



Allen Anderson, Head Coach & CEO

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March 5, 2007

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COMMISSION

Ms. Beth O'Donnell
Executive Director
Kentucky Public Service Commission
Post Office Box 615
Frankfort, Kentucky 40602

Dear Ms. O'Donnell

Case No. 2007-00097

Enclosed for filing with the Commission is an original and ten (10) copies of South Kentucky Rural Electric Cooperative Corporation's application for a "Certificate of Convenience and Necessity" based on three (3) year construction work plan, three (3) copies of which are enclosed.

If further information is needed, please advise.

Sincerely,

SOUTH KENTUCKY RECC

A handwritten signature in black ink, appearing to read 'Jeffrey C. Greer', is written over the typed name.

Jeffery C. Greer
Chief Financial Officer

JG:cgw

Enclosures

F:\CertificateOfConvenience&Necessity.jg,cgw

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

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PUBLIC SERVICE
COMMISSION

IN THE MATER OF:

APPLICATION OF SOUTH KENTUCKY)
RURAL ELECTRIC COOPERATIVE)
CORPORATION FOR A CERTIFICATE)
OF CONVENIENCE AND NECESSITY TO)
CONSTRUCT ADDITIONAL LINES)
AND FACILITIES.)

CASE NO. 2007-00097

SOUTH KENTUCKY RURAL ELECTRIC COOPERATIVE CORPORATION
SOMERSET, KENTUCKY

I

South Kentucky Rural Electric Cooperative Corporation with a post office address of P.O. Box 910, Somerset, Kentucky 42502 designated as Kentucky 54 - Wayne states that it is a corporation with all rights, characteristics, powers, privileges and duties shown by the records now on file in the office of the Public Service Commission of Kentucky, and that it is engaged in the rural electrification business in the counties of Pulaski, Wayne, McCreary, Cumberland, Lincoln, Rockcastle, Casey, Russell, Laurel, Clinton and Adair, all in Kentucky and Pickett and Scott Counties in the State of Tennessee, by and under the Rural Electrification Act and under authority contained in Kentucky Revised Statutes, Chapter 279.

II

South Kentucky Rural Electric Cooperative Corporation's Articles of Incorporation, with amendments, have previously been filed with the Commission in Case No. 96-109.

III

South Kentucky Rural Electric Cooperative Corporation attaches to this application, and fully incorporates by reference, three copies of its 2007-2009 Construction Work Plan, which was approved by its' Board of Directors at a regular meeting held on January 11, 2007. A certified copy of this resolution is attached as Exhibit A, and fully incorporated by reference. The facts relied upon showing that the proposed new construction is required by a public convenience

of necessity are set out in the attached 2007 - 2009 Construction Work Plan. This Plan contains a full description of the proposed location, route, or routes of the new construction or extension, including a description of the manner in which same will be constructed, and also the names of all public utilities, corporations, or persons with whom the proposed new construction or extensions is likely to compete. Three (3) maps showing the location or route of the proposed new construction or extensions, as well as the location to scale of any like facilities owned by others located anywhere within the map area with adequate identification as to the ownership of such other facilities.

IV

There are no franchises required or in existence. Construction permits may be required in the future, as construction progresses, from the Commonwealth of Kentucky, Transportation Cabinet, and possibly from governmental agencies such as the *United States Forest Service* and the *Federal Aviation Administration*. These will be timely obtained as construction progresses and same will be promptly filed with the Public Service Commission if required.

V

South Kentucky Rural Electric Cooperative Corporation will construct the proposed facilities from general funds until such time as new loan funds are needed. At that time, loan applications will be filed with the Rural Utilities Service. These loan proceeds will be used to reimburse general funds as expended and to provide money to complete the proposed facilities.

VI

There is attached as Exhibit B and fully incorporated by reference, a schedule showing the estimated cost of operation after the proposed facilities are completed.

WHEREFORE, South Kentucky Rural Electric Cooperative Corporation of Somerset, Pulaski County, Kentucky, designated as Kentucky 54 - Wayne, pursuant to KRS 278.020, respectfully petitions this Commission as follows:

- A. To grant it a Certificate of Convenience and Necessity to construct additional lines and facilities.
- B. For all proper orders and relief.



Darrell L. Saunders
Attorney for Petitioner
700 Master Street
Post Office Box 1324
Corbin, Kentucky 40702
Telephone No. (606) 523-1370



Allen Anderson
General Manager and C.E.O.
South Kentucky Rural Electric
Cooperative Corporation
Somerset, KY 42501

STATE OF KENTUCKY
SCT)
COUNTY OF PULASKI

Subscribed and sworn to before me by Allen Anderson, General Manager and
C.E.O. of South Kentucky Rural Electric Cooperative Corporation, at Somerset,
Kentucky this 5th day of March 2007.


NOTARY PUBLIC
State of Kentucky at Large

My Commission Expires 12-17-2009



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BOARD RESOLUTION

WHEREAS, a Three-Year Construction Work Plan dated 2007 - 2009 has been prepared by the Engineering Staff at South Kentucky Rural Electric Cooperative Corporation in the amount of \$29,243,291;

WHEREAS, RUS Field Representative, Mike Norman, approved the 2007 – 2009 Construction Work Plan on December 13, 2006;

NOW, THEREFORE BE IT RESOLVED, that the Board of Directors adopt this Work Plan, as a course of action to be followed by management or amended with the approval of RUS.

A handwritten signature in cursive script that reads 'Tom Estes'.

SECRETARY

1-11-07

DATE

EXHIBIT B

SOUTH KENTUCKY R.E.C.C.
STATEMENT OF ESTIMATED ADDITIONAL COST UPON COMPLETION OF THREE YEAR WORK PLAN
2007 - 2009

<u>PROPERTY TAX EXPENSE</u>	<u>AMOUNT</u>	<u>AMOUNT</u>	<u>ESTIMATED TOTAL</u>
1 TOTAL UTILITY PLANT DECEMBER 31,2006	<u>\$158,636,617</u>		
2			
3 TOTAL PROPERTY TAXES - 2006	<u>\$996,000</u>		
4			
5 TAX PER \$100.00	<u>\$0.628</u>		
6			
7 NET ADDITIONS TO PLANT (SEE BELOW)	<u>\$21,932,469</u>		
8			
9 ADDITIONAL TAXES			\$137,736
10			
11			
12			
13			
14			
15			
16			
17			
18			
19 <u>DEPRECIATION EXPENSE</u>			
20			
21 PLANT ADDITIONS FOR THREE YEARS		\$29,243,291	
22 LESS: ESTIMATED RETIREMENTS		<u>(\$7,310,822)</u>	
23			
24 NET PLANT ADDITIONS - 36 MONTHS		\$21,932,469	
25			
26 COMPOSITE DEPRECIATION RATE		<u>0.03</u>	
27			
28 ANNUAL DEPRECIATION		<u>\$657,974</u>	\$657,974
29			
30			
31			
32			
33			
34 ESTIMATED ADDITIONAL EXPENSE			<u>\$795,710</u>

Case No. 2007-00097

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COMMISSION



2007-2009 Construction Work Plan

**Kentucky 54 Wayne
Somerset, Kentucky**



United States Department of Agriculture
Rural Development

Rural Business-Cooperative Service • Rural Housing Service • Rural Utilities Service
Washington, DC 20250

JAN 26 2007

Mr. Allen Anderson
Chief Executive Officer
South Kentucky Rural Electric Cooperative Corporation
P.O. Box 910
Somerset, Kentucky 42502-0910

Dear Mr. Anderson:

We have reviewed the Environmental Report (ER) covering all the facilities recommended in your 2007-2009 Construction Work Plan (CWP). The ER is complete and complies with all requirements of 7 CFR Part 1794, Environmental Policies and Procedures. We have determined that the projects proposed in your CWP are categorical exclusions and no further environmental documentation unless the projects change from those described in the ER.

South Kentucky Rural Electric Cooperative Corporation is responsible for ensuring that any environmental commitments made in the ER are fulfilled in the construction of the projects whether by construction contract or by force account labor.

Thank you for your assistance and cooperation in helping us fulfill our environmental review requirements. If you have any questions, please contact me at (202) 720-1994.

Sincerely,

A handwritten signature in black ink, appearing to read "Charles M. Philpott".

CHARLES M. PHILPOTT
Chief, Engineering Branch
Northern Regional Division
USDA Rural Development-Utilities Programs



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Tom Estes

SECRETARY

1-11-07

DATE

Allen Anderson
Head Coach and CEO
Phone (606) 678-4121



925929 North Main St.
P. O. Box 910
Somerset KY 42502-910

DECEMBER 2006

ENVIRONMENTAL REPORT

KY 54

2007-2009 Construction Work Plan

The projects in this work plan consist of code 300 line conversions and conductor replacements only.


Head Coach & CEO



**SOUTH KENTUCKY RURAL ELECTRIC COOPERATIVE
CORPORATION**

Case No. 7007-00097

**KENTUCKY 54 WAYNE
SOMERSET, KENTUCKY**

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MAR 07 2007

**PUBLIC SERVICE
COMMISSION**

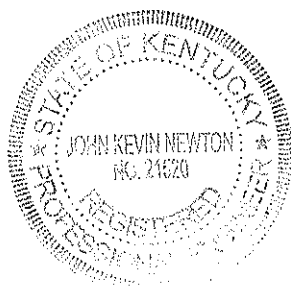
**CONSTRUCTION WORK PLAN (CWP)
January 2007 – December 2009**

ENGINEERING CERTIFICATION

Upon completion of the construction proposed herein, the above electric distribution system can provide adequate and dependable service to the approximate 65,542 customers. The peak demand is estimated to be approximately 485,000 kW in the winter 2009-2010.

The loads estimated for the next three years are consistent with the 2006 Power Requirements Study and the applicable RUS bulletins. The Long Range System Study (LRSS) currently in progress will contain this CWP as its first load level. The construction included herein is in accordance with the LRSS.

I certify that this 2007-2009 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 the State of Kentucky.



John Kevin Newton
John Kevin Newton
Kentucky P.E. No. 21,520

Engineer's Certification

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Appendix A- Milsoft Windmil load flow for 3 cases

- 1- Existing System/Existing Load (314.5MW)
- 2- Existing System/Future Load (485MW)
- 3- Future System/Future Load (485MW)



I. EXECUTIVE SUMMARY

A. PURPOSE OF THE REPORT

This report documents the winter of 2005-2006 engineering analysis and summarizes the proposed construction for South Kentucky Rural Electric Cooperative Corporation's (SKRECC) electric distribution system for the three-year planning period of 2007 through 2009.

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

RESULTS OF THE PROPOSED CONSTRUCTION

Upon completion of the construction of facilities proposed herein, the system will provide adequate and dependable service to 60,435 residential consumers using an average of 1187 kWh per consumer per month; 4,341 small commercial consumers, and 17 large consumers which are provided for on an individual basis. It is estimated that there will be 9,800 idle services.

GENERAL BASIS OF THE STUDY

The 2009 projected number of consumers and total peak system loads were taken directly from the cooperative's 2006 Power Requirements Study (PRS) prepared jointly by East Kentucky Power Cooperative (EKP) and SKRECC as approved by the RUS. The projected load increases were spread uniformly except for projected high growth areas that were projected individually.

New distribution, transmission, and power supply construction 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 with the cooperative's power supplier, EKP.

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

An analysis, using as a basis RUS guidelines and the design criteria herein, for thermal loading, voltages, physical conditions and reliability was performed on all of the substations and distribution lines and major equipment of the existing system. Milsoft Distribution Analysis Software (WINDMIL) was used to analyze the distribution circuits during the Winter of 2005 peak loading conditions. The exhibits in Section II form the rest of the basis of this analysis.

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

B. SERVICE AREA AND POWER SUPPLY

South Kentucky Rural Electric Cooperative Corporation's headquarters is in Somerset. The system is located in south central Kentucky. It serves a large portion of the rural areas of all or part of Wayne, Russell, Pulaski and McCreary Counties, and sections of Adair, Casey, Lincoln and Laurel Counties. The system covers the major geographical portions of these counties, with Kentucky Utilities Company serving the towns and some rural areas along the main roads. The small towns and district offices within the service area are Russell Springs, Monticello, Albany, and Whitley City.

Most of the service area is rural in nature with some industry, tourism, farming, and commercial establishments. The geographic area consists of significant rolling hills, some rocky, rough terrain and some grazing lands along streams and tributaries. The population of our service area is increasing at a modest rate. Manufacturing and the development of industrial parks is occurring system wide.

The following data is from SKRECC's 12/31/2005 Form 7:

Number of Consumers:	61,696
MWh Purchased:	1,207,092
MWh Sold:	1,133,474
Maximum kW Demand:	314,500
Total Utility Plant:	\$147,346,709
Consumers per Mile:	9.5

Most of our 36 substations are constructed for 69/12.47 kV operation, with only a few constructed for 69/24.9 kV. Total distribution line mileage is 6,475. Installed conductor sizes range from 6A CWC to 336ACSR.

SKRECC receives its power from East Kentucky Power Cooperative (EKPC). They provide transmission lines and distribution substations for our supply. EKPC owns, maintains and is responsible for the operation of the substations.

EKPC provides all of our power and energy requirements, by virtue of a standard "all requirements" power contract. EKPC is an RUS financed G & T in Winchester KY.

C. SYSTEM ORGANIZATION AND OPERATION

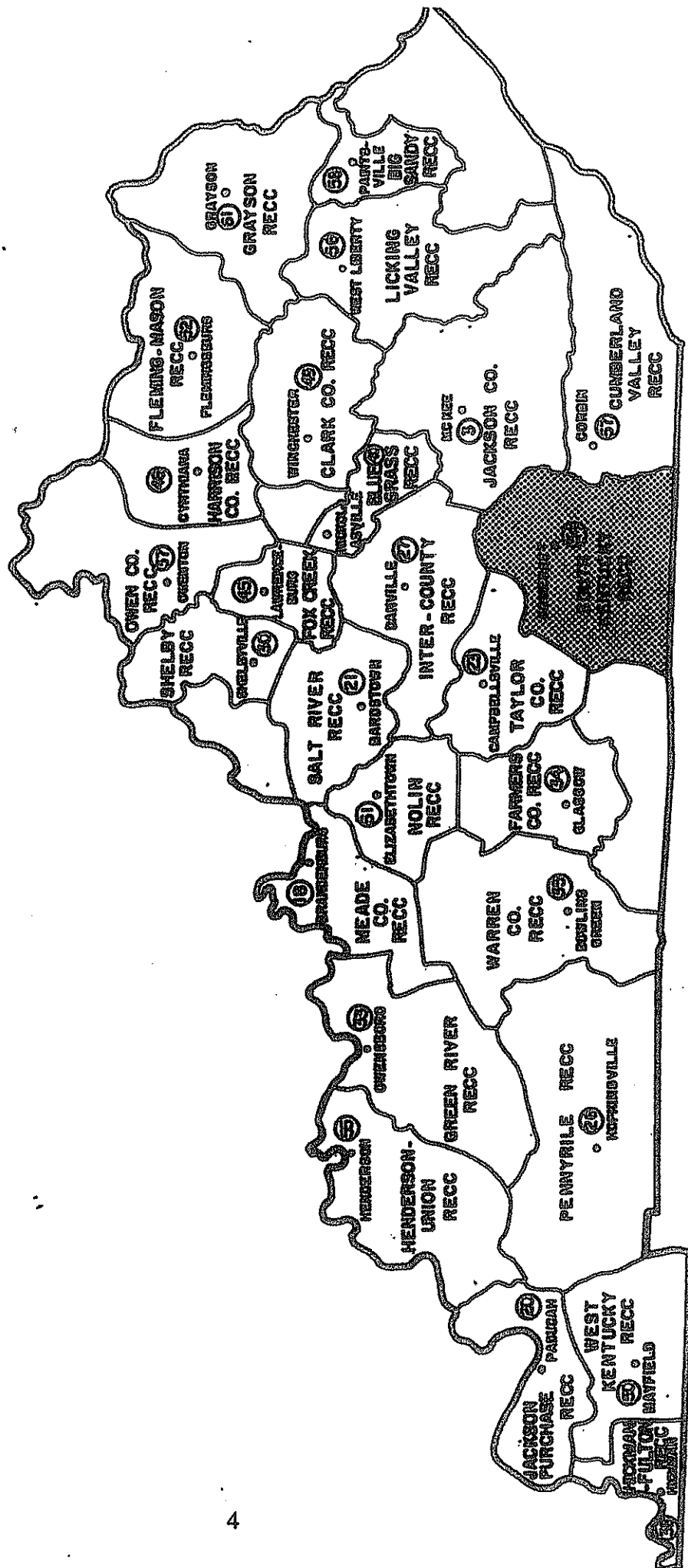
SKRECC's headquarters as mentioned earlier is in Somerset, Kentucky, near the geographic center of the system. The system is operated and maintained under the leadership of engineering teams and leaders. Additional support staff of technicians, administrators, and aides compliments the system operations.

SKRECC utilizes contractor construction crews for both large system improvements and member line extensions as needed.

D. STATUS OF PREVIOUS WORKPLAN PROJECTS

The previous CWP projects will be completed or nearing completion at year end 2006. This 100 percent completion rate reflects the seriousness the engineering staff and employees at SKRECC have for the CWP, by completing the work in a timely manner.

KENTUCKY COOPERATIVES



F. SUMMARY OF PROPOSED 3-YEAR CONSTRUCTION AND COSTS

The costs of the recommended construction program over the next three years are summarized as follows:

<u>Year</u>	<u>New Construction</u>	<u>System Improvements</u>		<u>Total</u>
2007	\$7,397,100	\$2,327,083	=	\$9,624,183
2008	\$7,543,450	\$2,085,364	=	\$9,628,814
2009	<u>\$7,769,800</u>	<u>\$2,220,494</u>	=	<u>\$9,990,294</u>
CWP totals	\$22,610,350	\$6,632,941	=	\$29,243,291

The total amount above is subject to RUS loan funds. Specifics of new construction items and system improvements begin on page 17.

II. BASIS OF THE STUDY AND PROPOSED CONSTRUCTION

A. DESIGN AND OPERATIONAL CRITERIA

The RUS General Field Representative reviewed each of the following design criteria items on May 10, 2006.

Construction proposed herein is required to meet the following minimum standards for voltage, thermal load, safety, and system reliability.

1. The minimum voltage on primary distribution lines is 117 volts on a 120-volt base (125 volts at the source after re-regulation).
2. Primary conductors loaded over 75% of their thermal loading are to be evaluated for uprating. Thermal conductor ratings will be calculated using the ANSI/IEEE STD 738-91 method of calculation.
3. The following equipment will have maximum loading not to exceed the following nameplate percentages:
 - a. Power transformers 130% winter; 100% summer
 - b. Regulators 130% winter; 100% summer
 - c. Voltage Conv. Trans. 130% winter; 100% summer
 - d. Reclosers 70% winter or summer
 - e. Line Fuses 70% winter or summer
4. Conductors (and associated poles and hardware as required) will be rebuilt or relocated if they are to be found to be unsafe or fail to meet applicable NESC requirements.

5. Conductors (and associated poles and hardware as required) will be considered for replacement if any of the following conditions exist:
 - a. Excessive outage hours per year, excluding outages caused by major storms or power supplier.
 - b. If found to contain numerous splices per phase per span in one mile increments.
 - c. Replace old deteriorated conductor on a systematic basis.
6. Poles and/or crossarms will be replaced if found to be physically deteriorated by visual inspection and/or tests.
7. All distribution lines are to be designed and built according to RUS standard construction specifications and guidelines. This includes the deviation permitted by RUS in CFR 1724.52 of lowering the neutral an additional 2 ft below its standard location on the pole. This approved deviation may be applied to new distribution lines, and when upgrading existing lines, at the discretion of the cooperative.
8. New lines and line conversions will be built according to the standard primary voltage levels as recommended in the Long Range Plan.
9. New primary conductor sizes will be determined on a case-by-case basis using the economic conductor sizing computer program and presently known constants and variables. The final proposed conductor may be modified to conform to SKRECC's standard sizes and recommendations of the Long Range Plan.
10. Conversions to multiphase will be considered to correct voltage drop and phase balance problems. Single phase and vee phase lines operating at 7.2/12.5 kV with loads exceeding 250 kW per phase will be considered for multi-phasing. Single phase and vee phase lines operating at 14.4/24.9 kV with loads exceeding 430 kW per phase will be considered for multi-phasing. Operating and engineering practices used to develop the loading criteria are based on a single phase line interruption that may cause operation of the ground trip on three phase oil circuit reclosers. This is due to 35 ampere unbalance at 7.2 kV and 30 ampere unbalance at 14.4 kV, which can be more than doubled during cold load pick up.
11. Voltage conversions from 7.2/12.5 kV to 14.4/24.9 kV will be considered to relieve thermally loaded conductors, reduce voltage drop, and relieve single and vee phase lines exceeding 250 kW per phase. Major factors used to determine if voltage conversions are appropriate rather than multi-phasing and/or conductor replacement are:
 - a. Overall economics
 - b. Condition of conductor.
 - c. Location of project relative to existing 14.4/24.9 kV.
 - d. Ability to reuse retired 7.2/12.5 kV transformers.
 - e. Impact of planned outages during conversions to critical loads such as hospitals, water treatment facilities, etc.
 - f. Special operating conditions and factors

12. Capacitors will be considered for improvement of substation power factors at peak loading and improvement of line voltage.
13. It is recommended that proposed construction items required for voltage improvements whose forecasted need is based solely on calculated voltages from computerized circuit analysis printouts, not be authorized for construction until such calculated voltages are measured in the field and extrapolated to peak loading conditions, and then compared to calculated values to corroborate that actual values exceed the minimum design level.

B. HISTORICAL LINE AND EQUIPMENT COSTS

Historical Data and Construction Required							
CODE 100	June 2004-	June 2005-	Yearly Average				2007-2009
NEW SERVICES	May 2005	May 2006	Prior two years	2007	2008	2009	
Number of New Services							
Undergrd. & Overhead	1,928	2,054	1,991	2,000	2,000	2,000	6,000
Linear Feet of New Line							
Undergrd. & Overhead	451,720	458,993	455,357	537,500	537,500	537,500	1,612,500
Ave. Length	234	223	229	250	250	250	250
							305.4 miles
Cost of New Line							
Total Urd. & Overhead	\$3,579,393	\$3,998,581	\$3,788,987	\$4,000,000	\$4,100,000	\$4,200,000	\$12,300,000
Ave. Cost	\$1,857	\$1,947	\$1,903	\$2,000	\$2,050	\$2,100	\$2,050
CODE 300	June 2004-	June 2005-	Yearly Average				2007-2009
LINE CHG. & CONV.	May 2005	May 2006	Prior two years	2007	2008	2009	
Total Cost of Line Chg.				\$2,327,083	\$2,085,364	\$2,220,494	\$6,632,941
CODE 601	June 2004-	June 2005-	Yearly Average				2007-2009
TRANSFORMERS	May 2005	May 2006	Prior two years	2007	2008	2009	
# of New Transf. *	1598	1891	1744.5	1,800	1,800	1,800	5,400
Total Cost of Transformers	\$1,027,056.00	\$1,324,921.00	\$1,175,989	\$1,332,000	\$1,386,000	\$1,440,000	\$4,158,000
Ave. Cost per Transformers	\$643	\$701	\$674	\$740	\$770	\$800	\$770

*- includes 390 overhead trans. for 25 kV conversion items

CODE 601	June 2004-	June 2005-	Yearly Average				2007-2009
METERS	May 2005	May 2006	Prior two years	2007	2008	2009	
Number of New Meters	3,930	2,532	3,231	3,000	3,000	3,000	9,000
Cost of Meters	\$244,407	\$200,445	\$222,426	\$249,000	\$255,000	\$261,000	\$765,000
Ave. Installed Cost	\$62	\$79	\$69	\$85	\$85	\$85	\$85
CODE 602	June 2004-	June 2005-	Yearly Average				2007-2009
SERVICE UPGRADES	May 2005	May 2006	Prior two years	2007	2008	2009	
Number of Inc. Capacity	90	115	103	110	110	110	330
Cost of Inc. Capacity	\$56,653	\$67,679	\$62,166	\$71,500	\$74,250	\$77,000	\$222,750
Ave. Installed Cost	\$629	\$589	\$609	\$650	\$675	\$700	\$675
CODE 603	June 2004-	June 2005-	Yearly Average				2007-2009
SECTIONALIZING	May 2005	May 2006	Prior two years	2007	2008	2009	
Sectionalizing Total				\$21,100	\$21,100	\$21,100	\$63,300
CODE 604	June 2004-	June 2005-	Yearly Average				2007-2009
LINE REGULATORS	May 2005	May 2006	Prior two years	2007	2008	2009	
Single Phase Unit, 100 amp @ \$7,500 installed				\$7,500			
Single Phase Unit, 219 amp @ \$10,000 installed				\$90,000	\$120,000	\$120,000	
Single Phase Unit, 328 amp @ \$13,333 installed							
Single Phase Unit, 100 amp 14.4kV @ \$10,000 installed				\$60,000	\$30,000	\$30,000	
Total				\$157,500	\$150,000	\$150,000	\$457,500
CODE 605	June 2004-	June 2005-	Yearly Average				2007-2009
CAPACITORS/ CONTROLS	May 2005	May 2006	Prior two years	2007	2008	2009	
Number of Capacitors/Controls							0
Ave. Installed Cost							\$0
Total							\$0

CODE 606	June 2004-	June 2005-	Yearly Average				2007-2009
POLE REPLACEMENTS	May 2005	May 2006	Prior two years	2007	2008	2009	
Number of Poles	705	877	791	800	800	800	2,400
Total	\$791,325	\$1,013,059	\$902,192	\$960,000	\$1,000,000	\$1,040,000	\$3,000,000
Ave. Installed Cost	\$1,122	\$1,155	\$1,141	\$1,200	\$1,250	\$1,300	\$1,250
CODE 608	June 2004-	June 2005-	Yearly Average				2007-2009
GAP ARRESTOR REPLACEMENT	May 2005	May 2006	Prior two years	2007	2008	2009	
Number of Arrestors		1283	1283	1,300	1,300	1,300	3,900
Total		\$94,659	\$94,659	\$104,000	\$106,600	\$109,200	\$319,800
Ave. Installed Cost		\$74	\$74	\$80	\$82	\$84	\$82
CODE 609	June 2004-	June 2005-	Yearly Average				2007-2009
STEP- TRANS.	May 2005	May 2006	Prior two years	2007	2008	2009	
Number of 1000 kVA auto transformers					3	3	
Ave. Installed Cost					\$ 10,000	\$10,000	
Total					\$ 30,000	\$30,000	\$60,000
Number of 333 kVA auto transformers					2		
Ave. Installed Cost					\$4,000		
Total					\$8,000		\$8,000
CODE 701	June 2004-	June 2005-	Yearly Average				2007-2009
SECURITY LIGHTS	May 2005	May 2006	Prior two years	2007	2008	2009	
Number of Lights	1101	924	1013	1,100	1,100	1,100	3,300
Total	\$386,638	\$325,462	\$356,050	\$396,000	\$412,500	\$440,000	\$1,248,500
Ave. Installed Cost	\$351	\$352	\$352	\$360	\$375	\$400	378
CODE 702	June 2004-	June 2005-	Yearly Average				2007-2009
SCADA	May 2005	May 2006	Prior two years	2007	2008	2009	
Number of RTUs						1	
Total						\$7,500	\$7,500

D. ANALYSIS OF CURRENT SYSTEM STUDIES (LF, LRSS, RUS FORM 300)

LOAD FORECAST (LF)

The load forecast used in this CWP is the 2006 Load Forecast prepared jointly by East Kentucky Power and South Kentucky RECC engineering personnel. It has been approved by South Kentucky RECC's management and Board of Directors.

2007 LONG RANGE SYSTEM STUDY (LRSS)

Patterson & Dewar Engineers, Inc., is completing a LRSS for SKRECC's distribution system in early 2007. The system configuration and the loads for the winter of 2005/2006 form the basis for the LRSS.

A comparison of the current 2006 Load Forecast and the LRSS for total consumers and total system peak kW demands is as follows (note: these agree since the current Load Forecast was the basis for the load levels of the new LRSS):

2007 LRSS Load Levels	Long Range System Study and Load Forecast	
	Cons.	MW*
LL 1- 2005	61696 ^{actual}	314.5
LL 2- 2010	66846	485
LL 3- 2013	70749	524
LL 4- 2016	74684	564
LL 5- 2026	86790	724

* For extreme winter scenario (10% probability)

ANALYSIS OF THE 2006 OPERATIONS AND MAINTENANCE SURVEY

In December of 2006, the Operations and Engineering Department of SKRECC completed the Operations and Maintenance Survey (Form 300). In general, the distribution facilities, operations and maintenance, and engineering programs are adequate and improvements are made every year. A few recommendations were noted:

1. Telephone poles are left standing next to electric poles and need to be removed after the joint-use facilities have been attached to SKRECC poles. Cable TV attachments require constant follow-up to ensure contract compliance.
2. Several problem trees were observed in residential areas.
3. The report of idle services should be reconciled with billing records and adjusted.

E. EXISTING AND PROJECTED SUBSTATION LOADING

2005 SUBSTATION WINTER LOADING

Substation	Substation Capacity		Actual 2005	Winter 2009/2010 Design Load	Sub Loading at Design Load	Required Action
	Winter Rating					
Russell Springs	36,280		15,500	21,400	59%	
Windsor	18,140		5,900	8,900	49%	
Nancy	18,140		10,400	17,700	98%	*
Mt. Olive	18,140		7,000	10,600	58%	
Somerset	18,140		10,800	15,700	87%	
E. Somerset	18,140		10,000	15,600	86%	
Shopville	18,140		9,700	14,800	82%	
Norwood	18,140		11,100	17,500	96%	*
Floyd	18,140		11,100	11,200	62%	
N. Albany	18,140		6,900	8,500	47%	
S. Albany	18,140		10,800	15,900	88%	
Sewellton	18,140		5,800	8,900	49%	
Zula	18,140		10,200	12,400	68%	
Monticello	36,290		18,000	19,500	54%	
Bronston	36,280		18,700	22,600	62%	
Mt. Victory	8,350		1,800	3,300	40%	
Whitley City	18,140		8,500	13,500	74%	
Pine Knot	18,140		9,000	14,400	79%	
Oak Hill	18,140		9,100	14,200	78%	
Asahi	18,140		4,500	5,100	28%	
W. Somerset	18,140		9,700	15,700	87%	
Salem	18,140		14,700	15,100	83%	
Cabin Hollow	18,140		9,900	14,200	78%	
S. Floyd	18,140		11,700	15,700	87%	
S. Oakhill	24,840		9,800	16,000	64%	
Snow	18,140		13,900	10,600	58%	
Slat	31,050		12,900	19,700	63%	
E. Pine Knot	18,140		5,000	6,500	36%	
Cemetery Rd.	8,350		3,900	5,900	71%	
Wiborg	18,140		10,400	17,800	98%	*
Jamestown	18,140		6,700	13,000	72%	
Nelson Valley	18,140		6,600	10,000	55%	
Zollicoffer	8,350		4,500	7,000	84%	
Gap of the Rdg. (fall 2006)	18,140			14,300	79%	
Upchurch (spring 2006)	18,140			13,200	73%	
Webb's X-rds. (fall 2006)	18,140			9,800	54%	
Woodstock (fall 2007)	18,140			8,800	49%	

715,850

314,500

485,000

New substations in 2006-7 relieve Monticello, Bronston, Snow, Zula, N. Albany, Rus Spgs., Salem, Floyd and S. Floyd.

* -- These substations will not become overloaded during the workplan period; however, power supply studies will be started during the workplan period to address their future loading concerns.

F. SERVICE INTERRUPTIONS

AVERAGE ANNUAL HOURS/CONSUMER BY CAUSE

<u>Year</u>	<u>Power Supply</u>	<u>Storm</u>	<u>Pre-Arranged</u>	<u>Other</u>	<u>Total</u>
2001	.29	.53	.13	1.88	2.83
2002	.44	.00	.11	1.68	2.23
2003	.07	.00	.07	1.68	1.82
2004	.12	1.23	.01	2.81	4.17
2005	.09	.26	.12	2.06	2.53
<u>5 Year Average</u>	.2	.4	.09	2.02	2.71

G. HISTORICAL ANNUAL ENERGY, LOAD AND CONSUMER DATA

HISTORICAL ANNUAL ENERGY, LOAD AND CONSUMER DATA

Year	Energy Purchased (mWh)	Energy Sold (mWh)	% Inc.	Energy Loss (mWh)	% Loss	non-coincident Peak (mW)	% Inc.	% Annual Load Factor	# of Consumers Annual Avg.	% Inc.
1994	706,604	666,893		39,711	5.6%	225.5	-	35.8%	47,593	
1995	768,092	710,608	6.6%	57,484	7.5%	195.9	13.1%	44.8%	49,153	3.3%
1996	813,983	765,493	7.7%	48,490	6.0%	240.6	22.8%	38.6%	50,398	2.5%
1997	836,252	774,808	1.2%	61,444	7.3%	237.3	-1.4%	40.2%	51,808	2.8%
1998	865,809	819,088	5.7%	46,721	5.4%	207.9	12.4%	47.5%	53,152	2.6%
1999	944,207	888,281	8.4%	55,926	5.9%	242.0	16.4%	44.5%	54,377	2.3%
2000	1,026,327	950,641	7.0%	75,686	7.4%	262.8	8.6%	44.6%	55,685	2.4%
2001	1,024,321	985,426	3.7%	38,895	3.8%	282.0	7.3%	41.5%	56,877	2.1%
2002	1,092,297	1,024,676	4.0%	67,621	6.2%	265.4	-5.9%	47.0%	58,058	2.1%
2003	1,106,010	1,037,801	1.3%	68,209	6.2%	312.0	17.6%	38.0%	59,081	1.8%
2004	1,142,493	1,076,755	3.8%	65,738	5.8%	316.3	1.4%	41.2%	60,128	1.8%
2005	1,207,092	1,133,474	5.3%	73,618	6.1%	314.5	-0.6%	43.8%	60,922	1.3%

Notes: All data is from the Form 7.

PROJECTED ANNUAL ENERGY, LOAD AND CONSUMER DATA

Year	Energy Purchased	Energy Sold	% Inc.	Energy Loss	% Loss	non-coincident Demand	% Inc.	% Annual Load Factor	Number of Consumers	% Inc.
2007	1,316,547	1,237,554	-	78,993	6.0%	456	-	33.0%	64,238	-
2008	1,367,230	1,285,196	3.8%	82,034	6.0%	470	3.1%	33.2%	65,542	2.0%
2009	1,416,978	1,331,959	3.6%	85,019	6.0%	485	3.2%	33.4%	66,846	2.0%

Note: All of the projections above are from the 2006 Power Requirement Study.

H. CIRCUIT LOADING AND VOLTAGE CONDITIONS

SKRECC's system has consistently been a winter peaking system; therefore, the winter conditions have been used as the basis for identifying needed system improvements.

The 2005/2006 winter peak for SKRECC was 314,500 kW during December 2005. The corresponding peak kWh consumer billing data was used to develop the system model in Windmil. During December 2005 the system served approximately 65,542 consumers with each residential consumer averaging 1,187 kWh each.

Appendix 1 contains the primary analysis for the winter 2005/2006 system. The analysis disc provides circuit loading by substation and line section, voltage drops on a 120 volt base, primary losses, number of consumers by section, circuit, and substation, primary conductor size and miles from the sub, and fault current levels.

Map 1 is a diagram of the conditions in Appendix 1, reflecting actual system peak that occurred in December 2005. The circuit diagram also shows the CWP system improvements.

Similarly, the primary analysis of the existing 2005 system configuration with future winter 2009/2010 loads of 485 MW is presented in Appendix 2.

Appendix 3 represents a primary analysis for the proposed future winter 2009/2010 system after all the CWP improvements are implemented. Map 2 is a diagram of Appendix 3 conditions.

Through the use of line voltage regulators and capacitors, adequate system voltages are being maintained for current system conditions. Some regulator changes will be necessary to maintain adequate voltage. These will be discussed on page 49.

The improvements in this plan will reduce line losses by approximately \$240,623 per year.

III. REQUIRED CONSTRUCTION ITEMS

A. NEW SERVICES – CODE 100

SKRECC continues to experience good customer growth in many parts of the service territory. During the 24-month period ending May 2006, SKRECC added 3,982 services for new consumers. The average line extension cost for each new service was \$1,903, and the average service length was 229 feet.

During the upcoming 2007 – 2009 work plan period, SKRECC projects that 6,000 new services will be added, with a total cost over the three year period of \$12,300,000. The historical data that was used to make the projections is shown on page 8. In this work plan, services to new consumers make up approximately 42 % of the total capital required over the CWP period.

B. SYSTEM IMPROVEMENTS – CODE 300

The following descriptions provide details of each construction item and a rationale of how the decisions were reached for each project.

Project: Lanetown DC to Piney Grove Rd.

Project Code: 303.31 2.0 miles \$210,000

DESCRIPTION OF THE PROPOSED CONSTRUCTION

Convert a 3 phase 4/0 line to a DC 336 ACSR line.

REASON FOR THE PROPOSED CONSTRUCTION

The conductor is reaching its thermal loading rating and this dc will allow load to be shifted to another circuit. Other load growth is also taking place in the general area.

RESULTS OF THE PROPOSED CONSTRUCTION

This project will allow us to carry the load resulting from the increasing electrical demand in the area, reduce losses, and correct voltage problems in the area.

ALTERNATIVE PLANS CONSIDERED

We looked at reconductoring the double circuit from the sub, but economically the proposed construction is preferred.

Project: Breezy Hills to Wesley Rd.

Project Code: 308.31 .6 miles \$9,000

DESCRIPTION OF THE PROPOSED CONSTRUCTION

Convert a 2-phase 2 ACSR line to a 3-phase 2 ACSR line.

REASON FOR THE PROPOSED CONSTRUCTION

The existing line is becoming thermally overloaded due to general load growth throughout the area.

RESULTS OF THE PROPOSED CONSTRUCTION

This project will allow us to carry the load resulting from the increasing electrical demand in the area, reduce losses, and allow for phase balance.

ALTERNATIVE PLANS CONSIDERED

No other reasonable alternatives exist.

Project: Parkway Manor- Ringgold Rd.
Project Code: 308.32 .9 miles \$13,500

DESCRIPTION OF THE PROPOSED CONSTRUCTION

Convert a 2-phase 2 ACSR line to a 3-phase 2 ACSR line.

REASON FOR THE PROPOSED CONSTRUCTION

The existing line is becoming thermally overloaded due to general load growth throughout the area.

RESULTS OF THE PROPOSED CONSTRUCTION

This project will allow us to carry the load resulting from the increasing electrical demand in the area, reduce losses, and allow for phase balance.

ALTERNATIVE PLANS CONSIDERED

No other reasonable alternatives exist.

Project: Goochtown near end of 2ph
Project Code: 309.31 .4 miles \$11,600

DESCRIPTION OF THE PROPOSED CONSTRUCTION

Convert a single phase 2 ACSR line to a 2-phase 2 ACSR line.

REASON FOR THE PROPOSED CONSTRUCTION

The existing line is becoming thermally overloaded due to general load growth throughout the area.

RESULTS OF THE PROPOSED CONSTRUCTION

This project will allow us to carry the load resulting from the increasing electrical demand in the area, reduce losses, and allow for phase balance.

ALTERNATIVE PLANS CONSIDERED

No other reasonable alternatives exist.

Project: S. Albany- 2ph to tie to Duvall Valley Ckt.
Project Code: 311.31 1.4 miles \$21,000

DESCRIPTION OF THE PROPOSED CONSTRUCTION

Convert a 2-phase 2 ACSR line to a 3-phase 2 ACSR line.

REASON FOR THE PROPOSED CONSTRUCTION

The existing 2-phase 2 ACSR line is becoming overloaded due to general load growth in the area.

RESULTS OF THE PROPOSED CONSTRUCTION

This project will allow us to carry the load resulting from the increasing electrical demand in the area, reduce losses and allow for phase balance.

ALTERNATIVE PLANS CONSIDERED

No other reasonable alternatives exist.

Project: Susie ckt- to split in 3ph
Project Code: 313.31 2.7 miles \$283,500

DESCRIPTION OF THE PROPOSED CONSTRUCTION

Convert a 3-phase 4/0 line to a DC 336 ACSR line.

REASON FOR THE PROPOSED CONSTRUCTION

The 4/0 ACSR line is becoming overloaded due to industry and general load growth in the area.

RESULTS OF THE PROPOSED CONSTRUCTION

This project will allow us to carry the load resulting from the increasing electrical demand in the area, reduce losses, and allow for phase balance.

ALTERNATIVE PLANS CONSIDERED

No other reasonable alternatives exist.

Project: Fall Creek Rd.

Project Code: 314.31 1.4 miles \$21,000

DESCRIPTION OF THE PROPOSED CONSTRUCTION

Convert a 2-phase 2 ACSR line to a 3-phase 2 ACSR line.

REASON FOR THE PROPOSED CONSTRUCTION

The existing 2-phase 2 ACSR line is becoming overloaded due to general load growth in the area.

RESULTS OF THE PROPOSED CONSTRUCTION

This project will allow us to carry the load resulting from the increasing electrical demand in the area, reduce losses and allow for phase balance.

ALTERNATIVE PLANS CONSIDERED

No other reasonable alternatives exist.

Project: Fall Creek Rd. 1-phase

Project Code: 314.32 .2 miles \$5,800

DESCRIPTION OF THE PROPOSED CONSTRUCTION

Convert a single phase 2 ACSR line to a 2-phase 2 ACSR line.

REASON FOR THE PROPOSED CONSTRUCTION

The existing single phase 2 ACSR line is becoming overloaded due to a new subdivision being developed.

RESULTS OF THE PROPOSED CONSTRUCTION

This project will allow us to carry the load resulting from the increasing electrical demand in the area, reduce losses and allow for phase balance.

ALTERNATIVE PLANS CONSIDERED

No other reasonable alternatives exist.

Project: Echo Point from Hwy 790

Project Code: 315.31 .6 miles \$9,000

DESCRIPTION OF THE PROPOSED CONSTRUCTION

Convert a 2-phase 2 ACSR line to a 3-phase 2 ACSR line.

REASON FOR THE PROPOSED CONSTRUCTION

The existing 2-phase 2 ACSR line is becoming overloaded due to load growth in the area.

RESULTS OF THE PROPOSED CONSTRUCTION

This project will allow us to carry the load resulting from the increasing electrical demand in the area, reduce losses and allow for phase balance.

ALTERNATIVE PLANS CONSIDERED

No other reasonable alternatives exist.

Project: Keno Rd.- end of 3ph to right

Project Code: 315.32 1.2 miles \$44,400

DESCRIPTION OF THE PROPOSED CONSTRUCTION

Convert a single phase 2ACSR line to a 3-phase 2 ACSR line.

REASON FOR THE PROPOSED CONSTRUCTION

The 2 ACSR line is becoming overloaded due to the development of a lakefront subdivision.

RESULTS OF THE PROPOSED CONSTRUCTION

This project will allow us to carry the load resulting from the increasing electrical demand in the area, reduce losses, and allow for phase balance.

ALTERNATIVE PLANS CONSIDERED

No other reasonable alternatives exist.

Project: Kingtown Rd.

Project Code: 318.31 .2 miles \$5,800

DESCRIPTION OF THE PROPOSED CONSTRUCTION

Convert a single phase 2 ACSR line to a 2-phase 2 ACSR line.

REASON FOR THE PROPOSED CONSTRUCTION

The existing single phase 2 ACSR line is becoming overloaded due to a new subdivision and general load growth in the area.

RESULTS OF THE PROPOSED CONSTRUCTION

This project will allow us to carry the load resulting from the increasing electrical demand in the area, reduce losses and allow for phase balance.

ALTERNATIVE PLANS CONSIDERED

No other reasonable alternatives exist.

Project: Ridgewood Subdivision- Hideway Drive

Project Code: 319.31 .5 miles \$18,500

DESCRIPTION OF THE PROPOSED CONSTRUCTION

Convert a single phase 2 ACSR line to a 2-phase 2 ACSR line.

REASON FOR THE PROPOSED CONSTRUCTION

The existing single phase 2 ACSR line is becoming overloaded due to a subdivision and general load growth in the area.

RESULTS OF THE PROPOSED CONSTRUCTION

This project will allow us to carry the load resulting from the increasing electrical demand in the area, reduce losses and allow for phase balance.

ALTERNATIVE PLANS CONSIDERED

No other reasonable alternatives exist.

Project: Summit Point sub- left at end of 3ph
Project Code: 321.31 .4 miles \$14,800

DESCRIPTION OF THE PROPOSED CONSTRUCTION

Convert a single phase 2 ACSR line to a 2-phase 2 ACSR line.

REASON FOR THE PROPOSED CONSTRUCTION

The existing single phase 2 ACSR line is becoming overloaded due to a subdivision and general load growth in the area.

RESULTS OF THE PROPOSED CONSTRUCTION

This project will allow us to carry the load resulting from the increasing electrical demand in the area, reduce losses and allow for phase balance.

ALTERNATIVE PLANS CONSIDERED

No other reasonable alternatives exist.

Project: Eli- new DC 336 to split
Project Code: 322.31 3.3 miles \$346,500

DESCRIPTION OF THE PROPOSED CONSTRUCTION

Convert a 3-phase 336 ACSR line to a DC 336 ACSR line.

REASON FOR THE PROPOSED CONSTRUCTION

The existing 336 circuit is becoming overloaded due to general load growth in the area.

RESULTS OF THE PROPOSED CONSTRUCTION

This project will allow us to carry the load resulting from the increasing electrical demand in the area and reduce losses.

ALTERNATIVE PLANS CONSIDERED

This circuit has not ties to any other substations, so load shift was not an option. No other reasonable alternatives exist.

Project: West Rd. off Hwy 80

Project Code: 322.32 .4 miles \$11,600

DESCRIPTION OF THE PROPOSED CONSTRUCTION

Convert a single phase 2 ACSR line to a 2-phase 2 ACSR line.

REASON FOR THE PROPOSED CONSTRUCTION

The existing single phase 2 ACSR line is becoming overloaded due to general load growth in the area.

RESULTS OF THE PROPOSED CONSTRUCTION

This project will allow us to carry the load resulting from the increasing electrical demand in the area, reduce losses and allow for phase balance.

ALTERNATIVE PLANS CONSIDERED

No other reasonable alternatives exist.

Project: Omega Park from end of 2ph

Project Code: 323.31 .8 miles \$23,200

DESCRIPTION OF THE PROPOSED CONSTRUCTION

Convert a single phase 2 ACSR line to a 2-phase 2 ACSR line.

REASON FOR THE PROPOSED CONSTRUCTION

The existing single phase 2 ACSR line is becoming overloaded due to general load growth in the area.

RESULTS OF THE PROPOSED CONSTRUCTION

This project will allow us to carry the load resulting from the increasing electrical demand in the area, reduce losses and allow for phase balance.

ALTERNATIVE PLANS CONSIDERED

No other reasonable alternatives exist.

Project: Beechgrove 2ph

Project Code: 324.31 2.8 miles \$49,000

DESCRIPTION OF THE PROPOSED CONSTRUCTION

Convert a 2-phase 1/0 ACSR line to a 3-phase 1/0 ACSR line.

REASON FOR THE PROPOSED CONSTRUCTION

The existing 2-phase 1/0 ACSR line is becoming overloaded due to general load growth in the area, and will experience voltage problems at the projected design load.

RESULTS OF THE PROPOSED CONSTRUCTION

This project will allow us to carry the load resulting from the increasing electrical demand in the area, reduce losses and allow for phase balance, and correct all voltage problems and reduce losses.

ALTERNATIVE PLANS CONSIDERED

No other reasonable alternatives exist.

Project: Beechgrove- left at end of 2ph

Project Code: 324.32 .2 miles \$5,800

DESCRIPTION OF THE PROPOSED CONSTRUCTION

Convert a single phase 2 ACSR line to a 2-phase 2 ACSR line.

REASON FOR THE PROPOSED CONSTRUCTION

The existing single phase 2 ACSR line is becoming overloaded due to general load growth in the area.

RESULTS OF THE PROPOSED CONSTRUCTION

This project will allow us to carry the load resulting from the increasing electrical demand in the area, reduce losses and allow for phase balance.

ALTERNATIVE PLANS CONSIDERED

No other reasonable alternatives exist.

Project: Buncombe Church tap

Project Code: 324.33 .2 miles \$6,660

DESCRIPTION OF THE PROPOSED CONSTRUCTION

Convert a single phase 6 cu line to a 2-phase 2 ACSR line.

REASON FOR THE PROPOSED CONSTRUCTION

The old single phase 6 cu line is deteriorated and is becoming overloaded due to general load growth in the area.

RESULTS OF THE PROPOSED CONSTRUCTION

This project will allow us to carry the load resulting from the increasing electrical demand in the area, reduce losses, allow for phase balance, and remove old conductor from service.

ALTERNATIVE PLANS CONSIDERED

No other reasonable alternatives exist.

Project: Shafter Shepola Rd.

Project Code: 325.31 .4 miles \$6,000

DESCRIPTION OF THE PROPOSED CONSTRUCTION

Convert a 2-phase 2 ACSR line to a 3-phase 2 ACSR line.

REASON FOR THE PROPOSED CONSTRUCTION

The existing line is becoming thermally overloaded due to general load growth throughout the area.

RESULTS OF THE PROPOSED CONSTRUCTION

This project will allow us to carry the load resulting from the increasing electrical demand in the area.

ALTERNATIVE PLANS CONSIDERED

No other reasonable alternatives exist.

Project: Prather Rd.

Project Code: 325.32 .7 miles \$12,250

DESCRIPTION OF THE PROPOSED CONSTRUCTION

Convert a 2-phase 2 ACSR line to a 3-phase (2) 2 and add 1/0 ACSR line.

REASON FOR THE PROPOSED CONSTRUCTION

The existing line is becoming thermally overloaded due to subdivisions and general load growth throughout the area.

RESULTS OF THE PROPOSED CONSTRUCTION

This project will allow us to carry the load resulting from the increasing electrical demand in the area, reduce losses and allow for phase balance.

ALTERNATIVE PLANS CONSIDERED

No other reasonable alternatives exist.

Project: Slate Branch Spur

Project Code: 325.33 .7 miles \$10,500

DESCRIPTION OF THE PROPOSED CONSTRUCTION

Convert a 2-phase 2 ACSR line to a 3-phase 2 ACSR line.

REASON FOR THE PROPOSED CONSTRUCTION

The existing line is becoming thermally overloaded due to general load growth throughout the area.

RESULTS OF THE PROPOSED CONSTRUCTION

This project will allow us to carry the load resulting from the increasing electrical demand in the area.

ALTERNATIVE PLANS CONSIDERED

No other reasonable alternatives exist.

Project: Parnell Ckt. – Frisby tap from 90
Project Code: 327.31 .5 miles \$14,500

DESCRIPTION OF THE PROPOSED CONSTRUCTION

Convert a single phase 2 ACSR line to a 2-phase 2 ACSR line.

REASON FOR THE PROPOSED CONSTRUCTION

The existing single phase 2 ACSR line is becoming overloaded due to general load growth in the area.

RESULTS OF THE PROPOSED CONSTRUCTION

This project will allow us to carry the load resulting from the increasing electrical demand in the area, reduce losses and allow for phase balance.

ALTERNATIVE PLANS CONSIDERED

No other reasonable alternatives exist.

Project: Bugwood 2ph
Project Code: 327.32 1.2 miles \$21,000

DESCRIPTION OF THE PROPOSED CONSTRUCTION

Convert a 2-phase 2 ACSR line to a 3-phase (2) 2 and add 1/0 ACSR line.

REASON FOR THE PROPOSED CONSTRUCTION

The existing line is becoming thermally overloaded due to subdivisions and general load growth throughout the area.

RESULTS OF THE PROPOSED CONSTRUCTION

This project will allow us to carry the load resulting from the increasing electrical demand in the area, reduce losses and allow for phase balance.

ALTERNATIVE PLANS CONSIDERED

No other reasonable alternatives exist.

Project: Bugwood 1ph

Project Code: 327.33 3.0 miles \$105,000

DESCRIPTION OF THE PROPOSED CONSTRUCTION

Convert a single phase 2 ACSR line to a 3-phase (1) 2 and add (2)1/0 ACSR line.

REASON FOR THE PROPOSED CONSTRUCTION

The existing line is becoming thermally overloaded due to subdivisions and general load growth throughout the area.

RESULTS OF THE PROPOSED CONSTRUCTION

This project will allow us to carry the load resulting from the increasing electrical demand in the area, reduce losses and allow for phase balance.

ALTERNATIVE PLANS CONSIDERED

No other reasonable alternatives exist.

Project: Methodist Church tap

Project Code: 327.34 .7 miles \$23,310

DESCRIPTION OF THE PROPOSED CONSTRUCTION

Convert a single phase 6 cu line to a 2-phase 2 ACSR line.

REASON FOR THE PROPOSED CONSTRUCTION

The old single phase 6 cu line is deteriorated and is becoming overloaded due to general load growth in the area.

RESULTS OF THE PROPOSED CONSTRUCTION

This project will allow us to carry the load resulting from the increasing electrical demand in the area, reduce losses, allow for phase balance, and remove old conductor from service.

ALTERNATIVE PLANS CONSIDERED

No other reasonable alternatives exist.

Project: Coffey Mtn. – Rocky Branch 2ph
Project Code: 327.35 2.1 miles \$31,500

DESCRIPTION OF THE PROPOSED CONSTRUCTION

Convert a 2-phase 2 ACSR line to a 3-phase 2 ACSR line.

REASON FOR THE PROPOSED CONSTRUCTION

The existing 2-phase 2 ACSR line is becoming overloaded due to general load growth in the area.

RESULTS OF THE PROPOSED CONSTRUCTION

This project will allow us to carry the load resulting from the increasing electrical demand in the area, reduce losses and allow for phase balance.

ALTERNATIVE PLANS CONSIDERED

No other reasonable alternatives exist.

Project: Waynesburg 3ph – to the right
Project Code: 329.31 .7 miles \$24,500

DESCRIPTION OF THE PROPOSED CONSTRUCTION

Convert a single phase 1/0 ACSR line to a 3-phase 1/0 ACSR line.

REASON FOR THE PROPOSED CONSTRUCTION

The existing single phase 1/0 ACSR line is becoming overloaded due to general load growth in the area.

RESULTS OF THE PROPOSED CONSTRUCTION

This project will allow us to carry the load resulting from the increasing electrical demand in the area, reduce losses and allow for phase balance.

ALTERNATIVE PLANS CONSIDERED

No other reasonable alternatives exist.

Project: Johns Street

Project Code: 330.31 .7 miles \$10,500

DESCRIPTION OF THE PROPOSED CONSTRUCTION

Convert a 2-phase 2 ACSR line to a 3-phase 2 ACSR line.

REASON FOR THE PROPOSED CONSTRUCTION

The existing 2-phase 2 ACSR line is becoming overloaded due to general load growth in the area.

RESULTS OF THE PROPOSED CONSTRUCTION

This project will allow us to carry the load resulting from the increasing electrical demand in the area, reduce losses and allow for phase balance.

ALTERNATIVE PLANS CONSIDERED

No other reasonable alternatives exist.

Project: Johns Street to the greenhouses

Project Code: 330.32 .7 miles \$20,300

DESCRIPTION OF THE PROPOSED CONSTRUCTION

Convert a single phase 2 ACSR line to a 2-phase 2 ACSR line.

REASON FOR THE PROPOSED CONSTRUCTION

The existing single phase 2 ACSR line is becoming overloaded due to general load growth in the area.

RESULTS OF THE PROPOSED CONSTRUCTION

This project will allow us to carry the load resulting from the increasing electrical demand in the area, reduce losses and allow for phase balance.

ALTERNATIVE PLANS CONSIDERED

No other reasonable alternatives exist.

Project: Apple Lane

Project Code: 330.33 .4 miles \$15,600

DESCRIPTION OF THE PROPOSED CONSTRUCTION

Convert a single phase 6 cu line to a 3-phase 2 ACSR line.

REASON FOR THE PROPOSED CONSTRUCTION

The old single phase 6 cu line is deteriorated and is becoming overloaded due to subdivisions and general load growth in the area.

RESULTS OF THE PROPOSED CONSTRUCTION

This project will allow us to carry the load resulting from the increasing electrical demand in the area, reduce losses, allow for phase balance, and remove old conductor from service.

ALTERNATIVE PLANS CONSIDERED

No other reasonable alternatives exist.

Project: Moore School Rd. 2ph

Project Code: 330.34 2.1 miles \$31,500

DESCRIPTION OF THE PROPOSED CONSTRUCTION

Convert a 2-phase 2 ACSR line to a 3-phase 2 ACSR line.

REASON FOR THE PROPOSED CONSTRUCTION

The existing 2-phase 2 ACSR line is becoming overloaded due to general load growth in the area.

RESULTS OF THE PROPOSED CONSTRUCTION

This project will allow us to carry the load resulting from the increasing electrical demand in the area, reduce losses and allow for phase balance.

ALTERNATIVE PLANS CONSIDERED

No other reasonable alternatives exist.

Project: Moore School Rd. 1ph

Project Code: 330.35 .4 miles \$13,320

DESCRIPTION OF THE PROPOSED CONSTRUCTION

Convert a single phase 6 cu line to a 2-phase 2 ACSR line.

REASON FOR THE PROPOSED CONSTRUCTION

The old single phase 6 cu line is deteriorated and is becoming overloaded due to general load growth in the area.

RESULTS OF THE PROPOSED CONSTRUCTION

This project will allow us to carry the load resulting from the increasing electrical demand in the area, reduce losses, allow for phase balance, and remove old conductor from service.

ALTERNATIVE PLANS CONSIDERED

No other reasonable alternatives exist.

Project: Stilesville Rd.

Project Code: 332.31 1.5 miles \$49,950

DESCRIPTION OF THE PROPOSED CONSTRUCTION

Convert a single phase 6 cu line to a 2-phase 2 ACSR line.

REASON FOR THE PROPOSED CONSTRUCTION

The old single phase 6 cu line is deteriorated and is becoming overloaded due to general load growth in the area.

RESULTS OF THE PROPOSED CONSTRUCTION

This project will allow us to carry the load resulting from the increasing electrical demand in the area, reduce losses, allow for phase balance, and remove old conductor from service.

ALTERNATIVE PLANS CONSIDERED

No other reasonable alternatives exist.

Project: John Andy Meece 2ph

Project Code: 333.31 1.8 miles \$27,000

DESCRIPTION OF THE PROPOSED CONSTRUCTION

Convert a 2-phase 2 ACSR line to a 3-phase 2 ACSR line.

REASON FOR THE PROPOSED CONSTRUCTION

The existing 2-phase 2 ACSR line is becoming overloaded due to general load growth in the area.

RESULTS OF THE PROPOSED CONSTRUCTION

This project will allow us to carry the load resulting from the increasing electrical demand in the area, reduce losses and allow for phase balance.

ALTERNATIVE PLANS CONSIDERED

No other reasonable alternatives exist.

Project: Bill Shearer tap

Project Code: 335.31 .5 miles \$14,500

DESCRIPTION OF THE PROPOSED CONSTRUCTION

Convert a single phase 2 ACSR line to a 2-phase 2 ACSR line.

REASON FOR THE PROPOSED CONSTRUCTION

The existing single phase 2 ACSR line is becoming overloaded due to general load growth in the area.

RESULTS OF THE PROPOSED CONSTRUCTION

This project will allow us to carry the load resulting from the increasing electrical demand in the area, reduce losses and allow for phase balance.

ALTERNATIVE PLANS CONSIDERED

No other reasonable alternatives exist.

Project: Jerricho- east tap above Friendship Church
Project Code: 336.31 .5 miles \$14,500

DESCRIPTION OF THE PROPOSED CONSTRUCTION

Convert a single phase 2 ACSR line to a 2-phase 2 ACSR line.

REASON FOR THE PROPOSED CONSTRUCTION

The existing single phase 2 ACSR line is becoming overloaded due to general load growth in the area.

RESULTS OF THE PROPOSED CONSTRUCTION

This project will allow us to carry the load resulting from the increasing electrical demand in the area, reduce losses and allow for phase balance.

ALTERNATIVE PLANS CONSIDERED

No other reasonable alternatives exist.

Project: Woodstock sub
Project Code: 337.31 5.0 miles \$400,000

DESCRIPTION OF THE PROPOSED CONSTRUCTION

Convert a single phase 2 ACSR line to a 3-phase 336 ACSR line.

REASON FOR THE PROPOSED CONSTRUCTION

Due to growth in the area, a new substation is planned to come online in the fall of 2007. New 3ph lines must be built in order to tie the sub to the existing 3ph.

RESULTS OF THE PROPOSED CONSTRUCTION

This project will allow us to carry the load resulting from the increasing electrical demand in the area, reduce losses and allow for phase balance.

ALTERNATIVE PLANS CONSIDERED

Several alternatives were considered in the substation evaluation, and this alternative which calls for a new substation was found to be the most economical and the preferred operationally.

Voltage Conversions:

Project: Gregory Rd.

Project Code: 314.33 4.3 miles \$68,900

DESCRIPTION OF THE PROPOSED CONSTRUCTION

Convert 3-phase and single phase 7.2/12.5 kV to 14.4/25 kV.

REASON FOR THE PROPOSED CONSTRUCTION

The existing circuit will have voltage problems at the projected design load.

RESULTS OF THE PROPOSED CONSTRUCTION

This project will correct all voltage and overload problems while reducing losses and giving capacity for future growth. This agrees with our Long Range Plan of extending 25 kV in this part of our service territory.

ALTERNATIVE PLANS CONSIDERED

No other reasonable alternatives exist.

Project: Rattlesnake Rdg.

Project Code: 317.31 3.5 miles \$35,000

DESCRIPTION OF THE PROPOSED CONSTRUCTION

Convert single phase 7.2/12.5 kV to 14.4/25 kV.

REASON FOR THE PROPOSED CONSTRUCTION

The existing circuit will have voltage problems at the projected design load.

RESULTS OF THE PROPOSED CONSTRUCTION

This project will correct all voltage and overload problems while reducing losses and giving capacity for future growth. This agrees with our Long Range Plan of extending 25 kV in this part of our service territory.

ALTERNATIVE PLANS CONSIDERED

No other reasonable alternatives exist.

Project: Worley Hilltop tap

Project Code: 317.32 5.3 miles \$53,000

DESCRIPTION OF THE PROPOSED CONSTRUCTION

Convert single phase 7.2/12.5 kV to 14.4/25 kV.

REASON FOR THE PROPOSED CONSTRUCTION

The existing circuit will have voltage problems at the projected design load.

RESULTS OF THE PROPOSED CONSTRUCTION

This project will correct all voltage and overload problems while reducing losses and giving capacity for future growth. This agrees with our Long Range Plan of extending 25 kV in this part of our service territory.

ALTERNATIVE PLANS CONSIDERED

No other reasonable alternatives exist.

Project: Coffey Mtn. along Hwy 92

Project Code: 327.36 10.6 miles \$113,800

DESCRIPTION OF THE PROPOSED CONSTRUCTION

Convert 3-phase and single phase 7.2/12.5 kV to 14.4/25 kV.

REASON FOR THE PROPOSED CONSTRUCTION

The existing circuit will have voltage problems at the projected design load.

RESULTS OF THE PROPOSED CONSTRUCTION

This project will correct all voltage and overload problems while reducing losses and giving capacity for future growth. This agrees with our Long Range Plan of extending 25 kV in this part of our service territory.

ALTERNATIVE PLANS CONSIDERED

No other reasonable alternatives exist.

Project: Day Ridge 1ph

Project Code: 331.31 3.7 miles \$68,900

DESCRIPTION OF THE PROPOSED CONSTRUCTION

Convert single phase 7.2/12.5 kV to 14.4/25 kV.

REASON FOR THE PROPOSED CONSTRUCTION

The existing circuit will have voltage problems at the projected design load.

RESULTS OF THE PROPOSED CONSTRUCTION

This project will correct all voltage and overload problems while reducing losses and giving capacity for future growth. This agrees with our Long Range Plan of extending 25 kV in this part of our service territory.

ALTERNATIVE PLANS CONSIDERED

No other reasonable alternatives exist.

Summary of multi-phase projects described above is shown in the below table.

System Improvements (code 300):

Multiphase jobs:

WP#	sub	line description	description	Dist.	Yearly Cost Summary			design criteria
					2007	2008	2009	
303.31	Nancy	Lanetown DC to Piney Grove	DC 336	2			\$ 210,000	1,10
308.31	Norwood	Breezy Hills - to Wesley Rd.	2ph #2 to 3ph #2	0.6			\$ 9,000	10
308.32	Norwood	Parkway Manor- Ringgold 2ph	2ph #2 to 3ph #2	0.9		\$ 13,500		10
309.31	Floyd	Goochtown near end of 2ph	1ph #2 to 2ph #2	0.4		\$ 11,600		10
311.31	S. Albany	2ph to Duvall Valley ckt tie	2ph #2 to 3ph #2	1.4			\$ 21,000	10
313.31	Zula	Susie ckt. - to split in 3ph	3-ph 4/0 to dc336	2.7	\$ 283,500			10
314.31	Monticello	Rdg. Grove ckt.- Fall Creek	2ph #2 to 3ph #2	1.4			\$ 21,000	10
314.32	Monticello	Rdg. Grove ckt.- Fall Creek	1ph #2 to 2ph #2	0.2			\$ 5,800	10
315.31	Bronston	Kidder- Echo Pt line	2ph #2 to 3ph #2	0.6		\$ 9,000		10
315.32	Bronston	Keno Rd- end of 3ph	1ph #2 to 3ph #2	1.2			\$ 44,400	10
318.31	Pine Knot	Kingtown Rd.	1ph #2 to 2ph #2	0.2		\$ 5,800		10
319.31	Oakhill	Ridgewood next to sub	1ph #2 to 3ph #2	0.5	\$ 18,500			10
321.31	West Som.	left and end of 3ph Sum Pt.	1ph #2 to 3ph #2 DC 336- 4/0 exists	0.4	\$ 14,800			10
322.31	Salem	Eli- new 336 to split		3.3		\$ 346,500		10
322.32	Salem	W.80- West Rd. of 80	1ph #2 to 2ph #2	0.4			\$ 11,600	10
323.31	Cabin Hollow	Omega Park 1ph from end of 2ph	1ph #2 to 2ph #2 2ph 1/0 to 3ph 1/0	0.8			\$ 23,200	10
324.31	S. Floyd	Mt. Zion- Beechgrove		2.8			\$ 49,000	1,10
324.32	S. Floyd	Mt Zion- Bgrove- left at end of 2ph	1ph #2 to 2ph #2	0.2			\$ 5,800	10
324.33	S. Floyd	Buncombe Church tap	1ph 6a to 2ph #2	0.2		\$ 6,660		10
325.31	S. Oakhill	Shafter Shepola Road	2ph to 3ph #2 2ph #2 add 1ph 1/0	0.4	\$ 6,000			10
325.32	S. Oakhill	Prather Rd.		0.7			\$ 12,250	10
325.33	S. Oakhill	Waides' Wds.- Slate Br Spur	2ph to 3ph #2	0.7		\$ 10,500		10
327.31	Slat	Parnell- Frisby line	1ph #2 to 2ph #2 2ph #2 add 1ph 1/0	0.5		\$ 14,500		10
327.32	Slat	Parnell- Bugwood 2ph	1ph #2 add 2ph 1/0	1.2			\$ 21,000	10
327.33	Slat	Parnell- Bugwood 1ph		3			\$ 105,000	10
327.34	Slat	Parnell- Meth Church tap	1ph 6 to 2ph #2	0.7			\$ 23,310	10
327.35	Slat	Coffey Mtn. - Rocky Branch	2ph #2 to 3ph #2 1ph 1/0 to 3ph 1/0	2.1		\$ 31,500		10
329.31	Cem Rd.	Right at end of Waynesburg 3ph		0.7	\$ 24,500			10
330.31	J-town	Pleasant Hill- John Street	2ph #2 to 3ph #2	0.7	\$ 10,500			10
330.32	J-town	Pleasant Hill- John St to greenhs	1ph #2 to 2ph #2	0.7	\$ 20,300			10
330.33	J-town	Pleasant Hill- Apple Lane	1ph 6A to 3ph #2	0.4		\$ 15,600		10
330.34	J-town	Moore Sch Rd	2ph #2 to 3ph #2	2.1		\$ 31,500		10
330.35	J-town	Moore Sch Rd	1ph 6a to 2ph #2	0.4		\$ 13,320		10
332.31	Nelson Valley	Stilesville Rd.	1ph 6a to 2ph #2	1.5			\$ 49,950	10
333.31	Zol	JA Meece	2ph to 3ph #2	1.8			\$ 27,000	10
335.31	Upchurch	Bill Shearer tap Jerrico- east tap above Friendship Ch.	1ph #2 to 2ph #2	0.5	\$ 14,500			10
336.31	Webbs		1ph #2 to 2ph #2 1ph #2 to 3ph 1/0	0.5	\$ 14,500			10
337.31	Woodstk	new sub ties along Hwy 39	336	5.0	\$ 400,000			1,2,10
					\$ 807,100	\$ 509,980	\$ 639,310	
				43.8	\$ 1,956,390	Total		

Project: Miscellaneous Conductor Replacement Projects
Project Code: 301.81 thru 399.81 109.1 miles \$4,394,849

DESCRIPTION OF THE PROPOSED CONSTRUCTION

Note: Please see list on the next page.

Single Phase jobs: Convert single phase 6 cu lines to new single phase #2 ACSR lines.

Three Phase jobs: Convert 1/0 ACSR to 336 ACSR.

REASON FOR THE PROPOSED CONSTRUCTION

Single Phase: The old single phase copper lines are deteriorated and meet design criteria #5.

Three Phase: The 1/0 ACSR is becoming overloaded due to growth and needs to be upgraded.

RESULTS OF THE PROPOSED CONSTRUCTION

Single Phase: These projects will allow us to replace the old conductor, reduce losses and improve reliability.

Three Phase: This project will allow us to carry the load resulting from the increasing electrical demand in the area, reduce losses and allow for phase balance.

ALTERNATIVE PLANS CONSIDERED

Single Phase: These lines are part of South Kentucky RECC's ongoing conductor replacement program.

Three Phase: No other reasonable alternatives exist.

Listing of conductor replacement items:

WP #	substation	line description	descript	dist	Yearly Cost Summary			design criteria
					2007	2008	2009	
301.81	Russell Spg.	Sano ckt.- Miller-Short Rd.	6a to #2	0.8		\$ 19,600		5
301.82	Russell Spg.	N 127- Jerrico Rd. J.Jones Rd	6a to #2	1.0	\$ 24,500			5
301.83	Russell Spg.	N 127- Bottoms Rd.	6a to #2	1.7	\$ 41,650			5
302.81	Windsor	Caintown- F.Owens Rd.	6sol to #2	0.8	\$ 19,600			5
304.81	Mt. Olive	Walltown ckt.- Ware Rd.	6a to #2	1.9	\$ 46,550			5
304.82	Mt. Olive	Walltown ckt.- Hurr. Rdg	6a to #2	2.5	\$ 61,250			5
304.83	Mt. Olive	Walltown ckt. from sub E. 192- 336 to Mayfield	1/0 to 336	2.2			\$ 167,200	5
306.81	E. Somerset	Hollow Grundy ckt- DC from Gofftwn	1/0 to 336 336 to	3	\$ 228,000			5
306.82	E. Somerset	to Grundy	DC336	0.8		\$ 84,000		5
306.83	E. Somerset	Grundy road from 192 Valley Oak- Dahl 2ph str and	1/0 to 336	2.2		\$ 167,200		5
307.81	Shopville	end of	6a to #2	3			\$ 73,500	5
307.81	Norwood	Parkway Manor- Ringgold 1ph	6a to #2	1.6		\$ 39,200		5
309.81	Floyd	Woodstock ckt.- Bullock Rd. Burks. Ckt.- end of 2ph from	6a to #2	1.5	\$ 36,750			5
310.81	N. Albany	WANY	6a to #2	2.8	\$ 68,600			5

C. TRANSFORMERS AND METERS – CODE 601

For the 24-month period ending May 2006, SKRECC required 3,489 transformers. Based upon this historical data, SKRECC expects to require 5,400 transformers over the next three-year CWP period. The average cost for each transformer is \$770, requiring a capital outlay of \$4,158,000. During the same time period SKRECC expects to require 9000 meters at a capital outlay of \$765,000.

D. SERVICE UPGRADES – CODE 602

For the 24-month period ending May 2006, SKRECC increased service wire capacity for 206 customers. Based upon this historical data, SKRECC expects to upgrade services for 330 customers over the three-year CWP period. The average cost for each service upgrade is \$675, yielding a capital requirement of \$222,750.

E. SECTIONALIZING – CODE 603

The engineering staff of SKRECC has completed a sectionalizing study for the entire system. The following table indicates sectionalizing changes that will need to be completed during the 2007-2009 CWP period.

Code 603 Sectionalizing

The following sectionalizing changes are required to assure South Kentucky RECC is protecting for minimum and maximum faults, loads, and additions due to multi-phasing.

Reason for change codes:

- 1- to meet maximum fault
- 2- to meet minimum fault
- 3- load
- 4- workplan multi-phasing
- 5- new substation

<u>substation</u>	<u>pri key #</u>	<u>existing device</u>	<u>new device</u>	<u>reason</u>	<u>description of location</u>
Asahi	no changes required				
Bronston	1473	(3) 70 L	(3) 100 L	3	Cedar Hill Hts.
	1458	(3) 70 L	(3) 100 L	3	Antioch
	1561	50 F2	70 F2	3	790 single phase
Cabin Hollow	no changes required				
Cemetery Rd	127	(2) 50 H	(2) 50 E	1	328 E from 27

E. Pine Knot	no changes required				
E. Somerset	no changes required				
Floyd	no changes required				
Gap of the Ridge	1559	50 H	70 F2	3	Mystic View tap
	1553	50 H	50 F2	1	Fall Creek
	1526303414	(3) 50 H	(3) 70 F2	1,3	Kno Knox from north
Jamestown	no changes required				
Monticello	no changes required				
Mt. Olive	183	(2) 50 H	(2) 70 F2	1,3	Brown Rdg. 2ph
Mt. Victory	no changes required				
Nancy	no changes required				
Nelson Valley	399	(3) 50 L	(3) 70 L	1	Woods Edge subd on 39
North Albany	no changes required				
Norwood	484	50 H	70 F2	1,3	Parkway Manor Tr Pk tap
Oakhill	1726	fuse	50 F2	3	Grand Central off Oakhill Rd.
Pine Knot	no changes required				
Russell Springs	no changes required				
Salem	no changes required				
Sewellton	no changes required				
Shopville	221	(2) 50 L	(2) 70 L	3	2ph to Hwy 934 on Hwy 461 from end of 3ph
	198	35 H	50 H	3	at int. of Hwy 934 and Hwy 461- do after above
	196	25 H	35 H	3	end of 2ph on Hwy 934- do after above
	377	(3) 70 F2	VWVE 200/100	3	Sinking Valley on Stab ckt.
	442	25 H	35 H	3	end of new 2ph at Acorn- Ano - str. Ahead
Slat	2417	(3) 50 E	(2) 70 L	1,3	Murl 3ph from 90
	1646	48 amp sect.	35 F2	1	tap south past autos out Parnell Rd.
	1642	(2) 50 H	(2) 50 F2	1	Bugwood 2ph- will be 3ph in this workplan
Snow	no changes required				
Somerset	no changes required				
South Albany	no changes required				
South Floyd	no changes required				
South Oakhill	1369	50 L	70 L	1	Slate Br 1ph from Waides Woods subd

Upchurch	2495	50 E	50 L	1	Bill Shearer tap- will be 2ph in this CWP
	2473	25 H	70 L	1	Upchurch Rd. tap
	2474	35 H	50 L	1	90 loop- from end of short 2ph
	2496	35 H	70 L	1	Hwy 2063 from 90
	2472	50 L	cutout	1	Wray Rdg near sub
Webb's X-rds.	406	35 H	50 F2	1,3	Patty Rdg. Tap
	1089359228	25 H	35 F2	1,3	end of Patty Rdg.
	405	50 H	50 F2	1	Damron Creek tap
	384	35 H	35 F2	1	end of Damron Creek
	469	50 H	70 L	1	W. 76 off Hwy 127
West Somerset	1252	(2) 50 L	(2) 70 L	1	Memorial Gardens 2ph
Whitley City	2521	(3) 50 F2	(3) 70 L	1,3	Jenny's Branch 3ph -Marshes ckt.
Wiborg	1604	25 H	35 H	3	end of Sawyer tap left at end of 3ph at
	1625	35 H	50 H	3	Eagle
	2349	(2) 35 H	(2) 50 H	3	Eagle School 2ph
	1659	25 H	35 H	3	1ph past Eagle School- do after above
	2365	35 H	50 H	1	McLloyd Rd. tap just past falls 3ph
	2368	(3) 35 H	(3) 35 F2	1	Fall 3ph
Windsor	no changes required				
Woodstock	245	35 H	35 F2	1	Hargis Lane off Hwy 452
	194	(2) 50 H	(2) 70 L	1	Hwy 934 from 39
	195	35 H	50 F2	1	end of Hwy 934- do after above
	959563971	(2) 35 H	(2) 50 F2	1	Hwy 70 east from 39
	147	35 H	35 F2	1	tap south from Blankenships old store
	180	48 amp sectionalizer	35 F2	1	Albright Rd. off 39
	Zollicoffer	no changes required			
Zula	no changes required				

Note:

The below ocrs need to be relocated on out the line in order to reduce the maximum fault to a value below the rating for the ocr.

Floyd	189	(3) 70 L	move out	mile	3ph to Barron Pallet
Cabin Hollow	1302	(2) 70 L			Cabin Hollow 2ph
Cabin Hollow	1300	70 L			Tap right off Cabin Hollow
Windsor	411	(2) 70 L			Phelps Sch 2ph
Zula	2448	70 L			Buncombe near sub- will be 2ph in this CWP
West Som		(3) 70L			Relocate to end of 3ph in Summit Point

Sectionalizing Summary

Code 603 Sectionalizing

Summary of sectionalizing expense for work needed during the 2007-2009 CWP

<u>Device</u>	<u>Unit Costs</u>	<u>Remove/Replace</u>	<u>Added</u>	<u>Surplus</u>	<u>Required</u>	<u>Total Cost</u>
H-15	\$ 850.00					
H-25	\$ 850.00	6				
H-35	\$ 850.00	17				
H-50	\$ 850.00	16				
L-25	\$ 1,800.00					
L-35	\$ 1,800.00					
L-50	\$ 1,800.00	9				
L-70	\$ 1,800.00	6	18		12	\$ 21,600.00
L-100	\$ 1,800.00		6			
E-25	\$ 2,000.00					
E-35	\$ 2,000.00					
E-50	\$ 2,000.00	4	2		2	\$ 4,000.00
E-70	\$ 2,000.00					
4E-50	\$ 2,600.00					
4E-70	\$ 2,600.00					
F2-25	\$ 2,000.00					
F2-35	\$ 2,000.00		9		9	\$ 18,000.00
F2-50	\$ 2,000.00	4	9		5	\$ 10,000.00
F2-70	\$ 2,000.00	3	8		5	\$ 10,000.00
F2-100	\$ 2,000.00					
VWVE	\$ 17,500.00		1	1	0	
TOTAL						\$ 63,600.00

F. LINE REGULATORS – CODE 604

Below are the voltage regulators to be added during the 2007-2009 CWP:

Regulators (code 604):				Yearly Cost Summary			design criteria
substation	line description	description	size	2007	2008	2009	
Cem Rd.	Parlor Grove ckt.	(3) 219 amp regs	219			\$ 30,000	1
Gap of the Ridge	Conley Bottom	chg to 14.4	219		\$ 35,000		1
J-town	Pleasant Hill	before T	328	\$ 40,000			1
J-town	remove when above is done	north of sewer tap	219	\$ 5,000			1
Monticello	Spann Hill	2nd set Gregory Rd.	219		\$ 30,000		1
Mt. Olive	Walltown	relocate	219			\$ 9,000	1
N.Albany	Duval Valley		219		\$ 30,000		1
Nancy	Faubush	chg to 219@14.4	219	\$ 30,000			1
Nelson Valley	Stilesville		219		\$ 30,000		1
Russ Sprgs.	Hails Hwy		219		\$ 30,000		1
S. Floyd	Mt. Zion- on 1676		219	\$ 30,000			1
S. Floyd	Buncombe		219	\$ 30,000			1
S.Albany	Static		219			\$ 30,000	1
Salem	Eli	set for new feeder	219		\$ 30,000		1
Shopville	Stab	relocate	219		\$ 10,000		1
Shopville	Buffalo tap	1 reg	100		\$ 10,000		1
Shopville	Valley Oak	2nd set	219	\$ 30,000			1
Slat	Parnell-	toward CEW	219		\$ 30,000		1
Slat	Coffey Mtn.	14.4 regs	219			\$ 35,000	1
Slat	Coffey Mtn.	3rd set regs	219			\$ 30,000	1
Whitley City	Hilltop- Rattlesnake	chg to 14.4	100	\$ 15,000			1
Wiborg	Beulah Hts.	2nd set	219			\$ 30,000	1
Woodstock	N.39- just east of 865		219	\$ 30,000			1
Zula	Powersburg	relocate	219			\$ 10,000	1
Zula	Powersburg	2nd set	219			\$ 30,000	1
				\$ 210,000	\$ 235,000	\$ 204,000	
			total	\$ 649,000			

G. CAPACITORS/CONTROLS – CODE 605

South Kentucky RECC monitors substation power factor monthly and makes any needed changes immediately, striving to maintain a minimum power factor of 95% at substation peak. EKPC supplies all capacitors on South Kentucky's system. South Kentucky is responsible for the controls on any switched banks, but none are expected during this CWP.

H. POLE REPLACEMENTS – CODE 606

The physical condition of SKRECC's electric plant is satisfactory according to work order inspections completed by Patterson and Dewar Engineers. A significant number of pole replacements have been made in recent years, and we have an ongoing inspection program that is carried out by two, in-house, full-time line inspectors.

SKRECC's distribution system contains approximately 130,000 wood poles. RUS guidelines recommends that approximately 10% of the pole plant be inspected annually. This means that we should check approximately 13,000 per year. Our current program clearly meets and exceeds this number, because we are inspecting approximately 20,000 poles annually with our ground line inspection program. We are also visually inspecting ½ of our system each year as part of a PSC requirement.

During the 2007-2009 CWP period, SKRECC is projected to change out 2,400 poles (800 per year) at a total cost of \$3,000,000. Both the number of poles and the costs are based upon recent historical data of SKRECC's pole replacement activity.

I. GAPPED ARRESTOR REPLACEMENT – CODE 608

Over the last few years, SKRECC has begun to experience several power quality problems from the older gapped-type lightning arrestors that it has on its system. For many years, the newer MOV arrestors have been used exclusively, but many of the older lightning arrestors are still in service. It is estimated that nearly 1/3 of the approximately 60,000 transformers (or 20,000) have gapped arrestors.

This CWP includes provisions for us to continue replacing the old arrestors. The estimated capital expenditure of \$319,800 that has been included will allow us to change out approximately 3,900 old lightning arrestors over the three-year period. Areas initially targeted will be those (1) where recurring power quality problems are being experienced, and (2) where there are special or sensitive customers such as hospitals.

J. STEP- TRANSFORMERS – CODE 609

South Kentucky RECC will need 6 additional 1000 kVA autotransformers and two 333-kVA autos related to the 7 locations where 25 kV conversions are to be done.

K. SECURITY LIGHTING – CODE 701

SKRECC has an excellent lighting program that offers a variety of lights to all customers, including both the traditional open bottomed globe type and the newer directional floodlights. Homeowner associations and cities also have a choice of various fixtures for street lighting and decorative purposes. Based upon the historical data, SKRECC projects that it will add approximately 3,300 lights over the CWP period for a total capital expenditure of \$1,248,500.

L. SCADA – CODE 702

South Kentucky RECC will need 1 additional RTU at a cost of \$7500.

M. SUBSTATION AND METER POINTS ADDITIONS AND CHANGES

While we will not require any new substations, other than the one already approved by East Kentucky Power, we will begin Power Supply Studies on the substations approaching their ratings during the work plan period.

IV. CONCLUSIONS

The recommendations set forth in this construction work plan will enable South Kentucky RECC to serve the membership of the cooperative at the projected, extreme winter peak conditions of 2009/2010. The recommendations contained herein are in accordance with established RUS guidelines and other criteria established by SKRECC's Long Range System Study, approved load forecast, and other related studies. Any questions or comments regarding this report should be directed to Steven D. Conover, Engineering Team Leader, or Kevin Newton, System Planning Engineer. Their e-mail addresses are sconover@skrecc.com and knewton@skrecc.com respectively. The telephone number for both of these is 606-678-4121.