OWEN Electric

A Touchstone Energy Cooperative

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PUBLIC SERVICE COMMISSION

Case No. 2009-00010

FIRST DATA REQUEST OF COMMISSION STAFF TO OWEN ELECTRIC COOPERATIVE

8205 Hwy 127 N
PO Box 400
Owenton, KY 40359
502-484-3471

OWEN Electric

A Touchstone Energy® Cooperative

May 14, 2009

Jeff Derouen
Executive Director
Kentucky Public Service Commission
211 Sower Boulevard
P. O. Box 615
Frankfort, KY 40602

Dear Mr. Derouen:

Please find enclosed the original and seven (7) copies of the responses to the Public Service Commission's Order "First Data Request of Commission Staff" to Owen Electric Cooperative, Inc. posted on April 27, 2009 in reference to Case No 2009-00010.

Please contact me with any questions regarding this filing.

Respectfully submitted,

Mark Stallons
President and CEO

Enclosure

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

APPLICATION OF OWEN ELECTRIC COOPERATIVE, INC. FOR AN ORDER PURSUANT TO KRS 278.300 AND 807 KAR 5:001, SECTION 11 AND RELATED SECTIONS, AUTHORIZING THE COOPERATIVE TO OBTAIN A LOAN UNDER THE RUS/COBANK CO-LENDING PROGRAM NOT TO EXCEED $28,083,000 AT ANY ONE TIME FROM RURAL UTILITIES SERVICE AND COBANK	)))))))))	CASE NO. 2009-00010

FIRST DATA REQUEST OF COMMISSION STAFF TO OWEN ELECTRIC COOPERATIVE, INC.

Owen Electric Cooperative, Inc. ("Owen"), pursuant to 807 KAR 5:001, is to file with the Commission the original and seven copies of the following information, with a copy to all parties of record. The information requested herein is due on or before May 15, 2009. Responses to requests for information shall be appropriately bound, tabbed and indexed. Each response shall include the name of the witness responsible for responding to the questions related to the information provided.

Each response shall be answered under oath or, for representatives of a public or private corporation or a partnership or association or a governmental agency, be accompanied by a signed certification of the preparer or the person supervising the preparation of the response on behalf of the entity that the response is true and accurate to the best of that person's knowledge, information, and belief formed after a reasonable inquiry.

Owen shall make timely amendment to any prior response if it obtains information which indicates that the response was incorrect when made or, though correct when made, is now incorrect in any material respect. For any request to which Owen fails or refuses to furnish all or part of the requested information, it shall provide a written explanation of the specific grounds for its failure to completely and precisely respond.

Careful attention shall be given to copied material to ensure that it is legible. When the requested information has been previously provided in this proceeding in the requested format, reference may be made to the specific location of that information in responding to this request. When applicable, the requested information shall be separately provided for total company operations and jurisdictional operations.

1. In Case No. 2002-00454, the Commission granted Owen a Certificate of Public Convenience and Necessity ("Certificate") to construct the facilities described in Owen's 2003-2004 Work Plan. [1] Provide each work plan that Owen has issued since the Commission granted a Certificate for Owen's 2003-2004 Work Plan.

2. For each work plan provided in response to Item 1, state if Owen applied to the Commission for a Certificate for the facilities identified in that plan.

3. For each work plan for which Owen failed to apply for a Certificate, provide a detailed explanation as to why Owen did not apply for a Certificate.

[1] Case No. 2002-00454, *Application of Owen Electric Cooperative, Inc. for an Order Issuing a Certificate of Public Convenience and Necessity* (Ky. PSC Apr. 4, 2003).

Jeff R. Derouen
Executive Director
Public Service Commission
P.O. Box 615
Frankfort, KY 40602

DATED: APR 27 2009

cc: Parties of Record

Mark Stallons
President
Owen Electric Cooperative, Inc.
8205 Highway 127 North
P. O. Box 400
Owenton, KY 40359

Affiant, Rebecca Witt, states that the answers given by her to the foregoing questions are true and correct to the best of her knowledge and belief.

Rebecca Witt, Senior Vice President of Corporate Services

Subscribed and sworn to before me by the affiant, Rebecca Witt, this 14th day of May, 2009.

Notary Laura M. Scroggins
State-at-Large

My Commission expires May 2, 2012.

Owen Electric Cooperative
Case No. 2009-00010
First Data Request of Commission Staff

1 In Case No 2002-00454, the Commission granted Owen a Certificate of Public Convenience and Necessity ("Certificate") to construct the facilities described in Owen's 2003-2004 Work Plan. Provide each work plan that Owen has issued since the Commission granted a Certificate for Owen's 2003-2004 Work Plan.

Response: The requested copies are attached. A copy of the associated maps is attached to the original only.

OWEN Electric

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Item 1a
page 1 of 52

Sent in April 2006 1st

Mr. Mark Goss
Chairman
Public Service Commission
211 Sower Blvd.
P.O. Box 615
Frankfort, Kentucky 40602-0615

Dear Mr. Goss;

Enclosed are an original and one copy of Owen Electric Cooperative's (OEC) 2005-2007 Distribution Construction Work Plan for your information, review and file. OEC's 2005-2007 Work Plan has been approved by the OEC Board and by Rural Utilities Services (RUS). The Cooperative shall finance the proposed extensions and additions through funds generated internally from normal operations during the work plan period.

If you or your staff needs any additional information or needs to discuss the plan, feel free to contact me.

Sincerely,

Charles R. Gill, PE

Charles R. Gill, PE
Chief Information Officer

Contact Information:
Phone: Office 502-563-3510
Cell 859-393-3728
Email cgill@owenelectric.com

CERTIFICATION

KENTUCKY 37 OWEN

September 2005- August 2007 Work Plan

I certify that:

1. Upon completion of the construction of the electrical facilities contained herein, the system will be capable of adequately and dependably serving the projected load as contained in the current RUS approved Power Requirement Study and this Construction Work Plan.
2. The preparation and recommendations of this Construction Work Plan are consistent with the requirements of applicable RUS bulletins.

Charles R. Gill, PE
Kentucky Registered Engineer

EXECUTIVE SUMMARY

PURPOSE:

The purpose of this report is to document and summarize the proposed capital plant additions and improvements required over the next two years (September 2005 – August 2007) in order for Owen Electric Cooperative, Incorporated (OEC) (KY 37 OWEN) to adequately serve its consumer members. This report provides engineering support in the form of descriptions, maps, economic analysis, and justifications for the proposed new distribution facilities.

RESULTS:

Upon completion of the proposed distribution projects, OEC will provide adequate and dependable service to the following loads:

Residential/Farm	55,765	1,159 KWHr/month average
Small Commercial	2,085	7,500 KWHr/month average
Large Commercial	33	451,667 KWHr/month average
Public/Other	257	4,774 KWHr/month average
Industrial	1	1,200,000,000 KWHr/month average

Approximately 4,000 idle services were in place at the end of 2004.

GENERAL BASIS OF STUDY:

The year 2007 projected number of consumers and total peak system demand were interpolated directly from OEC's 2004 Power Requirements Study (PRS) as approved by RUS. The PRS was developed in conjunction with OEC's wholesale power supplier, East Kentucky Cooperative (EKP). The projections in the Work Plan may vary slightly to include or omit projects that either did not develop or were not anticipated when the PRS was prepared.

The Cooperative's 1993 Long-Range Work Plan (LRP) load projections and recommendations were reviewed and generally found to be adequate for this planning period. All construction projects proposed herein are consistent with the LRP.

The Cooperative's 2003 Operations and Maintenance Review (Review Rating Summary; RUS Form 300) and the data gathered for the review were used to determine construction and maintenance projects. These projects may require physical replacement of deteriorated facilities, upgrade portions of the system to conform to applicable codes or safety requirements, and/or improve reliability or quality of service to OEC's members.

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. Where applicable, the proposed construction and recommendations herein, relative to OEC's wholesale power supplier, were discussed with EKP.

A complete list of the lines and equipment, and the estimated cost of the facilities required to serve the additional 4,060 members and 26 MW load is contained in the Distribution Line and Equipment Costs Section (page 11). The cost data is based on recent historical cost data.

An analysis, using RUS guidelines as a basis and the design criteria contain herein, was performed on all of the construction projects proposed in this Work Plan. Milsoft's WindMil software was used to analyze the distribution circuits during the appropriate winter and summer peak loads for the Work Plan period. The design criteria, historical load and growth data, and future load growth data formed the rest of the basis of this analysis.

SERVICE AREA & POWER SUPPLY

Owen Electric Cooperative provides service in portions of nine counties in the northern Kentucky region. Founded in 1937, OEC presently distributes power to over 59,171 services through 4,836 miles of distribution lines. Most of OEC's growth has and continues to be in the three northern most counties of Boone, Kenton and Campbell. These counties are suburbs of the Cincinnati Ohio area. Moderate growth has continued in the central area counties of Carroll, Gallatin, Grant, Owen, Pendleton and Scott.

OEC presently owns and maintains distribution circuits that emanate from twenty-three (23) substations. OEC has portions of the system operating at 24.7/14.4 KV and the remainder of the system operating at 12.5/7.2 KV. Additionally, OEC provides the Gallatin Steel Company with a 34.5 KV and a 345 KV feed to the steel mill. All of the distribution substations are owned and maintained by EKP. OEC is one of 16 member owners of the EKP system, whose headquarters is located in Winchester, Kentucky.

The following data is from OEC's RUS Form 7 (12/31/04):

Number of Active Services	53,926
KWHr of Energy Purchased	2,048,527,629
KWHr of Energy Sold	2,008,544,392
Maximum KW of Demand	342,721
Total Utility Plant	$147,760,494
Consumers Per Mile	11.15

SYSTEM ANALYSIS

LONG RANGE PLAN

The Cooperative completed a twenty-year (20) Long Range Work Plan in 1993. All construction projects proposed herein are consistent with the LRP.

VOLTAGE DROPS

The voltage drops analyzed in this work plan are based on the year 2005 summer and winter peaks. Any inadequacy in the voltage levels on a feeder were attempted to be corrected first by one or more of the following tools; balancing the feeder loads, application of switched or fixed capacitors, or transferring load from one feeder to another. If these did not improve voltage drops, conversion from 12.5 to 25 KV, reconductoring, three phasing, regulators, or new feeders were evaluated based on the most effective and economical solution.

DISTRIBUTION LOSSES

The Cooperative has in the past and will continue in the future to place significant emphasis on distribution line losses. These losses are evaluated and steps are taken to reduce these losses. Some of the steps are balancing circuit and substation loads, power factor improvement, economic transformer and conductor analysis, reconductoring, and voltage conversions. The Cooperative has improved the system line losses and the previous twenty years line losses are shown in Appendix I.

SERVICE RELIABILITY

Through the use of the Cooperative's SCADA System, outage report are complied and evaluated on a daily basis. Consumer outage hours have declined in recent years and the Cooperative continually strives to reduce the duration and frequency of outages. The improvement in outage times can be directly attributable to the SCADA System, the Right-of-Way Program and the work done, which began in the late 1970's, to replace vintage conductor. The Coop finished the conversion to its new GIS system (UAI) which included full implementation in the cooperative vehicle fleet. The Construction Department has also made significant strides in the organization of construction crews and the Operation Department has improved its handling of large outages with the coop's Emergency Restoration Plan and improving the data in the system outage software. The summary of the recent outage records by year is located in Appendix II.

PRESENT WORTH ANALYSIS

The projects in this Work Plan have been evaluated with their alternatives on a present worth basis when applicable. All new proposed substation projects will be evaluated with EKP based on a "one-system" concept and on a present worth basis.

ECONOMIC CONDUCTOR ANALYSIS

An economic conductor analysis is done on proposed projects to determine the most effective conductor for the load being served or the load on the circuit. Reliability, standardization, and proposed distribution voltage levels are also considered.

PHYSICAL CONDITION:

The Cooperative has and will continue to fund and provide the manpower necessary to operate and maintain the distribution facilities in a safe and prudent manner. The following is a summary of the program in place to accomplish these goals;

1. Right-of-Way - The Cooperative maintains the rights-of-way for the distribution facilities on a five-year (5) cycle. Residential subdivisions are on a more frequent cycle as needed. The Cooperative is assertive in its duty to maintain these rights-of-way in a proper and safe manner.
2. Low Volume Herbicide Spraying - The Cooperative applies herbicide in its rights-of-way to assist the mechanical clearing in maintaining the rights-of-way. This program was started in 1995 and has been very successful as a supplement to the mechanical program.
3. Pole Treatment - The Cooperative inspects and treats an average of 7000 poles per year and is in a third ten-year (10) cycle. The results of the program have been outstanding and in 2004 the rejection rate was less than 2.09%.
4. Line Patrol – A portion of OEC's overhead distribution facilities are inspected each year by employee patrols. Deficiencies or problems are identified, reported, and corrected as soon as possible. Pole treating, Right-of-Way, and spray crews also identify and report deficiencies. Maintenance crews inspect and repair any problems or deficiencies found in the residential subdivisions. Other Cooperative personnel working in the field also identify and report and deficiencies.
5. Power Factor - Capacitor banks, switched and fixed, are installed on the distribution system in an economical manner in order to improve system voltages and reduce distribution line losses.

6. Load Balancing - The Cooperative assesses substation and feeder circuit loads in order to evaluate the most economical feeds and reduce line losses through circuit balancing.
7. Sectionalizing - The Cooperative began a system-wide sectionalizing study and projects to have it completed in 2006. This study will update the system's sectionalizing and will be incorporating into the outage system and evaluated using the connectivity model in the Milsoft software.
8. Meter Testing - Each year the Cooperative tests a specific number of meters as indicated by the Cooperative's Statistical Meter Test Program. Each year, the previous results are evaluated to determine the percentage of meters that need to be tested in order to meet the statistical standard.
9. Aging Conductor - Since the 1980's, the Cooperative has focused on the replacement of vintage conductor. The Coop has concentrated specifically on 6 and 8 ACWC and all "amerductor" wire. Outage records, field inspections, and discussion with Coop personnel provide the basis for prioritizing the conductor replacement. Conductor replacement will be evaluated on a cost/reliability basis. Underground distribution primary cables, specifically the high molecular weight polyethylene insulation medium cable, are evaluated in a similar manner to prioritize for cable replacement.

   The following is a summary of Owen Electric's aged conductor 6A, 8A and Amerductor in miles;

Phase	As of 9/05 Existing	2005-2007 WP Replacement	Remaining
Single Phase	615	172	443
Two Phase	19.2	5.1	14.1
Three Phase	14.2	3.4	10.8
TOTAL	648.4	180.5	467.9

A field survey of remaining 6A, 8A, and Amerductor will be done prior to the next work plan in order to gain an accurate assessment of the remaining single phase aged conductor remaining.

DESIGN CRITERIA & CONSIDERATIONS

DESIGN CRITERIA

1. The minimum primary voltage on the distribution system is 118 volts and a base on 120 volts. The substation base will be 126 volts. Circuit voltage correction will be limited to one stage of voltage regulators, not including the station regulators.
2. Distribution circuits are not to be loaded more than 75% of their thermal rating.
3. The following distribution line equipment will have a minimum loading not to exceed the percentages below:

a)	Distribution Transformers	130% Winter	100% Summer
b)	Voltage Regulators	130% Winter	100% Summer
c)	Step Down Transformers	130% Winter	100% Summer
d)	Reclosers/Line Fuses	80% Winter	80% Summer

4. Underground conductors will be considered for replacement based on two or more outages attributable to the conductor over the last year or three outages over the last two years. Additionally, all conductors with significant numbers of splices and underground conductors with T-Taps will be evaluated. Replacement of old deteriorated overhead conductor will be done based on outage history and on a systematic basis.
5. Poles and appurtenances are to be replaced if found to be deteriorated during visual or physical inspection.
6. Poles, hardware, and conductors will be rebuilt and/or relocated if they are found to be unsafe or if they fail to meet applicable National Electric Safety Code requirements.
7. New primary construction is to be overhead except where underground facilities are required to comply with governmental or environmental regulations, local restrictions, favorable economics, developmental requests, or safety concerns.
8. All new construction is to be designed and built according to RUS standard construction specifications and guidelines.
9. Single-phase distribution lines with more than 300 KW of load will be evaluated for multi-phasing.
10. Adequate reliability for residential subdivisions, commercial and industrial loads may require backfeed capability and substation ties to improve reliability.

DESIGN CONSIDERATIONS

1. Circuit tie points on urban or industrial substation feeders should be equipped with three phase pole-top switches so that load can be easily shifted during emergency situations.
2. OEC shall standardize on overhead and underground conductor sizes based on an economic conductor analysis. Depending upon circuit loading, all three phase overhead circuits will be 336 ACSR or 1/0 ACSR. Single-phase overhead circuit will be either 1/0 ACSR or #2 ACSR. Underground distribution circuits will 1/0 URD jacketed cable and underground feeder circuits will be 500 MCM jacketed cable. Feeders and circuit ties should be a minimum of 336 ACSR. Deviations from this standard will be evaluated and will be based on site specific criteria and situations.
3. Conversion of feeders or line sections from 12.5 KV to 25 KV to improve voltage levels will be evaluated in conjunction with reconductoring and multi-phasing. All proposed voltage conversions will be analyzed in conjunction with the Long-Range Plan.
4. All three phase circuits will be evaluated for load balancing to reduce system losses and improve circuit voltage levels. Load balancing goals for three phase circuits will be +/- 20% and substation imbalances will be +/- 10% from the average.
5. Capacitors will be placed in an economical manner on the system to maintain a 95% lagging power factor. Switched capacitors banks will be installed to keep the power factor to a minimum of 98% leading.

DISTRIBUTION LINE AND EQUIPMENT COSTS

IMPROVEMENT/REPLACEMENT	COST PER MILE
6A, 8A TO #2 ACSR 1-PH	$17,500
6A, 8A TO 1/0 ACSR 1-PH	$19,500
CONVERSION TO 2-PH #2 ACSR	$35,000
CONVERSION TO 2-PH 1/0 ACSR	$39,000
CONVERSION TO 3-PH 1/0 ACSR	$45,000
CONVERSION TO 3-PH 336 ACSR	$54,800
CONVERSION TO DOUBLE CKT 336 ACSR	$80,700
FAULTY URD REPLACEMNT WITH 1/0 URD	$95,040
500 MCM FEEDER REPLACEMENT/INSTALL	$115,000
1/0 URD REPLACEMENT/INSTALL	$76,560
VOLTAGE CONVERSION 7.2 TO 14.4 KV	$2,940
THREE-PHASE POLE TOP SWITCHES (EACH)	$4,000
STEP TRANSFORMERS (EACH)	
1000 KVA	$4,750
1667 KVA	$6,000

STATUS OF PREVIOUS WORK PLAN

REF #	Project	Completed	Deleted	Carryover	Revised
301	Warsaw Road	X			
302	Glencoe Folsom Road	X			
303	Baker Williams Road				X
304	Duro Circuit 8&9 Double Circuit	X			
305	Carson Voltage Conversion	X			
306	Hogrefe Road				
307	Maher Road @ Glenhurst	X			
308	Holbrook Lane @ Shaker Run	X			
309	Holbrook Lawrenceville Road				X
310	Bavarian Substation DC	X			
311	Graves Road Double Circuit	X			
312	Cody Road (Meadow Glen)	X			
313	Hogg Ridge	X			
314	Lanter Road	X			
315	Kelly Road/Brownfield				X
316	Sweet Owen Road	X			
317	Reuben Lane	X			
318	Steels Bottom	X			
319	Lusbys Mill	X			
320	Bob White & Hwy 20				X
321	Vera Cruz	X			
322	Hwy 16 at Munk		X		
323	Greenup Road	X			
324	Davies A	X			
325	Fishing Creek	X			
326	Symbo Lane				X
327	Taylor/Workman and Pribble	X			
328	Big Bone Church Road	X			
329	Old New Liberty Road	X			
330	Twin Creek	X			
331	Big Bone Church Road #2			X	
332	Davies B	X			
333	Walnut Lick Road		X		
334	Tooten Lane & Clubhouse Drive	X			
335	Evergreen Drive				X
336	Indian Trace				X
337	Pleasant Hill Road				X
338	Ghent Eagle Station Road	X			
339	Old Teresita Road	X			
340	Morgan Creek	X			
341	Sherman Newtown Road	X			
342	Hwy 36		X		

CARRYOVERS:

RUS Ref. # 301 – Big Bone Church Road (Ref#328 in 2003/2004 WP) – The project was postponed from the last work plan because the contractor completed several relocation projects and highway jobs.

REVISIONS:

RUS Ref. # 306 – Baker Williams 3PH (Ref#303 in 2003/2004 WP) – The project was revised due to a revision in the projected date of the proposed Corinth Substation. The original project was a DC 336 ACSR line. The revised project is a single circuit 336 ACSR line.

RUS Ref. # 311 – Hwy 22 Tie (Ref#309 in 2003/2004 WP) – The original project has been revised to include another portion of single phase to three phase.

RUS Ref. # 331 – Kelly/Brownfield Road (Ref#315 in 2003/2004 WP) – The original project has been revised to include another additional areas of single phase 6A to #2 ACSR conductor replacement.

RUS Ref. # 337 – Pond Creek (Ref#336 in 2003/2004 WP) – The original project has been revised to include another additional areas of single phase 6A to #2 ACSR conductor replacement.

RUS Ref. # 338 – Pleasant Hill Road (Ref#337 in 2003/2004 WP) – The original project has been revised to include another additional areas of single phase 6A to #2 ACSR conductor replacement.

RUS Ref. # 339 – Symbo Lane (Ref#326 in 2003/2004 WP) – The original project has been revised to include another additional areas of single phase 6A to #2 ACSR conductor replacement.

RUS Ref. # 340 – Evergreen Drive (Ref#335 in 2003/2004 WP) – The original project has been revised to include another additional areas of single phase 6A to #2 ACSR conductor replacement.

RUS Ref. # 341 – Bob White & Hwy 20 (Ref#320 in 2003/2004 WP) – The original project has been revised to include another additional areas of single phase 6A to #2 ACSR conductor replacement.

SUBSTATION ANALYSIS

Owen Electric Cooperative, in conjunction with East Kentucky Power Coop, added 75 MVA of capacity to the system in the past work plan period. One substation was added (Bavarian), three substations had an additional bay and power transformer added to relieve load on the existing station transformer (Richardson, Duro, and Grant's Lick) and two substations had the power transformer upgraded (Carson, Bromley (old New Liberty)).

OEC and EKP will be installing another landfill gas generating station at the Remke Landfill near Griffin Substation. Boone Substation will be upgraded to a 15/20/25 MVA transformer in the fall of 2005. Bristow and Downing Substations will have an additional 11.2/14 MVA transformer added in the spring of 2006. OEC has completed the substation justification on the proposed Corinth Substation and has delayed it until 2008 or 2009. Additional substations in the Independence area, on Weaver Road between Bristow and Smoot Substations and a Camp Ernest Substation are presently being evaluated and the justifications will be complete this fall. None of the three possible additional substations will be constructed in this work plan. The projected loading on each substation for this work plan period is shown on the Substation Loading Chart on the following page.

SUBSTATION LOADING - Summer

LOCATION	SUB #	SUB MVA	2003 KW	2004 KW	2005 KW	2006 KW	2007 KW	% Loading
BANKLICK	N013	13.8	8,078	8,545	10,385	10,500	11,000	80%
BAVARIAN	N070	16.0		2,732	6,055	6,200	6,400	40%
BIG BONE	N036	13.8	6,450	5,862	6,251	6,500	6,800	49%
BOONE	N015	13.8	10,017	10,904	13,231	13,500	14,500	105%
BRISTOW	N047	14.0	8,545	11,344	11,629	10,000	10,700	76%
BROMLEY	N073	11.2		2,568	5,518	5,800	6,200	55%
BULLITTSVILLE	N028	14.0	10,161	12,113	12,951	11,000	11,500	82%
CARSON	N033	11.2	4,769	5,910	5,420	5,700	6,000	54%
DOWNING	N062	14.0	12,053	10,670	12,908	14,000	14,800	106%
DURO #1	N055	14.0	9,884	7,919	5,875	6,800	7,500	54%
DURO #2	N055A	14.0	1,511	8,157	10,798	10,500	11,000	79%
GALLATIN 138KV M-4		30.0	19,102	18,824	19,228	19,000	19,000	63%
GALLATIN 345KV M-1		210.0	162,259	160,186	156,211	160,000	160,000	76%
GALLATIN DIST.	N057A	16.0	6,474	6,244	6,952	7,000	7,500	47%
GRANTS LICK #1	N012	14.0	5,374	5,616	7,056	7,000	7,400	53%
GRANTS LICK #2	N012A	16.0	10,080	10,616	12,384	12,600	13,200	83%
GRIFFIN	N029	14.0	6,130	6,083	6,890	6,800	7,000	50%
HEBRON	N069	16.0	9,565	12,347	14,414	14,800	15,200	95%
KEITH	N038	9.9	6,009	6,242	6,821	7,200	7,500	76%
MUNK	N021	14.0	12,015	11,301	12,879	8,800	9,000	64%
NEW LIBERTY		0.0	4,441	5,858				
OAKLEY NOEL	N067	14.0	5,253	4,692	6,013	6,500	7,000	50%
PENN	N008	13.8	7,508	8,117	9,418	8,600	8,800	64%
RICHARDSON #1	N058	14.0	9,223	10,117	10,014	10,800	11,200	80%
RICHARDSON #2	N058A	14.0			3,745	4,500	5,500	39%
TURKEYFOOT	N031	13.8	9,539	9,020	13,012	9,500	10,000	72%
W. M. SMITH #1	N048	14.0	3,119	3,491	3,387	4,500	5,000	36%
W. M. SMITH #2	N048A	14.0	7,983	8,070	10,079	9,000	9,500	68%
W. R. SMOOT #1	N052	14.0	3,542	3,957	9,292	4,500	5,500	39%
W. R. SMOOT #2	N052A	14.0	10,558	8,807	8,896	9,800	10,500	75%
WILLIAMSTOWN	N016	13.8	11,871	10,886	12,073	9,500	10,000	72%
Total KW With Gallatin:		629	381,513	397,198	429,785	420,900	435,200	
Total KW W/O Gallatin:			200,152	218,188	254,346	241,900	256,200	

SUBSTATION LOADING - Winter

LOCATION	SUB #	SUB MVA	2003 KW	2004 KW	2005 KW	2006 KW	2007 KW	% Loading
BANKLICK	N013	17.0	7,741	8,027	8,735	9,750	10,200	60%
BAVARIAN	N070	20.0	2,373	2,456	2,565	3,400	3,900	20%
BIG BONE	N036	17.0	4,726	5,404	6,238	6,900	7,400	44%
BOONE	N015	17.0	9,383	9,694	10,898	13,200	14,100	83%
BRISTOW	N047	17.0	14,571	13,383	14,895	15,600	16,200	95%
BROMLEY	N073	14.0			6,929	7,400	7,700	55%
BULLITTSVILLE	N028	17.0	9,941	9,893	10,722	12,200	12,750	75%
CARSON	N033	14.0	5,858	5,864	6,008	6,400	6,800	49%
DOWNING	N062	17.0	5,517	8,934	9,685	10,500	11,200	66%
DURO #1	N055	17.0	10,744	7,422	7,988	9,200	9,800	58%
DURO #2	N055A	17.0		5,080	5,082	6,600	7,400	44%
GALLATIN 138KV M-4		50.0	19,100	18,497	18,824	19,000	19,000	38%
GALLATIN 345KV M-1		210.0	162,259	160,013	163,296	163,000	163,000	78%
GALLATIN DIST.	N057A	20.0	4,736	5,126	6,342	6,800	7,500	38%
GRANTS LICK #1	N012	17.0	7,105	7,327	6,981	8,200	8,600	51%
GRANTS LICK #2	N012A	20.0	13,700	13,893	13,121	14,400	14,750	74%
GRIFFIN	N029	17.0	6,463	6,726	7,301	8,100	8,400	49%
HEBRON	N069	20.0	5,752	7,358	8,248	9,200	10,200	51%
KEITH	N038	13.2	8,381	8,636	8,774	9,700	9,900	75%
MUNK	N021	17.0	13,484	13,755	14,204	15,250	15,750	93%
NEW LIBERTY			6,595	6,820				
OAKLEY NOEL	N067	17.0	4,700	4,860	5,344	7,200	8,100	48%
PENN	N008	17.0	9,863	9,863	9,746	10,400	10,700	63%
RICHARDSON #1	N058	17.0	9,867	10,156	11,807	7,700	8,100	48%
RICHARDSON #2	N058A	17.0				5,500	6,100	36%
TURKEYFOOT	N031	17.0	11,850	11,146	9,798	11,500	12,000	71%
W. M. SMITH #1	N048	17.0	6,884	3,240	2,670	4,000	4,750	28%
W. M. SMITH #2	N048A	17.0		6,368	6,882	8,200	8,600	51%
W. R. SMOOT #1	N052	17.0	14,691	5,616	5,443	6,200	6,900	41%
W. R. SMOOT #2	N052A	17.0		9,176	8,510	9,700	10,300	61%
WILLIAMSTOWN	N016	17.0	11,975	12,200	12,522	13,200	13,650	80%
Total KW With Gallatin:		738	388,259	396,933	409,558	438,400	453,750	
Total KW W/O Gallatin:			206,900	218,423	227,438	256,400	271,750	

HISTORICAL COST DATA

	2003-2004	2005-2007 WP
Overhead		
1. No. of New Services	764	680
2. Linear Feet: Total	287,387	300,000
Primary	216,219	225,000
Secondary & Services	71,168	75,000
3. Aver. Length Feet	376	375
4. Cost of Overhead	$2,737,082	$2,480,000
5. Aver. Cost of Service	$3,583	$3,600
6. No. of New Xfrmrs	656	500
7. Aver. Inst. Cost/Xfrmr	$450	$450
8. No. of 3-PH Polemounts	74	75
9. Aver. Cost of 3-PH Xfrmrs	$1089	$1250
Underground		
10. No. of New Services	3692	3320
11. Linear Feet: Total	515,208	500,000
Primary	194,706	200,000
Secondary & Services	320,502	300,000
12. Aver. Length Feet	140	140
13. Cost of Underground	$4,597,080	$3,984,000
14. Aver. Cost of Service	$1,245	$1,200
15. No. of New Xfmrs	970	800
16. Aver. Inst. Cost/Xfmrs	$1,000	$1250
17. No. of 3-PH Padmounts	32	30
18. Aver. Cost of 3-PH Xfrmrs	$8,823	$9,000
Increased Capacity		
19. No. of New Xfrmrs for C/O	23	25
20. No. of Service Changeouts	140	140
21. Aver. Cost for Service C/O	$1,059	$1,100
Security Lights		
22. No. of Security Lights	706	665
23. Aver. Inst. Cost/Light	$737	$725
Pole Replacement		
24. No. of Pole Replacements	443	475
25. Aver. Cost/Replacement	$2,387	$2,200
Meters		
26. No. of Meters Installed	7003	4500
27. Aver. Cost/Installation	$46	$45
28. No. of Large Power Meters	73	168
29. Aver. Cost/Large Power Meter	$305	$375
Large Power Installations		
30. No. Large Power Installations	58	60
31. Aver. Cost/Installation	$10,890	$11,000

DISTRIBUTION COSTS BY RUS ITEM CODE

RUS ITEM GROUP	DESCRIPTION	COST
100	OH Line Extensions	$ 2,480,000
101	UG Line Extensions	$ 3,984,000
102	Large Commercial Extensions	$ 660,000
300	System Improvements	$ 4,790,795
601	Meters and Transformers	$ 1,854,250
602	Service Upgrades/Change Outs	$ 154,000
606	Pole Change Outs	$ 1,045,000
607	Voltage Conversion Equipment	$ 18,000
701	Area Lights/Street-lighting	$ 482,125
Total 2005-2007 Work Plan Estimate		**$15,468,170**

DETAILED CONSTRUCTION COST

1. NEW SERVICES, OVERHEAD AND UNDERGROUND, SINGLE AND THREE PHASE

CODE	DESCRIPTION	Number	Miles	TOTAL COST
100	Overhead Services, 1 PH	680		$2,480,000
101	Underground Services, 1 PH	3320		$3,984,000
102	Large Commercial Services, 3 PH	60		$660,000
			Total	**$6,527,011**

2. CONVERSION, TIE LINES, AND LINE CHANGES, 300

CODE	Description	Miles	Per Mile	COST
301	3 ph 6A Cu to 3 ph 336 ACSR	2.1	$54,800	$115,080
302	1 ph 6A Cu to 3 ph 336 ACSR 3 ph 1/0 ACSR to 3 ph 336 ACSR	7.0	$54,800	$383,600
303	2 ph 6A Cu to 3 ph 1/0 ACSR	3.41	$45,000	$153,450
304	3 ph 1/0 ACSR to 3 ph 336 ACSR	0.15		$41,950
305	1 ph 6A Cu to 3 ph 1/0 ACSR	4.1	$45,000	$184,500
306	1 ph 6A Cu to 3 ph 336 ACSR	5.4	$54,800	$295,955
307	1 ph 2 ACSR to 3 ph 1/0 ACSR	0.58	$45,000	$26,100
308	3 ph 336 ACSR to DC 336 ACSR	0.7	$80,700	$56,490
309	3 ph 1/0 ACSR to 3 ph 336 ACSR	0.7	$54,800	$38,360
310	1 ph 6A Cu to 3 ph 1/0 ACSR	3.3	$45,000	$148,500
311	1 ph 6A Cu to 3 ph 1/0 ACSR	2.25	$45,000	$101,250
312	1 ph 6A Cu to 3 ph 1/0 ACSR	3.3	$45,000	$148,500
313	1 ph 6A Cu to 3 ph 1/0 ACSR 1 ph 6A Cu to 1 ph #2 ACSR	2.75 0.7	$45,000 $17,500	$125,500
314	3 ph 6A Cu to 3 ph 336 ACSR	1.4	$54,000	$76,720
315	3 ph 1/0 URDJ and 1/0 ACSR	0.047		$33,775
316	1 ph 6A Cu to 3 ph 1/0 ACSR 2 ph 6A Cu to 3 ph 1/0 ACSR	3.7	$45,000	$161,850
317	1ph 6A Cu to 1ph #2 ACSR	4.02	$17,500	$70,350
318	1ph 6A Cu to 1ph #2 ACSR	2.43	$17,500	$42,525
319	1ph 6A Cu to 1ph #2 ACSR	2.16	$17,500	$37,800

DETAILED CONSTRUCTION COST

320	1ph 6A Cu to 1ph #2 ACSR	2.97	$17,500	$51,975
321	1ph 6A Cu to 1ph #2 ACSR	1.79	$17,500	$31,325
322	1ph 6A Cu to 1ph #2 ACSR	2.0	$17,500	$35,000
323	1ph 6A Cu to 1ph #2 ACSR	4.51	$17,500	$78,925
324	1ph 6A Cu to 1ph #2 ACSR	3.88	$17,500	$67,900
325	1ph 6A Cu to 1ph #2 ACSR	4.41	$17,500	$77,175
326	1ph 6A Cu to 1ph #2 ACSR	5.07	$17,500	$88,725
327	1ph 6A Cu to 1ph #2 ACSR	9.25	$17,500	$161,875
328	1ph 6A Cu to 1ph #2 ACSR	2.26	$17,500	$39,555
329	1ph 6A Cu to 1ph #2 ACSR	8.67	$17,500	$151,725
330	1ph 6A Cu to 1ph #2 ACSR	4.67	$17,500	$81,725
331	1ph 6A Cu to 1ph #2 ACSR	6.58	$17,500	$115,150
332	1ph 6A Cu to 1ph #2 ACSR	2.6	$17,500	$113,400
333	1ph 6A Cu to 1ph #2 ACSR	0.9	$17,500	$73,500
334	1ph 6A Cu to 1ph #2 ACSR 1ph 6A Cu to 2ph #2 ACSR	1.2 0.23		
335	1ph 6A Cu to 3ph #2 ACSR	0.15		$35,800
335	1ph 6A Cu to 1ph #2 ACSR	5.56	$17,500	$97,300
336	1ph 6A Cu to 1ph #2 ACSR	5.55	$17,500	$97,125
337	1ph 6A Cu to 3ph 1/0 ACSR 1ph 6A Cu to 1ph #2 ACSR	2.0 3.56	$45,000 $17,500	$152,300
338	1ph 6A Cu to 1ph #2 ACSR	3.3	$17,500	$57,750
339	1ph 6A Cu to 1ph #2 ACSR	3.3	$17,500	$57,750
340	1ph 6A Cu to 1ph #2 ACSR	1.9	$17,500	33,250
341	1ph 6A Cu to 1ph #2 ACSR	2.5	$17,500	$43,750

DETAILED CONSTRUCTION COST

342	1ph 6A Cu to 1ph #2 ACSR	9.57	$17,500	$167,475
343	1ph 6A Cu to 1ph #2 ACSR	1.58	$17,500	$27,650
344	1ph 6A Cu to 1ph #2 ACSR	2.8	$17,500	$49,000
345	1ph 6A Cu to 1ph #2 ACSR	3.28	$17,500	$57,400
346	1ph 6A Cu to 1ph #2 ACSR	2.62	$17,500	$45,850
347	1ph 6A Cu to 1ph #2 ACSR	3.52	$17,500	$61,600
348	1ph 6A Cu to 1ph #2 ACSR	1.2	$17,500	$21,600
349	1ph 6A Cu to 1ph #2 ACSR	5.0	$17,500	$87,500
350	1ph 6A Cu to 1ph #2 ACSR	2.64	$17,500	$46,200
351	1ph 6A Cu to 1ph #2 ACSR	5.8	$17,500	$101,500
352	1ph 6A Cu to 1ph #2 ACSR	5.5	$17,500	$96,250
353	1ph 6A Cu to 1ph #2 ACSR	2.49	$17,500	$43,575
		Total		**$4,790,795**

DETAILED CONSTRUCTION COST

3. TRANSFORMERS AND METERS, 601

CODE	DESCRIPTION	Number	Average Cost	TOTAL COST
601	Transformers for OH services	500	$450	$225,000
	Transformers for UG services	800	$1,250	$1,000,000
	Transformers – Three Phase OH	75	$1,250	$93,750
	Transformers – Three Phase UG	30	$9,000	$270,000
	Meters - Single Phase	4500	$45	$202,500
	Meters - Three Phase	168	$375	$63,000
		Total		**$1,854,250**

4. INCREASE SERVICE CAPACITY, 602

CODE	DESCRIPTION	Number	Average Cost	TOTAL COST
602	Increase Service Capacity	140	$1,100	$154,000
		Total		**$154,000**

5. POLE REPLACEMENTS, 606

CODE		Number	Average Cost	TOTAL COST
606.0	Pole Replacements	475	$2,200	$1,045,000
		Total		**$1,045,000**

5. VOLTAGE CONVERSION DEVICES

CODE		TOTAL COST
607	Step-Transformer Installations	**$18,000**

7. SECURITYLIGHTS

CODE		Number	Average Cost	TOTAL COST
701	Security Lights	665	$725	$482,125
		Total		**$482,125**

CONSTRUCTION SCHEDULE

CODE	DESCRIPTION/PROJECT NAME	2005/2006	2006/2007
100	New Overhead Services	$1,240,000	$1,240,000
101	New Underground Services	$1,992,000	$1,992,000
102	New Large Power/Commercial	$ 330,000	$ 330,000
301	Big Bone Church Road	$ 115,080	
302	Penn Feeder 01	$ 383,600	
303	Glass Pike	$ 153,450	
304	Parkwest Tie	$ 41,910	
305	Hwy 127		$ 184,500
306	Baker Williams 3PH		$ 295,955
307	Williams Woods	$ 26,100	
308	Bristow Double Circuit	$ 56,490	
309	Short Richardson	$ 38,360	
310	Grant's Lick Tie		$ 148,500
311	Hwy 22 Tie	$ 148,500	
312	Hwy 10 Tie		$ 101,250
313	Hwy 16 Three Phase		$ 125,500
314	Possum Path		$ 76,720
315	Narrows Tie		$ 33,775
316	New Columbus Road	$ 161,850	
317	Penn Feeder 4 Taps	$ 70,350	
318	Glass Pike Taps	$ 42,525	
319	Scott's Mill	$ 37,800	
320	Porter Road	$ 51,975	
321	Penn Feeder 3 Taps	$ 31,325	
322	Corinth Exit	$ 35,000	
323	Penn Feeder 2 Taps	$ 78,925	
324	Fisher Road	$ 67,900	
325	Schababele Road		$ 77,175
326	Siry Road		$ 88,725
327	Greenwood Road		$ 161,875
328	Hwy 17		$ 39,555
329	Kincaid Lake		$ 151,725
330	Washington Trace		$ 81,725
331	Kelly/Brownfield Road		$ 115,150
332	Griffin Feeder 4 Taps		$ 113,400
333	Point of Rock	$ 73,500	
334	Cox Road	$ 35,800	
335	Elmer Davis Lake	$ 97,300	
336	Old Monterey Road	$ 97,125	
337	Pond Creek		$ 152,300
338	Pleasant Hill Road		$ 57,750
339	Symbo Lane		$ 57,750

CONSTRUCTION SCHEDULE

CODE	DESCRIPTION/PROJECT NAME	2005/2006	2006/2007
340	Evergreen Drive	$ 33,250	
341	Bob White & Hwy 20		$ 43,750
342	Brush Creek	$ 167,475	
343	East Bend Road Taps	$ 27,650	
344	Salem Creek	$ 49,000	
345	May Road		$ 57,400
346	Issac Road		$ 45,850
347	Swope/Natalee Road	$ 61,600	
348	Hopeful Church Road	$ 21,600	
349	Highway 36	$ 87,500	
350	Lawrenceburg Ferry	$ 46,200	
351	Rockdale Road	$ 101,500	
352	Turner Road		$ 96,250
353	Hwy 36 Taps		$ 43,575
601	Meters and Transformers	$ 927,125	$ 927,125
602	Service Upgrades/Change Outs	$ 77,000	$ 77,000
603	Sectionalizing/Reclosers	$ 112,500	$ 112,500
606	Pole Change Outs	$ 522,500	$ 522,500
607	Step Up/Down Transformers	$ 18,000	
701	Area Lights/Street-Lighting	$ 241,062	$ 241,063
Total 2005-2007 Work Plan		$7,788,327	$7,679,843

NEW DISTRIBUTION CONSTRUCTION / LINE CONVERSION

Code: 301 (Carryover – 331 in 2003-2004 CWP)
Design Criteria: 4,10
Projected Construction Year: 2005/2006
Substation: 12 Circuit: 1
Estimated Cost: $115,080
Length: 2.1 Miles
Project Name: Big Church Road
County: Boone
OEC Map Numbers: 406
Location: Between 61405059133 and 61406111678

Description of Proposed Construction:
3 ph 6A to 3 ph 336 ACSR

Justification of Proposed Construction:
The existing circuit conductor is 6A. Back feed capabilities with circuit ties is limited and feeder reliability is poor with the 6A conductor.

Results of Proposed Construction:
Circuit reliability is increased and back feed capabilities enhanced.

Alternative Corrective Plans Considered:
No other alternatives considered

NEW DISTRIBUTION CONSTRUCTION / LINE CONVERSION

Code: 302
Design Criteria: 4, 10
Projected Construction Year: 2005/2006
Substation: 07 Circuit: 1
Estimated Cost: $383,600
Length: 7.0 Miles
Project Name: Penn Feeder 01
County: Scott
OEC Map Numbers: 16,23,31,40
Location: From Substation to Pole 51016214589

Description of Proposed Construction:
1 ph 6A and 3 ph 1/0 ACSR to 3 ph 336 ACSR

Justification of Proposed Construction:
Extending Circuit 1 to southern Scott County will provide a reliable back feed for Circuit 4 out of Penn Substation and replace old conductor.

Results of Proposed Construction:
Circuit reliability is increased and back feed capabilities enhanced.

Alternative Corrective Plans Considered:
No other alternatives considered

NEW DISTRIBUTION CONSTRUCTION / LINE CONVERSION

Code: 303
Design Criteria: 4, 10
Projected Construction Year: 2005/2006
Substation: 07 Circuit: 1
Estimated Cost: $153,450
Length: 3.41 Miles
Project Name: Glass Pike
County: Scott
OEC Map Numbers: 9,12,13,17
Location: From Pole 51017065772 to Pole 510090677937

Description of Proposed Construction:
2 ph 6A to 3 ph 1/0 ACSR

Justification of Proposed Construction:
Extending Circuit 1 to southern Scott County will provide a reliable back feed for Circuit 4 out of Penn Substation and replace old conductor.

Results of Proposed Construction:
Circuit reliability is increased and back feed capabilities enhanced.

Alternative Corrective Plans Considered:
No other alternatives considered

NEW DISTRIBUTION CONSTRUCTION / LINE CONVERSION

Code: 304
Design Criteria: 2, 10
Projected Construction Year: 2005/2006
Substation: 22 Circuit: 2
Estimated Cost: $41,910
Length: 0.15 Miles UG and 0.45 Miles OH
Project Name: Parkwest Tie
County: Boone
OEC Map Numbers: 499,500
Location: From Switch 62499171698 to Pole 62500062420

Description of Proposed Construction:
3 ph 1/0 ACSR to 3 ph 336 ACSR and install 500 MCM URD.

Justification of Proposed Construction:
Install UG tie and replacing existing 3 ph 1/0 ACSR will relieve overload condition on existing fuses and provide reliable back feed to Downey Sub.

Results of Proposed Construction:
Existing loading problems, circuit reliability is increased and back feed capabilities enhanced.

Alternative Corrective Plans Considered:
Alternative route was examined and not feasible.

NEW DISTRIBUTION CONSTRUCTION / LINE CONVERSION

Code: 305
Design Criteria: 4, 10
Projected Construction Year: 2006/2007
Substation: 06 Circuit: 1
Estimated Cost: $184,500
Length: 4.1 Miles
Project Name: Hwy 127
County: Owen
OEC Map Numbers: 214,234,235,255
Location: From Pole 12214081531 to Pole 12255191210

Description of Proposed Construction:
1 ph 6A to 3 ph 1/0 ACSR

Justification of Proposed Construction:
Extending Circuit 1 to improves system reliability, single phase loading and a back feed to Munk and Gallatin Substations

Results of Proposed Construction:
Single phase loading addressed, circuit reliability is increased and back feed capabilities enhanced.

Alternative Corrective Plans Considered:
No other alternatives considered

NEW DISTRIBUTION CONSTRUCTION / LINE CONVERSION

Code: 306
Design Criteria: 4, 9, 10
Projected Construction Year: 2006/2007
Substation: New (Corinth) Circuit: New
Estimated Cost: $295,955
Length: 5.4 Miles
Project Name: Baker Williams 3PH
County: Grant
OEC Map Numbers: 93,106,107,121,136
Location: Baker Williams Road

Description of Proposed Construction:
1 ph 6A to 3 ph 336 ACSR

Justification of Proposed Construction:
Single phase overloading close to 75% ampacity rating and reliable three phase tie to a radial three phase feeder.

Results of Proposed Construction:
Provides back feed capabilities, corrects single phase overload problem and replaces old conductor.

Alternative Corrective Plans Considered:
Substation justification prepared but not justified at this time.

NEW DISTRIBUTION CONSTRUCTION / LINE CONVERSION

Code: 307
Design Criteria: 2,10
Projected Construction Year: 2005/2006
Substation: 14 Circuit: 2
Estimated Cost: $26,100
Length: 0.58 Miles
Project Name: Williams Woods
County: Kenton
OEC Map Numbers: 425
Location: From Pole 7242507140 to Pole 72425142785

Description of Proposed Construction:
1 ph 2 ACSR to 3 ph 1/0 ACSR

Justification of Proposed Construction:
One existing and one new subdivision are presently served through an existing UG subdivision and the new subdivision will overload the existing circuit.

Results of Proposed Construction:
Three phasing single phase OH line relieves existing and future load problems and back feed capabilities enhanced.

Alternative Corrective Plans Considered:
Upgrading existing UG feeder more expensive.

NEW DISTRIBUTION CONSTRUCTION / LINE CONVERSION

Code: 308
Design Criteria: 10
Projected Construction Year: 2005/2006
Substation: 14 Circuit: 2
Estimated Cost: $56,490
Length: 0.7 Miles
Project Name: Bristow Double Circuit
County: Kenton
OEC Map Numbers: 425
Location: From Substation to Pole 72425109780

Description of Proposed Construction:
3 ph 336 ACSR to double circuit 336 ACSR

Justification of Proposed Construction:
Existing Circuit 1 out of Bristow Substation will be overloaded with new subdivision and additional load in Enterprise V Business Park.

Results of Proposed Construction:
Circuit 1 will be able to handle additional commercial load and new circuit will feed new subdivision and tie with Duro Substation.

Alternative Corrective Plans Considered:
No other alternatives considered

NEW DISTRIBUTION CONSTRUCTION / LINE CONVERSION

Code: 309
Design Criteria: 2, 10
Projected Construction Year: 2005/2006
Substation: 14 Circuit: 2
Estimated Cost: $38,360
Length: 0.7 Miles
Project Name: Short Richardson
County: Kenton
OEC Map Numbers: 438
Location: From Pole 72438039251 to Pole 61438025464

Description of Proposed Construction:
3 ph 1/0 ACSR to 3 ph 336 ACSR

Justification of Proposed Construction:
A small section of Circuit 4 out of Bristow consists of 1/0 ACSR. Conductor loading problems and limited back feed capabilities result from this section.

Results of Proposed Construction:
Conductor loading problems resolved and back feed capabilities enhanced.

Alternative Corrective Plans Considered:
No other alternatives considered

NEW DISTRIBUTION CONSTRUCTION / LINE CONVERSION

Code: 310
Design Criteria: 4, 10
Projected Construction Year: 2006/2007
Substation: 03 Circuit: 2 and 3
Estimated Cost: $148,500
Length: 3.3 Miles
Project Name: Grants Lick Tie
County: Pendleton
OEC Map Number: 339,340,355
Location: From Pole 31399087352 to Pole 31355140816

Description of Proposed Construction:
1 ph 6A to 3 ph 1/0 ACSR

Justification of Proposed Construction:
Provides a circuit tie between Grants Lick Circuits 2 & 3 and improves reliability and replaces old conductor.

Results of Proposed Construction:
Reliability and back feed capabilities enhanced.

Alternative Corrective Plans Considered:
No other alternatives considered

NEW DISTRIBUTION CONSTRUCTION / LINE CONVERSION

Code: 311
Design Criteria: 4, 10
Projected Construction Year: 2006/2007
Substation: 03 and 51 Circuit: 2 and 3
Estimated Cost: $101,250
Length: 2.25 Miles
Project Name: Hwy 10 Tie
County: Pendleton
OEC Map Number: 371, 385
Location: From Pole 313710076435 to Pole 82385153819

Description of Proposed Construction:
1 ph 6A to 3 ph 1/0 ACSR

Justification of Proposed Construction:
Provides a circuit tie between Grants Lick Circuits 1 & 2 and improves reliability.

Results of Proposed Construction:
Reliability and back feed capabilities enhanced.

Alternative Corrective Plans Considered:
No other alternatives considered

NEW DISTRIBUTION CONSTRUCTION / LINE CONVERSION

Code: 312
Design Criteria: 4, 10
Projected Construction Year: 2005/2006
Substation: 13 and 05 Circuit: 2 and 3
Estimated Cost: $148,500
Length: 3.3 Miles
Project Name: Hwy 22 Tie
County: Grant
OEC Map Number: 147,148
Location: From Pole 21147061610 to Pole 21148060488

Description of Proposed Construction:
1 ph 6A to 3 ph 1/0 ACSR

Justification of Proposed Construction:
Provides a circuit tie between Keith Circuit 2 and Williamstown Circuit 3 and improves reliability and replaces old conductor.

Results of Proposed Construction:
Reliability and back feed capabilities enhanced.

Alternative Corrective Plans Considered:
No other alternatives considered

NEW DISTRIBUTION CONSTRUCTION / LINE CONVERSION

Code: 313
Design Criteria: 4,
Projected Construction Year: 2006/2007
Substation: 4 Circuit: 2
Estimated Cost: $125,500
Length: 2.75 Miles 3 ph, 0.7 Miles 1ph
Project Name: Hwy 16 Three Phase
County: Gallatin
OEC Map Number: 254, 274, 275
Location: From Pole 41254009829 to Pole 41275191397

Description of Proposed Construction:
1 ph 6A and 1 ph #2 ACSR to 3 ph 1/0 ACSR
1 ph 6A to 1 ph #2 ACSR

Justification of Proposed Construction:
Load balancing and reliability problems on a long single phase tap and replaces old conductor.

Results of Proposed Construction:
Improves load balance and reliability.

Alternative Corrective Plans Considered:
No other alternatives considered

NEW DISTRIBUTION CONSTRUCTION / LINE CONVERSION

Code: 314
Design Criteria: 4, 10
Projected Construction Year: 2006/2007
Substation: 01 and 08 Circuit: 3 and 2
Estimated Cost: $76,720
Length: 1.4 Miles
Project Name: Possum Path
County: Boone
OEC Map Number: 462,463,474
Location: From Pole 62462173330 to Pole 62474184736

Description of Proposed Construction:
3 ph 6A to 3 ph 336 ACSR

Justification of Proposed Construction:
Limited back feed and circuit loading on 6A conductor and replaces old conductor.

Results of Proposed Construction:
Improves back feed and reliability.

Alternative Corrective Plans Considered:
No other alternatives considered

NEW DISTRIBUTION CONSTRUCTION / LINE CONVERSION

Code: 315
Design Criteria: 4, 10
Projected Construction Year: 2005/2006
Substation: 10 Circuit: 5
Estimated Cost: $33,775
Length: 0.4 Miles 1/0 URD 3 ph, 0.07 Miles 1/0 ACSR 3 ph
Project Name: Narrows Tie
County: Kenton
OEC Map Number: 453
Location: From Pole 72453128749 and Pole 72453131694

Description of Proposed Construction:
Install 3 ph 1/0 URD and 3 ph 1/0 ACSR

Justification of Proposed Construction:
Limited back feed and old UG feeder from Turkeyfoot Substation continually failed and taken out service results in limited back feed capabilities.

Results of Proposed Construction:
Improves back feed and reliability.

Alternative Corrective Plans Considered:
Replacement of existing 350 MCM feeder too expensive.

NEW DISTRIBUTION CONSTRUCTION / LINE CONVERSION

Code: 316
Design Criteria: 4, 10
Projected Construction Year: 2005/2006
Substation: 7 Circuit: 3
Estimated Cost: $161,850
Length: 3.7 Miles of 3 ph 1/0 ACSR
Project Name: New Columbus Road
County: Owen
OEC Map Number: 453
Location: From Pole 11080234287 to Pole 11069187508
From Pole 11080234287 to Pole 11080097678

Description of Proposed Construction:
1 ph 6A to 3 ph 1/0 ACSR, 2 ph 6A to 3 ph 1/0 ACSR

Justification of Proposed Construction:
Reliability and limited back feeding and replaces old conductor.

Results of Proposed Construction:
Improves back feed and reliability.

Alternative Corrective Plans Considered:
No other alternatives considered

CONDUCTOR REPLACEMENTS – Design Criteria 4

Code: 317
Projected Construction Year: 2005/2006
Substation: 7 Circuit: 4
Estimated Cost: $70,350
Length: 4.02 Miles
Project Name: Penn Feeder 4 Taps
County, Roads: Scott, various
OEC Map Numbers: 009, 013, 017, 024, 031, 032, 040, 041
Description: 1 ph 6A to 1 ph #2 ACSR

Code: 318
Projected Construction Year: 2005/2006
Substation: 7 Circuit: 1
Estimated Cost: $42,525
Length: 2.43 Miles
Project Name: Glass Pike Taps
County, Roads: Scott, various
OEC Map Numbers: 009, 012, 013, 016, 017, 024
Description: 1 ph 6A to 1 ph #2 ACSR

Code: 319
Projected Construction Year: 2005/2006
Substation: 7 Circuit: 3
Estimated Cost: $37,800
Length: 2.16 Miles
Project Name: Scott's Mill
County, Roads: Scott, Scott's Mill Road
OEC Map Numbers: 041, 049, 050
Description: 1 ph 6A to 1 ph #2 ACSR

Code: 320
Projected Construction Year: 2005/2006
Substation: 7 Circuit: 3
Estimated Cost: $51,975
Length: 2.97 Miles
Project Name: Porter Road
County, Roads: Scott, Porter Road
OEC Map Numbers: 050, 059, 060
Description: 1 ph 6A to 1 ph #2 ACSR

CONDUCTOR REPLACEMENTS – Design Criteria 4

Code: 321
Projected Construction Year: 2005/2006
Substation: 7 Circuit: 3
Estimated Cost: $31,325
Length: 1.79 Miles
Project Name: Penn Feeder 3 Taps
County, Roads: Scott & Grant, various
OEC Map Numbers: 050, 060, 070, 081, 092, 093
Description: 1 ph 6A to 1 ph #2 ACSR

Code: 322
Projected Construction Year: 2005/2006
Substation: 7 Circuit: 3
Estimated Cost: $35,000
Length: 2.0 Miles
Project Name: Corinth Exit
County, Roads: Grant, Hwy 330 and the I-75 Interchange
OEC Map Numbers: 093
Description: 1 ph 6A to 1 ph #2 ACSR

Code: 323
Projected Construction Year: 2005/2006
Substation: 7 Circuit: 2
Estimated Cost: $78,925
Length: 4.51 Miles
Project Name: Penn Feeder 2 Taps
County, Roads: Owen, various
OEC Map Numbers: 038, 09, 047, 048, 049
Description: 1 ph 6A to 1 ph #2 ACSR

Code: 324
Projected Construction Year: 2005/2006
Substation: 7 Circuit: 3
Estimated Cost: $67,900
Length: 3.88 Miles
Project Name: Fisher Road
County, Roads: Campbell, Fisher Road
OEC Map Numbers: 369, 370, 384
Description: 1 ph 6A to 1 ph #2 ACSR

CONDUCTOR REPLACEMENTS – Design Criteria 4

Code: 325
Projected Construction Year: 2006/2007
Substation: 51 Circuit: 1
Estimated Cost: $77,175
Length: 4.41 Miles
Project Name: Schababele Road
County, Roads: Campbell, Hwy 1121, and Schababele Road
OEC Map Numbers: 384, 385
Description: 1 ph 6A to 1 ph #2 ACSR

Code: 326
Projected Construction Year: 2006/2007
Substation: 7 Circuit: 3
Estimated Cost: $88,725
Length: 5.07 Miles
Project Name: Siry Road
County, Roads: Campbell, Hwy 1280, Siry and Burns Road
OEC Map Numbers: 369, 383
Description: 1 ph 6A to 1 ph #2 ACSR

Code: 327
Projected Construction Year: 2006/2007
Substation: 9 Circuit: 4
Estimated Cost: $161,875
Length: 9.25 Miles
Project Name: Greenwood Road
County, Roads: Pendleton, Butler/Greenwood Road
OEC Map Numbers: 284, 285, 304, 305, 323, 324
Description: 1 ph 6A to 1 ph #2 ACSR

Code: 328
Projected Construction Year: 2006/2007
Substation: 9 Circuit: 4
Estimated Cost: $39,555
Length: 2.26 Miles
Project Name: Hwy 17
County, Roads: Pendleton, Highway 17
OEC Map Numbers: 284
Description: 1 ph 6A to 1 ph #2 ACSR

CONDUCTOR REPLACEMENTS – Design Criteria 4

Code: 329
Projected Construction Year: 2006/2007
Substation: 9 Circuit: 1
Estimated Cost: $151,725
Length: 8.67 Miles
Project Name: Kincaid Lake
County, Roads: Pendleton, Area around Kincaid Lake
OEC Map Numbers: 266, 267, 286, 287
Description: 1 ph 6A to 1 ph #2 ACSR

Code: 330
Projected Construction Year: 2006/2007
Substation: 51 Circuit: 1
Estimated Cost: $81,725
Length: 4.67 Miles
Project Name: Washington Trace
County, Roads: Campbell, Washington Trace Road
OEC Map Numbers: 401, 402
Description: 1 ph 6A to 1 ph #2 ACSR

Code: 331
Projected Construction Year: 2006/2007
Substation: 3 Circuit: 4
Estimated Cost: $115,150
Length: 6.58 Miles
Project Name: Kelly/Brownfield Road
County, Roads: Pendleton, Kelly/Brownfield Road
OEC Map Numbers: 282, 283, 302, 303
Description: 1 ph 6A to 1 ph #2 ACSR

Code: 332
Projected Construction Year: 2006/2007
Substation: 9 Circuit: 4
Estimated Cost: $113,400
Length: 6.48 Miles
Project Name: Griffin Feeder 4 Taps
County, Roads: Pendleton, various
OEC Map Numbers: 184, 203, 204, 223, 224, 243, 244, 263, 264
Description: 1 ph 6A to 1 ph #2 ACSR

CONDUCTOR REPLACEMENTS – Design Criteria 4

Code: 333
Projected Construction Year: 2005/2006
Substation: 3 Circuit: 4
Estimated Cost: $73,500
Length: 4.2 Miles
Project Name: Point of Rock
County, Roads: Owen, Point of Rock Road
OEC Map Numbers: 034, 043, 044
Description: 1 ph 6A to 1 ph #2 ACSR

Code: 334
Projected Construction Year: 2005/2006
Substation: 2 Circuit: 1
Estimated Cost: $35,800
Length: 0.15 Miles 3 ph, 0.23 Miles 2 ph, 1.2 Miles 1 ph
Project Name: Cox Road
County, Roads: Campbell, Cox Road
OEC Map Numbers: 426
Description: 1 ph 6A to 1 ph, 2 ph and 3 ph #2 ACSR

Code: 335
Projected Construction Year: 2005/2006
Substation: 2 Circuit: 1
Estimated Cost: $97,300
Length: 5.56 Miles
Project Name: Elmer Davis Lake
County, Roads: Owen, Lake and Dam Road
OEC Map Numbers: 075, 086, 099
Description: 1 ph 6A to 1 ph #2 ACSR

Code: 336
Projected Construction Year: 2005/2006
Substation: 13 Circuit: 3
Estimated Cost: $97,125
Length: 5.55 Miles
Project Name: Old Monterey Road
County, Roads: Owen, Old Monterey Road
OEC Map Numbers: 026, 035, 044
Description: 1 ph 6A to 1 ph #2 ACSR

CONDUCTOR REPLACEMENTS – Design Criteria 4

Code: 337
Projected Construction Year: 2006/2007
Substation: 51 Circuit: 6
Estimated Cost: $152,300
Length: 2.0 Miles 3ph, 3.56 Miles 1 ph
Project Name: Pond Creek
County, Roads: Campbell, Indian Trace Road
OEC Map Numbers: 413, 397, 428
Description: 1 ph 6A to 3 ph 1/0 ACSR & 1 ph #2 ACSR

Code: 338
Projected Construction Year: 2006/2007
Substation: 51 Circuit: 6
Estimated Cost: $57,750
Length: 3.3 Miles
Project Name: Pleasant Hill Road
County, Roads: Campbell, Pleasant Hill and Harrisburg Hill Road
OEC Map Numbers: 397, 381
Description: 1 ph 6A to 1 ph #2 ACSR

Code: 339
Projected Construction Year: 2006/2007
Substation: 51 Circuit: 6
Estimated Cost: $57,750
Length: 3.3 Miles
Project Name: Symbo Lane
County, Roads: Kenton, Symbo Lane
OEC Map Numbers: 345, 364
Description: 1 ph 6A to 1 ph #2 ACSR

Code: 340
Projected Construction Year: 2005/2006
Substation: 14 Circuit: 4
Estimated Cost: $33,250
Length: 1.9 Miles
Project Name: Evergreen Drive
County, Roads: Boone, Evergreen Drive off Weaver Road
OEC Map Numbers: 451, 437
Description: 1 ph 6A to 1 ph #2 ACSR

CONDUCTOR REPLACEMENTS – Design Criteria 4

Code: 341
Projected Construction Year: 2006/2007
Substation: 51 Circuit: 1
Estimated Cost: $43,750
Length: 2.5 Miles
Project Name: Bob White & Hwy 20
County, Roads: Campbell, California Crossroad to BobWhite lane
OEC Map Numbers: 400, 401, 416, 417
Description: 1 ph 6A to 1 ph #2 ACSR

Code: 342
Projected Construction Year: 2005/2006
Substation: 6 Circuit: 2
Estimated Cost: $167,475
Length: 9.57 Miles
Project Name: Brush Creek
County, Roads: Owen, Brush Creek
OEC Map Numbers: 160, 176, 177, 195, 196, 215
Description: 1 ph 6A to 1 ph #2 ACSR

Code: 343
Projected Construction Year: 2005/2006
Substation: 6 Circuit: 2
Estimated Cost: $27,650
Length: 1.58 Miles
Project Name: East Bend Road Taps
County, Roads: Boone, various
OEC Map Numbers: 434, 435, 448, 449
Description: 1 ph 6A to 1 ph #2 ACSR

Code: 344
Projected Construction Year: 2005/2006
Substation: 12 Circuit: 4
Estimated Cost: $49,000
Length: 2.80 Miles
Project Name: Salem Creek
County, Roads: Boone, Salem Creek Road
OEC Map Numbers: 348, 363
Description: 1 ph 6A to 1 ph #2 ACSR

CONDUCTOR REPLACEMENTS – Design Criteria 4

Code: 345
Projected Construction Year: 2006/2007
Substation: 3 Circuit: 2
Estimated Cost: $57,400
Length: 3.28 Miles
Project Name: May Road
County, Roads: Campbell, May Road
OEC Map Numbers: 371, 385, 386
Description: 1 ph 6A to 1 ph #2 ACSR

Code: 346
Projected Construction Year: 2006/2007
Substation: 12 Circuit: 2
Estimated Cost: $45,850
Length: 2.62 Miles
Project Name: Issac Road
County, Roads: Boone, Issac Road
OEC Map Numbers: 407, 422
Description: 1 ph 6A to 1 ph #2 ACSR

Code: 347
Projected Construction Year: 2005/2006
Substation: 7 Circuit: 2
Estimated Cost: $61,600
Length: 3.52 Miles
Project Name: Swope/Natalee Road
County, Roads: Owen, Swope/Natalee Road
OEC Map Numbers: 068, 069, 079
Description: 1 ph 6A to 1 ph #2 ACSR

Code: 348
Projected Construction Year: 2005/2006
Substation: 53 Circuit: 5
Estimated Cost: $21,600
Length: 1.2 Miles
Project Name: Hopeful Church Road
County, Roads: Boone, Hopeful Church Road
OEC Map Numbers: 451, 464, 465
Description: 1 ph 6A to 1 ph #2 ACSR

CONDUCTOR REPLACEMENTS – Design Criteria 4

Code: 349
Projected Construction Year: 2005/2006
Substation: 21 Circuit: 2
Estimated Cost: $87,500
Length: 5.0 miles
Project Name: Highway 36
County, Roads: Grant, Highway 36
OEC Map Numbers: 178, 197, 198
Description: 1 ph 6A to 1 ph #2 ACSR

Code: 350
Projected Construction Year: 2005/2006
Substation: 21 Circuit: 2
Estimated Cost: $46,200
Length: 2.64 miles
Project Name: Lawrenceburg Ferry
County, Roads: Boone, Lawrenceburg Ferry Road
OEC Map Numbers: 489, 496
Description: 1 ph 6A to 1 ph #2 ACSR

Code: 351
Projected Construction Year: 2005/2006
Substation: 7 Circuit: 2
Estimated Cost: $101,500
Length: 5.8 Miles
Project Name: Rockdale Road
County, Roads: Owen, Rockdale Road
OEC Map Numbers: 489, 496
Description: 1 ph 6A to 1 ph #2 ACSR

Code: 352
Projected Construction Year: 2006/2007
Substation: 5 Circuit: 1
Estimated Cost: $96,250
Length: 5.5 Miles
Project Name: Turner Road
County, Roads: Grant, various
OEC Map Numbers: 120,135,136
Description: 1 ph 6A to 1 ph #2 ACSR

CONDUCTOR REPLACEMENTS – Design Criteria 4

Code: 353
Projected Construction Year: 2006/2007
Substation: 5 Circuit: 1
Estimated Cost: $43,575
Length: 2.49 Miles
Project Name: Hwy 36 Taps
County, Roads: Grant, various
OEC Map Numbers: 136, 150, 151, 165, 166
Description: 1 ph 6A to 1 ph #2 ACSR

APPENDIX - I

DISTRIBUTION LINE LOSSES

YEAR	KWHr BILLED	% LOSSES
1986	84,220,000	7.30
1987	90,510,000	6.56
1988	99,730,000	5.36
1989	99,800,000	4.95
1990	103,380,000	6.38
1991	112,470,000	5.45
1992	110,730,000	5.30
1993	119,730,000	6.16
1994	505,020,115	4.72
1995	847,342,649	2.97
1996	590,065,556	4.19
1997	605,435,650	3.06
1998	634,726,404	4.65
1999	690,936,594	3.42
2000	753,186,257	2.07
2001	859,670,780	5.31
2002	904,359,447	4.14
2003	939,272,738	5.07
2004	989,271,386	4.07

Note: 1995 loss data includes actual Gallatin Steel load. 1996 through 2004 does not included Gallatin Steel, but does include 1% losses associated with that load.

APPENDIX - II
FIVE-YEAR OUTAGE SUMMARY

Listed below is the five-year outage summary for the Cooperative. The outage hours continue to be acceptable and as stated previously, the Cooperative continues to adjust and institute programs to improve these outage times.

Type	2000	2001	2002	2003	2004
Power Supplier	0.63	0.33	0.25	0.02	0.33
Major Storm	0.05	0.11	0.00	0.55	0.44
Scheduled	0.05	0.06	0.09	0.03	0.02
All Other	1.71	1.75	2.65	2.44	2.61
TOTAL	2.44	2.25	2.99	3.04	3.40

5 Year Average = 2.82

OWEN Electric

A Touchstone Energy Cooperative

Item 1b
page 1 of 50

March 5, 2008

Mr. Mark Goss
Chairman
Public Service Commission
211 Sowers Blvd.
P. O. Box 615
Frankfort, KY 40602-0615

Dear Mr. Goss:

Enclosed are two copies of Owen Electric Cooperative's (OEC) 2008-2009 Distribution Construction Plan for your information, review, and file. OEC's 2008-2009 Work Plan has been approved by the OEC Board and by Rural Utilities Services, (RUS).

If you or your staff needs additional information, feel free to contact meat 502-563-3498, 1-800-372-7612, Ext, 3498 or jsee@owenelectric.com.

Sincerely,

OWEN ELECTRIC COOPERATIVE

James D. See
Senior VP System Planning
& Reliability

JDS:trb

Enclosures

CERTIFICATION

KENTUCKY 37 OWEN

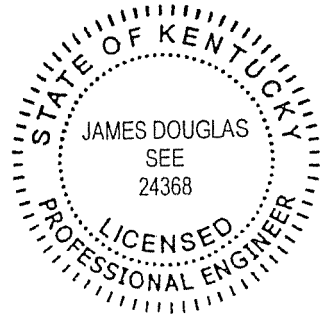
January 2008 – December 2009 Work Plan

I certify that:

1. Upon completion of the construction of the electrical facilities Contained herein, the system will be capable of adequately and dependably serving the projected load as contained in the current RUS approved Power Requirement Study and this Construction Work Plan.

2. The preparation and recommendations of this Construction Work Plan are consistent with the requirements of applicable RUS Bulletins.

James D. See, P.E.
Kentucky Registered Engineer



OWEN ELECTRIC COOPERATIVE
2008 – 2009 CONSTRUCTION WORK PLAN REPORT

Kentucky 37 Owen

TABLE OF CONTENTS

PURPOSE OF REPORT

This report documents the engineering analysis of, and summarizes the proposed construction for Owen Electric Cooperative (OEC) electric distribution system for the two-year planning period of 2008-2009.

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

GENERAL BASIS OF STUDY

The summer 2009 projected total peak system loads were taken from the OEC 2006 Load Forecast (LF) as approved by RUS. Residential and small commercial loads were grown at rates consistent with the LF.

From 2002-2005, the annual increase in residential energy sales was 4.1%. This rate is projected to be 3.3% over the next two years. Commercial sales are projected to increase at 3.8% over the next two years. Industrial energy sales are projected to increase at 1.4% over the next two years.

System analysis models are based on non-coincidental (NC) system peaks that are outlined in the LF. The projected summer 2009 NC peak (based on LF and GFR meeting) is 266,000 kW with an additional 10,000 kW of spot loads. This projection excludes Gallatin Steel. The system annual load factor is projected to average 50.0% over the next two years.

Existing summer growth model was examined for what is generally a summer-peaking system.

The current OEC 2006 Long Range Plan (LRP) load projections and improvement recommendations were reviewed to make sure that they generally agree with scope of the 2008-2009 construction work plan (CWP) recommendations.

A RUS Operations and Maintenance Survey (FORM 300) has been completed with the RUS GFR. This survey is used to determine portions of the construction required to replace physically deteriorated equipment and material, upgrade areas of the system to conform to code or safety requirements, and improve the reliability and quality of service. A copy of the survey is included in the Appendices of this report.

GENERAL BASIS OF STUDY (cont.)

A system analysis using RUS guidelines and the OEC Design Criteria was performed on all of the substations and distribution lines of the system. Milsoft Integrated Solutions' PC-Based Distribution Analysis Program – "Windmil" version 7.2 was used to analyze the existing system configuration that was modeled with the projected load growth.

For each deficiency that was found, alternate solutions were considered and economically evaluated.

SUMMARY - RESULTS OF PROPOSED CONSTRUCTION

Upon completion of the proposed construction, the system will provide adequate and dependable service to 58,744 residential customers as well as 38 industrial loads and 2,162 commercial loads. Average monthly residential usage is projected to be 1,265 kWh. It is estimated that there will be 4,450 idle services.

During the course of this Construction Workplan period transformer 1 of the Duro Substation will be upgraded from a 13.6MVA to a 25MVA transformer. This upgrade is necessary to serve the expansion of ACARB, a large commercial consumer; as well as provide a required 2.5MW of backup capability for a new data center.

27 miles of conductor replacement and conversion will take place in the two-year plan period. Conductor replacement line sections were selected based on conductor condition, operational experience and the number of customers served.

SERVICE AREA

OWEN ELECTRIC COOPERATIVE is a RUS-funded electric distribution cooperative. OEC is located in Northern Kentucky. OEC serves portions of Boone, Kenton, Campbell, Grant, Pendleton, Carroll, Scott and Owen Counties. The headquarters are located in Owenton, KY (Owen County).

The OEC service area *(see map on following page)* is due south of Cincinnati, Ohio and north of Georgetown, Kentucky. The system has a fine balance of large industrial and commercial customers combined with a very large and continually growing residential base due to the close proximity to Cincinnati.

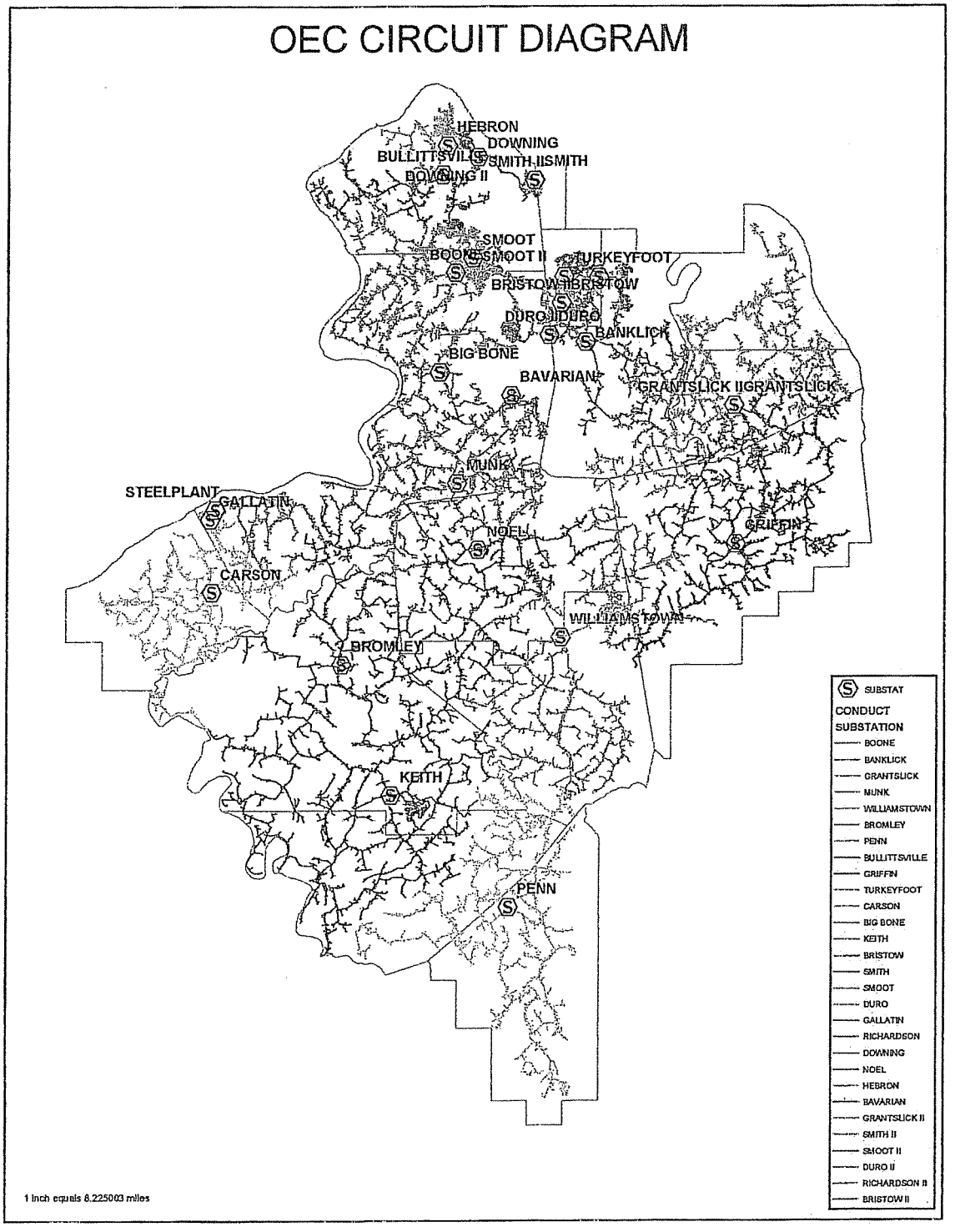
The following data is from OEC's 12/06 RUS Form 7:

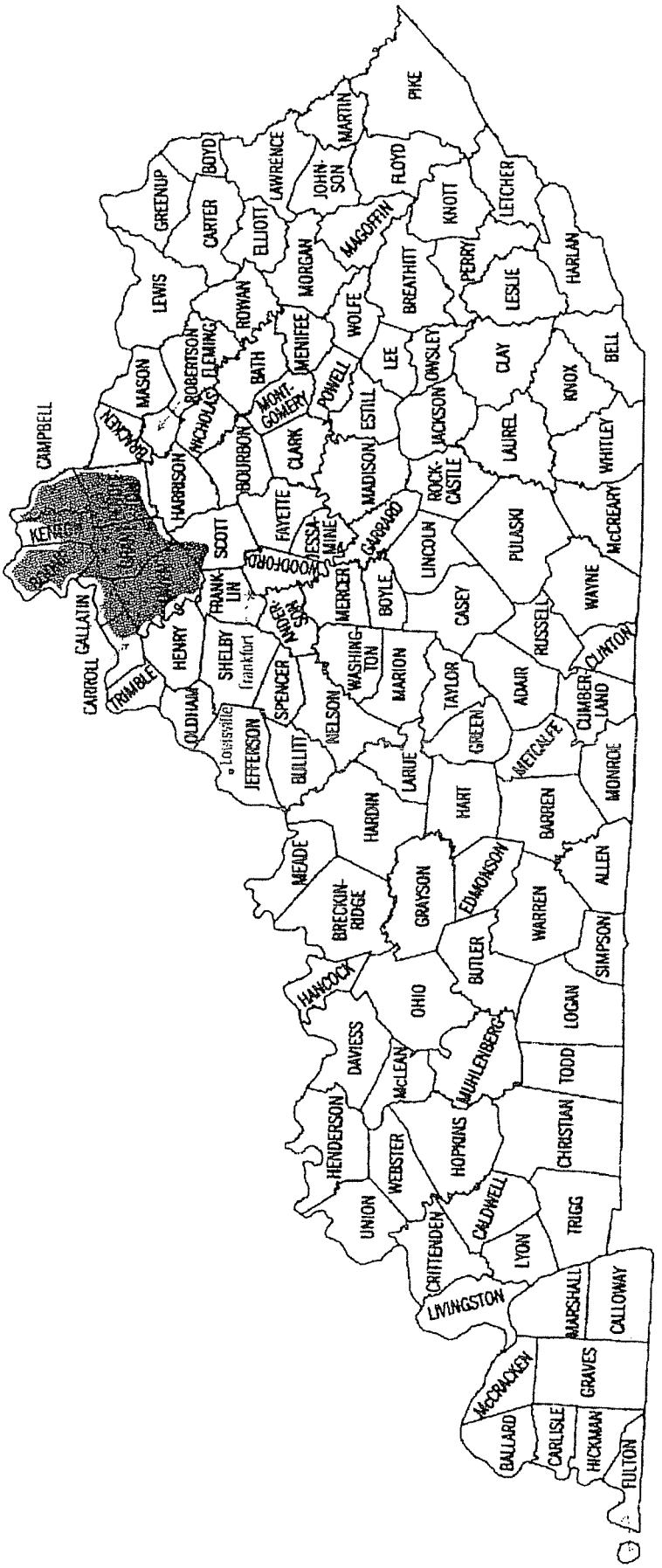
Total Services in Place	***58,999***
MWH Purchases	***2,134,119***
MWH Sold	***2,076,642***
Maximum MW Non-Coincident Demand	***412****
Total Utility Plant	***$173,365,645***
Plant Dollars Per Active Member	***$2,938***
Consumers/Mile	***13.4***

****This includes Gallatin Steel***

OEC operates 25 delivery points and distributes power at a primary voltages of 12.5/7.2 kV and 14.4/25 kV over approximately 4,400 miles of line. Additionally, OEC provides Gallatin Steel with a 34.5 kV and a 345 kV feed.

OWEN ELECTRIC CWP: I-B
Page 2




OWEN ELECTRIC SERVICE TERRITORY
CAMPBELL
KENTON
BOONE
CARROLL
GALLATIN
GRANT
PENDLETON
BRACKEN
MASON
ROBERTSON
NICHOLAS
HARRISON
BOURBON
SCOTT
FRANK-LIN
WOODFORD
JESSA-MINE
MERCER
BOYLE
SHELBY
Frankfort
ANDER-SON
SPENCER
TRIMBLE
OLDHAM
Louisville
JEFFERSON
BULLITT
NELSON
WASHING-TON
MARION
TAYLOR
CASEY
LINCOLN
ROCK-CASTLE
JACKSON
OWSLEY
LEE
ESTILL
POWELL
CLARK
MADISON
GARRARD
FAYETTE
MONT-GOMERY
BATH
MENIFEE
MORGAN
WOLFE
MAGOFFIN
BREATHITT
PERRY
KNOTT
FLOYD
JOHN-SON
MARTIN
PIKE
LAWRENCE
ELLIOTT
BOYD
GREENUP
CARTER
LEWIS
ROWAN
HENRY
GREEN
ADAIR
RUSSELL
CLINTON
CUMBER-LAND
METCALFE
LARUE
HART
BARREN
MONROE
ALLEN
SIMPSON
WARREN
EDMONSON
GRAYSON
BRECKIN-RIDGE
MEADE
HARDIN
BUTLER
OHIO
HANCOCK
DAVIESS
McLEAN
MUHLENBERG
LOGAN
TODD
CHRISTIAN
HOPKINS
WEBSTER
HENDERSON
UNION
CALDWELL
CRITTENDEN
LIVINGSTON
LYON
TRIGG
MARSHALL
CALLOWAY
McCRACKEN
GRAVES
BALLARD
CARLISLE
HICKMAN
FULTON
LAUREL
WHITLEY
McCREARY
PULASKI
WAYNE
CLAY
LESLIE
LETCHER
HARLAN
KNOX
BELL

GENERATION and TRANSMISSION POWER SUPPLIER

East Kentucky Power Cooperative (EKP) provides all power and energy needs to OEC. EKP provides service to twenty-five distribution substations. EKP is located in Winchester, Kentucky.

The 2006 Load Forecast (LF) is a joint effort between OEC and EKP. OEC provides loading data and system growth predictions to EKP for use in the LF growth models.

All new distribution, transmission, and substation construction requirements are considered simultaneously as a "one system" concept - between OEC & EKP - for the orderly and economical development of the total system. All of the recommendations relative to power supply and delivery are discussed with EKP.

SUMMARY OF CONSTRUCTION PROGRAM AND COSTS

Owen Electric's distribution system was analyzed in order to identify the construction requirements needed to adequately serve the projected CWP load of 266 MW. Improvements were identified based on voltage drop, conductor loading, system reliability improvements, economic conductor analysis and operational experience. A narrative list of system improvements is located in Section IV.

A breakdown of proposed construction projects by RUS 740C codes is listed below in Table I-C-1.

Table I-C-1
System Additions and Improvements Summary

RUS Form 740C Category	Category Name	Estimated Cost
100	New Distribution Line	$8,541,106
300	Line Conversion & Replacement	$1,420,493
600	Misc. Equip. & Poles	$10,610,838
700	Security Lights, SCADA	$709,275
	2008-2009 CWP TOTAL	$21,281,712

100 – New Construction planned to serve 3,362 new services.

300 – 27 miles of conductor upgrading and replacement.

600 - Miscellaneous distribution equipment and pole changes. This includes voltage regulators, switched capacitors, sectionalizing, automated meters, transformers, pole changes and increased service capacity upgrades.

700 – Other Distribution Items - Security Lights and SCADA.

OWEN ELECTRIC COOPERATIVE 2008-2009 Construction Workplan
COST SUMMARY SPREADSHEET

NEW CONSTRUCTION -- RUS CODE 100

ITEM	RUS CODE		AVE. $/CONSUMER	# CONS.	
New Member Extensions OH	100		$4,423	722	
New Member Extensions URD	101		$1,949	2,600	
New Member Extensions LP	102		$7,040	40	
			TOTAL CODE 100:	3,362	

2008	2009	TOTAL
$1,569,267	$1,624,139	$3,193,406
$2,489,500	$2,576,600	$5,066,100
$138,380	$143,220	$281,600
$4,197,147	$4,343,959	$8,541,106

LINE CONVERSION - RUS CODE 300

SUB. or LINE	RUS CODE	Original Conductor	Dest. Conductor	$/Mile	# of Miles		2008	2009	TOTAL
Williamstown	301-1	1 ph 1/0 ACSR	3 ph 1/0 ACSR	$47,000	2.8	2008	$136,692	$0	$136,692
Williamstown	302-1	1 ph 6A & 1 ph 1/0 ACSR	3 ph 1/0 ACSR	$47,000	1.4	2008	$70,049	$0	$70,049
Williamstown	303-1	1 ph 6A	3 ph 1/0 ACSR	$47,000	0.7	2009	$0	$35,747	$35,747
Bromley	304-1	1 ph 1/0 ACSR	3 ph 1/0 ACSR	$47,000	3.3	2009	$0	$165,644	$165,644
Carson	305-1	1 ph #2 ACSR	3 ph 1/0 ACSR	$47,000	1.5	2008	$73,940	$0	$73,940
Noel	306-1	1 ph 1/0 ACSR	3 ph 1/0 ACSR	$47,000	2.7	2009	$0	$136,442	$136,442
Griffin	307-1	1 ph 1/0 ACSR	3 ph 1/0 ACSR	$47,000	3.7	2009	$0	$187,796	$187,796
Grantslick	308-1	1 ph 6A	3 ph 1/0 ACSR	$47,000	1.3	2008	$64,211	$0	$64,211
Grantslick #2	309-1	1 ph 6A	3 ph 1/0 ACSR	$47,000	1.5	2008	$71,022	$0	$71,022
Munk	310-1	1 ph 1/0 ACSR	3 ph 1/0 ACSR	$47,000	2.4	2009	$0	$122,848	$122,848
Munk	311-1	1 ph #2 ACSR	3 ph 1/0 ACSR	$47,000	0.5	2009	$0	$24,670	$24,670
Banklick	312-1	1 ph 6A	3 ph 1/0 ACSR	$47,000	1.6	2008	$79,778	$0	$79,778
Banklick	313-1	1 ph #2 ACSR	3 ph 1/0 ACSR	$47,000	0.6	2009	$0	$28,698	$28,698
Bullittsville	314-1	3 ph 336 ACSR	DC 3 ph 336 ACSR	$60,000	0.4	2008	$26,703	$0	$26,703
Smith	315-1	1 ph 6A	3 ph 1/0 ACSR	$47,000	0.3	2009	$0	$15,104	$15,104
Richardson	316-1	1 ph #2 ACSR	3 ph 1/0 ACSR	$47,000	0.5	2008	$25,782	$0	$25,782
Bristow	317-1	1 ph 1/0 ACSR	3 ph 1/0 ACSR	$47,000	0.1	2008	$6,810	$0	$6,810
Bristow	318-1	1 ph #2 ACSR	3 ph 1/0 ACSR	$47,000	0.1	2008	$4,183	$0	$4,183
Bristow	318-1	1 ph 1/0 urd	3 ph 1/0 urd	$84,000	0.1	2008	$10,868	$0	$10,868
Bristow #2	319-1	3 ph 4/0 urd	3 ph 500MCM	$125,000	0.1	2008	$12,938	$0	$12,938
Downing #2	320-1	3 ph 3/0 ACSR	3 ph 336 ACSR	$89,000	1.0	2008	$89,352	$0	$89,352
Downing #2	321-1	1 ph #2 ACSR	3 ph 1/0 ACSR	$47,000	0.3	2009	$0	$15,104	$15,104
Downing #2	322-1	1 ph #2 ACSR	3 ph 1/0 ACSR	$47,000	0.3	2009	$0	$16,111	$16,111
			TOTAL CODE 300:		27.4		$672,328	$748,165	$1,420,493

MISCELLANEOUS DISTRIBUTION EQUIPMENT – RUS CODE 600's

ITEM	RUS CODE		2 YR. AVE. COST	# ITEMS	
New Underground Transformers	601		$1,954	400	
New Overhead Transformers	601		$948	1,280	
New 3 phase Transformers PAD	601		$14,467	40	
New Meters - AMR	601		$146	25,000	
New Meters - AMR replacement	601		$155	3,600	
Service Upgrades	602		$1,177	250	
Sectionalizing	603		$262,213	56	
Voltage Regulators	604		$95,645	18	
Switched Capacitors	605		$66,225	11	
Pole Changes	606		$2,183	500	
Conductor Replacement	608		$800,000	80	
			TOTAL		
			MISC. CODE 600'S:		

2008	2009	TOTAL
$384,000	$397,440	$781,440
$595,840	$616,694	$1,212,534
$284,360	$294,313	$578,673
$3,650,000	$0	$3,650,000
$273,600	$283,176	$556,776
$144,500	$149,500	$294,000
$256,720	$265,705	$522,425
$94,000	$97,290	$191,290
$60,000	$72,450	$132,450
$536,250	$555,000	$1,091,250
$800,000	$800,000	$1,600,000
$7,079,270	$3,531,568	$10,610,838

OTHER DIST. ITEMS - RUS CODE 700

ITEM	RUS CODE		2 YR. AVE. COST	# ITEMS	
Security Lights	701		$619	900	
SCADA	703		$15,263	10	
			TOTAL CODE 700:		

2008	2009	TOTAL
$273,600	$283,050	$556,650
$75,000	$77,625	$152,625
$348,600	$360,675	$709,275

2008-2009 Kentucky 37 - Owen **CONSTRUCTION WORK PLAN TOTAL:** **$21,281,712**

Owen Electric Cooperative

TABLE III-B-1

COST SUMMARY DATA (3.5% Annual Inflation)

DESCRIPTION	ACTUAL 24 mo.	2008	2009	CWP TOTAL	Miles of line
New Member Extensions OH(100)	5/05 to 5/07				
1. New services constructed	679	361	361	722	
2. Cost per Customer	$4,141	$4,347	$4,499		
3. Cost of New Customers	$2,811,739	$1,569,267	$1,624,139	$3,193,406	
4. Total Footage	245,856	125,000	125,000	250,000	47.3
New Member Extensions URD(101)					
1. New services constructed	3,253	1,300	1,300	2,600	
2. Cost per Customer	$1,636	$1,915	$1,982		
3. Cost of New Customers	$5,321,908	$2,489,500	$2,576,600	$5,066,100	
4. Total Footage	492,696	185,000	185,000	370,000	70.1
New Member Extensions LP(102)					
1. New services constructed	47	20	20	40	
2. Cost per Customer	$5,215	$6,919	$7,161		
3. Cost of New Customers	$245,105	$138,380	$143,220	$281,600	
4. Total Footage		5500	5500	11,000	2.1
System Improvements (300)					
1. System improvements					
2. Average cost per project					
3. Total cost of System Improvements		$672,328	$748,165	$1,420,493	
4. Total Footage					27.4
New Transformers URD (601)					
1. New transformers added	889	200	200	400	
2. Cost per Transformer	$1,421	$1,920	$1,987		
3. Cost of New Transformers	$1,263,269	$384,000	$397,440	$781,440	
New Transformers OH (601)					
1. New transformers added	1650	640	640	1,280	
2. Cost per Transformer	$732	$931	$964		
3. Cost of New Transformers	$1,208,196	$595,840	$616,694	$1,212,534	
New Transformers 3PH PAD (601)					
1. New transformers added	81	20	20	40	
2. Cost per Transformer	$4,036	$14,218	$14,716		
3. Cost of New Transformers	$326,931	$284,360	$294,313	$578,673	
New Meters AMR (601)					
1. New Meters added	6,085	25,000	0	25,000	
2. Cost per Meter	$146	$146	$146		
3. Cost of New Meters	$888,410	$3,650,000	$0	$3,650,000	
New Meters AMR REPLACEMENT (601)					
1. New Meters added	4,556	1,800	1,800	3,600	
2. Cost per Meter	$92	$152	$157		
3. Cost of New Meters	$417,421	$273,600	$283,176	$556,776	
Total all 601's		$5,187,800	$1,591,623	$6,779,423	

Service Upgrades (602)					
1. Number of Service Upgrades	175	125	125	250	
2. Cost per Service Upgrade	$1,465	$1,156	$1,196		
3. Cost of Service Upgrades	$256,375	$144,500	$149,500	$294,000	
Sectionalizing (603)					
1. New Reclosers		28	28	56	
2. Cost per New Recloser		$4,080 or $18,240	$4,223 or $18,878		
3. Cost of Recloser		$156,720	$162,205	$318,925	
4. Field sectionalizing total job costs		$100,000	$103,500	$203,500	
5. Total cost of Sectionalizing		$256,720	$265,705	$522,425	
Regulators (604)					
1. Number of Regulators		9	9	18	
2. Cost per Regulator		$6,000	$6,210		
3. Total Cost of Regulators		$54,000	$55,890	$109,890	
4. Total cost of regulators installations		$40,000	$41,400	$81,400	
5. Total Cost of Regulator installations		$94,000	$97,290	$191,290	
Capacitors (605)					
1. Number of Capacitor Banks		5	6	11	
2. Cost per Capacitor Bank		$10,000	$10,350		
3. Total Cost of Capacitor Banks		$50,000	$62,100	$112,100	
4. Total Cost of installing Capacitors		$10,000	$10,350	$20,350	
5. Total Cost of Capcitor installations		$60,000	$72,450	$132,450	
Pole Changes - Replacement (606)					
1. Poles Changed	411	250	250	500	
2. Cost per Pole Change	$2,215	$2,145	$2,220		
3. Cost of Pole Changes	$910,365	$536,250	$555,000	$1,091,250	
Miscellaneous Replacements (607)					
Total cost					
Conductor Replacement (608)					
1. Miles of small conductor to be replaced		40	40		80
2. Cost per mile		$20,000	$20,000		
3. Total cost of small conductor replacement		$800,000	$800,000	$1,600,000	
Security Lights (701)					
1. New Security Lights Added	716	450	450	900	
2. Cost per Security Light	$640	$608	$629		
3. Cost of Security Lights	$458,240	$273,600	$283,050	$556,650	
SCADA (704)					
1. New or Upgraded Substation RTU's		5	5	10	
2. Cost per Substation		$15,000	$15,525		
3. Cost or SCADA		$75,000	$77,625	$152,625	

Note: Forecast are based on current data since material cost have escalated significantly and new residential construction decreased significantly.

				Miles
Total	$12,297,345	$8,984,367	$21,281,712	226.9
Total - minus AMR	$8,647,345		$17,631,712	

DISTRIBUTION SYSTEM DESIGN CRITERIA

Each of the following criteria items were reviewed and accepted by the RUS General Field Representative in May 2007.

1) The minimum voltage on primary distribution lines is 118 volts (120 volt base, 126 volts at source) after re-regulation.

2) Primary conductors will be evaluated for replacement or alternative action if loaded over 75% of their thermal rating.

3) The following equipment will not be thermally loaded by more than the percentage shown:
   a) Distribution Transformers 130% winter; 100% summer
   b) Voltage Regulators 130% winter; 100% summer
   c) Reclosers and Fuses 80% winter; 80% summer

4) Conversions to multiphase are to correct voltage drop and phase balance. Line sections with a load current range of 45 amps will be considered for multiphasing on a case-by-case basis. Operation and engineering practices used to develop the loading criteria are based on a single-phase line interruption that may cause an operation of the ground trip relay on three phase oil circuit reclosers.

5) Replacement of aged, deteriorated conductor will continue on a systematic basis. Outage history and service technician reports will be guidelines.

6) All construction projects will follow existing right-of-way, unless otherwise noted.

7) New primary conductor sizes are to be determined on a case-by-case basis using the Economic Conductor Analysis method. The standard Overhead conductor sizes are #2 ACSR, 1/0 ACSR, and 336.4 ACSR. The standard Underground conductor size is 1/0 ALUG and 500MCM.

DISTRIBUTION LINE AND EQUIPMENT COSTS

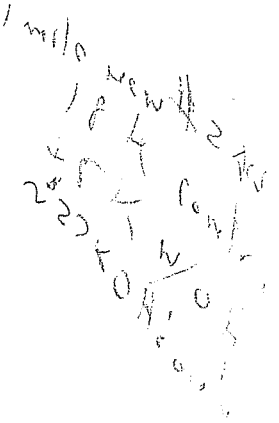
Construction cost estimates for the two year planning period are shown in Table II-B-1. Cost summaries for distribution equipment are shown in Table II-B-2.

Table II-B-1
Line Construction Cost Estimates
Annual Projected Dollars/Mile

SIZE	TYPE	2008	2009
1/0 ACSR	CONV 3-PH	$48,645	$50,350
336.4 ACSR	CONV 3-PH	$62,100	$64,275
1/0 ACSR	NEW 3-PH	$53,820	$55,704
#2 ACSR	CONV V-PH	$39,330	$40,710
1/0 ACSR	CONV V-PH	$44,505	$46,065
#2 ACSR	CONV 1-PH	$18,630	$19,282
1/0 ACSR	CONV 1-PH	$20,700	$21,425
7.2KV to 14.4 KV	VOLT CONV.	$3,209	$3,321
1/0 ALUG	REPL 1-PH	$67,275	$69,630
1/0 ALUG	REPL 3-PH	$108,675	$112,479
500 MCM ALUG	NEW 3-PH	$129,375	$133,900

Table II-B-2
Distribution Equipment Cost Estimates
Annual Projected Unit Costs

DEVICE	TYPE	2008	2009
V.Regulators (3)	150 amp	$18,000	$18,630
V.Regulators (3)	219 amp	$7,000	$7,245
V.Regulators (1)	150 amp	$6,000	$6,210
600 kVAR Capacitors	3-ph w/ cont.	$10,000	$10,350
Reclosers	3-ph Elect.	$18,240	$18,878
Reclosers	1-ph OCR	$4,080	$4,223



STATUS OF PREVIOUS CWP ITEMS

All projects from the 2005-2007 CWP have been completed except the following items.

740 C #	Project Description	Status
305	Hwy 127	Delete
313	Hwy 16 Three Phase	Delete
315	Narrows Tie	Defer
318	Glass Pike Taps	Delete
326	Siry Road	Defer
327	Greenwood Road	Defer
329	Kincaid Lake	Defer
330	Washington Trace	Defer
331	Kelly/Brownfield Road	Defer
332	Griffin Feeder 4 Taps	Defer
333	Point of Rock	Delete
337	Pond Creek	Defer
346	Possom Path	Delete

ANALYSIS OF 2006 LONG RANGE PLAN

The current Long Range Plan (LRP) projects an approximate peak of 300 MW for the summer of 2010. The loading level of 266 MW for the 2008-2009 construction work plan peak is in line with the planning peak. It is important to realize that LRP peak loading is intended to stress the distribution system at a projected point in time. However, the CWP loading level must be based and grown upon actual peak load data since the recommended projects are to be RUS financed.

Over the next five years, the 2006 LRP plan recommends the addition of four new substations.

The ***Blanchet Substation*** is recommended in the southern Grant County area along US Highway 25 near Corinth. Loading in this area has not reached the level that would require this substation during the CWP period.

The ***Burlington Substation*** was recommended in order to relieve loading on the Bullittsville, Boone and Smoot substations. This substation was energized in the summer of 2007 and has greatly relieved overloading in the subject area.

The ***Sterling Ventures Substation*** was recommended in order to relieve loading on the Big Bone and Munk substations. This station was energized in the fall of 2007. The station serves the Sterling Ventures/Gallatin Materials site. This site is a sand and gravel facility with a recently added limestone baking process. The new substation is adjacent to this large power load.

The ***Woolper Creek Substation*** is recommended to relieve the excessive loading on feeders from the Bullittsville and Boone substations. An existing gravel plant continues to expand. Residential loading is projected to increase in this area as well. However, the major new load for the area will be the Western Regional Sewer Plant. It is likely that it will be needed early in the next CWP period.

Aged conductor replacement of 40 miles per year is recommended in the LRP. This CWP report recommends and outlines 80 miles of aged conductor replacement in the non-specific 608 category. Another 27 miles of conductor will be replaced through system improvements.

OPERATIONS & MAINTENANCE SURVEY

The current O&M Survey ("Review Rating Summary") was completed in June 2006. A copy of the survey is included as an Appendix of this report.

Summary of survey recommendations and comments

A more aggressive right-of-way clearing program is recommended with Directional trimming the recommended approach. Telephone poles left standing next to electric poles need to be removed after the joint-use facilities have been transferred. Telephone and cable TV attachments require frequent follow-up to ensure contract compliance.

SECTIONALIZING STUDIES

A sectionalizing study analyzes the existing overcurrent protection scheme and proposes changes to improve the overall effectiveness of the scheme.
Sectionalizing studies take place on a substation-by-substation basis.

The four main goals of a sectionalizing study are Safety, Reliability, Coordination, and Protection.

1. Safety – Sectionalizing devices should be able to detect and interrupt the full range of fault currents available in their zone of protection coverage. Calculated minimum fault current values (Using RUS Bulletin 61-2) should be detected and cleared by the protective device.

2. Reliability – Limit the outage hours per consumer by isolating or "sectionalizing" faulted portions of the circuit so that the minimum number of customers are interrupted. Additional devices – where needed – will further limit the overall outage hours.

3. Coordination – Good protective device coordination will ensure that the closest device to the fault opens. Fault locating is also enhanced. Miscoordination of protective devices can cause confusion and ultimately add to outage times.

4. Protection – A well designed protection scheme will minimize damage to the distribution system by limiting the time that damaging overcurrent is present on the faulted portion of the system.

Changes that can affect the coordination scheme include: load growth; substation transformer capacity increases; reconductoring distribution lines; single-phase to three-phase conversions; changes in the system's circuit configuration; and the addition of loads in specific locations.

The ongoing, substation-by-substation sectionalizing study will continue after the completion of the CWP report. General sectionalizing device cost projections will be listed in the "603" category in this report.

		OWEN ELECTRIC CWP: II-E				
						PAGE 1
TABLE II-E-1						
SUBSTATION LOAD	**HISTORICAL AND PROJECTED LOADING**					
TABLE						
SUBSTATION	**KVA CAPACITY**	**SUMMER 2007 kVA**	**SUMMER %LOAD 2007**	**SUMMER 2009 kVA**	**SUMMER %LOAD 8/09**	**NOTE**
Bank Lick	13,620	11,775	86.45	11,775	86.45	
Bavarian	17,910	3,934	21.97	3,926	21.92	
Big Bone	13,620	6,750	49.56	3,574	26.24	1
Boone Distribution	24,000	13,807	57.53	15,112	62.97	2
Bristow	13,620	6,654	48.85	9,595	70.45	
Bristow II	13,620	5,958	43.74	8,932	65.58	
Bromley	13,620	6,164	45.26	6,190	45.45	
Bullittsville	13,620	8,815	64.72	6,653	48.85	3
Burlington (2007)	13,620	12319	90.45	11,575	84.99	4
Carson	11,080	5,855	52.84	5,829	52.61	
Downing #1	13,620	11,114	81.60	11,079	81.34	
Downing #2	13,620	5955	43.72	5,908	43.38	
Duro #1	13,620	13,100	96.18	17,039	71.00	8
Duro #2	13,620	10,520	77.24	7,211	52.94	7
Gallatin	18,600	7,780	41.83	7,813	42.01	
Grants Lick #1	13,620	5,901	43.33	5,900	43.32	
Grants Lick #2	14,840	13,753	92.68	13,704	92.35	
Griffin	9,820	10,285	104.74	7,907	80.52	5
Hebron	19,200	15,154	78.93	15,128	78.79	
Keith	9,820	7,676	78.17	7,667	78.08	
Munk	13,620	13,011	95.53	11,559	84.87	6
Oakley Noel	11,080	8,152	73.57	8,124	73.32	
Penn	13,620	10,042	73.73	10,109	74.22	
Richardson #1	13,620	10,609	77.89	10630	78.05	
Richardson #2	11,080	4,408	39.78	4,421	39.90	
Sterling (2007)	13,620		0.00	8,114	59.57	
Turkey Foot	13,620	8,552	62.79	8,596	63.11	
W. M. Smith #1	13,620	4,330	31.79	4332	31.81	
W. M. Smith #2	11,080	10,131	91.44	10179	91.87	
W. R. Smoot #1	11,080	9,053	81.71	8856	79.93	
W. R. Smoot #2	11,080	10,491	94.68	10550	95.22	
Williamstown	13,620	11,244	82.56	11253	82.62	
1 Offload to Sterling						
2 Longbranch School (2008)						
3 Split load between Burlington and Bullittsvile						
4 Split load between Burlington and Bullittsvile						
5 Backfeeding during storm (2007)						
6 Offload to Sterling						
7 Split load between Duro #1 and Bristow						
8 Split load between Duro #2 and Bristow						

SERVICE RELIABILITY

The record of OEC's service interruptions for the past five years is shown in Table II-E-2. The five-year average outage hours per consumer is **2.86**. This value is below the minimum level that is considered acceptable by RUS. Ongoing system improvements and continued feeder sectionalizing studies will help to reduce this value even further.

TABLE II-E-2

	Power Supplier	Extreme Storm	Prearranged	All Other	Total
2002					
OUTAGE HR/CONS	**0.25**	**0.00**	**0.09**	**2.65**	**2.99**
2003					
OUTAGE HR/CONS	**0.02**	**0.55**	**0.03**	**2.44**	**3.04**
2004					
OUTAGE HR/CONS	**0.33**	**0.44**	**0.02**	**2.61**	**3.40**
2005					
OUTAGE HR/CONS	**0.14**	**0.18**	**0.06**	**1.91**	**2.29**
2006					
OUTAGE HR/CONS	**0.13**	**0.62**	**0.08**	**1.73**	**2.56**
FIVE YEAR AVE.				2.41	3.20
OUTAGE HR/CONS	**0.17**	**0.36**	**0.06**	**2.27**	**2.86**

DATA RESOURCES

The following is a list of the basic data used for this analysis and report.

1. Updated circuit diagram map that indicates substations with present feeder configurations.
2. Monthly substation non-coincident peak (NCP) demands.
3. Billing system kW and kWh sales for last winter and summer peaks.
4. 2006 East Kentucky Power Cooperative *Load Forecast.*
5. Five Year Outage Summary.
6. RUS Form 7 data.
7. Substation transformer ratings.
8. Load projections for each existing and any proposed substation.
9. Substation Data Sheets.
10. Computerized circuit model databases with voltage drop calculations for each line section.

BASIC DATA AND ASSUMPTIONS

Design Load – The construction program in the CWP covers a two-year period to serve the 266 MW, August 2009 summer peak. The design load was derived after reviewing the *2006 Load Forecast* with the GFR.

Load Allocation – Individual areas of the system were grown at different rates based on the potential for growth in that area. The total system design load was attained by allocating each substation's load to its individual line sections proportional to the kWh consumption on each of the line sections. Peak summer loading were modeled and analyzed. The system is generally summer peaking.

Voltage Drop – For the design load, an eight volt drop past one set of downline voltage regulators was assumed to be the maximum allowable end-of-line voltage drop.

Substation Voltage Regulation – Voltage regulation was assumed for each substation such that a 10% voltage drop could be experienced on the transmission system at peak load and 126 volts could still be supplied to the substation bus.

System Power Factor – System power factor values were assumed to coincide with the levels listed on the substation load data sheet.

Single-Phase Loading – On taps where more than 45 amps are served from a single-phase line, conversion to 3 phase was considered in order to provide greater system reliability. Three-phase conversions were chosen for the more heavily loaded taps and when the single- phase tap split into more than two directions.

Inflation – An annual inflation rate of 3.5% was used in this CWP.

Construction Cost Estimates – Cost estimates for the various distribution equipment and conductor sizes are presented in Tables II-B-1 and II-B-2.

Computer Model of Distribution System – The system is modeled on Milsoft Integrated Solution's Windmil v. 7.2 analysis software. Downloading monthly billing computer data into the Windmil billing file directory was the framework for building the winter and summer models. Residential and commercial loads were allocated by the kWh Demand Table method. Projected models were analyzed for Design Criteria violations using an unbalanced voltage drop calculation.

Economic Conductor Analysis – Economic Conductor analysis includes the consideration of initial construction costs and the associated losses of the selected conductors. For two alternative conductors compared, there is generally a kW load level at which the fixed costs associated with construction plus the variable costs related to line losses are equal for both alternatives.

The following general recommendations were generated from the analysis:

1. New overhead single-phase line extensions will be constructed of #2 ACSR. New underground extensions will be constructed of 1/0 ALUG. New three-phase underground line extensions will be constructed of 1/0 ALUG or 500 MCM ALUG.
2. Conversions that are to remain single-phase should generally be constructed of #2 ACSR. 1/0 ACSR may be used if unacceptable voltage drop is likely to occur.
3. Converted 12.5 kV three-phase construction should be of 1/0 ACSR for initial loads up to 2,200 kW; and 336.4 ACSR for larger initial loads. Voltage drop and load considerations may lower the initial kW level for the use of 336.4 ACSR.

The data tables preceding each analysis graph list the assumptions that were made in each scenario of the conductor analysis. This analysis appears in the Appendices of this report.

FINANCIAL DATA

- ***Cost of Capital = 5.0%***
- ***Inflation = 3.5%***
- ***Present Worth Discount Factor = 5.0%***
- ***Depreciation = 4.3%***
- ***O&M = 4.60%***
- ***Tax & Ins = 0.10%***
- ***TOTAL ANNUAL FIXED CHARGE RATE = 14.0%***

NEW MEMBER EXTENSIONS – RUS CODE 100

A total of 3,362 new services – 2,600 of which are underground and 722 in overhead construction are anticipated. The total projected cost for new service construction is $8,541,106.

The average length of service per customer is 188 feet. The total projected length for the work plan period is 119 miles.

Cost history and projections are shown in Table III-B-1.

SYSTEM IMPROVEMENTS – RUS CODE 300

LINE CONVERSION NARRATIVES

Williamstown Substation
Code 301-1
Estimated Cost: $ 136,692
Year: 2008

Description of Proposed Construction
Maps 136, 121, 107 – Replace 2.8 miles of existing single-phase 1/0 ACSR with three-phase 1/0 ACSR. This project starts at the intersection Turner Rd. and Cordova Rd. heading south to the intersection of Cordova Rd. and Corinth Rd and then heading south on Corinth Rd. to the intersection of Baker Williams Rd.

Reason For Proposed Construction
Design Criteria (DC) Item 4 is being violated.

Results of Proposed Construction
DC Item 4 will be met.

Alternative Corrective Plan Investigated
Since this single-phase tap was heavily loaded and the only backfeed was through a smaller conductor, no alternatives were considered.

Williamstown Substation
Code 302-1
Estimated Cost: $ 70,049
Year: 2008

Description of Proposed Construction
Maps 241, 221 – Replace 0.3 miles of existing single-phase 6A conductor and 1.14 miles of existing single-phase 1/0 ACSR with three-phase 1/0 ACSR. This tap starts on Knoxville Rd. and serves part of the Corinth Lake area.

Reason For Proposed Construction
Design Criteria (DC) Item 4 is being violated.

Results of Proposed Construction
DC Item 4 will be met.

Alternative Corrective Plan Investigated
Since this single-phase tap was heavily loaded and no backfeed was available, no alternatives were considered.

SYSTEM IMPROVEMENTS – RUS CODE 300

Williamstown Substation

Code 303-1

Estimated Cost: $ 35,747
Year: 2009

Description of Proposed Construction

Maps 241, 221 – Replace 0.71 miles of existing single-phase 6A conductor with three-phase 1/0 ACSR. This tap starts on Ragtown Rd. and ends on McFarland Drive and serves Lake Williamstown.

Reason For Proposed Construction

Design Criteria (DC) Item 4 is being violated.

Results of Proposed Construction

DC Item 4 will be met.

Alternative Corrective Plan Investigated

Since this single-phase tap was heavily loaded and no backfeed was available, no alternatives were considered.

Bromley Substation

Code 304-1

Estimated Cost: $ 165,644
Year: 2009

Description of Proposed Construction

Maps 196, 177, 161 – Replace 3.3 miles of existing single-phase 1/0 ACSR with three-phase 1/0 ACSR. This single-phase tap starts at the intersection of Golds Valley Rd. and KY 36 and then follows Golden Circle Rd. before going cross country and past Jonesville.

Reason For Proposed Construction

Design Criteria (DC) Items 1 and 4 are being violated.

Results of Proposed Construction

DC Items 1 and 4 will be met.

Alternative Corrective Plan Investigated

Since this single-phase tap was heavily loaded and backfeeding did not alleviate all low voltage, no alternatives were considered.

SYSTEM IMPROVEMENTS – RUS CODE 300

Carson Substation

Code 305-1

Estimated Cost: $ 73,940
Year: 2008

Description of Proposed Construction

Maps 171, 172 – Replace 1.5 miles of existing single phase #2 ACSR with three-phase 1/0 ACSR. This single-phase tap begins on KY 36 and follows Eagle Valley Recreation Center Road to Eagle Valley Recreation Center.

Reason For Proposed Construction

Design Criteria (DC) Item 4 is being violated.

Results of Proposed Construction

DC Item 4 will be met.

Alternative Corrective Plan Investigated

Since this single-phase tap was heavily loaded and no backfeed was available, no alternatives were considered.

Noel Substation

Code 306-1

Estimated Cost: $ 136,442
Year: 2009

Description of Proposed Construction

Maps 198, 179 – Replace 2.7 miles of existing single-phase 1/0 ACSR with three-phase 1/0 ACSR. This single-phase tap multiphasing starts at Four Corners and ends at Downingsville Rd.

Reason For Proposed Construction

Design Criteria (DC) Item 4 is being violated.

Results of Proposed Construction

DC Item 4 will be met.

Alternative Corrective Plan Investigated

An alternative considered was to backfeed some of this single-phase tap out of a single-phase Bromley tap. However, the Bromley single-phase tap considered was moderately loaded and this area of OEC's system was lacking any three-phase service in the area. Thus, to fix this overloaded single-phase tap and provide better reliability and expanded service to customers in this area, OEC recommends replacing the 2.7 miles of single-phase 1/0 ACSR with three-phase 1/0 ACSR.

SYSTEM IMPROVEMENTS – RUS CODE 300

Griffin Substation

Code 307-1

Estimated Cost: $ 187,796
Year: 2009

Description of Proposed Construction

Maps 305, 324, 325 – Replace 3.7 miles of existing single-phase 1/0 ACSR with three-phase 1/0 ACSR. This single-phase tap starts on Mount Hope East Rd. and the three-phase construction will end at the intersection of Mount Hope East Rd. and Pleasant Hill Rd.

Reason For Proposed Construction

Design Criteria (DC) Item 4 is being violated.

Results of Proposed Construction

DC Item 4 will be met.

Alternative Corrective Plan Investigated

Since the only alternatives were to backfeed part of this single-phase tap on a tap with a smaller conductor of #2 ACSR and a Grantslick tap which is already loaded to over 36A, OEC recommends replacing the 3.7 miles of existing single-phase 1/0 ACSR with three-phase 1/0 ACSR.

Grantslick #1 Substation

Code 308-1

Estimated Cost: $ 64,211
Year: 2008

Description of Proposed Construction

Maps 338, 353 – Replace 1.3 miles of existing single-phase 6A with three-phase 1/0 ACSR. This single-phase tap starts at the intersection of Hwy 27 and Old US 27 Loop No 2 and the multiphasing will start there and go along Oak street and end just past Summerfield Lane.

Reason For Proposed Construction

Design Criteria (DC) Item 4 is being violated.

Results of Proposed Construction

DC Item 4 will be met.

Alternative Corrective Plan Investigated

An alternative considered was to backfeed this single-tap onto another circuit on Grantslick #1. However, the loading on both taps then would be over 30A in a quickly

SYSTEM IMPROVEMENTS – RUS CODE 300

growing of OEC's system which would require poly phasing in the very near future. So to fix the overloaded single phase tap and address the near future needs of this quickly growing area of OEC's system, OEC recommends replacing the 1.3 miles of existing single-phase 6A with three-phase 1/0 ACSR.

Grantslick #2 Substation

Code 309-1

Estimated Cost: $ 71,022
Year: 2008

Description of Proposed Construction

Maps 397, 413 – Replace 1.5 miles of existing single-phase 6A with three-phase 1/0 ACSR. This begins single-phase tap begins on Visalia Rd., follows along KY 1936 and the job ends at the intersection of KY 536 and Lauren Lane.

Reason For Proposed Construction

Design Criteria (DC) Item 4 is being violated.

Results of Proposed Construction

DC Item 4 will be met.

Alternative Corrective Plan Investigated

Since this single-phase tap was heavily loaded and no backfeed was available, no alternatives were considered.

Munk Substation

Code 310-1

Estimated Cost: $ 122,848
Year: 2009

Description of Proposed Construction

Maps 331, 332 – Replace 2.4 miles of existing single-phase 1/0 ACSR with three-phase 1/0 ACSR. This single-phase tap begins on KY 2850 and the three-phase should end at the intersection of KY 2850 and L Mesmer Rd.

Reason For Proposed Construction

Design Criteria (DC) Item 4 is being violated.

Results of Proposed Construction

DC Item 4 will be met.

SYSTEM IMPROVEMENTS – RUS CODE 300

Alternative Corrective Plan Investigated
The only alternatives considered were backfeeding the tap through a small conductor tap of 6A or through 1/0 underground conductor. Since neither alternative was considered reliable, OEC recommends replacing the 2.4 miles of existing single-phase 1/0 ACSR with three-phase 1/0 ACSR.

Munk Substation
Code 311-1
Estimated Cost: $ 24,670
Year: 2009

Description of Proposed Construction
Maps 316 – Replace .5 miles of existing #2 ACSR with three-phase 1/0 ACSR. This single-phase tap serves the Mars Place subdivision.

Reason For Proposed Construction
Design Criteria (DC) Item 4 is being violated.

Results of Proposed Construction
DC Item 4 will be met.

Alternative Corrective Plan Investigated
Since this single-phase tap was heavily loaded and no backfeed was available, no alternatives were considered.

Banklick Substation
Code 312-1
Estimated Cost: $ 79,778
Year: 2008

Description of Proposed Construction
Maps 397, 396, 412 – Replace the existing single-phase 6A with three-phase 1/0 ACSR. The multiphasing will begin just south the intersection of Mann Rd. and Visalia Rd. and end at the intersection of Mann Rd. and Steep Creek Rd.

Reason For Proposed Construction
Design Criteria (DC) Item 4 is being violated.

Results of Proposed Construction
DC Item 4 will be met.

SYSTEM IMPROVEMENTS – RUS CODE 300

Alternative Corrective Plan Investigated
Since this single-phase tap was heavily loaded and no backfeed was available, no alternatives were considered.

Banklick Substation
Code 313-1
Estimated Cost: $ 28,698
Year: 2009

Description of Proposed Construction
Maps 395, 411 – Replace 0.6 miles of existing #2 ACSR with three-phase 1/0 ACSR. The multiphasing will begin at Bowman Rd. and will end on Riggs Rd.

Reason For Proposed Construction
Design Criteria (DC) Item 4 is being violated.

Results of Proposed Construction
DC Item 4 will be met.

Alternative Corrective Plan Investigated
Since this single-phase tap was heavily loaded and no backfeed was available, no alternatives were considered.

Bullittsville Substation
Code 314-1
Estimated Cost: $ 26,703
Year: 2009

Description of Proposed Construction
Maps 484, 485 – Convert 0.4 miles of three-phase 336 ACSR double circuit three-phase 336 ACSR. This will begin at the intersection of Burlington-Bullittsville Rd. and Conrad Lane.

Reason for Proposed Construction
To balance loading between Burlington and Bullittsville substations.

Results of Proposed Construction
Loading between Burlington and Bullittsville substations balanced.

Alternative Corrective Plan Investigated
No alternatives were considered.

SYSTEM IMPROVEMENTS – RUS CODE 300

Smith Substation
Code 315-1
Estimated Cost: $ 15,104
Year: 2009

Description of Proposed Construction
Maps 487, 486 – Replace 0.3 miles of existing single-phase 6A with three-phase 1/0 ACSR. This single-phase tap is along Circleport Drive.

Reason For Proposed Construction
Design Criteria (DC) Item 4 is being violated.

Results of Proposed Construction
DC Item 4 will be met.

Alternative Corrective Plan Investigated
Since this single-phase tap was heavily loaded and no backfeed was available, no alternatives were considered.

Richardson Substation
Code 316-1
Estimated Cost: $ 25,782
Year: 2008

Description of Proposed Construction
Map 452 – Replace 0.5 miles of existing single-phase #2 ACSR with three-phase 1/0 ACSR. This single-phase tap serves a subdivision along Buffington Rd.

Reason For Proposed Construction
Design Criteria (DC) Item 4 is being violated.

Results of Proposed Construction
DC Item 4 will be met.

Alternative Corrective Plan Investigated
Since this single-phase tap was heavily loaded and no backfeed was available, no alternatives were considered.

SYSTEM IMPROVEMENTS – RUS CODE 300

Bristow #1 Substation
Code 317-1
Estimated Cost: $ 6,810
Year: 2008

Description of Proposed Construction
Map 438 – Replace existing single-phase 1/0 ACSR with three-phase 1/0 ACSR. This multiphasing will begin along Wedgewood Dr.

Reason For Proposed Construction
Design Criteria (DC) Item 4 is being violated.

Results of Proposed Construction
DC Item 4 will be met.

Alternative Corrective Plan Investigated
Since this single-phase tap was heavily loaded and no backfeed was available, no alternatives were considered.

Bristow #1 Substation
Code 318-1
Estimated Cost: $ 15,051
Year: 2008

Description of Proposed Construction
Map 424 – Replace 0.1 miles of single-phase #2 ACSR with three-phase 1/0 ACSR and 0.13 miles of single-phase 1/0 underground with three-phase 1/0 underground. This tap serves the Howe's Acres subdivision.

Reason For Proposed Construction
Design Criteria (DC) Item 4 is being violated.

Results of Proposed Construction
DC Item 4 will be met.

Alternative Corrective Plan Investigated
Since this single-phase tap was heavily loaded and no backfeed was available, no alternatives were considered.

SYSTEM IMPROVEMENTS – RUS CODE 300

Bristow #2 Substation

Code 319-1

Estimated Cost: $ 12,938
Year: 2008

Description of Proposed Construction

Map 424 – Replace 0.1 miles of existing 4/0 underground with three-phase 500MCM. This tap serves the Thomson Learning facility.

Reason For Proposed Construction

Design Criteria (DC) Item 2 is being violated.

Results of Proposed Construction

DC Item 2 will be met.

Alternative Corrective Plan Investigated

Since the underground conductor serving this facility is over capacity and there is no way to backfeed any part of this circuit, no alternatives were considered.

Downing #2 Substation

Code 320-1

Estimated Cost: $ 89,352
Year: 2008

Description of Proposed Construction

Maps 493, 500 – Replace 1 mile of three-phase 3/0 ACSR with three-phase 336 ACSR. This project covers the Downing #2 circuit coming out of the substation and going to Aviation Boulevard.

Reason For Proposed Construction

Design Criteria (DC) Item 2 is being violated.

Results of Proposed Construction

DC Item 2 will be met.

Alternative Corrective Plan Investigated

SYSTEM IMPROVEMENTS – RUS CODE 300

Since the conductor serving this circuit is over capacity and there is no way to backfeed any part of this circuit, no alternatives were considered

Downing #2 Substation

Code 321-1
Estimated Cost: $ 15,104
Year: 2009

Description of Proposed Construction
Map 493 – Replace 0.3 miles of existing single-phase #2 ACSR with three-phase 1/0 ACSR. This is a single-phase tap immediately outside of Downing #2 substation off of Elijah Creek Rd. heading south.

Reason For Proposed Construction
Design Criteria (DC) Item 4 is being violated.

Results of Proposed Construction
DC Item 4 will be met.

Alternative Corrective Plan Investigated
Since this single-phase tap was heavily loaded and no backfeed was available, no alternatives were considered.

Downing #2 Substation

Code 322-1
Estimated Cost: $ 16,111
Year: 2009

Description of Proposed Construction
Map 500 – Replace 0.3 miles of existing single-phase #2 ACSR with three-phase 1/0 ACSR. This is a single-phase tap immediately outside of Downing #2 substation off of Elijah Creek Rd. heading north.

Reason For Proposed Construction
Design Criteria (DC) Item 4 is being violated.

Results of Proposed Construction
DC Item 4 will be met.

Alternative Corrective Plan Investigated

SYSTEM IMPROVEMENTS – RUS CODE 300

Since this single-phase tap was heavily loaded and no backfeed was available, no alternatives were considered.

SYSTEM IMPROVEMENTS – RUS CODE 300

Since this single-phase tap was heavily loaded and no backfeed was available, no alternatives were considered.

MISCELLANEOUS DISTRIBUTION EQUIPMENT – RUS CODE 600's

Meters and Transformers – RUS Code 601

400 new underground transformers are projected at a cost of $781,440.
1,280 new overhead transformers are projected at a cost of $1,212,534.
25,000 new AMR meters are projected at a cost of $3,650,000.
Historical data was gathered for meters and transformers and is included in Table III-B-1.

Automated Meter Reading (AMR)

After an extensive review process, Owen Electric decided to implement the Cannon Automated Meter Infrastructure throughout our entire system. In the fall of 2006, a test was done on one substation (approx. 1600 meters). Upon acceptance, OEC began a full meter changeout in December of 2006. At this time we have approximately 29,000 meters changed to AMI equipped meters. We have 18 of our 25 substations energized with the AMI injection equipment. We anticipate having the remainder of the meters changed by December 31, 2008. OEC plans to install 25,000 AMR meters in 2008 at a cost of $3,650,000. Upon completion of the meter changeouts, all meters on the system will be solid state and no older than 3 years.

This project will provide OEC and it's customers with numerous benefits including:

- Virtually eliminate meter reading errors
- Increase meter accuracy
- Improve billing efficiency
- Improve outage detection and restoration times
- Increase employee safety
- Improve power quality
- Increase overall operating efficiencies

Service Upgrades – RUS Code 602

There are 250 service upgrades projected at a total cost of $294,000. Historical data is included in Table III-B-1.

Sectionalizing – RUS Code 603

Overcurrent analysis is performed on an ongoing basis. Device changeouts, additional substation feeders, conductor multiphasing and load shifts require overcurrent device purchases.

Reclosers, fuses and switches are included in this category. An average base cost of $261,213 for the two years has been allocated. The total projected cost for sectionalizing is $522,425.

MISCELLANEOUS DISTRIBUTION EQUIPMENT – RUS CODE 600's - continued

Voltage Regulators – RUS Code 604

There are several locations where voltage regulators will be added in the CWP.

CFR CODE	SUBSTATION	MAP-BLCK #/RATING	YEAR	COST
007-1A	PENN	02420/(3) 150 A	2008	$33,120
006-1A	BROMLEY	14217/(3) 150 A	2008	$33,120
004-1A	MUNK	27711/(3) 150 A	2009	$34,279
009-1A	GRIFFIN	28508/(3) 150 A	2009	$34,279

- 007-1A: Voltage Regulators (VR's) should be installed at map and block location 02420 just south of the intersection of Skinnersburg and Burton Rds.
- 006-1A: Voltage Regulators (VR's) should be installed at map and block location 14217 along KY-978.
- 004-1A: Voltage Regulators (VR's) should be installed at map and block location 27711 along Mt. Zion Station Rd.
- 009-1A: Voltage Regulators (VR's) should be installed at map and block location 28508 along Wright Rd.

Capacitor Banks – RUS Code 605

Capacitor placement will depend on system and AMR needs. The total cost for capacitors is projected to be $132,450.

MISCELLANEOUS DISTRIBUTION EQUIPMENT – RUS CODE 600's - continued

Pole Changes – RUS Code 606 Including Clearance Poles

There are 500 projected pole changes in the CWP. This includes all maintenance and clearance poles. The cost for the pole changes is projected to be $1,091,250. Historical cost data for pole changes may be found in Table III-B-1.

Aged Conductor Summary – RUS Code 608

Since the 1980's, the Cooperative has had an active program to replace of old and deteriorated conductor. The Coop has concentrated specifically on 6 and 8 ACWC wire. Outage records, field inspections, and discussion with Coop personnel provide the basis for prioritizing the conductor replacement. Conductor replacement will be evaluated on a cost/reliability basis. Underground distribution primary cables, specifically the high molecular weight polyethylene insulation medium cable, are evaluated in a similar manner to prioritize for cable replacement.

The following is a summary of Owen Electric's aged conductor 6A, 8A in miles;

	As of 12/1/07	*2008-2009 WP*	
Phase	*Existing*	*Est. Replacement*	*Remaining*
Single Phase	486	70	416
Two Phase	14	5	9
Three Phase	12.8	5	7.8
TOTAL	512.8	80	432.8

OTHER DISTRIBUTION ITEMS - RUS CODE 700

Security Lights – RUS Code 702

A total of 900 new security lights are anticipated. The projected cost is $556,650. Security light cost history and projections are shown in Table III-B-1.

SCADA – RUS Code 703

The original SCADA substation equipment was installed in 1985 and has deteriorated, is becoming unreliable, and replacement equipment is becoming hard to acquire. Therefore OEC has started on a program to replace and upgrade substation equipment with new state of the art RTU's, regulator controls, fiber optic link, and cabinets. There are approximate 20 older SCADA installations that are planned to be upgraded over the next four to six years.

RUS FORM 300 – JUNE 2006

OPERATIONS AND MAINTENANCE SURVEY

UNITED STATES DEPARTMENT OF AGRICULTURE
RURAL UTILITIES SERVICE

REVIEW RATING SUMMARY

BORROWER DESIGNATION: KY 37

DATE PREPARED: June 20, 2006

Ratings on form are: 0: Unsatisfactory -- No Records; 2: Acceptable, but Should be Improved -- See Attached Recommendations
NA: Not Applicable; 1: Corrective Action Needed; 3: Satisfactory -- No Additional Action Required at this Time

PART I. TRANSMISSION and DISTRIBUTION FACILITIES

1. Substations (Transmission and Distribution)	(Rating)
a. Safety, Clearance, Code Compliance	NA
b. Physical Conditions: Structure, Major Equipment, Appearance	NA
c. Inspection Records - Each Substation	NA
d. Oil Spill Prevention	NA

2. Transmission Lines	
a. Right-of-Way: Clearing, Erosion, Appearance, Intrusions	NA
b. Physical Condition: Structure, Conductor, Guying	NA
c. Inspection Program and Records	NA

3. Distribution Lines - Overhead		
a. Inspection Program and Records		3
b. Compliance with Safety Codes:	Clearances	3
	Foreign Structures	2
	Attachments	2
c. Observed Physical Condition from Field Checking:		
	Right-of-Way	3
	Other	NA

4. Distribution - Underground Cable	(Rating)
a. Grounding and Corrosion Control	3
b. Surface Grading, Appearance	3
c. Riser Pole: Hazards, Guying, Condition	3

5. Distribution Line Equipment: Conditions and Records	
a. Voltage Regulators	3
b. Sectionalizing Equipment	3
c. Distribution Transformers	3
d. Pad Mounted Equipment	
Safety: Locking, Dead Front, Barriers	3
Appearance: Settlement, Condition	3
Other	NA
e. Kilowatt-hour and Demand Meter	
Reading and Testing	3

PART II. OPERATIONS and MAINTENANCE

6. Line Maintenance and Work Order Procedures		(Rating)
a. Work Planning & Scheduling		3
b. Work Backlogs:	Right-of-Way Maintenance	3
	Poles	3
	Retirement of Idle Services	3
	Other	NA

7. Service Interruptions

a. Average Annual Hours/Consumer by Cause (Complete for each of the previous 5 years)

PREVIOUS 5 YEARS (Year)	POWER SUPPLIER a.	MAJOR STORM b.	SCHEDULED c.	ALL OTHER d.	TOTAL e.	(Rating)
2001	0.33	0.11	0.06	1.75	2.25	3
2002	0.25		0.09	2.65	2.99	3
2003	0.02	0.55	0.03	2.44	3.04	3
2004	0.33	0.44	0.02	2.61	3.40	3
2005	0.14	0.18	0.06	1.91	2.29	3

b. Emergency Restoration Plan: 3

8. Power Quality	(Rating)
a. General Freedom from Complaints	3

9. Loading and Load Balance	
a. Distribution Transformer Loading	3
b. Load Control Apparatus	NA
c. Substation and Feeder Loading	3

10. Maps and Plant Records	
a. Operating Maps: Accurate and Up-to-Date	3
b. Circuit Diagrams	3
c. Staking Sheets	3

PART III. ENGINEERING

11. System Load Conditions and Losses		(Rating)
a. Annual System Losses	3.20%	3
b. Annual Load Factor	49.2%	3
c. Power Factor at Monthly Peak	95%+	3
d. Ratios of Individual Substation Annual Peak kW to kVA		3

12. Voltage Conditions	
a. Voltage Surveys	3
b. Substation Transformer Output Voltage Spread	3

13. Load Studies and Planning	(Rating)
a. Long Range Engineering Plan	3
b. Construction Work Plan	3
c. Sectionalizing Study	3
d. Load Data for Engineering Studies	3
e. Load Forecasting Data	3

PART IV. OPERATION AND MAINTENANCE BUDGETS

YEAR	For Previous 2 Years		For Present Year	For Future 3 Years		
	2004	2005	2006	2007	2008	2009
	Actual $ Thousands	Actual $ Thousands	Budget $ Thousands	Budget $ Thousands	Budget $ Thousands	Budget $ Thousands
Normal Operation	3,465	3,205	3,676	3,786	3,900	4,017
Normal Maintenance	3,700	3,601	3,551	3,658	3,767	3,880
Additional (Deferred) Maintenance						
Total	7,165	6,806	7,227	7,444	7,667	7,897

14. Budgeting: Adequacy of Budgets for Needed Work 3 *(Rating)*

15. Date Discussed with Board of Directors 7/27/2006 *(Date)*

EXPLANATORY NOTES

ITEM NO.	COMMENTS
3b.	Telephone poles left standing next to electric poles need to be removed after the joint-use facilities have been transferred Telephone and cable TV attachments require frequent follow-up to ensure contract compliance.

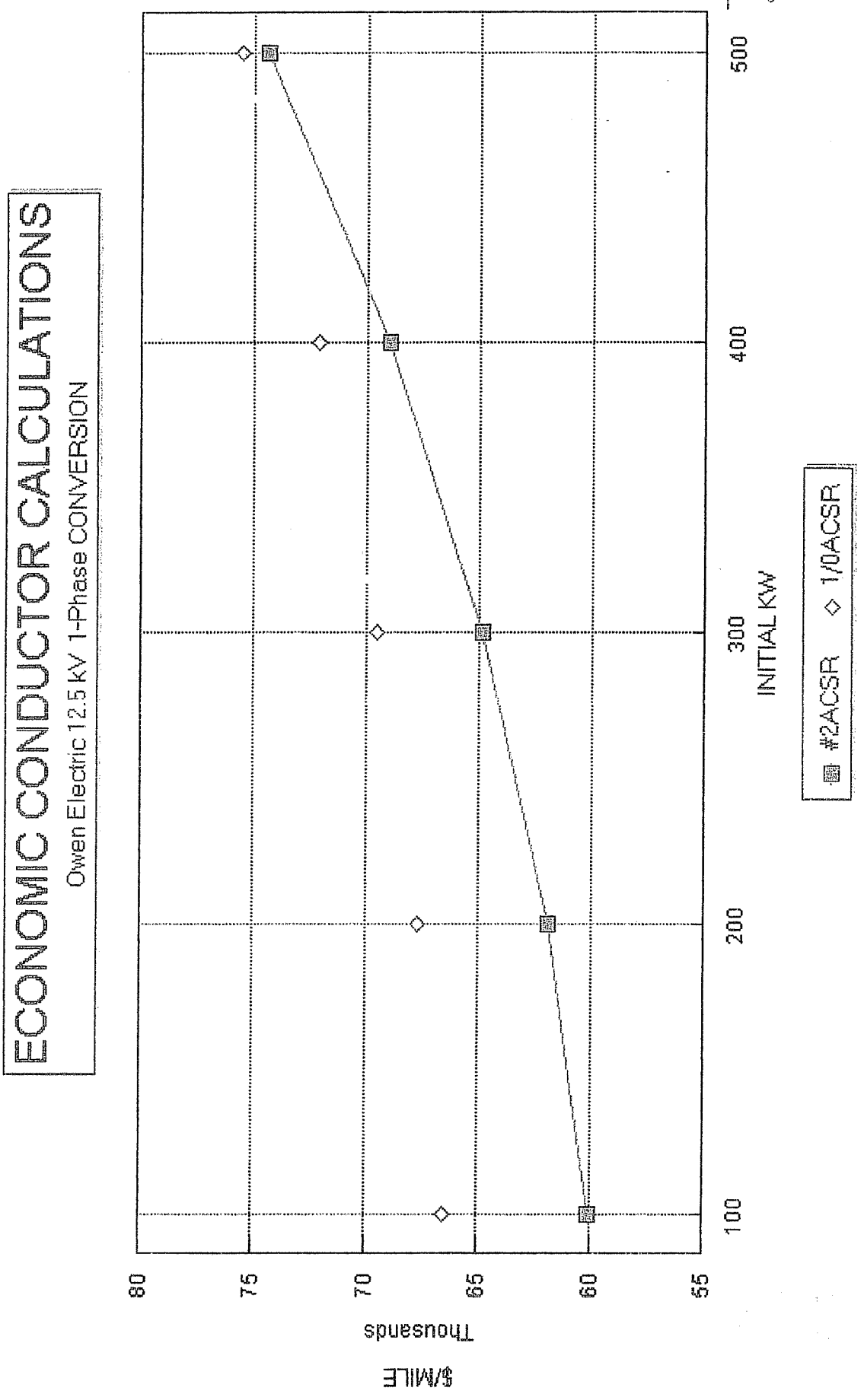
		TITLE	DATE
RATED BY:		MANAGER PLANNING & RELIABILITY	06/20/06
REVIEWED BY:		PRESIDENT AND CEO	06/20/06
REVIEWED BY:		RUS GFR	06/20/06

ECONOMIC CONDUCTOR ANALYSIS

Owen Electric
12.5 kV 1-Phase
Economic Conductor Calculations for Conversion

O&M/Dep.	TAX	INS	INT	$/KW	$/KWH	KW
8.90%	0.05%	0.05%	5.00%	5.22	0.026	100
RMO	RAT	KWI	KWHI	LGR	INF	m
12	0.0%	2.00%	2.00%	2.00%	3.50%	20
LF	PF	CF	N	KV	P	
50.0%	95.0%	95.0%	0.72	7.2	1	

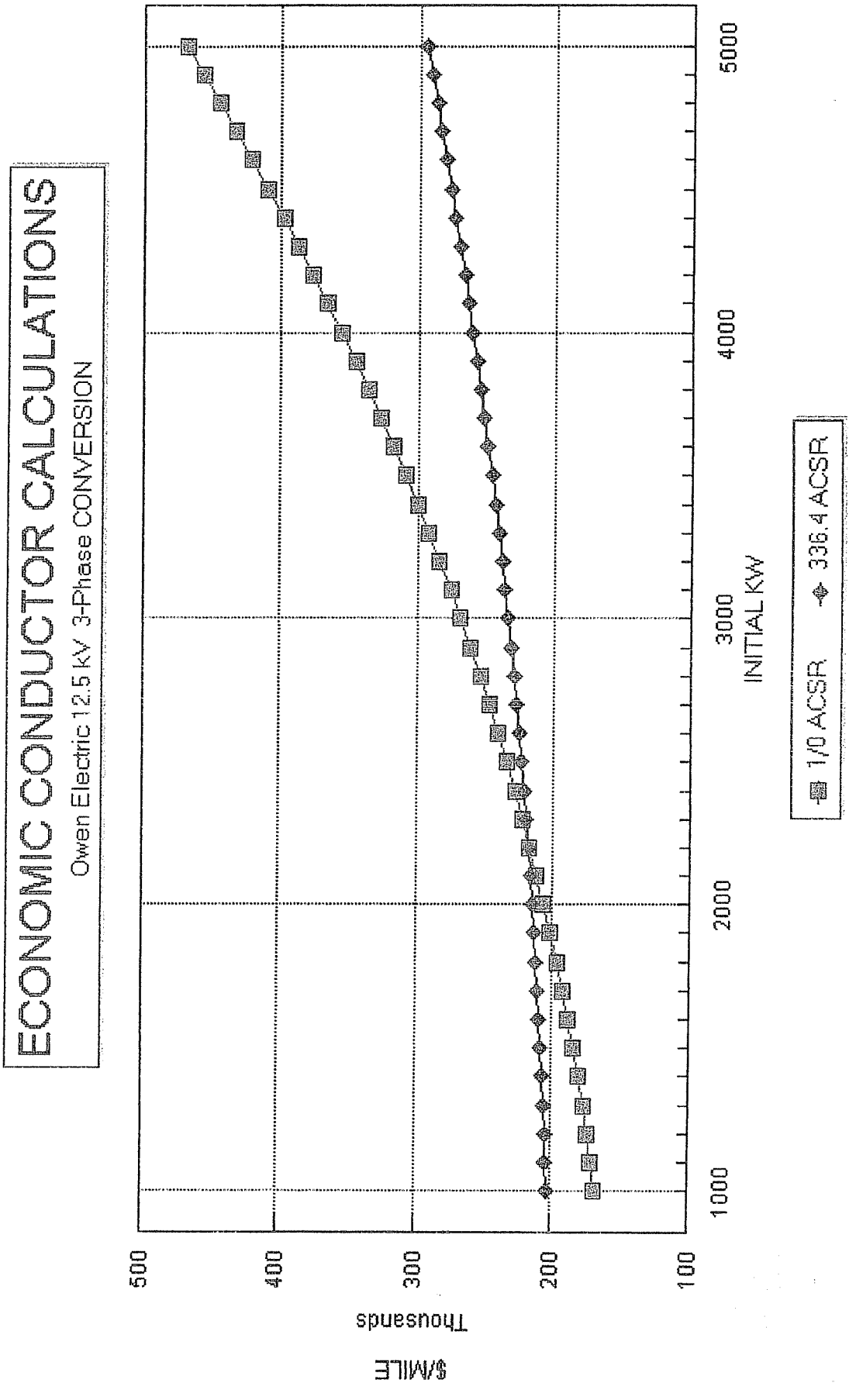
CONDUCTOR	2ACSR	1/0ACSR
COST/MI	$18,630	$20,700
OHMS/MI	1.420	0.900
TCOST/MI	$121,756	$134,775
PWCOST/MI	$60,105	$66,500


ECONOMIC CONDUCTOR CALCULATIONS
Owen Electric 12.5 KV 1-Phase CONVERSION
$/MILE
Thousands
80
75
70
65
60
55
100
200
300
400
500
INITIAL KW
#2ACSR
1/0ACSR

Owen Electric
12.5 kV 3-Phase
Economic Conductor Calculations for Conversion

O&M/Dep.	TAX	INS	INT	$/KW	$/KWH	KW
8.90%	0.05%	0.05%	5.00%	5.22	0.026	1000
RMO	RAT	KWI	KWHI	LGR	INF	m
12	0.0%	2.00%	2.00%	2.00%	3.50%	20
LF	PF	CF	N	KV	P	
50.0%	95.0%	95.0%	0.72	7.2	3	

CONDUCTOR	1/0ACSR	336.4 ACSR
COST/MI	$48,645	$62,100
OHMS/MI	0.900	0.278
TCOST/MI	$337,675	$409,259
PWCOST/MI	$167,939	$202,246


ECONOMIC CONDUCTOR CALCULATIONS
Owen Electric 12.5 KV 3-Phase CONVERSION
$/MILE
Thousands
500
400
300
200
100
1000
2000
3000
4000
5000
INITIAL KW
1/0 ACSR
336.4 ACSR

Owen Electric Cooperative
Case No. 2009-00010
First Data Request of Commission Staff

2. For each work plan provided in response to Item 1, state if Owen applied to the Commission for a Certificate for the facilities identified in that plan.

Response: Owen did not apply for Certificates for either of the two Work Plans identified in Question 1.

Owen Electric Cooperative
Case No. 2009-00010
Second Data Request of Commission Staff

3. For each work plan for which Owen failed to apply for a Certificate, provide a detailed explanation as to why Owen did not apply for a Certificate.

Response: Exceptions to filing for a Certificate are provided for in KRS 278.020 (2) for ordinary extensions of existing systems in the usual course of business. This involves construction that provides for replacement or upgrading of existing electric lines, relocation of existing electric lines to accommodate construction or expansion of transportation infrastructure, and construction of an electric line constructed solely to serve a single customer that passes over the customer's own property.

When the Work Plans identified in Question #1 were being developed, the construction of the facilities contained in those Work Plans was believed to fall within the exceptions referenced above. Therefore, certificates of convenience and necessity were not applied for. Owen did, however, submit copies of both Work Plans to the Commission at the time of their development. Copies of the letters to the Commission that were sent with the Work Plans are attached with the response to Question #1.