

Nov 5/24

Resolution to OFA : Annual Compensation for Hydro Corridors on Private Lands

Based on present practice, Hydro One is unjustly treating farmland owners whose land has been selected for a new hydro corridor. Hydro One considers farming and agricultural operations as a compatible use within transmission line rights-of-ways. Although an agricultural operation and a transmission line corridor can co-exist, the presence of transmission infrastructure creates an ongoing hindrance with agricultural operations, a loss of annual income, and an increase in annual agricultural operating costs. The annual ongoing agricultural operating costs are not acknowledged in the Easement Compensation, Injurious Affection Calculation or the Crop Land Out of Production payment.

Land rights for Hydro One transmission line projects are acquired through "Voluntary Negotiations", although a landowner's participation in the project is not voluntary. If a negotiated settlement cannot be reached, HONI seeks expropriation relief as prescribed in Section 99 of the Ontario Energy Board Act. The Expropriation Act then applies where land is expropriated or injurious affection is caused by a statutory authority. The Act defines Injurious Affection as a situation "where a statutory authority acquires part of the land of an owner such personal and business damages, resulting from the construction or use, or both, of the works as the statutory authority would be liable for if the construction or use were not under the authority of a statute". It can be argued then that the ongoing annual agricultural operating costs at the expense of a landowner that are caused by Hydro One's use of the land can be considered as business damages. Compensation for these annually incurred damages should therefore be claimed under this Act.

This analysis examines the ongoing annual operating costs that are incurred by an agricultural operation resulting from transmission infrastructure. Every agriculture operation is unique, however, to simplify this analysis the following generalized assumptions have been made regarding common farming practices in 2024:

- The standard width of equipment used were selected based on sizes currently used on efficient farms and by custom operators.
- The custom rates used are from the March 2024 Survey by the Ontario Professional Agri-Contractors Association.
- Full retail pricing has been used for seed, fertilizer and pesticides, although some individual discounts may be available.
- The calculations used are based on a common four crop rotation of corn, soybeans, wheat, and a specialty crop which typically require more field passes. This analysis uses sugar beets, however other possibilities include hybrid seed corn, tomatoes or other vegetable crops.
- The transmission tower footprint of 32'x 32' has been used with a 4' safety buffer on all sides (1600 sq. ft.); however, some transmission towers may be larger.
- The time required or productivity lost in operating around the towers will be assumed equal to the time it would take to make one undisrupted field pass. Towers may be met on the square or on the diagonal; therefore, complete coverage around each tower requires a clover leaf pattern with each implement to install an internal headland on all four sides.

Exhibit 1 indicates the operation, assumed implement width, number of passes, custom rate and total cost. The average headland overlap has been estimated to be approximately 25% of the headland acreage; however, this amount could vary depending on the width of the implement, the number of boom sections and the presence of RTK based boom or row shutoffs, as well as the orientation of the tower. The headland overlap required due to the presence of a

transmission tower consequently increases the wastage of seed, spray and fertilizer materials. Exhibits 2, 3 and 4 indicate the average annual seed overlap, the average cost of redundant fertilizer applied, and the average cost of redundant spray materials, respectively. Crop loss will also consequently result from tower headland overlap, due to compaction from multiple passes, yield suppression from double planting, and crop injury from doubling up pesticides. The combined effect of all of these factors is estimated at 25% of the sprayer headland of 1.76 acres or 0.44 acres per tower. Hydro One uses a gross value for grain crops of \$2,000 per acre and \$3,500 per acre for specialty crops. Using these values, the average annual headland crop loss is \$1,045 per tower.

Although compensation is received for the area under a transmission tower, this compensation is offered once and at the current land market value. This area is permanently taken out of production, resulting in a loss of annual income for the lifetime of the tower. For a 40' x 40' tower base, which is 0.0367 per acre, it has been estimated that the annual loss for grain crops is \$73 and \$128 for specialty crops. The average per tower would therefore be \$87 annually. In addition to the loss of annual income, the area under the towers also incur an annual cost as the responsibility of weed control under and around the base of the towers is the landowner's. Addressing weed control will require two applications annually with a backpack sprayer. It is estimated that each application would take approximately 2 hours, including preparation time, travel time, and application time. The combined cost has been estimated to be \$50 per hour, which is a total of \$200 per tower annually.

A new transmission corridor brings new management burdens including details to be cared for which were not there before, including:

- Special instructions to equipment operators.
- Risk of damage to equipment and the cost of repairs when they occur.
- Crop scouting in this special area.
- Risk of other kinds of crop loss, including disease that starts in a spray coverage miss and spreads to the rest of the field.
- Very irritating loss of valuable operating time caused by RTK signal interference. This may include time lost from shut-down, start-up and repositioning. Reports of this are scattered, as some systems are more susceptible than others and it is difficult to quantify.
- Complications for the adoption of more autonomous farm operations in the future.
- Pesticide safety risk. An air-conditioned cab is safer than back-packing.
- Value: Professional farm manager salary \$100,000, \$500 per day, 2 days.

Below is a summary of the annual per tower farm operating costs that do not exist until a new transmission corridor is constructed:

<u>Operation</u>	<u>Cost</u>
Equipment operation	\$1075
Seed overlap	\$16
Fertilizer overlaps	\$54
Pesticide overlaps	\$147
Tower site weed control	\$200
Tower site crop loss	\$87
Internal headland crop loss	\$1,045
<u>Management burden</u>	<u>\$1,000</u>
Total	\$3,624

These costs are not commonly calculated or they are seriously underestimated by all parties. Looking forward 100 years is a tall order.

Exhibit 5 shows four other utilities that occupy farmland, and all pay annual compensation. These arrangements were accomplished by negotiation with willing hosts, without recourse to the Expropriation Act. The last item in *Exhibit 5* is a useful precedent for compensation for new transmission corridors in Ontario. In addition to upfront compensation, ATCO Electric in Alberta pays annually per tower. Altalink, the largest electricity provider in Alberta, also acknowledges landowners who have transmission infrastructure on their property and recognizes their stewardship on behalf of the province by providing "annual structure payments. They consider the loss of land due to tower location, inconvenience and additional costs associated with weed control under towers, additional time required to operate equipment, additional seed required and other intangible adverse effects. With these examples in mind, compensation for the costs itemized above as ongoing injurious affection under the Expropriation Act, appear commendably reasonable.

In conclusion, it is Hydro One's opinion that "agriculture is a compatible use within overhead transmission line ROWS"; however, transmission infrastructure forever limits the future uses and opportunities for a property. Technology and machinery in the agricultural industry are constantly changing, with machinery growing in size and even becoming autonomous to increase efficiency. The presence of transmission infrastructure on a farm limits a property owner's ability to evolve with the agricultural industry in the future. As the importance and value of energy in our economy has increased, so has the value of land and the economic impact that a transmission corridor has on that land. Other utilities, which do not utilize the power of expropriation, offer different compensation packages that include annual payments and are attractive enough to be welcomed by farm operators. ATCO Electric in Alberta recognizes the disruptive impacts of transmission corridors and has created a precedent for annual compensation. Farmland owners are waking up to the necessity of more equitable treatment. In refusing to consider annual payments for ongoing injurious affection, Hydro One is trying to defend an outdated concept, using principles based on precedents that date back to the 80's and earlier.

This analysis has been developed by an informal Powerline Concerns Committee, comprised of individuals who have experience dealing with the Chatham to Lakeshore line, the St Clair to Chatham line, and potentially with the Longwoods to Lakeshore twin lines.

November 1, 2024
Bob Kerr
Bill Parks

Exhibit 1: Per Tower Additional Equipment Operating Costs

	Width ft	Pass es	Acres per pass	Custom Rate	Corn	Soybea ns	Wheat	Sugar Beets
Spring Tillage	40	2	2	30	120	120	0	120
Planting	40	1	2	37	74	74	74	74
Fertilizer	80	2	4	15	120	120	120	120
Spraying	120	3	6	15	270	270	270	(11) 990
Fall Disc	30	1	1.5	30	45	45	45	45
Disc Rip	20	1	1	50	50	50	50	50
Finish Tillage	30	2	1.5	30	90	90	90	90
Harvest	15-20- 40	1	.75 - 1 - 2	68 - 400	68	136	136	300
Total					837	905	785	1789
Average	1079							

Exhibit 2: Seed Cost per Acre

	Corn	Soybean s Loam	Soybeans Clay	Wheat	Sugar Beets
Seeds per Acre	34,000	180,000	250,000	1,800,0 00	60,000
Seeds per unit	80,000	140,000	140,000	550,000	100,000
Units per Acre	0.425	1.27	1.79	3.27	0.6
Price per Unit	\$414	\$103	\$103	\$45	\$665
Cost per Acre	\$176	\$131	\$184	\$147	\$399
Cost of Overlap, 25%					
.0725 Acres	\$13	\$9.50	\$13.34	\$11	\$29
Rotation Average					\$16

Exhibit 3: Cost per Acre, Fertilizer Overlap

Airflow Spreader Width: 80 ft

Headland area: .88 ac

	Cost / ac	Area, 25% overlap	Cost / tower
Corn	\$355.02	.22 ac	\$78.10
Soybeans	\$134.23	.22 ac	\$29.53
Wheat	\$222.97	.22 ac	\$49.05
Sugar Beets	\$271.65	.22 ac	\$59.76
Average			\$ 54.11

Exhibit 4: Cost per Acre, Spray overlap

Sprayer boom width: 120 ft

Headland area: 1.76 ac

	Cost / ac	Area, 25% overlap	Cost / tower
Corn	\$95.46	.44 ac	\$42.00
Soybeans	\$104.64	.44 ac	\$46.04
Wheat	\$64.41	.44 ac	\$ 28.34
Sugar beets	\$1,074.29	.44 ac	\$472.68
Average			\$147.26

Exhibit 5: Other Utilities Annual Compensation

1. Windmill, Haldimand. 20-year lease, renewable
1 acre + farm road
Annual increase 2%
2024 payment: \$27,487
2. Gas Wellhead, Kent Site + driveway
Rounded to full acre
Annual cost of living adjustment
Annual per acre payment: \$2,147
3. Communication Tower, Kent 4 acres, paid monthly
Property taxes paid (\$40)
Annual cost of living adjustment
HST added
2024 total: \$19,144
4. 10KW Solar Panel, Kent \$0.80 per KW
20-year contract
Annual income: \$13,000-\$14,000
5. Landfill Neighbours Research incomplete
6. ATCO Electric (Alberta) Cultivated land (2011) per tower: \$1,178
Update to 2024 @ 2%: \$1,524
Alberta cultivated land value 2024: \$6,000-\$7,000
 $\$1524/6000 = 0.254$

SW Ontario cultivated land: \$30,000
Proportional Ontario per tower: \$7,620

Additional contract detail available if desired.