

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

THE APPLICATION OF LICKING VALLEY)
RURAL ELECTRIC COOPERATIVE CORPORATION)
FOR A CERTIFICATE OF PUBLIC CONVENIENCE) CASE NO.
AND NECESSITY TO CONSTRUCT A FOUR (4)) 96-153
YEAR WORK PLAN)

INTERIM ORDER

Licking Valley Electric Cooperative Corporation ("Licking Valley") filed its application on April 16, 1996 for a Certificate of Public Convenience and Necessity to construct certain improvements and additions to its existing plant. In support of its application, Licking Valley filed its 1996-1999 Work Plan which describes in detail the improvements and additions to its plant that are required over the next 4 years to serve its load.

Licking Valley seeks authorization to construct extensions and additions to its plant as follows:

New distribution lines	\$2,481,000
Conversion and line changes	3,691,800
Miscellaneous Distribution	3,513,800
Security lights	<u>275,400</u>
Total	\$9,962,000

Licking Valley indicated that it planned to borrow all necessary funds from the Rural Utilities Service ("RUS") to finance these projects.

An informal conference was held on October 3, 1996 to discuss two specific projects and any alternatives considered. Project 312-3 will require the conversion of 10.7 miles

from three phase 3/0 ACSR to three phase 336.4 MCM ACSR at a cost of \$588,500, and Project 317-6 will require the conversion of 3.4 miles from three phase 3/0 ACSR to three phase 336.4 MCM ACSR at a cost of \$187,000. Licking Valley indicated that the conversion is needed to correct low voltage problems at the extremities of the Helechawa and Sublett substations. While the evidence does show low voltage problems that need to be corrected, Licking Valley has not adequately demonstrated that less costly alternatives to Projects 312-3 and 317-6 would not be reasonable and sufficient to correct the voltage deficiencies.

Several alternatives to Project 312-3 and Project 317-6 were discussed at the informal conference and Licking Valley subsequently filed analyses of each alternative. Project 312-3 consists of the replacement of 10.7 miles of 3/0 ACSR. One alternative investigated is the conversion of 9.3 miles of line sections 474, 465, 466, 792, 470, and 742 from three phase 1/0 ACSR to 336.4 MCM ACSR at a cost of \$547,000 or \$41,000 less than Project 312-3. Licking Valley acknowledged that, "this alternate feed would work just as well as the one proposed in the Four-Year Work Plan,"¹ but noted that six miles of the 1/0 ACSR conductor had been installed within the last two years, at an estimated cost of \$180,000, and that the poles and pole top assemblies supporting that conductor would not be used for the 336.4 MCM ACSR conductor. Licking Valley rejected this alternative because of the necessity to replace the recently installed poles and pole top assemblies even though it would satisfy the RUS criteria and cost \$41,500 less than Project 312-3.²

¹ Page 3 of Southern Engineering letter filed on October 15, 1996.

² Page 3 of Southern Engineering letter filed on October 15, 1996.

The Commission finds that this alternative is reasonable based on its lower capital cost and potential to provide capacity to handle load from an adjacent substation in an emergency. It appears that when upgrading conductors Licking Valley is not sizing them for the long term and the alternative of constructing a new substation was not considered even though Licking Valley's Long Range Plan calls for one in the area and 69KV transmission lines traverse the area. A new substation would have a greater impact on reliability than any other alternative. A new 10 MVA substation with 1.0 miles of 69KV transmission line would cost \$511,700,³ which is slightly less than either alternative discussed so far and might eliminate the need for Project 312-3 and Project 317-6. While the need and feasibility of a new substation in the next four years cannot be determined without an analysis of many factors not yet in evidence, the Commission finds that Projects 312-3 and 317-6 should be deferred until Licking Valley has demonstrated that the feasibility of a new substation has been fully considered.

Licking Valley has indicated that Project 317-6 might be unnecessary if Project 318-6, which has been postponed pending litigation over right-of-way acquisition, could be completed. However, Licking Valley's consultant has indicated that both projects are needed. An analysis was filed which shows the impact of omitting Project 317-6 and splitting load between circuit one and circuit two of the Sublett Substation as proposed by Licking Valley. The analysis stated, "we find that voltage drops at the load end on line section 517 and 515 become prohibitive by RUS standards."⁴ Although the voltage drop

³ Attachment 2 to the I.C. memo, filed on October 7, 1996.

⁴ Page 4 of Southern Engineering letter filed on October 15, 1996.

analysis shows 109.3V at the end of line section 517 and 109.5V at the end of line section 515, this voltage deficiency could be easily corrected with a voltage regulator.

The Commission agrees with Licking Valley that Project 317-6 might be unnecessary. Licking Valley should install a Minimum-Maximum Indicating voltmeter on line section 517 and monitor the actual voltage which can be compared to the calculated voltage to determine whether Project 317-6 is needed. Further, if a new substation is determined to be feasible, Licking Valley should consider the feasibility of shifting some of the load from Sublett Substation feeder 2 to line section 520 of Helechawa Substation to improve voltage at line sections 517 and 515.

The proposed construction in the Work Plan, except as noted above, will enable Licking Valley to continue to provide adequate and dependable electric service to its consumers. The system improvements recommended with the exception of Projects 312-3 and 317-6 will not duplicate existing facilities and are needed to correct voltage problems, improve phase balance, and provide for improved service reliability.

IT IS THEREFORE ORDERED that:


1. Licking Valley is granted a Certificate of Public Convenience and Necessity to construct the facilities described in its 1996-1999 Work Plan excluding Projects 312-3 and 317-6.
2. The Commission will defer ruling on Projects 312-3 and 317-6 until Licking Valley has done a feasibility study on the construction of a new substation instead of constructing Projects 312-3 and 317-6.
3. Licking Valley shall, within 180 days from the date of this Order, file with the Commission an original and 5 copies of the information requested in Appendix A to this

Order. All responses shall include the name of the witness who will respond at the public hearing, if one is held, to questions concerning each item of information provided.

Done at Frankfort, Kentucky, this 6th day of December, 1996.

PUBLIC SERVICE COMMISSION


Chairman


Vice Chairman


Commissioner

ATTEST:


Executive Director

APPENDIX A

APPENDIX TO AN ORDER OF THE KENTUCKY PUBLIC SERVICE COMMISSION IN CASE NO. 96-153 DATED DECEMBER 6, 1996

1. Will the construction of a new substation between the Oakdale and Helechawa substations in the area where the 69KV transmission lines traverse eliminate the need for Projects 312-3 and 317-6?
2. If your response to Item 1 is no, explain why and provide the voltage analysis to support your response.
3. If your response to Item 1 is yes:
 - a. Provide the cost of the new substation and explain how it was derived.
 - b. Provide Licking Valley's portion of the cost of the new substation and related facilities. Provide all supporting calculations.
 - c. Is a substation site available and how many feet would it be from the existing 69 KV lines?
 - d. If a substation site is available, provide a map showing the location of the new substation and how your system will be modified.
4. Would the construction of Projects 312-3 and 317-6 eliminate the need for a new substation in the area for the period covered in your Long Range Plan?
5. Provide two copies of your Long Range Plan.