

EASEMENT COMPENSATION FOR TRANSMISSION LINE RIGHTS-OF-WAY

by J. E. Partaker

Transmission line routes are designed by Manitoba Hydro to cause the least possible conflict upon land while recognizing economic and technical considerations.

In keeping with these objectives, 500 kV transmission lines require four structures per mile. In the majority of cases the structures are centered on a 250 foot wide right-of-way and no closer than 125 feet from the boundary of productive areas. This design minimizes the area being removed from production, the time required to maneuver equipment around towers, and the reduction of yields in the area surrounding structure bases.

Manitoba Hydro's policy of compensation for the granting of transmission easements on the basis of 75% of market value is outlined as follows:

Area removed from production

A variety of structure designs are used in major transmission lines, having base areas from 589 square feet to 878 square feet. For this discussion the maximum area of 878 square feet or 0.02 acres has been used. Random sample field measurements have indicated that the maximum area removed from production is equivalent to no more than 1½ times the base area of the structure or 0.03 acres. This can be expressed as 2 structures per half mile of right-of-way times 0.03 acres per structure resulting in 0.06 acres removed from production. This is a generous calculation as evidence indicates the dexterity of farmers enables them to work within less than two feet of structure perimeters.

Value of area removed from production

The value of the area removed from production varies proportionately to the market value of the land. Land having a market value of \$700 per acre establishes (700 x 0.03 acres) \$21 as the value of that land removed from production on a per structure basis including the peripheral

buffer.

The rental value of this same land out of production (0.03 acres) at, say, \$30 an acre per annum would amount to 90 cents annually.

The annual gross income (value of yield) for the 0.03 acres on the basis of an average yield of 35 bushels an acre of #3 CW Red Spring Wheat at \$5.50 a bushel and assuming summerfallow every fourth year would amount to \$4.33 (annually).

Normal expenses not incurred because of the 0.03 acres of land area being out of production (operating and fixed costs—\$93.25 per acre x 0.03) would amount to \$2.80 (annually) resulting in loss to the operator of: \$0.90 + \$4.33 - \$2.80 = \$2.43.

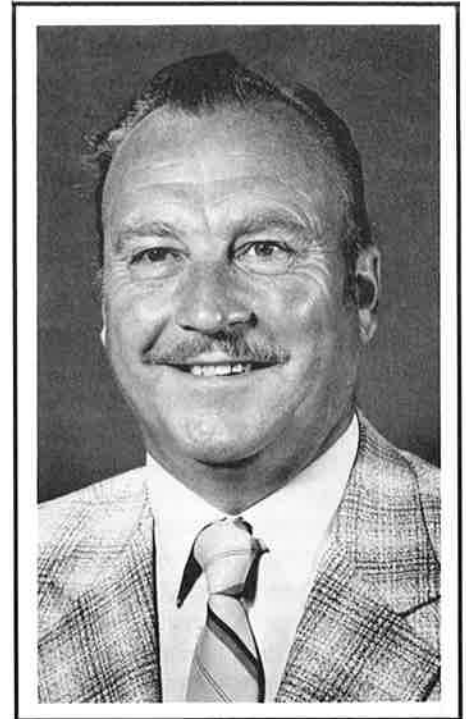
Value of increased work associated with working around structures

Farmers have stated¹ that there is an increase in operating time when structures are located on agricultural lands. The consensus indicates that a 3-minute increase in operation time per structure per operation is required for the usual eight operations per year. Consequently, a structure (tower) installed on a grain cropped right-of-way will increase operating time by 3 minutes or 0.05 hrs. x 8 operations per year or 0.4 hours per year. The additional annual cost to the farmer of this increased operating time can be expressed as 0.4 hrs. x \$85² hr. = \$34.

Value of reduced productivity surrounding structures

The productivity and quality of yield around the tower sites due to backtracking and circling the structures is recognized as being somewhat inferior. The unavoidable partial duplication of seeding, fertilizing, and chemical applications results in lower yields. As equipment is designed to operate at maximum efficiency in a straight line pattern, this operation is affected when structures or other obstructions are encountered. In addition,

(see Easements, pg. 18)



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His educational background includes studies in Business Management at the University of Manitoba and additional Management Studies at the University of Michigan, Ann Arbor. He is a Professional Manager as accredited by the Canadian Institute of Management, and is a member of the Winnipeg Real Estate Board, the Manitoba Electrical Association and the Canadian Electrical Association.

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