COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

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In the Matter of:

THE APPLICATION OF HIGHLAND TELEPHONE COOPERATIVE, INC., SUNBRIGHT, TENNESSEE 37872, FOR:	
I. AN ORDER APPROVING AND AUTHORIZING IT TO BORROW $1,373,284 FROM THE RURAL ELECTRIC AND TELEPHONE REVOLVING FUND AND ISSUE ITS NOTE AND MORTGAGE OR OTHER SECURITY INSTRUMENTS TO SECURE THE SAME.	CASE NO. 9399 (S-8 LOAN)
II. FOR A CERTIFICATE OF CONVENIENCE AND NECESSITY TO CONSTRUCT ADDITIONAL TELEPHONE LINES AND OTHER FACILITIES	

O R D E R

On September 30, 1985, the Commission issued an Information Request Order in this case. Highland Telephone Cooperative, Inc., ("Highland") filed its response on October 17, 1985. Among other requests within the Commission's September 30, 1985, Order was an inquiry into the proposed construction of a fiber optic route between Highland's Stearns-Whitley City exchange and General Telephone Company's Burnside exchange. Highland was asked to provide a comparison study between two alternatives, T carrier and fiber optics, for the proposed route.

Much of the information submitted by Highland was unclear and conflicting estimates were found for the fiber optic route. Several staff inquiries were conducted by telephone to try and clarify parts of Highland's response. However, the Commission

finds that in order to solidify the record in this case, an additional information request is necessary.

IT IS THEREFORE ORDERED that Highland shall file an original and 10 copies of the information requested in this Order within 20 days from the date of this Order.

Concerning the proposed toll route between Stearns-Whitley and General Telephone at Burnside:

(1) The latest cost estimates filed with the Commission show estimated costs as follows:

Fiber optics ("FO")	$151,610
T Carrier	77,350
Difference	**$ 74,260**

Have these estimates been revised since the October 17, 1985, response? If so, state those changes or revisions along with detailed explanations.

(2) Would there be any additional multiplexing equipment necessary to implement the T carrier system?

(3) In the information request response on October 17, 1985, a letter signed by Mr. John Sam James was attached as applicant's Exhibit 6. The letter was dated January 11, 1984. What is Mr. John Sam James' position and with whom is he employed?

(a) In the letter, Exhibit 6, it was stated, "Although "T" screen cable is approximately $12,000 less than fiber other factors should be considered." According to the current record (if not altered by

a response to #1) the difference between T carrier and fiber is now $74,260.

Are these other factors: less maintenance, less cost to build to ultimate capacity, and fiber being less conductive to lightning?

Are there any factors other than the above that should be considered?

(b) Since the difference between fiber and T carrier is now some 6 times greater than the original estimate ($74,000 difference vs. $12,000 difference), is the use of fiber still justified and the additional cost still offset by those benefits in (a)?

(4) Again with reference to Exhibit 6 of the October 17, 1985, response to the Commission's Order:

By "5 systems" and "8 systems" does this imply 5 times and 8 times the present capacity required? Explain.

(5) Show how the values in (4) were computed, include all assumptions pertaining to transmission rates, cable size, and projected capacity needs for the T Carrier and FO systems?

(6) Show how the ultimate capacity for the T carrier was calculated to arrive at 11 systems? Show how the ultimate capacity for the FO was calculated to arrive at a minimum 28 systems? What will be the transmission rate of the FO system?

(7) What modifications are necessary to build each alternative to ultimate capacity? Show how the estimates of

$15,000 for T carrier and $6,000 for FO were calculated?

(8) Could you state some of the maintenance savings of FO vs. T carrier? Quantify your response for a period over 5 years? 10 years? 20 years?

(9) A letter dated October 24, 1985, from Cottrell and House, Inc., signed by Robert W. DiSalvo implies that General Telephone approached Highland requesting them to pursue the use of FO for the proposed route. In Mr. John Sam James' letter, it states that "it is our opinion that fiber should be considered for this route, providing General Telephone will concur in the use of single mode fiber optics." Who initiated the use of fiber for the proposed route? Why?

(a) What are the qualitative and quantitative benefits to (1) Highland and (2) General Telephone in choosing FO over the T carrier system?

(b) What system modifications are necessary at the Highland/General interface if FO is chosen? If T carrier is chosen? Who pays the additional costs?

(10) Mr. DiSalvo's letter states that although FO was more expensive, the choice was made due to:

(a) the availability to accommodate future growth without major future additions,

(b) less maintenance costs, and

(c) FO is less conductive to lightning.

With reference to (10)(a) above, the proposed T carrier system appears to provide 5 times the initial capacity needed, plus additional capacity up to 11 systems. Will the additional capacity of the FO system actually be needed? If so, estimate how soon?

With reference to (10)(b) and (10)(c) above, quantify the savings from these factors for FO vs. T carrier for a period of 5 years? 10 years? 20 years?

(11) Please provide the name, position or title, and company name of the individual(s) responding to the above questions.

Done at Frankfort, Kentucky, this 7th day of January, 1986.

PUBLIC SERVICE COMMISSION

Richard D. Thomas Jr.
For the Commission

ATTEST:

Secretary