

Agricultural Impacts Alone Justify Scrapping Bipole III Route¹

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The 1384 km route of Bipole III from the Nelson River to Winnipeg imposed by the Manitoba Government has been consistently estimated to cost at least \$1 billion more than a route to the east of Lake Winnipeg. That's the engineering and line loss costs for the extra distance, plus the added cost of purchasing replacement energy in the event of a catastrophic outage of the line. It also includes a mere \$34 million for "property acquisition" for the entire length of the line, including the agricultural areas affected.

In fact, the impact on Manitoba's agricultural industry for the life of the line is now calculated to have a present value in the range of \$1.6 to \$2.6 billion, just for losses from impediments to spraying created by the new line. The range illustrates the effect of different discount rates (3.5% and 2%) to estimate the long-range impacts in today's dollars.

Looking at it another way, the present value calculation of impact shows the amount Hydro would need to invest to have enough revenue to pay compensation to farmers for the life of the line. In practice, Hydro would probably borrow the money each year and pay its loan shark (Government of Manitoba) a 1% fee to access the Government's credit rating.

This brings increased costs to between \$2.6 and \$3.6 billion. How could Manitoba Hydro acquiesce to such an economically disastrous route that crosses over 250 km of prime agricultural land?

As noted above, the impact on spraying of herbicides, insecticides and fungicides will be substantial. Aerial spraying is necessary in many situations, and depending on field orientation and seeding direction in relation to the lines, may be unsafe and impractical within up to a mile of the lines.

Aerial spraying is a precision activity both in terms of immediate safety from collisions and from the risk of overlaps or misses. Overlaps mean potentially unsafe harvested foods, and misses mean reduced yields. Aircraft in this business are flying prescribed low patterns at high speeds, often in hot weather when the air is "thin" and maneuvers require great care. Consequently, aerial operators are not expected to accept the risk within a mile of a high power line.

Ground-based sprayers may often not be practical either. Wet soils with high clay content in particular, may not be very accessible, and the clay can easily be picked

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up on tires and do serious mechanical damage to crops in addition to spreading weeds from one field to another.

Combined aerial and ground spraying is not practical because of the risk of overlap or misses due to uncertainty about where one or the other application actually stopped. Overlap could render the produce unsafe for human consumption and leave aerial applicators vulnerable to huge fines and jeopardize their licences.

Because spraying may not be practical or timely, considerable crop losses will occur, not just under the wires, but over the entire field. Since over 250 km of line passes through prime crop land: spraying impacts will be huge!

Manitoba Hydro is on record as stating that only 50 hectares (123.5 acres) of farm land will be affected: essentially tower bases. This is ridiculous: an illusion clearly intended to deflect attention away from reality. A more realistic figure is 192,000 acres of arable land directly impacted with spraying problems. With at least 250 km of prime crop lands impacted, plus almost an equal distance of mixed farming areas, it will significantly increase costs, frustrations and hazards for Manitoba farmers unfortunate enough to be located under or near the proposed line.

This calculation does not include other significant agricultural impacts noted below.

First, equipment will require extra turns to avoid towers, with the consequence of extra time (labour) and fuel for turning, missed areas and overlap of seed, fertilizer and sprays. Given the size of equipment today compared to a few decades ago, the risk of collision with towers is real: the only question is when it will happen and what injury and damage will result.

Second, additional insurance costs associated with these risks will be considerable, as well as associated costs for crop insurance and income stability programs resulting from increased premiums and reduced coverage.

Third, dairy and hog farmers today are obligated to have complex manure injection plans and systems. These involve huge storage structures for the manure and a very long umbilical hose that is dragged behind injector equipment. Maneuvering this equipment will be severely impacted by towers, restricting the area of land that can be used for manure application and probably resulting either in the need for additional land to accommodate injection requirements, or exposure to heavy fines for not meeting regulations.

Fourth, climate change will justify new irrigation developments, but these may not be practical in the vicinity of lines, resulting in lost potential income.

It gets even more complicated.

The above deals only with today's technology. Over the past 60 years, seeding machinery has gone from widths of 12 to 20 feet to 60 to 80 feet or more (over 130 and more for harrows and sprayers). Greater widths creep in each year! GPS and GIS technologies linked into auto-steering systems are the norm, and the proper operation of equipment is monitored by sophisticated technologies mounted in the cab of the tractor or combine. Technological change is a fact of life in every aspect of farming: new crops suited to Manitoba conditions, new chemicals, new and larger machinery, new computer applications for planning and management, etc. Specialists in fields of medicine, genetics, robotics, engineering, metallurgy, computer technology, microbiology and biology, to name just a few, are working steadily on tweaking systems, but as well they are developing entirely new approaches to how farming will be practiced in the future.

It is this pace of technological change that makes it impossible to project future costs and losses beyond a few years. Just as many crops today were not grown 60 years ago (e.g. canola, corn, soybeans), over another 60 years, crop types will continue to change, keeping pace with market and efficiency challenges.

Manitoba Hydro hasn't caught up to this fact. Their approach to compensation derives from thinking of agriculture in static terms. Just a look at the amount of food produced and the differences in types over the past 50 years renders this approach obsolete. The pace of change is now so fast that even medium term projections cannot be made with any degree of accuracy.

Yet, Manitoba Hydro thinks that a once-only up-front lump sum payment is appropriate for compensation: again a blatant denial of reality.

Bipole III, if needed at all in the short run, warrants the following considerations.

First, Bipole III should avoid cultivated agricultural lands. Where this is impossible, the lines should be underground, as are oil and gas pipelines. Given the magnitude of projected agricultural losses, underground lines are clearly the less costly option. Although the proposed Bipole III line could be placed underground from near Gladstone to Winnipeg, thereby avoiding much of the long term losses, other routes also deserve attention to avoid serious migratory bird and caribou impacts.

Second, putting a new line through the agricultural region (a documented tornado prone area) for reasons of "system security", defies logic! If security is the objective, there are other and better routes to achieve it: if market demand is the objective, due diligence is required.

Finally, compensation should reflect its true meaning: replacement of losses incurred. This means that if losses are annual, compensation should be paid annually, based on the realities of the day.

Farmers reaction to this excessive impact of the proposed line on their livelihoods, may turn out to be a godsend to the taxpayers of Manitoba by saving them from paying for a \$2.6 billion boondoggle.