE-51	704	A	079-10N FU	7.41Y	123.4	0.00	2.58	0.64	3	5	1	98	0.00	0.0	10.50	0.00	0	0	0	6
51	FUSE-51	A	110-#4 ACS	7.40Y	123.4	0.02	2.59	0.64	0	5	1	98	0.00	0.0	11.60	1.10	5	1	6	6
45	856	A	110-#4 ACS	7.43Y	123.8	0.00	2.17	0.32	0	2	1	89	0.00	0.0	9.90	0.40	2	1	4	4
OCR-855	44	A	005-25-H O	7.44Y	123.9	0.00	2.06	28.98	116	209	54	97	0.00	0.0	8.80	0.00	0	0	0	79
855	OCR-855	A	110-#4 ACS	7.44Y	123.9	0.01	2.07	28.98	21	209	54	97	0.01	0.0	6.81	0.01	95	25	28	79
FUSE-46	855	A	079-10N FU	7.44Y	123.9	0.00	2.07	9.60	48	69	18	97	0.00	0.0	8.81	0.00	0	0	0	23
46	FUSE-46	A	110-#4 ACS	7.41Y	123.5	0.42	2.49	9.60	7	69	18	97	0.14	0.2	10.71	1.90	69	18	23	23
47	855	A	110-#4 ACS	7.41Y	123.5	0.42	2.49	6.12	4	44	11	97	0.09	0.2	11.81	3.00	44	11	28	28
NODE1591	109	ABC	Node	7.47Y	124.5	0.00	1.49	0.00	0	0	0	0	0.00	0.0	7.50	0.00	0	0	0	0
OCR-8084	9008	ABC	207-340-10	7.56Y	126.0	0.00	0.00	50.19	15	1100	293	97	0.00	0.0	0.00	0.00	0	0	0	344
----- Feeder NO. 4 Beginning with Node Element 8084 -----																				
	OCR-8084	ABC	Node	7.56Y	126.0	0.00	0.00	50.19	744	1100	293	97	0.00	0.0	0.00	0.00	0	0	0	344
	8084	ABC	102-#1/0 A	7.52Y	125.4	0.62	0.62	50.19	22	1100	293	97	4.55	0.4	0.70	0.70	41	11	21	344
57	53	ABC	106-#2 ACS	7.49Y	124.8	0.58	1.20	22.67	13	495	130	97	2.09	0.4	1.70	1.00	22	6	11	151
60	57	A	110-#4 ACS	7.35Y	122.6	2.25	3.45	31.72	23	230	61	97	3.24	1.4	3.70	2.00	106	27	23	70
42	60	A	110-#4 ACS	7.29Y	121.6	1.00	4.45	16.96	12	121	31	97	0.83	0.7	5.20	1.50	35	9	19	47

Database: C:\MILSOFT\DATA\NOLIN\JAN_EXIT03GROWTHOLDLOWWITHCHG
Title: 2003-2005 Work Plan (Substation growth without changes)
Case: NOLIN RECC

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-----			
							Accum Drop	Thru Amps	% Cap	Thru KW							KW	KVAR	Cons On	Cons Thru
	42	A	110-#4 ACS	7.25Y	120.9	0.68	5.13	10.17	7	72	19	97	0.25	0.3	8.10	2.90	72	16	24	24
	42	A	110-#4 ACS	7.29Y	121.5	0.07	4.52	1.88	1	13	3	97	0.00	0.0	6.60	1.60	13	3	4	4
FUSE-59	57	A	083-30N FU	7.49Y	124.8	0.00	1.20	16.63	28	120	31	97	0.00	0.0	1.70	0.00	0	0	0	35
59	FUSE-59	A	106-#2 ACS	7.44Y	124.0	0.84	2.04	16.63	9	120	31	97	0.47	0.4	4.77	3.07	120	31	35	35
56	57	A	110-#4 ACS	7.43Y	123.8	1.04	2.24	16.65	12	121	31	97	0.62	0.5	4.40	2.70	120	31	35	35
54	53	ABC	106-#2 ACS	7.42Y	123.7	1.67	2.29	25.65	14	560	148	97	6.09	1.1	3.70	3.00	194	50	51	172
OCR-55	54	A	061-50-4H	7.42Y	123.7	0.00	2.29	25.10	50	180	47	97	0.00	0.0	3.70	0.00	0	0	0	61
55	OCR-55	A	110-#4 ACS	7.31Y	121.9	1.85	4.14	25.10	18	180	47	97	1.67	0.9	6.90	3.20	179	46	61	61
OCR-56	54	A	061-50-4H	7.42Y	123.7	0.00	2.29	25.01	50	180	47	97	0.00	0.0	3.70	0.00	0	0	0	60
56	OCR-56	A	106-#2 ACS	7.36Y	122.6	1.07	3.35	25.01	14	180	47	97	0.90	0.5	6.30	2.60	179	46	60	60

	Load	Adjustment	Capacitance	Charging	Gen&Motors	Loops&Metas	Losses	No Load Losses	Total	
KW	8440	0	0	0	0	0	218	0.00	8658	Lowest Voltage = 118.97 on Element 31
KVAR	2421	0	-1270	0	0	0	282		1433	

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

Balanced Voltage Drop Report
Source: 9009

Database: C:\MILSOFT\DATA\NOLIN\JAN_EXIT03GROWTHOLDLOAD\WITHCHG
Title: 2003-2005 Work Plan (SubStation growth without changes)
Case: NOLIN RECC

Element Name	Parent Name	Cnf	Type/ Conductor	Pri KV	Base Volt	Element Drop	Units Displayed In Volts					KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	Element			
							-Base Accum Drop	Thru Amps	% Cap	Thru KW	----- KW							----- KVAR	Cons On	Cons Thru	
		ABC	SRC-9009-j	7.56Y	126.0	0.00	0.00	628.11	0	14229	694	100	0.00	0.0	0.00	0.00	0	0	0	3610	
----- Feeder NO. 4 Beginning with Node Element 8094 -----																					
8094	9009	ABC	Node	7.56Y	126.0	0.00	0.00	317.25	0	7158	-732	-99	0.00	0.0	0.00	0.00	0	0	0	1435	
OCR-8094	8094	ABC	203-400-10	7.56Y	126.0	0.00	0.00	317.25	79	7158	-732	-99	0.00	0.0	0.00	0.00	0	0	0	1435	
608	OCR-8094	ABC	090-336 AC	7.43Y	123.8	2.16	2.16	317.25	60	7158	-732	-99	174.50	2.4	2.30	2.30	815	-66	169	1435	
OCR-609	608	A	061-50-4H	7.43Y	123.8	0.00	2.16	29.05	58	215	-17	-100	0.00	0.0	2.30	0.00	0	0	0	53	
609	OCR-609	A	110-#4 ACS	7.38Y	123.0	0.86	3.01	29.05	21	215	-17	-100	1.05	0.5	3.80	1.50	214	-17	53	53	
610	608	ABC	090-336 AC	7.41Y	123.6	0.28	2.44	271.22	51	5953	-1053	-98	24.29	0.4	2.70	0.40	65	20	14	1213	
6010	610	ABC	Capacitor	7.41Y	123.6	0.00	2.44	268.50	3978	5864	-1129	-98	0.00	0.0	2.70	0.00	0	0	0	1199	
611	6010	ABC	090-336 AC	7.34Y	122.3	1.30	3.74	219.79	41	4884	-196	-100	57.93	1.2	4.20	1.50	245	-20	58	972	
776	611	ABC	090-336 AC	7.32Y	122.0	0.22	3.96	187.33	35	4113	-273	-100	8.77	0.2	4.50	0.30	0	0	0	813	
613	776	ABC	090-336 AC	7.29Y	121.6	0.47	4.43	86.78	16	1902	-124	-100	8.40	0.4	6.00	1.50	253	-20	50	345	
OCR-616	613	ABC	007-50-H O	7.29Y	121.6	0.00	4.43	26.07	52	569	-41	-100	0.00	0.0	6.00	0.00	0	0	0	111	
616	OCR-616	ABC	102-#1/0 A	7.24Y	120.6	0.95	5.38	26.07	11	569	-41	-100	4.20	0.7	9.30	3.30	218	-18	44	111	
OCR-617	616	A	005-25-H O	7.24Y	120.6	0.00	5.38	48.02	192	346	-28	-100	0.00	0.0	9.30	0.00	0	0	0	67	
617	OCR-617	A	110-#4 ACS	7.24Y	120.6	0.00	5.38	48.02	34	346	-28	-100	0.00	0.0	9.30	0.00	346	-28	67	67	
664	613	ABC	102-#1/0 A	7.28Y	121.4	0.20	4.63	49.12	21	1072	-62	-100	1.89	0.2	6.30	0.30	23	-2	3	184	
OCR-614	664	ABC	007-50-H O	7.28Y	121.4	0.00	4.63	32.55	65	709	-55	-100	0.00	0.0	6.30	0.00	0	0	0	111	
614	OCR-614	ABC	098-#3/0 A	7.26Y	121.0	0.42	5.05	32.55	11	709	-55	-100	1.80	0.3	8.65	2.35	707	-57	111	111	
OCR-895	614	C	005-25-H O	7.26Y	121.0	0.00	5.05	0.00	0	0	0	0	0.00	0.0	8.65	0.00	0	0	0	0	
895	OCR-895	C	110-#4 ACS	7.26Y	121.0	0.00	5.05	0.00	0	0	0	0	0.00	0.0	9.81	1.15	0	0	0	0	
894	614	ABC	098-#3/0 A	7.26Y	121.0	0.00	5.05	0.00	0	0	0	0	0.00	0.0	9.77	1.12	0	0	0	0	
OCR-615	664	ABC	007-50-H O	7.28Y	121.4	0.00	4.63	15.52	31	338	-27	-100	0.00	0.0	6.30	0.00	0	0	0	70	
615	OCR-615	ABC	106-#2 ACS	7.25Y	120.9	0.50	5.13	15.52	9	338	-27	-100	0.98	0.3	9.20	2.90	337	-27	70	70	
OCR-691	776	ABC	061-50-4H	7.32Y	122.0	0.00	3.96	100.55	201	2202	-169	-100	0.00	0.0	4.50	0.00	0	0	0	468	
	OCR-691	ABC	090-336 AC	7.32Y	121.9	0.09	4.05	100.55	19	2202	-169	-100	1.82	0.1	4.80	0.30	776	-62	170	468	
	691	ABC	098-#3/0 A	7.29Y	121.6	0.36	4.42	51.30	17	1123	-87	-100	2.47	0.2	6.10	1.30	1120	-90	238	238	
NODE1584	691	ABC	Node	7.32Y	121.9	0.00	4.05	13.80	0	302	-24	-100	0.00	0.0	4.80	0.00	0	0	0	60	
835	NODE1584	ABC	098-#3/0 A	7.32Y	121.9	0.01	4.06	4.72	2	103	-8	-100	0.01	0.0	5.10	0.30	66	-5	14	20	
823	835	ABC	098-#3/0 A	7.32Y	121.9	0.01	4.07	1.69	1	37	-3	-100	0.00	0.0	5.40	0.30	0	0	0	6	
662	823	A	110-#4 ACS	7.31Y	121.9	0.08	4.15	5.06	4	37	-3	-100	0.02	0.0	6.20	0.60	37	-3	6	6	
803	NODE1584	A	110-#4 ACS	7.26Y	120.9	1.02	5.07	27.24	19	199	-15	-100	1.17	0.6	6.70	1.90	198	-16	40	40	
OCR-612	611	ABC	061-50-4H	7.34Y	122.3	0.00	3.74	21.33	43	468	-36	-100	0.00	0.0	4.20	0.00	0	0	0	101	
612	OCR-612	ABC	102-#1/0 A	7.30Y	121.7	0.51	4.25	21.33	9	468	-36	-100	1.41	0.3	7.70	3.50	466	-38	101	101	
645	6010	ABC	098-#3/0 A	7.41Y	123.5	0.10	2.54	46.03	15	980	-297	-96	1.27	0.1	3.10	0.40	400	-32	100	227	
709	645	ABC	098-#3/0 A	7.41Y	123.5	-0.02	2.52	16.48	5	254	-264	-69	0.27	0.1	3.60	0.50	38	-3	12	47	
6004	709	ABC	Capacitor	7.41Y	123.5	0.00	2.52	15.22	226	215	-261	-64	0.00	0.0	3.60	0.00	0	0	0	35	
OCR-714	6004	A	011-70-L O	7.41Y	123.5	0.00	2.52	11.46	16	65	-7	-100	0.00	0.0	3.60	0.00	0	0	0	34	
714	OCR-714	A	110-#4 ACS	7.39Y	123.2	0.25	2.77	11.46	8	65	-7	-100	0.12	0.1	4.70	1.10	85	-7	34	34	
1468	6004	ABC	110-#4 ACS	7.41Y	123.5	0.01	2.54	6.52	5	130	63	90	0.01	0.0	3.69	0.09	130	63	1	1	
FUSE-646	645	A	084-40N FU	7.41Y	123.5	0.00	2.54	38.54	48	285	-22	-100	0.00	0.0	3.10	0.00	0	0	0	77	
646	FUSE-646	A	110-#4 ACS	7.33Y	122.2	1.29	3.83	38.54	28	285	-22	-100	2.09	0.7	4.80	1.70	283	-23	77	77	
1470	645	ABC	110-#4 ACS	7.41Y	123.5	0.00	2.54	1.96	1	40	19	90	0.00	0.0	3.19	0.09	40	19	3	3	
----- Feeder NO. 7 Beginning with Node Element 8097 -----																					
8097	9009	ABC	Node	7.56Y	126.0	0.00	0.00	23.01	0	519	55	99	0.00	0.0	0.00	0.00	0	0	0	174	
OCR-8097	8097	ABC	203-400-10	7.56Y	126.0	0.00	0.00	23.01	6	519	55	99	0.00	0.0	0.00	0.00	0	0	0	174	
600	OCR-8097	ABC	098-#3/0 A	7.53Y	125.4	0.56	0.56	23.01	6	519	55	99	2.07	0.4	1.80	1.60	0	0	0	174	
601	600	ABC	098-#3/0 A	7.51Y	125.1	0.31	0.87	23.01	6	517	53	99	0.79	0.2	3.80	2.00	504	50	170	174	
602	601	ABC	098-#3/0 A	7.51Y	125.1	0.00	0.87	0.53	0	12	1	100	0.00	0.0	4.80	1.00	12	1	4	4	
7091	9009	ABC	Node	7.56Y	126.0	0.00	0.00	295.14	4372	6552	1371	98	0.00	0.0	0.00	0.00	0	0	0	2001	
8091	7091	ABC	118-400-17	7.56Y	126.0	0.00	0.00	267.74	72	6380	1373	98	0.00	0.0	0.00	0.00	0	0	0	1965	
----- Feeder NO. 1 Beginning with Node Element 8091 -----																					
8091	OCR-8091	ABC	Node	7.56Y	126.0	0.00	0.00	267.74	4263	6380	1373	98	0.00	0.0	0.00	0.00	0	0	0	1965	
C 579	8091	ABC	098-#3/0 A	7.40Y	123.3	2.68	2.68	267.74	96	6380	1373	98	108.96	1.7	0.70	0.70	1034	231	78	1965	
C 580	579	ABC	098-#3/0 A	7.33Y	122.2	1.16	3.85	240.36	60	5237	1020	96	41.63	0.8	1.04	0.34	116	17	9	1887	

Balanced Voltage Drop Report
Source: 9009

Database: C:\MILSOFT\DATA\NOLIN\JAN_EXIT03GROWTHOLDLOWVOLTAGE\ITHCHG
Title: 2003-2005 Work Plan (Substation growth without changes)
Case: NOLIN RECC

Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Units Displayed In Volts				Thru KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	Element		
							-Base Accum Drop	Thru Amps	% Cap	Thru KW								KW	KVAR	Cons On
	560	ABC	098-#3/0 A	7.17Y	119.5	2.64	6.49	235.06	78	5079	956	98	93.26	1.8	1.84	0.80	182	-15	33	1878
	581	ABC	098-#3/0 A	7.10Y	118.4	1.14	7.63	184.58	62	3945	450	99	33.88	0.9	2.30	0.46	15	-1	4	1843
841	846	ABC	098-#3/0 A	7.09Y	118.1	0.28	7.91	183.87	61	3896	414	99	8.29	0.2	2.41	0.11	23	-2	13	1839
OCR-842	841	A	011-70-L O	7.09Y	118.1	0.00	7.91	14.33	20	101	-8	-100	0.00	0.0	2.41	0.00	0	0	0	45
842	OCR-842	A	110-#4 ACS	7.08Y	118.1	0.04	7.95	14.33	10	101	-8	-100	0.03	0.0	2.56	0.15	101	-8	45	45
L 694	841	ABC	098-#3/0 A	7.02Y	116.9	1.17	9.07	174.92	58	3694	420	99	32.70	0.9	2.91	0.50	68	-4	31	1714 L
L OCR-695	694	ABC	011-70-L O	7.02Y	116.9	0.00	9.07	37.36	53	784	-62	-100	0.00	0.0	2.91	0.00	0	0	0	684 L
L 695	OCR-695	ABC	110-#4 ACS	7.01Y	116.8	0.17	9.24	37.36	27	784	-62	-100	1.01	0.1	3.06	0.15	285	-23	254	684 L
L 808	695	A	110-#4 ACS	7.00Y	116.7	0.03	9.27	11.26	8	79	-6	-100	0.02	0.0	3.21	0.15	79	-6	21	21 L
L 807	695	ABC	110-#4 ACS	7.00Y	116.7	0.04	9.27	20.02	14	419	-34	-100	0.13	0.0	3.11	0.05	9	-1	22	409 L
L 809	807	A	110-#4 ACS	7.00Y	116.7	0.02	9.29	5.31	4	37	-3	-100	0.00	0.0	3.27	0.16	37	-3	19	19 L
L 810	807	A	110-#4 ACS	7.00Y	116.7	0.00	9.28	2.05	1	14	-1	-100	0.00	0.0	3.21	0.10	14	-1	72	72 L
L 811	807	ABC	110-#4 ACS	7.00Y	116.7	0.04	9.32	17.12	12	359	-29	-100	0.14	0.0	3.18	0.07	0	0	0	296 L
L 812	811	A	110-#4 ACS	7.00Y	116.7	0.02	9.34	7.05	5	49	-4	-100	0.01	0.0	3.32	0.14	49	-4	18	18 L
L 813	811	A	110-#4 ACS	7.00Y	116.7	0.00	9.32	1.45	1	10	-1	-100	0.00	0.0	3.29	0.11	10	-1	58	58 L
L 814	811	ABC	110-#4 ACS	7.00Y	116.7	0.03	9.35	14.29	10	299	-24	-100	0.06	0.0	3.25	0.06	102	-8	57	220 L
L 819	814	A	110-#4 ACS	7.00Y	116.6	0.03	9.37	6.54	5	46	-4	-100	0.01	0.0	3.48	0.23	46	-4	23	23 L
L 821	814	A	110-#4 ACS	7.00Y	116.6	0.01	9.35	4.27	3	30	-2	-100	0.00	0.0	3.31	0.06	30	-2	17	17 L
L 836	814	ABC	110-#4 ACS	7.00Y	116.6	0.01	9.36	5.80	4	121	-10	-100	0.02	0.0	3.32	0.07	0	0	0	123 L
L 839	836	ABC	110-#4 ACS	7.00Y	116.6	0.00	9.36	0.00	0	0	0	0	0.00	0.0	3.39	0.07	0	0	0	0 L
L 838	836	A	110-#4 ACS	7.00Y	116.6	0.03	9.39	10.57	8	74	-6	-100	0.01	0.0	3.44	0.12	74	-6	99	99 L
L 837	836	A	110-#4 ACS	7.00Y	116.6	0.01	9.37	6.82	5	48	-4	-100	0.00	0.0	3.43	0.11	48	-4	24	24 L
L 586	694	ABC	098-#3/0 A	6.99Y	116.5	0.38	9.45	135.22	45	2810	450	99	7.92	0.3	3.11	0.20	0	0	6	999 L
L 659	586	ABC	098-#3/0 A	6.98Y	116.3	0.27	9.72	127.52	43	2650	367	99	4.39	0.2	3.34	0.23	1586	439	712	984 L
L CAP1717	659	ABC	Capacitor	6.98Y	116.3	0.00	9.72	-13.46	0	0	-282	0	0.00	0.0	3.34	0.00	0	0	0	0 L
-911	659	ABC	061-50-4H	6.98Y	116.3	0.00	9.72	0.00	0	0	0	0	0.00	0.0	3.34	0.00	0	0	0	0 L
-	OCR-911	B	110-#4 ACS	6.98Y	116.3	0.00	9.72	0.00	0	0	0	0	0.00	0.0	3.49	0.15	0	0	0	0 L
L OCR-912	659	ABC	086-65N FU	6.98Y	116.3	0.00	9.72	0.00	0	0	0	0	0.00	0.0	3.34	0.00	0	0	0	0 L
L 912	OCR-912	ABC	098-#3/0 A	6.98Y	116.3	0.00	9.72	0.00	0	0	0	0	0.00	0.0	3.67	0.33	0	0	0	0 L
L 908	659	ABC	098-#3/0 A	6.97Y	116.2	0.05	9.77	51.54	17	1059	205	98	0.40	0.0	3.41	0.07	0	0	0	272 L
L 1435	908	ABC	110-#4 ACS	6.97Y	116.2	0.05	9.82	25.51	18	480	233	90	0.14	0.0	3.51	0.09	480	233	5	5 L
L OCR-632	908	A	061-50-4H	6.97Y	116.2	0.00	9.77	24.45	49	170	-13	-100	0.00	0.0	3.41	0.00	0	0	0	163 L
L 632	OCR-632	A	110-#4 ACS	6.94Y	115.6	0.59	10.36	24.45	17	170	-13	-100	0.77	0.5	4.21	0.80	78	-6	52	163 L
L 769	632	A	110-#4 ACS	6.93Y	115.5	0.11	10.47	13.14	9	91	-7	-100	0.06	0.1	4.64	0.42	91	-7	111	111 L
L OCR-677	908	ABC	061-50-4H	6.97Y	116.2	0.00	9.77	19.53	39	408	-15	-100	0.00	0.0	3.41	0.00	0	0	0	104 L
L 677	OCR-677	ABC	110-#4 ACS	6.97Y	116.1	0.13	9.90	19.53	14	408	-15	-100	0.30	0.1	3.76	0.35	408	-15	104	104 L
L 6091	586	ABC	Node	6.99Y	116.5	0.00	9.45	8.07	120	152	74	90	0.00	0.0	3.11	0.00	0	0	0	9 L
L 1430	6091	ABC	110-#4 ACS	6.99Y	116.5	0.01	9.46	6.75	5	127	62	90	0.01	0.0	3.21	0.09	127	62	6	6 L
L 1452	6091	ABC	110-#4 ACS	6.99Y	116.5	0.00	9.45	0.00	0	0	0	0	0.00	0.0	3.21	0.09	0	0	2	2 L
L 1467	6091	ABC	110-#4 ACS	6.99Y	116.5	0.00	9.45	1.32	1	25	12	90	0.00	0.0	3.21	0.09	25	12	1	1 L
OCR-840	841	A	062-70-4H	7.09Y	118.1	0.00	7.91	9.70	14	69	-6	-100	0.00	0.0	2.41	0.00	0	0	0	67
840	OCR-840	A	110-#4 ACS	7.08Y	118.0	0.06	7.96	9.70	7	69	-6	-100	0.02	0.0	2.71	0.30	69	-6	67	67
1401	581	ABC	110-#4 ACS	7.17Y	119.4	0.08	6.57	44.34	32	858	416	90	0.42	0.0	1.93	0.09	858	416	2	2
OCR-8092	7091	ABC	118-400-17	7.56Y	126.0	0.00	0.00	7.58	2	172	-2	-100	0.00	0.0	0.00	0.00	0	0	0	36
----- Feeder NO. 2 Beginning with Node Element 8092 -----																				
8092	OCR-8092	ABC	Node	7.56Y	126.0	0.00	0.00	7.58	112	172	-2	-100	0.00	0.0	0.00	0.00	0	0	0	36
618	8092	ABC	098-#3/0 A	7.56Y	125.9	0.07	0.07	7.58	3	172	-2	-100	0.06	0.0	1.50	1.50	172	-2	36	36
OCR-6093	7091	ABC	208-400-14	7.56Y	126.0	0.00	0.00	0.00	0	0	0	0	0.00	0.0	0.00	0.00	0	0	0	0
----- Feeder NO. 3 Beginning with Node Element 8093 -----																				
8093	OCR-6093	ABC	Node	7.56Y	126.0	0.00	0.00	0.00	0	0	0	0	0.00	0.0	0.00	0.00	0	0	0	0

	Load	Adjustment	Capacitance	Charging	Gen&Motors	Loops&Metas	Losses	No Load	Losses	Total	Lowest Voltage = 115.53 on Element 769	
KW	13597	0	0	0	0	0	632	0.00	14229			
KVAR	899	0	-1235	0	0	0	1031		694			

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

Database: C:\MILSOFT\DATA\NOLIN\JAN_EXIT03GROWTHOLDLLC.WITHCHG
Title: 2003-2005 Work Plan (Substation growth without changes)
Case: NOLIN RECC

Element Name	Parent Name	Cnf	Type/ Conductor	Pri KV	Base Volt	Element Drop	Units Displayed In Volts				KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	Element			
							-Base Accum Drop	Thru Amps	% Cap	Thru KW							KW	KVAR	Cons On	Cons Thru
9		ABC	SRC-9010-J	7.56Y	126.0	0.00	0.00	514.01	0	11500	1913	99	0.00	0.0	0.00	0.00	0	0	0	4539
----- Feeder NO. 1 Beginning with Node Element 7101 -----																				
7101	9010	ABC	Node	7.56Y	126.0	0.00	0.00	428.64	6350	9593	1576	99	0.00	0.0	0.00	0.00	0	0	0	4039
OCR-8101	7101	ABC	118-400-17	7.56Y	126.0	0.00	0.00	195.49	49	4428	219	100	0.00	0.0	0.00	0.00	0	0	0	1587
----- Feeder NO. 1 Beginning with Node Element 8101 -----																				
8101	OCR-8101	ABC	Node	7.56Y	126.0	0.00	0.00	195.49	2696	4428	219	100	0.00	0.0	0.00	0.00	0	0	0	1587
819	8101	ABC	098-#3/0 A	7.50Y	124.9	1.05	1.05	195.49	65	4428	219	100	34.69	0.8	0.44	0.44	248	57	77	1587
701	619	ABC	110-#4 ACS	7.50Y	124.9	0.02	1.08	4.90	3	107	25	97	0.01	0.0	0.69	0.25	107	25	23	23
700	619	ABC	098-#3/0 A	7.48Y	124.3	0.64	1.70	179.60	60	4038	98	100	20.07	0.5	0.74	0.30	200	46	51	1487
620	700	ABC	098-#3/0 A	7.39Y	123.2	1.07	2.77	170.65	57	3816	30	100	32.20	0.6	1.29	0.55	323	74	91	1436
6014	620	ABC	Capacitor	7.39Y	123.2	0.00	2.77	156.17	2314	3463	-51	-100	0.00	0.0	1.29	0.00	0	0	0	1345
676	6014	ABC	098-#3/0 A	7.39Y	123.1	0.12	2.69	113.35	38	2493	327	99	2.23	0.1	1.37	0.08	0	0	0	1008
635	676	ABC	098-#3/0 A	7.36Y	123.0	0.11	3.00	113.35	38	2491	325	99	1.95	0.1	1.44	0.07	0	0	0	1008
OCR-676	635	ABC	013-140-L	7.38Y	123.0	0.00	3.00	76.20	54	1652	136	100	0.00	0.0	1.44	0.00	0	0	0	842
678	OCR-676	ABC	098-#3/0 A	7.37Y	122.9	0.10	3.11	76.20	25	1682	136	100	1.29	0.1	1.55	0.11	132	30	34	842
623	678	ABC	098-#3/0 A	7.37Y	122.8	0.06	3.17	48.77	16	1079	-4	-100	0.56	0.1	1.66	0.11	7	2	2	651
OCR-738	623	ABC	011-70-L O	7.37Y	122.8	0.00	3.17	21.72	31	429	-216	-89	0.00	0.0	1.66	0.00	0	0	0	326
738	OCR-738	ABC	098-#3/0 A	7.37Y	122.8	0.01	3.18	21.72	7	429	-216	-89	0.15	0.0	1.88	0.22	223	51	236	326
6007	738	ABC	Capacitor	7.37Y	122.8	0.00	3.18	15.25	226	206	-267	-61	0.00	0.0	1.88	0.00	0	0	0	90
625	6007	ABC	098-#3/0 A	7.37Y	122.8	0.01	3.19	9.56	3	206	47	97	0.01	0.0	2.05	0.17	206	47	90	90
OCR-874	623	ABC	011-70-L O	7.37Y	122.8	0.00	3.17	30.54	44	642	209	95	0.00	0.0	1.66	0.00	0	0	0	323
874	OCR-874	ABC	098-#3/0 A	7.37Y	122.8	0.05	3.22	30.54	10	642	209	95	0.20	0.0	1.76	0.10	0	0	0	323
622	874	ABC	098-#3/0 A	7.36Y	122.6	0.19	3.41	30.54	10	642	209	95	0.65	0.1	2.34	0.58	414	98	310	322
1441	622	ABC	110-#4 ACS	7.35Y	122.6	0.02	3.43	10.29	7	204	99	90	0.02	0.0	2.43	0.09	204	99	7	7
1477	622	ABC	110-#4 ACS	7.36Y	122.6	0.00	3.41	1.14	1	23	11	90	0.00	0.0	2.43	0.09	23	11	5	5
	874	ABC	102-#1/0 A	7.37Y	122.8	0.00	3.22	0.00	0	0	0	0	0.00	0.0	2.14	0.38	0	0	0	1
3	875	ABC	110-#4 ACS	7.37Y	122.8	0.00	3.22	0.00	0	0	0	0	0.00	0.0	2.23	0.09	0	0	1	1
624	676	A	110-#4 ACS	7.33Y	122.1	0.75	3.85	65.37	47	470	108	97	1.77	0.4	2.05	0.50	468	107	157	157
OCR-902	635	C	012-100-L	7.38Y	123.0	0.00	3.00	112.29	112	807	187	97	0.00	0.0	1.44	0.00	0	0	0	166
C 902	OCR-902	C	110-#4 ACS	7.30Y	121.6	1.36	4.36	112.29	80	807	187	97	5.53	0.7	1.97	0.53	802	184	166	166 C
634	6014	ABC	098-#3/0 A	7.38Y	123.1	0.18	2.95	44.90	15	970	225	97	1.14	0.1	1.57	0.28	83	19	73	337
637	634	ABC	098-#3/0 A	7.37Y	122.9	0.16	3.11	27.92	9	603	139	97	0.45	0.1	2.37	0.80	602	138	170	170
OCR-621	634	B	011-70-L O	7.38Y	123.1	0.00	2.95	39.40	56	283	66	97	0.00	0.0	1.57	0.00	0	0	0	94
621	OCR-621	B	110-#4 ACS	7.35Y	122.4	0.61	3.56	39.40	28	283	66	97	1.31	0.5	1.91	0.34	0	0	5	94
636	621	B	110-#4 ACS	7.31Y	121.8	0.67	4.23	36.03	27	272	63	97	0.92	0.3	2.68	0.77	271	62	80	80
643	621	B	110-#4 ACS	7.35Y	122.4	0.01	3.57	1.33	1	10	2	98	0.00	0.0	2.18	0.27	10	2	9	9
OCR-8102	7101	ABC	118-400-17	7.56Y	126.0	0.00	0.00	124.20	31	2743	642	97	0.00	0.0	0.00	0.00	0	0	0	594
----- Feeder NO. 2 Beginning with Node Element 8102 -----																				
8102	OCR-8102	ABC	Node	7.56Y	126.0	0.00	0.00	124.20	1840	2743	642	97	0.00	0.0	0.00	0.00	0	0	0	594
803	8102	ABC	090-336 AC	7.55Y	125.8	0.22	0.22	124.20	23	2743	642	97	3.22	0.1	0.27	0.27	245	56	39	594
742	803	ABC	090-336 AC	7.54Y	125.7	0.05	0.27	100.19	19	2210	513	97	0.62	0.0	0.35	0.08	62	14	17	501
743	742	ABC	102-#1/0 A	7.54Y	125.7	0.00	0.28	3.75	2	83	19	97	0.00	0.0	0.44	0.09	83	19	19	19
761	742	ABC	090-336 AC	7.54Y	125.7	0.02	0.30	93.64	18	2064	479	97	0.28	0.0	0.36	0.04	0	0	0	465
744	761	ABC	090-336 AC	7.54Y	125.6	0.09	0.39	86.74	16	1912	443	97	0.94	0.0	0.53	0.15	21	5	6	430
745	744	ABC	102-#1/0 A	7.53Y	125.6	0.06	0.45	37.54	16	827	192	97	0.33	0.0	0.62	0.09	27	6	12	169
746	745	ABC	102-#1/0 A	7.52Y	125.4	0.15	0.60	32.43	14	714	165	97	0.72	0.1	0.89	0.27	43	10	11	146
747	746	ABC	102-#1/0 A	7.52Y	125.3	0.06	0.65	28.30	12	623	143	97	0.23	0.0	1.02	0.12	105	24	20	124
770	747	A	110-#4 ACS	7.49Y	124.9	0.45	1.10	70.64	50	518	119	97	1.16	0.2	1.30	0.26	517	116	104	104
749	746	A	110-#4 ACS	7.52Y	125.4	0.04	0.64	6.57	5	46	12	97	0.01	0.0	1.17	0.26	46	12	11	11
750	745	A	110-#4 ACS	7.53Y	125.5	0.04	0.48	11.73	8	86	20	97	0.02	0.0	0.76	0.14	86	20	11	11
	744	ABC	090-336 AC	7.54Y	125.6	0.01	0.40	48.26	9	1063	244	97	0.08	0.0	0.57	0.04	19	4	3	255
	752	ABC	090-336 AC	7.53Y	125.6	0.02	0.42	11.00	2	242	56	97	0.02	0.0	0.64	0.27	66	16	16	105
768	753	ABC	098-#3/0 A	7.53Y	125.6	0.02	0.44	7.90	3	174	40	97	0.02	0.0	1.10	0.26	66	15	19	89
796	768	ABC	098-#3/0 A	7.53Y	125.6	0.01	0.45	2.46	1	54	10	98	0.00	0.0	1.27	0.17	13	3	13	38
804	796	ABC	098-#3/0 A	7.53Y	125.6	0.00	0.45	0.00	0	0	0	0	0.00	0.0	1.37	0.10	0	0	0	0

Database: C:\MILSOFT\DATA\NOLIN\JAN_EXIT03GROWTHOLDLC .THCHG
Title: 2003-2005 Work Plan (Substation growth without changes)
Case: NOLIN RECC

Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Units Displayed In Volts					KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	Element			
							-Base Accum Drop	Thru Amps	% Cap	Thru KW	Thru KVAR							Thru Cons On	Thru Cons Thru		
793	796	A	011-70-L O	7.53Y	125.6	0.00	0.45	5.57	8	41	9	98	0.00	0.0	1.27	0.00	0	0	0	25	
	OCR-793	A	110-#4 ACS	7.53Y	125.5	0.02	0.47	5.57	4	41	9	96	0.01	0.0	1.35	0.08	0	0	0	25	
773	793	A	110-#4 ACS	7.53Y	125.5	0.03	0.50	5.57	4	41	9	98	0.01	0.0	1.60	0.25	41	9	25	25	
794	768	A	110-#4 ACS	7.53Y	125.5	0.04	0.49	7.32	5	54	12	98	0.01	0.0	1.36	0.26	54	12	32	32	
754	752	ABC	090-336 AC	7.54Y	125.6	0.01	0.41	27.16	5	596	137	97	0.04	0.0	0.64	0.07	18	4	6	106	
771	754	ABC	090-336 AC	7.53Y	125.6	0.01	0.42	22.42	4	494	113	97	0.03	0.0	0.71	0.07	76	17	10	88	
755	771	ABC	110-#4 ACS	7.53Y	125.6	0.01	0.44	3.85	3	85	19	98	0.01	0.0	0.87	0.15	85	19	11	11	
756	771	ABC	098-#3/0 A	7.53Y	125.6	0.02	0.44	10.00	3	220	51	97	0.01	0.0	0.92	0.20	220	51	52	52	
765	771	A	110-#4 ACS	7.53Y	125.5	0.03	0.46	15.33	11	113	26	97	0.02	0.0	0.80	0.09	113	26	15	15	
772	754	A	110-#4 ACS	7.53Y	125.6	0.02	0.44	11.70	8	66	20	97	0.01	0.0	0.72	0.08	86	20	12	12	
741	752	A	110-#4 ACS	7.52Y	125.4	0.19	0.59	27.72	20	204	47	97	0.19	0.1	0.87	0.30	203	47	41	41	
746	761	A	110-#4 ACS	7.54Y	125.6	0.11	0.41	20.69	15	152	35	97	0.08	0.1	0.62	0.24	152	35	35	35	
751	803	A	110-#4 ACS	7.53Y	125.6	0.21	0.43	38.75	26	285	65	97	0.30	0.1	0.51	0.24	285	65	54	54	
OCR-8103	7101	ABC	213-400-17	7.56Y	126.0	0.00	0.00	111.34	28	2422	715	96	0.00	0.0	0.00	0.00	0	0	0	1858	
----- Feeder NO. 3 Beginning with Node Element 8103 -----																					
8103	OCR-8103	ABC	Node	7.56Y	126.0	0.00	0.00	111.34	1650	2422	715	96	0.00	0.0	0.00	0.00	0	0	0	1858	
696	8103	ABC	090-336 AC	7.55Y	125.9	0.09	0.09	111.34	21	2422	715	96	1.11	0.0	0.11	0.11	65	15	13	1858	
824	696	ABC	090-336 AC	7.54Y	125.7	0.18	0.27	108.40	20	2356	698	96	2.13	0.1	0.33	0.22	40	9	4	1845	
652	824	ABC	090-336 AC	7.54Y	125.6	0.11	0.37	96.20	18	2084	631	96	1.01	0.0	0.51	0.18	679	277	469	1811	
712	652	ABC	090-336 AC	7.54Y	125.6	0.03	0.40	35.86	7	790	183	97	0.11	0.0	0.62	0.11	104	24	109	1268	
686	712	ABC	090-336 AC	7.54Y	125.6	0.01	0.40	18.39	3	405	94	97	0.01	0.0	0.67	0.05	0	0	4	538	
686	686	A	110-#4 ACS	7.53Y	125.6	0.04	0.45	19.45	14	143	33	97	0.03	0.0	0.77	0.10	143	33	366	366	
689	686	ABC	090-336 AC	7.53Y	125.5	0.06	0.46	11.91	2	262	62	97	0.07	0.0	1.57	0.90	120	29	28	168	
720	689	ABC	090-336 AC	7.53Y	125.5	0.00	0.47	6.46	1	142	33	97	0.00	0.0	1.68	0.11	47	11	74	140	
806	720	ABC	090-336 AC	7.53Y	125.5	0.00	0.47	1.27	0	28	6	98	0.00	0.0	1.73	0.05	28	6	9	9	
	720	ABC	090-336 AC	7.53Y	125.5	0.00	0.47	0.17	0	4	1	97	0.00	0.0	1.76	0.08	4	1	24	24	
	720	A	110-#4 ACS	7.53Y	125.5	0.06	0.53	8.62	6	63	15	97	0.02	0.0	1.98	0.30	63	15	33	33	
687	712	A	110-#4 ACS	7.53Y	125.4	0.16	0.56	38.24	27	281	65	97	0.22	0.1	0.80	0.18	281	64	621	621	
711	652	ABC	110-#4 ACS	7.53Y	125.5	0.14	0.51	22.97	16	506	116	97	0.35	0.1	0.81	0.30	506	116	71	71	
----- Feeder NO. 3 Beginning with Node Element 6101 -----																					
6101	652	ABC	Node	7.54Y	125.6	0.00	0.37	5.26	76	107	52	90	0.00	0.0	0.51	0.00	0	0	0	3	
1445	6101	ABC	110-#4 ACS	7.54Y	125.6	0.01	0.38	5.26	4	107	52	90	0.01	0.0	0.60	0.09	107	52	3	3	
1451	6101	ABC	110-#4 ACS	7.54Y	125.6	0.00	0.37	0.00	0	0	0	0	0.00	0.0	0.60	0.09	0	0	0	0	
825	824	A	110-#4 ACS	7.54Y	125.6	0.13	0.40	31.30	22	230	53	97	0.15	0.1	0.51	0.18	230	53	30	30	
OCR-8104	9010	ABC	208-400-14	7.56Y	126.0	0.00	0.00	0.00	0	0	0	0	0.00	0.0	0.00	0.00	0	0	0	0	
OCR-8105	9010	ABC	208-400-14	7.56Y	126.0	0.00	0.00	65.37	21	1907	337	98	0.00	0.0	0.00	0.00	0	0	0	500	
----- Feeder NO. 5 Beginning with Node Element 8105 -----																					
8105	OCR-8105	ABC	Node	7.56Y	126.0	0.00	0.00	65.37	1265	1907	337	98	0.00	0.0	0.00	0.00	0	0	0	500	
763	8105	ABC	090-336 AC	7.53Y	125.5	0.55	0.55	65.37	16	1907	337	98	6.08	0.3	1.00	1.00	1	0	1	500	
868	763	ABC	098-#3/0 A	7.52Y	125.3	0.15	0.69	71.55	24	1596	253	99	1.63	0.1	1.15	0.15	34	8	15	392	
OCR-639	868	ABC	012-100-L	7.52Y	125.3	0.00	0.69	26.07	26	586	16	100	0.00	0.0	1.15	0.00	0	0	0	119	
639	OCR-639	ABC	098-#3/0 A	7.50Y	124.9	0.37	1.06	26.07	9	566	16	100	1.65	0.3	2.35	1.20	45	10	16	119	
644	639	ABC	098-#3/0 A	7.49Y	124.8	0.09	1.16	24.05	6	541	4	100	0.32	0.1	2.85	0.50	364	17	56	103	
641	644	ABC	098-#3/0 A	7.49Y	124.8	0.04	1.20	7.67	3	176	-14	-100	0.06	0.0	3.35	0.50	12	-1	4	45	
OCR-640	641	C	061-50-4H	7.49Y	124.8	0.00	1.20	21.99	44	164	-13	-100	0.00	0.0	3.35	0.00	0	0	0	41	
640	OCR-640	C	110-#4 ACS	7.46Y	124.4	0.39	1.59	21.99	16	164	-13	-100	0.36	0.2	4.25	0.90	164	-13	41	41	
OCR-764	868	ABC	011-70-L O	7.52Y	125.3	0.00	0.69	44.27	63	972	227	97	0.00	0.0	1.15	0.00	0	0	0	258	
764	OCR-764	ABC	098-#3/0 A	7.52Y	125.3	0.05	0.75	44.27	16	972	227	97	0.32	0.0	1.23	0.08	60	14	9	258	
642	764	ABC	098-#3/0 A	7.45Y	124.2	1.07	1.82	41.54	14	912	213	97	4.37	0.5	4.73	3.50	908	208	249	249	
636	763	ABC	098-#3/0 A	7.52Y	125.4	0.05	0.60	13.60	5	304	70	97	0.07	0.0	1.52	0.52	304	70	107	107	

	Load	Adjustment	Capacitance	Charging	GenMotors	Loops&Metas	Losses	No Load	Losses	Total	
KW	11365	0	0	0	0	0	134				Lowest Voltage = 121.64 on Element 902
KVAR	2698	0	-947	0	0	0	162	0.00	11500	1913	

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

Database: C:\MILSOFT\DATA\NOLIN\JAN EXIT03GROWTHOLDL THCHG
Title: 2003-2005 Work Plan (SubStation growth without changes)
Case: NCLIN RECC

Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Units Displayed In Volts										-----Element-----			
							-Base Voltage:120.0-	Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	PF	kW Loss	% Loss	mi From Src	Length (mi)	KW	KVAR	Cons On
9011		ABC	SRC-9011-j	7.56Y	126.0	0.00	0.00	355.24	0	7769	2133	96	0.00	0.0	0.00	0.00	0	0	0	3591
	9011	ABC	Node	7.56Y	126.0	0.00	0.00	267.30	3960	5896	1412	97	0.00	0.0	0.00	0.00	0	0	0	2728
OCR-8111	7111	ABC	205-400-10	7.56Y	126.0	0.00	0.00	186.78	47	4147	1065	97	0.00	0.0	0.00	0.00	0	0	0	356
----- Feeder NO. 1 Beginning with Node Element 8111 -----																				
8111	OCR-8111	ABC	Node	7.56Y	126.0	0.00	0.00	186.78	2797	4147	1065	97	0.00	0.0	0.00	0.00	0	0	0	356
672	8111	ABC	090-336 AC	7.53Y	125.5	0.54	0.54	188.78	36	4147	1065	97	11.88	0.3	0.40	0.40	2	0	1	356
465	672	ABC	090-336 AC	7.51Y	125.2	0.27	0.81	188.70	36	4133	1038	97	5.93	0.1	0.60	0.20	0	0	2	355
6003	465	ABC	Capacitor	7.51Y	125.2	0.00	0.81	188.70	2796	4127	1024	97	0.00	0.0	0.60	0.00	0	0	0	353
879	6003	ABC	090-336 AC	7.50Y	124.9	0.25	1.05	197.69	37	4127	1677	93	4.89	0.1	0.75	0.15	0	0	1	353
880	879	ABC	098-#3/0 A	7.49Y	124.8	0.17	1.22	29.10	10	589	266	90	0.49	0.1	1.30	0.55	423	205	14	21
1453	880	ABC	110-#4 ACS	7.49Y	124.8	0.01	1.24	6.49	5	131	64	90	0.01	0.0	1.39	0.09	131	64	6	6
1454	880	ABC	110-#4 ACS	7.49Y	124.8	0.00	1.22	0.00	0	0	0	0	0.00	0.0	1.39	0.09	0	0	0	0
1455	880	ABC	110-#4 ACS	7.49Y	124.8	0.00	1.23	1.71	1	35	17	90	0.00	0.0	1.39	0.09	35	17	1	1
OCR-777	879	ABC	220-340-12	7.50Y	124.9	0.00	1.05	188.67	30	3533	1380	93	0.00	0.0	0.75	0.00	0	0	0	331
777	OCR-777	ABC	090-336 AC	7.48Y	124.7	0.22	1.27	168.67	32	3533	1380	93	3.57	0.1	0.93	0.18	677	328	20	331
767	777	ABC	110-#4 ACS	7.45Y	124.2	0.56	1.84	82.75	59	1782	526	96	7.62	0.4	1.11	0.18	163	78	25	307
OCR-575	767	ABC	012-100-L	7.45Y	124.2	0.00	1.84	63.34	63	1376	331	97	0.00	0.0	1.11	0.00	0	0	0	264
575	OCR-575	ABC	106-#2 ACS	7.40Y	123.3	0.83	2.67	63.34	35	1376	331	97	5.66	0.4	2.11	1.00	1371	328	264	264
1475	575	ABC	110-#4 ACS	7.40Y	123.3	0.00	2.67	0.00	0	0	0	0	0.00	0.0	2.20	0.09	0	0	0	0
6111	767	ABC	Node	7.45Y	124.2	0.00	1.84	11.68	173	235	114	90	0.00	0.0	1.11	0.00	0	0	0	18
1421	6111	ABC	110-#4 ACS	7.45Y	124.1	0.02	1.86	11.68	8	235	114	90	0.03	0.0	1.20	0.09	235	114	18	18
6112	777	ABC	Node	7.48Y	124.7	0.00	1.27	53.01	785	1071	519	90	0.00	0.0	0.93	0.00	0	0	0	4
1409	6112	ABC	110-#4 ACS	7.46Y	124.7	0.06	1.34	33.52	24	677	328	90	0.24	0.0	1.02	0.09	677	328	3	3
1410	6112	ABC	110-#4 ACS	7.48Y	124.7	0.04	1.31	19.49	14	394	191	90	0.08	0.0	1.02	0.09	394	191	1	1
OCR-8112	7111	ABC	209-400-14	7.56Y	126.0	0.00	0.00	78.61	20	1749	347	98	0.00	0.0	0.00	0.00	0	0	0	2372
----- Feeder NO. 2 Beginning with Node Element 8112 -----																				
	OCR-8112	ABC	Node	7.56Y	126.0	0.00	0.00	78.61	1165	1749	347	98	0.00	0.0	0.00	0.00	0	0	0	2372
OH1571	8112	ABC	600-336.4	7.54Y	125.7	0.33	0.33	78.61	15	1749	347	98	3.40	0.2	0.60	0.60	0	0	0	2372
882	OH1571	ABC	090-336 AC	7.51Y	125.1	0.58	0.91	78.61	15	1746	339	98	5.52	0.3	1.80	1.20	228	47	149	2372
463	882	ABC	090-336 AC	7.50Y	124.9	0.17	1.08	68.31	13	1512	280	98	1.30	0.1	2.30	0.50	587	204	770	2223
OCR-456	463	ABC	011-70-L O	7.50Y	124.9	0.00	1.08	31.75	45	712	56	100	0.00	0.0	2.30	0.00	0	0	0	1156
456	OCR-456	ABC	106-#2 ACS	7.47Y	124.6	0.35	1.43	31.75	18	712	56	100	1.28	0.2	3.20	0.90	710	55	1156	1156
827	463	ABC	098-#3/0 A	7.49Y	124.9	0.01	1.08	9.47	3	212	16	100	0.01	0.0	2.40	0.10	212	16	297	257
883	882	ABC	098-#3/0 A	7.51Y	125.1	0.00	0.91	0.00	0	0	0	0	0.00	0.0	2.20	0.40	0	0	0	0
OCR-8113	7111	ABC	209-400-14	7.56Y	126.0	0.00	0.00	0.00	0	0	0	0	0.00	0.0	0.00	0.00	0	0	0	0
----- Feeder NO. 3 Beginning with Node Element 8113 -----																				
8113	OCR-8113	ABC	Node	7.56Y	126.0	0.00	0.00	0.00	0	0	0	0	0.00	0.0	0.00	0.00	0	0	0	0
OCR-8114	9011	ABC	203-400-10	7.56Y	126.0	0.00	0.00	88.52	22	1874	721	93	0.00	0.0	0.00	0.00	0	0	0	863
----- Feeder NO. 4 Beginning with Node Element 8114 -----																				
8114	OCR-8114	ABC	Node	7.56Y	126.0	0.00	0.00	88.52	1311	1874	721	93	0.00	0.0	0.00	0.00	0	0	0	863
779	8114	ABC	090-336 AC	7.53Y	125.6	0.43	0.43	88.52	17	1874	721	93	3.91	0.2	0.60	0.60	7	1	2	863
581	779	ABC	090-336 AC	7.53Y	125.5	0.11	0.54	88.21	17	1862	712	93	0.95	0.1	0.75	0.15	53	21	3	861
780	581	ABC	090-336 AC	7.52Y	125.4	0.06	0.60	85.70	16	1809	688	93	0.37	0.0	0.90	0.15	1586	600	842	859
778	780	ABC	098-#3/0 A	7.52Y	125.4	0.01	0.61	9.09	3	192	72	94	0.01	0.0	1.05	0.15	192	72	15	15
1432	780	ABC	110-#4 ACS	7.52Y	125.4	0.00	0.60	1.53	1	31	15	90	0.00	0.0	0.99	0.09	31	15	1	1

	Load	Adjustment	Capacitance	Charging	Gen&Motors	Loops&Metas	Losses	No Load	Losses	Total	
KW	7712	0	0	0	0	0	57				
KVAR	2683	0	-653	0	0	0	104	0.00	7769	2133	Lowest Voltage = 123.33 on Element 575

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

Database: C:\MILSOFT\DATA\NOLIN\JAN_EXIT03GROWTHOLDL ITHCHG
Title: 2003-2005 Work Plan (Substation growth without changes)
Case: NOLIN RECC

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
9012		ABC	SRC-9012-j	7.56Y	126.0	0.00	0.00	881.97	0	14708	3012	98	0.00	0.0	0.00	0.00	0	0	0 1832	
- 8125	9012	ABC	211-400-12	7.56Y	126.0	0.00	0.00	-0.38	0	0	-9	0	0.00	0.0	0.00	0.00	0	0	0 0	
----- Feeder NO. 5 Beginning with Node Element 8125 -----																				
8125	OCR-8125	ABC	Node	7.56Y	126.0	0.00	0.00	-0.38	0	0	-9	0	0.00	0.0	0.00	0.00	0	0	0 0	
1774	6125	ABC	090-336 AC	7.56Y	126.0	0.00	0.00	-0.38	0	0	-9	0	0.00	0.0	0.50	0.50	0	0	0 0	
UG1615	1774	ABC	004-4/OAL	7.56Y	126.0	0.00	0.00	-0.38	0	0	-9	0	0.00	0.0	0.81	0.31	0	0	0 0	
SW1616-B	UG1615	ABC	Open	7.56Y	126.0	0.00	0.00	0.00	0	0	0	0	0.00	0.0	0.81	0.00	0	0	0 0	
7121	9012	ABC	Node	7.56Y	126.0	0.00	0.00	512.12	7587	11224	2986	97	0.00	0.0	0.00	0.00	0	0	0 854	
OCR-8121	7121	ABC	211-400-12	7.56Y	126.0	0.00	0.00	16.38	4	368	53	99	0.00	0.0	0.00	0.00	0	0	0 182	
----- Feeder NO. 1 Beginning with Node Element 8121 -----																				
8121	OCR-8121	ABC	Node	7.56Y	126.0	0.00	0.00	16.38	243	368	53	99	0.00	0.0	0.00	0.00	0	0	0 182	
762	8121	ABC	090-336 AC	7.56Y	126.0	0.02	0.02	16.38	3	368	53	99	0.04	0.0	0.20	0.20	0	0	0 182	
477	762	ABC	110-#4 ACS	7.55Y	125.8	0.16	0.16	16.38	12	368	52	99	0.30	0.1	0.70	0.50	367	52	182 182	
OCR-8122	7121	ABC	210-560-12	7.56Y	126.0	0.00	0.00	173.37	31	3924	249	100	0.00	0.0	0.00	0.00	0	0	0 853	
----- Feeder NO. 2 Beginning with Node Element 8122 -----																				
8122	OCR-8122	ABC	Node	7.56Y	126.0	0.00	0.00	173.37	2588	3924	249	100	0.00	0.0	0.00	0.00	0	0	0 853	
478	8122	ABC	090-336 AC	7.44Y	124.0	1.98	1.98	173.37	33	3924	249	100	54.78	1.4	2.30	2.30	224	32	75 853	
554	478	ABC	090-336 AC	7.41Y	123.5	0.55	2.53	163.33	31	3645	90	100	15.56	0.4	3.00	0.70	3	0	3 578	
480	554	ABC	090-336 AC	7.39Y	123.2	0.24	2.77	139.69	26	3103	-97	-100	6.51	0.2	3.40	0.40	0	0	0 512	
6006	480	ABC	Capacitor	7.39Y	123.2	0.00	2.77	139.69	2069	3097	-112	-100	0.00	0.0	3.40	0.00	0	0	0 512	
OCR-481	6006	ABC	011-70-L O	7.39Y	123.2	0.00	2.77	25.37	36	556	86	99	0.00	0.0	3.40	0.00	0	0	0 195	
481	OCR-481	ABC	098-#3/O A	7.38Y	123.0	0.24	3.01	25.37	8	556	86	99	0.80	0.1	4.30	0.90	267	43	108 195	
OCR-405	481	A	006-35-H O	7.38Y	123.0	0.00	3.01	29.76	85	217	32	99	0.00	0.0	4.30	0.00	0	0	0 56	
405	OCR-405	A	110-#4 ACS	7.28Y	121.3	1.72	4.73	29.76	21	217	32	99	1.90	0.9	6.90	2.60	215	31	56 56	
410	481	ABC	090-336 AC	7.38Y	123.0	0.02	3.03	3.25	1	71	10	99	0.01	0.0	5.20	0.90	10	1	3 31	
410	410	ABC	090-336 AC	7.38Y	123.0	0.00	3.03	0.15	0	3	0	100	0.00	0.0	7.20	2.00	3	0	4 4	
409	410	A	083-30N FU	7.38Y	123.0	0.00	3.03	7.90	13	58	8	99	0.00	0.0	5.20	0.00	0	0	0 24	
409	FUSE-409	A	110-#4 ACS	7.36Y	122.7	0.25	3.27	7.90	6	58	8	99	0.07	0.1	6.60	1.40	58	8	24 24	
OCR-482	6006	ABC	012-100-L	7.39Y	123.2	0.00	2.77	116.19	116	2540	436	99	0.00	0.0	3.40	0.00	0	0	0 317	
482	OCR-482	ABC	098-#3/O A	7.30Y	121.7	1.51	4.28	116.19	39	2540	436	99	25.64	1.0	4.40	1.00	392	56	87 317	
733	482	ABC	098-#3/O A	7.25Y	120.6	0.94	5.22	96.21	33	2123	351	99	13.89	0.7	5.10	0.70	133	19	45 230	
OCR-483	733	ABC	006-35-H O	7.25Y	120.8	0.00	5.22	13.64	35	287	73	97	0.00	0.0	5.10	0.00	0	0	0 82	
483	OCR-483	ABC	106-#2 ACS	7.22Y	120.4	0.38	5.60	13.64	8	287	73	97	0.71	0.2	6.50	1.40	142	20	55 82	
1439	483	ABC	110-#4 ACS	7.22Y	120.4	0.01	5.61	4.81	3	98	36	94	0.00	0.0	6.59	0.09	98	36	2 2	
1450	483	ABC	110-#4 ACS	7.22Y	120.4	0.00	5.61	2.28	2	46	17	94	0.00	0.0	6.59	0.09	46	17	5 5	
484	733	ABC	098-#3/O A	7.19Y	119.9	0.93	6.14	49.23	16	1070	19	100	7.94	0.7	6.70	1.60	69	14	17 122	
485	484	ABC	098-#3/O A	7.17Y	119.5	0.32	6.47	46.05	15	993	-4	-100	2.68	0.3	7.30	0.60	34	5	10 105	
OCR-117	485	A	006-35-H O	7.17Y	119.5	0.00	6.47	17.09	49	121	16	99	0.00	0.0	7.30	0.00	0	0	0 43	
117	OCR-117	A	110-#4 ACS	7.06Y	117.6	1.92	8.38	17.09	12	121	18	99	1.48	1.2	10.80	3.50	67	10	23 43	
115	117	A	106-#2 ACS	7.06Y	117.6	0.03	8.41	4.61	3	32	5	99	0.00	0.0	11.20	0.40	32	5	9 9	
116	117	A	110-#4 ACS	7.05Y	117.5	0.08	8.46	2.97	2	21	3	99	0.01	0.0	12.00	1.20	21	3	11 11	
6039	485	ABC	Capacitor	7.17Y	119.5	0.00	6.47	38.88	576	836	-30	-100	0.00	0.0	7.30	0.00	0	0	0 52	
OCR-486	6039	ABC	060-35-4H	7.17Y	119.5	0.00	6.47	40.79	117	836	267	95	0.00	0.0	7.30	0.00	0	0	0 52	
486	OCR-486	ABC	098-#3/O A	7.11Y	118.4	1.08	7.55	40.79	14	836	267	95	4.10	0.5	10.71	3.41	832	263	52 52	
1474	733	ABC	110-#4 ACS	7.24Y	120.7	0.06	5.28	30.26	22	618	225	94	0.19	0.0	5.19	0.09	618	225	1 1	
OCR-479	554	A	011-70-L O	7.41Y	123.5	0.00	2.53	73.51	105	523	151	96	0.00	0.0	3.00	0.00	0	0	0 83	
479	OCR-479	A	110-#4 ACS	7.20Y	120.1	3.41	5.94	73.51	53	523	151	96	8.94	1.7	5.00	2.00	514	145	83 83	
OCR-8123	7121	ABC	211-400-12	7.56Y	126.0	0.00	0.00	327.78	82	6933	2684	93	0.00	0.0	0.00	0.00	0	0	0 19	
----- Feeder NO. 3 Beginning with Node Element 8123 -----																				
8123	OCR-8123	ABC	Node	7.56Y	126.0	0.00	0.00	327.78	4856	6933	2684	93	0.00	0.0	0.00	0.00	0	0	0 19	
-	6123	ABC	090-336 AC	7.40Y	123.4	2.62	2.62	327.78	60	6933	2684	93	64.10	1.2	1.07	1.07	1040	376	12 19	
16-A	775	ABC	Open	7.40Y	123.4	0.00	2.62	0.00	0	0	0	0	0.00	0.0	1.07	0.00	0	0	0 0	
XFMR1500	775	ABC	Transforme	0.28Y	123.4	0.00	2.62	0.00	0	0	0	0	0.00	0.0	1.07	0.00	0	0	0 0	
1461	775	ABC	090-336 AC	7.40Y	123.3	0.09	2.71	246.42	47	5184	1888	94	1.62	0.0	1.16	0.09	5182	1884	2 2	
1471	775	ABC	110-#4 ACS	7.40Y	123.3	0.06	2.68	29.93	21	625	227	94	0.19	0.0	1.16	0.09	625	227	5 5	

Database: C:\MILSOFT\DATA\NOLIN\JAN_EXIT03GROWTHOLDLC ITHCHG
Title: 2003-2005 Work Plan (SubStation growth without changes)
Case: NOLIN RECC

Element Name	Parent Name	Cnf	Type/ Conductor	Pri KV	Base Volt	Element Drop	Units Displayed In Volts					mi From Src	Length (mi)	-----Element-----						
							-Base Accum Drop	-Base Voltage: Thru Amps	120.0- % Cap	Thru KW	KVAR			% PF	kW Loss	% Loss	KW	KVAR	Cons On	Cons Thru
-8124	9012	ABC	211-400-12	7.56Y	126.0	0.00	0.00	153.61	38	3484	35	100	0.00	0.0	0.00	0.00	0	0	0	978
----- Feeder NO. 4 Beginning with Node Element 8124 -----																				
8124	OCR-8124	ABC	Node	7.56Y	126.0	0.00	0.00	153.61	2276	3484	35	100	0.00	0.0	0.00	0.00	0	0	0	978
774	8124	ABC	090-336 AC	7.54Y	125.6	0.36	0.36	153.61	29	3484	35	100	9.78	0.3	0.50	0.50	22	3	6	978
490	774	ABC	098-#3/0 A	7.39Y	123.1	2.53	2.89	152.63	51	3452	9	100	67.99	2.0	2.00	1.50	417	59	125	972
FUSE-491	490	A	084-40N FU	7.39Y	123.1	0.00	2.89	8.77	11	64	9	99	0.00	0.0	2.00	0.00	0	0	0	17
491	FUSE-491	A	110-#4 ACS	7.37Y	122.9	0.23	3.13	8.77	6	64	9	99	0.08	0.1	3.20	1.20	64	9	17	17
492	490	ABC	098-#3/0 A	7.37Y	122.8	0.29	3.18	128.95	43	2853	-154	-100	7.19	0.3	2.20	0.20	5	1	3	826
OCR-493	492	ABC	011-70-L O	7.37Y	122.8	0.00	3.18	56.39	81	1232	192	99	0.00	0.0	2.20	0.00	0	0	0	371
493	OCR-493	ABC	102-#1/0 A	7.34Y	122.3	0.55	3.73	56.39	25	1232	192	99	4.80	0.4	2.80	0.60	82	12	16	371
493	493	ABC	102-#1/0 A	7.30Y	121.7	0.60	4.34	52.65	23	1145	176	99	4.96	0.4	3.50	0.70	51	7	21	355
498	499	ABC	102-#1/0 A	7.26Y	121.0	0.69	5.03	50.32	22	1090	164	99	5.20	0.5	4.40	0.90	192	27	41	334
FUSE-495	498	A	083-30N FU	7.26Y	121.0	0.00	5.03	7.80	13	56	8	99	0.00	0.0	4.40	0.00	0	0	0	24
495	FUSE-495	A	110-#4 ACS	7.24Y	120.7	0.26	5.29	7.80	6	56	8	99	0.08	0.1	5.90	1.50	56	8	24	24
FUSE-496	496	ABC	083-30N FU	7.26Y	121.0	0.00	5.03	38.63	65	836	124	99	0.00	0.0	4.40	0.00	0	0	0	269
496	FUSE-496	ABC	110-#4 ACS	7.12Y	118.7	2.24	7.27	38.63	28	836	124	99	14.26	1.7	6.00	1.60	123	18	31	269
OCR-497	496	ABC	006-35-H O	7.12Y	118.7	0.00	7.27	33.05	94	699	101	99	0.00	0.0	6.00	0.00	0	0	0	238
497	OCR-497	ABC	110-#4 ACS	7.05Y	117.4	1.29	8.56	33.05	24	699	101	99	4.90	0.7	8.00	2.00	694	99	238	238
494	492	ABC	098-#3/0 A	7.33Y	122.2	0.61	3.79	74.54	25	1609	-355	-98	11.13	0.7	3.20	1.00	149	21	42	454
501	494	ABC	098-#3/0 A	7.31Y	121.8	0.42	4.21	68.20	23	1449	-389	-97	7.67	0.5	4.00	0.80	88	13	44	412
FUSE-502	501	A	085-50N FU	7.31Y	121.8	0.00	4.21	7.98	8	58	8	99	0.00	0.0	4.00	0.00	0	0	0	24
502	FUSE-502	A	110-#4 ACS	7.29Y	121.5	0.28	4.49	7.98	6	58	8	99	0.08	0.1	5.60	1.60	58	8	24	24
OCR-503	501	A	011-70-L O	7.31Y	121.8	0.00	4.21	39.87	57	288	43	99	0.00	0.0	4.00	0.00	0	0	0	86
503	OCR-503	A	102-#1/0 A	7.26Y	121.1	0.72	4.93	39.87	17	288	43	99	1.30	0.4	5.00	1.00	101	14	26	86
504	503	A	110-#4 ACS	7.26Y	120.9	0.15	5.07	6.74	5	48	7	99	0.04	0.1	6.00	1.00	48	7	12	12
	503	A	110-#4 ACS	7.23Y	120.6	0.50	5.42	19.11	14	137	20	99	0.52	0.4	5.60	0.60	7	1	2	48
	505	A	110-#4 ACS	7.23Y	120.5	0.12	5.54	7.46	5	53	8	99	0.03	0.1	6.30	0.70	53	8	17	17
507	505	A	110-#4 ACS	7.20Y	119.9	0.64	6.07	10.74	8	77	11	99	0.26	0.3	8.30	2.70	77	11	29	29
OCR-508	501	ABC	062-70-4H	7.31Y	121.8	0.00	4.21	50.52	72	1007	-461	-91	0.00	0.0	4.00	0.00	0	0	0	258
508	OCR-508	ABC	098-#3/0 A	7.29Y	121.6	0.21	4.42	50.52	17	1007	-461	-91	5.88	0.6	5.40	1.40	353	50	75	258
721	508	ABC	098-#3/0 A	7.29Y	121.6	0.01	4.44	37.92	13	648	-519	-78	1.54	0.2	5.90	0.50	18	3	6	183
6025	721	ABC	Capacitor	7.29Y	121.6	0.00	4.44	37.35	553	628	-523	-77	0.00	0.0	5.90	0.00	0	0	0	177
789	6025	ABC	098-#3/0 A	7.28Y	121.3	0.24	4.68	29.01	10	628	93	99	1.10	0.2	6.50	0.60	0	0	0	177
850	789	ABC	098-#3/0 A	7.28Y	121.3	0.02	4.70	4.25	1	92	13	99	0.01	0.0	6.90	0.40	23	3	8	24
509	850	ABC	098-#3/0 A	7.28Y	121.3	0.02	4.72	3.18	1	69	10	99	0.01	0.0	7.60	0.70	69	10	16	16
510	789	ABC	110-#4 ACS	7.22Y	120.4	0.94	5.62	24.77	18	535	78	99	3.96	0.7	7.50	1.00	26	4	5	153
10	510	AB	110-#4 ACS	7.19Y	119.8	0.59	6.21	12.24	9	175	25	99	0.54	0.3	9.80	2.30	174	25	50	50
OCR-11	510	ABC	007-50-H O	7.22Y	120.4	0.00	5.62	15.42	31	331	48	99	0.00	0.0	7.50	0.00	0	0	0	98
11	OCR-11	ABC	110-#4 ACS	7.15Y	119.1	1.26	6.88	15.42	11	331	48	99	2.60	0.8	10.30	2.80	164	23	45	98
OCR-12	11	A	005-25-H O	7.15Y	119.1	0.00	6.88	23.22	93	164	24	99	0.00	0.0	10.30	0.00	0	0	0	53
12	OCR-12	A	110-#4 ACS	7.09Y	118.1	1.03	7.91	23.22	17	164	24	99	0.89	0.5	12.30	2.00	163	23	53	53
1460	490	ABC	106-#2 ACS	7.39Y	123.1	0.00	2.90	2.36	1	49	18	94	0.00	0.0	2.09	0.09	49	18	2	2

	Load	Adjustment	Capacitance	Charging	Gen&Motors	Loops&Metas	Losses	No Load	Losses	Total	
KW	14320	0	0	0	0	0	389		0.00	14708	Lowest Voltage = 117.44 on Element 497
KVAR	3956	0	-1546	-9	0	0	611			3012	

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

Database: C:\MILSOFT\DATA\NOLIN\JAN_EXIT03GROWTHOLDLOAD\WITHCHG
Title: 2003-2005 Work Plan (Substation growth without changes)
Case: NOLIN RECC

Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Units Displayed in Volts				Thru KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Element			
							-Base Voltage:120.0-	Accum Drop	Thru Amps	% Cap							Length (mi)	KW	KVAR	Cons On
3		ABC	SRC-9013-j	7.56Y	126.0	0.00	0.00	397.33	0	8657	1305	99	0.00	0.0	0.00	0.00	0	0	0	2362
8131	9013	ABC	Node	7.56Y	126.0	0.00	0.00	220.63	0	4940	795	99	0.00	0.0	0.00	0.00	0	0	0	1355
OCR-8131	7131	ABC	118-400-17	7.56Y	126.0	0.00	0.00	0.00	0	0	0	0	0.00	0.0	0.00	0.00	0	0	0	0
----- Feeder NO. 1 Beginning with Node Element 8131 -----																				
8131	OCR-8131	ABC	Node	7.56Y	126.0	0.00	0.00	0.00	0	0	0	0	0.00	0.0	0.00	0.00	0	0	0	0
OCR-8132	7131	ABC	212-ESV	7.56Y	126.0	0.00	0.00	119.04	11	2645	543	98	0.00	0.0	0.00	0.00	0	0	0	654
OCR-440	OCR-8132	ABC	204-280VWE	7.56Y	126.0	0.00	0.00	119.04	43	2645	543	98	0.00	0.0	0.00	0.00	0	0	0	654
440	OCR-440	ABC	102-#1/0 A	7.45Y	124.1	1.90	1.90	119.04	52	2645	543	98	31.14	1.2	1.09	1.09	822	151	243	654
441	440	ABC	106-#2 ACS	7.41Y	123.6	0.53	2.43	81.84	45	1792	361	98	4.72	0.3	1.59	0.50	1787	359	411	411
2427	OCR-8132	ABC	096-#3/0 A	7.56Y	126.0	0.00	0.00	0.00	0	0	0	0	0.00	0.0	0.40	0.40	0	0	0	0
----- Feeder NO. 2 Beginning with Node Element 8132 -----																				
8132	OCR-8132	ABC	Node	7.56Y	126.0	0.00	0.00	0.00	0	0	0	0	0.00	0.0	0.00	0.00	0	0	0	0
OCR-8134	7131	ABC	212-ESV	7.56Y	126.0	0.00	0.00	101.83	9	2296	253	99	0.00	0.0	0.00	0.00	0	0	0	701
----- Feeder NO. 3 Beginning with Node Element 8134 -----																				
8134	OCR-8134	ABC	Node	7.56Y	126.0	0.00	0.00	101.83	0	2296	253	99	0.00	0.0	0.00	0.00	0	0	0	701
426	8134	ABC	090-336 AC	7.55Y	125.8	0.23	0.23	101.83	19	2296	253	99	3.43	0.1	0.40	0.40	20	2	6	701
429	426	ABC	106-#2 ACS	7.49Y	124.9	0.87	1.10	53.49	30	1204	130	99	6.42	0.5	1.30	0.90	665	66	174	382
OCR-829	429	B	061-50-4H	7.49Y	124.9	0.00	1.10	71.47	143	532	60	99	0.00	0.0	1.30	0.00	0	0	0	208
829	OCR-829	B	110-#4 ACS	7.34Y	122.3	2.59	3.69	71.47	51	532	60	99	9.93	1.9	2.20	0.90	85	8	21	208
430	829	B	110-#4 ACS	7.24Y	120.7	1.57	5.25	59.96	43	438	45	99	3.57	0.6	3.40	1.20	434	43	187	187
OCR-890	428	A	061-50-4H	7.55Y	125.8	0.00	0.23	0.00	0	0	0	0	0.00	0.0	0.40	0.00	0	0	0	0
890	OCR-890	A	110-#4 ACS	7.55Y	125.8	0.00	0.23	0.00	0	0	0	0	0.00	0.0	0.59	0.19	0	0	0	0
869	428	ABC	090-336 AC	7.54Y	125.7	0.11	0.35	47.44	9	1068	113	99	0.77	0.1	0.82	0.42	12	1	3	313
426	869	ABC	090-336 AC	7.54Y	125.6	0.05	0.40	46.89	9	1055	110	99	0.36	0.0	1.02	0.20	7	1	3	310
424	426	ABC	090-336 AC	7.52Y	125.4	0.22	0.62	43.54	8	979	101	99	1.33	0.1	2.02	1.00	190	19	102	279
	424	ABC	090-336 AC	7.52Y	125.3	0.06	0.68	33.49	6	752	76	99	0.19	0.0	2.62	0.60	752	75	167	167
	424	A	110-#4 ACS	7.52Y	125.3	0.06	0.68	4.74	3	35	4	99	0.01	0.0	2.62	0.60	35	4	10	10
425	426	A	110-#4 ACS	7.53Y	125.5	0.12	0.52	9.13	7	68	7	99	0.04	0.1	1.62	0.60	68	7	28	28
OCR-8133	9013	ABC	208-400-14	7.56Y	126.0	0.00	0.00	166.73	42	3747	510	99	0.00	0.0	0.00	0.00	0	0	0	1007
----- Feeder NO. 4 Beginning with Node Element 8133 -----																				
8133	OCR-8133	ABC	Node	7.56Y	126.0	0.00	0.00	166.73	0	3747	510	99	0.00	0.0	0.00	0.00	0	0	0	1007
434	8133	ABC	090-336 AC	7.50Y	125.0	0.98	0.98	166.73	31	3747	510	99	22.58	0.6	1.00	1.00	118	12	64	1007
607	434	ABC	090-336 AC	7.48Y	124.7	0.36	1.34	161.46	30	3606	446	99	8.06	0.2	1.40	0.40	323	36	186	943
606	607	ABC	090-336 AC	7.41Y	123.5	1.17	2.51	146.98	28	3275	391	99	23.23	0.7	2.90	1.50	573	57	160	757
OCR-906	606	A	012-100-L	7.41Y	123.5	0.00	2.51	0.00	0	0	0	0	0.00	0.0	2.90	0.00	0	0	0	0
906	OCR-906	A	110-#4 ACS	7.41Y	123.5	0.00	2.51	0.00	0	0	0	0	0.00	0.0	3.37	0.47	0	0	0	0
605	606	ABC	090-336 AC	7.38Y	123.0	0.48	2.99	121.17	23	2679	280	99	5.71	0.2	4.30	1.40	2673	267	597	597
OCR-601	605	ABC	012-100-L	7.38Y	123.0	0.00	2.99	0.00	0	0	0	0	0.00	0.0	4.30	0.00	0	0	0	0

	Load	Adjustment	Capacitance	Charging	Gen&Motors	Loops&Metas	Losses	No Load	Losses	Total	Lowest Voltage = 120.75 on Element 430	
KW	8566	0	0	0	0	0	122		0.00	8687		
KVAR	1109	0	0	0	0	0	196			1305		

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

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
9014		ABC	SRC-9014-j	7.56Y	126.0	0.00	0.00	654.94	0	14702	2122	99	0.00	0.0	0.00	0.00	0	0	0	4934
----- Feeder NO. 1 Beginning with Node Element 7141 -----																				
7141	9014	ABC	Node	7.56Y	126.0	0.00	0.00	553.30	8197	12426	1753	99	0.00	0.0	0.00	0.00	0	0	0	4482
OCR-8141	7141	ABC	208-400-14	7.56Y	126.0	0.00	0.00	166.43	42	3766	254	100	0.00	0.0	0.00	0.00	0	0	0	593
----- Feeder NO. 1 Beginning with Node Element 6141 -----																				
8141	OCR-8141	ABC	Node	7.56Y	126.0	0.00	0.00	168.43	2466	3766	254	100	0.00	0.0	0.00	0.00	0	0	0	593
884	8141	ABC	090-336 AC	7.55Y	125.9	0.13	0.13	166.43	31	3766	254	100	3.47	0.1	0.15	0.15	0	0	0	593
889	884	ABC	090-336 AC	7.51Y	125.1	0.72	0.85	166.43	31	3763	246	100	18.95	0.5	0.97	0.82	0	0	0	593
587	889	ABC	090-336 AC	7.49Y	124.8	0.33	1.18	166.43	31	3744	202	100	6.13	0.2	1.42	0.45	983	144	230	593
6029	587	ABC	Capacitor	7.49Y	124.8	0.00	1.18	122.54	1815	2753	39	100	0.00	0.0	1.42	0.00	0	0	0	363
737	6029	ABC	098-#3/0 A	7.45Y	124.1	0.69	1.86	105.30	35	2317	477	98	7.21	0.3	2.32	0.90	2310	469	352	352
----- Feeder NO. 1 Beginning with Node Element 6141 -----																				
6141	6029	ABC	Node	7.49Y	124.8	0.00	1.18	21.54	319	436	211	90	0.00	0.0	1.42	0.00	0	0	0	11
1438	6141	ABC	110-#4 ACS	7.49Y	124.8	0.01	1.18	2.87	2	58	28	90	0.00	0.0	1.51	0.09	58	28	3	3
1446	6141	ABC	110-#4 ACS	7.49Y	124.8	0.00	1.18	2.15	2	44	21	90	0.00	0.0	1.51	0.09	44	21	7	7
1449	6141	ABC	110-#4 ACS	7.49Y	124.8	0.03	1.21	16.51	12	334	162	90	0.06	0.0	1.51	0.09	334	162	1	1
OCR-8142	7141	ABC	118-400-17	7.56Y	126.0	0.00	0.00	196.71	49	4404	711	99	0.00	0.0	0.00	0.00	0	0	0	2022
----- Feeder NO. 2 Beginning with Node Element 8142 -----																				
8142	OCR-8142	ABC	Node	7.56Y	126.0	0.00	0.00	196.71	2914	4404	711	99	0.00	0.0	0.00	0.00	0	0	0	2022
888	8142	ABC	090-336 AC	7.50Y	125.0	1.04	1.04	196.71	37	4404	711	99	27.32	0.6	0.86	0.86	83	12	20	2022
OCR-860	888	ABC	012-100-L	7.50Y	125.0	0.00	1.04	192.99	193	4294	636	99	0.00	0.0	0.86	0.00	0	0	0	2002
C 860	OCR-860	ABC	102-#1/0 A	7.48Y	124.6	0.35	1.40	192.99	84	4294	636	99	7.26	0.2	1.08	0.22	4287	629	2002	2002 C
OCR-8143	7141	ABC	118-400-17	7.56Y	126.0	0.00	0.00	190.81	48	4255	788	98	0.00	0.0	0.00	0.00	0	0	0	1867
----- Feeder NO. 3 Beginning with Node Element 8143 -----																				
8143	OCR-8143	ABC	Node	7.56Y	126.0	0.00	0.00	190.81	2827	4255	788	98	0.00	0.0	0.00	0.00	0	0	0	1867
72	8143	ABC	090-336 AC	7.55Y	125.8	0.19	0.19	190.81	36	4255	788	98	4.54	0.1	0.15	0.15	12	2	1	1867
592	72	ABC	090-336 AC	7.49Y	124.9	0.95	1.13	190.29	36	4239	776	98	21.62	0.5	1.01	0.86	859	126	279	1866
OCR-907	588	ABC	012-100-L	7.49Y	124.9	0.00	1.13	0.00	0	0	0	0	0.00	0.0	1.01	0.00	0	0	0	0
907	OCR-907	ABC	090-336 AC	7.49Y	124.9	0.00	1.13	0.00	0	0	0	0	0.00	0.0	1.78	0.77	0	0	0	0
886	588	ABC	090-336 AC	7.48Y	124.7	0.12	1.25	151.76	29	3358	600	98	2.31	0.1	1.13	0.12	0	0	0	1587
OCR-589	886	ABC	011-70-L O	7.48Y	124.7	0.00	1.25	17.79	25	395	58	99	0.00	0.0	1.13	0.00	0	0	0	140
589	OCR-589	ABC	098-#3/0 A	7.48Y	124.6	0.10	1.35	17.79	6	395	58	99	0.21	0.1	1.77	0.64	286	42	119	140
590	589	ABC	102-#1/0 A	7.48Y	124.6	0.01	1.36	4.91	2	109	16	99	0.00	0.0	1.97	0.20	109	16	21	21
861	886	ABC	098-#3/0 A	7.46Y	124.3	0.45	1.70	133.98	45	2960	536	98	9.15	0.3	1.37	0.24	76	11	133	1447
OCR-862	861	ABC	010-50-L O	7.46Y	124.3	0.00	1.70	13.28	27	294	43	99	0.00	0.0	1.37	0.00	0	0	0	103
862	OCR-862	ABC	098-#3/0 A	7.45Y	124.2	0.06	1.77	13.28	4	294	43	99	0.09	0.0	2.07	0.70	294	43	103	103
863	861	ABC	098-#3/0 A	7.44Y	124.0	0.28	1.98	117.29	39	2581	472	98	4.92	0.2	1.54	0.17	30	4	8	1211
OCR-864	863	A	010-50-L O	7.44Y	124.0	0.00	1.98	62.29	125	459	68	99	0.00	0.0	1.54	0.00	0	0	0	96
864	OCR-864	A	110-#4 ACS	7.43Y	123.9	0.10	2.09	62.29	44	459	68	99	0.36	0.1	1.57	0.04	0	0	0	96
865	864	A	110-#4 ACS	7.41Y	123.6	0.36	2.45	46.24	33	340	50	99	0.62	0.2	1.92	0.35	340	50	84	84
866	864	A	110-#4 ACS	7.43Y	123.8	0.08	2.16	16.05	11	118	17	99	0.05	0.0	1.79	0.21	118	17	12	12
585	863	ABC	098-#3/0 A	7.39Y	123.2	0.60	2.78	95.17	32	2088	394	98	11.34	0.5	2.14	0.60	96	18	22	1107
716	585	ABC	098-#3/0 A	7.37Y	122.8	0.39	3.17	90.78	30	1960	363	98	5.33	0.3	2.44	0.30	16	2	2	1085
584	716	ABC	098-#3/0 A	7.32Y	121.9	0.88	4.05	90.04	30	1959	355	98	10.98	0.6	3.24	0.80	551	81	220	1083
582	584	ABC	098-#3/0 A	7.31Y	121.8	0.10	4.15	5.55	2	121	18	99	0.07	0.1	4.94	1.70	57	8	14	35
OCR-847	582	ABC	013-140-L	7.31Y	121.8	0.00	4.15	2.93	2	64	9	99	0.00	0.0	4.94	0.00	0	0	0	21
847	OCR-847	ABC	098-#3/0 A	7.31Y	121.8	0.01	4.16	2.93	1	64	9	99	0.00	0.0	5.41	0.47	64	9	21	21
OCR-818	584	ABC	062-70-4H	7.32Y	121.9	0.00	4.05	27.38	39	584	140	97	0.00	0.0	3.24	0.00	0	0	0	472
818	OCR-818	ABC	106-#2 ACS	7.30Y	121.6	0.32	4.37	27.38	15	584	140	97	0.95	0.2	4.14	0.90	583	140	472	472
OCR-583	584	ABC	060-35-4H	7.32Y	121.9	0.00	4.05	31.89	91	692	103	99	0.00	0.0	3.24	0.00	0	0	0	356
583	OCR-583	ABC	110-#4 ACS	7.29Y	121.5	0.46	4.51	31.89	23	692	103	99	2.40	0.3	3.64	0.40	105	15	40	356
591	583	A	110-#4 ACS	7.28Y	121.4	0.09	4.60	14.50	10	105	15	99	0.05	0.0	3.91	0.27	104	15	72	72
OCR-8144	9014	ABC	208-400-14	7.56Y	126.0	0.00	0.00	101.66	25	2276	369	99	0.00	0.0	0.00	0.00	0	0	0	452
----- Feeder NO. 4 Beginning with Node Element 6144 -----																				

Database: C:\MILSOFT\DATA\NOLIN\JAN_EXIT03GROWTHOLDLOC_WITHCHG
Title: 2003-2005 Work Plan (Substation growth without changes)
Case: NOLIN RECC

Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Units Displayed In Volts -Base Voltage:120.0-					KW	PF	KW Loss	% Loss	mi From Src	Length (mi)	-Element-			
							Accum Drop	Thru Amps	% Cap	Thru KW	KVAR							Cons On	KVAR	Cons Thru	
44	OCR-8144	ABC	Node	7.56Y	126.0	0.00	0.00	101.66	1506	2276	369	99	0.00	0.0	0.00	0.00	0	0	0	452	
	S144	ABC	090-336 AC	7.54Y	125.7	0.32	0.32	101.66	19	2276	369	99	4.26	0.2	0.50	0.50	33	5	14	452	
595	594	A	110-#4 ACS	7.43Y	123.9	1.81	2.12	81.34	58	607	91	99	5.47	0.9	1.50	1.00	601	88	159	159	
596	594	ABC	090-336 AC	7.51Y	125.1	0.55	0.87	73.07	14	1632	263	99	5.04	0.3	1.98	1.38	345	86	41	279	
597	596	ABC	090-336 AC	7.46Y	124.7	0.41	1.28	57.37	11	1282	165	99	2.72	0.2	3.58	1.70	706	111	140	238	
540	597	B	110-#4 ACS	7.33Y	122.2	2.46	3.76	76.80	55	573	46	100	7.32	1.3	5.08	1.50	565	44	98	98	

	Load	Adjustment	Capacitance	Charging	Gen&Motors	Loops&Metas	Losses	No Load	Losses	Total	
KW	14527	0	0	0	0	0	175		0.00	14702	Lowest Voltage = 120.45 on Element 591
KVAR	2470	0	-649	0	0	0	301			2122	

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

Database: C:\MILSOFT\DATA\NOLIN\JAN_EXIT03GROWTHOLDL\ATHCHG
Title: 2003-2005 Work Plan (Substation growth without changes)
Case: NOLIN RECC

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
915		ABC	SRC-9015-j	7.56Y	126.0	0.00	0.00	730.15	0	15400	6087	93	0.00	0.0	0.00	0.00	0	0	0	1
----- Feeder NO. 1 Beginning with Node Element 8151 -----																				
8151	9015	ABC	Node	7.56Y	126.0	0.00	0.00	730.15	0	15400	6087	93	0.00	0.0	0.00	0.00	0	0	0	1
C 910	8151	ABC	003-1000MC	7.56Y	125.9	0.06	0.06	730.15	127	15400	6087	93	3.54	0.0	0.04	0.04	15397	6083	1	1 C

	Load	Adjustment	Capacitance	Charging	Gen&Motors	Loops&Metas	Losses	No Load	Losses	Total	Lowest Voltage = 125.94 on Element 910	
KW	15397	0	0	0	0	0	4	0.00	15400			
KVAR	6083	0	0	0	0	0	4		6087			

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

Table with columns: Element Name, Parent Name, Cnf, Type/Conductor, Pri kV, Base Volt, Element Drop, Units Displayed, Accum Drop, Thru Amps, In Volts, Cap, Thru KW, KVAR, PF, kW Loss, % Loss, mi From Src, Length (mi), Element KW, KVAR, Cons On, Cons Thru. Includes Feeder NO. 4 and Feeder NO. 2 sections.

Database: C:\MILSOFT\DATA\NOLIN\JAN_EXIT03GROWTHOLDL THCHG
 Title: 2003-2005 Work Plan (Substation growth without changes)
 Case: NOLIN RECC

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
997	OCR-897	ABC	098-#3/0 A	7.49Y	124.8	0.00	1.23	0.00	0	0	0	0	0.00	0.0	2.67	0.87	0	0	0	0
----- Feeder NO. 3 Beginning with Node Element 8163 -----																				
8163	9016	ABC	Node	7.56Y	126.0	0.00	0.00	281.61	0	6387	20	100	0.00	0.0	0.00	0.00	0	0	0	1060
OCD1507	8163	ABC		7.56Y	126.0	0.00	0.00	281.61	0	6387	20	100	0.00	0.0	0.00	0.00	0	0	0	1060
466	OCD1507	ABC	090-336 AC	7.50Y	125.0	1.02	1.02	261.61	53	6387	20	100	52.89	0.8	0.85	0.85	377	173	10	1060
466	466	ABC	090-336 AC	7.41Y	123.5	1.48	2.50	259.29	49	5826	-266	-100	80.94	1.4	2.35	1.50	249	19	34	1018
6008	466	ABC	Capacitor	7.41Y	123.5	0.00	2.50	248.23	3678	5496	-493	-100	0.00	0.0	2.35	0.00	0	0	0	984
470	6008	ABC	090-336 AC	7.37Y	122.9	0.61	3.11	217.48	41	4834	84	100	23.04	0.5	2.95	0.60	151	12	33	843
OCR-471	470	A	060-35-4H	7.37Y	122.9	0.00	3.11	32.69	93	240	20	100	0.00	0.0	2.95	0.00	0	0	0	38
471	OCR-471	A	110-#4 ACS	7.28Y	121.4	1.48	4.59	32.69	23	240	20	100	2.23	0.9	4.45	1.50	143	11	22	38
472	471	A	110-#4 ACS	7.28Y	121.3	0.14	4.73	13.06	9	95	7	100	0.07	0.1	4.95	0.50	95	7	16	16
473	470	ABC	090-336 AC	7.32Y	122.0	0.84	3.95	199.81	38	4420	-1	-100	29.83	0.7	3.95	1.00	540	42	105	772
534	473	ABC	090-336 AC	7.29Y	121.6	0.47	4.43	128.51	24	2816	-201	-100	13.23	0.5	4.95	1.00	125	10	22	459
533	534	ABC	090-336 AC	7.28Y	121.3	0.25	4.68	122.85	23	2677	-242	-100	7.36	0.3	5.65	0.70	481	132	38	437
CAP1713	533	ABC	Capacitor	7.28Y	121.3	0.00	4.68	-14.04	0	0	-307	0	0.00	0.0	5.65	0.00	0	0	0	0
532	533	ABC	098-#3/0 A	7.23Y	120.6	0.75	5.42	62.08	21	1347	-155	-99	8.99	0.7	7.15	1.50	481	37	74	244
CAP1712	532	ABC	Capacitor	7.23Y	120.6	0.00	5.42	-13.96	0	0	-303	0	0.00	0.0	7.15	0.00	0	0	0	0
527	532	ABC	098-#3/0 A	7.23Y	120.4	0.13	5.55	16.80	6	403	62	99	0.28	0.1	7.95	0.80	328	25	92	93
1411	527	ABC	110-#4 ACS	7.23Y	120.4	0.01	5.56	3.86	3	75	36	90	0.00	0.0	8.04	0.09	75	36	1	1
OCR-528	532	B	007-50-H O	7.23Y	120.6	0.00	5.42	62.93	126	454	38	100	0.00	0.0	7.15	0.00	0	0	0	77
526	OCR-528	B	110-#4 ACS	7.16Y	119.3	1.23	6.65	62.93	45	454	38	100	3.72	0.8	7.75	0.60	221	17	44	77
530	526	B	110-#4 ACS	7.12Y	118.6	0.76	7.41	19.48	14	139	11	100	0.85	0.6	8.65	0.90	0	0	0	17
531	530	B	110-#4 ACS	7.09Y	118.1	0.46	7.87	19.48	14	138	11	100	0.35	0.2	9.75	1.10	138	11	17	17
FUSE-529	528	B	081-20N FU	7.16Y	119.3	0.00	6.65	12.55	31	90	7	100	0.00	0.0	7.75	0.00	0	0	0	16
529	FUSE-529	B	110-#4 ACS	7.13Y	118.8	0.54	7.20	12.55	9	90	7	100	0.26	0.3	9.75	2.00	89	7	16	16
~537	533	ABC	007-50-H O	7.28Y	121.3	0.00	4.66	38.71	77	842	71	100	0.00	0.0	5.65	0.00	0	0	0	155
OCR-537	537	ABC	102-#1/0 A	7.27Y	121.2	0.12	4.80	38.71	17	642	71	100	0.78	0.1	5.85	0.20	18	1	2	155
539	537	ABC	102-#1/0 A	7.26Y	121.0	0.23	5.03	37.86	16	823	69	100	1.43	0.2	6.25	0.40	61	5	21	153
536	539	A	110-#4 ACS	7.15Y	119.2	1.77	6.80	54.71	39	396	34	100	3.71	0.9	7.75	1.50	392	32	90	90
FUSE-538	539	A	081-20N FU	7.26Y	121.0	0.00	5.03	50.42	126	365	29	100	0.00	0.0	6.25	0.00	0	0	0	42
538	FUSE-538	A	110-#4 ACS	7.22Y	120.3	0.65	5.68	50.42	36	365	29	100	1.26	0.3	6.85	0.60	364	28	42	42
OCR-474	473	ABC	061-50-4H	7.32Y	122.0	0.00	3.95	47.24	94	1034	90	100	0.00	0.0	3.95	0.00	0	0	0	208
474	OCR-474	ABC	090-336 AC	7.32Y	121.9	0.13	4.08	47.24	9	1034	90	100	0.88	0.1	4.45	0.50	71	6	10	208
660	474	ABC	098-#3/0 A	7.31Y	121.8	0.10	4.18	43.98	15	962	82	100	0.67	0.1	4.65	0.20	250	19	65	198
870	660	ABC	090-336 AC	7.30Y	121.7	0.08	4.26	32.54	6	711	62	100	0.31	0.0	5.40	0.75	533	47	93	133
FUSE-475	870	B	081-20N FU	7.30Y	121.7	0.00	4.26	24.41	61	178	14	100	0.00	0.0	5.40	0.00	0	0	0	40
475	FUSE-475	B	102-#1/0 A	7.29Y	121.5	0.26	4.53	24.41	11	178	14	100	0.23	0.1	6.45	1.05	178	14	40	40
OCR-469	6008	A	062-70-4H	7.41Y	123.5	0.00	2.50	69.72	126	662	59	100	0.00	0.0	2.35	0.00	0	0	0	141
469	OCR-469	A	110-#4 ACS	7.15Y	119.2	4.26	6.76	69.72	64	662	59	100	14.65	2.2	4.55	2.20	648	50	141	141
467	466	A	110-#4 ACS	7.48Y	124.6	0.38	1.40	17.56	13	131	10	100	0.26	0.2	1.85	1.00	131	10	32	32

	Load	Adjustment	Capacitance	Charging	Gen&Motors	Loops&Metas	Losses	No Load Losses	Total	
KW	14070	0	0	0	0	0	347	0.00	14417	Lowest Voltage = 118.13 on Element 531
KVAR	2418	0	-3165	0	0	0	663	-54		

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

Database: C:\MILSOFT\DATA\NOLIN\JAN_EXIT03GROWTHOLDLOWLITHCHG
Title: 2003-2005 Work Plan (SubStation growth without changes)
Case: NOLIN RECC

Element Name	Parent Name	Cnf	Type/ Conductor	Pri KV	Base Volt	Element Drop	Units Displayed In Volts				KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	-----Element-----			
							-Base Voltage:120.0-	Accum Drop	Thru Amps	% Cap								Thru KW	KW	% PF	kW Loss
17		ABC	SRC-9013-j	7.56Y	126.0	0.00	0.00	344.99	0	7806	542	100	0.00	0.0	0.00	0.00	0	0	0	2507	
----- Feeder NO. 4 Beginning with Node Element 8174 -----																					
8174	9017	ABC	Node	7.56Y	126.0	0.00	0.00	100.16	0	2271	69	100	0.00	0.0	0.00	0.00	0	0	0	763	
OCR-8174	8174	ABC	118-400-17	7.56Y	126.0	0.00	0.00	100.16	25	2271	69	100	0.00	0.0	0.00	0.00	0	0	0	763	
427	OCR-8174	ABC	098-#3/0 A	7.53Y	125.5	0.50	0.50	100.16	33	2271	69	100	8.67	0.4	0.40	0.40	10	1	69	763	
442	427	ABC	098-#3/0 A	7.52Y	125.3	0.21	0.71	22.16	7	497	56	99	0.64	0.1	1.30	0.90	215	22	70	134	
439	442	ABC	090-336 AC	7.52Y	125.3	0.03	0.74	12.57	2	282	34	99	0.06	0.0	1.80	0.50	50	-1	5	64	
SW1618-B	439	ABC	Open	7.52Y	125.3	0.00	0.74	0.00	0	0	0	0	0.00	0.0	1.80	0.00	0	0	0	0	
454	439	ABC	090-336 AC	7.51Y	125.2	0.08	0.82	10.36	2	231	34	99	0.09	0.0	3.20	1.40	73	11	14	59	
462	454	ABC	090-336 AC	7.51Y	125.2	0.03	0.84	7.08	1	158	23	99	0.02	0.0	4.40	1.20	158	23	45	45	
785	427	ABC	110-#4 ACS	7.46Y	124.3	1.17	1.67	77.66	55	1754	2	100	10.95	0.6	1.20	0.80	1729	-9	558	560	
1431	785	ABC	110-#4 ACS	7.46Y	124.3	0.00	1.67	0.71	1	14	7	89	0.00	0.0	1.29	0.09	14	7	2	2	
----- Feeder NO. 2 Beginning with Node Element 8172 -----																					
8172	9017	ABC	Node	7.56Y	126.0	0.00	0.00	29.21	0	620	234	94	0.00	0.0	0.00	0.00	0	0	0	28	
OCR-8172	8172	ABC	118-400-17	7.56Y	126.0	0.00	0.00	29.21	7	620	234	94	0.00	0.0	0.00	0.00	0	0	0	28	
435	OCR-8172	ABC	090-336 AC	7.55Y	125.9	0.09	0.09	29.21	6	620	234	94	0.19	0.0	0.80	0.80	620	234	28	28	
----- Feeder NO. 3 Beginning with Node Element 8173 -----																					
8173	9017	ABC	Node	7.56Y	126.0	0.00	0.00	216.98	0	4915	238	100	0.00	0.0	0.00	0.00	0	0	0	1716	
OCR-8173	8173	ABC	118-400-17	7.56Y	126.0	0.00	0.00	216.98	54	4915	238	100	0.00	0.0	0.00	0.00	0	0	0	1716	
1437	OCR-8173	ABC	090-336 AC	7.51Y	125.1	0.88	0.88	216.98	41	4915	238	100	31.41	0.6	0.80	0.80	0	0	0	1716	
6005	1437	ABC	Capacitor	7.51Y	125.1	0.00	0.88	-26.96	0	0	-652	0	0.00	0.0	0.80	0.00	0	0	0	0	
1456	1437	ABC	110-#4 ACS	7.51Y	125.1	0.03	0.91	16.08	11	326	158	90	0.05	0.0	0.89	0.09	326	158	1	1	
1446	1437	ABC	110-#4 ACS	7.51Y	125.1	0.01	0.89	3.74	3	76	37	90	0.00	0.0	0.89	0.09	76	37	3	3	
OCR-436	1437	ABC	011-70-L O	7.51Y	125.1	0.00	0.88	99.92	143	2243	184	100	0.00	0.0	0.80	0.00	0	0	0	969	
436	OCR-436	ABC	098-#3/0 A	7.46Y	124.3	0.78	1.66	99.92	33	2243	184	100	8.66	0.4	2.00	1.20	2234	174	969	969	
	1437	ABC	098-#3/0 A	7.43Y	123.9	1.23	2.11	101.33	34	2239	440	98	17.77	0.8	1.70	0.90	339	1	84	743	
-443	437	ABC	011-70-L O	7.43Y	123.9	0.00	2.11	30.07	43	622	251	93	0.00	0.0	1.70	0.00	0	0	0	16	
443	OCR-443	ABC	098-#3/0 A	7.39Y	123.2	0.68	2.79	30.07	10	622	251	93	2.56	0.4	3.20	1.50	122	7	14	16	
1403	443	ABC	110-#4 ACS	7.39Y	123.2	0.05	2.83	24.90	18	497	241	90	0.13	0.0	3.29	0.09	497	241	2	2	
OCR-438	437	ABC	010-50-L O	7.43Y	123.9	0.00	2.11	57.04	114	1261	168	99	0.00	0.0	1.70	0.00	0	0	0	643	
438	OCR-438	ABC	102-#1/0 A	7.40Y	123.3	0.61	2.72	57.04	25	1261	168	99	3.73	0.3	3.00	1.30	1257	175	643	643	
UG1438	438	ABC	602-1/OAL	7.40Y	123.3	0.00	2.72	-0.46	0	0	-10	0	0.00	0.0	3.32	0.33	0	0	0	0	
SW1618-A	UG1438	ABC	Open	7.40Y	123.3	0.00	2.72	0.00	0	0	0	0	0.00	0.0	3.32	0.00	0	0	0	0	

	Load	Adjustment	Capacitance	Charging	Gen&Motors	Loops&Metas	Losses	No Load	Losses	Total	
KW	7721	0	0	0	0	0	85				
KVAR	1080	0	-652	-10	0	0	124		0.00	7806	Lowest Voltage = 123.17 on Element 1403
										54	

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

Database: C:\MILSOFT\DATA\NOLIN\JAN_EXIT03GROWTHOLDLOAD\WITHCHG
Title: 2003-2005 Work Plan (Substation growth without changes)
Case: NOLIN RECC

Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Units Displayed in Volts					KVAR	PF	kW Loss	% Loss	mi From Src	Length (mi)	Element			
							-Base Voltage:120.0-	Accum Drop	Thru Amps	% Cap	Thru KW							KW	KVAR	Cons On	Cons Thru
	OCR-692	ABC	098-#3/0 A	7.46Y	124.3	0.03	1.72	8.59	3	167	43	97	0.03	0.0	1.92	0.26	41	9	23	114	
	692	ABC	098-#3/0 A	7.45Y	124.2	0.08	1.80	6.73	2	147	34	97	0.07	0.0	2.92	1.00	65	15	32	91	
843	739	A	110-#4 ACS	7.45Y	124.2	0.00	1.50	1.08	1	8	2	97	0.00	0.0	3.07	0.15	8	2	4	4	
844	739	ABC	098-#3/0 A	7.45Y	124.2	0.01	1.80	3.37	1	73	17	97	0.00	0.0	3.09	0.17	50	11	33	55	
705	844	A	110-#4 ACS	7.45Y	124.1	0.07	1.88	3.22	2	23	5	98	0.01	0.0	4.09	1.00	23	5	22	22	
685	656	ABC	098-#3/0 A	7.46Y	124.3	0.02	1.71	4.76	2	98	41	92	0.01	0.0	2.06	0.40	96	41	41	41	
1447	656	ABC	110-#4 ACS	7.46Y	124.3	0.00	1.69	0.80	1	16	8	89	0.00	0.0	1.75	0.09	16	8	1	1	
1443	6031	ABC	110-#4 ACS	7.46Y	124.4	0.01	1.61	4.80	3	97	47	90	0.00	0.0	1.35	0.09	97	47	3	3	
655	657	ABC	098-#3/0 A	7.46Y	124.4	0.04	1.62	27.83	9	602	160	97	0.14	0.0	1.25	0.15	359	82	160	248	
654	655	ABC	098-#3/0 A	7.46Y	124.4	0.00	1.63	5.40	2	111	47	92	0.00	0.0	1.36	0.11	111	47	10	10	
679	655	AB	110-#4 ACS	7.46Y	124.4	0.02	1.64	9.09	6	132	30	98	0.02	0.0	1.30	0.05	22	5	14	78	
680	679	A	110-#4 ACS	7.44Y	124.0	0.35	1.98	15.13	11	110	25	98	0.19	0.2	2.30	1.00	110	25	64	64	
----- Feeder NO. 4 Beginning with Node Element 8164 -----																					
5184	9016	ABC	Node	7.56Y	126.0	0.00	0.00	14.12	0	320	-15	-100	0.00	0.0	0.00	0.00	0	0	0	157	
OCR-8164	8164	ABC	203-400-10	7.56Y	126.0	0.00	0.00	14.12	4	320	-15	-100	0.00	0.0	0.00	0.00	0	0	0	157	
646	OCR-8184	ABC	090-336 AC	7.56Y	126.0	0.01	0.01	14.12	3	320	-15	-100	0.03	0.0	0.40	0.40	287	-23	137	157	
647	646	ABC	098-#3/0 A	7.56Y	126.0	0.01	0.03	1.51	1	33	8	97	0.00	0.0	1.50	1.10	33	8	20	20	
OCR-891	648	B	011-70-L O	7.56Y	126.0	0.00	0.01	0.00	0	0	0	0	0.00	0.0	0.40	0.00	0	0	0	0	
891	OCR-891	B	110-#4 ACS	7.56Y	126.0	0.00	0.01	0.00	0	0	0	0	0.00	0.0	0.66	0.26	0	0	0	0	

	Load	Adjustment	Capacitance	Charging	Gen&Motors	Loops&Metas	Losses	No Load	Losses	Total	
KW	7695	0	0	0	0	0	126		0.00	7822	Lowest Voltage = 121.47 on Element 626
KVAR	1335	0	-974	0	0	0	190			551	

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

Balanced Voltage Drop Report
Source: 9019

Database: C:\MILSOFT\DATA\NOLIN\JAN_EXIT03GROWTHOLDLOWVOLTAGE\ITHCHG
Title: 2003-2005 Work Plan (Substation growth without changes)
Case: NOLIN RECC

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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-				mi From Src	Length (mi)	Element							
							Accum Drop	Thru Amps	% Cap	Thru KW			KVAR	% PF	kW Loss	% Loss	KW	KVAR	Cons On	Cons Thru
9		ABC	SRC-9011-j	7.56Y	126.0	0.00	0.00	357.90	0	8167	1554	98	0.00	0.0	0.00	0.00	0	0	0	2153
OCR-8192	9019	ABC	203-400-10	7.56Y	126.0	0.00	0.00	69.63	17	1571	161	99	0.00	0.0	0.00	0.00	0	0	0	717
----- Feeder NO. 2 Beginning with Node Element 8192 -----																				
8192	OCR-8192	ABC	Node	7.56Y	126.0	0.00	0.00	69.63	0	1571	161	99	0.00	0.0	0.00	0.00	0	0	0	717
7192	8192	ABC	600-336.4	7.56Y	126.0	0.00	0.00	69.63	13	1571	161	99	0.00	0.0	0.00	0.00	0	0	0	717
OH1572	7192	ABC	090-336 AC	7.55Y	125.8	0.24	0.24	69.63	13	1571	161	99	2.44	0.2	0.60	0.60	0	0	0	717
781	OH1572	ABC	110-#4 ACS	7.44Y	124.0	1.71	1.95	69.63	50	1569	155	100	19.60	1.2	1.30	0.70	273	21	35	717
782	781	ABC	110-#4 ACS	7.37Y	122.8	1.29	3.24	57.45	41	1276	127	100	10.54	0.8	2.10	0.80	696	54	258	682
457	782	ABC	098-#3/0 A	7.35Y	122.5	0.23	3.47	25.98	9	570	69	99	0.63	0.1	3.40	1.30	569	68	424	424
OCR-8194	9019	ABC	203-400-10	7.56Y	126.0	0.00	0.00	85.94	21	2100	433	98	0.00	0.0	0.00	0.00	0	0	0	299
----- Feeder NO. 4 Beginning with Node Element 8194 -----																				
8194	OCR-8194	ABC	Node	7.56Y	126.0	0.00	0.00	85.94	0	2100	433	98	0.00	0.0	0.00	0.00	0	0	0	299
7194	8194	ABC	600-336.4	7.56Y	126.0	0.00	0.00	85.94	16	2100	433	98	0.00	0.0	0.00	0.00	0	0	0	299
578	7194	ABC	098-#3/0 A	7.54Y	125.7	0.28	0.28	85.94	29	2100	433	98	2.95	0.1	0.30	0.30	589	190	173	299
OCR-458	578	A	011-70-L O	7.54Y	125.7	0.00	0.28	63.56	91	478	39	100	0.00	0.0	0.30	0.00	0	0	0	86
458	OCR-458	A	110-#4 ACS	7.46Y	124.3	1.37	1.65	63.56	45	478	39	100	3.34	0.7	1.30	1.00	475	37	68	88
593	578	ABC	003-1000MC	7.54Y	125.7	0.01	0.29	20.61	4	621	201	95	0.01	0.0	0.49	0.19	421	204	36	38
XFMR1567	593	ABC	Transforme	7.54Y	125.7	0.00	0.29	0.00	0	200	0	100	200.00	100.0	0.49	0.00	0	0	0	0
OCR-8193	9019	ABC		7.56Y	126.0	0.00	0.00	202.69	0	4496	960	98	0.00	0.0	0.00	0.00	0	0	0	1167
----- Feeder NO. 3 Beginning with Node Element 8193 -----																				
8193	OCR-8193	ABC	Node	7.56Y	126.0	0.00	0.00	202.69	0	4496	960	98	0.00	0.0	0.00	0.00	0	0	0	1167
7193	8193	ABC	090-336 AC	7.56Y	126.0	0.00	0.00	202.69	38	4496	960	98	0.00	0.0	0.00	0.00	0	0	0	1167
828	7193	ABC	090-336 AC	7.52Y	125.3	0.68	0.68	202.69	38	4496	960	98	17.02	0.4	0.50	0.50	38	3	7	1167
OCR-822	828	ABC	084-40N FU	7.52Y	125.3	0.00	0.68	0.63	1	14	1	100	0.00	0.0	0.50	0.00	0	0	0	5
822	OCR-822	ABC	110-#4 ACS	7.52Y	125.3	0.01	0.69	0.63	0	14	1	100	0.00	0.0	1.50	1.00	14	1	5	5
	828	ABC	090-336 AC	7.36Y	122.7	2.56	3.26	200.39	38	4426	917	98	64.73	1.5	2.50	2.00	174	39	18	1155
	459	ABC	110-#4 ACS	7.36Y	122.7	0.00	3.26	192.39	36	4188	728	99	0.00	0.0	2.90	0.40	25	2	7	1137
871	718	ABC	090-336 AC	7.35Y	122.6	0.17	3.43	100.11	19	2170	429	98	2.16	0.1	3.16	0.26	13	2	2	557
461	871	ABC	090-336 AC	7.30Y	121.7	0.86	4.29	99.53	19	2155	422	98	9.50	0.4	4.76	1.60	806	118	191	555
596	461	ABC	090-336 AC	7.29Y	121.4	0.29	4.58	62.49	12	1340	282	98	2.20	0.2	5.46	0.70	57	8	23	364
OCR-790	596	ABC	011-70-L O	7.29Y	121.4	0.00	4.58	59.87	66	1261	269	98	0.00	0.0	5.46	0.00	0	0	0	341
OCR-558	OCR-790	A	011-70-L O	7.29Y	121.4	0.00	4.58	32.99	47	238	35	99	0.00	0.0	5.46	0.00	0	0	0	44
558	OCR-558	A	110-#4 ACS	7.22Y	120.3	1.10	5.68	32.99	24	238	35	99	1.35	0.6	6.96	1.50	236	35	44	44
790	OCR-790	ABC	102-#1/0 A	7.25Y	120.9	0.51	5.09	48.90	21	1043	233	98	3.28	0.3	6.21	0.75	434	79	72	297
FUSE-791	790	A	083-30N FU	7.25Y	120.9	0.00	5.09	16.49	27	118	17	99	0.00	0.0	6.21	0.00	0	0	0	34
791	FUSE-791	A	110-#4 ACS	7.23Y	120.4	0.48	5.56	16.49	12	118	17	99	0.29	0.2	7.51	1.30	118	17	34	34
599	790	ABC	098-#3/0 A	7.21Y	120.2	0.73	5.81	23.22	8	487	134	96	1.89	0.4	9.10	2.89	313	46	169	191
1463	599	ABC	110-#4 ACS	7.21Y	120.2	0.02	5.83	8.88	6	173	84	90	0.02	0.0	9.20	0.09	173	64	2	2
OCR-559	718	ABC	011-70-L O	7.36Y	122.7	0.00	3.26	66.67	98	1498	242	99	0.00	0.0	2.90	0.00	0	0	0	388
559	OCR-559	ABC	098-#3/0 A	7.30Y	121.6	1.15	4.41	66.67	23	1498	242	99	10.61	0.7	4.40	1.50	602	88	166	388
820	559	ABC	098-#3/0 A	7.28Y	121.3	0.28	4.69	40.94	14	865	142	99	1.76	0.2	4.90	0.50	37	5	10	222
557	820	ABC	098-#3/0 A	7.25Y	120.8	0.55	5.24	39.25	13	846	135	99	2.23	0.3	6.90	2.00	844	132	211	212
555	557	ABC	102-#1/0 A	7.25Y	120.8	0.00	5.24	0.00	0	0	0	0	0.00	0.0	7.70	0.60	0	0	1	1
OCR-453	718	A	062-70-4H	7.36Y	122.7	0.00	3.26	29.46	42	214	32	99	0.00	0.0	2.90	0.00	0	0	0	119
453	OCR-453	A	110-#4 ACS	7.32Y	122.0	0.76	4.02	29.46	21	214	32	99	1.23	0.6	3.50	0.60	12	2	1	119
451	453	A	110-#4 ACS	7.30Y	121.7	0.25	4.27	27.75	20	201	30	99	0.38	0.2	3.70	0.20	0	0	0	118
450	451	A	110-#4 ACS	7.27Y	121.1	0.61	4.87	24.88	18	180	27	99	0.56	0.3	4.80	1.10	179	26	110	110
452	451	A	110-#4 ACS	7.30Y	121.7	0.04	4.30	2.87	2	21	3	99	0.00	0.0	4.30	0.60	21	3	8	8
717	718	A	110-#4 ACS	7.33Y	122.2	0.58	3.83	39.25	27	261	22	100	0.85	0.3	3.60	0.70	280	22	66	66

	Load	Adjustment	Capacitance	Charging	Gen&Motors	Loops&Metas	Losses	No Load	Losses	Total	Lowest Voltage = 120.17 on Element 1463	
KW	7507	0	0	0	0	0	160		200.00	8167		
KVAR	1289	0	0	-2	0	0	268			1554		

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

Database: C:\MILSOFT\DATA\NOLIN\JAN_EXIT03GROWTHOLDLC_1THCHG
Title: 2003-2005 Work Plan (Substation growth without changes)
Case: NOLIN RECC

Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Units Displayed In Volts					mi From Src	Length (mi)	Element						
							-Base Voltage:120.0-	Accum Drop	Thru Amps	% Cap	Thru KW			KVAR	% PF	kW Loss	% Loss	KW	KVAR	Cons On
90		ABC	SRC-9002-j	7.56Y	126.0	0.00	0.00	317.99	0	7105	1238	99	0.00	0.0	0.00	0.00	0	0	0	630
-9203	9020	ABC	203-400-10	7.56Y	126.0	0.00	0.00	163.66	41	3459	1345	93	0.00	0.0	0.00	0.00	0	0	0	222
----- Feeder NO. 3 Beginning with Node Element 8203 -----																				
8203	OCR-9203	ABC	Node	7.56Y	126.0	0.00	0.00	163.66	0	3459	1345	93	0.00	0.0	0.00	0.00	0	0	0	222
476	8203	ABC	090-336 AC	7.49Y	124.9	1.13	1.13	163.66	31	3459	1345	93	12.66	0.4	1.70	1.70	3447	1316	222	222
OCR-9205	9020	ABC	203-400-10	7.56Y	126.0	0.00	0.00	0.00	0	0	0	0	0.00	0.0	0.00	0.00	0	0	0	0
----- Feeder NO. 5 Beginning with Node Element 8205 -----																				
8205	OCR-9205	ABC	Node	7.56Y	126.0	0.00	0.00	0.00	0	0	0	0	0.00	0.0	0.00	0.00	0	0	0	0
OCR-9202	9020	ABC	203-400-10	7.56Y	126.0	0.00	0.00	160.80	40	3645	-107	-100	0.00	0.0	0.00	0.00	0	0	0	608
----- Feeder NO. 2 Beginning with Node Element 8202 -----																				
8202	OCR-9202	ABC	Node	7.56Y	126.0	0.00	0.00	160.80	0	3645	-107	-100	0.00	0.0	0.00	0.00	0	0	0	608
487	8202	ABC	090-336 AC	7.50Y	125.0	0.97	0.97	160.80	30	3645	-107	-100	29.87	0.8	1.70	1.70	786	94	162	608
6023	487	ABC	Capacitor	7.50Y	125.0	0.00	0.97	126.29	1871	2829	-271	-100	0.00	0.0	1.70	0.00	0	0	0	446
788	6023	ABC	090-336 AC	7.50Y	125.0	0.00	0.98	2.45	0	55	7	99	0.00	0.0	1.90	0.20	19	2	12	47
421	788	A	110-#4 ACS	7.50Y	125.0	0.06	1.04	4.87	3	36	4	99	0.01	0.0	2.50	0.60	36	4	35	35
787	6023	ABC	098-#3/0 A	7.50Y	125.0	0.08	1.05	19.24	6	430	52	99	0.22	0.1	2.00	0.30	36	4	11	67
OCR-488	787	A	010-50-L O	7.50Y	125.0	0.00	1.05	13.61	27	101	12	99	0.00	0.0	2.00	0.00	0	0	0	14
488	OCR-488	A	110-#4 ACS	7.46Y	124.4	0.80	1.65	13.61	10	101	12	99	0.31	0.3	4.00	2.00	101	12	14	14
489	787	ABC	098-#3/0 A	7.49Y	124.8	0.17	1.22	13.11	4	293	35	99	0.24	0.1	3.90	1.90	293	35	42	42
420	6023	ABC	102-#1/0 A	7.48Y	124.7	0.33	1.30	105.15	46	2344	321	99	5.37	0.2	1.90	0.20	249	30	51	332
OCR-878	420	B	011-70-L O	7.48Y	124.7	0.00	1.30	0.00	0	0	0	0	0.00	0.0	1.90	0.00	0	0	0	0
878	OCR-878	B	110-#4 ACS	7.48Y	124.7	0.00	1.30	0.00	0	0	0	0	0.00	0.0	3.41	1.52	0	0	0	0
OCR-706	420	ABC	013-140-L	7.48Y	124.7	0.00	1.30	93.99	67	2090	286	99	0.00	0.0	1.90	0.00	0	0	0	281
706	OCR-706	ABC	098-#3/0 A	7.36Y	122.7	2.03	3.33	93.99	31	2090	286	99	28.82	1.4	3.60	1.70	295	35	29	281
OCR-432	706	A	011-70-L O	7.36Y	122.7	0.00	3.33	0.00	0	0	0	0	0.00	0.0	3.60	0.00	0	0	0	0
	706	A	110-#4 ACS	7.33Y	122.1	0.57	3.91	26.01	19	190	23	99	0.56	0.3	4.60	1.00	189	23	38	38
	706	ABC	102-#1/0 A	7.34Y	122.4	0.31	3.64	69.34	30	1519	189	99	3.23	0.2	3.90	0.30	300	36	33	201
OCR-500	666	A	011-70-L O	7.34Y	122.4	0.00	3.64	0.00	0	0	0	0	0.00	0.0	3.90	0.00	0	0	0	0
500	666	A	110-#4 ACS	7.19Y	119.9	2.51	6.15	57.01	41	415	52	99	5.38	1.3	5.90	2.00	410	49	61	61
OCR-433	666	ABC	012-100-L	7.34Y	122.4	0.00	3.64	36.64	37	801	98	99	0.00	0.0	3.90	0.00	0	0	0	107
433	OCR-433	ABC	102-#1/0 A	7.31Y	121.8	0.51	4.15	36.64	16	801	96	99	2.02	0.3	5.60	1.70	799	96	107	107
431	706	A	110-#4 ACS	7.35Y	122.5	0.15	3.49	7.77	6	57	7	99	0.04	0.1	4.50	0.90	57	7	13	13

	Load	Adjustment	Capacitance	Charging	Gen&Motors	Loops&Metas	Losses	No Load	Losses	Total	
KW	7016	0	0	0	0	0	69			7105	Lowest Voltage = 119.85 on Element 500
KVAR	1744	0	-651	0	0	0	146	0.00		1236	

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

Database: C:\MILSOFT\DATA\NOLIN\JAN_EXIT03GROWTHOLDL .ITHCHG
Title: 2003-2005 Work Plan (SubStation growth without changes)
Case: NOLIN RECC

Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Units Displayed In Volts				Thru KW	KVAR	PF	kW Loss	% Loss	mi From Src	Length (mi)	Element			
							-Base Voltage:120.0-	Accum Drop	Thru Amps	% Cap								KW	KVAR	PF	kW Loss
9021		ABC	SRC-9009-j	7.56Y	126.0	0.00	0.00	0.00	0	0	0	0	0.00	0.0	0.00	0.00	0	0	0	0	
9021	9021	ABC	Node	7.56Y	126.0	0.00	0.00	0.00	0	0	0	0	0.00	0.0	0.00	0.00	0	0	0	0	
----- Feeder NO. 3 Beginning with Node Element 8213 -----																					
8213	8210	ABC	Node	7.56Y	126.0	0.00	0.00	0.00	0	0	0	0	0.00	0.0	0.00	0.00	0	0	0	0	
OCR-8213	8213	ABC	208-400-14	7.56Y	126.0	0.00	0.00	0.00	0	0	0	0	0.00	0.0	0.00	0.00	0	0	0	0	
----- Feeder NO. 2 Beginning with Node Element 8212 -----																					
8212	8210	ABC	Node	7.56Y	126.0	0.00	0.00	0.00	0	0	0	0	0.00	0.0	0.00	0.00	0	0	0	0	
OCR-8212	8212	ABC	208-400-14	7.56Y	126.0	0.00	0.00	0.00	0	0	0	0	0.00	0.0	0.00	0.00	0	0	0	0	
----- Feeder NO. 1 Beginning with Node Element 8211 -----																					
8211	8210	ABC	Node	7.56Y	126.0	0.00	0.00	0.00	0	0	0	0	0.00	0.0	0.00	0.00	0	0	0	0	
OCR-8211	8211	ABC	208-400-14	7.56Y	126.0	0.00	0.00	0.00	0	0	0	0	0.00	0.0	0.00	0.00	0	0	0	0	

	Load	Adjustment	Capacitance	Charging	Gen&Motors	Loops&Metas	Losses	No Load	Losses	Total	
KW	0	0	0	0	0	0	0	0.00	0		Lowest Voltage = 126.00 on Element 9021
KVAR	0	0	0	0	0	0	0	0	0		

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

Database: C:\MILSOFT\DATA\NOLIN\JAN_EXIT03GROW DLOADWITHCHGRINEY
Title: 2003-2004 Work Plan
Case: NOLIN RECC

Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Units Displayed In Volts -Base Voltage:120.0-				Thru KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	-----Element-----			
							Accum Drop	Thru Amps	% Cap	Thru KW								KW	KVAR	Cons On	Cons Thru
OCR-562	566	ABC	060-35-4H	7.42Y	123.7	0.00	2.29	20.01	57	424	-137	-95	0.00	0.0	3.90	0.00	0	0	0	83	
562	OCR-562	ABC	106-#2 ACS	7.41Y	123.6	0.14	2.43	20.01	11	424	-137	-95	0.66	0.2	4.30	0.40	13	5	2	83	
719	562	ABC	106-#2 ACS	7.40Y	123.4	0.16	2.59	19.52	11	410	-143	-94	0.75	0.2	4.80	0.50	42	17	4	81	
563	719	ABC	106-#2 ACS	7.40Y	123.3	0.15	2.74	4.68	3	94	44	91	0.10	0.1	6.10	1.30	21	9	8	9	
1472	563	ABC	110-#4 ACS	7.40Y	123.3	0.01	2.75	3.65	3	73	35	90	0.00	0.0	6.19	0.09	73	35	1	1	
564	719	ABC	106-#2 ACS	7.41Y	123.5	-0.06	2.53	15.37	9	273	-204	-80	1.71	0.6	7.30	2.50	272	112	68	68	
CAP1696	564	ABC	Capacitor	7.41Y	123.5	0.00	2.53	-14.29	0	0	-318	0	0.00	0.0	7.30	0.00	0	0	0	0	

	Load	Adjustment	Capacitance	Charging	Gen&Motors	Loops&Metas	Losses	No Load	Losses	Total	
KW	4302	0	0	0	0	0	107		0.00	4410	Lowest Voltage = 117.88 on Element 323
KVAR	1763	0	-1600	0	0	0	109			272	

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

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	
9002		ABC	SRC-9002-j	7.56Y	126.0	0.00	0.00	342.35	0	7488	2056	96	0.00	0.0	0.00	0.00	0	0	0	2009
OCR-8024	9002	ABC	203-400-10	7.56Y	126.0	0.00	0.00	17.94	4	404	49	99	0.00	0.0	0.00	0.00	0	0	0	340
445	OCR-8024	ABC	090-336 AC	7.56Y	125.9	0.07	0.07	17.94	3	404	49	99	0.19	0.0	0.70	0.70	7	1	22	340
OCR-446	445	ABC	010-50-L O	7.56Y	125.9	0.00	0.07	17.64	35	397	48	99	0.00	0.0	0.70	0.00	0	0	0	318
446	OCR-446	ABC	090-336 AC	7.55Y	125.9	0.03	0.10	17.64	3	397	46	99	0.05	0.0	1.30	0.60	397	46	316	318
----- Feeder NO. 1 Beginning with Node Element 8024 -----																				
8024	OCR-8024	ABC	Node	7.56Y	126.0	0.00	0.00	0.00	0	0	0	0	0.00	0.0	0.00	0.00	0	0	0	0
OCR-8025	9002	ABC	202-560-14	7.56Y	126.0	0.00	0.00	324.65	58	7084	2007	96	0.00	0.0	0.00	0.00	0	0	0	1669
----- Feeder NO. 5 Beginning with Node Element 8025 -----																				
8025	OCR-8025	ABC	Node	7.56Y	126.0	0.00	0.00	324.65	4610	7084	2007	96	0.00	0.0	0.00	0.00	0	0	0	1669
444	8025	ABC	090-336 AC	7.44Y	124.0	2.00	2.00	324.65	61	7084	2007	96	72.31	1.0	0.90	0.90	668	283	99	1669
447	444	ABC	090-336 AC	7.34Y	122.4	1.60	3.60	252.63	46	5517	1162	98	49.12	0.9	1.90	1.00	527	86	126	1459
455	447	ABC	096-#3/0 A	7.34Y	122.3	0.10	3.71	36.62	13	845	102	99	0.43	0.1	2.30	0.40	644	101	166	166
OCR-446	447	ABC	221-400-12	7.34Y	122.4	0.00	3.60	167.03	30	3625	632	99	0.00	0.0	1.90	0.00	0	0	0	1133
446	OCR-446	ABC	090-336 AC	7.28Y	121.3	1.05	4.66	167.03	32	3625	632	99	21.55	0.6	3.00	1.10	721	107	549	1133
736	446	ABC	090-336 AC	7.27Y	121.2	0.17	4.83	50.62	17	1959	260	99	1.58	0.1	3.50	0.50	1522	182	324	400
OCR-449	736	ABC	012-100-L	7.27Y	121.2	0.00	4.83	20.43	20	436	94	96	0.00	0.0	3.50	0.00	0	0	0	76
449	OCR-449	ABC	090-336 AC	7.27Y	121.1	0.03	4.86	20.43	4	436	94	98	0.06	0.0	3.60	0.30	307	37	63	76
784	449	ABC	090-336 AC	7.27Y	121.1	0.02	4.86	6.45	1	129	57	91	0.01	0.0	4.55	0.75	129	57	13	13
858	448	ABC	098-#3/0 A	7.26Y	121.1	0.27	4.93	43.23	14	924	196	98	1.21	0.1	3.80	0.80	861	164	182	184
1436	858	ABC	110-#4 ACS	7.26Y	121.1	0.01	4.93	3.15	2	62	30	90	0.00	0.0	3.89	0.09	62	30	2	2
----- Feeder NO. 2 Beginning with Node Element 6021 -----																				
6021	447	ABC	Node	7.34Y	122.4	0.00	3.60	23.78	352	472	228	90	0.00	0.0	1.90	0.00	0	0	0	32
1423	6021	ABC	110-#4 ACS	7.34Y	122.4	0.01	3.61	4.88	3	97	47	90	0.01	0.0	1.99	0.09	97	47	19	19
1427	6021	ABC	110-#4 ACS	7.34Y	122.4	0.04	3.64	18.90	13	375	181	90	0.08	0.0	1.99	0.09	375	181	13	13
1442	444	ABC	110-#4 ACS	7.44Y	123.9	0.06	2.08	41.03	29	827	394	90	0.36	0.0	0.99	0.09	826	394	111	111
OCR-8023	9002	ABC	203-400-10	7.56Y	126.0	0.00	0.00	0.00	0	0	0	0	0.00	0.0	0.00	0.00	0	0	0	0
----- Feeder NO. 3 Beginning with Node Element 8023 -----																				
8023	OCR-8023	ABC	Node	7.56Y	126.0	0.00	0.00	0.00	0	0	0	0	0.00	0.0	0.00	0.00	0	0	0	0

	Load	Adjustment	Capacitance	Charging	Gen&Motors	Loops&Metas	Losses	No Load	Losses	Total	
KW	7341	0	0	0	0	0	147	0.00	7488		Lowest Voltage = 121.07 on Element 1436
KVAR	1719	0	0	0	0	0	337	2056			

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

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			
388	OCR-388	ABC	102-#1/0 A	7.30Y	121.6	2.04	4.38	89.76	39	1973	-316	-99	39.36	2.0	6.70	2.00	195	21	52	354
CAP1638	388	ABC	Capacitor	7.30Y	121.6	0.00	4.38	-14.08	0	0	-308	0	0.00	0.0	6.70	0.00	0	0	0	0
395	388	ABC	106-#2 ACS	7.21Y	120.2	1.40	5.78	59.09	33	1288	-117	-100	15.74	1.2	7.80	1.10	47	5	17	225
OCR-396	395	ABC	007-50-H O	7.21Y	120.2	0.00	5.78	56.95	114	1225	-131	-99	0.00	0.0	7.80	0.00	0	0	0	208
396	OCR-396	ABC	098-#3/0 A	7.17Y	119.4	0.79	6.57	56.95	19	1225	-131	-99	8.33	0.7	9.90	2.10	702	88	104	208
CAP1806	396	ABC	Capacitor	7.17Y	119.4	0.00	6.57	-13.62	0	0	-297	0	0.00	0.0	9.90	0.00	0	0	0	0
295	396	A	110-#4 ACS	7.12Y	118.7	0.72	7.29	23.01	16	162	29	98	0.61	0.4	11.30	1.40	162	29	50	50
397	396	ABC	098-#3/0 A	7.16Y	119.4	0.04	6.61	5.70	2	122	13	99	0.03	0.0	11.00	1.10	122	13	27	27
398	396	A	110-#4 ACS	7.14Y	119.1	0.35	6.92	32.48	23	231	25	99	0.44	0.2	10.40	0.50	231	25	27	27
OCR-387	388	A	061-50-4H	7.30Y	121.6	0.00	4.38	62.13	124	451	50	99	0.00	0.0	6.70	0.00	0	0	0	77
387	OCR-387	A	110-#4 ACS	7.22Y	120.3	1.36	5.74	62.13	44	451	50	99	3.19	0.7	7.70	1.00	447	48	77	77
697	696	A	110-#4 ACS	7.52Y	125.4	0.00	0.60	0.00	0	0	0	0	0.00	0.0	2.20	1.00	0	0	0	0
OCR-8035	7031	ABC	207-340-10	7.56Y	126.0	0.00	0.00	41.12	12	906	-222	-97	0.00	0.0	0.00	0.00	0	0	0	201
----- Feeder NO. 5 Beginning with Node Element 8035 -----																				
8035	OCR-8035	ABC	Node	7.56Y	126.0	0.00	0.00	41.12	0	906	-222	-97	0.00	0.0	0.00	0.00	0	0	0	201
412	8035	ABC	098-#3/0 A	7.54Y	125.7	0.31	0.31	41.12	14	906	-222	-97	3.27	0.4	1.00	1.00	120	13	34	201
416	412	ABC	098-#3/0 A	7.53Y	125.5	0.20	0.51	33.76	11	723	-245	-95	2.12	0.3	1.90	0.90	43	5	9	157
6020	416	ABC	Capacitor	7.53Y	125.5	0.00	0.51	32.05	0	878	-252	-94	0.00	0.0	1.90	0.00	0	0	0	148
OCR-417	6020	A	007-50-H O	7.53Y	125.5	0.00	0.51	38.58	77	289	33	99	0.00	0.0	1.90	0.00	0	0	0	46
417	OCR-417	A	110-#4 ACS	7.40Y	123.3	2.19	2.71	38.58	28	289	33	99	3.20	1.1	4.50	2.60	285	31	46	46
801	6020	ABC	098-#3/0 A	7.52Y	125.3	0.21	0.72	16.68	6	374	41	99	0.56	0.1	2.82	0.92	0	0	0	93
OCR-802	801	ABC	010-50-L O	7.52Y	125.3	0.00	0.72	10.42	21	234	25	99	0.00	0.0	2.82	0.00	0	0	0	56
802	OCR-802	ABC	098-#3/0 A	7.51Y	125.2	0.11	0.83	10.42	3	234	25	99	0.19	0.1	3.62	0.80	0	0	0	56
795	802	ABC	098-#3/0 A	7.51Y	125.1	0.06	0.90	10.42	3	233	25	99	0.09	0.0	4.22	0.60	119	13	30	56
176	795	ABC	098-#3/0 A	7.50Y	125.0	0.06	0.96	5.09	2	114	12	99	0.04	0.0	5.42	1.20	61	7	12	26
175	176	A	110-#4 ACS	7.50Y	125.0	0.08	1.03	4.99	4	37	4	99	0.01	0.0	6.12	0.70	37	4	9	9
174	176	ABC	098-#3/0 A	7.50Y	125.0	0.00	0.96	0.70	0	16	2	99	0.00	0.0	5.92	0.50	16	2	5	5
419	801	A	110-#4 ACS	7.48Y	124.6	0.69	1.41	18.79	13	140	15	99	0.49	0.3	4.50	1.68	140	15	37	37
FUSE-418	6020	A	083-30N FU	7.53Y	125.5	0.00	0.51	2.05	3	15	2	99	0.00	0.0	1.90	0.00	0	0	0	9
418	FUSE-418	A	110-#4 ACS	7.53Y	125.4	0.04	0.56	2.05	1	15	2	99	0.00	0.0	2.90	1.00	15	2	9	9
OCR-413	412	A	010-50-L O	7.54Y	125.7	0.00	0.31	7.90	16	59	6	99	0.00	0.0	1.00	0.00	0	0	0	10
413	OCR-413	A	110-#4 ACS	7.52Y	125.4	0.33	0.64	7.90	6	59	6	99	0.10	0.2	2.90	1.90	59	6	10	10
OCR-8031	9003	ABC	207-340-10	7.56Y	126.0	0.00	0.00	68.17	20	1546	4	100	0.00	0.0	0.00	0.00	0	0	0	227
----- Feeder NO. 1 Beginning with Node Element 8031 -----																				
8031	OCR-8031	ABC	Node	7.56Y	126.0	0.00	0.00	68.17	0	1546	4	100	0.00	0.0	0.00	0.00	0	0	0	227
376	8031	ABC	090-336 AC	7.55Y	125.9	0.12	0.12	68.17	13	1546	4	100	1.47	0.1	0.40	0.40	97	10	24	227
377	376	ABC	098-#3/0 A	7.50Y	125.0	0.89	1.01	63.88	21	1447	-9	-100	9.87	0.7	1.70	1.30	248	27	46	203
378	377	ABC	110-#4 ACS	7.47Y	124.5	0.52	1.54	19.75	14	407	179	92	1.69	0.4	2.40	0.70	47	5	29	33
1414	376	ABC	110-#4 ACS	7.47Y	124.4	0.02	1.55	9.88	7	199	96	90	0.02	0.0	2.49	0.09	199	96	3	3
1426	378	ABC	110-#4 ACS	7.47Y	124.4	0.01	1.55	7.87	6	159	77	90	0.01	0.0	2.49	0.09	159	77	1	1
6038	377	ABC	Capacitor	7.50Y	125.0	0.00	1.01	34.86	0	745	-244	-95	0.00	0.0	1.70	0.00	0	0	0	120
379	6038	ABC	102-#1/0 A	7.49Y	124.8	0.21	1.22	33.32	14	745	81	99	0.87	0.1	2.30	0.60	532	57	89	120
OCR-380	379	A	060-35-4H	7.49Y	124.8	0.00	1.22	28.53	62	212	23	99	0.00	0.0	2.30	0.00	0	0	0	31
380	OCR-380	A	110-#4 ACS	7.47Y	124.5	0.25	1.47	28.53	20	212	23	99	0.27	0.1	2.70	0.40	212	23	31	31
1462	377	ABC	110-#4 ACS	7.50Y	125.0	0.00	1.02	1.83	1	37	18	90	0.00	0.0	1.79	0.09	37	18	4	4

	Load	Adjustment	Capacitance	Charging	Gen&Motors	Loops&Metas	Losses	No Load Losses	Total	Lowest Voltage = 116.71 on Element 295	
KW	11624	0	0	0	0	0	376	0.00	12002		
KVAR	1667	0	-2201	0	0	0	591		157		

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

Database: C:\MILSOFT\DATA\NOLIN\JAN_EXIT03GROWTH\LDLOADWITHCHGRINEY
Title: 2003-2004 Work Plan
Case: NCLIN RECC

Units Displayed In Volts																				
Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	-Base Voltage:120.0-				KVAR	PF	kW Loss	% Loss	mi From Src	Length (mi)	-----Element-----			
							Accum Drop	Thru Amps	% Cap	Thru KW							KW	KVAR	Cons On	Cons Thru
261	279	ABC	096-#3/O A	7.34Y	122.4	0.29	3.55	33.79	11	706	-243	-95	3.12	0.4	6.40	1.40	90	7	29	185
FUSE-262	261	A	063-30N FU	7.34Y	122.4	0.00	3.59	4.37	7	32	3	100	0.00	0.0	6.40	0.00	0	0	0	15
262	FUSE-262	A	110-#4 ACS	7.34Y	122.3	0.09	3.69	4.37	3	32	3	100	0.02	0.0	7.40	1.00	32	3	15	15
263	261	ABC	096-#3/O A	7.34Y	122.3	0.07	3.66	28.81	10	561	-256	-92	0.91	0.1	6.90	0.50	75	6	22	141
OCR-264	263	ABC	006-35-H O	7.34Y	122.3	0.00	3.66	25.85	74	505	-263	-89	0.00	0.0	6.90	0.00	0	0	0	119
264	OCR-264	ABC	102-#1/O A	7.34Y	122.3	0.07	3.73	25.85	11	505	-263	-89	0.81	0.2	7.40	0.50	65	5	10	119
CAP1684	264	ABC	Capacitor	7.34Y	122.3	0.00	3.73	-14.15	0	0	-311	0	0.00	0.0	7.40	0.00	0	0	0	0
915	264	ABC	102-#1/O A	7.31Y	121.9	0.39	4.12	20.03	9	439	42	100	1.23	0.3	8.70	1.30	62	5	20	109
816	915	C	102-#1/O A	7.28Y	121.3	0.53	4.66	51.54	22	375	36	100	1.48	0.4	9.20	0.50	2	0	2	89
917	816	C	102-#1/O A	7.20Y	120.0	1.31	5.97	51.22	22	371	34	100	3.13	0.8	10.60	1.60	163	13	39	57
832	917	C	102-#1/O A	7.19Y	119.6	0.18	6.15	28.65	12	209	17	100	0.24	0.1	11.20	0.40	91	7	15	48
260	832	C	102-#1/O A	7.17Y	119.5	0.33	6.48	15.94	7	114	9	100	0.19	0.2	13.20	2.00	114	9	33	33
OCR-265	6002	ABC	011-70-L O	7.36Y	123.0	0.00	2.97	23.35	33	515	51	100	0.00	0.0	3.90	0.00	0	0	0	103
265	OCR-265	ABC	106-#2 ACS	7.36Y	122.7	0.32	3.29	23.35	13	515	51	100	1.23	0.2	4.50	0.60	70	6	13	103
OCR-266	265	B	006-35-H O	7.36Y	122.7	0.00	3.29	24.32	69	178	15	100	0.00	0.0	4.50	0.00	0	0	0	37
266	OCR-266	B	110-#4 ACS	7.30Y	121.6	1.10	4.40	24.32	17	178	15	100	1.03	0.6	6.60	2.10	177	14	37	37
OCR-267	265	C	007-50-H O	7.36Y	122.7	0.00	3.29	36.18	72	265	30	99	0.00	0.0	4.50	0.00	0	0	0	53
267	OCR-267	C	110-#4 ACS	7.19Y	119.6	2.92	6.22	36.18	26	265	30	99	4.01	1.5	6.20	3.70	261	27	53	53

	Load	Adjustment	Capacitance	Charging	Gen&Motors	Loops&Metas	Losses	No Load	Losses	Total	
KW	9413	0	0	0	0	0	477	0.00	9890		Lowest Voltage = 117.40 on Element 202
KVAR	611	0	-1896	0	0	0	717		-368		

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

Database: C:\MILSOFT\DATA\NOLIN\JAN_EXIT03GROW\..._LOADWITHCHGRINEY
Title: 2003-2004 Work Plan
Case: NOLIN RECC

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			
							Accum Drop	Thru Amps	% Cap	Thru KW							KW	KVAR	Cons On	Cons Thru
120	FUSE-120	B	106-#2 ACS	7.37Y	122.9	0.03	3.15	1.95	1	14	5	94	0.00	0.0	5.20	1.00	14	5	3	3
121	119	B	106-#2 ACS	7.34Y	122.3	0.61	3.72	22.69	13	157	56	94	0.66	0.4	5.00	0.80	5	2	3	54
FUSE-122	121	B	081-20N FU	7.34Y	122.3	0.00	3.72	1.17	3	8	3	94	0.00	0.0	5.00	0.00	0	0	0	5
122	FUSE-122	B	106-#2 ACS	7.34Y	122.3	0.01	3.73	1.17	1	8	3	94	0.00	0.0	5.70	0.70	8	3	5	5
FUSE-123	121	B	081-20N FU	7.34Y	122.3	0.00	3.72	0.68	2	6	2	95	0.00	0.0	5.00	0.00	0	0	0	4
123	FUSE-123	B	106-#2 ACS	7.34Y	122.3	0.01	3.73	0.88	0	6	2	95	0.00	0.0	5.70	0.70	6	2	4	4
124	121	B	106-#2 ACS	7.31Y	121.8	0.44	4.16	19.85	11	137	49	94	0.40	0.3	5.70	0.70	22	8	5	42
125	124	B	106-#2 ACS	7.29Y	121.6	0.28	4.43	11.64	6	80	28	94	0.10	0.1	7.10	1.40	60	28	23	23
OCR-126	124	B	005-25-H O	7.31Y	121.8	0.00	4.16	5.08	20	35	12	95	0.00	0.0	5.70	0.00	0	0	0	14
126	OCR-126	B	110-#4 ACS	7.30Y	121.6	0.25	4.41	5.08	4	35	12	95	0.04	0.1	7.80	2.10	35	12	14	14
79	77	ABC	102-#1/0 A	7.46Y	124.3	-0.13	1.75	14.54	6	211	-247	-65	0.92	0.4	4.60	1.90	114	40	31	63
723	79	ABC	102-#1/0 A	7.47Y	124.5	-0.21	1.52	13.58	6	96	-288	-32	0.62	0.6	6.10	1.30	96	34	32	32
6018	723	ABC	Capacitor	7.47Y	124.5	0.00	1.52	-14.41	213	0	-323	0	0.00	0.0	6.10	0.00	0	0	0	0
OCR-78	77	ABC	007-50-H O	7.45Y	124.1	0.00	1.66	15.46	31	325	117	94	0.00	0.0	2.90	0.00	0	0	0	223
78	OCR-78	ABC	090-336 AC	7.43Y	123.8	0.36	2.22	15.46	3	325	117	94	0.54	0.2	6.23	3.33	75	27	122	223
80	78	ABC	102-#1/0 A	7.42Y	123.7	0.05	2.27	2.33	1	49	17	94	0.01	0.0	8.53	2.30	49	17	31	31
OCR-81	78	B	006-35-H O	7.43Y	123.8	0.00	2.22	28.70	82	201	72	94	0.00	0.0	6.23	0.00	0	0	0	70
81	OCR-81	B	110-#4 ACS	7.24Y	120.7	3.04	5.26	28.70	20	201	72	94	3.07	1.5	10.73	4.50	198	70	70	70
OCR-79	77	ABC	011-70-L O	7.45Y	124.1	0.00	1.66	0.00	0	0	0	0	0.00	0.0	2.90	0.00	0	0	0	0
1413	75	ABC	110-#4 ACS	7.48Y	124.7	0.00	1.29	0.00	0	0	0	0	0.00	0.0	1.99	0.09	0	0	0	0

	Load	Adjustment	Capacitance	Charging	Gen&Motors	Loops&Metas	Losses	No Load	Losses	Total	
KW	6327	0	0	0	0	0	156	0.00	6484		Lowest Voltage = 117.91 on Element 106
KVAR	2241	0	-1277	0	0	0	255		1218		

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

Database: C:\MILSOFT\DATA\NOLIN\JAN_EXIT03GROWTH\LOADWITHCHGRINEY
Title: 2003-2004 Work Plan
Case: NOLIN RECC

Units Displayed In Volts																				
-Base Voltage:120.0-																				
Element Name	Parent Name	Chf	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			
																	Cons On	Cons Thru		
151	724	B	110-#4 ACS	7.32Y	122.0	0.37	3.98	6.40	5	46	12	97	0.08	0.2	9.00	2.50	45	12	17	17
725	724	B	110-#4 ACS	7.32Y	122.0	0.35	3.97	6.49	6	60	16	97	0.11	0.2	6.30	1.60	60	15	15	15
OCR-8071	9007	ABC	207-340-10	7.56Y	126.0	0.00	0.00	68.99	26	1943	548	96	0.00	0.0	0.00	0.00	0	0	0	582
----- Feeder NO. 1 Beginning with Node Element 8071 -----																				
8071	OCR-8071	ABC	Node	7.56Y	126.0	0.00	0.00	85.99	1316	1943	548	96	0.00	0.0	0.00	0.00	0	0	0	582
153	5071	ABC	098-#3/0 A	7.45Y	124.1	1.89	1.89	68.99	30	1943	548	96	23.84	1.2	1.40	1.40	21	5	3	582
OCR-154	153	B	060-35-4H	7.45Y	124.1	0.00	1.89	30.06	86	217	56	97	0.00	0.0	1.40	0.00	0	0	0	60
154	OCR-154	B	110-#4 ACS	7.35Y	122.5	1.66	3.55	30.06	21	217	56	97	1.79	0.8	3.80	2.40	215	55	60	60
OCR-155	153	A	060-35-4H	7.45Y	124.1	0.00	1.89	27.94	50	201	52	97	0.00	0.0	1.40	0.00	0	0	0	72
155	OCR-155	A	110-#4 ACS	7.33Y	122.1	2.00	3.86	27.94	20	201	52	97	2.00	1.0	4.50	3.10	199	51	72	72
156	153	ABC	098-#3/0 A	7.36Y	122.7	1.41	3.30	68.71	23	1480	407	96	13.55	0.9	2.80	1.40	99	25	22	447
OCR-157	156	A	060-35-4H	7.36Y	122.7	0.00	3.30	13.53	39	96	25	97	0.00	0.0	2.80	0.00	0	0	0	25
157	OCR-157	A	110-#4 ACS	7.32Y	122.1	0.62	3.92	13.53	10	96	25	97	0.30	0.3	4.60	2.00	96	25	25	25
158	156	ABC	098-#3/0 A	7.34Y	122.3	0.45	3.74	59.60	20	1271	342	97	3.61	0.3	3.30	0.50	17	4	10	400
159	158	ABC	098-#3/0 A	7.32Y	122.1	0.20	3.94	11.31	4	241	62	97	0.31	0.1	4.50	1.20	18	5	7	60
OCR-729	159	ABC	007-50-H O	7.32Y	122.1	0.00	3.94	10.44	21	222	57	97	0.00	0.0	4.50	0.00	0	0	0	73
729	OCR-729	ABC	098-#3/0 A	7.31Y	121.9	0.18	4.12	10.44	3	222	57	97	0.24	0.1	5.90	1.40	82	21	34	73
FUSE-160	729	A	061-20N FU	7.31Y	121.9	0.00	4.12	13.12	33	93	24	97	0.00	0.0	5.90	0.00	0	0	0	23
160	FUSE-160	A	110-#4 ACS	7.28Y	121.3	0.60	4.72	13.12	9	93	24	97	0.28	0.3	7.90	2.00	93	24	23	23
161	729	ABC	098-#3/0 A	7.31Y	121.9	0.02	4.14	2.21	1	47	12	97	0.00	0.0	7.30	1.40	47	12	16	16
OCR-162	156	ABC	062-70-4H	7.34Y	122.3	0.00	3.74	47.51	68	1010	271	97	0.00	0.0	3.30	0.00	0	0	0	310
162	OCR-162	ABC	098-#3/0 A	7.32Y	122.0	0.29	4.03	47.51	16	1010	271	97	1.95	0.2	3.70	0.40	5	1	3	310
163	162	A	110-#4 ACS	7.30Y	121.7	0.30	4.33	21.89	16	155	40	97	0.24	0.2	4.30	0.60	155	40	27	27
164	162	ABC	098-#3/0 A	7.26Y	121.0	0.95	4.98	39.99	13	848	228	97	5.37	0.6	5.30	1.60	33	8	14	280
OCR-165	164	B	006-35-H O	7.26Y	121.0	0.00	4.98	33.00	94	232	60	97	0.00	0.0	5.30	0.00	0	0	0	66
165	OCR-165	B	110-#4 ACS	7.17Y	119.5	1.52	6.50	33.00	24	232	60	97	1.80	0.8	7.30	2.00	230	59	66	66
166	164	ABC	098-#3/0 A	7.23Y	120.4	0.59	5.57	27.45	9	578	153	97	2.26	0.4	6.80	1.50	56	14	24	200
6034	166	ABC	Capacitor	7.23Y	120.4	0.00	5.57	24.81	368	520	136	97	0.00	0.0	6.80	0.00	0	0	0	176
168	6034	ABC	098-#3/0 A	7.20Y	120.1	0.35	5.92	24.81	8	520	136	97	1.21	0.2	7.80	1.00	58	15	12	176
OCR-169	168	A	005-25-H O	7.20Y	120.1	0.00	5.92	6.24	33	57	15	97	0.00	0.0	7.80	0.00	0	0	0	25
169	OCR-169	A	110-#4 ACS	7.18Y	119.7	0.34	6.27	6.24	6	57	15	97	0.10	0.2	9.60	1.60	57	15	25	25
170	166	ABC	098-#3/0 A	7.16Y	119.7	0.37	6.30	19.30	6	404	105	97	0.98	0.2	9.20	1.40	66	17	20	139
OCR-171	170	A	006-35-H O	7.18Y	119.7	0.00	6.30	21.49	61	149	39	97	0.00	0.0	9.20	0.00	0	0	0	49
171	OCR-171	A	110-#4 ACS	7.09Y	118.2	1.49	7.78	21.49	15	149	39	97	1.15	0.8	12.20	3.00	148	36	49	49
OCR-172	170	ABC	007-50-H O	7.18Y	119.7	0.00	6.30	6.95	18	167	49	97	0.00	0.0	9.20	0.00	0	0	0	70
172	OCR-172	ABC	098-#3/0 A	7.17Y	119.5	0.19	6.49	6.95	3	187	49	97	0.23	0.1	10.70	1.50	26	7	15	70
147	172	A	106-#2 ACS	7.10Y	118.3	1.25	7.73	18.61	10	129	34	97	0.78	0.6	14.80	4.10	128	33	45	45
173	172	A	110-#4 ACS	7.15Y	119.2	0.31	6.80	4.24	3	29	6	96	0.07	0.2	12.40	1.70	4	1	1	10
854	173	A	110-#4 ACS	7.14Y	119.1	0.13	6.93	3.72	3	26	7	97	0.02	0.1	13.90	1.50	26	7	9	9

	Load	Adjustment	Capacitance	Charging	Gen&Motors	Loops&Metas	Losses	No Load	Losses	Total	Lowest Voltage = 117.99 on Element 137	
KW	4929	0	0	0	0	0	171	0.00	5099			
KVAR	1406	0	-646	0	0	0	181		941			

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

Database: C:\MILSOFT\DATA\NOLIN\JAN_EXIT03GROW LOADWITHCHGRINEY
Title: 2003-2004 Work Plan
Case: NOLIN RECC

Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Units Displayed In Volts				KVAR	PF	kW Loss	W Loss	mi From Src	Length (mi)	Element			
							-Base Accum Drop	Thru Amps	% Cap	Thru kW							KW	KVAR	Cons On	Cons Thru
42	60	B	110-#4 ACS	7.29Y	121.6	1.00	4.45	16.96	12	121	31	97	0.83	0.7	5.20	1.50	35	9	19	47
43	42	B	110-#4 ACS	7.25Y	120.9	0.68	5.13	10.17	7	72	19	97	0.25	0.3	8.10	2.90	72	18	24	24
41	42	B	110-#4 ACS	7.29Y	121.5	0.07	4.52	1.66	1	13	3	97	0.00	0.0	6.60	1.60	13	3	4	4
FUSE-59	57	A	063-30N FU	7.49Y	124.8	0.00	1.20	16.63	28	120	31	97	0.00	0.0	1.70	0.00	0	0	0	35
59	FUSE-59	A	106-#2 ACS	7.44Y	124.0	0.84	2.04	16.63	9	120	31	97	0.47	0.4	4.77	3.07	120	31	35	35
58	57	C	110-#4 ACS	7.43Y	123.8	1.04	2.24	16.65	12	121	31	97	0.62	0.5	4.40	2.70	120	31	35	35
54	53	ABC	106-#2 ACS	7.42Y	123.7	1.67	2.29	25.65	14	560	146	97	6.09	1.1	3.70	3.00	194	50	51	172
OCR-55	54	C	061-50-4H	7.42Y	123.7	0.00	2.29	25.10	50	180	47	97	0.00	0.0	3.70	0.00	0	0	0	61
55	OCR-55	C	110-#4 ACS	7.31Y	121.9	1.65	4.14	25.10	16	180	47	97	1.67	0.9	6.90	3.20	179	46	61	61
OCR-56	54	A	061-50-4H	7.42Y	123.7	0.00	2.29	25.01	50	180	47	97	0.00	0.0	3.70	0.00	0	0	0	66
56	OCR-56	A	106-#2 ACS	7.36Y	122.6	1.07	3.35	25.01	14	180	47	97	0.90	0.5	6.30	2.60	179	46	60	60

	Load	Adjustment	Capacitance	Charging	Gen&Motors	Loops&Metas	Losses	No Load Losses	Total	
KW	5520	0	0	0	0	0	218	0.00	5738	Lowest Voltage = 119.92 on Element 19
KVAR	2421	0	-1573	0	0	0	294	1143		

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

Database: C:\MILSOFT\DATA\NOLIN\JAN_EXIT03GROW. JLOADWITHCHGRINEY
Title: 2003-2004 Work Plan
Case: NOLIN RECC

Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Units Displayed In Volts				KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	Element			
							-Base Accum Drop	Thru Amps	% Cap	Thru KW							KW	KVAR	Cons On	Cons Thru
CAP1717	659	ABC	Capacitor	7.19Y	119.9	0.00	6.12	-13.88	0	0	-299	0	0.00	0.0	3.34	0.00	0	0	0	0
OCR-911	659	ABC	061-50-4H	7.19Y	119.9	0.00	6.12	0.00	0	0	0	0	0.00	0.0	3.34	0.00	0	0	0	0
911	OCR-911	B	110-#4 ACS	7.19Y	119.9	0.00	6.12	0.00	0	0	0	0	0.00	0.0	3.49	0.15	0	0	0	0
OCR-912	659	ABC	086-#5N FU	7.19Y	119.9	0.00	6.12	0.00	0	0	0	0	0.00	0.0	3.34	0.00	0	0	0	0
912	OCR-912	ABC	098-#3/0 A	7.19Y	119.9	0.00	6.12	0.00	0	0	0	0	0.00	0.0	3.67	0.33	0	0	0	0
908	659	ABC	098-#3/0 A	7.19Y	119.8	0.05	6.16	90.23	20	1299	-48	-100	0.54	0.0	3.41	0.07	0	0	0	272
1435	908	ABC	110-#4 ACS	7.19Y	119.8	0.06	6.22	30.33	22	589	265	90	0.20	0.0	3.51	0.09	569	265	5	5
OCR-632	908	A	061-50-4H	7.19Y	119.8	0.00	6.16	29.09	58	209	-16	-100	0.00	0.0	3.41	0.00	0	0	0	163
632	OCR-632	A	110-#4 ACS	7.15Y	119.1	0.70	6.87	29.09	21	209	-16	-100	1.09	0.5	4.21	0.80	96	-6	52	163
769	632	A	110-#4 ACS	7.14Y	119.0	0.13	7.00	15.64	11	111	-9	-100	0.09	0.1	4.64	0.42	111	-9	111	111
OCR-677	908	ABC	061-50-4H	7.19Y	119.8	0.00	6.16	27.49	55	501	-317	-85	0.00	0.0	3.41	0.00	0	0	0	104
677	OCR-677	ABC	110-#4 ACS	7.19Y	119.6	0.06	6.25	27.49	20	501	-317	-85	0.86	0.2	3.76	0.35	500	-19	104	104
CAP1805	677	ABC	Capacitor	7.19Y	119.8	0.00	6.25	-13.66	0	0	-299	0	0.00	0.0	3.76	0.00	0	0	0	0
----- Feeder NO. 1		Beginning with Node Element 6091																		
6091	586	ABC	Node	7.21Y	120.2	0.00	5.83	9.59	142	167	90	90	0.00	0.0	3.11	0.00	0	0	0	9
1430	6091	ABC	110-#4 ACS	7.21Y	120.2	0.02	5.85	8.02	6	156	76	90	0.01	0.0	3.21	0.09	156	76	6	6
1452	6091	ABC	110-#4 ACS	7.21Y	120.2	0.00	5.83	0.00	0	0	0	0	0.00	0.0	3.21	0.09	0	0	2	2
1467	6091	ABC	110-#4 ACS	7.21Y	120.2	0.00	5.84	1.57	1	31	15	90	0.00	0.0	3.21	0.09	31	15	1	1
OCR-840	841	A	062-70-4H	7.30Y	121.7	0.00	4.32	11.54	16	84	-7	-100	0.00	0.0	2.41	0.00	0	0	0	67
840	OCR-840	A	110-#4 ACS	7.30Y	121.6	0.07	4.39	11.54	8	84	-7	-100	0.03	0.0	2.71	0.30	84	-7	67	67
1401	581	ABC	110-#4 ACS	7.38Y	123.0	0.10	3.03	52.77	38	1052	510	90	0.59	0.1	1.93	0.09	1052	509	2	2
OCR-8092	7091	ABC	118-400-17	7.56Y	126.0	0.00	0.00	9.29	2	211	-3	-100	0.00	0.0	0.00	0.00	0	0	0	36
----- Feeder NO. 2		Beginning with Node Element 8092																		
8092	OCR-8092	ABC	Node	7.56Y	126.0	0.00	0.00	9.29	138	211	-3	-100	0.00	0.0	0.00	0.00	0	0	0	36
618	8092	ABC	098-#3/0 A	7.56Y	125.9	0.06	0.06	9.29	3	211	-3	-100	0.09	0.0	1.50	1.50	211	-3	36	36
OCR-8093	7091	ABC	206-400-14	7.56Y	126.0	0.00	0.00	0.00	0	0	0	0	0.00	0.0	0.00	0.00	0	0	0	0
----- Feeder NO. 3		Beginning with Node Element 8093																		
8093	OCR-8093	ABC	Node	7.56Y	126.0	0.00	0.00	0.00	0	0	0	0	0.00	0.0	0.00	0.00	0	0	0	0

	Load	Adjustment	Capacitance	Charging	Gen&Motors	Loops&Metas	Losses	No Load	Losses	Total	
KW	10440	0	0	0	0	0	259		0.00	10699	Lowest Voltage = 119.00 on Element 769
KVAR	1603	0	-1693	0	0	0	454			163	

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

Database: C:\NHL\SOFT\DATA\NOLIN\JAN_EXIT03GROW DLOADWITHCHGRINEY
Title: 2003-2004 Work Plan
Case: NOLIN RECC

Units Displayed In Volts

-Base Voltage:120.0-

Table with columns: Element Name, Parent Name, Cnf, Type/Conductor, Pri kv, Base Volt, Element Drop, Element Accum Drop, Thru Amps, % Cap, Thru KW, KVAR, % PF, kW Loss, % Loss, mi From Src, Length (mi), Element KW, Element KVAR, Cons On, Cons Thru. The table lists various electrical elements and their properties, including a summary section for Feeder NO. 3, 4, and 5.

Summary table with columns: Load, Adjustment, Capacitance, Charging, Gen&Motors, Loops&Metas, Losses, No Load Losses, Total. Values include 11366, 0, 0, 0, 0, 0, 134, 0.00, 11500. A note states 'Lowest Voltage = 121.64 on Element 902'.

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Database: C:\MILSOFT\DATA\WOLIN\JAN_EXIT03GROW.LOADWITHCHGRINEY
Title: 2003-2004 Work Plan
Case: NOLIN RECC

Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Units Displayed in Volts			Thru KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	Element		
							-Base Voltage:120.0-	Accum Drop	Thru Amps								Cap	KW	KVAR
9011		ABC	SRC-9011-j	7.56Y	126.0	0.00	0.00	357.05	0	7809	2148	96	0.00	0.0	0.00	0.00	0	0	0 3591
7111	9011	ABC	Node	7.56Y	126.0	0.00	0.00	288.69	3961	5925	1423	97	0.00	0.0	0.00	0.00	0	0 0 2728	
OCR-8111	7111	ABC	205-400-10	7.56Y	126.0	0.00	0.00	189.77	47	4168	1075	97	0.00	0.0	0.00	0.00	0	0 0 0 356	
----- Feeder NO. 1 Beginning with Node Element 8111							-----												
8111	OCR-8111	ABC	Node	7.56Y	126.0	0.00	0.00	189.77	2811	4168	1075	97	0.00	0.0	0.00	0.00	0	0 0 0 356	
672	8111	ABC	090-336 AC	7.53Y	125.5	0.54	0.54	189.77	36	4168	1075	97	12.01	0.3	0.40	0.40	2	0 0 1 356	
465	672	ABC	090-336 AC	7.51Y	125.2	0.27	0.81	189.69	36	4154	1047	97	6.00	0.1	0.60	0.20	0	0 0 2 355	
6003	465	ABC	Capacitor	7.51Y	125.2	0.00	0.81	189.69	2810	4148	1033	97	0.00	0.0	0.60	0.00	0	0 0 0 353	
879	6003	ABC	090-336 AC	7.50Y	124.9	0.25	1.06	198.69	37	4148	1686	93	4.94	0.1	0.75	0.15	0	0 0 1 353	
860	879	ABC	096-#3/0 A	7.49Y	124.8	0.17	1.23	29.24	10	592	287	90	0.50	0.1	1.30	0.55	425	206 14 21	
1453	880	ABC	110-#4 ACS	7.49Y	124.8	0.01	1.24	6.53	5	132	64	90	0.01	0.0	1.39	0.09	132	64 6 6	
1454	880	ABC	110-#4 ACS	7.49Y	124.8	0.00	1.23	0.00	0	0	0	0	0.00	0.0	1.39	0.09	0	0 0 0 0	
1455	880	ABC	110-#4 ACS	7.49Y	124.8	0.00	1.23	1.72	1	35	17	90	0.00	0.0	1.39	0.09	35	17 1 1	
OCR-777	879	ABC	220-340-12	7.50Y	124.9	0.00	1.06	189.53	30	3551	1367	93	0.00	0.0	0.75	0.00	0	0 0 0 231	
777	OCR-777	ABC	090-336 AC	7.48Y	124.7	0.22	1.28	189.53	32	3551	1367	93	3.60	0.1	0.93	0.18	680	330 20 331	
767	777	ABC	110-#4 ACS	7.45Y	124.2	0.57	1.85	83.17	59	1791	528	96	7.70	0.4	1.11	0.18	164	78 25 307	
OCR-575	767	ABC	012-100-L	7.45Y	124.2	0.00	1.85	63.66	64	1383	333	97	0.00	0.0	1.11	0.00	0	0 0 0 264	
575	OCR-575	ABC	106-#2 ACS	7.40Y	123.3	0.83	2.68	63.66	35	1383	333	97	5.71	0.4	2.11	1.00	1377	329 264 264	
1475	575	ABC	110-#4 ACS	7.40Y	123.3	0.00	2.66	0.00	0	0	0	0	0.00	0.0	2.20	0.09	0	0 0 0 0	
6111	767	ABC	Node	7.45Y	124.2	0.00	1.85	11.74	174	236	114	90	0.00	0.0	1.11	0.00	0	0 0 0 18	
1421	6111	ABC	110-#4 ACS	7.45Y	124.1	0.02	1.87	11.74	8	236	114	90	0.03	0.0	1.20	0.09	236	114 18 18	
6112	777	ABC	Node	7.48Y	124.7	0.00	1.26	53.28	789	1076	521	90	0.00	0.0	0.93	0.00	0	0 0 0 4	
1409	6112	ABC	110-#4 ACS	7.48Y	124.7	0.06	1.35	33.69	24	681	330	90	0.24	0.0	1.02	0.09	680	330 3 3	
1410	6112	ABC	110-#4 ACS	7.48Y	124.7	0.04	1.32	19.59	14	396	192	90	0.08	0.0	1.02	0.09	396	192 1 1	
OCR-8112	7111	ABC	209-400-14	7.56Y	126.0	0.00	0.00	79.01	20	1758	348	98	0.00	0.0	0.00	0.00	0	0 0 0 2372	
----- Feeder NO. 2 Beginning with Node Element 8112							-----												
8112	OCR-8112	ABC	Node	7.56Y	126.0	0.00	0.00	79.01	1171	1758	348	98	0.00	0.0	0.00	0.00	0	0 0 0 2372	
OH1571	8112	ABC	600-336.4	7.54Y	125.7	0.33	0.33	79.01	15	1758	348	98	3.44	0.2	0.60	0.60	0	0 0 0 2372	
882	OH1571	ABC	090-336 AC	7.51Y	125.1	0.58	0.91	79.01	15	1754	341	98	5.58	0.3	1.80	1.20	229	47 149 2372	
463	882	ABC	090-336 AC	7.50Y	124.9	0.17	1.06	68.65	13	1520	261	98	1.32	0.1	2.30	0.50	590	205 770 2223	
OCR-456	463	ABC	011-70-L O	7.50Y	124.9	0.00	1.06	31.91	46	715	56	100	0.00	0.0	2.30	0.00	0	0 0 0 1156	
456	OCR-456	ABC	106-#2 ACS	7.47Y	124.6	0.35	1.43	31.91	16	715	56	100	1.29	0.2	3.20	0.90	714	55 1156 1156	
827	463	ABC	098-#3/0 A	7.49Y	124.9	0.01	1.09	9.52	3	213	17	100	0.01	0.0	2.40	0.10	213	17 297 297	
883	882	ABC	098-#3/0 A	7.51Y	125.1	0.00	0.91	0.00	0	0	0	0	0.00	0.0	2.20	0.40	0	0 0 0 0	
OCR-8113	7111	ABC	209-400-14	7.56Y	126.0	0.00	0.00	0.00	0	0	0	0	0.00	0.0	0.00	0.00	0	0 0 0 0	
----- Feeder NO. 3 Beginning with Node Element 8113							-----												
8113	OCR-8113	ABC	Node	7.56Y	126.0	0.00	0.00	0.00	0	0	0	0	0.00	0.0	0.00	0.00	0	0 0 0 0	
OCR-8114	9011	ABC	203-400-10	7.56Y	126.0	0.00	0.00	88.97	22	1883	725	93	0.00	0.0	0.00	0.00	0	0 0 0 863	
----- Feeder NO. 4 Beginning with Node Element 8114							-----												
8114	OCR-8114	ABC	Node	7.56Y	126.0	0.00	0.00	88.97	1318	1883	725	93	0.00	0.0	0.00	0.00	0	0 0 0 863	
779	8114	ABC	090-336 AC	7.53Y	125.6	0.44	0.44	88.97	17	1883	725	93	3.95	0.2	0.60	0.60	7	1 2 863	
881	779	ABC	090-336 AC	7.53Y	125.5	0.11	0.54	88.65	17	1872	715	93	0.96	0.1	0.75	0.15	53	21 3 861	
780	881	ABC	090-336 AC	7.52Y	125.4	0.06	0.60	86.13	18	1816	691	93	0.37	0.0	0.90	0.15	1594	603 842 858	
778	780	ABC	098-#3/0 A	7.52Y	125.4	0.01	0.61	9.13	3	193	73	94	0.01	0.0	1.05	0.15	193	73 15 15	
1432	780	ABC	110-#4 ACS	7.52Y	125.4	0.00	0.60	1.54	1	31	15	90	0.00	0.0	0.99	0.09	31	15 1 1	

	Load	Adjustment	Capacitance	Charging	Gen&Motors	Loops&Metas	Losses	No Load Losses	Total	Lowest Voltage = 123.32 on Element 575		
KW	7751	0	0	0	0	0	58	0.00	7809			
KVAR	2696	0	-653	0	0	0	105		2146			

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

Database: C:\MILSOFT\DATA\NOLIN\JAN_EXIT03GROWT...LOADWITHCHGRINEY
Title: 2003-2004 Work Plan
Case: NOLIN RECC

Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Units Displayed In Volts				Thru KW	KVAR	PF	kW Loss	% Loss	mi From Src	Length (mi)	Element			
							Accum Drop	Thru Amps	% Cap	Thru KW								KW	KVAR	Cons Ch	Cons Thru
OCR-8124	9012	ABC	211-400-12	7.56Y	126.0	0.00	0.00	24.74	6	554	91	99	0.00	0.0	0.00	0.00	0	0	0	150	
----- Feeder NO. 4 Beginning with Node Element 8124 -----																					
8124	OCR-8124	ABC	Node	7.56Y	126.0	0.00	0.00	24.74	367	554	91	99	0.00	0.0	0.00	0.00	0	0	0	150	
774	8124	ABC	090-336 AC	7.56Y	125.9	0.08	0.08	24.74	5	554	91	99	0.25	0.0	0.50	0.50	22	3	6	150	
490	774	ABC	096-#3/0 A	7.54Y	125.6	0.31	0.38	23.76	8	531	87	99	0.83	0.2	2.00	1.50	417	59	125	144	
FUSE-491	490	A	084-40N FU	7.54Y	125.6	0.00	0.38	6.60	11	64	9	99	0.00	0.0	2.00	0.00	0	0	0	17	
491	FUSE-491	A	110-#4 ACS	7.52Y	125.4	0.23	0.61	6.60	6	64	9	99	0.07	0.1	3.20	1.20	64	9	17	17	
1460	490	ABC	106-#2 ACS	7.54Y	125.6	0.00	0.39	2.31	1	49	18	94	0.00	0.0	2.09	0.09	49	18	2	2	

	Load	Adjustment	Capacitance	Charging	Gen&Motors	Loops&Metas	Losses	No Load	Losses	Total	
KW	11546	0	0	0	0	0	232		0.00	11778	Lowest Voltage = 116.06 on Element 115
KVAR	3561	0	-930	-9	0	0	446			3068	

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

Database: C:\MILSOFT\DATA\NOLIN\JAN_EXIT03GROW.DLOADWITHCHGRINEY
Title: 2003-2004 Work Plan
Case: NOLIN RECC

Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Units Displayed In Volts				KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	Element		Cons On	Cons Thru
							-Base Accum Drop	Thru Amps	% Cap	Thru KW							KW	KVAR		
9013		ABC	SRC-9013-j	7.56Y	126.0	0.00	0.00	483.77	0	10842	1685	99	0.00	0.0	0.00	0.00	0	0	0	2362
7131	9013	ABC	Node	7.56Y	126.0	0.00	0.00	275.35	0	6163	1007	99	0.00	0.0	0.00	0.00	0	0	0	1355
OCR-8131	7131	ABC	118-400-17	7.56Y	126.0	0.00	0.00	0.00	0	0	0	0	0.00	0.0	0.00	0.00	0	0	0	0
----- Feeder NO. 1 Beginning with Node Element 8131 -----																				
5131	OCR-8131	ABC	Node	7.56Y	126.0	0.00	0.00	0.00	0	0	0	0	0.00	0.0	0.00	0.00	0	0	0	0
OCR-8132	7131	ABC	212-ESV	7.56Y	126.0	0.00	0.00	148.61	13	3300	685	98	0.00	0.0	0.00	0.00	0	0	0	654
OCR-440	OCR-8132	ABC	204-280VWE	7.56Y	126.0	0.00	0.00	148.61	53	3300	685	98	0.00	0.0	0.00	0.00	0	0	0	654
440	OCR-440	ABC	102-#1/0 A	7.42Y	123.6	2.37	2.37	148.61	65	3300	685	98	48.56	1.5	1.09	1.09	1022	188	243	654
441	440	ABC	106-#2 ACS	7.35Y	123.0	0.66	3.03	102.23	57	2230	450	96	7.37	0.3	1.59	0.50	2223	446	411	411
2427	OCR-8132	ABC	096-#3/0 A	7.56Y	126.0	0.00	0.00	0.00	0	0	0	0	0.00	0.0	0.40	0.40	0	0	0	0
----- Feeder NO. 2 Beginning with Node Element 8132 -----																				
8132	OCR-8132	ABC	Node	7.56Y	126.0	0.00	0.00	0.00	0	0	0	0	0.00	0.0	0.00	0.00	0	0	0	0
OCR-8134	7131	ABC	212-ESV	7.56Y	126.0	0.00	0.00	127.04	11	2863	323	99	0.00	0.0	0.00	0.00	0	0	0	701
----- Feeder NO. 3 Beginning with Node Element 8134 -----																				
8134	OCR-8134	ABC	Node	7.56Y	126.0	0.00	0.00	127.04	0	2663	323	99	0.00	0.0	0.00	0.00	0	0	0	701
428	8134	ABC	090-336 AC	7.54Y	125.7	0.29	0.29	127.04	24	2863	323	99	5.34	0.2	0.40	0.40	25	3	6	701
429	428	ABC	106-#2 ACS	7.48Y	124.6	1.09	1.38	66.85	37	1504	166	99	10.05	0.7	1.30	0.90	827	83	174	362
OCR-829	429	B	061-50-4H	7.48Y	124.6	0.00	1.36	89.72	179	666	77	99	0.00	0.0	1.30	0.00	0	0	0	208
829	OCR-829	B	110-#4 ACS	7.28Y	121.4	3.25	4.63	89.72	64	666	77	99	15.65	2.3	2.20	0.90	105	11	21	208
430	829	B	110-#4 ACS	7.16Y	119.4	1.97	6.60	75.31	54	545	57	99	5.63	1.0	3.40	1.20	540	54	187	187
OCR-890	428	A	061-50-4H	7.54Y	125.7	0.00	0.29	0.00	0	0	0	0	0.00	0.0	0.40	0.00	0	0	0	0
890	OCR-890	A	110-#4 ACS	7.54Y	125.7	0.00	0.29	0.00	0	0	0	0	0.00	0.0	0.59	0.19	0	0	0	0
869	428	ABC	090-336 AC	7.53Y	125.6	0.14	0.43	59.07	11	1329	142	99	1.20	0.1	0.82	0.42	15	2	3	313
426	869	ABC	090-336 AC	7.53Y	125.5	0.07	0.50	58.39	11	1312	138	99	0.56	0.0	1.02	0.20	9	1	3	310
424	426	ABC	090-336 AC	7.51Y	125.2	0.28	0.78	54.21	10	1218	127	99	2.07	0.2	2.02	1.00	237	24	102	279
422	424	ABC	090-336 AC	7.51Y	125.2	0.07	0.85	41.70	8	935	94	99	0.29	0.0	2.62	0.60	935	93	167	167
423	424	A	110-#4 ACS	7.51Y	125.1	0.08	0.85	5.90	4	44	4	100	0.02	0.0	2.62	0.60	44	4	10	10
425	426	A	110-#4 ACS	7.52Y	125.4	0.15	0.65	11.36	8	85	9	99	0.06	0.1	1.62	0.60	85	9	28	28
OCR-8133	9013	ABC	208-400-14	7.56Y	126.0	0.00	0.00	208.44	52	4678	678	99	0.00	0.0	0.00	0.00	0	0	0	1007
----- Feeder NO. 4 Beginning with Node Element 8133 -----																				
8133	OCR-8133	ABC	Node	7.56Y	126.0	0.00	0.00	208.44	0	4678	678	99	0.00	0.0	0.00	0.00	0	0	0	1007
434	8133	ABC	090-336 AC	7.49Y	124.8	1.24	1.24	208.44	39	4678	678	99	35.30	0.8	1.00	1.00	147	15	64	1007
607	434	ABC	090-336 AC	7.46Y	124.3	0.46	1.70	201.87	38	4496	582	99	12.61	0.3	1.40	0.40	402	45	186	943
606	607	ABC	090-336 AC	7.37Y	122.8	1.47	3.16	183.83	35	4062	508	99	36.34	0.9	2.90	1.50	712	71	160	757
OCR-906	606	A	012-100-L	7.37Y	122.8	0.00	3.16	0.00	0	0	0	0	0.00	0.0	2.90	0.00	0	0	0	0
906	OCR-906	A	110-#4 ACS	7.37Y	122.8	0.00	3.16	0.00	0	0	0	0	0.00	0.0	3.37	0.47	0	0	0	0
605	606	ABC	090-336 AC	7.33Y	122.2	0.60	3.77	151.56	29	3333	353	99	8.94	0.3	4.30	1.40	3324	332	597	597
OCR-601	605	ABC	012-100-L	7.33Y	122.2	0.00	3.77	0.00	0	0	0	0	0.00	0.0	4.30	0.00	0	0	0	0

	Load	Adjustment	Capacitance	Charging	Gen&Motors	Loops&Metas	Losses	No Load Losses	Total	
KW	10652	0	0	0	0	0	190	0.00	10842	Lowest Voltage = 119.40 on Element 430
KVAR	1379	0	0	0	0	0	306	1685		

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

Database: C:\MILSOFT\DATA\NOLIN\JAN_EXIT03GROW.DLOADWITHCHGRINEY
Title: 2003-2004 Work Plan
Case: NOLIN RECC

Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Units Displayed In Volts							mi From Src	Length (mi)	-----Element-----				
							-Base Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	KW Loss			% Loss	Cons Cons			
							-----Base Voltage:120.0-----									Thru	%	Loss	Loss	On
9014		ABC	SRC-9014-j	7.56Y	126.0	0.00	0.00	665.54	0	15392	2264	99	0.00	0.0	0.00	0.00	0	0	0	4934
----- Feeder NO. 1 Beginning with Node Element 7141 -----																				
7141	9014	ABC	Node	7.56Y	126.0	0.00	0.00	579.18	8560	13001	1877	99	0.00	0.0	0.00	0.00	0	0	0	4482
OCR-8141	7141	ABC	208-400-14	7.56Y	126.0	0.00	0.00	174.23	44	3940	300	100	0.00	0.0	0.00	0.00	0	0	0	593
----- Feeder NO. 1 Beginning with Node Element 8141 -----																				
8141	OCR-8141	ABC	Node	7.56Y	126.0	0.00	0.00	174.23	2581	3940	300	100	0.00	0.0	0.00	0.00	0	0	0	593
864	8141	ABC	090-336 AC	7.55Y	125.9	0.14	0.14	174.23	33	3940	300	100	3.80	0.1	0.15	0.15	0	0	0	593
889	864	ABC	090-336 AC	7.51Y	125.1	0.76	0.91	174.23	33	3936	291	100	20.76	0.5	0.97	0.82	0	0	0	593
567	889	ABC	090-336 AC	7.48Y	124.7	0.35	1.25	174.23	33	3916	243	100	6.92	0.2	1.42	0.45	1028	151	230	593
6029	567	ABC	Capacitor	7.48Y	124.7	0.00	1.25	128.26	1900	2679	71	100	0.00	0.0	1.42	0.00	0	0	0	363
737	6029	ABC	098-#3/0 A	7.44Y	124.0	0.72	1.97	110.20	37	2424	499	98	7.90	0.3	2.32	0.90	2416	490	352	352
----- Feeder NO. 1 Beginning with Node Element 8141 -----																				
8141	6029	ABC	Node	7.48Y	124.7	0.00	1.25	22.54	334	455	221	90	0.00	0.0	1.42	0.00	0	0	0	11
1438	8141	ABC	110-#4 ACS	7.48Y	124.7	0.01	1.26	3.00	2	61	29	90	0.00	0.0	1.51	0.09	61	29	3	3
1448	8141	ABC	110-#4 ACS	7.48Y	124.7	0.00	1.26	2.25	2	46	22	90	0.00	0.0	1.51	0.09	46	22	7	7
1449	8141	ABC	110-#4 ACS	7.48Y	124.7	0.03	1.29	17.26	12	349	169	90	0.06	0.0	1.51	0.09	349	169	1	1
OCR-8142	7141	ABC	118-400-17	7.56Y	126.0	0.00	0.00	205.79	51	4607	747	99	0.00	0.0	0.00	0.00	0	0	0	2022
----- Feeder NO. 2 Beginning with Node Element 8142 -----																				
8142	OCR-8142	ABC	Node	7.56Y	126.0	0.00	0.00	205.79	3049	4607	747	99	0.00	0.0	0.00	0.00	0	0	0	2022
888	8142	ABC	090-336 AC	7.49Y	124.9	1.09	1.09	205.79	39	4607	747	99	29.90	0.6	0.86	0.86	87	13	20	2022
OCR-860	888	ABC	012-100-L	7.49Y	124.9	0.00	1.09	201.90	202	4491	665	99	0.00	0.0	0.86	0.00	0	0	0	2002
C 860	OCR-860	ABC	102-#1/0 A	7.47Y	124.5	0.37	1.46	201.90	88	4491	665	99	7.95	0.2	1.08	0.22	4483	658	2002	2002
OCR-8143	7141	ABC	118-400-17	7.56Y	126.0	0.00	0.00	199.75	50	4454	830	98	0.00	0.0	0.00	0.00	0	0	0	1867
----- Feeder NO. 3 Beginning with Node Element 8143 -----																				
8143	OCR-8143	ABC	Node	7.56Y	126.0	0.00	0.00	199.75	2959	4454	830	98	0.00	0.0	0.00	0.00	0	0	0	1867
592	8143	ABC	090-336 AC	7.55Y	125.8	0.19	0.19	199.75	36	4454	830	98	4.98	0.1	0.15	0.15	12	2	1	1867
588	592	ABC	090-336 AC	7.49Y	124.8	1.00	1.19	199.20	36	4436	817	98	23.92	0.5	1.01	0.86	898	132	279	1866
OCR-907	588	ABC	012-100-L	7.49Y	124.8	0.00	1.19	0.00	0	0	0	0	0.00	0.0	1.01	0.00	0	0	0	0
907	OCR-907	ABC	090-336 AC	7.49Y	124.8	0.00	1.19	0.00	0	0	0	0	0.00	0.0	1.78	0.77	0	0	0	0
686	588	ABC	090-336 AC	7.48Y	124.7	0.12	1.31	158.91	30	3514	630	98	2.53	0.1	1.13	0.12	0	0	0	1587
OCR-589	686	ABC	011-70-L O	7.48Y	124.7	0.00	1.31	16.61	27	413	61	99	0.00	0.0	1.13	0.00	0	0	0	140
589	OCR-589	ABC	098-#3/0 A	7.47Y	124.6	0.11	1.42	16.61	6	413	61	99	0.23	0.1	1.77	0.64	299	44	119	140
590	589	ABC	102-#1/0 A	7.47Y	124.6	0.01	1.43	5.14	2	114	17	99	0.00	0.0	1.97	0.20	114	17	21	21
861	886	ABC	098-#3/0 A	7.45Y	124.2	0.47	1.79	140.30	47	3096	563	98	10.03	0.3	1.37	0.24	79	12	133	1447
OCR-882	861	ABC	010-50-L O	7.45Y	124.2	0.00	1.79	13.90	26	307	45	99	0.00	0.0	1.37	0.00	0	0	0	103
862	OCR-882	ABC	098-#3/0 A	7.45Y	124.1	0.07	1.85	13.90	5	307	45	99	0.10	0.0	2.07	0.70	307	45	103	103
863	861	ABC	098-#3/0 A	7.44Y	123.9	0.29	2.08	122.84	41	2701	495	98	5.40	0.2	1.54	0.17	32	5	8	1211
OCR-864	863	A	010-50-L O	7.44Y	123.9	0.00	2.08	65.20	130	480	71	99	0.00	0.0	1.54	0.00	0	0	0	96
864	OCR-864	A	110-#4 ACS	7.43Y	123.8	0.11	2.19	65.20	47	480	71	99	0.40	0.1	1.57	0.04	0	0	0	96
865	864	A	110-#4 ACS	7.41Y	123.4	0.38	2.56	48.40	35	356	52	99	0.68	0.2	1.92	0.35	355	52	64	64
866	864	A	110-#4 ACS	7.42Y	123.7	0.08	2.27	16.80	12	123	18	99	0.05	0.0	1.79	0.21	123	18	12	12
585	863	ABC	098-#3/0 A	7.39Y	123.1	0.84	2.91	99.69	33	2185	414	98	12.44	0.6	2.14	0.60	100	19	22	1107
716	585	ABC	098-#3/0 A	7.36Y	122.7	0.41	3.32	95.09	32	2072	381	98	5.84	0.3	2.44	0.30	17	2	2	1085
564	716	ABC	098-#3/0 A	7.31Y	121.6	0.93	4.25	94.32	31	2049	372	98	12.05	0.6	3.24	0.80	576	85	220	1063
582	564	ABC	098-#3/0 A	7.30Y	121.6	0.10	4.35	5.61	2	126	19	99	0.08	0.1	4.94	1.70	59	9	14	35
OCR-847	582	ABC	013-140-L	7.30Y	121.6	0.00	4.35	3.07	2	67	10	99	0.00	0.0	4.94	0.00	0	0	0	21
847	OCR-847	ABC	098-#3/0 A	7.30Y	121.6	0.01	4.36	3.07	1	67	10	99	0.00	0.0	5.41	0.47	67	10	21	21
OCR-818	564	ABC	062-70-4H	7.31Y	121.6	0.00	4.25	28.66	41	611	147	97	0.00	0.0	3.24	0.00	0	0	0	472
818	OCR-818	ABC	106-#2 ACS	7.28Y	121.4	0.34	4.58	28.66	16	611	147	97	1.04	0.2	4.14	0.90	610	146	472	472
OCR-583	584	ABC	080-35-4H	7.31Y	121.8	0.00	4.25	33.41	95	724	108	99	0.00	0.0	3.24	0.00	0	0	0	356
583	OCR-583	ABC	110-#4 ACS	7.28Y	121.3	0.46	4.73	33.41	24	724	108	99	2.63	0.4	3.64	0.40	110	16	40	356
867	583	A	110-#4 ACS	7.27Y	121.2	0.09	4.82	15.19	11	109	16	99	0.05	0.0	3.91	0.27	109	16	72	72
591	563	A	110-#4 ACS	7.21Y	120.2	1.09	5.61	69.82	50	502	75	99	2.82	0.6	4.34	0.70	500	73	244	244
OCR-8144	9014	ABC	208-400-14	7.56Y	126.0	0.00	0.00	106.37	27	2381	387	99	0.00	0.0	0.00	0.00	0	0	0	452
----- Feeder NO. 4 Beginning with Node Element 8144 -----																				

Database: C:\MILSOFT\DATA\NOLIN\JAN_EXIT03GROW LOADWITHCHGRINEY
Title: 2003-2004 Work Plan
Case: NOLIN RECC

Element Name	Parent Name	Cnf	Type/ Conductor	Pri KV	Base Volt	Element Drop	Units Displayed In Volts				KW	PF	kW Loss	Loss	mi From Src	Length (mi)	-----Element-----			
							Accum Drop	Thru Amps	Cap	Thru KW							KVAR	Loss	mi	Length
8144	OCR-8144	ABC	Node	7.58Y	126.0	0.00	0.00	108.37	1576	2361	387	99	0.00	0.0	0.00	0.00	0	0	0	452
594	8144	ABC	090-336 AC	7.54Y	125.7	0.33	0.33	108.37	20	2361	387	99	4.66	0.2	0.50	0.50	35	5	14	452
595	594	A	110-#4 ACS	7.43Y	123.8	1.89	2.22	85.11	61	635	96	99	5.99	0.9	1.50	1.00	629	92	158	159
596	594	ABC	090-336 AC	7.51Y	125.1	0.58	0.91	78.46	14	1707	276	99	5.52	0.3	1.88	1.38	361	90	41	279
597	596	ABC	090-336 AC	7.48Y	124.7	0.43	1.34	60.03	11	1341	173	99	2.98	0.2	3.58	1.70	738	116	140	238
540	597	B	110-#4 ACS	7.32Y	122.1	2.60	3.94	60.40	57	599	50	100	8.02	1.3	5.08	1.50	591	46	98	98

	Load	Adjustment	Capacitance	Charging	Gen&Motors	Loops&Metas	Losses	No Load	Losses	Total	
KW	15191	0	0	0	0	0	192			15382	Lowest Voltage = 120.19 on Element 591
KVAR	2583	0	-648	0	0	0	330	0.00		2264	

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

Database: C:\MILSOFT\DATA\NOLIN\JAN_EXIT03GROW DLOADWITHCHGRINEY
Title: 2003-2004 Work Plan
Case: NOLIN RECC

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	Thru Cap	Thru KW	KVAR	PF	KW Loss	% Loss	mi From Src	Length (mi)	Element			
																Cons	Cons			
																On	Thru			
9015		ABC	SRC-9015-j	7.56Y	126.0	0.00	0.00	730.15	0	15400	6087	93	0.00	0.0	0.00	0.00	0	0	0	1
----- Feeder NO. 1 Beginning with Node Element 8151 -----																				
8151	9015	ABC	Node	7.56Y	126.0	0.00	0.00	730.15	0	15400	6087	93	0.00	0.0	0.00	0.00	0	0	0	1
C 910	8151	ABC	003-1000MC	7.56Y	125.9	0.06	0.06	730.15	127	15400	6087	93	3.54	0.0	0.04	0.04	15397	6083	1	1 C

	Load	Adjustment	Capacitance	Charging	Gen&Motors	Loops&Metas	Losses	No Load	Losses	Total	Lowest Voltage = 125.94 on Element 910	
KW	15397	0	0	0	0	0	4		0.00	15400		
KVAR	6083	0	0	0	0	0	4			6087		

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

Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Units Displayed in Volts -Base Voltage:120.0-					% PF	kW Loss	% Loss	mi From Src	Length (mi)	Element		Cons On	Cons Thru
							Accum Drop	Thru Amps	Cap	Thru KW	KVAR						KW	KVAR		
9016		ABC	SRC-9011-j	7.56Y	126.0	0.00	0.00	635.50	0	14411	243	100	0.00	0.0	0.00	0.00	0	0	0	2754
----- Feeder NO. 4 Beginning with Node Element 8164 -----																				
8164	9016	ABC	Node	7.56Y	126.0	0.00	0.00	65.33	0	1427	-397	-9%	0.00	0.0	0.00	0.00	0	0	0	327
OCDD610	8164	ABC	201-280-10	7.56Y	126.0	0.00	0.00	65.33	16	1427	-397	-9%	0.00	0.0	0.00	0.00	0	0	0	327
OH1516	OCDD610	ABC	090-336 AC	7.56Y	126.0	0.00	0.00	65.33	12	1427	-397	-9%	0.00	0.0	0.00	0.00	0	0	0	327
OH1517	OH1516	ABC	090-336 AC	7.56Y	126.0	0.00	0.00	65.33	12	1427	-397	-9%	0.00	0.0	0.00	0.00	0	0	0	327
OH1518	OH1517	ABC	090-336 AC	7.56Y	125.9	0.08	0.06	65.33	12	1427	-397	-9%	2.70	0.2	0.76	0.76	0	0	0	327
574	OH1518	ABC	090-336 AC	7.55Y	125.9	0.02	0.09	65.33	12	1425	-404	-9%	1.11	0.1	1.21	0.45	528	41	175	327
OCR-899	574	B	062-70-4H	7.55Y	125.9	0.00	0.09	0.00	0	0	0	0	0.00	0.0	1.21	0.00	0	0	0	0
899	OCR-899	B	090-336 AC	7.55Y	125.9	0.00	0.09	0.00	0	0	0	0	0.00	0.0	2.04	0.83	0	0	0	0
898	574	ABC	090-336 AC	7.56Y	125.9	-0.01	0.08	44.18	8	896	-447	-8%	0.73	0.1	1.66	0.45	0	0	0	152
OCR-905	898	C	062-70-4H	7.56Y	125.9	0.00	0.08	0.00	0	0	0	0	0.00	0.0	1.66	0.00	0	0	0	0
905	OCR-905	C	110-#4 ACS	7.56Y	125.9	0.00	0.06	0.00	0	0	0	0	0.00	0.0	2.32	0.66	0	0	0	0
464	898	ABC	100-#2/0 A	7.55Y	125.9	0.00	0.09	44.18	16	895	-449	-8%	0.27	0.0	1.77	0.11	54%	42	150	152
6027	464	ABC	Capacitor	7.55Y	125.9	0.00	0.09	26.60	394	349	-492	-5%	0.00	0.0	1.77	0.00	0	0	0	2
1425	6027	ABC	110-#4 ACS	7.55Y	125.9	0.02	0.11	12.83	9	262	127	90	0.03	0.0	1.66	0.09	262	127	1	1
1426	6027	ABC	110-#4 ACS	7.55Y	125.9	0.01	0.09	4.28	3	87	42	90	0.00	0.0	1.86	0.09	87	42	1	1
----- Feeder NO. 2 Beginning with Node Element 8162 -----																				
8162	9016	ABC	Node	7.56Y	126.0	0.00	0.00	67.72	0	1531	127	100	0.00	0.0	0.00	0.00	0	0	0	290
OCR-8162	8162	ABC	Node	7.56Y	126.0	0.00	0.00	67.72	0	1531	127	100	0.00	0.0	0.00	0.00	0	0	0	290
OH1515	OCR-8162	ABC	090-336 AC	7.55Y	125.8	0.18	0.18	67.72	13	1531	127	100	1.81	0.1	0.47	0.47	0	0	0	290
OCR-576	OH1515	ABC	011-70-L O	7.55Y	125.8	0.00	0.18	60.03	86	1355	109	100	0.00	0.0	0.47	0.00	0	0	0	249
576	OCR-576	ABC	102-#1/0 A	7.51Y	125.1	0.70	0.67	60.03	26	1355	109	100	4.68	0.3	1.94	1.46	1351	105	249	249
OH1514	OH1515	ABC	090-336 AC	7.55Y	125.8	0.03	0.21	7.69	1	174	14	100	0.04	0.0	1.20	0.73	0	0	0	41
577	OH1514	ABC	090-336 AC	7.55Y	125.8	0.01	0.21	7.69	1	174	13	100	0.01	0.0	1.57	0.37	174	13	41	41
NODE1605	OH1515	ABC	Node	7.55Y	125.8	0.00	0.18	0.00	0	0	0	0	0.00	0.0	0.47	0.00	0	0	0	0
----- Feeder NO. 1 Beginning with Node Element 8161 -----																				
8161	9016	ABC	Node	7.56Y	126.0	0.00	0.00	223.79	0	5072	187	100	0.00	0.0	0.00	0.00	0	0	0	1077
573	8161	ABC	090-336 AC	7.52Y	125.4	0.65	0.65	223.79	42	5072	187	100	23.00	0.5	0.70	0.70	1256	248	263	1077
572	573	ABC	090-336 AC	7.49Y	124.8	0.58	1.23	168.19	32	3793	-115	-100	17.53	0.5	1.80	1.10	1520	118	215	814
896	572	ABC	098-#3/0 A	7.40Y	123.4	1.38	2.60	101.16	34	2255	-274	-9%	29.59	1.3	3.13	1.33	0	0	0	599
571	896	ABC	110-#4 ACS	7.37Y	122.8	0.64	3.24	16.32	12	327	157	90	1.75	0.5	4.13	1.00	10	4	8	22
6011	571	ABC	Node	7.37Y	122.8	0.00	3.24	15.47	229	308	149	90	0.00	0.0	4.13	0.00	0	0	0	4
1406	6011	ABC	110-#4 ACS	7.37Y	122.8	0.00	3.24	0.00	0	0	0	0	0.00	0.0	4.23	0.09	0	0	0	0
1407	6011	ABC	110-#4 ACS	7.37Y	122.8	0.00	3.24	0.00	0	0	0	0	0.00	0.0	4.23	0.09	0	0	1	1
1408	6011	ABC	110-#4 ACS	7.36Y	122.7	0.03	3.27	15.47	11	308	149	90	0.05	0.0	4.23	0.09	308	149	3	3
6012	571	ABC	Node	7.37Y	122.8	0.00	3.24	0.38	6	8	4	89	0.00	0.0	4.13	0.00	0	0	0	10
1433	6012	ABC	110-#4 ACS	7.37Y	122.8	0.00	3.24	0.16	0	3	2	63	0.00	0.0	4.23	0.09	3	2	9	9
1465	6012	ABC	110-#4 ACS	7.37Y	122.8	0.00	3.24	0.22	0	4	2	69	0.00	0.0	4.23	0.09	4	2	1	1
570	896	ABC	090-336 AC	7.40Y	123.3	0.07	2.67	88.03	17	1899	-465	-9%	2.94	0.2	3.63	0.50	183	75	45	577
CAP1709	570	ABC	Capacitor	7.40Y	123.3	0.00	2.67	-14.27	0	0	-317	0	0.00	0.0	3.63	0.00	0	0	0	0
OCR-550	570	ABC	011-70-L O	7.40Y	123.3	0.00	2.67	25.31	36	555	-85	-9%	0.00	0.0	3.63	0.00	0	0	0	147
550	OCR-550	ABC	106-#2 ACS	7.38Y	122.9	0.41	3.08	25.31	14	555	-85	-9%	2.54	0.5	6.13	2.50	553	227	147	147
CAP1708	550	ABC	Capacitor	7.38Y	122.9	0.00	3.08	-14.23	0	0	-315	0	0.00	0.0	6.13	0.00	0	0	0	0
FUSE-549	570	A	084-40N FU	7.40Y	123.3	0.00	2.67	7.16	9	49	20	93	0.00	0.0	3.63	0.00	0	0	0	0
549	FUSE-549	A	110-#4 ACS	7.39Y	123.2	0.10	2.77	7.16	5	49	20	93	0.03	0.1	4.23	0.60	49	20	24	24
546	570	ABC	098-#3/0 A	7.37Y	122.8	0.53	3.20	50.50	17	1109	-165	-9%	5.90	0.5	4.83	1.20	147	60	69	361
547	546	A	110-#4 ACS	7.37Y	122.8	0.04	3.24	3.05	2	21	9	92	0.00	0.0	5.43	0.60	21	9	13	13
OCR-546	546	C	061-50-4H	7.37Y	122.8	0.00	3.20	43.01	66	293	121	92	0.00	0.0	4.63	0.00	0	0	0	101
546	OCR-546	C	110-#4 ACS	7.31Y	121.9	0.92	4.12	43.01	31	293	121	92	1.36	0.5	5.73	0.90	292	120	101	101
545	546	ABC	096-#3/0 A	7.37Y	122.8	0.04	3.24	33.35	11	642	-362	-6%	0.92	0.1	5.23	0.40	50	21	17	178
FUSE-544	545	A	084-40N FU	7.37Y	122.8	0.00	3.24	66.87	109	591	245	92	0.00	0.0	5.23	0.00	0	0	0	161
544	FUSE-544	A	102-#1/0 A	7.32Y	122.1	0.68	3.92	66.87	38	591	245	92	1.69	0.3	5.83	0.60	590	242	161	161
6024	545	ABC	Capacitor	7.37Y	122.8	0.00	3.24	-28.42	421	0	-628	0	0.00	0.0	5.23	0.00	0	0	0	0
OCR-897	572	ABC	011-70-L O	7.49Y	124.8	0.00	1.23	0.00	0	0	0	0	0.00	0.0	1.80	0.00	0	0	0	0

Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Units Displayed In Volts				KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	Element			
							-Base Voltage:120.0-	Accum Drop	Thru Amps	% Cap							Thru KW	KW	KVAR	Cons On
897	OCR-897	ABC	098-#3/0 A	7.49Y	124.8	0.00	1.23	0.00	0	0	0	0.00	0.0	2.67	0.67	0	0	0	0	
----- Feeder NO. 3 Beginning with Node Element 8163 -----																				
8163	9016	ABC	Node	7.56Y	126.0	0.00	0.00	281.71	0	6381	327	100	0.00	0.0	0.00	0.00	0	0	0	1060
OCDD1507	8163	ABC		7.56Y	126.0	0.00	0.00	281.71	0	6381	327	100	0.00	0.0	0.00	0.00	0	0	0	1060
466	OCDD1507	ABC	090-336 AC	7.49Y	124.9	1.15	1.15	261.71	53	6381	327	100	52.93	0.8	0.65	0.65	377	173	10	1060
468	466	ABC	090-336 AC	7.39Y	123.2	1.70	2.85	256.97	49	5820	20	100	80.78	1.4	2.35	1.50	249	19	34	1018
6008	468	ABC	Capacitor	7.39Y	123.2	0.00	2.85	247.81	3671	5490	-185	-100	0.00	0.0	2.35	0.00	0	0	0	984
470	6008	ABC	090-336 AC	7.35Y	122.5	0.70	3.55	218.49	41	4828	388	100	23.27	0.5	2.95	0.60	151	12	33	843
OCR-471	470	A	060-35-4H	7.35Y	122.5	0.00	3.55	32.61	94	240	20	100	0.00	0.0	2.95	0.00	0	0	0	36
471	OCR-471	A	110-#4 ACS	7.26Y	121.0	1.49	5.03	32.61	23	240	20	100	2.24	0.9	4.45	1.50	143	11	22	36
472	471	A	110-#4 ACS	7.25Y	120.8	0.14	5.17	13.11	9	95	7	100	0.07	0.1	4.95	0.50	95	7	16	16
473	470	ABC	090-336 AC	7.29Y	121.5	0.99	4.54	200.71	36	4414	303	100	30.20	0.7	3.95	1.00	540	42	105	772
534	473	ABC	090-336 AC	7.25Y	120.8	0.62	5.16	128.56	24	2809	101	100	13.26	0.5	4.95	1.00	125	10	22	459
533	534	ABC	090-336 AC	7.23Y	120.5	0.36	5.51	122.82	23	2671	61	100	7.37	0.3	5.65	0.70	481	132	38	437
CAP1794	533	ABC	Capacitor	7.23Y	120.5	0.00	5.51	-13.95	0	0	-302	0	0.00	0.0	5.65	0.00	0	0	0	0
532	533	ABC	098-#3/0 A	7.17Y	119.5	1.03	6.55	62.29	21	1343	145	99	9.14	0.7	7.15	1.50	481	37	74	244
527	532	ABC	098-#3/0 A	7.16Y	119.3	0.13	6.68	18.98	6	403	62	99	0.28	0.1	7.95	0.80	328	25	92	93
1411	527	ABC	110-#4 ACS	7.16Y	119.3	0.01	6.69	3.90	3	75	36	90	0.00	0.0	6.04	0.09	75	36	1	1
OCR-526	532	ABC	007-50-H O	7.17Y	119.5	0.00	6.55	20.98	42	450	35	100	0.00	0.0	7.15	0.00	0	0	0	77
528	OCR-528	ABC	106-#2 ACS	7.15Y	119.2	0.23	6.78	20.98	12	450	35	100	0.70	0.2	7.75	0.60	221	17	44	77
531	528	B	110-#4 ACS	7.13Y	118.8	0.46	7.24	19.37	14	138	11	100	0.34	0.2	8.85	1.10	138	11	17	17
FUSE-529	528	ABC	081-20N FU	7.15Y	119.2	0.00	6.78	4.19	10	90	7	100	0.00	0.0	7.75	0.00	0	0	0	16
529	FUSE-529	C	110-#4 ACS	7.12Y	118.7	0.54	7.32	12.56	9	90	7	100	0.26	0.3	9.75	2.00	89	7	16	16
OCR-537	533	ABC	007-50-H O	7.23Y	120.5	0.00	5.51	38.83	78	839	69	100	0.00	0.0	5.65	0.00	0	0	0	155
537	OCR-537	ABC	102-#1/0 A	7.22Y	120.4	0.12	5.64	38.83	17	839	69	100	0.78	0.1	5.85	0.20	19	1	2	155
539	537	ABC	102-#1/0 A	7.21Y	120.1	0.23	5.87	37.98	17	820	67	100	1.44	0.2	6.25	0.40	61	5	21	153
536	539	ABC	106-#2 ACS	7.19Y	119.8	0.34	6.20	18.22	10	393	32	100	0.70	0.2	7.75	1.50	392	32	90	90
FUSE-538	539	A	081-20N FU	7.21Y	120.1	0.00	5.87	50.77	127	365	29	100	0.00	0.0	6.25	0.00	0	0	0	42
538	FUSE-538	A	110-#4 ACS	7.17Y	119.5	0.66	6.53	50.77	36	365	29	100	1.28	0.4	6.85	0.60	364	28	42	42
OCR-474	473	ABC	061-50-4H	7.29Y	121.5	0.00	4.54	47.47	95	1034	90	100	0.00	0.0	3.95	0.00	0	0	0	208
474	OCR-474	ABC	090-336 AC	7.26Y	121.3	0.13	4.66	47.47	9	1034	90	100	0.89	0.1	4.45	0.50	71	6	10	208
660	474	ABC	098-#3/0 A	7.27Y	121.2	0.10	4.76	44.19	15	962	82	100	0.67	0.1	4.65	0.20	250	19	65	198
970	660	ABC	090-336 AC	7.27Y	121.2	0.08	4.85	32.69	6	711	62	100	0.31	0.0	5.40	0.75	533	47	93	133
FUSE-475	870	B	081-20N FU	7.27Y	121.2	0.00	4.85	24.53	61	178	14	100	0.00	0.0	5.40	0.00	0	0	0	40
475	FUSE-475	B	102-#1/0 A	7.25Y	120.9	0.26	5.11	24.53	11	178	14	100	0.24	0.1	6.45	1.05	178	14	40	40
OCR-469	6008	A	062-70-4H	7.39Y	123.2	0.00	2.85	89.98	129	662	59	100	0.00	0.0	2.35	0.00	0	0	0	141
469	OCR-469	A	110-#4 ACS	7.13Y	118.9	4.27	7.12	89.98	64	662	59	100	14.74	2.2	4.55	2.20	648	50	141	141
467	466	A	110-#4 ACS	7.47Y	124.5	0.38	1.53	17.58	13	131	10	100	0.26	0.2	1.85	1.00	131	10	32	32

	Load	Adjustment	Capacitance	Charging	Gen&Motors	Loops&Metas	Losses	No Load	Losses	Total	Lowest Voltage = 118.66 on Element 529	
KW	14070	0	0	0	0	0	341		0.00	14411		
KVAR	2418	0	-2855	0	0	0	680			243		

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

Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Units Displayed In Volts					KVAR	PF	KW Loss	Loss	mi From Src	Length (mi)	Element			
							Accum Drop	Thru Amps	% Cap	Thru KW	Loss							Loss	KW	Loss	Cons On
9017		ABC	SRC-9013-j	7.56Y	126.0	0.00	0.00	346.75	0	7845	546	100	0.00	0.0	0.00	0.00	0	0	0	2507	
----- Feeder NO. 4 Beginning with Node Element 8174 -----																					
8174	9017	ABC	Node	7.56Y	126.0	0.00	0.00	100.67	0	2282	69	100	0.00	0.0	0.00	0.00	0	0	0	763	
OCR-8174	8174	ABC	118-400-17	7.56Y	126.0	0.00	0.00	100.67	25	2282	69	100	0.00	0.0	0.00	0.00	0	0	0	763	
427	OCR-8174	ABC	096-#3/0 A	7.53Y	125.5	0.50	0.50	100.67	34	2262	69	100	8.76	0.4	0.40	0.40	10	1	69	763	
442	427	ABC	096-#3/0 A	7.52Y	125.3	0.21	0.71	22.27	7	500	56	99	0.65	0.1	1.30	0.90	216	22	70	134	
439	442	ABC	090-336 AC	7.52Y	125.3	0.03	0.75	12.64	2	263	34	99	0.06	0.0	1.80	0.50	51	-1	5	64	
SW1618-B	439	ABC	Open	7.52Y	125.3	0.00	0.75	0.00	0	0	0	0	0.00	0.0	1.80	0.00	0	0	0	0	
454	439	ABC	090-336 AC	7.51Y	125.2	0.08	0.82	10.42	2	232	34	99	0.10	0.0	3.20	1.40	74	11	14	59	
462	454	ABC	090-336 AC	7.51Y	125.2	0.03	0.85	7.11	1	159	23	99	0.02	0.0	4.40	1.20	159	23	45	45	
785	427	ABC	110-#4 ACS	7.46Y	124.3	1.18	1.68	78.06	56	1763	2	100	11.06	0.6	1.20	0.80	1736	-9	558	560	
1431	785	ABC	110-#4 ACS	7.46Y	124.3	0.00	1.68	0.71	1	14	7	89	0.00	0.0	1.29	0.09	14	7	2	2	
----- Feeder NO. 2 Beginning with Node Element 8172 -----																					
8172	9017	ABC	Node	7.56Y	126.0	0.00	0.00	29.36	0	623	236	94	0.00	0.0	0.00	0.00	0	0	0	28	
OCR-8172	8172	ABC	118-400-17	7.56Y	126.0	0.00	0.00	29.36	7	623	236	94	0.00	0.0	0.00	0.00	0	0	0	28	
435	OCR-8172	ABC	090-336 AC	7.55Y	125.9	0.10	0.10	29.36	6	623	236	94	0.19	0.0	0.80	0.80	623	236	28	28	
----- Feeder NO. 3 Beginning with Node Element 8173 -----																					
8173	9017	ABC	Node	7.56Y	126.0	0.00	0.00	218.09	0	4940	244	100	0.00	0.0	0.00	0.00	0	0	0	1716	
OCR-8173	8173	ABC	118-400-17	7.56Y	126.0	0.00	0.00	218.09	55	4940	244	100	0.00	0.0	0.00	0.00	0	0	0	1716	
1437	OCR-8173	ABC	090-336 AC	7.51Y	125.1	0.89	0.89	218.09	41	4940	244	100	31.73	0.6	0.80	0.80	0	0	0	1716	
6005	1437	ABC	Capacitor	7.51Y	125.1	0.00	0.89	-28.96	0	0	-652	0	0.00	0.0	0.80	0.00	0	0	0	0	
1456	1437	ABC	110-#4 ACS	7.51Y	125.1	0.03	0.92	16.16	12	328	159	90	0.06	0.0	0.89	0.09	328	159	1	1	
1446	1437	ABC	110-#4 ACS	7.51Y	125.1	0.01	0.89	3.76	3	76	37	90	0.00	0.0	0.89	0.09	76	37	3	3	
OCR-436	1437	ABC	011-70-L O	7.51Y	125.1	0.00	0.89	100.42	143	2254	185	100	0.00	0.0	0.80	0.00	0	0	0	969	
436	OCR-436	ABC	098-#3/0 A	7.46Y	124.3	0.79	1.87	100.42	33	2254	185	100	8.75	0.4	2.00	1.20	2245	175	969	969	
437	1437	ABC	098-#3/0 A	7.43Y	123.9	1.24	2.12	101.55	34	2251	442	98	17.95	0.8	1.70	0.90	341	1	84	743	
OCR-443	437	ABC	011-70-L O	7.43Y	123.9	0.00	2.12	30.22	43	625	252	93	0.00	0.0	1.70	0.00	0	0	0	16	
443	OCR-443	ABC	098-#3/0 A	7.39Y	123.2	0.68	2.80	30.22	10	625	252	93	2.59	0.4	3.20	1.50	123	7	14	16	
1403	443	ABC	110-#4 ACS	7.39Y	123.1	0.05	2.85	25.03	18	500	242	90	0.13	0.0	3.29	0.09	499	242	2	2	
OCR-436	437	ABC	010-50-L O	7.43Y	123.9	0.00	2.12	57.33	115	1267	169	99	0.00	0.0	1.70	0.00	0	0	0	643	
436	OCR-436	ABC	102-#1/0 A	7.40Y	123.3	0.61	2.73	57.33	25	1267	169	99	3.77	0.3	3.00	1.30	1263	176	643	643	
UG1436	436	ABC	602-1/OAL	7.40Y	123.3	0.00	2.73	-0.46	0	0	-10	0	0.00	0.0	3.32	0.33	0	0	0	0	
SW1618-A	UG1436	ABC	Open	7.40Y	123.3	0.00	2.73	0.00	0	0	0	0	0.00	0.0	3.32	0.00	0	0	0	0	

	Load	Adjustment	Capacitance	Charging	Gen&Motors	Loops&Metas	Losses	No Load Losses	Total	
KW	7759	0	0	0	0	0	86	0.00	7845	Lowest Voltage = 123.15 on Element 1403
KVAR	1066	0	-652	-10	0	0	125	0.00	546	

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

Element Name	Parent Name	Cnf	Type/ Conductor	Pri KV	Base Volt	Element Drop	Units Displayed In Volts				Thru KW	KVAR	PF	kW Loss	% Loss	mi From Src	Length (mi)	-----Element-----			
							Accum Drop	Thru Amps	% Cap	Thru KW								KW	KVAR	Cons On	Cons Thru
692	OCR-692	ABC	098-#3/0 A	7.45Y	124.2	0.03	1.82	9.04	3	197	45	97	0.04	0.0	1.92	0.26	43	10	23	114	
739	692	ABC	098-#3/0 A	7.45Y	124.1	0.08	1.91	7.08	2	154	35	98	0.07	0.0	2.92	1.00	69	16	32	91	
843	739	A	110-#4 ACS	7.45Y	124.1	0.00	1.91	1.13	1	8	2	97	0.00	0.0	3.07	0.15	8	2	4	4	
844	739	ABC	098-#3/0 A	7.45Y	124.1	0.01	1.91	3.54	1	77	18	97	0.00	0.0	3.09	0.17	53	12	33	55	
705	844	A	110-#4 ACS	7.44Y	124.0	0.06	1.99	3.39	2	25	6	97	0.01	0.0	4.09	1.00	25	6	22	22	
685	656	ABC	098-#3/0 A	7.45Y	124.2	0.02	1.81	5.00	2	103	43	92	0.01	0.0	2.06	0.40	103	43	41	41	
1447	656	ABC	110-#4 ACS	7.45Y	124.2	0.00	1.80	0.84	1	17	8	90	0.00	0.0	1.75	0.09	17	8	1	1	
1443	6031	ABC	110-#4 ACS	7.46Y	124.3	0.01	1.71	5.05	4	102	49	90	0.01	0.0	1.35	0.09	102	49	3	3	
655	657	ABC	098-#3/0 A	7.46Y	124.3	0.05	1.72	29.27	10	633	168	97	0.16	0.0	1.25	0.15	377	87	180	245	
654	655	ABC	098-#3/0 A	7.46Y	124.3	0.01	1.72	5.68	2	117	50	92	0.00	0.0	1.36	0.11	117	50	10	10	
679	655	AB	110-#4 ACS	7.46Y	124.3	0.02	1.74	9.56	7	139	32	97	0.02	0.0	1.30	0.05	23	5	14	78	
650	679	A	110-#4 ACS	7.43Y	123.9	0.36	2.10	15.92	11	116	27	97	0.21	0.2	2.30	1.00	115	26	64	64	
----- Feeder NO. 4 Beginning with Node Element 8184																					
8184	9018	ABC	Node	7.56Y	126.0	0.00	0.00	14.84	0	336	-16	-100	0.00	0.0	0.00	0.00	0	0	0	157	
OCR-8184	8184	ABC	203-400-10	7.56Y	126.0	0.00	0.00	14.84	4	336	-16	-100	0.00	0.0	0.00	0.00	0	0	0	157	
648	OCR-8184	ABC	090-336 AC	7.56Y	126.0	0.01	0.01	14.84	3	336	-16	-100	0.03	0.0	0.40	0.40	301	-24	137	157	
647	648	ABC	098-#3/0 A	7.56Y	126.0	0.01	0.03	1.58	1	35	6	97	0.00	0.0	1.50	1.10	35	8	20	20	
OCR-891	648	B	011-70-L O	7.56Y	126.0	0.00	0.01	0.00	0	0	0	0	0.00	0.0	0.40	0.00	0	0	0	0	
891	OCR-891	B	110-#4 ACS	7.56Y	126.0	0.00	0.01	0.00	0	0	0	0	0.00	0.0	0.66	0.26	0	0	0	0	

	Load	Adjustment	Capacitance	Charging	Gen&Motors	Loops&Metas	Losses	No Load	Losses	Total	Lowest Voltage = 121.21 on Element 626	
KW	8087	0	0	0	0	0	140	0.00	6228			
KVAR	1403	0	-973	0	0	0	211		641			

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

Database: C:\MILSOFT\DATA\NOLIN\JAN_EXIT03GROWT. CADWITHCHGRINEY
Title: 2003-2004 Work Plan
Case: NOLIN RECC

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										
9019		ABC	SRC-9011-j	7.56Y	126.0	0.00	0.00	357.90	0	8167	1554	96	0.00	0.0	0.00	0.00	0	0	0	2183
OCR-8192	9019	ABC	203-400-10	7.56Y	126.0	0.00	0.00	69.63	17	1571	161	99	0.00	0.0	0.00	0.00	0	0	0	717
----- Feeder NO. 2 Beginning with Node Element 8192 -----																				
8192	OCR-8192	ABC	Node	7.56Y	126.0	0.00	0.00	69.63	0	1571	161	99	0.00	0.0	0.00	0.00	0	0	0	717
7192	8192	ABC	600-336.4	7.56Y	126.0	0.00	0.00	69.63	13	1571	161	99	0.00	0.0	0.00	0.00	0	0	0	717
OH1572	7192	ABC	090-336 AC	7.55Y	125.8	0.24	0.24	69.63	13	1571	161	99	2.44	0.2	0.60	0.60	0	0	0	717
781	OH1572	ABC	110-#4 ACS	7.44Y	124.0	1.71	1.95	69.63	50	1589	155	100	19.60	1.2	1.30	0.70	273	21	35	717
782	781	ABC	110-#4 ACS	7.37Y	122.8	1.29	3.24	57.45	41	1276	127	100	10.54	0.8	2.10	0.80	696	54	258	682
457	782	ABC	098-#3/0 A	7.35Y	122.5	0.23	3.47	25.98	9	570	69	99	0.63	0.1	3.40	1.30	569	68	424	424
OCR-8194	9019	ABC	203-400-10	7.56Y	126.0	0.00	0.00	85.94	21	2100	433	98	0.00	0.0	0.00	0.00	0	0	0	299
----- Feeder NO. 4 Beginning with Node Element 8194 -----																				
8194	OCR-8194	ABC	Node	7.56Y	126.0	0.00	0.00	85.94	0	2100	433	98	0.00	0.0	0.00	0.00	0	0	0	299
7194	8194	ABC	600-336.4	7.56Y	126.0	0.00	0.00	85.94	16	2100	433	98	0.00	0.0	0.00	0.00	0	0	0	299
578	7194	ABC	098-#3/0 A	7.54Y	125.7	0.26	0.28	85.94	29	2100	433	98	2.95	0.1	0.30	0.30	999	190	173	299
OCR-455	578	A	011-70-L O	7.54Y	125.7	0.00	0.26	63.56	91	478	39	100	0.00	0.0	0.30	0.00	0	0	0	88
458	OCR-458	A	110-#4 ACS	7.46Y	124.3	1.37	1.65	63.56	45	478	39	100	3.34	0.7	1.30	1.00	475	37	88	88
593	578	ABC	003-1000MC	7.54Y	125.7	0.01	0.29	20.61	4	621	201	95	0.01	0.0	0.49	0.19	421	204	38	38
XFMR1567	593	ABC	Transforme	7.54Y	125.7	0.00	0.29	0.00	0	200	0	100	200.00	100.0	0.49	0.00	0	0	0	0
OCR-8193	9019	ABC		7.56Y	126.0	0.00	0.00	202.69	0	4496	960	98	0.00	0.0	0.00	0.00	0	0	0	1167
----- Feeder NO. 3 Beginning with Node Element 8193 -----																				
8193	OCR-8193	ABC	Node	7.56Y	126.0	0.00	0.00	202.69	0	4496	960	98	0.00	0.0	0.00	0.00	0	0	0	1167
7193	8193	ABC	090-336 AC	7.56Y	126.0	0.00	0.00	202.69	38	4496	960	98	0.00	0.0	0.00	0.00	0	0	0	1167
828	7193	ABC	090-336 AC	7.52Y	125.3	0.68	0.68	202.69	38	4496	960	98	17.02	0.4	0.50	0.50	38	3	7	1167
OCD-822	828	ABC	064-40N FU	7.52Y	125.3	0.00	0.68	0.63	1	14	1	100	0.00	0.0	0.50	0.00	0	0	0	5
822	OCD-822	ABC	110-#4 ACS	7.52Y	125.3	0.01	0.69	0.63	0	14	1	100	0.00	0.0	1.50	1.00	14	1	5	5
459	828	ABC	090-336 AC	7.36Y	122.7	2.58	3.26	200.39	38	4426	917	98	64.73	1.5	2.50	2.00	174	39	18	1155
718	459	ABC	110-#4 ACS	7.36Y	122.7	0.00	3.26	192.39	36	4188	728	99	0.00	0.0	2.90	0.40	25	2	7	1137
871	718	ABC	090-336 AC	7.35Y	122.6	0.17	3.43	100.11	19	2170	429	98	2.16	0.1	3.16	0.26	13	2	2	557
461	871	ABC	090-336 AC	7.30Y	121.7	0.86	4.29	99.53	19	2155	422	98	9.50	0.4	4.76	1.60	806	118	191	555
598	461	ABC	090-336 AC	7.29Y	121.4	0.29	4.58	62.49	12	1340	282	98	2.20	0.2	5.46	0.70	57	8	23	364
OCR-790	598	ABC	011-70-L O	7.29Y	121.4	0.00	4.58	59.87	86	1281	269	98	0.00	0.0	5.46	0.00	0	0	0	341
OCR-558	OCR-790	A	011-70-L O	7.29Y	121.4	0.00	4.58	32.99	47	238	35	99	0.00	0.0	5.46	0.00	0	0	0	44
558	OCR-558	A	110-#4 ACS	7.22Y	120.3	1.10	5.68	32.99	24	238	35	99	1.35	0.6	6.96	1.50	236	35	44	44
790	OCR-790	ABC	102-#1/0 A	7.25Y	120.9	0.51	5.09	48.90	21	1043	233	98	3.28	0.3	6.21	0.75	434	79	72	297
FUSE-791	790	A	083-30N FU	7.25Y	120.9	0.00	5.09	16.49	27	118	17	99	0.00	0.0	6.21	0.00	0	0	0	34
791	FUSE-791	A	110-#4 ACS	7.23Y	120.4	0.48	5.56	16.49	12	118	17	99	0.29	0.2	7.51	1.30	118	17	34	34
599	790	ABC	098-#3/0 A	7.21Y	120.2	0.73	5.81	23.22	8	487	134	96	1.89	0.4	9.10	2.89	313	48	189	191
1463	599	ABC	110-#4 ACS	7.21Y	120.2	0.02	5.83	8.88	6	173	84	90	0.02	0.0	9.20	0.09	173	94	2	2
OCR-559	716	ABC	011-70-L O	7.36Y	122.7	0.00	3.26	66.67	99	1496	242	99	0.00	0.0	2.90	0.00	0	0	0	388
559	OCR-559	ABC	098-#3/0 A	7.30Y	121.6	1.15	4.41	66.67	23	1498	242	99	10.61	0.7	4.40	1.50	602	88	166	388
820	559	ABC	098-#3/0 A	7.28Y	121.3	0.28	4.69	40.94	14	885	142	99	1.76	0.2	4.90	0.50	37	5	10	222
557	820	ABC	098-#3/0 A	7.25Y	120.8	0.55	5.24	39.25	13	846	135	99	2.23	0.3	6.90	2.00	844	132	211	212
555	557	ABC	102-#1/0 A	7.25Y	120.8	0.00	5.24	0.00	0	0	0	0	0.00	0.0	7.70	0.60	0	0	1	1
OCR-453	718	A	062-70-4H	7.36Y	122.7	0.00	3.26	29.46	42	214	32	99	0.00	0.0	2.90	0.00	0	0	0	119
453	OCR-453	A	110-#4 ACS	7.32Y	122.0	0.76	4.02	29.46	21	214	32	99	1.23	0.6	3.50	0.50	12	2	1	119
451	453	A	110-#4 ACS	7.30Y	121.7	0.25	4.27	27.75	20	201	30	99	0.38	0.2	3.70	0.20	0	0	0	118
450	451	A	110-#4 ACS	7.27Y	121.1	0.81	4.87	24.86	16	160	27	99	0.56	0.3	4.80	1.10	179	26	110	110
452	451	A	110-#4 ACS	7.30Y	121.7	0.04	4.30	2.87	2	21	3	99	0.00	0.0	4.30	0.60	21	3	5	8
717	716	A	110-#4 ACS	7.33Y	122.2	0.56	3.83	38.25	27	281	22	100	0.65	0.3	3.60	0.70	280	22	66	66

KW	KVAR	Load	Adjustment	Capacitance	Charging	Gen&Motors	Loops&Metas	Losses	No Load	Losses	Total	Lowest Voltage = 120.17 on Element 1463	
7867	1289	0	0	0	0	0	0	160		200.00	6167		
		0	0	-2	0	0	0	268			1554		

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

Database: C:\MILSOFT\DATA\NOLIN\JAN_EXIT03GROWT OADWITHCHGRINEY
Title: 2003-2004 Work Plan
Case: NCLIN RECC

Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Units Displayed in Volts			Thru KW	KVAR	PF	kW Loss	Loss	mi From Src	Length (mi)	Element		
							Accum Drop	Thru Amps	Cap								KW	KVAR	Cons On
9020		ABC	SRC-9002-J	7.56Y	126.0	0.00	0.00	333.05	0	7435	1333	96	0.00	0.0	0.00	0.00	0	0	0
OCR-9203	9020	ABC	203-400-10	7.56Y	126.0	0.00	0.00	171.21	43	3619	1408	93	0.00	0.0	0.00	0.00	0	0	0
----- Feeder NO. 3 Beginning with Node Element 8203 -----																			
8203	OCR-9203	ABC	Node	7.56Y	126.0	0.00	0.00	171.21	0	3619	1408	93	0.00	0.0	0.00	0.00	0	0	0
476	8203	ABC	090-336 AC	7.49Y	124.8	1.19	1.19	171.21	32	3619	1408	93	13.85	0.4	1.70	1.70	3605	1376	222
OCR-9205	9020	ABC	203-400-10	7.56Y	126.0	0.00	0.00	0.00	0	0	0	0	0.00	0.0	0.00	0.00	0	0	0
----- Feeder NO. 5 Beginning with Node Element 8205 -----																			
8205	OCR-9205	ABC	Node	7.56Y	126.0	0.00	0.00	0.00	0	0	0	0	0.00	0.0	0.00	0.00	0	0	0
OCR-9202	9020	ABC	203-400-10	7.56Y	126.0	0.00	0.00	168.30	42	3816	-75	-100	0.00	0.0	0.00	0.00	0	0	0
----- Feeder NO. 2 Beginning with Node Element 8202 -----																			
8202	OCR-9202	ABC	Node	7.56Y	126.0	0.00	0.00	168.30	0	3816	-75	-100	0.00	0.0	0.00	0.00	0	0	0
487	8202	ABC	090-336 AC	7.50Y	125.0	1.05	1.05	168.30	32	3816	-75	-100	32.74	0.9	1.70	1.70	822	99	162
6023	487	ABC	Capacitor	7.50Y	125.0	0.00	1.05	132.13	1958	2961	-251	-100	0.00	0.0	1.70	0.00	0	0	0
788	6023	ABC	090-336 AC	7.50Y	125.0	0.00	1.05	2.57	0	57	7	99	0.00	0.0	1.90	0.20	19	2	12
421	788	A	110-#4 ACS	7.49Y	124.9	0.07	1.12	5.10	4	38	5	99	0.01	0.0	2.50	0.60	35	5	35
787	6023	ABC	098-#3/0 A	7.49Y	124.9	0.08	1.13	20.14	7	450	55	99	0.25	0.1	2.00	0.30	37	4	11
OCR-488	787	A	010-50-L O	7.49Y	124.9	0.00	1.13	14.25	28	106	13	99	0.00	0.0	2.00	0.00	0	0	0
488	OCR-488	A	110-#4 ACS	7.45Y	124.2	0.63	1.75	14.25	10	106	13	99	0.34	0.3	4.00	2.00	106	13	14
489	787	ABC	098-#3/0 A	7.48Y	124.7	0.18	1.30	13.72	5	306	37	99	0.26	0.1	3.90	1.90	306	37	42
420	6023	ABC	102-#1/0 A	7.48Y	124.6	0.35	1.39	110.15	46	2454	338	99	5.90	0.2	1.90	0.20	260	31	51
OCR-878	420	B	011-70-L O	7.48Y	124.6	0.00	1.39	0.00	0	0	0	0	0.00	0.0	1.90	0.00	0	0	0
878	OCR-878	B	110-#4 ACS	7.48Y	124.6	0.00	1.39	0.00	0	0	0	0	0.00	0.0	3.41	1.52	0	0	0
OCR-706	420	ABC	013-140-L	7.48Y	124.6	0.00	1.39	98.47	70	2168	302	99	0.00	0.0	1.90	0.00	0	0	0
706	OCR-706	ABC	098-#3/0 A	7.35Y	122.5	2.13	3.52	98.47	33	2168	302	99	31.64	1.4	3.60	1.70	309	37	29
OCR-432	706	A	011-70-L O	7.35Y	122.5	0.00	3.52	0.00	0	0	0	0	0.00	0.0	3.60	0.00	0	0	0
432	706	A	110-#4 ACS	7.31Y	121.9	0.60	4.12	27.25	19	199	24	99	0.61	0.3	4.60	1.00	198	24	38
666	706	ABC	102-#1/0 A	7.33Y	122.2	0.32	3.84	72.66	32	1590	198	99	3.55	0.2	3.90	0.30	314	36	33
OCR-500	666	A	011-70-L O	7.33Y	122.2	0.00	3.84	0.00	0	0	0	0	0.00	0.0	3.90	0.00	0	0	0
500	666	A	110-#4 ACS	7.17Y	119.5	2.63	6.47	59.76	43	435	55	99	5.91	1.4	5.90	2.00	425	51	61
OCR-433	666	ABC	012-100-L	7.33Y	122.2	0.00	3.84	38.39	38	838	102	99	0.00	0.0	3.90	0.00	0	0	0
433	OCR-433	ABC	102-#1/0 A	7.30Y	121.6	0.53	4.38	38.39	17	838	102	99	2.22	0.3	5.60	1.70	836	100	107
431	706	A	110-#4 ACS	7.34Y	122.3	0.16	3.68	8.14	6	59	7	99	0.05	0.1	4.50	0.90	59	7	13

	Load	Adjustment	Capacitance	Charging	Gen&Motors	Loops&Metas	Losses	No Load	Losses	Total	
KW	7336	0	0	0	0	0	97		0.00	7435	Lowest Voltage = 119.53 on Element 500
KVAR	1624	0	-651	0	0	0	160			1333	

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

Database: C:\MILSOFT\DATA\NCLIN\JAN_EXIT03GROWT. OADWITHCHGRINEY
Title: 2003-2004 Work Plan
Case: NCLIN RECC

Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Units Displayed in Volts				Thru KW	PF	kW Loss	Loss	mi From Src	Length (mi)	Element			
							Base Voltage:120.0-	Thru Amps	% Cap	Thru KW							KVAR	Loss	Loss	Length (mi)
508	550	ABC	098-#3/0 A	7.27Y	121.2	0.02	4.78	3.18	1	89	10	99	0.01	0.0	9.22	0.70	89	10	16	16
789	510	ABC	098-#3/0 A	7.27Y	121.1	0.15	4.89	49.21	16	970	-462	-90	3.15	0.3	8.72	0.60	0	0	0	280
6025	789	ABC	Capacitor	7.27Y	121.1	0.00	4.89	49.21	729	967	-465	-90	0.00	0.0	8.72	0.00	0	0	0	280
721	6025	ABC	098-#3/0 A	7.25Y	120.8	0.31	5.20	44.85	15	967	146	99	2.15	0.2	9.22	0.50	18	3	6	280
508	721	ABC	098-#3/0 A	7.21Y	120.1	0.70	5.90	44.00	15	946	141	99	4.18	0.4	10.62	1.40	353	50	75	274
OCR-508	508	ABC	062-70-4H	7.21Y	120.1	0.00	5.90	27.53	39	589	86	99	0.00	0.0	10.62	0.00	0	0	0	199
OCR-503	OCR-508	A	011-70-L O	7.21Y	120.1	0.00	5.90	40.44	58	286	43	99	0.00	0.0	10.62	0.00	0	0	0	86
503	OCR-503	A	102-#1/0 A	7.16Y	119.4	0.73	6.62	40.44	18	288	43	99	1.33	0.5	11.82	1.00	101	14	26	86
504	503	A	110-#4 ACS	7.15Y	119.2	0.15	6.77	6.63	5	46	7	99	0.04	0.1	12.82	1.00	46	7	12	12
505	503	A	110-#4 ACS	7.13Y	118.9	0.50	7.13	19.38	14	137	20	99	0.54	0.4	12.22	0.60	7	1	2	48
506	505	A	110-#4 ACS	7.13Y	118.8	0.12	7.24	7.56	5	53	8	99	0.03	0.1	12.92	0.70	53	6	17	17
507	505	A	110-#4 ACS	7.09Y	118.2	0.65	7.78	10.89	8	77	11	99	0.27	0.3	14.92	2.70	77	11	29	29
FUSE-502	OCR-508	A	085-50N FU	7.21Y	120.1	0.00	5.90	6.09	6	58	8	99	0.00	0.0	10.62	0.00	0	0	0	24
502	FUSE-502	A	110-#4 ACS	7.19Y	119.8	0.29	6.18	6.09	6	56	8	99	0.09	0.2	12.22	1.60	56	8	24	24
501	OCR-508	ABC	098-#3/0 A	7.20Y	120.0	0.10	6.00	11.35	4	243	35	99	0.18	0.1	11.42	0.80	88	13	44	89
494	501	ABC	098-#3/0 A	7.20Y	119.9	0.05	6.05	7.22	2	154	22	99	0.04	0.0	12.42	1.00	149	21	42	45
SW1802-A	494	ABC	Open	7.20Y	119.9	0.00	6.05	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	7.20Y	119.9	0.00	6.05	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	7.20Y	119.9	0.00	6.05	0.25	0	5	1	98	0.00	0.0	12.62	0.20	5	1	3	3
OCR-615	664	ABC	007-50-H O	7.53Y	125.4	0.00	0.58	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	1.07	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	229		0.00	7796	Lowest Voltage = 118.22 on Element 507
KVAR	9	0	-904	0	0	0	404			-491	

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