

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

THE ELECTRONIC APPLICATION OF LICKING VALLEY RURAL)	
ELECTRIC COOPERATIVE CORPORATION FOR A GENERAL)	
ADJUSTMENT OF RATES PURSUANT TO STREAMLINED)	CASE NO.
PROCEDURE PILOT PROGRAM ESTABLISHED IN CASE NO.)	2020-00338
2018-00407)	

LICKING VALLEY RURAL ELECTRIC COOPERATIVE CORPORATION
RESPONSE TO ATTORNEY GENERAL'S DATA REQUESTS

Filed: February 11, 2021

Licking Valley Rural Electric Cooperative Corporation
Case No. 2020-00338
AG's Data Requests

1. Refer to the Application, Page 1, in which Licking Valley RECC states that it provides electric power to approximately 17,272 members in the Kentucky counties of Breathitt, Elliott, Lee, Magoffin, Menifee, Morgan, Rowan, and Wolfe.
 - a. Provide a detailed account of the economic issues that the above-referenced counties were suffering from before the COVID-19 pandemic.
 - b. Provide a detailed account of the economic situation that the above-referenced counties are battling during the COVID-19 pandemic.
 - c. Based upon the most recent United States Census information, the poverty rates for Licking Valley RECC's service area are as follows: Breathitt County – 29.2%, Elliott County – 27.7%, Lee County – 34.9%, Magoffin County – 29.4%, Menifee County – 26.1%, Morgan County – 26.5%, Rowan County – 23.3%, Wolfe County – 30.1%.

Confirm that Licking Valley RECC is aware of the extreme poverty that exists in its service territory.

- d. Explain in detail whether Licking Valley RECC is experiencing a higher amount of uncollectible bills/account since the COVID-19 pandemic.
- e. Taking into account the economic issues that were present in Licking Valley RECC service area before the COVID-19 pandemic, and the exacerbated economic issues that the COVID-19 pandemic has caused in the counties that Licking Valley RECC serves, explain how Licking Valley RECC's customers will be able to afford an increase in electric rates.

Response:

- a. As stated in the Attorney General's question in AG 1-1 c., the federal poverty rates for the eight counties comprising Licking Valley's service territory are among the

highest in Kentucky and likely, the United States. The average poverty rate for the counties comprising the service territory is approximately 28.4%. For many decades the economies of the counties in Licking Valley's service territory, and most of the rest of Eastern Kentucky, relied almost exclusively on non-technical, labor-intensive industries such as coal mining, timber harvesting and similar businesses employing largely unskilled workers. For more than 100 years these signature industries provided employment for our members and maintained a sufficient tax base to provide decent roads, schools and other necessary infrastructure. However, it is widely accepted that during these years leadership in Eastern Kentucky failed to employ the necessary foresight and planning to develop and put in place alternate economic and job opportunities when the coal and timber resources were exhausted. While several county governments in Licking Valley's service territory are trying to develop alternate economies by attracting outside industries, they are playing catch-up and competing with other areas of the region, state and nation possessing the same desire. Many of these competitors are located in areas whose geography and basic infrastructure are more developed, the tax structure is more appealing, and there are already businesses and industries in place that complement the business of the target employer. To summarize, before the COVID-19 pandemic the economies of the counties in Licking Valley's service territory were flat with almost no growth and the prospects for immediate and enduring economic improvement were uncertain at best.

- b. Please refer to response to AG 1-1 a., above. There are numerous examples of the economic disruption which COVID-19 has caused in Licking Valley's service territory. There has been months-long shutdowns of schools and businesses. The few manufacturing and commercial businesses in the Cooperative's service territory have been required to reduce their hours of operation because of government requirements, supply chain disruptions and workforce illness. These factors have only exacerbated the challenging economic situation existing before COVID-19 among Licking Valley's owner-members.
- c. Licking Valley is acutely aware of the extreme poverty in the service territory and is committed to assisting our customers whenever and wherever possible. This awareness is best demonstrated by Licking Valley's consistently low rates and the decision of our Board of Directors to temper the rate adjustment requested by filing a streamlined case rather than a full rate case.
- d. Licking Valley has experienced a higher amount of uncollectible bills/accounts since the Kentucky Public Service Commission issued an order on March 16, 2020, in Case No. 2020-00085 placing a moratorium on service disconnections. For calendar year 2020, the average monthly arrears was \$664,846.25. This compares to an average monthly arrears in the test year (2019) of \$581,157.15, or a 13% increase.
- e. Any rate increase, whether implemented during 'normal' times or a pandemic, can be challenging for some customers, especially low-income customers. However,

in the current case, Licking Valley only requests a 2.21% rate increase implemented by an upward adjustment of its residential customer charge by \$3.09, from \$14.00 to \$17.09, while making no change to the residential energy charge. The request is meant to more accurately capture the true cost of providing service to its customers. The alternative is no rate increase which would hasten the degradation of Licking Valley's financial condition, customer service and reliability. Licking Valley takes seriously the Commission's mandate that distribution cooperatives should not allow their financial condition to suffer by artificially delaying rate adjustments; but, instead, should seek more frequent but modest adjustments to prevent its customers from being subjected to unreasonable rate shock. In this case, Licking Valley has made a good-faith effort to balance the need to maintain a strong financial condition while simultaneously taking into account the effect of any rate increase on its most financially vulnerable customers.

Witnesses: Kerry Howard and John Wolfram

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2. Refer to the Application, page 2. Licking Valley RECC asserts that its existing rates went into effect on March 1, 2017, and since that time Licking Valley RECC's costs have increased at a greater rate than its energy sales and revenue despite management supervision to minimize cost escalation.
 - a. Provide a list of all pro forma adjustments, the monetary amount of each adjustment, and a description of why each adjustment is being requested.
 - b. Explain in detail why costs have increased more than energy sales.
 - c. Explain in detail and provide examples of how management has attempted to minimize cost escalation.
 - d. Licking Valley RECC is requesting to achieve a Times Interest Earned Ratio ("TIER") of 1.38, and an Operating Times Interest Earned Ratio ("OTIER") of 1.30.
 - i. Confirm that a TIER of 1.38 and an OTIER of 1.30 is reasonable and will ensure that Licking Valley RECC can provide safe and reliable service to its customers.
 - e. In the final Order of Case No. 2016-00174, Licking Valley RECC requested a TIER of 2.25, but the Commission denied the request and instead granted a TIER of 2.00. If not constrained by the Streamlined Procedure Pilot Program, explain whether Licking Valley RECC would have asked for a TIER of 2.0 or higher.
 - f. Provide the TIER and OTIER that are required by all loan contract terms.
 - g. Confirm or deny that normally loans that an RECC enters into only requires a TIER of 1.25. If denied, explain in full detail what TIER is generally required.
 - h. If (g) is confirmed, then provide the justification in requesting a higher TIER than what is required by the loan contract terms.
 - i. If Licking Valley RECC is requesting a TIER and OTIER that is higher than the loan contract requirements, explain why it is making such requests.

Witnesses: Kerry Howard and John Wolfram

- j. Explain how Licking Valley RECC utilizes the additional funds that the Commission awards that is above and beyond the required TIER and OTIER amounts per the loan contract terms, and how Licking Valley RECC accounts for these funds.
- k. Provide Licking Valley RECC's TIER and OTIER for the historical test period ending December 31, 2019.
- l. Provide Licking Valley RECC's TIER and OTIER for January 1, 2020 – December 31, 2020.
- m. Provide Licking Valley RECC's TIER and OTIER from January 1, 2021-the present day.
- n. Explain why Licking Valley RECC is seeking to increase the monthly residential customer charge from \$14.00 to \$17.09, which is an approximate increase of 22.07%.
- o. Did Licking Valley RECC contemplate implementing the proposed higher customer charge in two phases instead of 22.07% increase at one time?
- p. Did Licking Valley RECC contemplate proposing the requested revenue increase on the residential customer energy charge instead of exclusively on the residential customer charge?

Response:

- a. For this list and amount of each proposed pro forma adjustment, please see the Direct Testimony of John Wolfram, Exhibit JW-2. For the descriptions, see Wolfram Testimony, Part VI.
- b. Refer to Licking Valley's response to Item 1 above generally, and to the testimony of Kerry Howard and Sandra Bradley for a description of the reason Licking Valley's energy sales, and relatedly, margins, have decreased in the past several years. While the revenue side of Licking Valley's operations have decreased, operational costs have not. To the contrary, costs

throughout most of the business, including for materials, vendor services, labor and depreciation have increased due to market forces. The same is true for virtually every other industry and is not confined to only Licking Valley's business. Even though customer base, energy usage and financial metrics have declined in the past few years, Licking Valley is still required to maintain the same number of miles of distribution line both in terms of conductor and related hardware, as well as right-of-way. It also must still maintain all of its substations, rolling fleet, adequate personnel and administrative services. To be clear, Licking Valley has an ongoing responsibility to maintain a safe and reliable electric distribution system for its customers irrespective of the inherent variability in total energy sales.

- c. Refer to the testimony of Kerry Howard for management-driven cost reductions¹ in such categories as labor expense, extending the life of expensive vehicles such as digger and bucket trucks, re-purposing expensive distribution equipment removed from the field, an improved right-of-way/vegetation management plan, deployment of Advanced Metering Infrastructure and office communication systems, deployment of an efficient Outage Management system, and reductions in advertising and donation expense.
- d. Licking Valley confirms.

¹ See, Application, Exhibit 7, Testimony of Kerry Howard, page 5.

- e. If the Streamlined Procedure Pilot Program did not place a limit on the requested increase, it is likely that Licking Valley would have requested a TIER of 2.00 or higher. Please see the response to Commission Staff's First Data Request, Item 10.
- f. Please see Licking Valley's response to Commission Staff's First Data Request, Item 2.a.
- g. Licking Valley confirms.
- h. The loan covenants establish minimum requirements for financial metrics like TIER. Licking Valley RECC considers it prudent to establish rates that permit the achievement of financial metrics above these minimums, and the Commission has supported this view in every distribution cooperative rate case of which Licking Valley RECC is aware.
- i. Please see the response to Item 2h above.
- j. Licking Valley RECC does not accept the premise of the question that the amounts above the minimum lender-required TIER or OTIER are "additional funds" for which separate allocation or tracking is warranted. On the contrary, Licking Valley RECC uses TIER and OTIER in order to establish its total revenue requirement, consistent with standard Commission practices and traditional ratemaking methods. The cooperative is entitled to a reasonable opportunity to recover its prudently-incurred costs and is also entitled to earn a

fair and reasonable rate of return on its capital investments. All of Licking Valley RECC's rate revenue allows the cooperative to recover its costs, earn a reasonable return on its investment, and manage contingencies related to providing safe, reliable, and cost-effective electric service to its members. The Commission has found in repeated distribution cooperative rate filings in recent years that a TIER of 2.00 provides that reasonable return. The Commission also established the OTIER cap of 1.85 for cooperatives using the Streamlined Procedure Pilot Program, which indicates an expectation by this Commission that cooperatives like Licking Valley RECC should achieve financial metrics above the minimum thresholds established by the lenders. There are no "additional funds" and thus no special or separate "accounts for these funds" exist.

- k. Licking Valley's TIER was 2.05 and its OTIER was 0.87 for the historical test period ending December 31, 2019.
- l. See attached schedule.
- m. This information is not available at this time.
- n. Please see Wolfram Testimony overall at Part IX and specifically at page 26.
- o. No. The proposed increase of the monthly residential customer charge from \$14.00 to \$17.09 is relatively small in terms of real dollars. The total average monthly residential bill would increase by \$3.09 or 2.88%. A phase-in for an increase of this size is not warranted.

- p. No. The cost of service study indicates that the residential customer charge is only 73 percent of the cost-based rate (\$14.00/\$19.07) while the residential energy charge is 93 percent of the cost based rate $\{\$0.0920 \text{ base tariff rate} + \$0.000436 \text{ FAC rate}\}/\0.0943 . Licking Valley opted to allocate the increase to the customer charge due to (a) the greater disparity from cost based rates for the customer charge and (b) the desire to mitigate revenue erosion that the Commission has recognized often occurs due to the decrease in sales volumes accompanying poor regional economics, as is the case for Licking Valley RECC.

Licking Valley RECC's TIER and OTIER

2020	TIER	OTIER
January	5.92	5.92
February	1.51	1.51
March	-0.27	-0.62
April	22.23	3.04
May	3.97	3.97
June	1.43	1.43
July	3.42	3.42
August	2.29	1.92
September	-5.04	-5.25
October	4.33	3.79
November	11.84	11.84
December		

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3. Refer to the Application, page 4.
 - a. Licking Valley RECC states that its existing retail rates do not provide sufficient revenue to ensure the requisite financial strength going forward.
 - i. Explain the criteria Licking Valley RECC uses to determine if the retail rates provide sufficient revenue.
 - ii. Explain the criteria Licking Valley RECC uses to determine if it has the requisite financial strength.
 - b. Licking Valley RECC avers that its goal is to keep rates as low as possible for its members. Provide a list of all electric utilities in Kentucky, with the corresponding monthly residential customer charge, residential volumetric charge, average bill, and rank the utilities from lowest to highest average bill. Ensure to provide all of the requested information in the response.

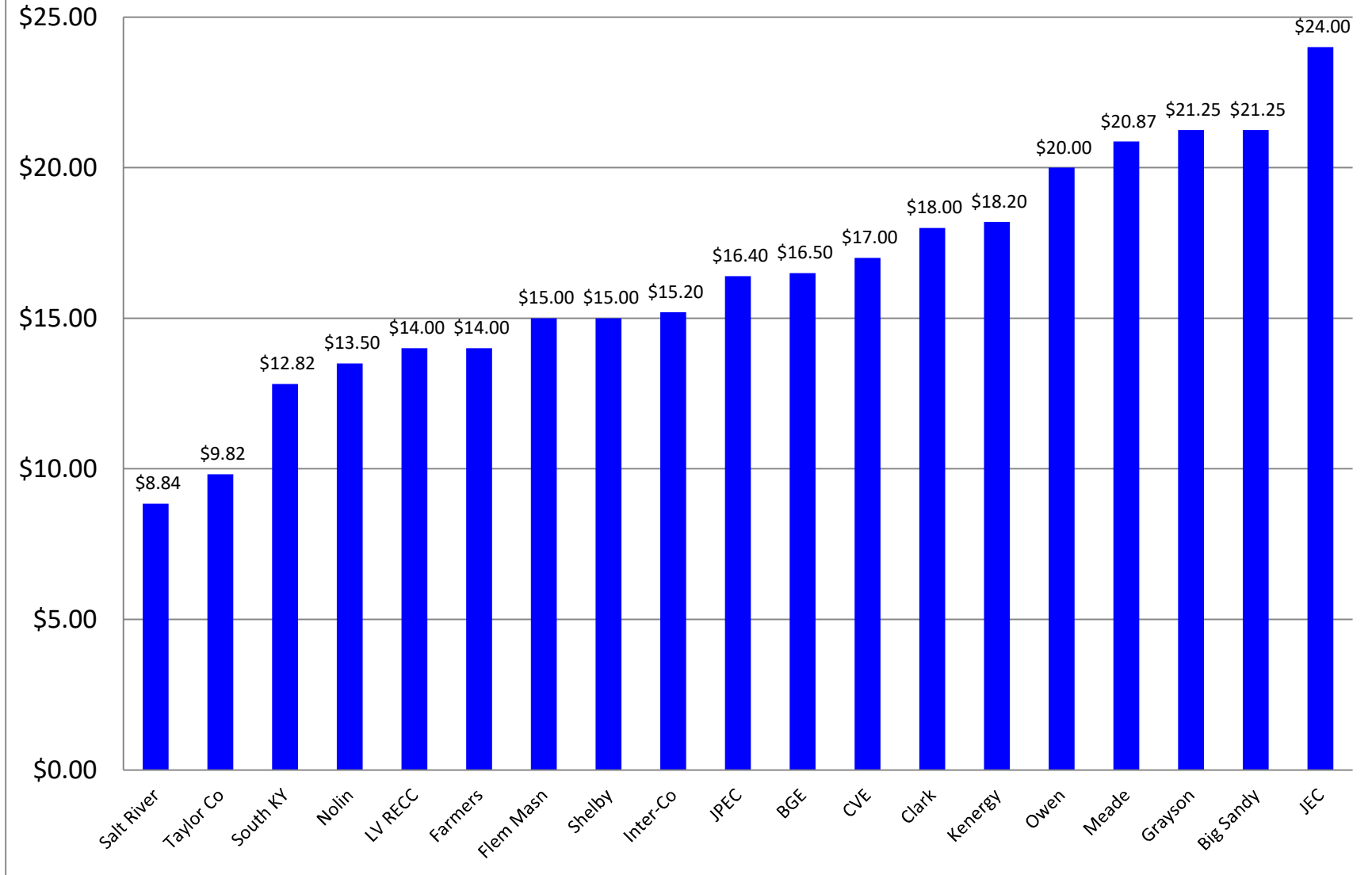
Response:

- a. i. and ii.

Licking Valley uses financial metrics like TIER and OTIER to assess whether the retail rates provide sufficient revenue and to ensure it maintains sound financial strength. See Exhibit JW-2 to the Application.
- b. Licking Valley RECC did not compile all the requested information during the development of this case. The relevant information that Licking Valley RECC did compile, which only includes the monthly residential customer charge for electric distribution cooperatives in Kentucky, from publicly-available data on the Commission's website, is on page 2 of this response.

Monthly Residential Fixed Charges

(as of 2/1/21)



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4. Refer to the Application, page 5. Licking Valley RECC asserts that it is requesting the rate case expense to be allowed recovery in the rates, and amortized over a three-year period.
 - a. Provide the total rate case expense that has been accrued thus far.
 - b. Provide a breakdown of the total rate case expense that has been accrued thus far by category.
 - c. Provide the estimated total rate case expense.
 - d. Provide a breakdown of the estimated total rate case expense. Consider this a continuing request.

Response:

- a. Please see attached.
- b. Please see attached.
- c. Please see attached and also refer to Exhibit 36 of the Application.
- d. Please see attached and also refer to Exhibit 36 of the Application.

Licking Valley RECC

Estimated Rate Case Expenses

Legal Services	\$ 30,000.00
Consulting/COS Study	20,000.00
	<u>\$ 50,000.00</u>

Incurred Rate Case Expenses

Date	Reference	Amount	Name
08/01/20	Consulting Support	\$ 780.00	Catalyst Consulting LLC
11/01/20	Consulting Support	6,240.00	Catalyst Consulting LLC
12/01/20	Consulting Support	4,680.00	Catalyst Consulting LLC
12/31/20	Consulting Support	2,632.50	Catalyst Consulting LLC
01/31/21	Consulting Support	1,657.50	Catalyst Consulting LLC
11/10/20	Legal Services	5,500.00	Goss-Samford
12/08/20	Legal Services	14,768.00	Goss-Samford
01/15/21	Legal Services	14,929.78	Goss-Samford
12/14/20	Certified Letter	4.10	West Liberty Post Office
12/16/20	Advertising	432.00	News Group of KY Inc
01/31/21	Advertising	3,360.00	Courier Publishing
01/11/21	Advertising	360.00	Breathitt Advocate
12/31/20	Advertising	370.00	Mortimer Media Group
01/31/21	Advertising	185.00	Mortimer Media Group
12/16/20	Advertising	175.00	Intermountain Publishing Co
12/23/20	Advertising	175.00	Intermountain Publishing Co
12/30/20	Advertising	175.00	Intermountain Publishing Co
12/30/20	Advertising	238.00	Intermountain Publishing Co
1/6/2021	Advertising	238.00	Intermountain Publishing Co
01/13/21	Advertising	238.00	Intermountain Publishing Co
		 \$ 57,137.88	

Summary Incurred Rate Case Expenses

Legal Services/Rate Case	\$ 35,197.78
Consulting/COS Study/Rate Case	15,990.00
Advertising	5,950.10
	<u>\$ 57,137.88</u>

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5. Refer to the Application, Exhibit 1.
- a. Licking Valley RECC states that there have been increased costs in many areas of its business. Identify all increased costs with an explanation regarding the same.
 - b. Licking Valley RECC asserts that it has mitigated some of the increased costs by management-driven cost reductions in categories such as labor expense by holding the line on employee wage raises, cutting overtime, maintaining adequate but not excessive employee headcount, extending the lives of expensive vehicles such as digger and bucket trucks, repurposing cost-intensive distribution equipment removed from the field such as regulators, transformers, or breakers instead of buying new equipment, an improved right-of-way/vegetation management plan, deployment of an effective Advanced Metering Infrastructure (“AMI”) and office communication systems, deployment of an efficient Outage Management system utilizing updated Global Positioning System (“GPS”) mapping of the Company’s service territory, and reductions in advertising and donation expense. Provide a detailed description of each cost reduction listed in above-referenced statement, and provide the correlating amount that was saved.

Response:

- a. Please refer to Application, Exhibit 7, testimony of Sandra Bradley, page 6, and testimony of Kerry Howard, pages 4-5. The three principal areas of cost-escalation has been in labor, depreciation and materials.
- b. Please refer to Licking Valley’s response to Commission Staff’s Data Request, Item 1.

Inventory Sampling Price Comparison 2015/2020

Item Description	2015 Cost	2020 Cost	Percent Increase
10 KVA	\$ 458.31	\$ 470.36	2.6%
15 KVA	\$ 597.54	\$ 620.37	3.8%
25 KVA	\$ 709.39	\$ 726.79	2.5%
50 KVA	\$ 912.33	\$ 954.59	4.6%
75 KVA	\$ 1,352.67	\$ 1,397.85	3.3%
100 KVA	\$ 1,590.47	\$ 1,732.43	8.9%
500 KVA	\$ 5,544.72	\$ 6,349.65	14.5%
Regulators	\$ 5,142.19	\$ 5,265.40	2.4%
1000 KVA	\$ 14,730.52	\$ 14,699.44	-0.2%
Pin Pole Top	\$ 15.04	\$ 18.88	25.6%
Bolt, Machine	\$ 1.31	\$ 1.41	7.8%
Pin, Clamp Saddle	\$ 14.43	\$ 17.59	21.9%
Crossarm	\$ 53.07	\$ 61.88	16.6%
Brace, Angle Arm 60"	\$ 19.07	\$ 23.90	25.3%
Insul. Suspension	\$ 9.38	\$ 13.40	42.8%
Clamp, Prim. D.E.	\$ 14.36	\$ 17.15	19.5%
Line Disconn Switch	\$ 233.56	\$ 238.50	2.1%
4/0 URD Wire	\$ 1.31	\$ 1.38	5.3%
Anchor Rod 5/8" x 7	\$ 14.64	\$ 16.49	12.6%
Anchor Rod 3/4" x8	\$ 25.09	\$ 30.61	22.0%
Anchor Screw 6"	\$ 18.81	\$ 23.71	26.0%
Lighting Arrest 9 KV	\$ 32.78	\$ 35.36	7.9%
URD Straps	\$ 15.76	\$ 24.18	53.5%
#2 Triplex	\$ 0.66	\$ 0.66	0.1%
# 1/0 ACSR Wire	\$ 0.25	\$ 0.26	1.1%
#2 ACSR Wire	\$ 0.14	\$ 0.18	28.3%
Cluster Mounts	\$ 231.29	\$ 263.33	13.9%
Adapted Insulator	\$ 8.36	\$ 9.71	16.1%
Service Spools,2"	\$ 0.66	\$ 0.92	38.9%
Secondary Spool, 3"	\$ 1.10	\$ 1.40	27.2%
350 MCM Wire	\$ 2.39	\$ 2.80	17.0%
6 & 8 A Sleeves	\$ 3.77	\$ 3.77	0.0%
Farm Light Security	\$ 188.37	\$ 217.18	15.3%
Wire Holder Clevis	\$ 11.67	\$ 15.57	33.5%
Lightn, ARRE & Cutout	\$ 81.27	\$ 105.38	29.7%
Clevis, SEC. Rigid	\$ 5.67	\$ 5.95	4.9%
Guy STRA. Link Stick	\$ 17.41	\$ 17.93	3.0%
350 MCM Quad	\$ 3.56	\$ 3.98	11.8%
RF Router Kit	\$ 1,711.90	\$ 1,826.53	6.7%
Total	\$ 33,775.23	\$ 35,216.87	4.3%

Witnesses: Kerry Howard and Sandy Bradley

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6. Refer to the Application, Exhibit 7, the Testimony of Kerry Howard, President and Chief Executive Officer (“Howard Testimony”), page 2. Mr. Howard states that he has been employed as either General Manager or President/Chief Executive Officer at Licking Valley RECC for the past 14 years.
- a. Provide the names, positions, salaries, and date of hire for all employees of Licking Valley RECC who are related to Mr. Howard, if any.
 - b. Provide the names of all members of the Licking Valley RECC Board of Directors who are related to Mr. Howard, if any.
 - c. Explain whether Licking Valley RECC has a Nepotism Policy. If so, provide a copy of the policy. If not, explain why a Nepotism Policy is not in place, and whether Licking Valley RECC is agreeable to implementing one.

Response:

- a. There are no employees of Licking Valley who are related to Mr. Howard.
- b. There are no Board of Directors of Licking Valley who are related to Mr. Howard.
- c. Please see attached.

LICKING VALLEY RURAL ELECTRIC COOPERATIVE CORPORATION

KENTUCKY 56 MORGAN

BOARD OF DIRECTORS POLICIES AND PROCEDURES MANUAL

Policy Number 106

Effective Date: 03/19/2020

SUBJECT: NEPOTISM

Page 01 of 01

PURPOSE: To set forth a policy with regard to the employment of close relatives of the Board of Directors (Board) and employees of Licking Valley Rural Electric Cooperative Corporation (LVRECC).

POLICY: In the event an employee(s) becomes related to another employee through marriage to each other, this relationship will affect their employment status. (RE: Policy 106, NEPOTISM, Responsibilities, Section 2).

RESPONSIBILITIES:

1. LVRECC shall not employ any individual(s) residing in a Director(s) or General Manager/CEO's household.
2. If two employees become immediate family by marriage or otherwise, one of them will be required to terminate employment. If the affected employees cannot decide which of them will terminate, the employee with the least seniority at LVRECC shall have employment terminated.
3. To establish a reasonable period of time in which the relatives have to decide who will terminate. It shall be set forth that thirty (30) calendar days will be the maximum allowable time for continued employment for both employees. Upon completion of said thirty (30) calendar days, if one of these employees has not submitted a letter of resignation, this Cooperative shall take necessary action as prescribed in this Policy.

This Policy supersedes all prior policies with number 106.

Board Approved March 19, 2020

Secretary



Witnesses: Kerry Howard and Sandy Bradley

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7. Refer to the Howard Testimony, pages 3-4. Mr. Howard states that Licking Valley RECC provides retail electric service to approximately 17,272 meters for 12,193 members. Mr. Howard further states that as of December 31, 2019, Licking Valley RECC had 16,187 residential meters and 1,085 commercial and industrial meters. Refer also to the Application, page 1, in which Licking Valley RECC states that it provides retail electric power to approximately 17,272 members. Reconcile these two statements and provide how many meters and members Licking Valley RECC has, and if the former statement is correct then explain why there are approximately 5,000 more meters than members.

Response:

The number of meters and members contained in Mr. Howard's testimony is correct.

Some members may have more than one meter registered in their name such as a separate meter for a garage, barn, business or rental property.

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8. Refer to the Howard Testimony, page 4. Mr. Howard generally refers to the deployment of AMI.
 - a. Explain whether the AMI project has completely been deployed, as well as the implementation date for the AMI project.
 - b. Explain how Licking Valley RECC is recovering the cost of the AMI. Ensure to explain whether all of the AMI costs have previously been included in Licking Valley RECC's rates, and if not, identify the monetary amounts associated with the AMI that are included in the pending rate request.
 - c. Has Licking Valley RECC included any savings in the pending case associated with the AMI project? If so, identify the amount of savings and where it is included in the pending rate case.
 - d. Provide a cost breakdown of all new savings and new costs arising as a result of the AMI project. Include in your response a discussion of whether the AMI deployment has resulted in cost reductions for the pre-pay program, and if so: (i) how; and (ii) provide a quantification of all such cost reductions.
 - e. Provide the meter reading staff head count, including all full-time, part-time and /or contracted readers, both: (i) prior to the initiation of the AMI project; and (ii) the number of all such staff in the current test year.
 - f. Explain in detail whether the AMI project has allowed Licking Valley RECC to reduce the number of meter readers on staff. If so, identify the correlating amount of savings and where it is included in the pending rate case.

Response:

- a. Deployment of Licking Valley's AMI system began in August 2015. It was completed and placed into service in June 2020.

- b. Licking Valley is recovering the cost of its AMI system in current rates. There are no amounts associated with the AMI that are included in the pending rate case.
- c. Licking Valley has implicitly included the AMI cost savings in the cost of service and rate analyses; savings relative to the last rate case are reflected in the test year expense amounts in the revenue requirement without specifying any explicit additional pro forma adjustments.
- d. Licking Valley is unable to provide reliable dollar-amount cost savings associated with the AMI project. However, Licking Valley is confident that savings are being realized because of the ability to remotely read and connect/disconnect meters without the necessity of rolling a truck with employees as was the case before AMI was installed. There are also other back-office savings realized due to automation in billing.
- e. Licking Valley's meter-reading staff headcount is four (4) employees. This was the same number both before and after AMI was operational. These four employees are still needed to fully comply with Commission regulations found at 807 KAR 5:041, regarding periodic meter reading and testing.
- f. Please see Licking Valley's response to Attorney General's Data Request Item 8 (e) above.

Witnesses: Kerry Howard and John Wolfram

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9. Refer to the Howard Testimony, page 5.
 - a. Mr. Howard states that stagnant customer and load growth is directly related to the poor economy in the service territory. Proved the customer and load growth for the years 2015-present day.
 - b. Explain in detail whether Licking Valley RECC is concerned that increasing electricity prices will make it even more difficult to attract much needed businesses and jobs to its service area.

Response:

- a. Please see attached the data tabulated for Licking Valley RECC for 2015 through 2019 as reflected in the annual financial filings made by Licking Valley RECC with the Commission.
- b. Licking Valley does not believe that the very modest upward rate adjustment requested in this case will act as a disincentive for new businesses, industry and jobs to locate in its eight-county service territory. This is true especially considering that only residential rates will be affected by any increase the Commission approves. Of greater significance to whether new employers might locate in the area is the availability of favorable business/industrial sites containing the required basic infrastructure to accommodate efficient business activities such as potable water, sanitary sewer, a reliable source of electric power, non-confiscatory tax rates, safe and well-maintained roads, and most importantly, a sufficiently educated and skilled workforce.

**Licking Valley RECC
Load Growth Data**

#	<u>Item</u>	<u>2015</u>	<u>2019</u>	<u>Incr(Decr)</u>	<u>% Change</u>
1	Usage (kWh)				
2	Residential	188,335,809	186,848,709	(1,487,100)	-0.8%
3	Small Commercial	41,883,086	40,489,724	(1,393,362)	-3.3%
4	Large Commercial	14,643,920	12,476,964	(2,166,956)	-14.8%
5	Total	244,862,815	239,815,397	(5,047,418)	-2.1%
6					
7	Avg Customer #				
8	Residential	16,212	16,177	(35)	-0.2%
9	Small Commercial	1,103	1,082	(21)	-1.9%
10	Large Commercial	8	7	(1)	-12.5%
11	Total	17,323	17,266	(57)	-0.3%
12					

13 > All data provided from the Annual Financial Reports filed with the Commission.

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10. Refer to the Howard Testimony, page 6, in which he acknowledges that eastern Kentucky has been in an economic crisis for several years. When coupled with further economic devastation caused by the COVID-19 pandemic, explain how Licking Valley RECC believes that its customers can afford for the electricity rates to increase at this time.

Response:

It is possible that should the Commission approve Licking Valley's requested upward rate adjustment a few customers may have increased difficulty paying their monthly power bill. For these individuals Licking Valley will continue its longstanding custom and course of business of assistance with billing challenges and explore ways to reduce the impact of even a small rate increase on them. The vast majority of Licking Valley's customers will not realize any significant financial detriment when the new rates become effective. Conversely, failure of Licking Valley to raise its rates consistent with basic cost-of-service principles could result in a weakened systemic financial condition, ultimately leading to decreased service reliability and, paradoxically, higher power costs in the future. This scenario would not be in any customer's best interest and its possibility outweighs any *de minimis* hypothetical hardship resulting to a very small number of customers.

Witnesses: Kerry Howard and Sandy Bradley

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11. Refer to the Howard Testimony, page 6. Mr. Howard asserts that when comparing 2010's energy sales to 2019, Licking Valley RECC has experienced a 12% decline in residential sales and a 14% decline in commercial and industrial sales that resulted in a 13% overall decline in total energy sales.
 - a. Explain in detail whether Licking Valley cooperates and/or works on economic development projects with other local entities.
 - b. Due to the large volume of decreasing sales, has Licking Valley RECC discussed merger with any other rural electric cooperative corporation ("RECC")? If not, explain why not.

Response:

- a. Licking Valley strongly believes in the importance of cooperating and working with municipal and county governments on economic development projects in our service territory. We try to assist in all counties in our service territory, however, we have a greater presence and success in some more than others. Licking Valley's employees are also encouraged to participate and represent our members and the Cooperative in numerous civic and service organizations throughout our service territory. This participation has allowed Licking Valley to interact in economic development matters with interested stakeholders, elected officials, financial institutions, representatives of governmental agencies and departments and other important business leaders. As one of the owners of East Kentucky Power Cooperative we also are an active part of its impressive economic development

Witnesses: Kerry Howard and Sandy Bradley

efforts throughout many other Kentucky counties besides the ones we serve. To summarize, Licking Valley takes economic development very seriously and our participation and work with many organizations throughout the years demonstrates our commitment to economic advancement in our service territory wherever and whenever possible.

- b. Licking Valley has not commissioned a formal consultant's study to explore merger with another cooperative. Over the years Licking Valley has been part of very informal discussions with other cooperatives in the East Kentucky Power Cooperative system about the pros and cons of consolidation. However, those discussions never advanced very far because of the infeasibility associated with inter-system integration difficulties and virtually no economic or operational efficiencies.

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12. Refer to the Howard Testimony, page 6. Mr. Howard states that Licking Valley RECC is monitoring staffing levels, and currently has 41 full-time employees down from a historical high of 48 employees in 2010.
- a. Explain in detail what opportunities there are to gain efficiencies and reduce cost in regards to Licking Valley RECC's staffing levels.
 - b. Explain in detail whether Licking Valley RECC has analyzed the required staffing levels that are necessary due to the continued decline in customer base and electricity usage. Provide all analyses of the same. If no analysis has been performed, explain in detail why not.
 - c. Provide the number of full-time employees that Licking Valley RECC had for the years 2010-2020.

Response:

- a. As stated in Kerry Howard's testimony², in an effort to cut costs Licking Valley has historically maintained adequate but not excessive employee headcount, held the line on wages while remaining competitive for skilled and reliable employees, cut employee overtime expense, and has required employee contribution toward benefits. Licking Valley has already reduced its full-time workforce from 48 to 40³ employees since 2010, and is not aware of any other meaningful efficiencies or cost-cutting measures it could employ at this time to further decrease staffing-related expense.

² See, *Application*, Exhibit 7, Testimony of Kerry Howard, p. 5.

³ Since Mr. Howard provided his testimony in support of the Application Licking Valley has one fewer employee.

- b. Licking Valley is a relatively small company employing 41 individuals which management believes is the minimum number of employees necessary to reasonably and reliably conduct its business. This question assumes that as customer usage and energy sales decline, so should staffing levels. However, as stated in Licking Valley's response to AG 1-2 b., it is erroneous to believe there should be a direct correlation between energy sales and staffing levels. While its energy sales might decline Licking Valley's 2,076 miles of distribution lines and 10 substations must still be maintained to insure the provision of safe, reliable power at reasonable rates to its over 12,000 owner-members. No formal study of staffing levels has been completed because Licking Valley does not believe one is necessary.
- c. Please see attached.

Full Time Employees 2010 -2020

2010	48
2011	45
2012	44
2013	45
2014	44
2015	44
2016	44
2017	43
2018	42
2019	41
2020	41

Witnesses: Kerry Howard and Sandy Bradley

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13. Refer to the Howard Testimony, pages 6-7. Mr. Howard states that by formal Resolution the Board of Directors directed the management to seek the rate relief requested in this case. Did any member of the Board of Directors vote not to proceed with the pending rate case? If so, provide the number of members that voted no, and the rationale for doing so.

Response:

All of the members of the Board of Directors voted to proceed with the pending rate case.

Licking Valley Rural Electric Cooperative Corporation
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14. Refer to the Application, Exhibit 8, the Direct Testimony of Sandra N. Bradley, Account (“Bradley Testimony”), page 5. Ms. Bradley states that as of December 31, 2019, the Company’s residential load accounted for approximately 78% of the total energy usage and approximately 75% of total revenue from energy sales. Ms. Bradley further states that the commercial customers account for approximately 22% of Licking Valley’s total energy usage and represents approximately 25% of revenue from energy sales. Explain why information for industrial customers was not provided in the above-referenced statement. If Licking Valley RECC is combining commercial and industrial customers, then separately provide the approximate percentage of total energy used and the approximate percentage of revenue contributed to energy sales as of December 31, 2019, for commercial customers and industrial customers.

Response:

The data for commercial and industrial customers is combined. The Licking Valley RECC tariffs do not distinguish between commercial and industrial customers, but instead group non-residential customers into rate classes for “commercial and small power” based primarily on size. Accordingly, the requested “separate” data is not available.

Licking Valley Rural Electric Cooperative Corporation
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15. Refer to the Bradley Testimony, page 6, in which Ms. Bradley states that Licking Valley RECC's lenders are RUS, FFB, and CFC, and that as of December 31, 2019, the outstanding principal balance on the Company's long-term debt is \$31,678,482. Of this amount, approximately 10% is at a fixed rate with a blended rate of 5.18%, and 90% is at variable interest rates with a blended rate of 1.77%. For its short-term borrowing needs Licking Valley RECC has a \$2,000,000 line of credit with CFC for general operations.
- a. Explain whether Licking Valley RECC has inquired as to the economic feasibility of refinancing any of the debt with the fixed blended interest rate of 5.18%. If so, provide examples of the same. If not, explain why not.
 - b. Explain whether Licking Valley RECC plans to convert any of the variable interest loans to a fixed rate loan while interest rates are still at historically low levels.
 - c. Provide the balance of the \$2,000,000 line of credit with CFC, as well as the applicable interest rate.

Response:

- a-b Licking Valley continues to actively explore opportunities to convert a portion of its variable interest loans to a fixed rate loan in order to avail itself of the current low interest rate environment. In fact, Licking Valley has recently discussed this matter with representatives of the Cooperative Financing Corporation ("CFC"), and will continue to do so in order to develop the most advantageous plan of action for the Cooperative. No final decision has yet been made on this issue.
- c. Licking Valley has no balance on the \$2,000,000 CFC line of credit and that entire amount is available to be drawn by the Cooperative at this time.

Licking Valley Rural Electric Cooperative Corporation
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16. Refer to the Bradley Testimony, pages 6-7, in which Ms. Bradley states that because Licking Valley RECC has been required to borrow more money for its construction work plan and other needs, total interest expense has increased substantially.
- a. Provide a detailed description and copy of Licking Valley RECC's construction work plan.
 - b. Elaborate on what "other needs" have required Licking Valley RECC to borrow money.

Response:

- a. In lieu of providing a "detailed description" of Licking Valley's Construction Work Plan, please refer to the attached entire copy of same.
- b. The term "other needs" referenced in Ms. Bradley's testimony refers generally to unexpected weather-related events such as ice storms, tornadoes, severe thunderstorms and heavy snowfalls.

Licking Valley RECC

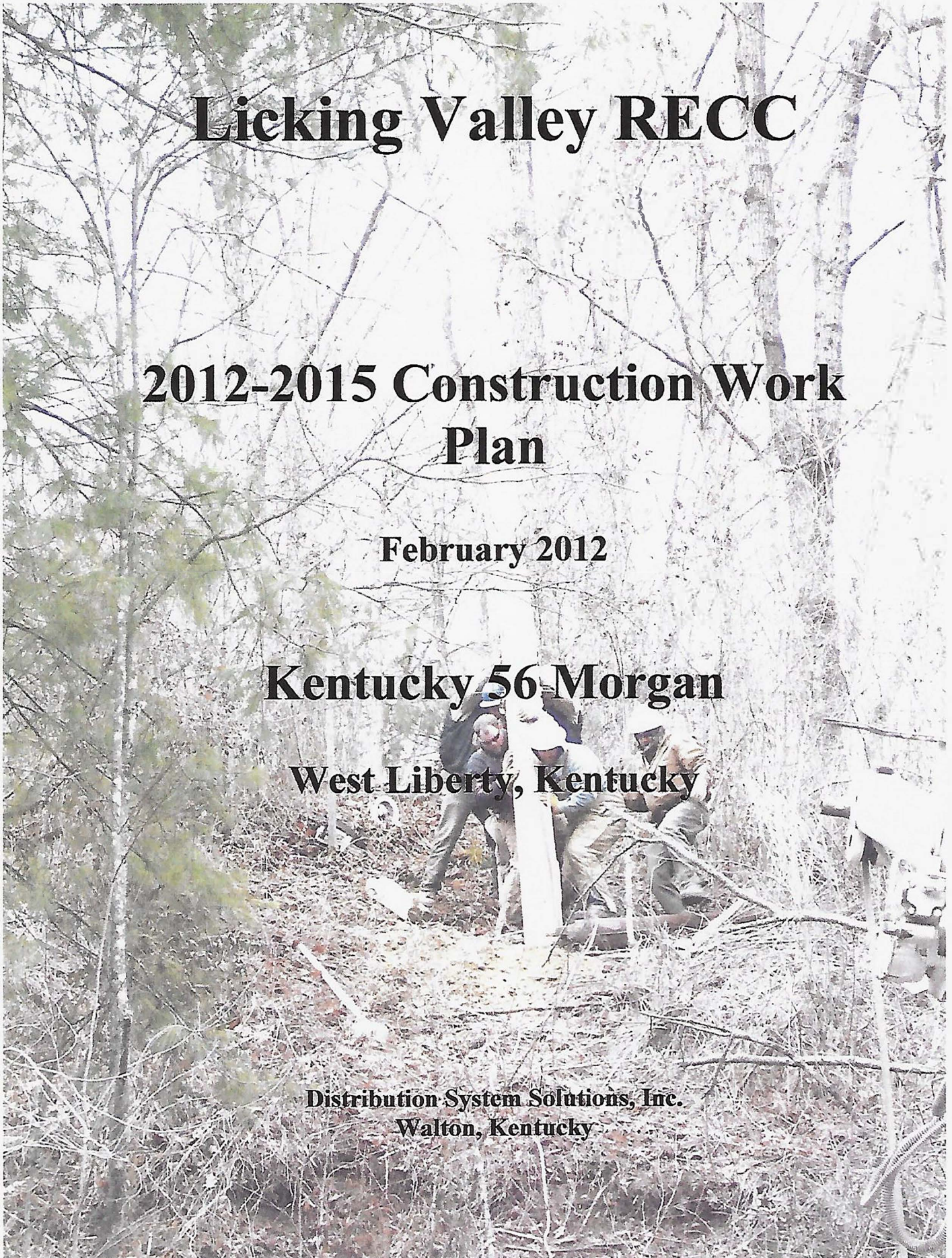
2012-2015 Construction Work Plan

February 2012

Kentucky 56 Morgan

West Liberty, Kentucky

**Distribution System Solutions, Inc.
Walton, Kentucky**



Licking Valley RECC

Kentucky 56 Morgan

2012-2015 Construction Work Plan

February 2012

Prepared by:

Distribution System Solutions, Inc.
Walton, Kentucky

I hereby certify that this 2012-2015 CWP Report was prepared by me or under my direct supervision and that I am a duly registered professional engineer under the laws of the State of Kentucky. Registration No. 16457



Feb 16, 2012
Date

By: James D. Bridges, P.E.
James D. Bridges, P.E.

**LICKING VALLEY RURAL ELECTRIC
COOPERATIVE CORPORATION
2012 – 2015 CONSTRUCTION WORK PLAN REPORT**

Kentucky 56 Morgan

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	A. Economic Conductor Analysis.

PURPOSE OF REPORT

This report documents the engineering analysis of, and summarizes the proposed construction for Licking Valley Rural Electric Cooperative Corporation (LVRECC) electric distribution system for the four-year planning period of 2012-2015.

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 winter 2015/2016 projected total peak system load was taken from the LVRECC 2010 Load Forecast (LF) as approved by RUS. Residential and small commercial loads were grown at rates consistent with the LF.

From 2005-2009, the annual average increase in residential energy sales was 0.82%. This rate is projected to be 0.45% over the next four years. Small commercial sales are projected to increase at 1.60% over the next four years. Large Commercial / Industrial energy sales are projected to increase at 0.70% over the next four years.

System analysis models are based on non-coincidental (NC) system peaks that are outlined in the LF. The projected winter 2015/2016 NC peak (based on LF and GFR meeting) is 81,500 kW. The system annual load factor is projected to average 40.9% over the next two years.

Existing winter and summer growth models were examined for what is generally a winter-peaking system. The existing summer model was reviewed to ensure that any system deficiencies for the cooling load closely tracked the winter model.

The LVRECC 1998 Long Range Plan (LRP) load projections and improvement recommendations were reviewed to make sure that they generally agree with scope of the 2012-2015 construction work plan (CWP) recommendations. This was determined to be the case.

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.

GENERAL BASIS OF STUDY (cont.)

A system analysis using RUS guidelines and the LVRECC 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 7.3 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 16,999 residential customers as well as 6 industrial/large commercial loads and 1,254 small commercial loads. Average monthly residential usage is projected to be 1,024 kWh.

The new Hot Mix Road substation was energized replacing the West Liberty substation in 2012. Several projects in this CWP are needed to improve the mainline infrastructure of this new substation including the feeder that will serve a new school.

Also in the four year CWP period a new proposed mine will be energized near Crafts Creek. This 1.5MW mine will require a new substation to be built near Carty Branch. The 69/12.5kV - 11.2 MVA substation will relieve the Sublett substation. There is also a second mine that will develop within the CWP period near Bee Tree Creek. This will be an identical mining operation as Crafts Creek. The additional capacity produced by the offloading of the Sublett substation to the Carty Branch substation will be sufficient for the Sublett substation to serve this Bee Tree mine. See Substation Load Table Table II-E-1. Upgrades to the distribution system to serve these two proposed mines are included in the CWP.

18.4 miles of aged conductor on three-phase mainlines will be replaced in this CWP. Upon completion there will be approximately 41 miles of remaining three-phase aged conductor, most of which are three-phase taps off of mainlines.

43.5 total miles of site specific conductor replacement and conversion will take place in the four-year plan period. Additionally, 80 miles of single-phase overhead conductor will be selected for aged conductor replacement. These conductor replacement line sections will be selected based on conductor condition, operational experience and the number of customers served.

SERVICE AREA

Licking Valley RECC is an RUS-funded electric distribution cooperative. LVRECC is located in eastern Kentucky. LVRECC serves portions of Breathitt, Lee, Magoffin, Menifee, Morgan, and Wolfe Counties with a few members in two other surrounding counties. The headquarters are located in West Liberty, Kentucky (Morgan County) with an operation center in Malone. See Map on following page.

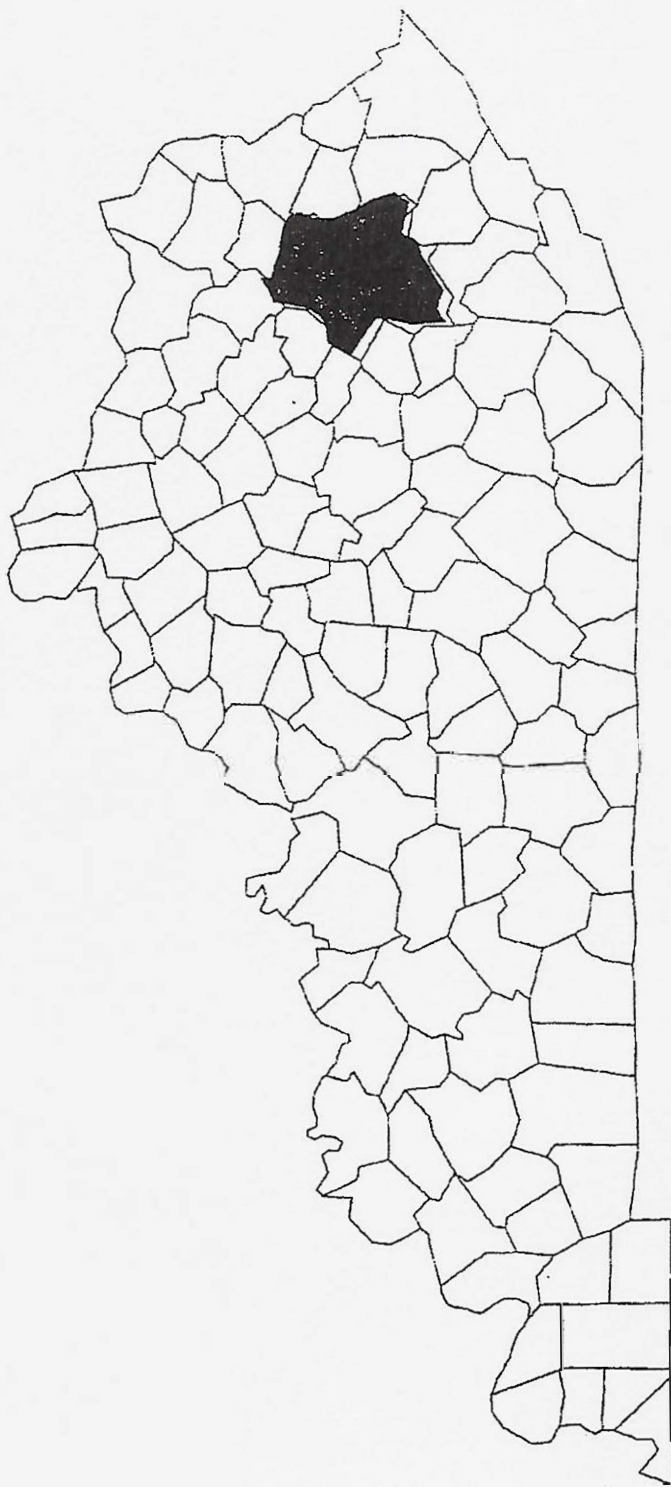
The principal counties served by LVRECC are rural with a high percentage of people relying on mining, timber, agricultural enterprises and manufacturing for income. Agricultural products include tobacco, corn, dairy, beef cattle and swine. A number of commercial and industrial loads are in the service territory. For the most part, level growth is projected for new commercial, small manufacturing and residential customers for this work plan period. A new school will be opening in Morgan County the winter of 2012/2013. There is a large meat packing plant, and two new mines developing during the course of the construction work plan within the LVRECC service territory.

The following data is from LVRECC's 12/10 RUS Form 7:

<i>Total Services in Place</i>	<i>21,436</i>
<i>MWH Purchased</i>	<i>293,032</i>
<i>MWH Sold</i>	<i>274,463</i>
<i>Maximum MW Demand</i>	<i>74.0</i>
<i>Total Utility Plant</i>	<i>\$58,140,565</i>
<i>Plant Dollars Per Active Member</i>	<i>\$2,712</i>
<i>Consumers/Mile</i>	<i>10.6</i>

LVRECC will operate 11 delivery points and distribute power at a primary voltage of 12.5/7.2 kV over approximately 2,030 miles of line at the end of the CWP.

LVRECC SERVICE AREA MAP



**LICKING VALLEY
RURAL ELECTRIC COOPERATIVE CORPORATION**

GENERATION and TRANSMISSION POWER SUPPLIER

East Kentucky Power Cooperative (EKP) provides all power and energy needs to LVRECC. EKP currently provides service to the ten distribution substations. EKP is located in Winchester, Kentucky.

The 2010 Load Forecast (LF) is a joint effort between LVRECC and EKP. LVRECC 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 LVRECC & 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

LVRECC's distribution system was analyzed in order to identify the construction requirements needed to adequately serve the projected CWP load of 81.5 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	\$2,941,460
300	Line Conversion & Replacement	\$5,501,672
600	Misc. Equip. & Poles	\$10,833,871
700	Outdoor Lights, AMR H/W & S/W	\$466,899
	2012-2015 CWP TOTAL	\$19,743,901

100 – New Construction planned to serve 1,250 new services.

300 – 43.5 miles of conductor upgrading and replacement.

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

700 – Other Distribution Items - Outdoor lighting, and software and hardware for AMI.

Licking Valley RECC 2012-2015 Construction Workplan
COST SUMMARY SPREADSHEET

NEW CONSTRUCTION -- RUS CODE 100

ITEM	RUS CODE	AVE. \$/CONSUMER	# CONS.	2012	2013	2014	2015	TOTAL
New Overhead Construction	100	\$2,353	1,250	\$663,936	\$690,493	\$777,956	\$809,074	\$2,941,460
TOTAL CODE 100:			1,250	\$663,936	\$690,493	\$777,956	\$809,074	\$2,941,460

LINE CONVERSION / REPLACEMENT - RUS CODE 300

SUB - SECTION	RUS CODE	Original Conductor	INST. COND/#-PH	\$/MILES	# OF MILES	2012	2013	2014	2015	TOTAL
Helechewa 80940 - 81015	301	3 ph 4A CWC	3 ph 1/0 ACSR	\$110,000	5.5	\$0	\$0	\$0	\$680,543	\$680,543
Helechewa 84130 - 84173	302	3 ph 4A CWC	3 ph 336 ACSR	\$145,000	2.8	\$0	\$0	\$439,130	\$0	\$439,130
Helechewa 80874 - 80895	303	3 ph 4A CWC	3 ph 1/0 ACSR	\$110,000	1.6	\$0	\$0	\$190,362	\$0	\$190,362
Carty Branch	304		Getaways	\$75,000	1.0	\$0	\$78,000	\$0	\$0	\$78,000
Carty Branch sub to 92767	305	3 ph 1/0 ACSR	3 ph DCT 336ACSR	\$195,000	0.4	\$78,000	\$0	\$0	\$0	\$78,000
Carty Branch 92766 - 93441	306	3 ph 1/0 ACSR	3 ph 336 ACSR	\$145,000	6.2	\$899,000	\$0	\$0	\$0	\$899,000
Hot Mix 71158 - 71178	307	3 ph #2 ACSR	3 ph 336 ACSR	\$145,000	1.7	\$246,500	\$0	\$0	\$0	\$246,500
Hot Mix 70895-70900, 70901 - 70909	308	3 ph #2 ACSR	3 ph 336 ACSR	\$145,000	1.2	\$174,000	\$0	\$0	\$0	\$174,000
Hot Mix 72728 - 72748	309	1 ph 6A CWC	3 ph #2 ACSR	\$80,000	0.5	\$40,000	\$0	\$0	\$0	\$40,000
Index 67269 - 68033	310	3 ph #2 ACSR	3 ph 336 ACSR	\$145,000	4.1	\$0	\$618,280	\$0	\$0	\$618,280
Index 68472 - 68543	311	3 ph 6A CWC	3 ph 1/0 ACSR	\$110,000	4.6	\$0	\$0	\$0	\$569,181	\$569,181
Oakdale 90055 - 90119	312	1 ph 6A CWC	2 ph #2 ACSR	\$50,000	3.2	\$0	\$0	\$173,056	\$0	\$173,056
Sublett 94037 - 94132	313	3ph & 1 ph 6A CWC	3 ph 1/0 & #2 ACSR	\$80,000	2.2	\$0	\$183,040	\$0	\$0	\$226,720
Sublett 92557 - 92619	314	3 ph 1/0 ACSR	3 ph 336 ACSR	\$145,000	4.1	\$0	\$618,280	\$0	\$0	\$618,280
Sublett 93907 - 93945	315	1 ph 6A CWC	3 ph 1/0 ACSR	\$110,000	1.9	\$0	\$217,360	\$0	\$0	\$217,360
Zachariah 55102 - 55117	316	3 ph 4A CWC	3 ph 1/0 ACSR	\$110,000	1.2	\$0	\$0	\$142,771	\$0	\$142,771
Zachariah 55211 - 55219	317	3 ph 6A CWC	3 ph #2 ACSR	\$80,000	0.7	\$0	\$0	\$60,570	\$0	\$60,570
Zachariah 55133 - 55141	318	3 ph 6A CWC	3 ph #2 ACSR	\$80,000	0.6	\$0	\$49,920	\$0	\$0	\$49,920
TOTAL CODE 300:					43.5	\$1,437,500	\$1,764,880	\$1,005,888	\$1,249,724	\$5,501,672

MISCELLANEOUS DISTRIBUTION EQUIPMENT -- RUS CODE 600's

ITEM	RUS CODE	4 YR. AVE. COST	# ITEMS	2012	2013	2014	2015	TOTAL
New Transformers	601	\$1,359	593	\$165,620	\$182,844	\$206,694	\$250,788	\$805,946
New Meters	601	\$120	1,350	\$33,696	\$37,964	\$42,520	\$47,379	\$161,559
Retrofit AMI Meters	601	\$152	1,400	\$50,232	\$52,241	\$54,331	\$56,504	\$213,308
New Polyphase Meters	601	\$641	22	\$2,392	\$3,110	\$3,881	\$4,709	\$14,092
Retrofit Polyphase AMI Meters	601	\$847	10	\$2,412	\$2,508	\$1,739	\$1,809	\$8,468
Service Upgrades	602	\$2,525	176	\$104,655	\$108,841	\$113,195	\$117,723	\$444,414
Sectionalizing	603			\$250,000	\$250,000	\$250,000	\$250,000	\$1,000,000
Voltage Regulators	604			\$108,000	\$87,380	\$99,600	\$81,000	\$375,980
Capacitors	605			\$20,000	\$0	\$30,000	\$10,000	\$60,000
Pole Changes	606	\$3,318	1,440	\$1,125,072	\$1,170,075	\$1,216,878	\$1,265,553	\$4,777,578
Conductor Replacement (OH)	608		80 mi	\$700,000	\$728,000	\$757,120	\$787,405	\$2,972,525
Radio Upgrade	615			\$60,000	\$0	\$0	\$0	\$60,000
TOTAL								
MISC. CODE 600'S:				\$2,562,079	\$2,622,964	\$2,775,958	\$2,872,870	\$10,833,871

OTHER DIST. ITEMS - RUS CODE 700

ITEM	RUS CODE	4 YR. AVE. COST	# ITEMS	2012	2013	2014	2015	TOTAL
Outdoor Lighting	701	\$371	472	\$41,234	\$42,883	\$44,599	\$46,383	\$175,099
AMI Equipment	705			\$72,950	\$72,950	\$72,950	\$72,950	\$291,800
TOTAL CODE 700:				\$114,184	\$115,833	\$117,549	\$119,333	\$466,899

DISTRIBUTION SYSTEM DESIGN CRITERIA

Each of the following criteria items were reviewed and accepted by the RUS General Field Representative on November 18, 2011.

- 1) The minimum primary voltage (on a 120 volt base) is 118 volts after re-regulation. The source voltage is 126 volts.
- 2) Primary conductors will be evaluated for replacement, or alternative action, if they exceed 75% of their thermal rating.
- 3) The following line equipment will not be thermally loaded by more than the percentage shown:

	<u>Winter</u>	<u>Summer</u>
i. Distribution Transformers	130%	100%
ii. Voltage Regulators	130%	100%
iii. Reclosers / Line Fuses	70%	70%

- 4) Conductors and associated poles and hardware will be considered for replacement on a priority basis. Outage information, conductor type and conductor location are considerations.
- 5) Conversions to multiphase are to correct voltage drop and phase balance. Line sections with load current exceeding 45 amps will be considered for multiphasing.

DISTRIBUTION LINE AND EQUIPMENT COSTS

Construction cost estimates for the four 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	2012	2013	2014	2015
1/0 ACSR	CONV 3-PH	\$110,000	\$114,400	\$119,000	\$124,000
336.4 ACSR	CONV 3-PH	\$145,000	\$151,000	\$157,000	\$163,000
#2 ACSR	REPL 1-PH	\$35,000	\$36,400	\$38,000	\$39,400
#2 ACSR	CONV 2-PH	\$50,000	\$52,000	\$54,100	\$56,300
#2 ACSR	CONV 3-PH	\$80,000	\$83,200	\$86,600	\$90,000

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

DEVICE	TYPE	2012	2013	2014	2015
V.Regulators (3)	219 amp	\$54,000	\$56,200	\$58,400	\$60,800
V.Regulators (3)	150 amp	\$40,000	\$41,600	\$43,300	\$45,000
V.Regulators (3)	100 amp	\$32,000	\$33,300	\$34,600	\$36,000
V.Regulators (1)	100 amp	\$12,000	\$12,480	\$13,000	\$13,500

STATUS OF PREVIOUS CWP ITEMS

All projects from the 2007-2011 CWP have been completed except the following:

740 C #	Project Description	Status
311-2	Oakdale to Coal Tipple / 3 ph 336 ACSR	Cancelled*

* Load at Coal Tipple did not expand to the amount where new circuit was warranted at this time.

ANALYSIS OF 1998 LONG RANGE PLAN

There were five new substations called for in the 1998 Long Range Plan (LRP). The B load block of the LRP was projecting a system Non-Coincident Peak (NCP) of 79.2MW, and the C load block was projecting a system NCP load of 107.5MW. The NCP projected by the end of the 2012-2015 CWP is 81.5MW. Four of the five substations called for in the LRP were proposed in the C load level. Since the projected peak of this CWP is only slightly above the B load block level of the LRP, the substations proposed in the C load level are not yet needed.

The **Bear Branch** substation was identified in the LRP to relieve the Sublett substation. This substation will actually be the Carty Branch substation which is proposed in the CWP. The substation will be located west of the Sublett substation. With the added load of the Crafts Creek and Bee Tree mines, the projected load on the Sublett substation will exceed the substation capacity. The Carty Branch substation will relieve the Sublett substation.

The four substations proposed in the C load level of the LRP are Long Branch, Vancleve, Cannel City, and Ezel.

The proposed **Long Branch** substation would be located to the Southeast of the Sublett substation. With the shift of load from the Sublett substation to the Carty Branch substation, the Long Branch substation is not needed to relieve the Sublett substation at this time. A set of downline voltage regulators on the Gunlock feeder help to sustain the voltage to the end of the feeder; therefore, voltage drop is not a concern that would dictate the need for the Long Branch substation at present.

The proposed **Vancleve** substation is located between Helechawa, Oakdale, and Campton substations. This substation is strategically positioned to improve the reliability in this area of the system by shortening feeder lengths of the three adjacent substations. To fully utilize the benefits of this substation location; there would need to be a number of large distribution projects that would be cost prohibitive at this time. Also the adjacent substations are not experiencing capacity issues by the end of the CWP.

The proposed **Cannel City** substation would be located south of the Index substation. This substation would relieve the Index and Helechewa substations which are not approaching overload by the end of the CWP.

The proposed **Ezel** substation is located Northwest of the Maytown substation. This substation would relieve the Maytown substation which is not approaching overload by the end of the CWP.

The LRP outlined a large amount of aged copper replacement. The CWP continues the initiative to replace aged conductor and is in-line with the LRP recommendations.

OPERATIONS & MAINTENANCE SURVEY

The current O&M Survey (“Review Rating Summary”) was completed in February 2011.

LVRECC will have to closely monitor cable TV attachments in service territory to ensure code requirements are met. LVRECC is presently working to reconcile the reporting of idle services with billing and making any necessary adjustments.

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 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.

TABLE II-E-1
SUBSTATION LOAD
TABLE
HISTORICAL AND FORECAST LOAD IN KVA

NAME	Installed Capability				Existing Winter		4 Year Winter Unimproved		4 Year Winter Improved		Existing Summer		Notes
	Nameplate (kVA)	Cooling	Winter Rating (kVA)	Summer Rating (kVA)	NCP '10/11 (kVA)	% Load	NCP '14/15 (kVA) ¹	% Load	NCP '14/15 (kVA)	% Load	NCP '11 (kVA)	% Load	
Campton	14,000	OA/FA-65C	17,100	13,620	11,680	68.30%	13,510	79.01%	13,624	79.67%	8,903	65.37%	
Crockett	11,200	OA-65C	13,700	11,070	4,664	34.04%	5,237	38.23%	6,218	38.09%	3,404	30.75%	
Helechawa	11,200	OA-65C	13,700	9,800	9,250	67.52%	11,150	81.39%	11,051	80.66%	7,580	77.35%	
Index	11,200	OA-65C	15,720	11,070	9,437	60.03%	10,159	64.62%	10,023	63.76%	8,102	73.19%	
Maggard	6,440	OA/FA-65C	8,340	6,260	6,081	72.90%	6,680	80.10%	6,674	80.02%	4,310	68.85%	
Maytown	11,200	OA-65C	13,700	9,800	5,336	39.13%	5,647	41.22%	5,798	42.32%	4,198	42.84%	
Oakdale	10,000	OA-55C	13,700	8,820	8,343	60.90%	8,758	63.93%	8,862	64.69%	6,513	73.84%	
Sublett	11,200	OA-65C	13,700	11,070	11,200	81.75%	14,526	106.03%	9,450	68.98%	8,539	77.14%	2
West Liberty	6,440	OA/FA-65C	8,340	6,260	6,863	82.53%	N/A	N/A	N/A	N/A	5,602	89.49%	3
Zachariah	11,200	OA-65C	5,400	4,900	3,572	66.15%	3,790	70.19%	3,851	71.31%	3,114	63.55%	
Hot Mix	11,200	OA-65C	15,720	11,070	N/A	N/A	8,403	53.45%	8,251	52.49%	N/A	N/A	3
Carty Branch	11,200	OA-65C	15,720	11,070	N/A	N/A	N/A	N/A	5,315	33.81%	N/A	N/A	

1. Loads grown based on feeder peak loading which result in a higher totalized substation load than actual season peak.
2. Craft Creek mine modeled at 1.5MW which is offloaded onto the proposed Carty Branch substation in 2013. Bee Tree Mine added for an additional 1.5MW load.
3. Hot Mix Road substation replaced West Liberty substation in 2012. Increase in load due to new school.

**TABLE II-E-2
SUBSTATION CAPACITY
LIMITS**

CAPACITY LIMITS IN KVA

Substation Identification			Substation Voltage		Transformer				Regulator				High-Side Fuse				Limits				
CoopID	Prefix	MV90 Name	Primary	Secondary	Nameplate	Cooling	Summer	Winter	Nameplate	Cooling	Summer	Winter	Amps	Type	TCC	Summer	Winter	Summer	Winter		
56	E040	CAMPTON	69	12.47	14	OA/FA-65C	13.62	18.14	466	OA-65C	17.9	23.4	125	SMD1A	153-1	17.1	17.1	13.62	T	17.10	F
56	E089	CROCKETT	69	12.47	11.2	OA-65C	11.07	15.72	466	OA-65C	17.9	23.4	100	SMD1A	119-1	13.7	13.7	11.07	T	13.70	F
56	E009	HELECHAWA	69	12.47	11.2	OA-65C	11.07	15.72	333	OA-55C	9.8	15.1	100	SMD1A	119-1	13.7	13.7	9.80	R	13.70	F
56	E053	INDEX	69	12.47	11.2	OA-65C	11.07	15.72	466	OA-65C	17.9	23.4	125	SMD1A	119-1	17.1	17.1	11.07	T	15.72	T
56	E039	MAGGARD	69	12.47	6.44	OA/FA-65C	6.26	8.34	333	OA-55C	9.8	15.1	65	SMD1A	119-1	8.9	8.9	6.26	T	8.34	T
56	E065	MAYTOWN	69	12.47	11.2	OA-65C	11.07	15.72	333	OA-55C	9.8	15.1	100	SMD1A	119-1	13.7	13.7	9.80	R	13.70	F
56	E022	OAKDALE	69	12.47	10	OA-55C	8.82	14.94	333	OA-55C	9.8	15.1	100	SMD1A	119-1	13.7	13.7	8.82	T	13.70	F
56	E036	SUBLETT	69	12.47	11.2	OA-65C	11.07	15.72	466	OA-65C	17.9	23.4	100	SMD1A	119-1	13.7	13.7	11.07	T	13.70	F
56	E024	WEST LIBERT	69	12.47	6.44	OA/FA-65C	6.26	8.34	333	OA-55C	9.8	15.1	65	SMD1A	119-1	8.9	8.9	6.26	T	8.34	T
56	E008	ZACHARIAH	69	12.47	11.2	OA-65C	11.07	15.72	167	OA-55C	4.9	7.5	40	SMD1A	119-1	5.4	5.4	4.90	R	5.40	F

SERVICE RELIABILITY

The record of LVRECC's service interruptions for the past five years is shown in Table II-E-2. The five-year average outage hours per consumer is 18.71. This value is higher than typical because of the extreme winds produced by Hurricane Ike in the fall of 2008 and the ice storm of early 2009 which both caused widespread damage for utilities throughout the region. With this exception LVRECC's typical average outage hours are below the minimum level recommended by RUS. Ongoing system improvements and continued feeder sectionalizing studies will help to reduce this value even further.

SERVICE INTERRUPTIONS (IN HOURS)

TABLE II-E-2

	Power Supplier	Extreme Storm	Prearranged	All Other	Total
2006					
OUTAGE HR/CONS	0.04	0.10	1.15	2.29	3.58
2007					
OUTAGE HR/CONS	0.56	0.18	0.64	2.83	4.21
2008					
OUTAGE HR/CONS	0.94	3.80	0.49	1.63	6.86
2009					
OUTAGE HR/CONS	9.71	60.83	0.72	2.90	74.15
2010					
OUTAGE HR/CONS	0.87	0.51	0.68	2.70	4.76
FIVE YEAR AVE.					
OUTAGE HR/CONS	2.42	13.08	0.74	2.47	18.71

NON-FUNDED SYSTEM IMPROVEMENTS

The following recommendations are based upon the review of the projected winter peak system; and the existing summer system. These recommendations do not affect the total dollar projections for the CWP, but are recommended for the LVRECC system to meet the design criteria.

Load Balance

The following feeders would benefit from balancing to alleviate excessive voltage drop or rise due to phase imbalance.

Substation	Feeder	Issue	Summer	Winter
Campton	Stillwater	Voltage drop		X
Campton	Vortex	Voltage drop		X
Crockett	Crockett	Voltage rise	X	
Crockett	Lenox	Voltage rise and drop	X	X
Helechawa	Cannel City	Voltage drop	X	X
Helechawa	Hazel Green	Voltage rise and drop	X	X
Hot Mix Road	Elk Fork	Voltage rise		X
Index	Caney	Voltage rise	X	
Index	Mize	Voltage drop	X	X
Maggard	Rockhouse	Voltage drop	X	X
Maggard	Flat Fork	Voltage drop	X	X
Maggard	Lick Creek	Voltage drop	X	X
Maytown	Hazel Green	Voltage rise	X	X
Oakdale	Highland	Voltage rise and drop	X	X
Oakdale	Elkatawa	Voltage drop	X	X
Oakdale	War Creek	Voltage drop	X	X
Sublett	Gunlock	Voltage rise	X	X

Switching recommendations

- Index/Maytown: Backfeed line section 69238 from 74537 at pole 9-86-24 and open at line section 69199 pole 9-77-3 to relieve overload on line section 69143.
- Oakdale: Change the tap beginning at pole 26-98-18 to feed from the Highland feeder line section 91965 instead of the Athol feeder line section 89507 to relieve overload on the tap beginning at pole 26-59-43 (Athol feeder). This should be done after the proposed voltage regulators have been added for the Highland feeder.

Additional Recommendations

- Helechawa, Hazel Green Feeder: The single phase tap beginning at pole 15-67-27 heading south to the town of Gilmore is constructed of newer single phase 1/0ACSR. This tap is heavily loaded. Monitor loading and consider multi-phasing in the future if cold load pickup becomes an issue.
- Helechawa, Cannel City Feeder: Remove the bypass of the two bypasses phases of the set of 150A voltage regulators at pole 16-64-41.
- Hot Mix Road, Zap feeder: This feeder is experiencing substantial overvoltage at the end of the feeder. Remove the set of capacitors at 3-77-28-1.
- Index Substation, Caney feeder: Monitor the end-of-line voltage on the single phase tap beginning at 16-25-23 during winter. If the voltage drop is below the criteria then add 1-100A voltage regulator at the beginning of this tap.

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. 2010 East Kentucky Power *Load Forecast*.
5. Five Year Outage Summary.
6. RUS Form 7 data.
7. Substation transformer ratings.
8. Substation Data Sheets.
9. Computerized circuit model databases with voltage drop calculations for each primary line section.

BASIC DATA AND ASSUMPTIONS

Design Load – The construction program in the CWP covers a four-year period to serve the 81.5 MW, January 2016 winter peak. The design load was derived after reviewing the *2010 Load Forecast* with the GFR.

Load Allocation – Individual areas of the system were grown as spot loads based on the potential for growth in that area. The total system design load was attained by allocating each substation's load to its consumers proportional to the kWh consumption of each residential consumer and billed demand for non-residential consumers. Peak summer and peak winter loading were modeled and analyzed. The system is generally winter 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 and ease of coordination.

Inflation – An annual inflation rate of 4% 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. 7.3 analysis software. Downloading monthly billing computer data into the Windmil billing file directory was the framework for building the winter and summer models. Residential loads were allocated by the kWh Demand Table method. Commercial and industrial loads were allocated based on their billed kW demand. 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.
2. Replacements that are to remain single-phase should generally be constructed of #2 ACSR unless unacceptable voltage drop is likely, in which case 1/0 ACSR should be used.
3. While the economic conductor analysis shows #2ACSR as the least cost conductor selection for three-phase up to 2300kW, voltage drop and backfeeding considerations makes #2ACSR limited on this distribution system to be used for three phase radial taps. 1/0 ACSR is not shown as the least cost conductor for three phase conversion; but the impact of improved voltage drop characteristics over #2ACSR will reduce the need for future voltage regulators which have associated losses not considered in this analysis. Any converted mainline, three-phase conductors should be of 1/0 ACSR construction up to an initial load of 2400kW; and 336.4 ACSR for initial loads greater than 2,400 kW. Voltage drop, potential backfeed and reliability considerations may lower the initial kW level for the use of 336.4 ACSR.

The data table preceding the analysis graph lists the assumptions that were made in the conductor analysis. This analysis appears in the Appendices of this report.

FINANCIAL DATA

- *Cost of Capital = 5.0%*
- *Inflation = 4.0%*
- *Present Worth Discount Factor = 5.0%*
- *Depreciation = 3.20%*
- *O&M = 5.94%*
- *Tax & Ins = 1.30%*
- *TOTAL ANNUAL FIXED CHARGE RATE = 15.44%*

LICKING VALLEY CWP: III-B

Page 3

TABLE III-B-1

COST SUMMARY DATA (4% Annual Inflation)

KY-56 Morgan

Inflation = 4%

DESCRIPTION	ACTUAL 2013	2012	2013	2014	2015	GWP TOTAL
New Member Extensions (100)						
1. New services constructed	512	300	300	325	325	1,250
2. Cost per Customer	\$2,128	\$2,213	\$2,302	\$2,394	\$2,489	
3. Cost of New Customers	\$1,089,536	\$663,936	\$690,493	\$777,956	\$809,074	\$2,941,460
4. Total Wire Footage	135,330	79,295	79,295	85,903	85,903	330,396
5. Average Wire Footage per Customer	264					
New Transformers (601)						
1. New transformers added	200	130	138	150	175	593
2. Cost per Transformer	\$1,225	\$1,274	\$1,325	\$1,378	\$1,433	
3. Cost of New Transformers	\$245,000	\$165,620	\$182,844	\$206,694	\$250,788	\$805,946
New Meters (601)						
1. New Meters added total	1,188	300	325	350	375	1,350
3. Cost per New Meter (TS2 enabled)	\$108	\$112	\$117	\$121	\$126	
4. Cost of New Meters	\$128,304	\$33,696	\$37,964	\$42,520	\$47,379	\$161,559
Retrofit AMI Meters (601)						
1. New Meters added		350	350	350	350	1,400
2. Cost per Meter	\$138	\$144	\$149	\$155	\$161	
3. Cost of New Meters		\$50,232	\$52,241	\$54,331	\$56,504	\$213,308
New 3PH AMI Meters (601)						
1. New Meters added	8	4	5	6	7	22
2. Cost per Meter	\$575	\$598	\$622	\$647	\$673	
3. Cost of New Meters	\$4,600	\$2,392	\$3,110	\$3,881	\$4,709	\$14,092
Retrofit 3PH AMI Meters (601)						
1. New Meters added		3	3	2	2	10
2. Cost per Meter		\$804	\$836	\$870	\$904	
3. Cost of New Meters		\$2,412	\$2,508	\$1,739	\$1,809	\$8,468
Service Upgrades (602)						
1. Number of Service Upgrades	88	44	44	44	44	176
2. Cost per Service Upgrade	\$2,287	\$2,379	\$2,474	\$2,573	\$2,676	
3. Cost of Service Upgrades	\$201,260	\$104,655	\$108,841	\$113,195	\$117,723	\$444,414
Pole Changes - Replacement (606)						
1. Poles Changed	719	360	360	360	360	1440
2. Cost per Pole Change	\$3,005	\$3,125	\$3,250	\$3,380	\$3,515	
3. Cost of Pole Changes	\$2,160,595	\$1,125,072	\$1,170,075	\$1,216,878	\$1,265,553	\$4,777,578
Conductor Replacement OH (608)						
1. Miles of small conductor to be replaced		20	20	20	20	80
2. Cost per mile		\$35,000	\$36,400	\$37,856	\$39,370	
3. Total cost of small conductor replacement		\$700,000	\$728,000	\$757,120	\$787,405	\$2,972,525
Radio Upgrade (615)						
1. Radio Hardware & Communications		\$60,000	\$0	\$0	\$0	\$60,000
Outdoor Lights (701)						
1. New Outdoor Lights Added	236	118	118	118	118	472
2. Cost per Outdoor Light	\$336	\$349	\$363	\$378	\$393	
3. Cost of Outdoor Lights	\$79,296	\$41,234	\$42,883	\$44,599	\$46,383	\$175,099
AMI Equipment (705)						
1. Related Software and Hardware		\$72,950	\$72,950	\$72,950	\$72,950	\$291,800

NEW MEMBER EXTENSIONS – RUS CODE 100

A total of 1,250 new services are anticipated. The total projected cost for new service construction is \$2,941,460.

The average length of service per customer is 264 feet. The total projected length for the work plan period is approximately 63 miles.

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

SYSTEM IMPROVEMENTS – RUS CODE 300

LINE CONVERSION NARRATIVES

Helechawa Substation

Code 301

Estimated Cost: \$680,543

Year: 2015

Description of Proposed Construction

Sections 80940 to 81015 – Replace 5.5 miles of three-phase 4A CWC with three-phase 1/0 ACSR. These line sections begin at pole number 16-58-8 on Hwy 1081 at Harper and ends at 16-89-3 on Hwy 134 at Kernie. The autobooters at 16-69-18 can be removed once this replacement takes place. The bypassed phases of the voltage regulators at 16-64-41 should be taken off bypass.

Reason For Proposed Construction

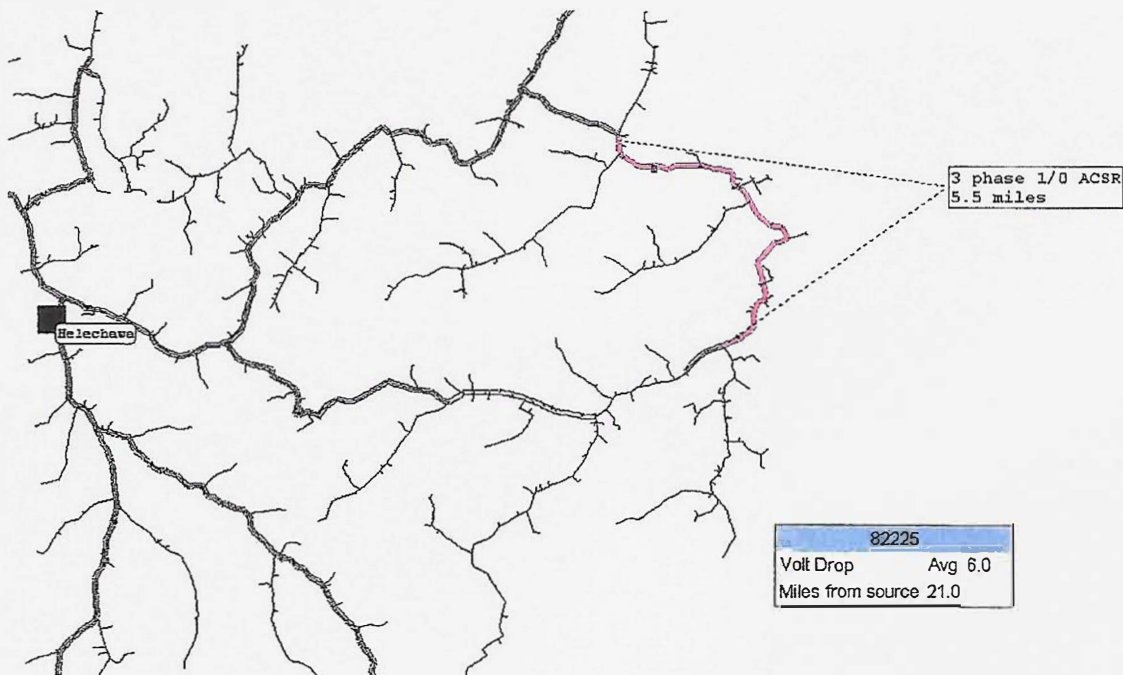
Design Criteria (DC) Items 1 & 4.

Results of Proposed Construction

DC Items 1 & 4 will be met.

Alternative Corrective Plan Investigated

These line sections were chosen due to aged deterioration. Therefore no viable alternatives exist.



SYSTEM IMPROVEMENTS – RUS CODE 300

Helechawa Substation

Code 302

Estimated Cost: \$439,130

Year: 2014

Description of Proposed Construction

Sections 84130 to 84173 – Replace 2.8 miles of three-phase 4A CWC with three-phase 336 ACSR. These line sections begin at pole number 15-68-1 at the Hwy 191 and Hwy 205 split, and end at 15-49-4 at the Hwy 205 and Hwy 705 split. This line serves as a mainline tie to the Index substation.

Reason For Proposed Construction

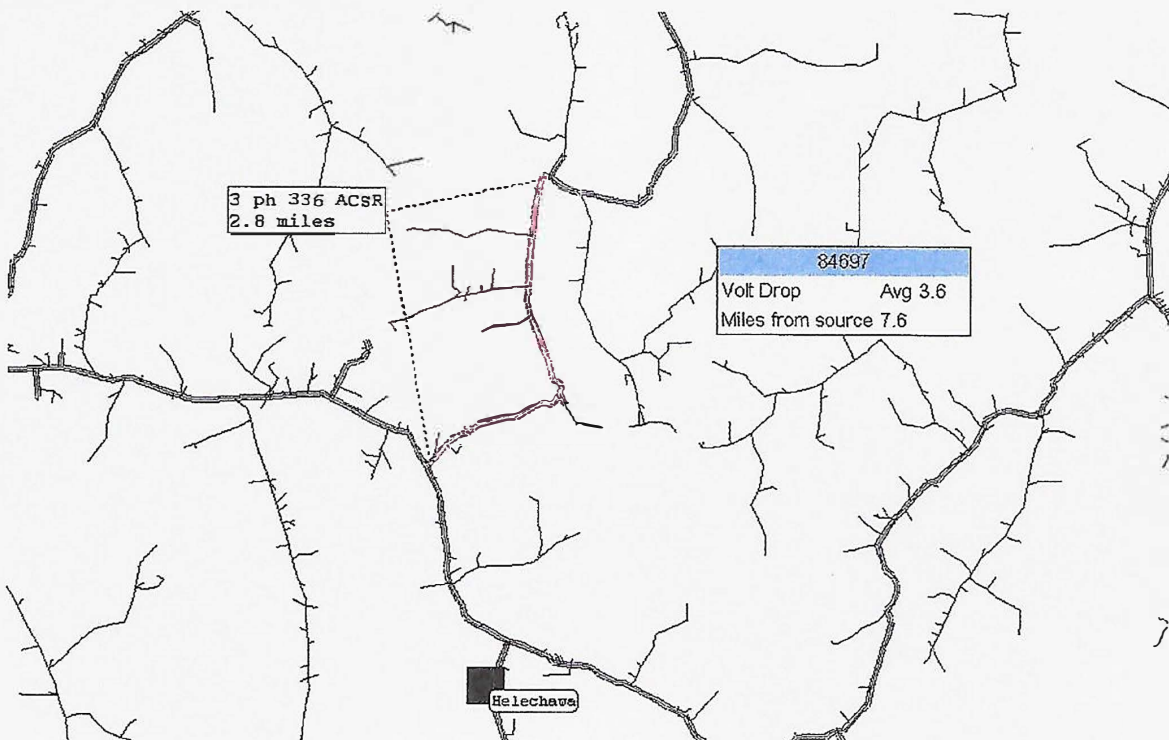
Design Criteria (DC) Item 4.

Results of Proposed Construction

DC Item 4 will be met.

Alternative Corrective Plan Investigated

These line sections serve as a mainline tie to Index substation. This replacement will improve the overall reliability to this service territory. Therefore no viable alternatives exist.



SYSTEM IMPROVEMENTS – RUS CODE 300

Helechawa Substation

Code 303

Estimated Cost: \$190,362

Year: 2014

Description of Proposed Construction

Sections 80874 to 80895 – Replace 1.6 miles of three-phase 4A CWC with three-phase 1/0 ACSR. These line sections begin at pole number 16-57-19 on Hwy 1000 in Holliday and end at pole 16-38-3.

Reason For Proposed Construction

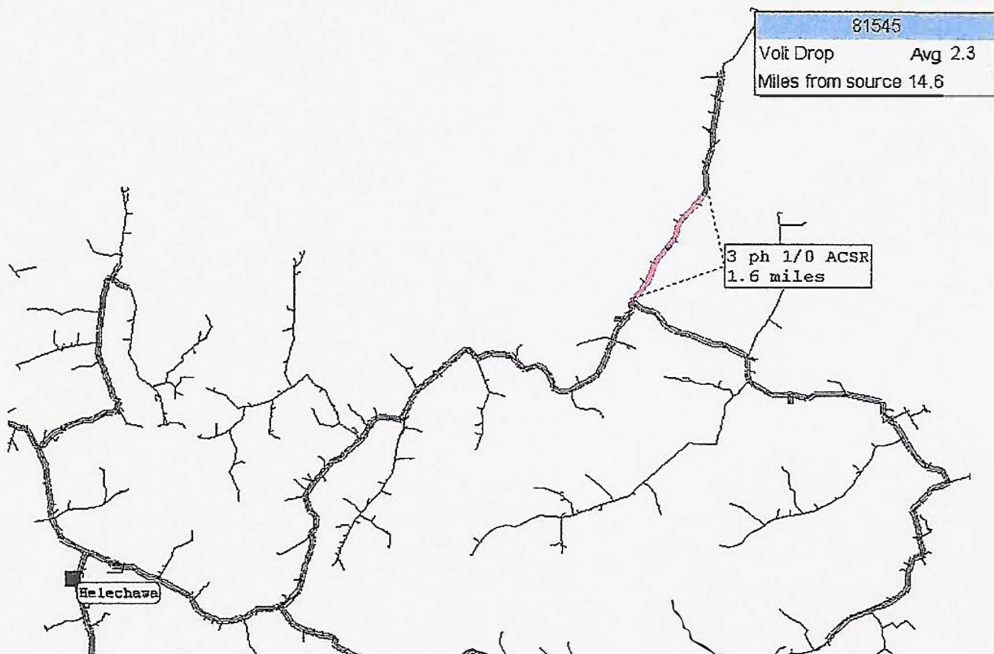
Design Criteria (DC) Item 4.

Results of Proposed Construction

DC Item 4 will be met.

Alternative Corrective Plan Investigated

These line sections were chosen due to aged deterioration. Therefore no viable alternatives exist.



SYSTEM IMPROVEMENTS – RUS CODE 300

Carty Branch Substation

Code 304

Estimated Cost: \$78,000

Year: 2013

Description of Proposed Construction

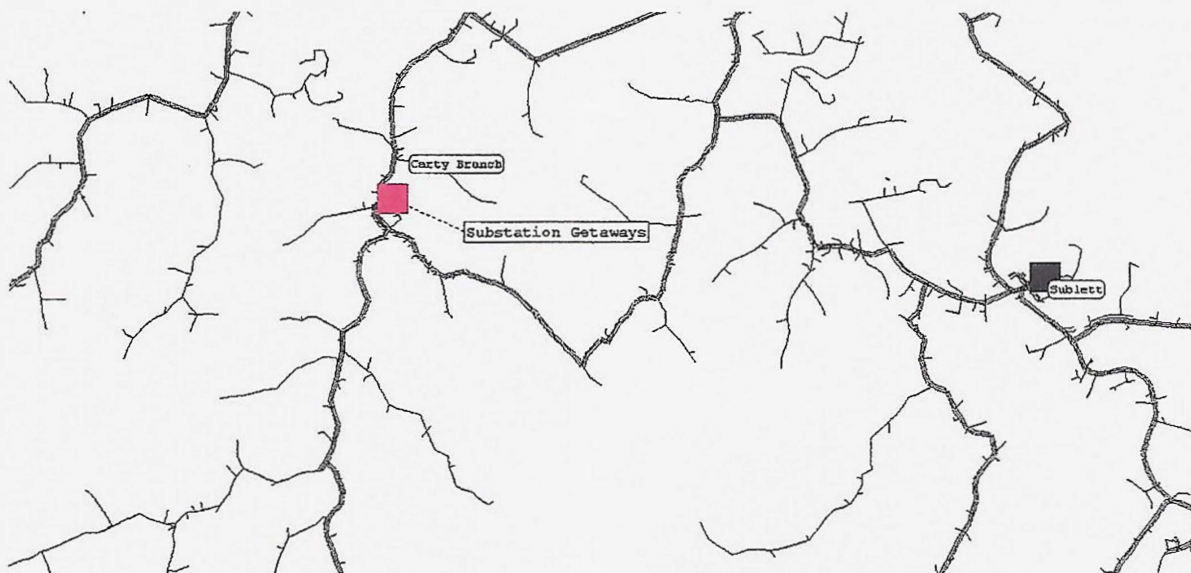
Substation getaways

Reason For Proposed Construction

Getaways needed for new substation.

Alternative Corrective Plan Investigated

Large power expansion will overload existing substation. No alternative exists.



SYSTEM IMPROVEMENTS – RUS CODE 300

Carty Branch Substation

Code 305

Estimated Cost: \$78,000

Year: 2012

Description of Proposed Construction

Sections Substation to 92767 – Replace 0.4 miles of three-phase 1/0 ACSR with three-phase DCT 336 ACSR. These line sections begin at the proposed Carty Branch substation and end at the three-phase spilt at pole 23-43-33.

Reason For Proposed Construction

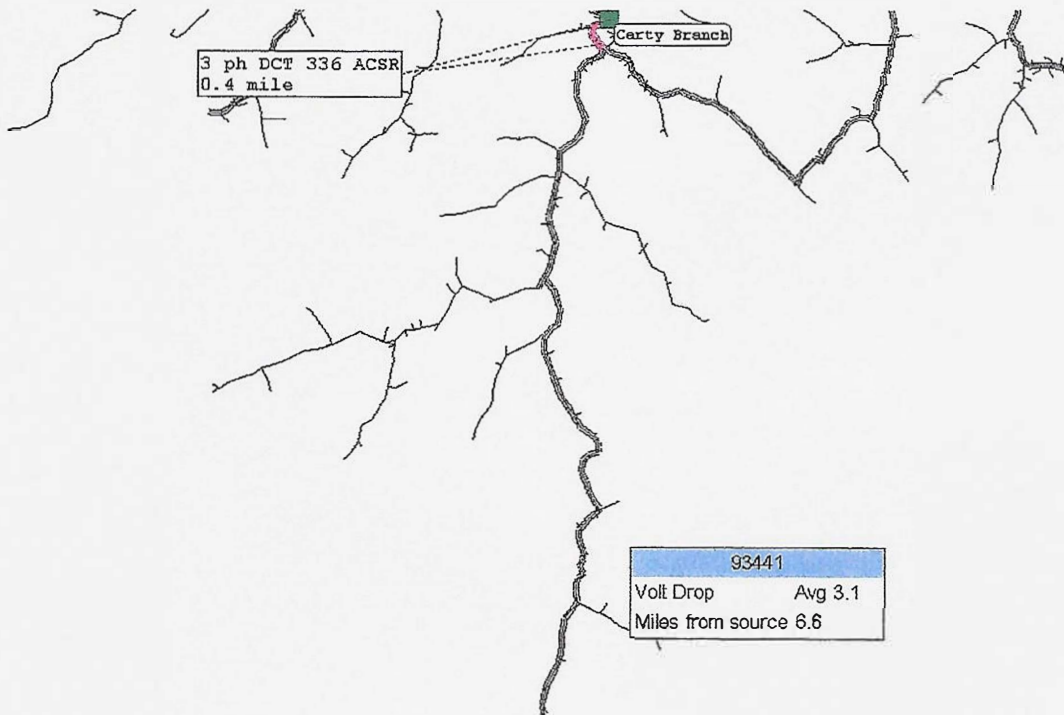
Design Criteria (DC) Items 1 & 2.

Results of Proposed Construction

DC Items 1 & 2 will be met.

Alternative Corrective Plan Investigated

A new proposed mine will be added to the end of this feeder. The alternative would be a single circuit larger conductor, but would not improve the reliability to this area by limiting the exposure between the mine load and the remainder of the original feeder. Therefore the double circuit is the preferred solution.



SYSTEM IMPROVEMENTS – RUS CODE 300

Carty Branch Substation

Code 306

Estimated Cost: \$899,000

Year: 2012

Description of Proposed Construction

Sections 92766 to 93441 – Replace 6.2 miles of single -phase and three-phase 1/0 ACSR with three-phase 336 ACSR. These line sections begin at the three-phase split at pole 23-43-33 and end at the proposed Crafts Creek mine.

Reason For Proposed Construction

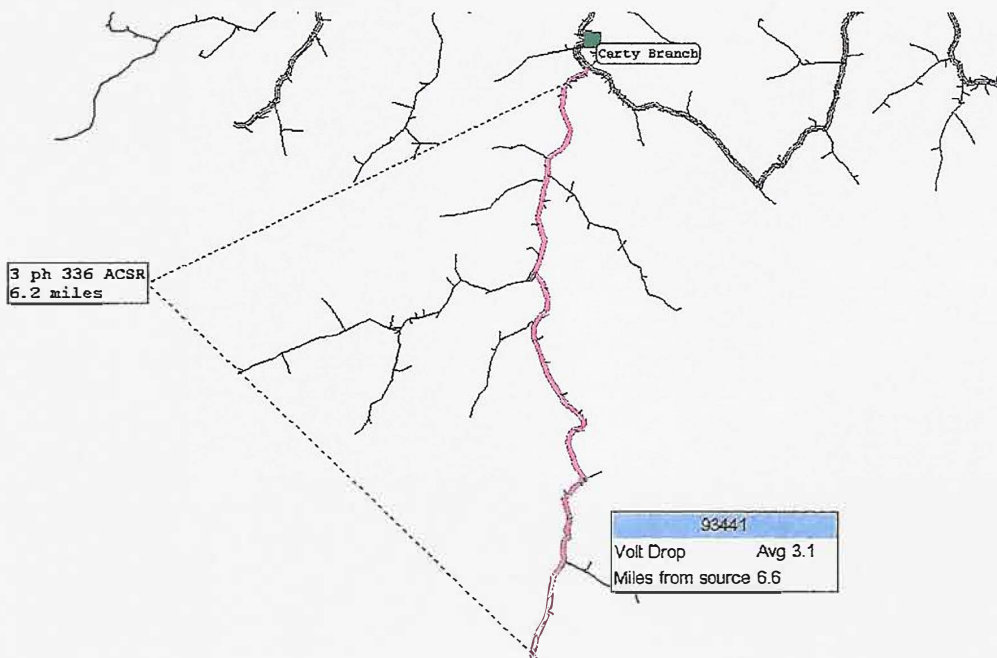
Design Criteria (DC) Items 1 & 5.

Results of Proposed Construction

DC Items 1 & 5 will be met.

Alternative Corrective Plan Investigated

A new proposed mine will be added to the end of this feeder. The alternative would be to reduce the three phase conductor to 1/0 ACSR closer to the mine. However while the steady-state voltage would be above criteria, the smaller conductor would increase the likelihood of flicker caused by the cyclical nature of the mining operation. Therefore the larger conductor will provide a stiffer source thereby reducing the level of flicker on this feeder.



SYSTEM IMPROVEMENTS – RUS CODE 300

Hot Mix Road Substation

Code 307

Estimated Cost: \$246,500

Year: 2012

Description of Proposed Construction

Sections 71158 to 71178 – Replace 1.7 miles of three-phase #2ACSR with three-phase 336 ACSR. These line sections begin at pole number 10-24-2 and end at 10-14-20 and run along Hot Mix Road to the foot of Wrigley Hill.

Reason For Proposed Construction

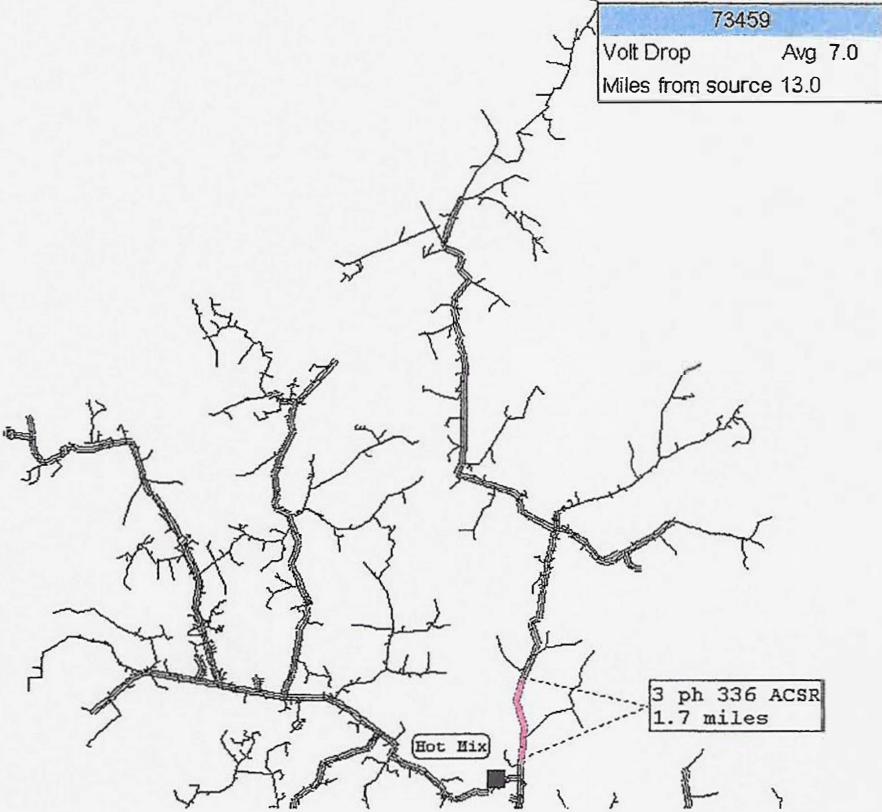
Design Criteria (DC) Items 1 & 2 are being violated.

Results of Proposed Construction

DC Items 1 & 2 will be met.

Alternative Corrective Plan Investigated

These line sections will serve as a main feeder out of the new Hot Mix Road substation and will serve a new school. Therefore no viable alternatives exist.



SYSTEM IMPROVEMENTS – RUS CODE 300

Hot Mix Rd Substation

Code 308

Estimated Cost: \$174,000

Year: 2012

Description of Proposed Construction

Sections 70895 to 70900 and 70901 to 70909 – Replace 1.2 miles of three-phase #2ACSR with three-phase 336 ACSR. These line sections begin at the split at pole number 10-44-9 on Hwy 7, and end at 10-43-42 toward Liberty Road and 10-44-31 toward West Liberty.

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

These line sections are a continuation of the south mainline feeder out of the new Hot Mix Road substation. They will serve a new steel fabrication plant, and also serve as a mainline tie to Index substation. This replacement will improve the overall reliability to this service territory. Therefore no viable alternatives exist.



SYSTEM IMPROVEMENTS – RUS CODE 300

Hot Mix Rd Substation

Code 309

Estimated Cost: \$40,000

Year: 2012

Description of Proposed Construction

Sections 72728 to 72748 – Convert 0.5 miles of single-phase 6A to three-phase #2 ACSR. These line sections begin at pole number 3-69-6 and end at 3-69-36 along Ditney Ridge Road.

Reason For Proposed Construction

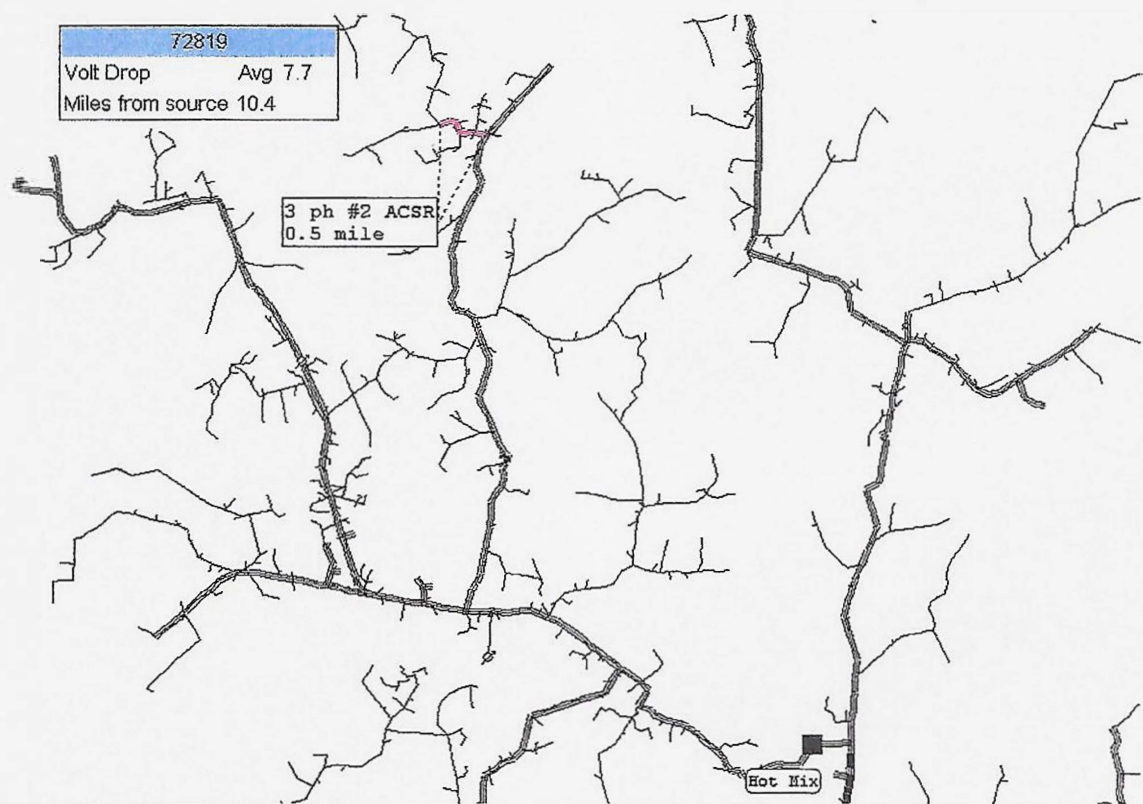
Design Criteria (DC) Items 1 & 5 are being violated.

Results of Proposed Construction

DC Items 1 & 5 will be met.

Alternative Corrective Plan Investigated

This is a radial feed, therefore no viable alternatives exist.



SYSTEM IMPROVEMENTS – RUS CODE 300

Index Substation

Code 310

Estimated Cost: \$618,280

Year: 2013

Description of Proposed Construction

Sections 67296 to 68033 – Replace 4.1 miles of three-phase #2 ACSR with three-phase 336 ACSR. These line sections begin at pole number 10-84-11 on Hwy 460 near Index following Rt. 2498, and end at 10-43-42. These line sections serve as a mainline tie to Hot Mix Road substation.

Reason For Proposed Construction

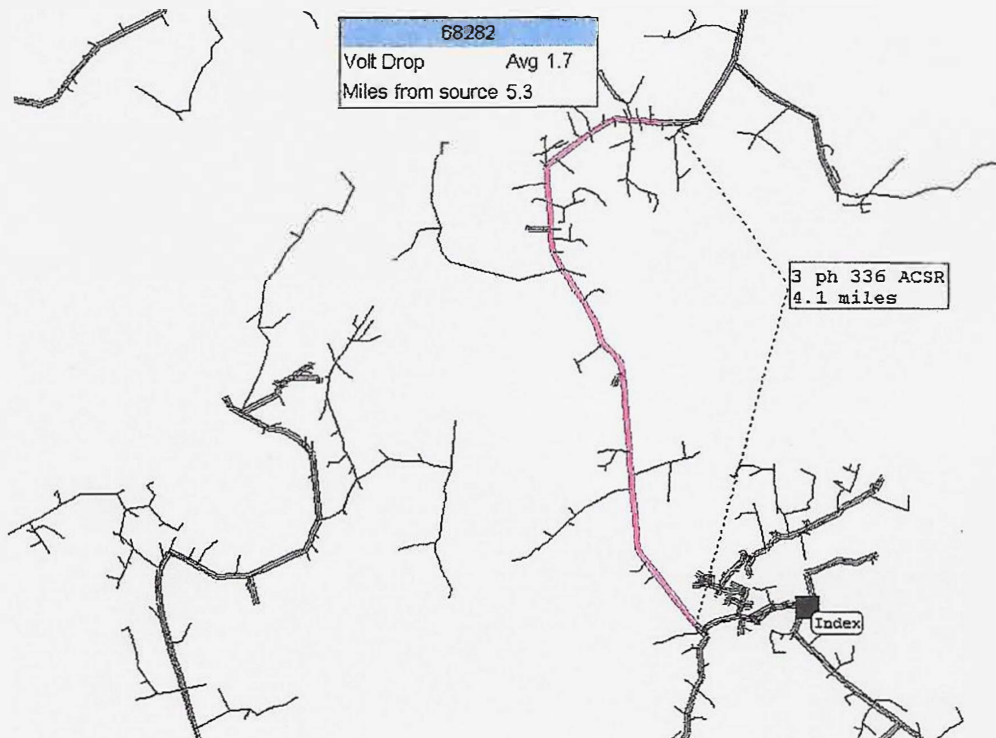
Design Criteria (DC) Item 4.

Results of Proposed Construction

DC Item 4 will be met.

Alternative Corrective Plan Investigated

These line sections serve as a mainline tie to Hot Mix Road substation. This replacement will improve the overall reliability to this service territory, as well as provide a contingency feed to the new school. Therefore no viable alternatives exist.



SYSTEM IMPROVEMENTS – RUS CODE 300

Index Substation

Code 311

Estimated Cost: \$569,181

Year: 2015

Description of Proposed Construction

Sections 68472 to 68543 – Replace 4.6 miles of three-phase 6A CWC with three-phase 1/0 ACSR. These line sections begin at pole number 15-9-13 on Hwy 460 near Grassy Creek, and end at pole 9-69-28 on Hwy 705 near Woodsbend.

Reason For Proposed Construction

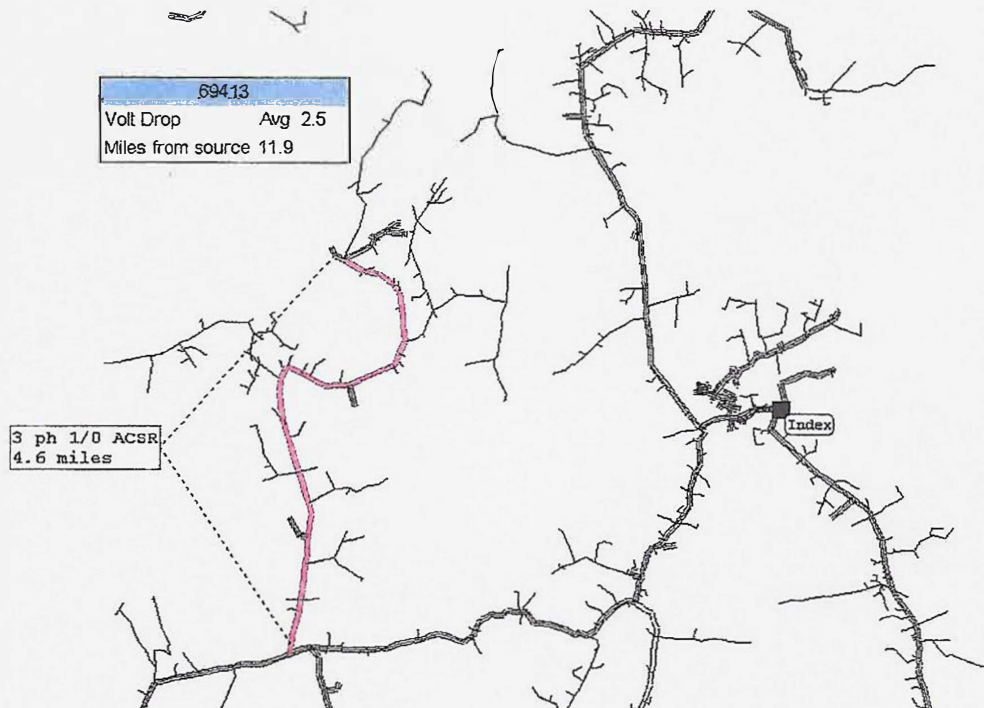
Design Criteria (DC) Items 1 & 4 are being violated.

Results of Proposed Construction

DC Items 1 & 4 will be met.

Alternative Corrective Plan Investigated

These line sections were chosen due to aged deterioration. Therefore no viable alternatives exist.



SYSTEM IMPROVEMENTS – RUS CODE 300

Oakdale Substation

Code 312

Estimated Cost: \$173,056

Year: 2014

Description of Proposed Construction

Sections 90055 to 90119 – Convert 3.2 miles of single-phase 6A CWC with two-phase #2 ACSR. These line sections begin at pole 27-22-12 on War Creek-Rockfield-Filmore Road in War Creek, and end at pole 26-28-15. All consumers on the converted line sections should stay on A-phase, and the remaining single phase line should be switched to B-phase.

Reason For Proposed Construction

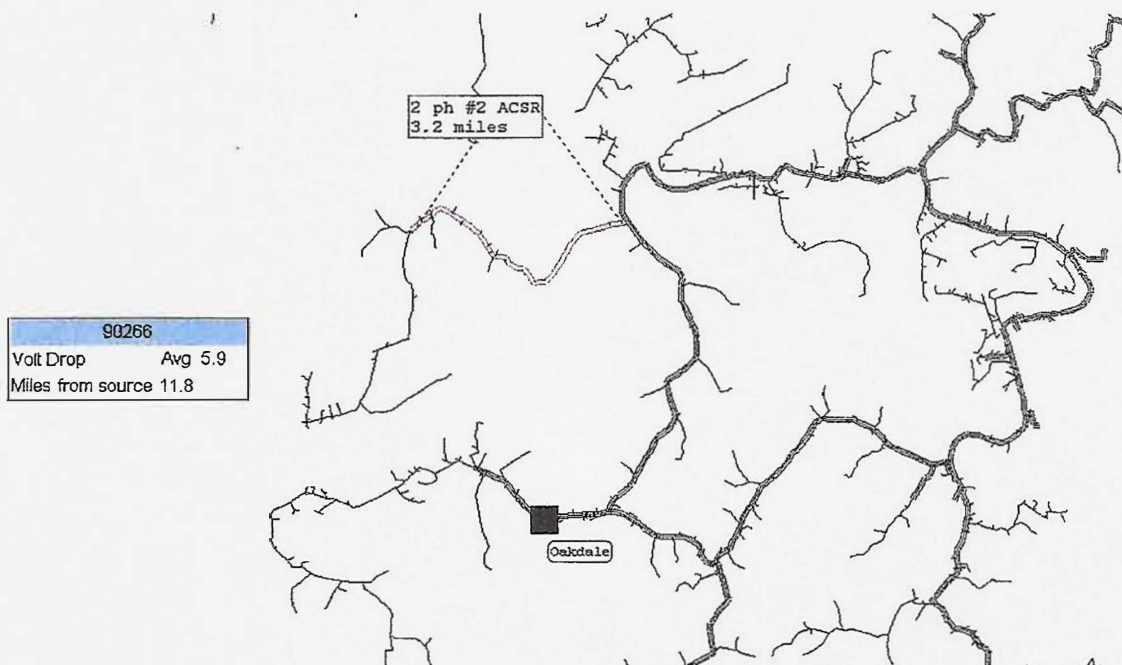
Design Criteria (DC) Items 1 & 5 are being violated.

Results of Proposed Construction

DC Items 1 & 5 will be met.

Alternative Corrective Plan Investigated

This is a radial feed, therefore no viable alternatives exist.



SYSTEM IMPROVEMENTS – RUS CODE 300

Sublett Substation

Code 313

Estimated Cost: \$226,720

Year: 2013

Description of Proposed Construction

Sections 94037 to 94132 – Replace 1.4 miles of three-phase 6A with three-phase 1/0 ACSR and convert 0.8 miles of single-phase 6A to three-phase #2 ACSR. These line sections begin at pole number 23-58-98 and end at 24-52-18 along Hwy 867 / Gun Creek Road.

Reason For Proposed Construction

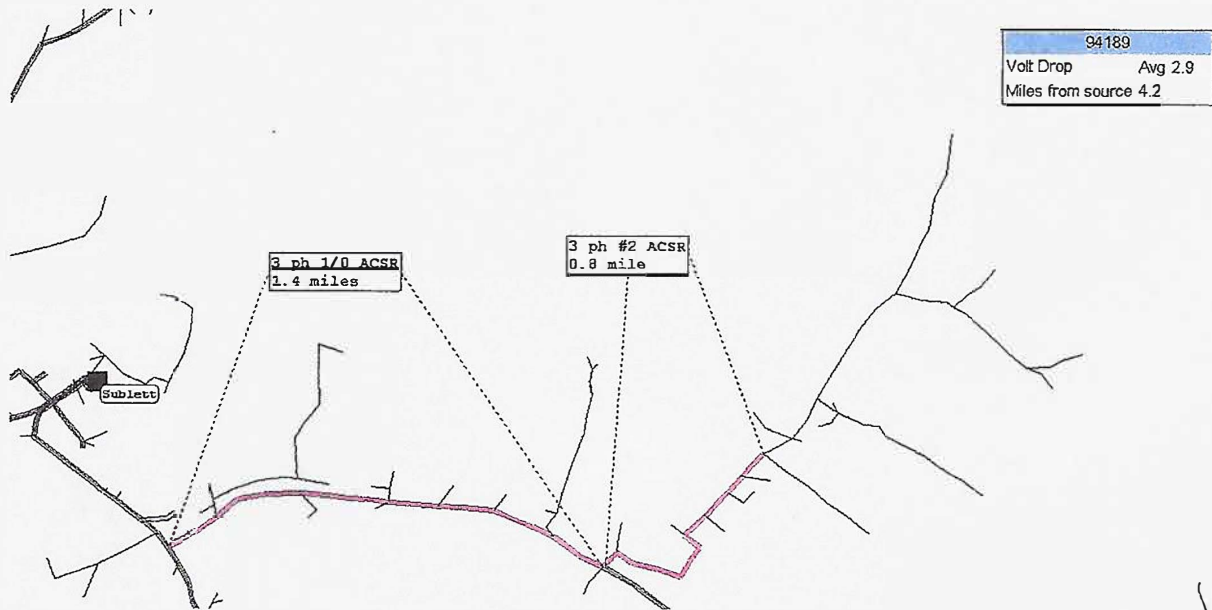
Design Criteria (DC) Item 4 & 5 is being violated.

Results of Proposed Construction

DC Items 4 & 5 will be met.

Alternative Corrective Plan Investigated

This is a radial feed, therefore no viable alternatives exist.



SYSTEM IMPROVEMENTS – RUS CODE 300

Sublett Substation

Code 314

Estimated Cost: \$618,280

Year: 2013

Description of Proposed Construction

Sections 92557 to 92619 – Replace 4.1 miles of three-phase 1/0 ACSR with three-phase 336 ACSR. These line sections will feed the proposed Bee Tree Mine.

Reason For Proposed Construction

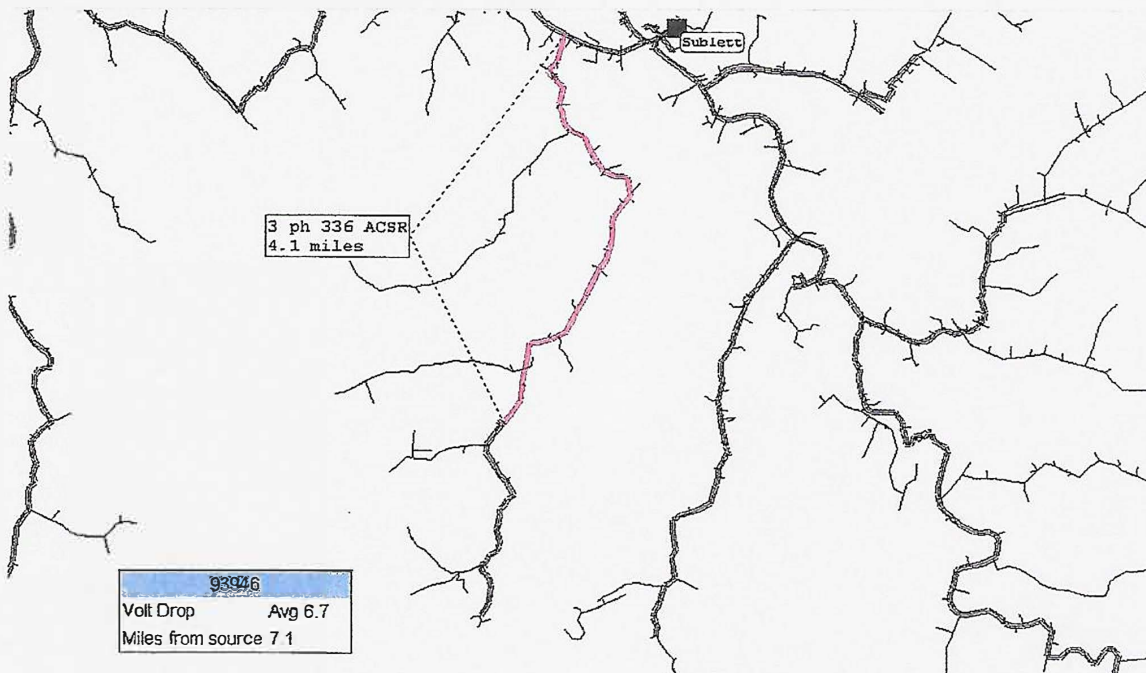
Design Criteria (DC) Item 1 & 5 is being violated.

Results of Proposed Construction

DC Items 1 & 5 will be met.

Alternative Corrective Plan Investigated

A new proposed mine will be added to the end of this feeder. The alternative would be to reduce the three phase conductor to 1/0ACSR closer to the mine. However while the steady-state voltage would be above criteria, the smaller conductor would increase the likelihood of flicker caused by the cyclical nature of the mining operation. Therefore the larger conductor will provide a stiffer source thereby reducing the level of flicker on this feeder.



SYSTEM IMPROVEMENTS – RUS CODE 300

Sublett Substation

Code 315

Estimated Cost: \$217,360

Year: 2013

Description of Proposed Construction

Sections 93907 to 93945 – Convert 1.9 miles of single-phase 6A to three-phase 1/0 ACSR. These line sections begin at pole 23-87-27 and end at 29-17-11 along Highway 1635. The washer plant at the Half Mountain Mine will be fed from this feeder and relieve the Gunlock circuit once this conversion is complete.

Reason For Proposed Construction

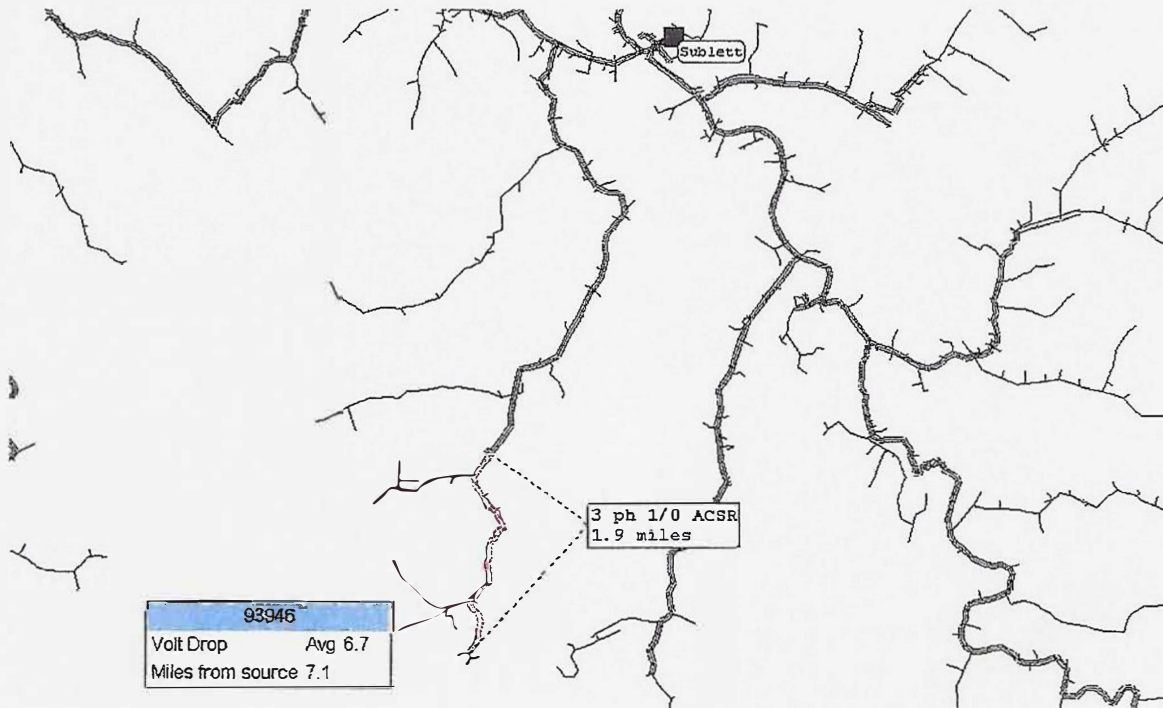
Design Criteria (DC) Item 1, 4, & 5 is being violated.

Results of Proposed Construction

DC Items 1, 4, & 5 will be met.

Alternative Corrective Plan Investigated

This is a radial feed. With the added load of the Washer Plant this conversion is necessary, and will improve the overall system reliability of this service territory.



SYSTEM IMPROVEMENTS – RUS CODE 300

Zachariah Substation

Code 316

Estimated Cost: \$142,771

Year: 2014

Description of Proposed Construction

Sections 55102 to 55117 – Replace 1.2 miles of three-phase 4A CWC with three-phase 1/0 ACSR. These line sections begin at pole number 19-38-6 at Hwy 1036 and Black Log Road, and end at pole 19-27-4 on Hwy 1036.

Reason For Proposed Construction

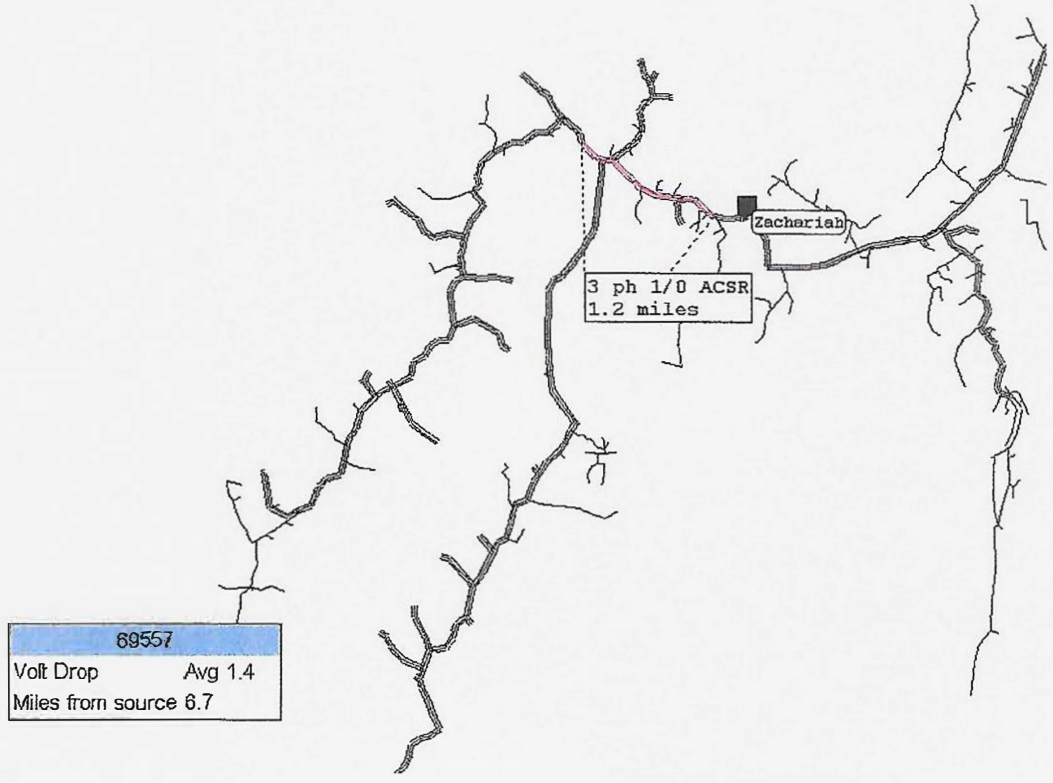
Design Criteria (DC) Item 4.

Results of Proposed Construction

DC Item 4 will be met.

Alternative Corrective Plan Investigated

These line sections were chosen due to aged deterioration. Therefore no viable alternatives exist.



SYSTEM IMPROVEMENTS – RUS CODE 300

Zachariah Substation

Code 318

Estimated Cost: \$49,920

Year: 2013

Description of Proposed Construction

Sections 55133 to 55141 – Replace 0.6 mile of three-phase 6A CWC with three-phase #2 ACSR. These line sections begin at pole number 19-28-3 at the intersection of Hwy 1036 and Big Bend Road following Big Bend Road to pole 19-28-16.

Reason For Proposed Construction

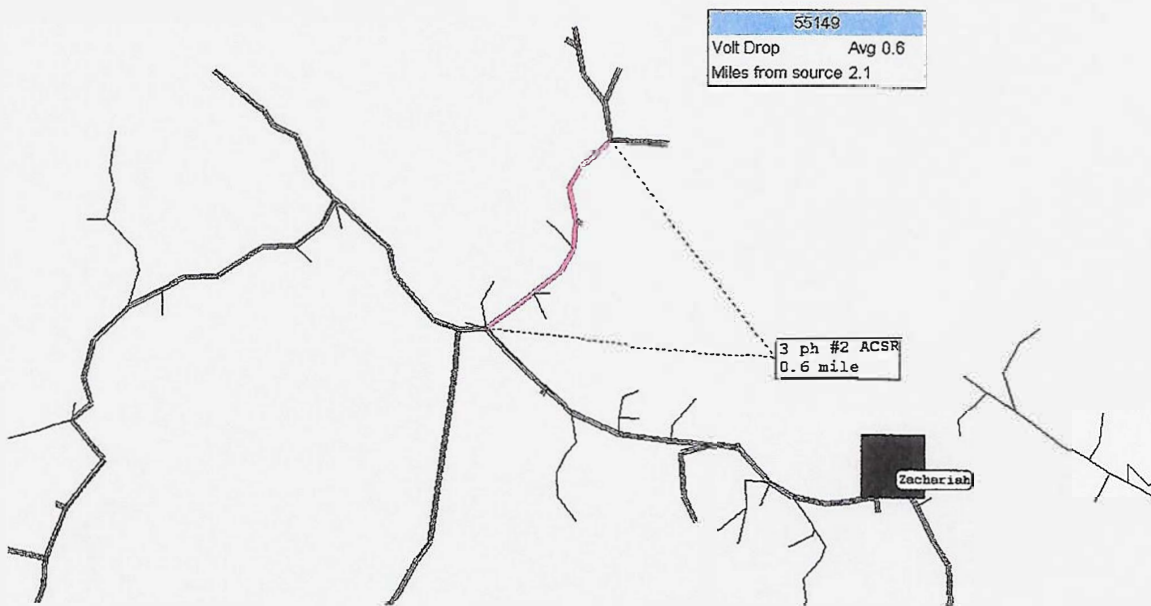
Design Criteria (DC) Item 4.

Results of Proposed Construction

DC Item 4 will be met.

Alternative Corrective Plan Investigated

These line sections were chosen due to aged deterioration. Therefore no viable alternatives exist.



MISCELLANEOUS DISTRIBUTION EQUIPMENT – RUS CODE 600's

Transformers – RUS Code 601

593 new transformers are projected at a cost of \$805,946.

Meters – RUS Code 601

1,350 new single-phase AMI meters are projected at a cost of \$161,559.

22 new three-phase AMI capable meters are projected at a cost of \$14,092.

LVRECC will be converting their AMI metering system from the Hunt Technologies TS1 AMR system to the TS2 system. This will allow for two-communication to meters on the LVRECC system to allow for demand side management opportunities. Additional benefits of the TS2 meters include outage restoration validation, voltage readings and load profiles. Meters will be converted to TS2 meters on an as-needed basis.

1,400 retrofit single-phase AMI meters are projected at a cost of \$213,308.

10 retrofit three-phase AMI capable meters are projected at a cost of \$8,468.

Historical data was gathered for meters and transformers and is included in Table III-B-1.

Service Upgrades – RUS Code 602

There are 176 service upgrades projected at a total cost of \$444,414. 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, switches, and cutouts are included in this category. Licking Valley has an ongoing effort to conduct system hardening initiative to improve reliability. A base cost of \$250,000 for each of the four years has been allocated. The total projected cost for sectionalizing is \$1,000,000.

- Continued on next page

MISCELLANEOUS DISTRIBUTION EQUIPMENT – RUS CODE 600’s -
continued

Voltage Regulators – RUS Code 604

The total cost for voltage regulators projected for the CWP is \$375,980. Upon the completion of the proposed Carty Branch substation the voltage regulators at the following locations will no longer be needed: 23-36-44, 23-32-21 and 23-63-22.

CFR CODE	SUBSTATION	SECT/RATING	YEAR	COST
604-1	CAMPTON	LOC#20-8-4 / 3-219A	2012	\$54,000
604-2	CAMPTON	LOC#20-49-3 / 3-150A	2013	\$41,600
604-3	HELECHAWA	LOC#22-18-7 / 1-100A	2013	\$12,480
604-4	HELECHAWA	LOC#27-18-29 / 1-100A	2014	\$13,000
604-5	OAKDALE	LOC#27-55-16 / 3-219A	2012	\$54,000
604-6	OAKDALE	LOC#27-82-5 / 3-150A	2015	\$45,000
604-7	OAKDALE	LOC#33-2-23 / 3-100A	2015	\$36,000
604-8	OAKDALE	LOC#27-33-27 / 3-150A	2014	\$43,300
604-9	SUBLETT	LOC#24-82-63 / 3-100A	2013	\$33,300
604-10	ZACHARIAH	LOC#20-3-5 / 3-150A	2014	\$43,300

- 604-1: Add 3-219A voltage regulators on the Campton Stillwater feeder near pole 20-8-4 before the three-phase spilt. Placement of this voltage regulator is in conjunction with the phase balancing recommendation of this feeder.
- 604-2: Add 3-150A voltage regulators on the Campton Vortex feeder near pole 20-49-3 before the three-phase spilt. Placement of this voltage regulator is in conjunction with the phase balancing recommendation of this feeder.
- 604-3: Add 1-100A voltage regulator on the Helechawa Cannel City feeder near pole 22-18-7 to boost the voltage on the tap beginning with line section 81963. Placement of this voltage regulator is in conjunction with the phase balancing recommendation of this feeder.
- 604-4: Add 1-100A voltage regulator on the Helechawa Lee City feeder near pole 27-18-29 to boost the voltage on the tap beginning with line section 83892. This regulator will be needed upon completion of the balancing of the Lee City feeder.
- 604- 5: Replace the 3-150A voltage regulators on the Oakdale Elkatawa feeder at pole 27-55-16 with 3-219A. The recent and projected expansion of the coal tippel increases the loading beyond the 150A voltage regulator loading criteria.
- 604-6 & 604-7: Add 3-150A voltage regulators on the Oakdale Highland feeder at pole 27-82-5 and add 3-100A voltage regulators at pole 33-3-23. Remove the set of 3-150A voltage regulators at 32-9-2. There is too much voltage drop before the existing set of regulators; and increasing the conductor size of this feeder mainline is cost prohibitive at this time. Placement of this voltage regulator is in conjunction with the phase balancing recommendation of this feeder.

MISCELLANEOUS DISTRIBUTION EQUIPMENT – RUS CODE 600’s -
continued

Voltage Regulators – RUS Code 604 - continued

- 604-8: Add 3-150A voltage regulators on the Oakdale War Creek feeder at pole 27-33-27. Placement of this voltage regulator is in conjunction with the phase balancing recommendation of this feeder, and the multi-phase conversion on War Creek-Rockfield-Filmore Road.
- 604-9: Replace the 100A autobooters at 24-82-63 on the Sublett Gunlock feeder with 3-100A voltage regulators. Remove the 50A autobooters at 30-13-57. Placement of this voltage regulator is in conjunction with the phase balancing recommendation of this feeder.
- 604-10: Add 3-150A on the Zachariah Pine Ridge feeder near pole 20-3-5. This set of voltage regulators are needed to sustain downline voltage during summer loading.

Capacitor Banks – RUS Code 605

The total cost for capacitor banks projected for the CWP is \$60,000. The capacitor bank on the Crockett substation, Crockett feeder at location 11-32-27 needs to be reduced or removed entirely. This substation has a leading power factor for most of the year. There are four other substations where capacitor banks should be considered during the summer season to reduce kVAR on the system. Also capacitors may be needed when the new proposed mines at Crafts Creek (Carty Branch substation) and Bee Tree Creek (Sublett substation) are energized.

CFR CODE	SUBSTATION	RATING	YEAR	COST
605-1	CARTY BRANCH*	600kVAR	2014	\$10,000
605-2	CAMPTON	600kVAR	2014	\$10,000
605-3	INDEX	300kVAR	2014	\$10,000
605-4	OAKDALE	600kVAR	2012	\$10,000
605-5	SUBLETT*	600kVAR	2015	\$10,000
605-6	ZACHARIAH	600kVAR	2012	\$10,000

*Dependent on power factor of substation system once mines are operational.

**MISCELLANEOUS DISTRIBUTION EQUIPMENT – RUS CODE 600’s –
continued**

Pole Changes – RUS Code 606 Including Clearance Poles

There are 1,440 projected pole changes in the CWP. This includes all maintenance and clearance poles. The cost for the pole changes is projected to be \$4,777,578. Historical cost data for pole changes may be found in Table III-B-1.

Conductor Replacements – RUS Code 608

The total cost for aged conductor replacement projected for the CWP is \$2,972,525. This accounts for an average of 20 miles of aged conductor replacement per year. This includes replacement of conductor due to age, deterioration, and operation and maintenance recommendations. These conductors have not been specifically identified in the CWP, but will be recommended on an as-needed basis.

Radio Upgrades – RUS Code 615

LVRECC will be upgrading their radio system in this CWP. The upgrade will include upgrading mobile radios, new antennas for mobile units, upgrading to 100W repeaters, and all associated licensing changes and upgrades to three towers. This upgrade also enables LVRECC to meet the FCC requirement that by January 2013 all users must operate on narrowband frequencies.

The total projected cost for the radio upgrades in the CWP is \$60,000.

RUS CODE 700

Outdoor Lighting – RUS Code 701

A total of 472 new outdoor lights are anticipated. The projected cost is \$175,099.

Outdoor lighting cost history and projections are shown in Table III-B-1.

AMI Equipment – RUS Code 705

An amount of \$291,800 is projected for this CWP for AMR equipment. This accounts for all of the required hardware and software necessary to complete the TS2 conversion. All of the LVRECC substations will be converted by the end of the CWP.

AMR equipment cost projections are shown in Table III-B-1.

APPENDIX A

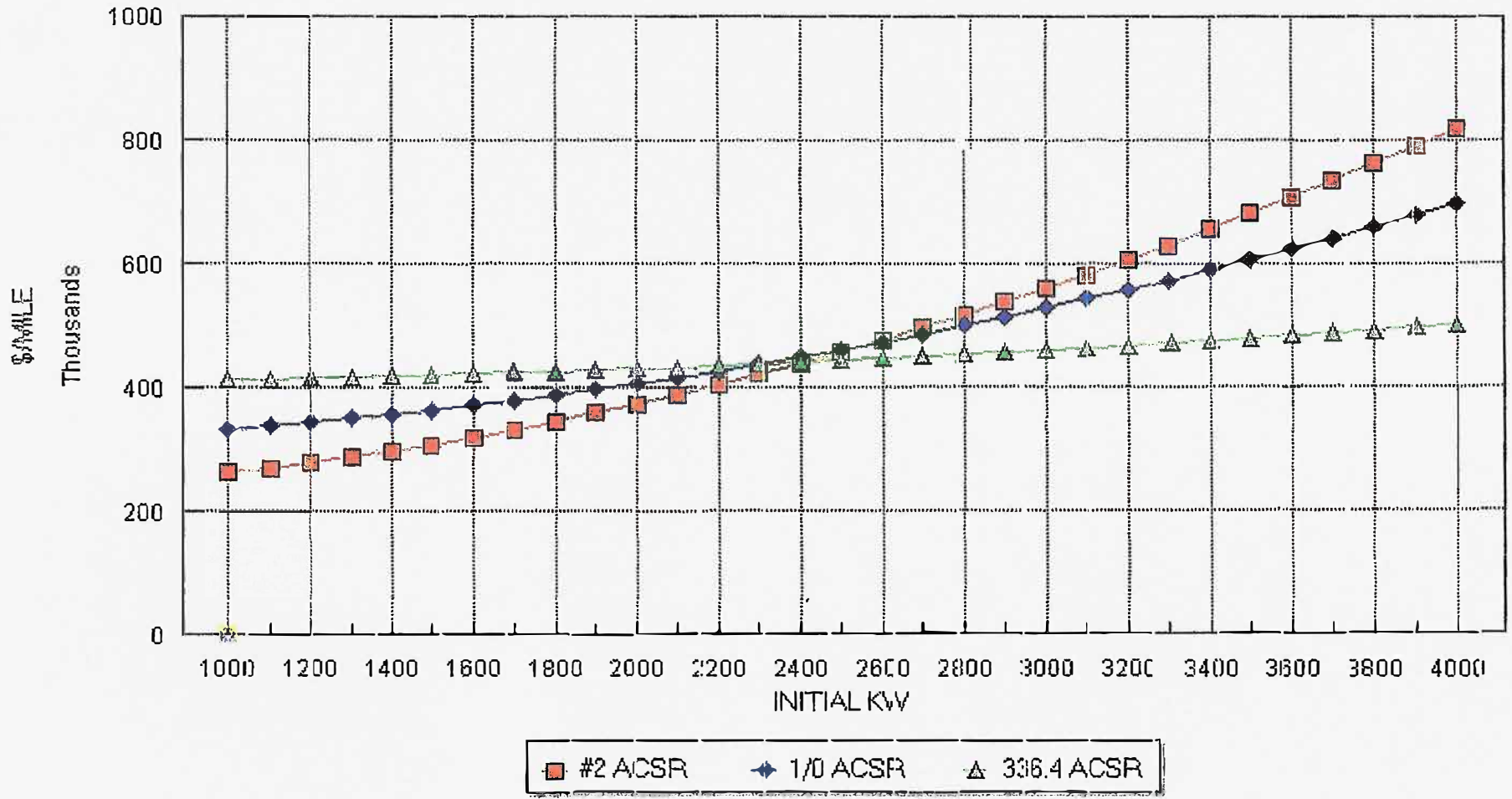
Economic Conductor Analysis

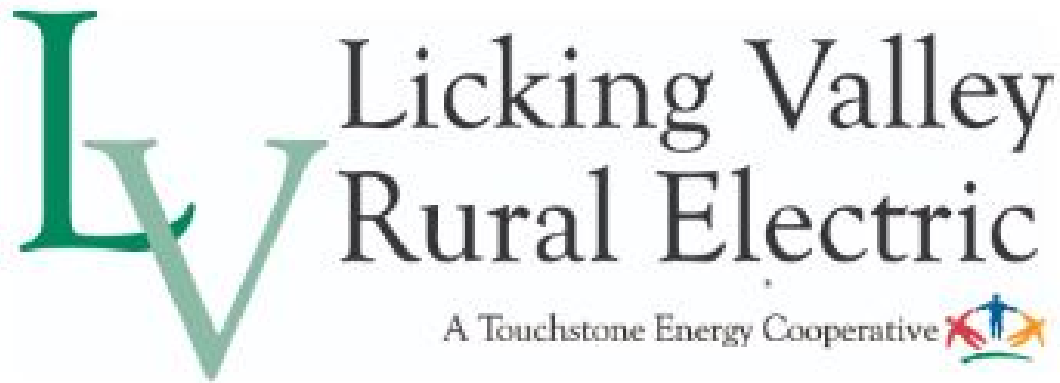
Licking Valley RECC
12 kV 3-Phase
ECONOMIC CONDUCTOR ANALYSIS

O&M	TAX	INS	INT	\$/KW	\$/KWH	KW
5.94%	0.50%	0.50%	5.00%	6.00	0.055	1000
RMO	RAT	KWI	KWHI	LGR	INF	m
12	0.0%	3.00%	3.00%	2.00%	4.00%	30
LF	PF	CF	N	KV	P	
43.1%	96.0%	98.0%	0.6	7.2	3	
CONDUCTOR	#2 ACSR	1/0 ACSR	336.4 ACSR			
COST/MI	\$80,000	\$110,000	\$145,000			
OHMS/MI	1.753	1.146	0.278			
TCOST/MI	\$527,258	\$674,994	\$841,035			
PWCOST/MI	\$261,552	\$332,794	\$412,516			

ECONOMIC CONDUCTOR CALCULATIONS

Licking Valley RECC 12 kV 3-Phase





2019-2022 Construction Work Plan

Kentucky 56 Morgan

West Liberty, Kentucky

January 2019

Distribution System Solutions, Inc.
Union, Kentucky

LICKING VALLEY RURAL ELECTRIC COOPERATIVE CORPORATION

2019 – 2022 CONSTRUCTION WORK PLAN REPORT

Kentucky 56 Morgan

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SECTION NUMBER	TITLE
I.	EXECUTIVE SUMMARY
	A. Purpose, General Basis of Study, and Results.
	B. Service Area and Power Supplier.
	C. Summary of Construction Program and Costs.
II.	STUDY GUIDELINES AND ANALYSIS OF SYSTEM
	A. Distribution System Design Criteria.
	B. Distribution Line and Equipment Costs.
	C. Status of Previous CWP Items.
	D. Analysis of Long Range Plan, O&M Survey, and Sectionalizing Study.
	E. Analysis of Substation Loading and Service Reliability.
III.	DATA RESOURCES
	A. Data Resources.
	B. Basic Data and Assumptions, Financial Data, and Historical/Projected Data.
IV.	PROPOSED CONSTRUCTION ITEMS
	A. New Construction.
	B. System Improvements.
	C. Miscellaneous Distribution Equipment.
	D. Other Distribution Items.

Professional Engineering Certification

Borrower's Environmental Report

PURPOSE OF REPORT

This report documents the engineering analysis of, and summarizes the proposed construction for, the Licking Valley Rural Electric Cooperative Corporation (LVRECC) electric distribution system for the four-year planning period of 2019-2022.

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 winter 2022/2023 projected total peak system load was based on the East Kentucky Power Cooperative, Inc. (EKPC) 2018 Load Forecast (LF) and approved by RUS. EKPC is the wholesale transmission and generation supplier for LVRECC.

From the LF Residential Summary Sheet, the 2019-2022 compound growth rates for the system are: flat for consumer increase and -0.25% for energy. System analysis models are based on the 2015 non-coincident (NC) system peak (89.3 MW) which is higher than projections in the 2018 LF. In January 2015, an extreme winter temperature event occurred which set an all-time, system NC peak for LVRECC. A projected winter 2022/2023 NC peak of 85 MW was selected from the LF information.

The current LVRECC 2002 Long Range Plan (LRP) load projections and improvement recommendations were reviewed. A new Ten-Year System Study will be performed at the completion of the CWP. The 2019-2022 CWP will represent the first four years of this new 10-Year System Study.

A system analysis using RUS guidelines and the LVRECC 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 8 - 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.

LICKING VALLEY CWP: I-A

Page 2

SUMMARY - RESULTS OF PROPOSED CONSTRUCTION

Upon completion of the proposed construction, the system will provide adequate and dependable service to 16,250 residential customers as well as 8 large commercial loads and 1,110 commercial loads. Average monthly residential usage is projected to be 1,000 kWh. It is estimated that there will be 4,200 idle services.

8.6 miles of site specific conductor conversion will take place in the four-year plan period. Additionally, an estimated 60 miles of conductor will be selected for replacement. These conductor replacement line sections will be selected based on conductor condition, operational experience and the number of customers served.

LICKING VALLEY CWP: I-B

Page 1

SERVICE AREA

LVRECC is a RUS-funded electric distribution cooperative. LVRECC is located in eastern Kentucky. LVRECC serves portions of Breathitt, Lee, Magoffin, Menifee, Morgan, and Wolfe Counties. The headquarters is located in West Liberty, Kentucky (Morgan County). *See map (highlighted in gray) on the following page.*

The principal counties served by LVRECC are rural with residents relying on agricultural enterprises, education, retail/manufacturing, and state government for income.

A number of commercial and industrial loads are in the service territory. Slow growth is projected for new commercial, small manufacturing and residential customers in all areas of the system. LVRECC has 10 distribution substations - all operating at 12,470/7,200 V.

The following data is from LVRECC's 12/17 RUS Form 7:

<i>Total Services in Place</i>	<i>21,659</i>
<i>MWH Purchases</i>	<i>247,024</i>
<i>MWH Sold</i>	<i>234,176</i>
<i>Maximum MW Non-Coincident Demand</i>	<i>89.3*</i>
<i>Total Utility Plant</i>	<i>\$74,522,491</i>
<i>Plant Dollars Per Active Member</i>	<i>\$4,297</i>
<i>Active Consumers/Mile</i>	<i>8.40</i>

* 2015 Polar Vortex

LICKING VALLEY RECC SERVICE TERRITORY (GRAY)



GENERATION and TRANSMISSION POWER SUPPLIER

EKPC provides all power and energy needs to LVRECC. EKPC provides service to sixteen distribution cooperatives. EKPC is located in Winchester, Kentucky.

The 2018 LF was a joint effort between LVRECC and EKPC. LVRECC provides loading data and system growth predictions to EKPC for use in the LF growth models.

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

LICKING VALLEY CWP: I-C

SUMMARY OF CONSTRUCTION PROGRAM AND COSTS

LVRECC's distribution system was analyzed in order to identify the construction requirements needed to adequately serve the projected CWP load of 85 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 Construction	\$3,097,715
300	System Improvements	\$1,588,172
600	Miscellaneous Distribution Equipment	\$14,039,769
700	Other Dist. Items	\$965,859
	2019-2022 CWP TOTAL	\$19,691,515

100 – New Construction planned to serve 1,200 new services.

300 – 8.6 miles of site-specific conductor conversion/system improvements.

600 - Miscellaneous distribution equipment, pole changes, equipment replacement, and communications. Included are a projected 60 miles of ordinary conductor replacement, as well as sectionalizing, automated meters, transformers, pole changes, communications and service capacity upgrades.

700 – Other Distribution Items - Outdoor Lights and SCADA equipment.

LICKING VALLEY CWP: I-C

LICKING VALLEY RECC 2019-2022 CWP
COST SUMMARY SPREADSHEET

NEW CONSTRUCTION -- RUS CODE 100

ITEM	RUS CODE	AVE. \$/CONSUMER	# CONS.	2019	2020	2021	2022	TOTAL
New Construction	100	\$2,581	1,200	\$729,481	\$758,660	\$789,007	\$820,567	\$3,097,715
		TOTAL CODE 100:	1,200	\$729,481	\$758,660	\$789,007	\$820,567	\$3,097,715

SYSTEM IMPROVEMENTS - RUS CODE 300

SUB - POLE	RUS CODE	Original Conductor	Proposed Conductor	\$/MILES	# OF MILES	2019	2020	2021	2022	TOTAL
Hot Mix 3-69-6 to 3-69-36	309	1 ph 6A CWC	3 ph #2 ACSR	\$140,000	0.5	\$70,000	\$0	\$0	\$0	\$70,000
Index 10-84-11 to 10-43-42	310	3ph #2 ACSR	3 ph 336 ACSR	\$206,000	4.1	\$0	\$878,384	\$0	\$0	\$878,384
Hot Mix 10-44-31 to 10-55-9	351	1 ph #2 ACSR	3 ph 1/0 ACSR	\$167,500	0.8	\$0	\$0	\$144,934	\$0	\$144,934
Hot Mix 4-76-6 to 4-66-23	352	1 ph 6A CWC	3 ph #2 ACSR	\$140,000	1.5	\$0	\$0	\$227,136	\$0	\$227,136
Maggard 17-43-64 to 17-23-3	353	1 ph 6A CWC	3 ph #2 ACSR	\$140,000	1.7	\$0	\$0	\$0	\$267,718	\$267,718
		TOTAL CODE 300:			8.6	\$70,000	\$878,384	\$372,070	\$267,718	\$1,588,172

CARRYOVERS are in BOLD

MISCELLANEOUS DISTRIBUTION EQUIPMENT - RUS CODE 600's

ITEM	RUS CODE	4 YR. AVE. COST	# ITEMS	2019	2020	2021	2022	TOTAL
New Transformers	601	\$1,528	600	\$215,865	\$224,500	\$233,480	\$242,819	\$916,664
New Meters	601	\$225	1,200	\$49,920	\$51,917	\$53,993	\$56,153	\$211,983
Service Upgrades	602	\$4,246	600	\$600,000	\$624,000	\$648,960	\$674,918	\$2,547,878
Sectionalizing	603			\$75,000	\$78,000	\$81,120	\$84,365	\$318,485
Voltage Regulators	604			\$116,000	\$145,560	\$89,500	\$49,500	\$400,560
Pole Changes	606	\$3,108	1,300	\$951,335	\$989,388	\$1,028,964	\$1,070,122	\$4,039,809
Misc. Replacements	607			\$100,000	\$104,000	\$108,160	\$112,486	\$424,646
Conductor Replacement OH	608		60 miles	\$1,288,636	\$1,288,636	\$1,288,636	\$1,288,636	\$5,154,544
Communications	615			\$0	\$10,200	\$15,000	\$0	\$25,200
		TOTAL						
		MISC. CODE 600'S:		\$3,396,756	\$3,516,201	\$3,547,813	\$3,578,999	\$14,039,769

OTHER DIST. ITEMS - RUS CODE 700

ITEM	RUS CODE	4 YR. AVE. COST	# ITEMS	2019	2020	2021	2022	TOTAL
Outdoor Lighting	702	\$722	1,200	\$203,901	\$212,057	\$220,540	\$229,361	\$865,859
SCADA Index Substation Pilot	704			\$0	\$100,000	\$0	\$0	\$100,000
		TOTAL CODE 700:		\$203,901	\$312,057	\$220,540	\$229,361	\$965,859
		CONSTRUCTION WORK PLAN TOTAL:						\$19,691,515

DISTRIBUTION SYSTEM DESIGN CRITERIA

Each of the following criteria items was reviewed and accepted by the RUS General Field Representative on October 11, 2018.

- 1) The minimum voltage on primary distribution lines is 118 volts (120 volt base, 126 volts at source) after re-regulation.
- 2) Primary conductors are to be investigated at 70% of their thermal rating.
- 3) The following equipment will be investigated if 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 70% winter; 70% summer
- 4) Conversions to multiphase are to correct voltage drop and phase balance. Line sections with load current exceeding 45 amps will be considered for multiphasing.
- 5) The standard Overhead conductor sizes are #2 ACSR (6/1), 1/0 ACSR (6/1), and 336.4 ACSR (18/1). The standard Underground conductor size is 1/0 ALUG.
- 6) Aged Conductor will be replaced based on the following:
 - Conductor type
 - Location
 - Number of customers served
 - Outage report data/operational experience.

LICKING VALLEY CWP: II-B

DISTRIBUTION LINE AND EQUIPMENT COSTS

Construction cost estimates for the four 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	2019	2020	2021	2022
1/0 ACSR	CONV 3-PH	\$167,500	\$174,200	\$181,170	\$188,400
336.4 ACSR	CONV 3-PH	\$206,000	\$214,250	\$222,820	\$231,700
#2 ACSR	CONV 3-PH	\$140,000	\$145,600	\$151,425	\$157,480
#2 ACSR	REPL 1-PH	\$75,000	\$78,750	\$81,900	\$85,180
1/0 ALUG	REPL 3-PH	\$330,000	\$343,200	\$356,930	\$371,200

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

DEVICE	TYPE	2019	2020	2021	2022
V.Regulators (3)	150 amp	\$48,000	\$49,900	\$51,920	\$54,000
V.Regulators (3)	100 amp	\$44,000	\$45,760	\$47,590	\$49,500
V.Regulators (3)	219 amp	\$55,000	\$57,200	\$59,500	\$61,870
V.Regulators (1)	50 amp	\$13,000	\$14,000	\$15,000	\$16,000

LICKING VALLEY CWP: II-C

STATUS OF PREVIOUS CWP ITEMS

All projects from the 2012-2015 CWP have been completed except the following items.

740 C #	Project Description	Status
304	Carty Branch Sub Feeder Getaways	CANCELLED
305	Carty Branch Sub to 92767	CANCELLED
306	Carty Branch 92766 to 93441	CANCELLED
309	Hot Mix 72728 to 72748	CARRYOVER
310	Index 67269 to 68033	CARRYOVER
313	Sublett 94037 to 94132	CANCELLED
314	Sublett 92557 to 92619	CANCELLED
315	Sublett 93907 to 93945	CANCELLED

ANALYSIS OF 1998 LONG RANGE PLAN

The 1998 Long Range Plan (LRP) projects a 2018 NCP winter load of 107.5 MW. None of the five proposed substations have been constructed. In 2012, the Hot Mix Substation replaced the West Liberty Substation. Hot Mix was constructed west of the now-retired West Liberty Substation. West Liberty Substation was prone to flooding and was well east of the modern growth areas. Commercial development, westward along HWY 519 and north toward Wrigley, necessitated the need for Hot Mix.

A revised LRP, the *2019-2028 10-Year System Study*, will be developed after this CWP is approved by RUS. The 4-year model of the CWP will be grown out two additional load levels. These load levels will each be three years of additional, projected growth. The system will be examined and corrections will be recommended at each load level. New substation sites, including the Bear Branch, Vancleve, Cannel City and Ezel locations, will be evaluated.

The 2019-2022 CWP is in basic agreement with the current LRP.

OPERATIONS & MAINTENANCE SURVEY

The current O&M Survey (“Review Rating Summary”) was completed in April 2015.

- 3b. LVRECC has an ongoing effort to enforce joint-use agreements. Transfers and pole attachments require continuous monitoring and qualify as full-time duties.
- 3c. While LVRECC has an ongoing right-of-way program, yard trees will always be an obstacle. There is greater challenge to member relations than that of trimming and cutting yard trees.
- 6b. LVRECC has worked to reconcile the reporting of idle services with the billing department.

SECTIONALIZING STUDY

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 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

SECTIONALIZING STUDY - continued

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 substation-by-substation sectionalizing study is ongoing. General sectionalizing device cost projections will be listed in the "603" category in this report.

LICKING VALLEY CWP: II-E

SERVICE RELIABILITY

The record of LVRECC’s service interruptions for the past five years is shown in Table II-E-2. The five-year average outage minute per consumer is **338.1**. LVRECC’s typical average outage hours are near the minimum level recommended by RUS. Ongoing system improvements and concerted feeder sectionalizing studies will help to reduce this value.

TABLE II-E-2

	Power Supplier	Extreme Storm	Prearranged	All Other	Total
2013					
OUTAGE MINS/CONS	43.6	144.2	20.4	138.9	347.1
2014					
OUTAGE MINS/CONS	2.7	203.3	23.7	123.5	353.2
2015					
OUTAGE MINS/CONS	11.8	220.0	61.3	143.8	436.9
2016					
OUTAGE MINS/CONS	9.0	69.7	27.5	102.5	208.7
2017					
OUTAGE MINS/CONS	56.4	150.6	13.8	123.6	344.4
FIVE YEAR AVE.	24.7	157.6	29.3	126.5	338.1
OUTAGE MINS/CONS					

DATA RESOURCES

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

1. Monthly substation non-coincident peak (NCP) demands.
2. Billing system kW and kWh sales for last winter and summer peaks.
3. 2018 East Kentucky Power Cooperative *Load Forecast*.
4. Five Year Outage Summary.
5. RUS Form 7 data.
6. Substation transformer ratings.
7. Load projections for each existing substation.
8. Computerized circuit model databases with voltage drop calculations for each line element.

BASIC DATA AND ASSUMPTIONS

Design Load – The construction program in the CWP covers a four-year period to serve the 85 MW, January 2023 winter peak. The design load was derived after reviewing the 2018 LF with the GFR and discussion with LVRECC staff.

Load Allocation – The total system design load was attained by allocating each substation's load to its individual line section or consumer node proportional to the kWh consumption on each of the line sections/consumers. Grown peak winter loading was modeled and analyzed. The system is decidedly winter 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 three-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 4% 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.

LICKING VALLEY CWP: III-B

Page 2

Computer Model of Distribution System – The system is modeled on Milsoft Integrated Solution’s Windmil v. 8 analysis software. Downloading monthly billing computer data into the Windmil billing file directory was the framework for building the winter model. Residential and commercial loads were allocated by peak month kWh. The projected model was analyzed for Design Criteria violations using an unbalanced voltage drop calculation.

FINANCIAL DATA

- ***Cost of Capital = 4.0%***
- ***Inflation = 4.0%***
- ***Present Worth Discount Factor = 4.0%***
- ***Depreciation = 3.25%***
- ***O&M = 6.46%***
- ***Tax & Ins = 0.2%***
- ***TOTAL ANNUAL FIXED CHARGE RATE = 13.91%***

LICKING VALLEY CWP: III-B

LICKING VALLEY RECC						
TABLE III-B-1						Inflation = 4%
HISTORICAL AND PROJECTED DATA						
DESCRIPTION	Sep 2016 - Aug 2018	2019	2020	2021	2022	CWP TOTAL
New Construction (100)						
1. New services constructed	492	300	300	300	300	1,200
2. Cost per Customer	\$2,338	\$2,432	\$2,529	\$2,630	\$2,735	
3. Cost of New Customers	\$1,150,335	\$729,481	\$758,660	\$789,007	\$820,567	\$3,097,715
4. Total Wire Footage	32,208	19,500	19,500	19,500	19,500	78,000
New Transformers (601)						
1. New transformers added	180	150	150	150	150	600
2. Cost per transformer	\$1,384	\$1,439	\$1,497	\$1,557	\$1,619	
3. Cost of New transformers	\$249,075	\$215,865	\$224,500	\$233,480	\$242,819	\$916,664
New Meters (601)						
1. New meters added	14,229	300	300	300	300	1,200
2. Cost per meter	\$160	\$166	\$173	\$180	\$187	
3. Cost of New meters	\$2,276,640	\$49,920	\$51,917	\$53,993	\$56,153	\$211,983
Service Upgrades (602)						
1. Number of Service Upgrades	223	150	150	150	150	600
2. Cost per Service Upgrade	\$2,560	\$4,000	\$4,160	\$4,326	\$4,499	
3. Cost of Service Upgrades	\$570,813	\$600,000	\$624,000	\$648,960	\$674,918	\$2,547,878
Sectionalizing (603)						
1. Cost of Sectionalizing	\$154,288	\$75,000	\$78,000	\$81,120	\$84,365	\$318,485
Pole Changes - Replacement (606)						
1. Poles Changed	434	325	325	325	325	1,300
2. Cost per Pole Change	\$2,815	\$2,927	\$3,044	\$3,166	\$3,293	
3. Cost of Pole Changes	\$1,221,536	\$951,335	\$989,388	\$1,028,964	\$1,070,122	\$4,039,809
Miscellaneous - Replacement (607)						
1. Cost of miscellaneous		\$100,000	\$104,000	\$108,160	\$112,486	\$424,646
Conductor Replacement (608)						
1. Miles of conductor to be replaced		15	15	15	15	60
2. Total cost of conductor replacement		\$1,288,636	\$1,288,636	\$1,288,636	\$1,288,636	\$5,154,544
Communications (615)						
1. Two-way Radio System Upgrade		\$0	\$10,200	\$0	\$0	\$10,200
2. Index Substation SCADA Communications		\$0	\$0	\$15,000	\$0	\$15,000
Outdoor Lights (702)						
1. New Outdoor Lights Added	271	300	300	300	300	1,200
2. Cost per Outdoor Light	\$654	\$680	\$707	\$735	\$765	
3. Cost of Outdoor Lights	\$177,107	\$203,901	\$212,057	\$220,540	\$229,361	\$865,859

LICKING VALLEY CWP: IV-A

Page 1

NEW CONSTRUCTION – RUS CODE 100

A total of 1,200 new services is anticipated. The total projected cost for new service construction is \$3,097,715.

The average length of service per customer is 65 feet. The total projected length for the work plan period is 14.8 miles.

SYSTEM IMPROVEMENTS – RUS CODE 300

LINE CONVERSION NARRATIVES

Hot Mix Substation (CARRYOVER)

Code 309

Estimated Cost: \$70,000

Year: 2019

Description of Proposed Construction

Pole 3-69-6 to 3-69-36 – Convert 0.5 mile of single-phase 6A CWC to three-phase #2 ACSR along Ditney Ridge Road.

Reason For Proposed Construction

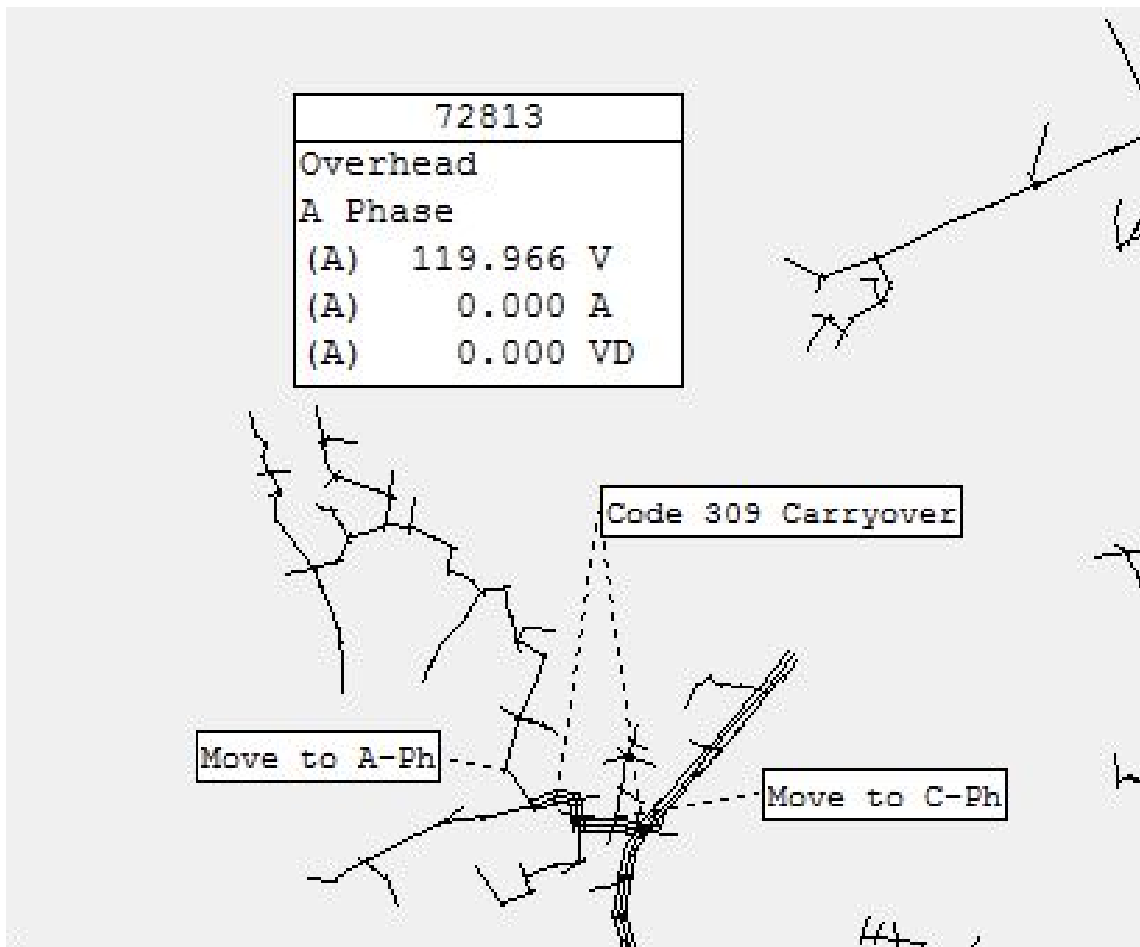
Design Criteria (DC) Items 1 & 4 are being violated.

Results of Proposed Construction

DC Items 1 & 4 will be met.

Alternative Corrective Plan Investigated

This is a radial feed, no viable alternatives are available.



SYSTEM IMPROVEMENTS – RUS CODE 300

Index Substation (CARRYOVER)

Code 310

Estimated Cost: \$878,384

Year: 2020

Description of Proposed Construction

Pole 10-84-11 to 10-43-42 – Convert 4.1 miles of three-phase #2 ACSR to three-phase 336.4 ACSR north along Liberty Road.

Reason For Proposed Construction

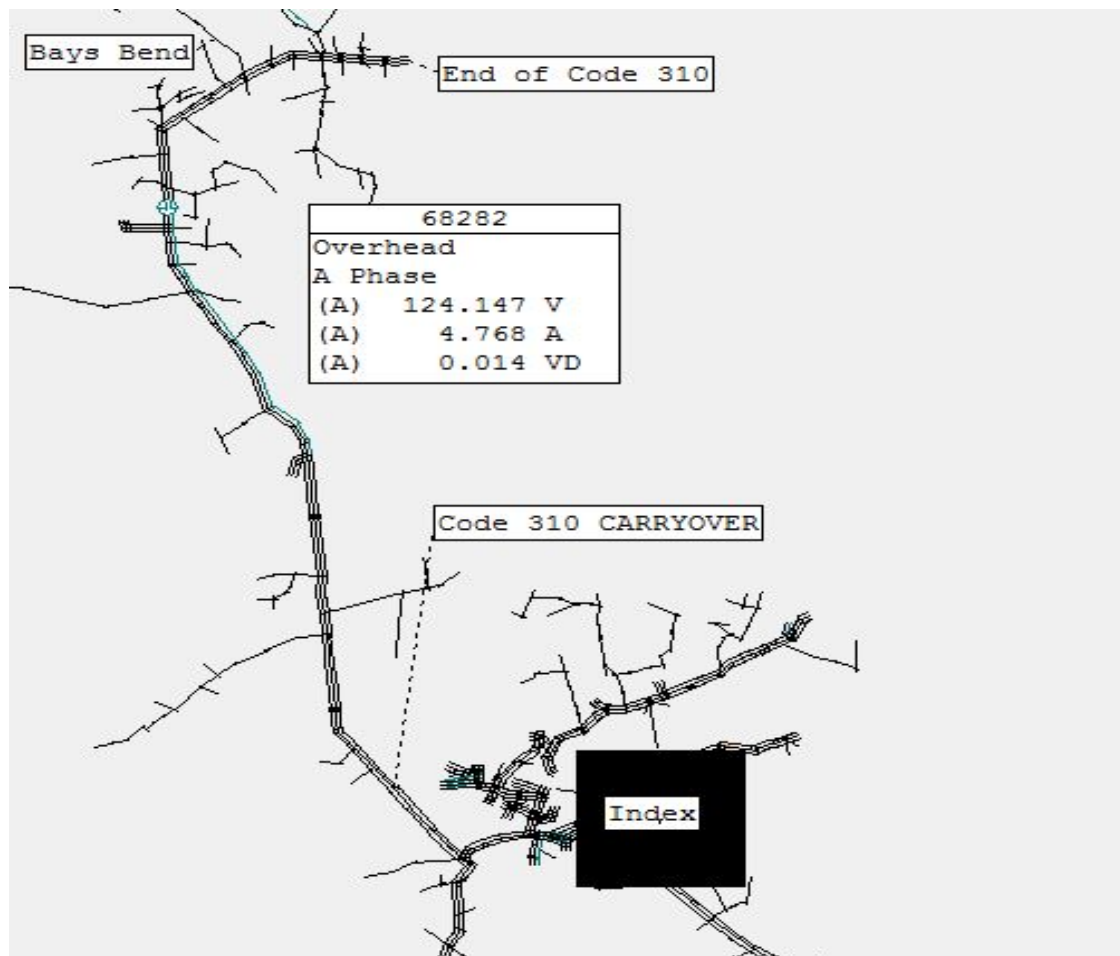
Design Criteria (DC) Item 1 is being violated.

Results of Proposed Construction

DC Item 1 will be met.

Alternative Corrective Plan Investigated

This connects the Index and Hot Mix Substations. This project improves the overall reliability in this area, including a contingency feed to a recently-constructed school. No alternatives were considered.



SYSTEM IMPROVEMENTS – RUS CODE 300

Hot Mix Substation

Code 351

Estimated Cost: \$144,934

Year: 2021

Description of Proposed Construction

Pole 10-44-31 to 10-55-9 – Convert 0.8 mile of single-phase #2 ACSR to three-phase 1/0 ACSR along Liberty Road.

Reason For Proposed Construction

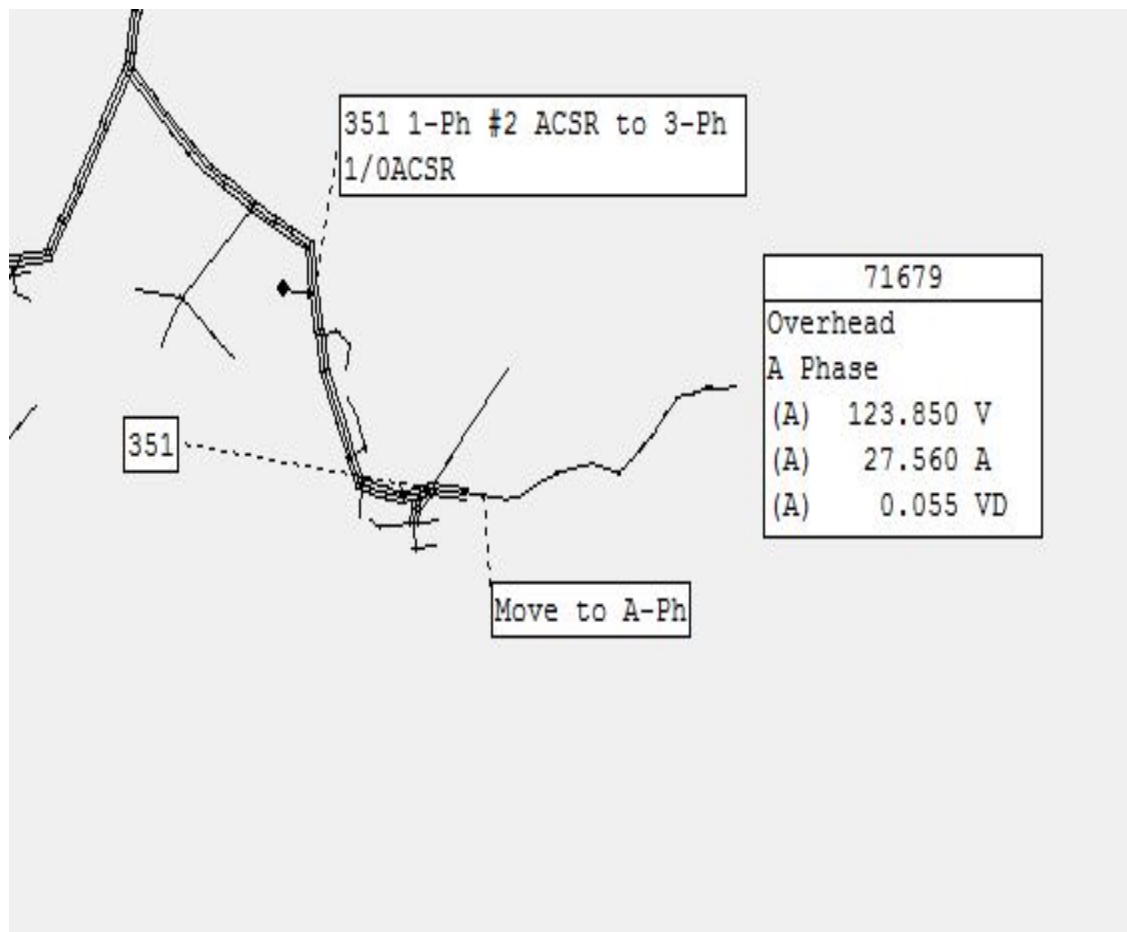
Design Criteria (DC) Item 4 is being violated.

Results of Proposed Construction

DC Item 4 will be met.

Alternative Corrective Plan Investigated

This is a radial feed, no viable alternatives are available.



SYSTEM IMPROVEMENTS – RUS CODE 300

Hot Mix Substation

Code 352

Estimated Cost: \$227,136

Year: 2021

Description of Proposed Construction

Pole 4-76-6 to 4-66-23 – Convert 1.5 miles of single-phase 6 ACWC to three-phase #2 ACSR from Wrigley to Hollow Poplar Road.

Reason For Proposed Construction

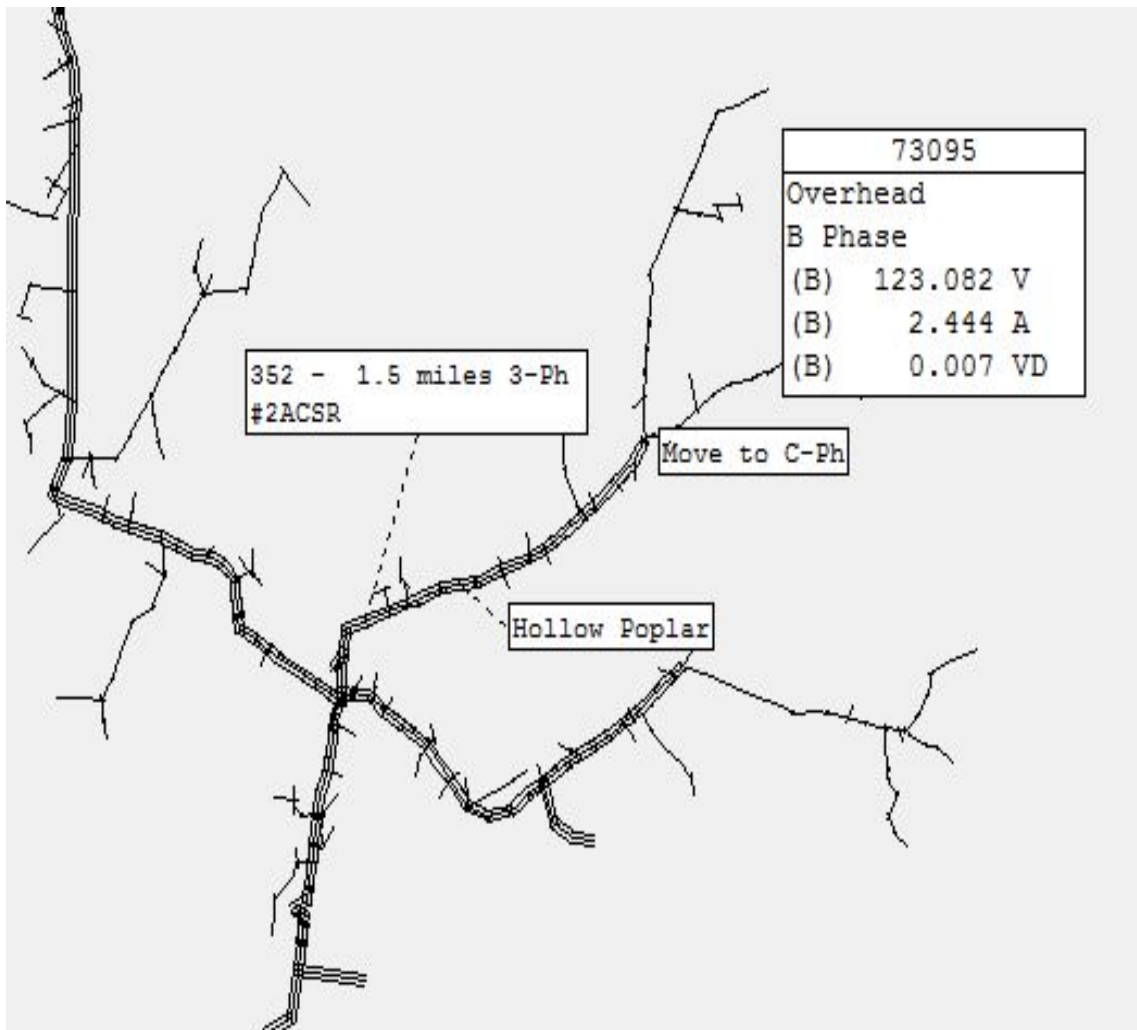
Design Criteria (DC) Item 4 is being violated.

Results of Proposed Construction

DC Item 4 will be met.

Alternative Corrective Plan Investigated

This is a radial tap from the main three-phase feeder. No alternatives were considered.



SYSTEM IMPROVEMENTS – RUS CODE 300

Maggard Substation

Code 353

Estimated Cost: \$267,718

Year: 2022

Description of Proposed Construction

Pole 17-43-64 to 17-23-3 – Convert 1.7 miles of single-phase 6 ACWC to three-phase #2 ACSR along Pricy Creek Road.

Reason For Proposed Construction

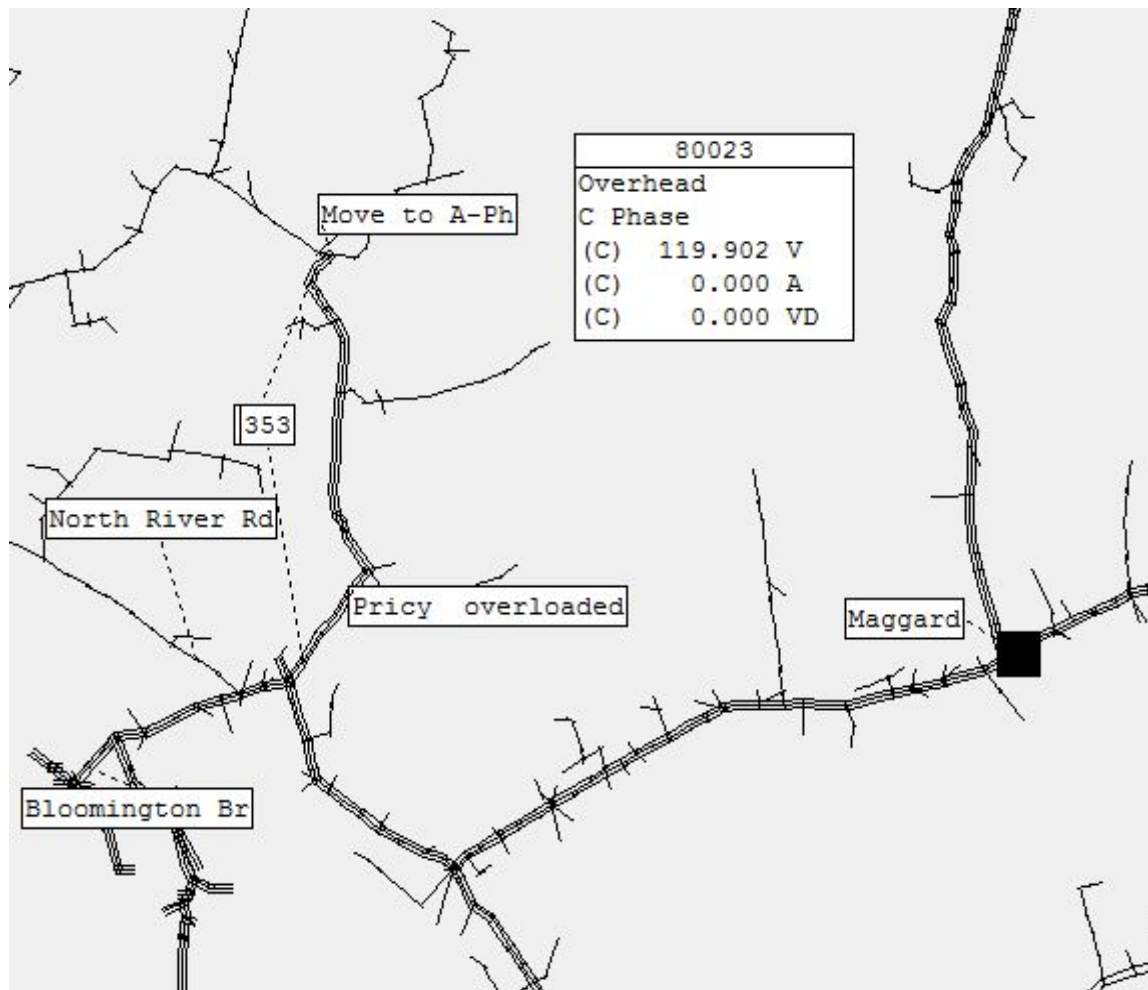
Design Criteria (DC) Item 4 is being violated.

Results of Proposed Construction

DC Item 4 will be met.

Alternative Corrective Plan Investigated

This is a radial tap from the main three-phase feeder, and is nearest to the source at Maggard. No alternatives were considered.



LICKING VALLEY CWP: IV-C

MISCELLANEOUS DISTRIBUTION EQUIPMENT – RUS CODE 600's

Meters and Transformers – RUS Code 601

600 new transformers are projected at a cost of \$916,664.

1,200 single-phase meters are projected at a cost of \$211,983.

Service Upgrades – RUS Code 602

There are 600 service upgrades projected at a total cost of \$2,547,878.

Sectionalizing – RUS Code 603

Overcurrent analysis is performed on an ongoing basis as system load and alterations occur. Device replacements or upgrades, additional substation feeders, conductor multiphasing and load shifts all require overcurrent device purchases.

Reclosers, fuses and switches are included in this category. A 2019 cost of \$75,000 for each of the four years has been allocated. LVRECC is continuing a system-wide sectionalizing study of four substations per year. This will result in the implementation of additional overcurrent protective devices. The projected, inflated, total cost for sectionalizing is \$318,485.

Voltage Regulators – RUS Code 604

There are several locations where voltage regulators will be added or removed in the CWP. The total cost for regulators is projected to be \$400,560.

CFR CODE	SUBSTATION	LOCATION/RATING	YEAR	COST
604.1	CAMPTON	20-8-4 / (3)-219 A	2019	\$55,000
604.2	CAMPTON	20-49-3 / (3)-150A	2020	\$49,900
604.3	HELECHAWA	22-18-7 / (1)-50A	2021	\$15,000
604.4	HELECHAWA	27-18-29 / (1)-50A	2019	\$13,000
604.5	HOT MIX	10-12-26 / (1)-50A	2021	\$15,000
604.6	OAKDALE	27-55-16 / (3)-219A	2021	\$59,500
604.7	OAKDALE	27-82-5 / (3)-150A	2020	\$49,900
604.8	OAKDALE	33-2-23 / (3)-100A	2020	\$45,760
604.9	OAKDALE	27-33-27 / (3)-150A	2019	\$48,000
604.10	SUBLETT	24-82-63 / (3)-100A	2022	\$49,500

LICKING VALLEY CWP: IV-C

Page 2

MISCELLANEOUS DISTRIBUTION EQUIPMENT – RUS CODE 600

Pole Changes – RUS Code 606 Including Clearance Poles

There are 1,300 projected pole changes in the CWP. This includes all maintenance and clearance poles. The cost for the pole changes is projected to be \$4,039,809.

Miscellaneous Replacements – RUS Code 607

An amount of \$424,646 is projected in the CWP for miscellaneous replacements. This includes cross arms, insulators, guys, etc.

Conductor Replacements – RUS Code 608

An amount of \$5,154,544 is projected in the CWP for aged conductor replacements. This includes replacement of conductor due to age, deterioration, and operation and maintenance recommendations.

Communications – RUS Code 615

An amount of \$25,200 is projected in the CWP for communications. LVRECC will operate a fiber optic communication circuit from Operations Control to Index substation. This will provide the necessary bandwidth to employ SCADA at the substation. The estimated cost is \$15,000.

LVRECC will be upgrading its two-way radio system. 6 handheld and 30 truck units will require programming. Two new handheld units will be purchased. The projected cost is \$10,200.

LICKING VALLEY CWP: IV-D

Page 1

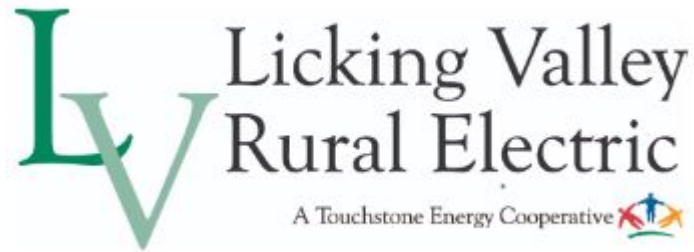
OTHER DISTRIBUTION ITEMS - RUS CODE 700

Outdoor Lights – RUS Code 702

A total of 1,200 outdoor lights are anticipated. The projected cost is \$865,859.

SCADA – RUS Code 704

LVRECC will be adding SCADA (Substation Control and Data Acquisition) in the Index Substation in a pilot program. This will provide the capability to monitor feeder data, operate and program protective devices, and control voltage regulation. The system will communicate via fiber optic technology. The projected cost is \$100,000.



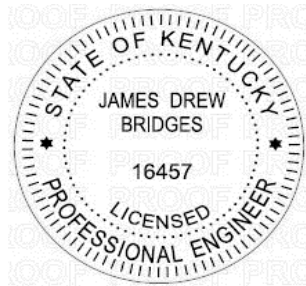
2019-2022 Construction Work Plan

Kentucky 56 Morgan

West Liberty, Kentucky

Prepared by:
Distribution System Solutions, Inc.
Union, Kentucky

I hereby certify that this 2019-2022 CWP Report was prepared by me or under my direct supervision and that I am a duly registered professional engineer under the laws of the State of Kentucky. Registration No. 16457



James Bridges, P.E.

January 9, 2019

By: _____
James D. Bridges, P.E.

KY 56 – Licking Valley RECC

Code 200 Projects

The proposed construction includes **N/A** miles of overhead tie-lines and **N/A** miles of line relocations that will be sited in existing utility right-of-way (ROW) and/or parallel public road ROW. In general, new lines would be installed within a public easement. Access to construct these projects would be from public and private roads and through utility ROW. No additional easements or tree clearing are needed to perform this work. The attached 740c environmental worksheet provides more site specific information about each project. The cooperative understands that new lines sited outside of utility or road ROW require a site-specific environmental report (ER).

Code 300 Projects

The proposed construction will consist of approximately **8.6** miles of overhead line conversions. Line conversions include line re-conductors, phase changes, etc. All line conversions will be performed within existing utility ROW (which is 40 feet in width). Access would be from public and private roads and through utility ROW. No additional easements or tree clearing are needed to perform this work. The attached 740c environmental worksheet provides more site specific information about each project.

Environmental Commitments

Any streams and/or wetlands located in the right-of-way of new lines, relocations, or line conversions, will be spanned or avoided entirely. Unless authorized by state and/or federal permits or licenses, vehicles will not traverse these water features. The cooperative has reviewed the most recent species list from the U.S. Fish and Wildlife Service, covering portions of Breathitt, Elliot, Lee, Magoffin, Menifee, Morgan, and Wolf Counties. The proposed project areas (i.e., utility and road ROW) are not suitable habitat for the listed species; therefore, no effects to listed species are expected. No additional easements or tree clearing are needed to perform this work. No work will occur around dunes or shoreline. The Short's Goldenrod does not exist in the Cooperative's service territory.

**KY 56 2019-2022 WORK PLAN
FORM 740c - ENVIRONMENTAL CHECKLIST**

1. DISTRIBUTION				Was project approved in a previous CWP or Amendment? If yes: provide status. If no: provide anticipated classification (per 7CFR1794)	Will work be entirely within existing ROW, generating station, industrial park, or substation fencing? If no: see next column. If yes: (1) is there new land disturbance? has SHPO provided feedback? (2) Are T&E species occurrences or habitat in/near project area? (3) Are federal/state lands (including wildlife refuges), floodplains or wetlands crossed?	For substations: will new land disturbance be <1 acre, 1-5 acres, or >5 acres? For lines: provide the voltage, length, ROW width, & ROW type (road vs private; if road, distance from road).	Does the project require preparation of an Environmental Assessment or Environmental Impact Statement? If yes, the environmental work must be approved before the application submittal or removed from loan.
100	a. New Line: (Excluding Tie-Lines)						
	<u>Construction</u>	<u>Consumers</u>	<u>Miles</u>				
	New Construction	1200	14.8	NA	NA	NA	NA
	Total	1200	14.8	NA	NA	NA	NA
200	b. New Tie-Lines						
	<u>Line Designation</u>		<u>Miles</u>				
	N/A		N/A	N/A	NA	NA	NA
300	c. Conversion and Line Changes						
	<u>Line Designation</u>		<u>Miles</u>				
309	1-Ph to #2 ACSR 3-Ph		0.5	YES-CARRYOVER	Existing ROW - Yes No Tree Clearing Required SHPO - NA T&E Species - NA Federal/State lands, floodplains, wetlands - NA	NA	NA
310	3-Ph to 336.4 ACSR 3-Ph		4.1	YES-CARRYOVER	Existing ROW - Yes No Tree Clearing Required SHPO - NA T&E Species - NA Federal/State lands, floodplains, wetlands - NA	NA	NA
351	1-Ph to 1/0 ACSR 3-Ph		0.8	No	Existing ROW - Yes No Tree Clearing Required SHPO - NA T&E Species - NA Federal/State lands, floodplains, wetlands - NA	NA	NA
352	1-Ph to #2 ACSR 3-Ph		1.5	No	Existing ROW - Yes No Tree Clearing Required SHPO - NA T&E Species - NA Federal/State lands, floodplains, wetlands - NA	NA	NA
353	1-Ph to #2 ACSR 3-Ph		1.7	No	Existing ROW - Yes No Tree Clearing Required SHPO - NA T&E Species - NA Federal/State lands, floodplains, wetlands - NA	NA	NA

Total Code 300 project miles

8.6

600	f. Miscellaneous Distribution Equipment	
601	(1) Transformers & Meters	
	<u>Transformers & Meters</u>	
	Trans	600
	Meters	1200
	<i>Subtotal code 601 . . . (included in total of all 600 codes below)</i>	
602	(2) Sets of Service Wires to increase Capacity	600
603	(3) Sectionalizing Equipment	\$318,485
604	(4) Regulators	\$400,560
605	(5) Capacitors	0
606	(6) Pole Replacement	1300
607	(7) Miscellaneous Replacement	\$424,646
608	(8) Conductor Replacement	60 miles
615	(9) Communications	1 Substation will be equipped with fiber communications
700	g. Other Distribution Items	
702	(1) Outdoor Lighting	1200
704	(2) SCADA Equipment	\$100,000

NA	NA	NA	NA
NA	NA	NA	NA
NA	NA	NA	NA
NA	NA	NA	NA
NA	NA	NA	NA
NA	NA	NA	NA
NA	NA	NA	NA
No - 1970.53(d)(4)	Existing ROW - Yes No Tree Clearing Required SHPO - NA T&E Species - NA Federal/State lands, floodplains, wetlands - NA	NA	NA
NA	Existing ROW - Yes No Tree Clearing Required SHPO - NA T&E Species - NA Federal/State lands, floodplains, wetlands - NA	NA	NA
NA	NA	NA	NA
NA	NA	NA	NA

2. TRANSMISSION

800	a. New Line			NA	NA	NA	NA
	Line Designation						
900	b. New Substation, Switching Station, etc.			NA	NA	NA	NA
1000	c. Line and Station Changes			NA	NA	NA	NA
1100	d. Other Transmission Items			NA	NA	NA	NA
1200	e. GENERATION (including Step-up Station at Plant)			NA	NA	NA	NA
1300	f. HEADQUARTERS FACILITIES						
1301	New or additional Facilities			NA	NA	NA	NA
1302				NA	NA	NA	NA
1400	g. ACQUISITIONS						
1401	Consumers		Miles	NA	NA	NA	NA
1402				NA	NA	NA	NA
1500	h. ALL OTHER						
1501				NA	NA	NA	NA
1502				NA	NA	NA	NA

Licking Valley Rural Electric Cooperative Corporation
Case No. 2020-00338
AG's Data Requests

17. Refer to the Bradley Testimony, page 7, in which Ms. Bradley states that Licking Valley RECC does not propose to adjust its depreciation rates, but the Company's depreciation expense has increased by approximately 15% since the 2016 rate case. Explain in detail why the depreciation expense has drastically increased since 2016.

Response:

Depreciation expense has increased since the last rate case due to the continued investment in gross plant since that time. Most of this investment has been for poles, overhead conductor, and metering. Please see the comparison of gross plant in service as reported in the Annual Financial Reports filed by Licking Valley with the Commission. Over the years, pre-existing gross plant continued to depreciate, and new plant also began to depreciate, both of which contribute to increased annual depreciation expense over the entire period. Please see attached.

Licking Valley RECC
Utility Plant / Depreciation Expense Data

#	Item	Acct	2015	2019	Incr(Decr)	%
1	<u>Distribution Plant</u>					
2	POLES, TOWERS AND FIXTURES	364	\$ 22,706,644	\$ 25,252,522	\$ 2,545,878	11.21%
3	OVERHEAD CONDUCTORS AND DEVICE	365	\$ 19,404,850	\$ 21,563,396	\$ 2,158,546	11.12%
4	UNDERGROUND CONDUCTORS AND DEV	367	\$ 598,232	\$ 698,524	\$ 100,292	16.76%
5	LINE TRANSFORMERS	368	\$ 8,578,182	\$ 8,975,621	\$ 397,439	4.63%
6	SERVICES	369	\$ 5,941,104	\$ 6,684,790	\$ 743,686	12.52%
7	METERS	370	\$ 3,037,787	\$ 5,654,148	\$ 2,616,361	86.13%
8	INSTALLATIONS ON CONSUMERS PRE	371	\$ 2,239,900	\$ 2,777,013	\$ 537,113	23.98%
9			\$ 62,506,699	\$ 71,606,014	\$ 9,099,315	14.56%
10	<u>General Plant</u>					
11	OFFICE FURNITURE AND EQUIPMENT	391	\$ 792,864	\$ 828,587	\$ 35,723	4.51%
12	TRANSPORTATION EQUIPMENT	392	\$ 2,135,619	\$ 2,654,992	\$ 519,373	24.32%
13	STORES EQUIPMENT	393	\$ 62,927	\$ 70,566	\$ 7,639	12.14%
14	TOOLS, SHOP & GARAGE EQUIPMENT	394	\$ 98,650	\$ 102,776	\$ 4,126	4.18%
15	LABORATORY EQUIPMENT	395	\$ 161,033	\$ 1,565,786	\$ 1,404,753	872.34%
16	POWER OPERATED EQUIPMENT	396	\$ 180,973	\$ 181,695	\$ 722	0.40%
17	COMMUNICATION EQUIPMENT	397	\$ 268,186	\$ 270,253	\$ 2,067	0.77%
18	MISCELLANEOUS EQUIPMENT	398	\$ 108,225	\$ 107,271	\$ (954)	-0.88%
19			\$ 3,808,477	\$ 5,781,926	\$ 1,973,449	51.82%
20						
21	Total Distribution & General Plant		\$ 66,315,176	\$ 77,387,940	\$ 11,072,764	16.70%

Licking Valley Rural Electric Cooperative Corporation
Case No. 2020-00338
AG's Data Requests

18. Refer to the Bradley Testimony, page 7, in which Ms. Bradley asserts that as of December 31, 2019, Licking Valley RECC had 43 employees, including 41 full-time and 2 part-time employees. Ms. Bradley then states that currently, Licking Valley has 41 full-time employees. Of the 43 employees during 2019, 5 were salaried and 38 were hourly employees.
- a. Explain whether Licking Valley currently employs the above-referenced 2 part-time employees.
 - b. If the answer to (a) is that Licking Valley does not currently employ the 2 part-time employees, explain whether Licking Valley RECC agrees that all costs associated with these positions should not be included in rates. If Licking Valley RECC does not agree with this statement then explain why not in detail.
 - c. Provide a position title and job description for each part-time employee.
 - d. Provide the number of employees that Licking Valley RECC employs as of the date of this request, designated by full-time and part-time employees.
 - e. Provide the job titles of the 5 salaried positions, and specify whether these positions are non-union or union.
 - f. Specify whether the 38 hourly employees are non-union or union.
 - g. If Licking Valley RECC has union employees, provide a copy of the union contract.

Response:

- a. Licking Valley does not currently employ the two part-time employees.
- b. Licking Valley agrees that all costs associated with these positions should not be included in rates.
- c. Please see attached.

- d. Licking Valley employs 40 full-time employees at this time.
- e. Please see attached.
- f. The 38 employees are non-union employees.
- g. Licking Valley does not have any union employees.

LICKING VALLEY RURAL ELECTRIC COOPERATIVE CORPORATION

KENTUCKY 56 MORGAN

POSITION DESCRIPTION

Title: Part-Time Laborer
Department/Section: Operations and Maintenance
Grade:
Salary Rate/Range:
Classification: Hourly
Exempt Status: Non-Exempt
Reports to: Supervisor of Individual Assigned
Supervises: None
Normal Duty Assignments
Received From: Malone Warehouse Office

I. POSITION SUMMARY:

To provide maximum service to member-consumer by:

Rendering prompt, efficient, courteous, and reliable service with line crew personnel that will promote goodwill between the Cooperative and its member-consumers.

Performing all work required in connection with providing service to line personnel from a ground position during the construction, replacement, and maintenance of distribution lines and electrical service with an alertness for all hazards and for the safety of others on the job with particular emphasis for the line personnel on the pole and be in a position to see the existence of hazards and able to assist in case of need.

To promote, within established policies and procedures, a dynamic member-service program by taking every opportunity to acquaint the membership with the use of electricity and to encourage their increased proper consumption of electrical services.

To promote, within established policies and procedures, effective public relations by being able to inform the public about the rural electric program and by developing enthusiastic support for it and by actively participating in community and civic affairs.

II. DUTIES AND RESPONSIBILITIES

Assists line personnel on pole by sending up all material needed for the proper construction, maintenance, and repair of lines.

Position Description
Part-Time Laborer
Page 02 of 05

Learns the proper use of all tools and work equipment and their operation; including the operation of the winch truck, boom truck, and other types of truck equipment.

Within the limits of established policies, procedures, and budgets, assumes responsibility and has commensurate authority as delegated by the supervisor, except as may be specified, for the following activities.

Be on the alert for the safety of others on the job, with particular emphasis for the line personnel on the pole when working on "hot lines" and be in a position to see existence of hazards and able to assist in case of need.

Sees that job location is left in safe and neat condition by removing any odd pieces of wire, cartons, and other discarded material.

Sees that all material and tools are properly placed on vehicles and kept in orderly manner.

Be on the alert for all hazards that exist in the form of falls, electric shock, electric flash, falling objects, and traffic, and be familiar with the use of protective and safety equipment and at all times follow the best safety practices.

Loads and unloads poles, transformers, and other material.

Assembles and installs down guy(s) as directed on job sites.

Cuts right-of-way and trims trees in accordance with detailed instructions provided by responsible person in charge.

Digs pole holes and anchor holes; sets anchors; sets, aligns, and frames poles according to RUS specifications as directed while on the job.

Performs work to connect services at meter poles or building and roads meters when required.

Performs work in response to trouble calls when requested.

Performs first aid and artificial respiration and becomes familiar with pole top resuscitation procedures.

Position Description
Part-Time Laborer
Page 03 of 05

Complies with, while operating any vehicle assigned to him/her, all traffic laws, safety rules, regulations, and practices. At all times looks out for the safety of others, the vehicle, its occupants, and its load.

Patrols the distribution lines of the Cooperative and observes any existing unsafe or unsatisfactory conditions and reports same to his/her supervisor.

Advises in accordance with established policies and procedures the need for promotional or public relations services, including new home construction and remodeling; promotes increased usage of electricity and adequate wiring.

Receives communications and directives and orally confirms full understanding; keeps supervisor informed of important information concerning the job and work equipment.

Keeps informed of all Cooperative policies and procedures related to his/her position.

Refrains from use of profanity, obscene language, and improper actions at all times.

Operates radio on truck, abiding by the Federal Communication Commission's Rules and Regulations in operating the radio.

Attends and participates in job safety and other training programs.

Attends and participates in annual meeting and other promotional activities as required or directed.

Assists in the keeping of materials, including poles, in order at warehouse and pole yard as directed or required.

Assists in the keeping of grounds at the headquarters building and warehouse, including snow removal, as required or directed.

Attaches ground, secondary and primary conductors to transformer before hoisting for line person on pole.

Participates with the supervisor in the development of plans and procedures for the most effective use of working time for the above responsibilities.

Position Description
Part-Time Laborer
Page 04 of 05

Establishes and maintains the following contacts and relationships for the purpose of coordination and communication.

To receive instruction, to seek advice, assistance, and information when necessary; to advise, assist, and inform in any matter pertaining to assigned work for which responsible.

Cooperates in maintaining pleasant working relationships and improving morale; to exchange ideas, information, and job experiences that will benefit the Organization and insure the continued progress of the Cooperative.

Explains at every opportunity the services offered by the Cooperative, its rates, policies, procedures, and benefits; and the role of the member-owned system.

Actively participates and represents the Cooperative in civic and community affairs and projects in such a manner as to bring respect and improve public relations for the Cooperative; seeks every opportunity to obtain understanding, acceptance, and support for the Cooperative's objectives, plans, and programs.

Keeps up to date and as well informed as possible about the Rural Electrification Program; the Cooperative; its policies, plans, programs and regulations.

Maintains good public relations in all contacts with member consumers and general public.

Cooperates with all employees in preserving good working relationships.

Responsible for rendering first aid/medical assistance and/or basic life support as trained by LVRECC as part of job duty solely for the purpose of responding to potential job related injury(ies) or illness(es) in conformance to the Occupational Safety and Health Administration Bloodborne Pathogens Standard, 29 CAR Part 1910.1030, Occupational Exposure to Bloodborne Pathogens; Final Rule.

Performs other duties as required by the position or as assigned by the General Manager/CEO.

III. Total Number of Employees Supervised: None.

Position Description
Part-Time Laborer
Page 05 of 05

The employment-related position description issued by the Cooperative serves only as a guide to the relationship between the Cooperative and present or future employee(s). Further, this position description is not to be used, construed or regarded as creating an all-inclusive expressed or implied requirement(s) of this position.

Employee

Date

Supervisor

Date

General Manager/CEO

Date

Job Titles of Salaried Positions

Accountant

General Manager/CEO

Manager of Administrative Services

General Superintendent

Executive Secretary to the General Manager/CEO

Licking Valley Rural Electric Cooperative Corporation
Case No. 2020-00338
AG's Data Requests

19. Refer to the Bradley Testimony, pages 7-8. Ms. Bradley states that Licking Valley RECC offers health insurance, life insurance, long-term disability, and participation in a 401(k) defined-contribution plan. Ms. Bradley further assets that as of the test year, Licking Valley RECC paid 100% of health insurance premiums for single coverage , and 89.63% for family coverage. However, Ms. Bradley states that as of September 1, 2020, all employees began paying 10.37% toward the health insurance premiums.
- a. What year did Licking Valley RECC begin requiring employees to contribute toward family insurance coverage?
 - b. Explain why Licking Valley RECC found it reasonable to contribute 100% toward health insurance premiums for employees.
 - c. Provide a detailed account of the long-term disability insurance that Licking Valley provides to its employees. Ensure to include the percentage amounts that Licking Valley contributes versus what the employee contributes to long-term disability insurance.
 - d. Provide a detailed account of the 401(k) defined-contribution plan that Licking Valley RECC provides to its employees. Ensure to include the contributions that Licking Valley RECC makes versus contributions the employees make to the 401(k) defined-contribution plan.
 - e. Explain whether Licking Valley RECC provides a pension plan to any of its employees, and if so, provide the details of the pension plan.
 - f. Identify whether any employee participates in both a pension plan and the 401(k) plan.

Response:

- a. Licking Valley has researched internal records to determine when its employees began contributing toward family insurance coverage. However, the exact year when these contributions began cannot be determined. Licking Valley can say with

certainty that the contributions have been in place and required for more than 40 years.

- b. Licking Valley's internal records also do not reveal when the decision was made for the company to pay 100% of health insurance premiums for single coverage employees. Again, Licking Valley can say with certainty that this contribution structure has been in place for more than 40 years. Current Licking Valley management cannot provide reliable information as to why these decisions were made decades ago, but can assume that it was thought reasonable to pay the entire coverage for an individual Licking Valley employee, but not for the employee's dependents.
- c. Please see attached the Summary Plan Description for Licking Valley's long-term disability insurance. Licking Valley contributes 100% of its employees' premiums for long-term disability insurance.
- d. Please see attached the Adoption Agreement for Licking Valley's 401(k) defined-contribution plan. An employee must make an annual Employee Elective Contribution of at least four percent (4%) of his/her base compensation in order to be eligible to receive Licking Valley's Employer Base Contribution of eleven percent (11%) for his/her benefit. Licking Valley makes no other employer matching contribution for the benefit of its employees.
- e. Licking Valley does not offer a pension plan to its employees.
- f. Please see the response to Item e above.



ASSURANT
Employee
Benefits

Group Benefits

**Licking Valley Rural Electrical
Cooperative**

Long Term Disability

**CERTIFICATE OF
GROUP INSURANCE**

Union Security Insurance Company certifies that the insurance stated in this Certificate became effective on the Effective Date shown in your Schedule. This Certificate is subject to the provisions of the below numbered *policy* issued by Union Security Insurance Company to the *policyholder*.

Policyholder: Licking Valley Rural Electrical Cooperative

Group Policy Number: 39,566

Participation Number: 0

Effective Date: For any *period of disability* starting on or after July 1, 2003.

This Certificate replaces any and all Certificates and Certificate Endorsements, if any, issued to you under the *policy*.

Michael J Peninger

Executive Vice-President

**The Insurance in this Certificate is
not in force unless this space is covered by a
Schedule sticker, Form SCHED**

SCHEDULE

Long Term Disability Insurance

Schedule Amount: 60% of *monthly pay* subject to a maximum Schedule Amount of \$3,000 per month.

For each day of a period less than a full month, the Schedule Amount will be 1/30th of the amount determined above.

Monthly pay means your basic monthly pay from the *policyholder* or an *associated company*, and is determined on the day before the *period of disability* starts. Bonuses, overtime, and other compensation not considered by us as basic wages or salary are not included. However, a monthly average of any commissions received during the prior full calendar year will be included. If you have been eligible to receive commissions for less than a full calendar year, *monthly pay* will include a monthly average of commissions received during the time you were eligible to receive them.

If you are an hourly employee, *monthly pay* will be based on your hourly rate of pay, but not on more than 40 hours per week.

Minimum Benefit: If you normally work at least 30 hours per week before your *period of disability* starts, the minimum monthly benefit will be \$100. For any part of a *period of disability* less than a full month, the Minimum Benefit is 1/30th of \$100 for each day of *disability* after the *qualifying period* ends.

Qualifying Period: 1 month

Maximum Interruption During Qualifying Period: 5 days

This Maximum applies to all returns to *active work* during any one *qualifying period*.

Maximum Benefit Period: We will not pay benefits beyond the maximums stated below, based on the person's age on the day the *period of disability* started.

<u>Age</u>	<u>Maximum Benefit Period</u>
Before 60	the day before retirement age*
60 but before 65	the day before retirement age* or 36 months of <i>disability</i> ** , whichever is longer
65 but before 68	24 months of <i>disability</i> **
68 but before 70	18 months of <i>disability</i> **
70 but before 72	15 months of <i>disability</i> **
72 or more	12 months of <i>disability</i> **

*"Retirement age" means the Social Security Normal Retirement Age as stated in the 1983 revision of the United States Social Security Act.

**following the end of the *qualifying period*.

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GENERAL DEFINITIONS

These terms have the meanings shown here when *italicized*. The pronouns "we", "us", "our", "you", and "your" are not *italicized*.

Active work means the expenditure of time and energy for the *policyholder* or an *associated company* at your usual place of business on a *full-time* basis. If you are working on the day your coverage would otherwise take effect, you will be considered to be at *active work* on that day only if, when your work begins on that day, it would be reasonable to expect that you would be physically and mentally able to complete a *full-time* week of work in your *regular occupation*.

Associated company means any company shown in the *policy* which is owned by or affiliated with the *policyholder*.

Contributory means you pay part of the premium.

Covered person means an eligible employee or member of the *policyholder*, or an *associated company* who has become insured for a coverage.

Doctor means a person acting within the scope of his or her license to practice medicine, prescribe drugs or perform surgery. Also, a person whom we are required to recognize as a *doctor* by the laws or regulations of the governing jurisdiction, or a person who is legally licensed to practice psychiatry, psychology or psychotherapy and whose primary work activities involve the care of patients, is a *doctor*. However, neither you nor a *family member* will be considered a *doctor*.

Eligible class means a class of persons eligible for insurance under the *policy*. This class is based on employment or membership in a group.

Family member means a person who is a parent, spouse, child, sibling, domestic partner, grandparent or grandchild of the *covered person*.

Full-time means working at least 30 hours per week, unless indicated otherwise in the *policy*.

Home office includes our Home Office located in St. Paul, Minnesota, and our office in Kansas City, Missouri.

Injury means accidental bodily injury. It does not mean intentionally self-inflicted injury while sane or insane.

No-fault motor vehicle coverage means a motor vehicle plan that pays disability or medical benefits without considering who was at fault in any accident that occurs.

Noncontributory means the *policyholder* pays the premium.

Policy means the group policy issued by us to the *policyholder* that describes the benefits for which you may be eligible.

Policyholder means the entity to whom the *policy* is issued.

Proof of good health means evidence acceptable to us of the good health of a person.

We, us, and our mean Union Security Insurance Company.

You and your mean an employee or member of the *policyholder* or an *associated company* who has met all the eligibility requirements for a coverage.

DEFINITIONS FOR LONG TERM DISABILITY INSURANCE

Accommodation expense means the costs your employer incurs to accommodate your *disability*, as required by the Americans with Disabilities Act or similar legislation. It also means costs you incur for tools, equipment, furniture, computer software, or other items necessary for you to return to work. The amount of the *accommodation expense* will be limited to \$3,000 for each *period of disability*.

Disability or *disabled* means that in a particular month, you satisfy either the Occupation Test or the Earnings Test, as described below. You may satisfy both the Occupation Test and Earnings Test, but you need only satisfy one Test to be considered *disabled*.

Occupation Test

- During the first 36 months of a *period of disability* (including the *qualifying period*), an *injury*, sickness, or pregnancy requires that you be under the *regular care and attendance* of a *doctor*, and prevents you from performing at least one of the *material duties* of your regular occupation; and
- after 36 months of *disability*, an *injury*, sickness, or pregnancy prevents you from performing at least one of the *material duties* of each *gainful occupation* for which your education, training, and experience qualifies you.

Earnings Test

You may be considered *disabled* in any month in which you are actually working, if an *injury*, sickness, or pregnancy, whether past or present, prevents you from earning more than 80% of your *monthly pay* in that month in any occupation for which your education, training or experience qualifies you. On each anniversary of the date your *disability* started, we will increase by 7.5% the *monthly pay* figure we use to decide whether you are *disabled* under this test. This increase will not affect the amount of benefit we pay.

If your actual earnings during any month are more than 80% of your *monthly pay* (including the 7.5% increase(s)), you will not be considered *disabled* under the Earnings Test during that month. Salary, wages, partnership or proprietorship draw, commissions, bonuses, or similar pay, and any other income you receive or are entitled to receive will be included. However, sick pay and salary continuance for periods not at work will not be included. Any lump sum payment will be pro-rated, based on the time over which it accrued or the period for which it was paid.

You may still be considered *disabled* according to the Occupation Test, without regard to your level of current earnings, if you meet the requirements of that Test.

If you meet the Earnings Test, *full-time* work in which you are performing all of the *material duties* of your regular or some other occupation will not interrupt the *qualifying period* or the *period of disability*. If you meet the Occupation Test only, work on less than a *full-time* basis or work in which you are not doing all of the *material duties* of your regular occupation, will not interrupt the *qualifying period* or the *period of disability*.

Education expense means, in your *rehabilitation plan*, the reasonable costs you incur which are required for your education or training to return to work. These costs may include the cost of tuition, books, computers, and other equipment. In your spouse's *rehabilitation plan*, *education expense* means the reasonable costs your spouse incurs which are required for your spouse's education or training. These costs may include the cost of tuition, books, computers, and other equipment.

Family care expense means the amount you spend for care of a family member in order for you to work or be retrained under a *rehabilitation plan*. To qualify:

DEFINITIONS FOR LONG TERM DISABILITY INSURANCE (continued)

- your family member must be under age 13, or be physically or mentally incapable of caring for him or herself;
- your family member must be dependent on you for support and maintenance; and
- the person who cares for your family member cannot be a relative.

Not more than \$350 per family member per month will be included. A pro-rated amount will apply to any period shorter than a month.

Gainful occupation means an occupation in which you could reasonably be expected to earn at least as much as your Schedule Amount.

Government plan means the United States Social Security Act, the Railroad Retirement Act, the Canadian Pension Plan, similar plans provided under the laws of other nations, and any plan provided under the laws of a state, province, or other political subdivision. It also includes any public employee retirement plan or any teachers' employment retirement plan, or any plan provided as an alternative to any of the above acts or plans. It does not include any Workers' Compensation Act or similar law, or the Maritime Doctrine of Maintenance, Wages, or Cure.

Hospital means a facility supervised by 1 or more *doctors* and operated under state and local laws. It must have 24-hour nursing service by registered graduate nurses. It may specialize in treating alcoholism, drug addiction, chemical dependency, or mental disease, but it cannot be a rest home, convalescent home, or a home for the aged.

Hospital confined and *hospital confinement* mean staying in a *hospital* for 24 hours a day.

Long term disability insurance means the group long term disability insurance under the *policy* issued by us to the *policyholder*.

Material duties means the sets of tasks or skills required generally by employers from those engaged in a particular occupation. One *material duty* of your regular occupation is the ability to work for an employer on a *full-time* basis as defined in the *policy*.

Medical expense means the reasonable costs you incur for medical treatment, physical therapy, and adaptive equipment necessary for your vocational rehabilitation, in excess of amounts paid or payable by third parties and any amounts under a policy of major medical coverage.

Mental illness means neurosis, psychoneurosis, psychopathy, psychosis, depression, eating and sleeping disorders, or mental or emotional diseases or disorders of any kind including those caused by chemical imbalance. It does not include dementia, organic brain syndromes, delirium, amnesia syndromes or organic delusional or hallucinogenic syndromes.

Moving expense means the costs you incur to move more than 35 miles so that you can attend school or accept gainful work. In a spouse's *rehabilitation plan*, the costs are those incurred by the family so that the spouse can attend school or accept gainful work.

Other plan means any group disability plan sponsored by your employer, the *policyholder*, or an *associated company*, except the one provided under the *policy*.

Period of disability means the time that begins on the day you become *disabled* and ends on the day before you return to *active work*. If you satisfy the *qualifying period* and then:

- return to *active work*;
- become *disabled* again; and
- remain insured under the *policy*;

the same *period of disability* may continue. Your return to *active work* must be for less than:

DEFINITIONS FOR LONG TERM DISABILITY INSURANCE (continued)

- 6 months, if the later *disability* results from the same cause, or a related one; or
- 1 day, if the later *disability* results from a different cause.

If your return to *active work* meets either of the above conditions, you do not have to satisfy the *qualifying period* again. The Maximum Benefit Period will continue on the day you become *disabled* again.

If you return to *active work* for more than the time shown above, and then become *disabled* again, you will start a new *period of disability*. You must satisfy the *qualifying period* again and the Maximum Benefit Period will start over.

Qualifying period means the length of time during a *period of disability* that you must be *disabled* before benefits are payable. If you satisfy the Earnings Test during the entire *qualifying period*, the Maximum Interruption During Qualifying Period in the Schedule will not apply. If application of the Occupation Test and the Maximum Interruption During Qualifying Period would result in an earlier entitlement to benefits, we will apply those provisions instead of the Earnings Test. In satisfying the Occupation Test, if you:

- return to *active work* during the *qualifying period* for no more than the maximum number of days shown in the Schedule;
- remain insured under the *policy*; and
- become *disabled* again for the same cause or one related to it;

you will not have to satisfy again the part of the *qualifying period* that you have already fulfilled.

In any case, you cannot satisfy any part of the *qualifying period* by any *period of disability* that results from a cause for which we do not pay benefits.

Any days of *active work* (including weekends in between) will not count in satisfying the *qualifying period*.

Regular care and attendance means care at a frequency medically appropriate for your condition. If your condition does not require frequent visits to your *doctor*, neither will we.

Rehabilitation plan means a written agreement between you and us in which, at your request, we agree to provide, arrange, or authorize appropriate vocational or physical rehabilitation services.

A spouse's *rehabilitation plan* means a written agreement between you, your spouse, and us in which, at your request, we agree to provide, arrange or authorize appropriate vocational or physical rehabilitation services.

Retirement plan means a formal or informal retirement plan, whether or not under an insurance or annuity contract. It does not include:

- a plan you pay for entirely;
- a qualified profit-sharing plan;
- a thrift plan;
- an individual retirement account (IRA);
- a tax sheltered annuity (TSA);
- a stock ownership plan;
- a *government plan*; or
- a plan that qualifies under Internal Revenue Service Code 401(k).

Social security plan means:

DEFINITIONS FOR LONG TERM DISABILITY INSURANCE (continued)

- the United States Social Security Act;
- the Railroad Retirement Act;
- the Canadian Pension Plan; or
- any similar plan provided under the laws of any other nation.

It also means any public employee retirement plan, or teachers' employment retirement plan provided as an alternative to rather than a supplement for such plans.

SSA representatives are persons or organizations which specialize in assisting people to obtain disability benefits under the United States Social Security Act. If you appoint an *SSA representative*, and they agree you are a good candidate, they will help you pursue your Social Security claim.

ELIGIBILITY AND TERMINATION PROVISIONS

Exception to Effective Date

If you are not at *active work* on the day you would otherwise become insured, your insurance will not take effect until you return to *active work*. If the day your coverage would normally take effect is not a regular work day for you, your coverage will take effect on that day if you are able to do your regular job.

When Your Insurance Ends

Your insurance will end on the date:

- the *policy* ends;
- the *policy* is changed to end the insurance for your *eligible class*;
- you are no longer in an *eligible class*;
- you stop *active work*; or
- a required contribution was not paid.

LONG TERM DISABILITY INSURANCE

Insurance Provided

If you become *disabled* while insured under the *policy*, we will pay long term disability benefits if you satisfy the *qualifying period*. We will continue to pay benefits during your *disability*, but not beyond the Maximum Benefit Period. Any benefits are subject to the provisions of the *policy*.

Amount of Benefit

The amount of benefit we will pay is the Schedule Amount minus the Offset Amount. However, if the Schedule Amount plus the amount of benefits and payments from Other Sources is more than 70% of your *monthly pay*, your benefit will be further reduced by the excess.

Offset Amount

If you are eligible for any of the following benefits, the total of all monthly benefits plus the pro-rated amount of any lump sum payments will be subtracted from the Schedule Amount:

- group disability benefits from any *other plan*.
- disability benefits from the United States Social Security Act, including dependent benefits, payable because of your *injury*, sickness, or pregnancy.
- disability benefits from a *government plan*, except Social Security.
- any benefits (except medical or death benefits) or any amount received in a settlement or compromise of your rights, under:
 - any Workers' Compensation Act (or a similar law); or
 - the Maritime Doctrine of Maintenance, Wages or Cure.
- retirement benefits, disability benefits, or similar benefits (not including your contributions) from a *retirement plan* sponsored by your employer, the *policyholder*, or an *associated company*.

Early retirement benefits from a *retirement plan* will be included only if:

- you choose to receive them; or
- they would not reduce the normal retirement benefit under the *retirement plan* sponsored by your employer.
- retirement benefits from a *government plan*.

Other Sources

- If you are eligible to receive any salary, wages, partnership or proprietorship draw, commissions, or similar pay from any work you do, we will not consider such income for the 12 consecutive months starting on the day you become entitled to it, as long as the sum of:
 - the income described above,
 - the Schedule Amount, and
 - benefits from any source described in Other Sources,

is not more than 100% of your *monthly pay*. If the sum is more than 100% of your *monthly pay*, we will subtract the amount over 100% from the Schedule Amount when determining your benefit under the *policy*.

LONG TERM DISABILITY INSURANCE (continued)

After 12 months, we will consider 70% of the amount determined after reducing any salary, wages, partnership or proprietorship draw, commissions or similar pay you earn from any work you do, by any *family care expense*.

- any group disability insurance contract, except one sponsored by your employer, the *policyholder*, or an *associated company*.
- any *no-fault motor vehicle coverage*, unless:
 - state law or regulation does not allow group disability benefits to be reduced by benefits from *no-fault motor vehicle coverage*; or
 - the *no-fault motor vehicle coverage* determines its benefits after benefits have been paid under the *policy*; or
 - the benefits are provided under optional coverage.

Estimate of Benefits

If you:

- are eligible for benefits from any of the above sources; or
- would be paid such benefits if you had applied for them or had applied for them on time;

we will figure your monthly benefit as though you are receiving these other benefits, even if you are not.

We will:

- estimate the amount of your Social Security benefit; and
- offset that amount as described above;

until we receive notice of a denial of such benefits at the first level of appeal after an initial denial.

Social Security Assistance

Your claim for Social Security disability benefits may be denied up to the reconsideration level. If it is, we will have it reviewed by an *SSA representative*, at your request.

If we consider you a good candidate, we will start this process. We will give you a list of *SSA representatives*. If you choose from this list, we will pay their fee.

Whether you use our help or not, we will reimburse you for the fee charged you by your *SSA representative*. You must become entitled to Social Security disability benefits while eligible for benefits under our *policy*. Our reimbursement is limited to the fee approved by the Social Security Administration. We may reduce any overpayment calculated in our claim.

Adjustment of Benefits

If we find that the amount of benefits from any source should be different from the amount we used to figure your monthly benefit, we will adjust it.

If we paid you less than we should have, we will pay you the difference.

If we paid you more than we should have, you must pay us the difference. We may reduce your benefit or stop paying benefits until the overpayment is recovered. If we reduce your benefit, or stop paying benefits, the Minimum Benefit will not be payable.

LONG TERM DISABILITY INSURANCE (continued)

Lump Sum Benefit

If you receive benefits from any source in a lump sum, we will pro-rate it over the time in which it accrued, based on information from the source of the payment. If we do not receive all the information we need, we will pro-rate the payment according to its nature and purpose.

Benefit Freeze

We will not reduce your monthly benefit further if the amount of benefits from any source, other than the *policy*, changes because of a cost of living increase that occurs automatically or by law after you satisfy the *qualifying period*.

Rehabilitation Benefit

Rehabilitation Plan for You

You may ask to participate in a *rehabilitation plan* while you are *disabled*. We have the sole discretion to approve or deny your request. The terms and conditions of the *rehabilitation plan* must be mutually agreed upon by you and us.

While you are participating in your *rehabilitation plan*, we will increase your Schedule Amount by 5% of your *monthly pay* or \$1,000, whichever is less. During this period, your Schedule Amount may exceed the maximum Schedule Amount in the Schedule.

The *rehabilitation plan* may include, at our discretion, payment of your *medical expense, education expense, moving expense, accommodation expense or family care expense*.

If you return to work as part of a *rehabilitation plan* while you are *disabled*, we will pay your employer:

- 50% of your salary, wages, partnership or proprietorship draw, commissions, or similar pay; or
- the Schedule Amount, if less;

for the first month after you return to work, or your remaining *period of disability*, if less.

If your *disability* ends while you are participating, with your full cooperation, in your *rehabilitation plan*, and you are not able to find gainful work, we will:

- pay you the amount of benefit, other than rehabilitation benefits, that would have been payable to you if you had remained *disabled* until:
 - 3 months after your *disability* ends; or
 - the date you are able to find gainful work, if earlier; and
- provide or pay for reasonable job placement services for a period of up to 3 months after your *disability* ends.

Rehabilitation Plan for Your Spouse

You and your spouse may ask to participate in a *rehabilitation plan* for your spouse while you are *disabled* if:

- you are receiving disability benefits from a *social security plan*; and
- your spouse's earnings in the six calendar months prior to your *disability* averaged less than 60% of your *monthly pay*.

We have the sole discretion to approve or deny your request. The terms and conditions of the *rehabilitation plan* must be mutually agreed by you, your spouse, and us.

LONG TERM DISABILITY INSURANCE (continued)

The *rehabilitation plan* for your spouse may include, at our discretion, payment of your spouse's *education expense*, reasonable job placement expenses, and the family's *moving expense*, if any. It may also include *family care expense* incurred by your spouse, necessary in order for your spouse to be retrained under the *rehabilitation plan*.

We will reduce the amount of your benefit we pay you by 50% of any salary, wages, partnership or proprietorship draw, commissions, or similar pay from any work your spouse does as a result of participating in your spouse's *rehabilitation plan*. If your spouse is working when your spouse's *rehabilitation plan* begins, we will only reduce your benefit by 50% of the increase in income that results from your spouse's participation in your spouse's *rehabilitation plan*.

Exclusions

We will not pay benefits for any time you are confined to any facility because you were convicted of a crime or public offense.

We will not pay benefits for any *disability* caused by:

- war or any act of war, whether declared or not;
- intentionally self-inflicted injury, while sane or insane; or
- taking part in or the result of taking part in committing an assault or felony.

Alcoholism, Drug Addiction, Chemical Dependency, and Mental Illness

We pay only a limited benefit for *periods of disability* for alcoholism, drug addiction, chemical dependency, and *mental illness*. The Maximum Benefit Period for all such *periods of disability* is 24 months. This is not a separate maximum for each such condition, or for each *period of disability*, but a combined maximum for all *periods of disability* and for all of these conditions.

Benefits may be payable for more than 24 months, but not beyond the Maximum Benefit Period in the Schedule, if you

- are *hospital confined* at the end of the 24-month period above, and
- remain *disabled*.

Benefits will be payable for the length of your confinement and for up to 60 days following the end of your confinement.

If you are *hospital confined* again during the 60-day period for at least 10 consecutive days, benefits will be payable for the length of the second confinement and for up to 60 days following the end of the second confinement.

Pre-existing Conditions

We will not pay benefits for any *disability* caused by a pre-existing condition (defined below) until you have been at *active work* for a full day following the earlier of:

- 3 consecutive months, ending on or after the day you became insured under the *long term disability insurance policy*, during which you do not consult with or receive advice from a licensed medical or dental practitioner or receive medical or dental care, treatment or services, including taking drugs, medicine, insulin or similar substances, for that condition; or
- 12 consecutive months during which you are continuously insured under the *long term disability insurance policy*.

A "pre-existing condition" means an *injury*, sickness, or pregnancy or any related *injury*, sickness, or pregnancy for which you:

LONG TERM DISABILITY INSURANCE (continued)

- consulted with or received advice from a licensed medical or dental practitioner, or
- received medical or dental care, treatment or services, including taking drugs, medicine, insulin, or similar substances

during the 3 months that end on the day before you became insured under the *long term disability insurance policy*.

Extended Benefit

If you are *disabled* on the day your *long term disability insurance* ends, and if you remain *disabled* long enough to qualify, we will pay benefits according to the *policy*.

Conversion Privilege

If your *long term disability insurance* ends, you may be able to convert to coverage provided under a conversion policy. You must have been insured under the *policy* for at least a year. This includes time insured under any similar group policy which the *policy* replaces.

Within 31 days after your insurance ends, you must:

- apply for coverage under the conversion policy; and
- pay the first premium.

Proof of good health is not required.

You cannot convert if your *long term disability insurance* ends because:

- the *policy* ends;
- the *policy* is changed to end your coverage;
- you are *disabled*;
- a required premium is not paid; or
- you retire from your employer, the *policyholder*, or an *associated company*.

The benefits of the conversion policy will be those we offer for conversion at the time you apply. The premium will be based on rates in effect for conversion policies at that time. The effective date of coverage will be the day after your insurance under the *policy* ends.

CLAIM PROVISIONS

Payment of Benefits

We will pay benefits at the end of each month (or shorter period) for which we are liable, after we receive the required proof. If any amount is unpaid when *disability* ends, we will pay it when we receive the required proof.

To Whom Payable

We will pay all benefits to you. However, if medical evidence indicates that a legal guardian should be appointed, we will hold further benefits due until such time as a guardian of your estate is appointed and we will pay benefits to such guardian at that time. If any amount remains unpaid when you die, we will pay your estate.

Authority

The *policyholder* delegates to us and agrees that we have the sole discretionary authority to determine eligibility for participation or benefits and to interpret the terms of the *policy*. All determinations and interpretations made by us are conclusive and binding on all parties.

Filing a Claim

1. You must send us notice of the claim. We must have written notice of any insured loss within 30 days after it occurs, or as soon as reasonably possible. You can send the notice to our *home office*, to one of our regional group claims offices, or to one of our agents. We need enough information to identify you as a *covered person*.
2. Within 15 days after the date of your notice, we will send you certain claim forms. The forms must be completed and sent to our *home office* or to one of our regional group claims offices. If you do not receive the claim forms within 15 days, we will accept a written description of the exact nature and extent of the loss.
3. The time limit for filing a claim is 90 days after the end of the first month (or shorter period) for which we are liable.
4. To decide our liability, we may require:
 - proof of benefits from other sources, and
 - proof that you have applied for all benefits from other sources, and that you have furnished any proof required to get them.

You must furnish whatever items we decide are necessary as proof of loss or to decide our liability. You must authorize the sources of medical and dental services to release your medical information. If you do not furnish any required information or authorize its release, we will not pay benefits.

If it is not reasonably possible to give proof on time, we will not deny or reduce your claim if you give us proof as soon as reasonably possible.

Right to Examine or Interview

We may ask you to be examined as often as we require at any time we choose. We may require you to be interviewed by our authorized representative. We will pay third party charges for any independent medical exam or interview which we require. If you fail to attend or fully participate, we will not pay benefits.

Limit on Legal Action

No action at law or in equity may be brought against the *policy* until at least 60 days after you file proof of loss. No action can be brought after the applicable statute of limitations has expired, but, in any case, not after 3 years from the date of loss.

Review Procedure

You must request, in writing, a review of a denial of your claim within 180 days after you receive notice of denial.

CLAIM PROVISIONS (continued)

You have the right to review, upon request and free of charge, copies of all documents, records, and other information relevant to your claim for benefits, and you may submit written comments, documents, records and other information relating to your claim for benefits.

We will review your claim after receiving your request and send you a notice of our decision within 45 days after we receive your request, or within 90 days if special circumstances require an extension. We will state the reasons for our decision and refer you to the relevant provisions of the *policy*. We will also advise you of further review procedures, if any.

Incontestability

The validity of the *policy* cannot be contested after it has been in force for 2 years, except if premiums are not paid.

Any statement made by the *policyholder* or a *covered person* will be considered a representation. It is not considered a warranty or guarantee. A statement will not be used in a dispute unless it is written and signed, and a copy is given to the *covered person* or the *beneficiary*.

No statement, except fraudulent misstatement, made by a *covered person* about insurability will be used to deny a claim for a loss incurred or *disability* starting after coverage has been in effect for 2 years.

No claim for loss starting 2 or more years after the *covered person's* effective date may be reduced or denied because a disease or physical condition existed before the person's effective date, unless the condition was specifically excluded by a provision in effect on the date of loss.

GENERAL PROVISIONS

Entire Contract

The *policy* and the *policyholder's* application attached to it are the entire contract. Any statement made by you or the *policyholder* is considered a representation. It is not considered a warranty or guarantee. A statement will not be used in a dispute unless it is written and signed, and a copy is given to you.

Errors

An error in keeping records will not cancel insurance that should continue nor continue insurance that should end. We will adjust the premium, if necessary, but not beyond 3 years before the date the error was found. If the premium was overpaid, we will refund the difference. If the premium was underpaid, the difference must be paid to us.

Misstatements

If any information about you or the *policyholder's* plan is misstated or altered after the application is submitted, including information with respect to participation or who pays the premium and under what circumstances, the facts will determine whether insurance is in effect and in what amount. We will retroactively adjust the premium.

Certificates

We will send certificates to the *policyholder* to give to each *covered person*. The certificate will state the insurance to which the person is entitled. It does not change the provisions of the *policy*.

Workers' Compensation

The *policy* is not in place of, and does not affect any state's requirements for coverage by Workers' Compensation insurance.

Agency

Neither the *policyholder*, any employer, any *associated company*, nor any administrator appointed by the foregoing is our agent. We are not liable for any of their acts or omissions.

Fraud

It is unlawful to knowingly provide false, incomplete or misleading facts or information with the intent of defrauding us. An application for insurance or statement of claim containing any materially false or misleading information may lead to reduction, denial or termination of benefits or coverage under the *policy* and recovery of any amounts we have paid.

SUMMARY PLAN DESCRIPTION

This Summary Plan Description is issued to you in compliance with the Employee Retirement Income Security Act of 1974 (ERISA). Included within this document is your Certificate of Insurance, issued by Union Security Insurance Company in compliance with state law. Your Summary Plan Description does not replace or modify the Master Policy issued by Union Security Insurance Company in any way. The Master Policy is the contract which sets forth the terms and conditions of the benefits the Plan Sponsor chose to provide in its welfare benefit plan. The Master Policy may be amended at any time by agreement between the Plan Sponsor and Union Security Insurance Company. The Master Policy may be terminated at any time by the Plan Sponsor or may be terminated by Union Security Insurance Company for non-payment of premium or for failure to meet the Master Policy's minimum participation requirements. The Plan Administrator has the obligation to prepare, issue, amend and file the Summary Plan Description (SPD) and is solely responsible for its contents.

GENERAL ADMINISTRATIVE PROVISIONS

Name of the Plan: Licking Valley Rural Electrical Cooperative

Plan Sponsor: Licking Valley Rural Electrical Cooperative
PO Box 605
West Liberty, KY 41472

Employer I.D. Number: EIN

Type of Plan: An employee welfare plan providing benefits for:

Long Term Disability Insurance

Plan Number: PN501 unless another number is assigned by the employer, the Plan Administrator, or on any Form 5500 filed for the Plan.

Effective Date: The plan, as described in this SPD, became effective on July 1, 2003.

Who Is Eligible: Each full-time employee who is at active work in the United States of America is eligible for coverage.

Full-time means working at least 30 hours per week. Any employee working less than 30 hours per week or any temporary or seasonal worker is excluded.

Plan Administrator: Licking Valley Rural Electrical Cooperative
PO Box 605
West Liberty, KY 41472

Type of Administration: This plan is insured by a contract with Union Security Insurance Company, 2323 Grand Boulevard, Kansas City, Missouri 64108.

Amendment or Termination of Plan: This plan may be amended or terminated at any time by the Plan Sponsor.

Agent for Service of Legal Process: Licking Valley Rural Electrical Cooperative
Ms. Sandra Johnson
PO Box 605
West Liberty, KY 41472

Plan Records: The fiscal records for the plan are kept on a policy year basis ending each December 31.

Cost of Benefits: The premiums for the Long Term Disability Insurance plan are paid for entirely by the Plan Sponsor.

Your plan includes: Long Term Disability Insurance

The benefits, limitations and exclusions are described in the Certificate which is found within this Description.

STATEMENT OF ERISA RIGHTS

As a participant in this Plan you are entitled to certain rights and protections under the Employee Retirement Income Security Act of 1974. ERISA provides that all plan participants shall be entitled to:

- (i) Examine, without charge at the plan administrator's office and at other locations such as worksites and union halls, all plan documents, including insurance contracts, collective bargaining agreements and copies of all documents which the plan filed with the U.S. Department of Labor, such as annual reports and plan descriptions.
- (ii) Obtain copies of all plan documents and other plan information upon written request to the plan administrator. The administrator may make a reasonable charge for the copies.
- (iii) Receive a summary of the plan's annual financial report.

In addition to creating rights for plan participants, ERISA imposes duties upon the people who are responsible for the operation of the employee benefit plan. The people who operate our plan, called "fiduciaries" of the plan, have a duty to do so prudently and in the interest of you and other plan participants and beneficiaries. No one, including your employer, your union, or any other person, may fire you or otherwise discriminate against you in any way to prevent you from obtaining a welfare benefit or exercising your rights under ERISA. If your claim for welfare benefits is denied in whole or in part you must receive a written explanation of the reason for the denial. You have the right to have the plan review and reconsider your claim.

Under ERISA, there are steps you can take to enforce the above rights. For instance, if you request certain materials from the plan and do not receive them within 30 days, you may file suit in a federal court. In such a case, the court may require the plan administrator to provide the materials and pay you up to \$110 a day until you receive the materials unless the materials were not sent because of reasons beyond the control of the administrator. If you have a claim for benefits which is denied or ignored, in whole or in part, you may file suit in a state or federal court. If it should happen that plan fiduciaries misuse the plan's money, or if you are discriminated against for asserting your rights, you may seek assistance from the U.S. Department of Labor, or you may file suit in a federal court. The court may decide who should pay court costs and legal fees. If you have any questions about your plan, you should contact the plan administrator. If you have any questions about this statement or about your rights under ERISA, you should contact the nearest office of the Pension and Welfare Benefits Administration, U.S. Department of Labor, listed in your telephone directory or the Division of Technical Assistance and Inquiries, Pension and Welfare Benefits Administration, U.S. Department of Labor, 200 Constitution Avenue N.W., Washington, D.C. 20210.

CLAIMS PROCEDURE

The following procedures apply to the extent benefits under your employee benefit plan are insured under a contract issued by Union Security Insurance Company.

PRESENTING A CLAIM

Contact your plan administrator, who will advise you of any forms which are required. These forms should be returned to the Plan Administrator after completion. This Administrator will review them, complete any information concerning eligibility and forward them to Union Security Insurance Company. Time limits for filing the claim and other requirements for notice and proof of loss may be found under the heading, "Filing A Claim".

NOTIFICATION OF DECISION—DISABILITY

A decision will be made within 45 days after receipt by Union Security Insurance Company of a properly executed, complete proof of loss unless circumstances beyond the control of the Plan require an extension of time for processing the claim. Such an extension of time may not exceed 30 additional days unless circumstances beyond the control of the Plan require a second extension, not to exceed an additional 30 days. If the claim is denied in whole or in part, Union Security Insurance Company will provide written notice either directly to you or to the Plan Administrator for delivery to you. The written notice will contain:

1. The specific reason or reasons for the denial;
2. Specific reference to pertinent provisions of the policy upon which the decision is based;
3. A description of any additional material or information needed to perfect the claim and an explanation of why it is necessary; and
4. An explanation of the plan's claim review procedure.

AUTHORITY

The Plan Sponsor delegates to Union Security Insurance Company and agrees that Union Security Insurance Company has the sole discretionary authority to determine eligibility for participation or benefits and to interpret the terms of the Policy. All determinations and interpretations made by Union Security Insurance Company are conclusive and binding on all parties.

REVIEW PROCEDURE—DISABILITY

You are entitled to a full and fair review of denial of claim. You may make a request to the Plan Administrator or appropriate named fiduciary, if other than the Plan Administrator. The procedure is as follows:

1. The request for review must be in writing and made within 180 days of receipt of written notice of denial;
2. You have the right to review, upon request and free of charge, copies of all documents, records, and other information relevant to your claim for benefits. You have the right to review copies of any internal rule, guideline, protocol or other similar criterion that was relied upon in making our decision to deny your claim. You have the right to submit issues and comments in writing, along with additional documents, records, and other information relating to your claim;
3. The Plan Administrator will forward the request to Union Security Insurance Company;
4. Union Security Insurance Company will make a decision upon review within 45 days after receipt of the request unless special circumstances require an extension of time for processing in which case the time limit shall not be later than 90 days after receipt. The decision or review will be in writing, include the specific reasons for the decision and specific references to the pertinent plan provisions on which the decision is based and be furnished either directly to you or to the Plan Administrator for delivery to you.





ASSURANT
Employee
Benefits

2323 Grand Boulevard
Kansas City, MO 64108

Policy 39,566
Participant 0
Booklet 2
6/18/2003

RUS NO. 18056-001
Plan No. 002
E.I.N. 610259922

National Rural Electric Cooperative Association
Adoption Agreement "A"
401(k) Pension Plan
For Use Only by Rural Electric Cooperatives

LICKING VALLEY RECC (hereinafter referred to as the Participating System) hereby adopts for its Employees the 401(k) Pension Plan (Plan) and the Trust under which it is administered, sponsored by the National Rural Electric Cooperative Association (NRECA), effective the first day of May, 1985, and amended effective the first day of July, 2017. The Participating System is bound by all terms and conditions included herein, which are construed in accordance with the Plan and any amendments thereto. The Participating System adopts the following elective Plan provisions:

1. Eligibility Requirements

A. Employer Contributions

An Employee shall become a Participant in the Plan on the first day of the month coincident with or next following (only one applies):

- a. The date on which the Employee completes X one/ three/ six Full Month(s) of Employment or, if earlier, a Year of Eligibility Service.
- b. The date on which the Employee completes a Year of Eligibility Service.
- c. The date on which the Employee completes one/ three/ six Full Month(s) of Employment or, if earlier, a Year of Eligibility Service and attains age 21.
- d. The date on which the Employee completes a Year of Eligibility Service and attains age 21.
- e. No Employer Contributions.

B. Employee Contributions

An Employee shall become a Participant in the Plan on the first day of the month coincident with or next following (only one applies):

- a. The date on which the Employee completes X one/ three / six Full Month(s) of Employment or, if earlier, a Year of Eligibility Service.
- b. The date on which the Employee completes a Year of Eligibility Service.
- c. The date on which the Employee completes one/ three / six Full Month(s) of Employment or, if earlier, a Year of Eligibility Service, and attains age 21.
- d. The date on which the Employee completes a Year of Eligibility Service and attains age 21.

For purposes of Sections A. and B., an Employee completes the Full Month of Employment requirement when he or she works 84 hours in each month during a one, three or six full calendar month(s) period, as elected, which do not need to be consecutive. An Employee completes a Year of Eligibility Service when he or she works 1,000 hours for a Participating System or a related Employer (as defined in Paragraph 5.4 of the Plan) during the first 12 months of employment (or subsequent Calendar Year).

An Employee who was a Participant in the Plan upon termination of employment shall become a Participant on the date of his or her reemployment with the same or another Participating System adopting the Plan if the employee meets the Eligibility Requirements and is part of an Eligible Class of Employees as defined by the subsequent Participating System's Plan Adoption Agreement.

2. Eligible Class of Employees

The provisions of the Plan and the Adoption Agreement are applicable to the following class of Employees of the Participating System (only one applies):

- a. All Employees of the Participating System.
- b. Employees of the Participating System covered by an agreement which is the subject of good faith bargaining between the Participating System and _____ Union which makes the Plan and any amendments thereto available to such Employees.
- c. Employees of the Participating System not covered by a collective bargaining agreement.
- d. Other: _____

An Employee who transfers from the class of Employees specified above to another class of Employees within the Participating System shall, as of the date of transfer, become subject to the provisions of the Adoption Agreement applicable to such other class.

3. Excluded Class of Employees

Employees of the Participating System described in the following classification(s) shall not be eligible to participate in the Plan (one or more options may apply):

- a. Part-time, Temporary, Seasonal Employees who have not completed a Year of Eligibility Service (not permitted if option b. or d. under Section 1.A. or 1.B is elected).
- b. Part-time, Temporary, Seasonal Employees who have not completed a Year of Eligibility Service and attained age 21 (not permitted if option b. or d. under Section 1.A. or 1.B. is elected).
- c. Other job classifications. The excluded classifications should be definitely determinable and should not be based on age or length of service.
- d. Highly Compensated Employees are excluded from receiving the following contributions (one or both options may apply).
 - i. Employer Basic contributions
 - ii. Employer Matching contributions

4. Years of Eligibility Service Relating to a Merger, Consolidation or Acquisition

This election is needed only if Paragraph 5.4(e) of the Plan is applicable.

If Paragraph 5.4(e) of the Plan applies, an Employee

- a. Shall
- b. Shall Not

receive credit for any period the Employee is employed by any entity merged, consolidated or liquidated into a System or any entity, substantially all of the assets of which have been acquired by a System, or which is otherwise considered a predecessor employer under Section 414(a) of the Internal Revenue Code of 1986 (the Code).

5. Normal Retirement Date

Normal Retirement Date under the Plan shall be (only one applies):

- a. Age 65: The first day of the month coincident with or next following a Participant's attainment of age 65.
- b. Age 62: The first day of the month coincident with or next following a Participant's attainment of age 62.
- c. Age 60: The first day of the month coincident with or next following a Participant's attainment of age 60.
- d. 30-Year: The first day of the month coincident with or next following the earlier of Participant's attainment of age 62 or the completion of 30 years of service. In conjunction with this option, contributions will be discontinued on (only one applies):
 - i. All Employer and all Employee Contributions shall be discontinued on the last day of the month in which the Participant completes 30 years of service under this Plan.
 - ii. All Employer and all Employee Contributions shall be discontinued on the first day of the month in which a Participant's actual retirement date occurs.
 - iii. All Employee Contributions shall be discontinued on the last day of the month in which the Participant completes 30 years of service under this plan.
 - iv. All Employee Contributions shall be discontinued on the first day of the month in which a Participant's actual retirement date occurs.
 - v. All Employer Contributions shall be discontinued on the last day of the month in which the Participant completes 30 years of service under this Plan. (Under this option, all Employee Contributions may continue until the first day of the month in which a Participant's actual retirement date occurs.)

For purposes of Section 5, Employer and Employee Contributions for a Participant who postpones retirement beyond his or her Normal Retirement Date shall not be discontinued because of attainment of any age.

6. Compensation

The Compensation on which Employer Contributions and Employee Contributions to this Plan are based shall be the Participant's current Full Salary or current Base Salary as limited under Paragraph 2.8 of the Plan.

Full Salary is a Participant's current wages from a Participating System subject to federal income tax withholding plus any amount deferred under a qualified salary reduction arrangement under Sections 125 and 401(k) of the Code and under Section 457(b) of the Code and including elective amounts that are not includible in the Participant's gross income by reason of Section 132(f) of the Code, but excluding reimbursements or other expense allowances; fringe benefits; moving expenses; welfare benefits; pension, deferred compensation or retirement allowances; or any amount deferred under a nonqualified, defined benefit deferred compensation arrangement.

Base Salary is the Participant's Full Salary, but excluding any extra or overtime compensation and bonuses received in the Calendar Year. The definition of Compensation for contributions to this Plan shall be Compensation as elected by the Participating System below.

Under either definition, only amounts that are actually paid to the Participant during periods while eligible to participate within the Calendar Year shall be taken into account.

A. Employer Contributions (only one applies):

- a. Full Salary
- b. Base Salary
- c. No Employer Contributions

B. Employee Elective Contributions and/or Roth Elective Contributions (only one applies):

- a. Full Salary
- b. Base Salary

C. After-tax Voluntary Employee Contributions (only one applies):

- a. Full Salary
- b. Base Salary
- c. No Voluntary Employee Contributions

7. Contributions (one or more options may apply)

A. Safe Harbor Provision

The Participating System has adopted the Safe Harbor provision (only one matching formula applies):

- a. Employer Base Contribution Formula: ____% (at least 3%).
- b. Basic Employer Matching Contribution Formula.
 - i. The Participating System shall contribute to each Participant's account an Employer Matching Contribution equal to 100% of Employee Elective Contributions of 0% to 3% of the Participant's Compensation; and
 - ii. The Participating System shall contribute to each Participant's account an Employer Matching Contribution equal to 50% of Employee Elective Contributions in excess of 3% and no greater than 5% of the Participant's Compensation.
- c. Enhanced Employer Matching Contribution Formula.
 - i. The Participating System shall contribute to each Participant's account an Employer Matching Contribution equal to ____% of Employee Elective Contributions from 0% to ____% (cannot exceed 6%) of the Participant's Compensation; and if applicable
 - ii. The Participating System shall contribute to each Participant's account an Employer Matching Contribution equal to ____% of Employee Elective Contributions from ____% to ____% (cannot exceed 6% total for i and ii) of the Participant's Compensation.

B. Employer Base Contribution

- a. The Participating System shall contribute to each Participant's account an Employer Base Contribution equal to _% of the Participant's Compensation.
- b. The Participating System shall contribute to each Participant's account an Employer Base Contribution equal to 11% of the Participant's Compensation. A Participant shall be required to contribute an Employee Elective Contribution equal to 4% of his or her Compensation in order to receive the Employer Base Contribution.

C. Employer Matching Contribution

- a. The Participating System shall contribute to each Participant's account an Employer Matching Contribution equal to ____% (up to 500%) of Employee Elective Contributions from ____% to ____% of the Participant's Compensation.
- b. In addition to the Employer Contribution(s) specified in B.b. and C.a., the Participating System shall further contribute to each Participant's account an Employer Contribution equal to ____% (up to 500%) of Employee Elective Contributions from ____% to ____% of the Participant's Compensation above the Employee Elective Contributions in B.b. and C.a.
- c. The Participating System shall contribute to each Participant's account an Employer Matching Contribution equal to ____% (up to 500%) of Employee Elective Contributions from ____% to ____% of the Participant's Compensation, in an amount:
- i. not more than \$ ____.
- ii. not less than \$ ____.

D. Other – See Addendum

E. Enhanced Employer Contribution

The Participating System shall contribute to each participant's account an Employer Contribution equal to a percentage of Employee Elective Contributions up to ____ of the Participant's Compensation. The Contribution is _____

F. There shall be no Employer Base Contribution or Employer Matching Contribution.

G. Roth Elective Contributions

Roth Elective Contributions are adopted by the Participating System.

H. Voluntary Employee Contributions (only one applies):

- a. A Participant may elect to make after-tax Voluntary Employee Contributions (VEC) to his or her account, subject to the limitations and conditions provided in Sections 6 and 8 of the Plan. A Participant's VECs are not eligible for any Employer Base or Employer Matching Contributions specified above.
- b. There shall be no VEC.

8. Participant Loans

- a. Participant loans are allowed, subject to the terms and conditions of the loan provisions in Section 15 of the Plan. A Participant may have a maximum of one, two, three, four loans.
- b. The Participating System elects not to allow Participant loans.

9. In-Service Withdrawals

- a. In-service Withdrawals following Normal Retirement Date (NRD) and age 59½: A one-time withdrawal upon the attainment of the later of age 59½ or a Participant's NRD shall be available to a Participant prior to retirement or other termination of employment.
- b. In-service Withdrawals upon Financial Hardship of the Participant: Withdrawal upon financial hardship (as defined in Paragraph 14.17 of the Plan) shall be available to a Participant prior to actual retirement or other termination of employment.
- c. There shall be no In-service Withdrawals.

10. Contributions During Short-term Disability

A Participant who is receiving Compensation from a Participating System and making any Required Employee Contributions shall receive Employer Contributions (as provided in Paragraph 6.8 of the Plan) for the period elected by the Participating System only from the onset of the disability period. Notwithstanding this, a Participant who is receiving Compensation from a Participating System may continue to make Employee Elective Contributions and Required Employee Contributions until the Participant begins to receive payments due to disability. The number of weeks in this election must not be greater than the Participating System's Long-term Disability elimination period (only one applies):

- a. For 13 weeks
- b. For 26 weeks
- c. For ___ weeks (from 1 to 25)
- d. No Employer Contributions

11. Investment of Contributions

The Participant shall designate the Investment Fund or Funds in which Employee Contributions and Employer Contributions allocated to the Participant shall be invested. Employee Contributions and Employer Contributions, if any, shall be invested in the same Investment Fund or Funds and in the same proportions. Participants shall be permitted to invest the contributions on a daily basis only by telephone or internet notice to the I&FS Committee or its authorized agent in accordance with procedures established by the I&FS Committee. The Investment Funds are described in the Participant Fees Annual Disclosure Statement provided to Participants upon enrollment and once a year thereafter.

SELF-DIRECTED BROKERAGE ACCOUNT

The Self-Directed Brokerage Account is an additional investment option in the Plan, specifically acting as a discount brokerage account within the Plan. All investments are made upon the direction of the Participant at the Participant's risk. Securities purchased through the Self-Directed Brokerage Account, including mutual funds, are not bank deposits and are not insured by the FDIC or guaranteed by the Self-Directed Brokerage Account Trustee. Upon adopting the Self-Directed Brokerage Account, a Participant must be permitted to invest contributions on a daily basis by telephone or internet notice to the I&FS Committee or its authorized agent in accordance with procedures established by the I&FS Committee.

12. Non-Discrimination Testing Elections

A. Top Paid Group

Highly Compensated Employees are defined in Paragraph 2.14 of the Plan. If the Participating System has multiple Highly Compensated Employees, the Participating System may limit the number of employees considered to be Highly Compensated Employees to those employees in the top paid group. This group consists of the top 20% of the Participating System's and its Affiliate's Employees, when ranked on the basis of compensation for the preceding Calendar Year.

Elect Top Paid Group

B. Prior/Current Year Election

Code sections 401(k) and 401(m) plan testing may be performed using either prior year or current year data. A prior year election may be changed to a current year election for any Calendar Year. However, once elected, a current year election must remain in effect for five Calendar Years (except under certain circumstances).

- a. Prior Year
- b. Current Year

13. Top-Heavy Adjustment

If the Participating System's Plan is determined to be top-heavy due to the required aggregation of multiple plans, Section 416 of the Code and Section 22 of the Plan will apply.

14. Limitations on Annual Additions

If the Participating System maintains one or more qualified defined contribution plans in addition to this Plan, Annual Additions that may be credited to any Participant's account under this Plan for any Limitation Year shall be limited in accordance with Section 11 of the Plan.

15. Hold Harmless and Indemnification Agreement

This section applies only if the Participating System participated in another plan qualified under Section 401(a) of the Code (the "Prior Plan"), and assets and liabilities of the Prior Plan are transferred to the Plan pursuant to the merger of the Prior Plan and the Plan.

Upon the effective date of the merger, the Participating System agrees to hold harmless and to indemnify NRECA, its officers and directors, the Plan and the I&FS Committee from any and all liability, fines, penalties, loss, damage or expense, including all costs to correct any disqualifying defect or practice, imposed or arising under the Code and from any and all liability, fines, penalties, loss, damage or expense imposed or claim arising under the Employee Retirement Income Security Act of 1974 with respect to the Participating System's participation in the Prior Plan. This Hold Harmless and Indemnification Agreement shall continue in full force and effect without regard to changes or modifications by the Participating System to its Adoption Agreement in the Plan and without regard to the Participating System's termination of participation in the Plan in the future. This Agreement shall inure to the benefit of the Plan, the I&FS Committee and NRECA and its officers, directors and employees and their respective heirs, estates and assigns. This Adoption Agreement incorporates the Merger Agreement between the Plan and the Participating System, effective the date of this Adoption Agreement.

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16. Signatures

IN WITNESS WHEREOF, the Participating System, by its duly authorized officers, has caused this Agreement to be executed as of the date below.

LICKING VALLEY RECO
(Name of Participating System)

By: 
(Signature of Authorized Officer)

President
(Title of Officer)

Date: August 17, 2017

NATIONAL RURAL ELECTRIC COOPERATIVE ASSOCIATION

By: 

Date: 9/7/17

Licking Valley Rural Electric Cooperative Corporation
Case No. 2020-00338
AG's Data Requests

20. In the final Order of Case No. 2016-00174, the Commission stated that it “expects Licking Valley to increase its efforts to reign in expenses for employee benefits by establishing a policy of limiting Licking Valley’s contribution to health insurance premiums and requiring that all employees pay some portion of the premium. The Commission finds that Licking Valley should limit its contributions to its employees’ health plans to percentages more in line with those of other businesses in order to reduce its expenses. Accordingly, the Commission will for ratemaking purposes adjust test-year health expense for all employees based on national average employee contribution rates.” The Commission based the adjustment on a 32 percent national average employee contribution rate for family coverage and 21 percent national average employee contribution rate for single coverage.
- a. Does Licking Valley RECC plan to move the employee contribution rates for insurance toward the national average or stay at only 10.37% employee contribution rate for the health insurance premiums. Ensure to include whether Licking Valley RECC reviewed specific national, state, or local data when creating the contribution rate.
 - b. Explain in detail how Licking Valley RECC formulated the 10.37% employee contribution rate for the health insurance premiums. Ensure to include whether Licking Valley RECC reviewed specific national, state, or local data when creating the contribution rate.
 - c. Explain why Licking Valley RECC believes that a 10.37% employee contribution rate toward insurance coverage is reasonable when the national averages are much higher.
 - d. Provide the retiree contribution rate for single and family health insurance coverage.
 - e. Explain whether Licking Valley RECC plans to modify the retiree contribution rates in the future.

Response:

- a. Licking Valley plans to remain at the 10.37% employee contribution rate.

Licking Valley has recently had two employees leave Licking Valley to

accept employment with another company that will pay 100% of their insurance benefits.

- b. The 10.37% employee contribution rate was formulated and made effective many years ago presumably after consultation between Licking Valley's management and Board of Directors. Current management has researched Licking Valley's internal records to attempt to establish how the contribution rate was determined. However, no records exist that provide this information. This rate has merely been carried over and continued to the test year and current date as the effective contribution rate. Although no specific recent published national, state or local data was consulted Licking Valley believes the contribution rate to be reasonable and generally consistent with some other rural electric cooperatives in Kentucky.
- c. The national averages are just that, averages. In a line of recent rural electric cooperative rate cases the Commission has only imposed the Bureau of Labor Statistics ("BLS") national averages when the cooperative pays 100% of its employees' health insurance benefits. That is clearly not the case here since Licking Valley requires its employees to share 10.37% of their insurance cost. Therefore, the BLS national averages are not utility specific and therefore not relevant in this case.
- d. Please see attached.
- e. Licking Valley does not have plans at this time to modify the retiree contribution rates.

LICKING VALLEY RURAL ELECTRIC COOPERATIVE CORPORATION
KENTUCKY 56 MORGAN

BOARD OF DIRECTORS POLICIES AND PROCEDURES MANUAL

Policy Number 219

Effective Date: 03/19/2020

**SUBJECT: RETIRED EMPLOYEES MAJOR MEDICAL
INSURANCE PLAN**

Page 01 of 03

PURPOSE: To provide a major medical insurance plan to retired Licking Valley Rural Electric Cooperative Corporation, (hereinafter referred to as LVRECC), employees who meet criteria as outlined within this policy subject.

POLICY: Participation in this benefit shall be limited to those employees who have attained the required number of years and age as outlined in this policy.

RESPONSIBILITIES: The Administration Department is responsible for the administration of this policy.

PRACTICES:

1. LVRECC will pay one hundred percent (100%) of insurance premiums for the retired employee, if employment was twenty-five (25) years with Licking Valley Rural Electric Cooperative Corporation (LVRECC) or equal time with an affiliated rural electric program and LVRECC totaling twenty-five (25) years.
2. Fifteen to twenty-four (15-24) years of service with LVRECC, the Cooperative will pay seventy-five percent (75%) of insurance premiums.
3. Five to fourteen (5-14) years of service with LVRECC, the Cooperative will pay fifty percent (50%) of insurance premium.
4. Under five (5) years of service with LVRECC, the Cooperative will not pay any of the insurance premiums.
5. The employee's spouse and children age nineteen (19) to to twenty-six (26) are also eligible. The spouse of a deceased retired employee shall be responsible for the premiums for dependents of the retired employee.
6. The coverage will be continued until the retired employee reaches their sixty-fifth (65th) birthday or deceased, whichever occurs first. After their sixty-fifth (65th) birthday, the individual employee will be transferred to Medicare plan and LVRECC will pay on reduced coverage to correlate with the National Rural Electric Cooperative Association, (hereinafter referred to as NRECA) or coverage in force at LVRECC at such time.

Licking Valley Rural Electric Cooperative Corporation
Case No. 2020-00338
AG's Data Requests

21. In the final Order of Case No. 2016-00174, the Commission stated that it would “accept the test-year expense for life insurance for full-time employees in this case. However, in its next rate case filing. Licking Valley’s request for cooperative paid life insurance should be capped at the lesser of an employee’s annual salary or \$50,000.” Explain in detail whether Licking Valley RECC caps paid life insurance for its employees at the lesser of an employee’s annual salary or \$50,000. If not, explain why not.

Response:

Licking Valley RECC excludes life insurance premiums for coverage above the lesser of an employee’s annual salary or \$50,000 from its proposed rates, consistent with the applicable Commission orders. See Wolfram testimony, Exhibit JW-2, Reference Schedule 1.10.

Licking Valley Rural Electric Cooperative Corporation
Case No. 2020-00338
AG's Data Requests

22. In the final Order of Case No. 2016-00174, the Commission stated that “Licking Valley was unable to provide salary and wage information specific to its service area for all of the employee positions. The Commission has begun placing more emphasis on evaluating salary and benefits provided by electric cooperatives as they relate to competitiveness in a broad marketplace, as opposed to wage and salary studies limited exclusively to electric cooperatives, electric utilities, or other regulated utility companies. In its next rate application, Licking Valley will be required to include a formal study that provides local wage and benefit information for Licking Valley’s operating area and to include state data where available.”
- a. Provide the formal study providing local wage and benefit information for Licking Valley RECC’s operating area that the Commission ordered the Company to submit.
 - b. If Licking Valley RECC did not conduct a formal study that provides local wage and benefit information for Licking Valley’s operating area then explain in detail why it was not performed.

Response:

- a-b. Please see Licking Valley’s response to Commission Staff’s Data Requests Item 6 which contains the requested wage and salary survey.

Licking Valley Rural Electric Cooperative Corporation
Case No. 2020-00338
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23. Refer to the Bradley Testimony, page 8, in which Ms. Bradley states that typically wage adjustments have been given across the board to the Company's employees. Ms. Bradley further asserts that Licking Valley RECC just concluded a comprehensive wage and salary review by a noted wage and salary consultant, and in the future this wage and salary survey will be used as a benchmark for setting and maintaining employee wages and an evaluation process will be gradually introduced.
- a. Explain the current process of awarding wage/salary increases. For example, does the CEO negotiate wage/salary increases with the union, and then turn around and provide the same wage/salary increase to non-union employees, including himself? Explain the process in detail.
 - b. Provide a copy of the wage and salary review as referred to in the above-referenced statement.
 - c. Provide the name of the wage and salary consultant.
 - d. Explain whether this wage and salary review includes the salary/wage and benefit information specific to its service area for all employee position.
 - e. Explain why Licking Valley RECC has not utilized an evaluation process up until the present date.
 - f. Identify the date that Licking Valley RECC intends to begin using an evaluation process.
 - g. Explain whether Licking Valley RECC envisions the future evaluation process to be tied to all potential wage/salary increase. If not, explain why not.
 - h. Provide the position title and salary for each salaried employee for the years 2015-2020.
 - i. Provide the average raise that Licking Valley RECC has provided to its salaried employees for the years 2015-2020.
 - j. Provide the average bonus that Licking Valley RECC provided to its salaried employees for the years 2015-2020.

- k. Provide all awards given to the salaried employees for the years 2015-2020.
- l. Provide all vehicle allowances given to the salaried employees for the years 2015-2020.
- m. Provide the position title and wages for each non-salaried employee for the years 2015-2020.
- n. Provide the average raise that Licking Valley has provided to its non-salaried employees for the years 2015-2020.
- o. Provide the average bonus that Licking Valley provided to its non-salaried employees for the years 2015-2020.
- p. Provide all awards given to the non-salaried employees for the years 2015-2020.
- q. Provide all vehicle allowances given to the non-salaried employees for the years 2015-2020.
- r. Has Licking Valley RECC already decided what average raise, if any, will be given to salaried and non-salaried employees for 2021? If so, provide the average raise, and explain whether Licking Valley RECC is talking the COVID-19 pandemic and the resulting economic downturn into consideration when awarding raises.

Response:

- a. Licking Valley is not a union shop. Historically, Licking Valley's Board of Directors has annually reviewed the Cooperative's financial results to determine if there are sufficient margins to provide an across the board wage increase for employees, and, if so, the amount of the increase. Once this was determined, the Board then authorized Mr. Howard to handle the details of when and how the increase will be paid to employees.

- b. Please refer to Licking Valley's response to Commission Staff Data Request Item 7.
- c. The name of the wage and salary consultant is Winston Tan, Intandem, Inc.
- d. The wage and salary and benefit surveys do consider information specific to Licking Valley's service territory to the extent such information is available.
- e. Licking Valley has not historically utilized a formal evaluation process. Because of its relatively small size (41-48 employees) the Board of Directors has always believed that across the board raises are more efficient.
- f. Licking Valley began utilizing a formal evaluation process in 2020 for 2021.
- g. Licking Valley intends for the new evaluation process to be used in the future for any wage and salary adjustments.
- h. Please see attached.
- i. Please see attached.
- j. The bonus given in 2018 of \$300.00 to all salaried employees is the only bonus that has been given.
- k. There have been no awards given.
- l. There are no vehicle allowances. Please also see the response to Item 32 b.
- m. Please see attached.
- n. Please see attached.
- o. The \$300.00 bonus given in 2018 to all non-salaried employees is the only time a bonus has been given.

- p. There have been no awards given to non-salaried employees.
- q. There have been no vehicle allowances to non-salaried employees.
- r. Based on the formal evaluation process begun in 2020 Licking Valley employees received raises of between 0% and 3% effective January 1, 2021. Several other factors besides the wage and salary survey were considered including the COVID-19 pandemic.

Wages for Salaried Employees

Title	2015	2016	2017	2018	2019	2020
General Superintendent	\$ 91,087.10	\$ 41,987.87				
General Superintendent		85,343.44	\$ 87,144.81	\$ 88,804.89	\$ 89,702.18	\$ 101,410.40
Exe Secretary to GM/CEO	92,791.69	100,351.19	114,434.08	77,700.37	107,770.61	104,810.92
Accountant	110,167.60	115,380.16	121,292.71	123,527.50	122,210.72	117,039.64
General Manager/CEO	113,133.00	117,118.02	123,671.33	122,395.61	118,957.64	133,885.93
Mgr of Admin Services	66,300.00	67,626.00	68,926.50	69,278.52	69,973.52	74,808.32
	\$ 473,479.39	\$ 527,806.68	\$ 515,469.43	\$ 481,706.89	\$ 508,614.67	\$ 531,955.21

Average Salaried Employee Raise from 2015 - 2020

2015	2.00%	
2016	2.00%	
2017	2.00%	
2018	0.00%	
2019	1.50%	
2020	3.00%	
	10.50%	1.75%

Wages for Non-Salaried Employees

Title	2015	2016	2017	2018	2019	2020
1st Class Lineperson	\$ 84,661.07					
Supervisor Construction	82,205.38	\$ 84,021.20				
1st Class Lineperson			\$ 81,116.38	\$ 81,020.44	\$ 81,766.03	\$ 84,458.97
Meter Person	54,464.16	55,255.21	59,017.69	64,969.39	67,005.42	68,877.28
Supervisor Construction	78,936.59					
1st Class Lineperson		81,962.36	80,767.27	75,907.68	35,597.47	
1st Class Lineperson	75,219.29	73,085.46	76,818.97	77,045.46	77,394.16	82,488.54
Staking Engineer	65,059.18	67,203.42	72,375.57	72,427.56	72,121.84	69,564.24
1st Class Lineperson	76,752.41	80,217.42	75,675.68	80,166.02	43,683.34	71,491.72
Purchasing Agent	59,895.10	54,917.94	56,686.99	57,448.00	57,950.92	59,057.72
1st Class Lineperson	74,954.96	70,926.09	65,711.29	79,234.27	78,439.49	82,536.28
2nd Class Lineperson	53,600.10	55,878.65	39,858.66	54,285.44	53,724.32	55,435.73
Supervisor Right of Way	69,560.11	63,558.20	66,361.98	66,872.78	67,918.17	70,635.48
Supervisor Construction	74,987.34	80,549.41	76,416.89	82,450.17	72,954.63	77,907.64
2nd Class Lineperson	56,540.75	55,694.77	60,562.69	60,664.00	62,038.17	64,830.77
1st Class Lineperson	79,668.37	78,475.19	74,229.01	80,159.86	71,981.56	75,549.67
1st Class Lineperson	57,493.89					
1st Class Lineperson	59,772.48	75,097.34	81,100.16	82,596.30	78,308.37	83,973.12
1st Class Lineperson	69,388.97	83,720.35	89,998.98	100,168.59		
Supervisor Construction					90,515.04	100,579.51
Laborer	39,012.23	38,703.27	41,192.02	45,604.85	41,543.48	39,133.40
2nd Class Lineperson	55,570.91	62,862.12	64,843.69	75,460.15	83,586.22	20,610.97
Fleet Manager	56,218.55	56,460.79	58,254.52	63,577.62	58,782.43	60,920.42
Laborer		34,955.00	42,613.50	50,113.25	58,701.28	
2nd Class Lineperson						66,524.32
Laborer		18,234.25	38,035.25	45,212.75		
Apprentice Lineperson					52,454.86	
2nd Class Lineperson						65,550.26
Laborer		6,992.75	34,097.75	38,810.50	39,813.25	37,581.91
Supervisor Meter Dept	73,587.39	75,163.73	78,057.55	78,950.73	77,571.91	76,993.24
Laborer			5,358.00	42,928.50	42,219.50	45,332.57
Laborer					6,404.00	16,839.00
Laborer					14,520.75	37,756.25
Laborer					1,228.88	844.63
Apprentice Lineperson						47,680.46
2nd Class Lineperson						6,831.45
1st Class Lineperson	73,331.30	82,299.76	25,572.44			
Supervisor Construction	75,049.19	75,192.82	75,138.95	85,625.41	75,474.97	76,308.21
Maintenance	39,779.94	17,341.39				
Plant Accountant	46,619.00	47,949.75	48,689.02	49,964.61	49,090.33	51,938.75
Laborer	15,875.00	25,428.75				
Assist. Mapping/Data Entry			32,005.00	34,216.00	38,260.00	42,481.00
Malone Sup/Mapping Data	74,498.82	74,655.24	78,769.26	72,673.22	73,519.01	73,883.24
CMA Coordinator	56,613.64	61,274.40	63,000.71	61,263.07	28,779.60	
Data Entry Clerk	43,016.70	42,192.33	47,441.47	47,142.85	46,194.89	48,133.49
Clerk/Secretary	41,874.50	42,362.68	43,416.89	44,557.36	46,127.29	47,580.20
CSR	51,048.03	51,741.38	51,388.66	50,157.64	50,884.08	54,932.68
Secretary/Data Entry	39,360.87	40,217.07	40,804.55	40,209.65	866.86	
CSR	55,749.36	62,737.81	64,166.76	63,142.34	70,513.45	65,927.95
Cashier/Data Entry	63,721.46	60,678.07	68,124.42	76,404.94	80,475.45	72,147.94
Cashier/Receptionist	23,767.29	30,798.69	31,893.84	25,912.80	30,053.17	31,029.53
Designated Employee	37,488.29	39,530.73	41,207.19	41,192.39	44,013.39	40,005.24
Office Clerk	43,873.45	45,798.67	38,940.87			
Office Clerk	36,203.02					
Cashier/Receptionist	35,681.44	34,533.46	35,604.58	38,107.43	43,621.89	39,641.49
CSR	31,799.62	29,740.44	10,076.96			
Laborer		1,388.38	1,236.15			
CSR			6,136.00	28,289.75	30,028.62	28,730.76
	\$ 2,282,900.15	\$ 2,219,796.74	\$ 2,222,764.21	\$ 2,314,933.77	\$ 2,196,128.49	\$ 2,242,726.03

Average Non-Salaried Employee Raise from 2015 - 2020

2015	2.00%	
2016	2.00%	
2017	2.00%	
2018	0.00%	
2019	1.50%	
2020	3.00%	
	10.50%	1.75%

Witnesses: Kerry Howard and Sandy Bradley

Licking Valley Rural Electric Cooperative Corporation
Case No. 2020-00338
AG's Data Requests

24. Refer to the case generally. Provide a detailed explanation of all salary and benefits that Licking Valley RECC provided to the members of the Board of Directors during the years 2015-2020. Ensure to provide the salary amounts, and specific details regarding all benefit packages including but not limited to health, dental, vision, accidental death and disability, life insurance, bonuses, awards, vehicle allowances, and the like.
- a. Provide the total amount of Licking Valley RECC Board of Directors' fees for the test year.
 - b. Provide a breakdown of the total amount of the Licking Valley RECC Board of Directors' fees for the test year.
 - c. Discuss if there will be any changes to the Board of Directors' salaries and/or benefit packages for 2021. If not, explain why not.

Response:

- a. Please see attached.
- b. Please see attached.
- c. Licking Valley does not anticipate any changes to the Board of Directors' fees for 2021. The Board does not have any benefit packages.

Fees for Directors for 2019

Tommy Hill	\$7,200.00
Dolores D Jones	3,600.00
Ted A Holbrook	3,600.00
Darrell Cundiff	3,600.00
J Frank Porter	3,600.00
Travis Stacy	3,600.00
Kevin Howard	3,600.00
Philip Williams	3,900.00
	\$32,700.00

Witnesses: Sandy Bradley and John Wolfram

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25. Refer to the Bradley Testimony, pages 9-10, in which Ms. Bradley stated that Licking Valley RECC's low-income customers are its highest energy users. Provide all documentation, including but not limited to all studies and analyses, which support this assertion.

Response:

Please see Licking Valley RECC's response to the Commission Staff's First Data Request, Item 8.

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26. Refer to the Direct Testimony of John Wolfram, Principal, Catalyst Consulting LLC (“Wolfram Testimony”), page 6, in which Mr. Wolfram states that residential members comprise 78% of test year energy usage and 76% of test year revenues from energy sales. Reconcile this statement with the Bradley Testimony, page 5, in which Ms. Bradley stated that the residential load accounted for 78% of the total energy usage and approximately 75% of total revenue from energy sales.

Response:

The values of 78% and 75% provided by Ms. Bradley are sourced from the 2019 RUS Form 7. The values of 78% and 76% referenced by Mr. Wolfram differ very slightly from the Form 7 amounts in part due to rounding but also because they stem from his reproduction of 2019 annual billings, which include minor adjustments for things like lighting. See Wolfram Testimony, page 6.

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27. Refer to the Wolfram Testimony, page 6, and explain why adjustments needed to be made to Licking Valley RECC's booked amounts in order to perform the cost of service study.

Response:

The adjustments referenced are very small. One example is lighting usage; for any cooperatives like Licking Valley, most lighting usage is not metered. Accordingly, the energy in kWh associated with lights is reported on the cooperative's book as residential usage. But the cost of service study treats lighting as its own rate class, consistent with the approved tariffs, so the lighting kWh in each class is shifted to the lighting class, to perform the cost of service study. These adjustments are minor and do not measurably affect the results of the cost of service study.

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28. Refer to the Wolfram Testimony, page 12, and explain why East Kentucky Power Cooperative ("EKPC") has not paid any capital credits to Licking Valley RECC.

Response:

The testimony cited should be modified to say "The adjustment removes the G&T Capital Credits from the test period." The rest of the sentence should be removed. For the first time in many years, EKPC did pay capital credits in 2019. This is reflected in the cost of service and rate analysis but is mis-stated in testimony. Specifically, EKPC allocated \$989,382 in capital credits in 2019, as noted in Exhibit JW-2, page 1, line 29.

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29. Refer to the Wolfram Testimony, page 28, in which Mr. Wolfram states that Licking Valley RECC's actual revenue deficiency based on a target OTIER of 1.85 is \$1,095,880. However, due to the streamlined rate procedure, the Company is capped at a 2.25% overall increase, which limits its request to \$595,560. Explain why Licking Valley RECC decided to proceed with a streamlined rate case, instead of a general rate case.

Response:

Please see Licking Valley's response to the Commission Staff's First Data Request, Item 10.

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30. Refer to Exhibit JW-2, Reference Schedule: 1.08.
- a. Provide a breakdown of the following amounts.
 - i. \$8,672 in donations;
 - ii. \$60,785 for membership dues;
 - iii. \$10,568 for the annual meeting;
 - iv. \$105,473 in miscellaneous expenditures.
 - b. Explain why Licking Valley has not attempted to reign in some of the above spending, which may have allowed the Company to delay requesting a rate increase from its members.

Response:

- a. The requested breakouts are provided in the attachment.
- b. The premise of the question is that Licking Valley “has not attempted to reign in” the referenced spending. In fact, the opposite is true; Licking Valley not only attempted but also succeeded in collectively reducing these costs.

The table below compares the amounts for each item from Licking Valley’s application in its last rate case in Docket No. 2016-00174 and for this case. Taken together, the items reflect the achievement of over \$100,000 of cost savings that has allowed Licking Valley RECC to delay requesting a rate increase from its members (all else being equal).

#	Item	Last Case (\$)	Current Case (\$)	Incr(Decr) (\$)	Incr(Decr) (%)
1	Donations	25,737	8,672	(17,065)	-66%
2	Membership Dues	63,897	60,785	(3,112)	-5%
3	Annual Meeting	96,976	10,568	(86,408)	-89%
4	Miscellaneous	100,657	105,473	4,816	5%
5	TOTAL	287,267	185,498	(101,769)	-35%

Licking Valley RECC - 426.00 Donations

<u>Date</u>	<u>Vendor Name</u>	<u>Reference</u>	<u>Check</u>	<u>Amount</u>	<u>Include</u>	<u>Exclude</u>
1/23/19	Morgan County High School	Girls Softball	8132270	200.00		200.00
1/29/19	Wolfe Counth High School	Bass Team	8132326	150.00		150.00
2/7/19	Wolfe County High School	Esports	8132424	100.00		100.00
3/1/19	Morgan County High School	Boys Basketball	8132586	200.00		200.00
3/25/19	Magoffin County High School	Softball Team	8132752	150.00		150.00
4/16/19	Pleasant Valley Country Club	Donation	8132939	500.00		500.00
4/16/19	Magoffin County Rescue Squad	Donation	8132752	400.00		400.00
4/16/19	Magoffin County Youth	Baseball & Softball	8132938	400.00		400.00
4/29/19	North Magoffin Volunteer Fire	Fishing Tournament	8133043	200.00		200.00
4/30/19	Rural Coop Credit Union	Hazel Green Fire Dept	8133106	171.71		171.71
5/2/19	Bethany Christian Mission Center	Auction Sponsor	8133092	100.00		100.00
5/2/19	Music in the Park	Donation	8133093	300.00		300.00
5/2/19	Sustainable Business Ventures	Rec'd from EKP	8133094	10,000.00 *	10,000.00	
5/17/20	Breathitt Heritage Fair Board	Donation	8133169	150.00		150.00
5/24/19	Morgan County Extension Service	Field Day	8133200	200.00		200.00
6/3/19	Morgan County Little League	Donation	8133328	250.00		250.00
6/5/19	Morgan County Historical Society	Donation	8133364	100.00		100.00
6/17/19	Morgan County High School	Tennis Team	8133424	200.00		200.00
6/25/19	Kiwanis Mountain Horse Celeb	Donation	8133477	125.00		125.00
6/28/19	Wolfe County Mudcats Baseball	Donation	8133604	100.00		100.00
7/3/19	Swift Silver Mine Festival	Donation	8133682	100.00		100.00
7/11/19	Magoffin County High School	Quarterback Club	8133731	200.00		200.00
7/24/19	Jackson Lions Club	Radio Auction	8133761	200.00		200.00
7/24/19	Wolfe County Extension Office	Showcase	8133763	200.00		200.00
7/24/19	Morgan County 4-H Council	Livestock Show	8133762	225.00		225.00
7/25/19	Magoffin County High School	Golf Scramble	8133852	200.00		200.00
7/30/19	Magoffin Co Community Found	Donation	8133864	500.00		500.00
8/7/19	Ronald McDonald House Charities	Donation	8133953	200.00		200.00
8/21/19	Morgan County Middle School	Girls Basketball	8134005	100.00		100.00
8/29/19	Sustainable Business Ventures	Rec'd from EKP	8134094	10,000.00 *	10,000.00	
9/6/19	Magoffin Co Board of Education	Rec'd from EKP	8134169	2,700.00 *	2,700.00	
9/11/19	Vanclave Fire Department	Radio Auction	8134183	200.00		200.00
9/11/19	Wolfe County Middle School	Boys Basketball	8134185	100.00		100.00
9/19/19	Morgan County Youth Basketball	Basketball Tournament	8134236	200.00		200.00
10/8/19	East Valley Elementary PTCO	Blue Ribbon	8134439	300.00		300.00
10/8/19	Ezel CPTO	School Acitivities	8134440	200.00		200.00
10/10/19	Wildcat CPTO	Kindergarten	8134453	300.00		300.00
10/17/19	Hazel Green Volunteer Fire Dept	Fall Banquet	8134499	200.00		200.00
10/17/19	Menifee County High School	Boys Basketball	8134500	300.00		300.00
11/5/19	Middle KY Community Action	Head Start	8134678	100.00		100.00
11/6/19	Morgan County High School	Girls Basketball	8134681	100.00		100.00
11/15/19	Student Santa Program	Donation	8134723	200.00		200.00
11/22/19	City of Salyersville	Hometown Christmas	8134806	200.00		200.00
11/26/19	Cops for Kids	Donation	8134818	150.00		150.00
12/9/19	Sustainable Business Ventures	Rec'd from EKP	8134938	10,000.00 *	10,000.00	
12/10/19	Magoffin Co Citizens for Unity	Christmas Feast	8134954	200.00		200.00
TOTAL				\$ 41,372	\$ 32,700	\$ 8,672

* Paid by EKPC for Economic Development

Licking Valley RECC - 930.20 Dues

<u>Date</u>	<u>Vendor Name</u>	<u>Reference</u>	<u>Check</u>	<u>Amount</u>
1/31/19	KY Association of Elect Coops	Dues	8132405	300.00
2/1/19	KY Association of Elect Coops	Dues	8132430	42,961.34
2/14/19	KY Association of Elect Coops	Dues	8132446	219.86
10/21/19	National Rural Elect Coop Assn	Dues	8134502	21,455.00
11/6/19	KY Association of Elect Coops	Dues		-4,151.00
				\$ 60,785

Licking Valley RECC - 930.30 Annual Meeting

<u>Date</u>	<u>Vendor Name</u>	<u>Reference</u>	<u>Check</u>	<u>Amount</u>	<u>Include</u>	<u>Exclude</u>
5/24/19	Birddogs Shirts-N-More	Employee Shirts	8133189	44.52		45
5/30/19	Appalachian Troubadours	Singers	8133279	500.00		500
5/30/19	Lands End Business Outfitters	Employee Shirts	8133272	2,252.78		2,253
5/30/19	LVRECC Petty Cash	Prize Money	8133273	800.00		800
5/30/19	Rural Coop Credit Union	Drinks	813327	234.15	234	
5/31/19	Lands End Business Outfitters	Employee Shirts	8133401	51.48		51
6/13/19	Lands End Business Outfitters	Employee Shirts	8133400	47.24		47
6/19/19	John R May	Mileage	8133430	56.68		57
6/20/19	Courtney Conley	Sound System	8133438	500.00		500
6/21/19	Arnolds Septic Sytem	Port a Pot	8133439	400.00	400	
6/21/19	Inflation Station	Inflatables	8133440	425.00		425
6/24/19	Fannins Vegetables	Prizes	8133442	95.94		96
6/30/19	Labor & Secondary Spread	Labor		25,041.49	25,041	
6/30/19	Logo Shack	Caps	8133680	2,694.83		2,695
6/30/19	WCBJ	Radio Advertising	8133675	450.00		450
6/30/19	WLKS	Radio Advertising	8133677	450.00		450
6/30/19	WRLV	Radio Advertising	8133676	450.00		450
6/30/19	American Express	Prizes	8133685	1,413.29		1,413
6/30/19	Rural Coop Credit Union	Food	8133692	21.19	21	
6/30/19	Rural Coop Credit Union	Misc Supplies	8133699	379.85	380	
6/30/19	Rural Coop Credit Union	Food	8133700	547.01	547	
6/30/19	Intermountain Broadcasting Co	Radio Advertising	8133707	336.00		336
7/11/19	KY Association of Elect Coops	Buckets & Bulbs	8133761	10,388.00 *	10,388	
7/31/19	Rural Coop Credit Union	Misc Supplies	8133874	18.02	18	
7/31/19	Rural Coop Credit Union	Misc Supplies	8133875	190.64	191	
7/31/19	American Express	Food	8133922	30.27	30	
7/31/19	Rural Coop Credit Union	Food	8133926	1,306.97	1,307	
9/11/19	East Kentucky Power	Refund - Bulbs		-4,500.00 *	(4,500)	
TOTAL				44,625.35	\$ 34,058	\$ 10,568

* Efficient Light Bulb giveaway

Licking Valley RECC - 930.40 Misc General Expenses

<u>Date</u>	<u>Vendor Name</u>	<u>Reference</u>	<u>Check</u>	<u>Amount</u>	<u>Include</u>	<u>Exclude</u>
1/23/19	KY Association of Elect Coops	Kentucky Living	8132268	6,353.78		6,353.78
1/24/19	Hope Barker	Cookies-Retirement	8132271	64.00		64.00
1/25/19	The Paisley Posey	Flowers for Employee	8132315	67.84		67.84
1/31/19	Insurance	Federated Rural		433.21	*	433.21
1/31/19	All Occasion Flowers	Flowers-Death	8132413	102.77		102.77
1/31/19	Rural Coop Credit Union	Retirement Gift	8132423	422.94		422.94
2/22/19	KY Association of Elect Coops	Kentucky Living	8132523	6,331.84		6,331.84
2/28/19	Insurance	Federated Rural		433.21	*	433.21
2/28/19	Rural Coop Credit Union	Retirement Gift	8132641	162.20		162.20
3/12/19	KY Association of Elect Coops	Kentucky Living	8132653	6,351.70		6,351.70
3/26/19	Rural Coop Credit Union	Employee Retirement	8132776	204.37		204.37
3/28/19	The Paisley Posey	Flowers-Death	8132805	106.00		106.00
3/31/19	Insurance	Federated Rural		433.21	*	433.21
4/8/19	All Occasion Flowers	Flowers-Death	8132897	111.25		111.25
4/11/19	KY Association of Elect Coops	Kentucky Living	8132916	6,348.74		6,348.74
4/26/19	Seasonal Shoppe	Christmas Gifts	8133029	295.10		295.10
4/30/19	Insurance	Federated Rural		433.21	*	433.21
4/30/19	All Occasion Flowers	Flowers-Death	8133110	106.00		106.00
5/10/19	KY Association of Elect Coops	Kentucky Living	8133133	6,359.70		6,359.70
5/31/19	Morehead State University	Scholarship	8133286	1,000.00		1,000.00
5/31/19	Morehead State University	Scholarship	8133287	1,000.00		1,000.00
5/31/19	Berea College	Scholarship	8133285	1,000.00		1,000.00
5/31/19	Insurance	Federated Rural		433.21	*	433.21
5/31/19	University of Kentucky	Scholarship	8133352	1,000.00		1,000.00
5/31/19	Gis-HireRight	Background Check	8133475	48.00		48.00
6/10/19	East Kentucky Power Cooperative	Tickets	8133373	60.00		60.00
6/13/19	The Paisley Posey	Flowers-Death	8133403	127.20		127.20
6/13/19	Logo Shack	Caps	8133405	604.12		604.12
6/17/19	KY Association of Elect Coops	Kentucky Living	8133414	8,106.49		8,106.49
6/17/19	Morehead State University	Scholarship	8133423	1,000.00		1,000.00
6/19/20	Maysville Community & Technical	Scholarship	8133431	1,000.00		1,000.00
6/25/19	Morehead State University	Scholarship	8133478	1,000.00		1,000.00
6/25/19	Nature Reliance School	Safety Training	8133479	400.00		400.00
6/30/19	Insurance	Federated Rural		433.21	*	433.21
6/30/19	Rural Coop Credit Union	Misc Board Expense	8133699	73.20		73.20
7/10/19	Eastern Kentucky University	Scholarship	8133715	1,000.00		1,000.00
7/11/19	KY Association of Elect Coops	Kentucky Living	8133718	6,339.87		6,339.87
7/23/19	Morehead State University	Scholarship	8133753	1,000.00		1,000.00
7/30/19	KY Association of Elect Coops	Washington Youth Tour	8133860	5,250.00		5,250.00
7/31/19	Insurance	Federated Rural		433.21	*	433.21
8/26/19	Creekside Sititchin and More	Logo Caps	8134025	585.12		585.12
8/28/19	American Express	American Flags	8134074	181.45		181.45
8/28/19	KY Association of Elect Coops	Kentucky Living	8134088	6,326.79		6,326.79
8/31/19	Insurance	Federated Rural		433.21	*	433.21
8/31/19	All Occasion Flowers	Flowers-Death	8134181	174.85		174.85
8/31/19	Tommy J. Conley	Gifts	8134201	240.00		240.00
9/13/19	Tommy J. Conley	Honor Flight	8134201	432.00		432.00
9/13/19	KY Association of Elect Coops	Kentucky Living	8134191	6,335.66		6,335.66
9/23/19	Tracy M. Sparks	Honor Flight-Mileage	8134253	80.18		80.18
9/30/19	Insurance	Federated Rural		433.21	*	433.21
10/7/19	KY Association of Elect Coops	Washington Youth Tour	8134421	59.57		59.57
10/17/19	KY Association of Elect Coops	Kentucky Living	8134472	6,340.88		6,340.88
10/30/19	Rural Coop Credit Union	Honor Flight	8134583	440.75		440.75
10/31/19	Rural Coop Credit Union	Parade Candy	8134608	93.83		93.83
10/31/19	Insurance	Federated Rural		433.21	*	433.21
11/3/19	East Kentucky Power Cooperative	Honor Flight	8134680	1,000.00		1,000.00
11/20/19	Kentucky Electric Cooperatives	Kentucky Living	8134752	6,345.60		6,345.60
11/30/19	Insurance	Federated Rural		433.21	*	433.21
12/2/19	LVRECC Petty Cash	Christmas Gifts	8134840	400.00		400.00
12/3/19	Outback	Christmas Gifts	8134904	2,150.00		2,150.00
12/3/19	Dennis Long	Christmas Dinner Santa	8134905	50.00		50.00
12/9/19	Hope Barker	Christmas Dinner	8134936	208.00		208.00
12/9/19	Morgan Gun & Pawn LLC	Christmas Gifts	8134937	137.80		137.80
12/11/19	Lees Famous Recipe	Christmas Dinner	8134956	1,845.58		1,845.58
12/13/19	Kentucky Electric Cooperatives	Kentucky Living	8134960	6,329.93		6,329.93
12/18/19	The Paisley Posey	Christmas Dinner	8134993	15.90		15.90
12/31/19	Insurance	Federated Rural		433.19	*	433.19
12/31/19	The Seasonal Shoppe	Christmas Gifts	8135174	147.31		147.31
12/31/19	American Express	Gifts for Give a Way	8135178	269.45		269.45
12/31/19	Rural Coop Credit Union	Christmas Dinner	8135197	1,120.43		1,120.43
12/31/19	Rural Coop Credit Union	Christmas Dinner	8135198	166.69		166.69
12/31/19	Rural Coop Credit Union	Christmas Dinner	8135209	573.04		573.04
TOTAL				\$ 110,646	\$ 5,199	\$ 105,448

* Director liability insurance

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31. Refer to Exhibit 21, and explain why Licking Valley anticipates the need to draw down funds in April 2021.

Response:

Licking Valley believes it will need to replace funds that were used for the construction work plan for work that has been completed since the last draw down.

Witnesses: Kerry Howard and Sandy Bradley

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32. Refer to the Application, Exhibit 26.
- a. This exhibit reflects that as of September 1, 2019, the President and CEO had an annualized salary of \$118,957.64. Explain whether this includes any benefit amounts, or if it is only reflective of his yearly salary.
 - b. Explain in detail why the President and CEO receives vehicle compensation, and whether it is common for other RECCs to provide vehicle compensation.
 - c. Explain why the President and CEO was awarded a 1.50% raise in 2019.
 - d. Explain why the President and CEO was awarded a 2.00% raise in 2017.
 - e. Explain why the President and CEO received a bonus of \$300 in 2018.
 - f. Explain why the President and CEO's annualized salary went from \$123,671.33 in 2017 to \$118,957.64 in 2019.
 - g. For the President and CEO, provide the salary, raise, bonus, award, and vehicle allowance for 2015-2020.

Response:

- a. The annualized salary as of December 31, 2019 of \$118,957.64 includes medical leave payout in the amount of \$3,120.46.
- b. The President and CEO receives a taxable vehicle compensation which is the amount he pays taxes on. He does not receive monetary compensation for a vehicle. Licking Valley is not familiar with what other RECCs do regarding taxable vehicle compensation.

Witnesses: Kerry Howard and Sandy Bradley

- c. The President and CEO was awarded a 1.5% salary increase in 2019 as well as all employees. This was awarded by the Board of Directors in a regular board meeting.
- d. The President and CEO was awarded a 2.0% salary increase in 2017 as well as all employees. This was awarded by the Board of Directors in a regular board meeting.
- e. The President and CEO received a bonus of \$300.00 in 2018 as well as all employees. This was awarded by the Board of Directors in a regular board meeting.
- f. The President and CEO's annualized salary of \$123,671.33 included vacation time pay out in 2017.
- g. Please see attached.

Title	Effective Date	Percentage	Pay Rate	Annualized Salary	Bonus	Vehicle Comp	Total Comp
Gen Man/CEO	1/1/2020	3.00%	\$ 64.37	\$ 133,895.93		\$ 1,017.00	\$ 134,912.93
	1/1/2019	1.50%	\$ 57.20	\$ 118,957.64		\$ 1,108.00	\$ 120,065.64
	1/1/2018	0.00%	\$ 58.70	\$ 122,095.61	\$ 300.00	\$ 1,453.00	\$ 123,848.61
	1/1/2017	2.00%	\$ 59.46	\$ 123,671.33		\$ 1,510.00	\$ 125,181.33
	1/1/2016	2.00%	\$ 56.31	\$ 117,118.02		\$ 1,476.00	\$ 118,594.02
	1/1/2015	2.00%	\$ 54.39	\$ 113,133.00		\$ 890.00	\$ 114,023.00