

Improving Rail Service in Southwestern Ontario: A Common Sense, Common Good Approach

Policy Brief, April 2018

Key Points

- Addressing the problems of traffic congestion and high levels of greenhouse gas emissions from transportation is imperative in Ontario. Improving rail transportation through the southwestern Ontario corridor is a reasonable and laudable objective, but should be pursued with caution. The proposal for high-speed rail (HSR) should be rigorously examined because of its real economic, social and environmental costs.
- Projected costs of HSR (approximately \$4.8 billion for the segment between Kitchener and London alone) may be vastly underestimated, and ridership may be far lower than expected, with insufficient population beyond the GTA and many obstacles to frequent usage, including high ticket prices.
- HSR would devour at least a thousand acres of Class 1 farmland — the jewel in the crown of Ontario's (indeed Canada's) agricultural land — disastrously affecting untold numbers of family farms, rural-based businesses and surrounding communities.
- Alternatives to HSR could mitigate these and other serious concerns.
- With an investment of such magnitude, and with so many inherent risks, careful consideration should be given to all reasonable alternatives that could achieve the province's goals. The scope of the Environmental Assessment (EA) that began in March 2018 is currently limited to *only HSR* within or adjacent to the Hydro One corridor between Kitchener and London. **The scope of the EA must be expanded to include alternatives to HSR and to other routes.**

Background

Personal vehicle use in the densely populated region of southwestern Ontario has been a concern for decades, as governments have attempted to address gridlock, congestion and the economic and environmental threats posed by both. At the same time, national, provincial/state and municipal governments worldwide are recognizing and acting on increasing levels of carbon emissions (particularly since the signing of the Paris Agreement on Climate Change in 2015). The Ontario government has identified transportation as one of the province's highest sources of emissions (approximately 35% of total emissions) (Government of Ontario 2015).

As part of a larger effort to address carbon emissions, the government of Ontario has proposed the construction of HSR to connect four major centres (Toronto, Kitchener-Waterloo, London and Windsor) by 2031. This proposal is supported by three foundational principles: to “transform mobility choice in southwestern Ontario”; to “catalyze economic development”; and to “support regional integration and development” (Government of Ontario 2016). These goals are only achievable through an integrated public transportation network and not a stand-alone HSR project. With high numbers of commuters currently driving or taking GO transit between Kitchener and Toronto, an improved (faster, more convenient and more affordable) rail system between these centres, fully integrated with other modes (active and passive), makes eminent sense.

The Case against the Proposed New Corridor from Kitchener to London

The only leg of the HSR system that would require the building of a new corridor is the section between London and Kitchener. Such a corridor would run directly between the two centres, driving a physical wedge through 62 km of farmland and rural communities. This portion of the project is being met with criticism on economic, social, environmental and ethical grounds.

Objections include:

- The use of tax dollars on a project that is destined to benefit a few at great expense to many, especially since the projected cost estimates of approximately \$4.8 billion are far from comprehensive and ridership projections are overly optimistic. According to transportation analysts, North American HSR is feasible only where each metropolitan area being served is *at least 3 million* (Gerson 2018). (See “A Business Case for HSR?”)
- The loss of prime agricultural land and the destruction of family farms and rural communities that would result from the implementation of such an invasive and disruptive technology. (See “Who Would Benefit from HSR? Who Would Lose?”)
- The potential damage to wildlife habitat and local food production is at odds with the province’s stated goals of lowering greenhouse gas emissions and protecting valuable farmland. Less harmful means should be found to incentivize reduced vehicle use. (See “Environmental Risks.”)
- **The decision to implement HSR has been reached in a manner that offends basic principles of justice, by seeking the input of business interests that stand to benefit from the investment and neglecting to consult those who would be adversely affected by HSR.** (See “Beyond Not-in-My-Back-Yard: Seeking the Common Good.”)
- HSR would be a stand-alone project and not part of a broader Ontario passenger network. The planned extension to Windsor is incompatible with Amtrak high performance rail services in Michigan that are predicated on 110 m/h with diesel propulsion. Neither would it be compatible with VIA Rail’s high-frequency plans for eastern Ontario.

A Business Case for HSR?

To date, no persuasive business case has been made for HSR between Kitchener and London.

Projected revenues are uncertain at best. While the Special Advisor’s Final Report estimates ridership at between 10.6 million per year and 11.6 million per year by 2041 (Government of Ontario 2016, 10), it also acknowledges numerous risks that may prevent ridership from reaching these numbers. Empirical data from other regions indicate the numbers are inflated. A recent *Macleans*’s article (Gerson 2018) quotes transportation analyst Bruce Feigenbaum: “In the North American context, you need at least 3 million people in each of the metropolitan areas [you’re serving]. You need incredibly high population density in both of these cities. You need very good inner-city transit systems and you need generally low rates of car ownership.”

The population of London (approximately 385,000) and its lack of “good inner-city transit systems” (note the probable demise of “Shift,” London’s rapid transit plan) would make the city a poor candidate for HSR. Successful HSR projects are those supported by connecting public transportation services of a type that are virtually non-existent in southwestern Ontario.

The cost of service is likely to be prohibitive. The Special Advisor’s Report presumes HSR ticket prices at 20% above current VIA prices (Government of Ontario 2016, 53). An adult who currently commutes from London to Toronto will pay, with two Commuter e-Passes each month, approximately \$1,300 (inclusive of taxes). The HSR cost would increase to approximately \$1,570. At \$78 per day (not including transportation to or from stations, or parking), this is excessive even for an employee who is paid an above-average salary.

Although the cost of a Commuter e-Pass is static, VIA uses a dynamic pricing system (not unlike an airline) for individual ticket pricing. It is therefore difficult to pinpoint pricing due to the considerable fluctuations depending on supply and demand. As an example, four people (two adults and two children) can travel between London and Toronto for between \$226 and \$768 (inclusive of taxes). At HSR pricing, this range would vary from \$271 to \$922.

Anyone commuting from Woodstock, Ingersoll, Stratford or St. Marys would have to drive to either Kitchener or London to board HSR, since it will not serve rural communities. Commuters travelling from Brantford will need to drive to the Aldershot GO Station. This will easily add another hour to the commute; the cost of parking must also be added to the increase in fares.

When compared to the relatively low cost of simply driving the same distance, it is hard to see how HSR — without massive subsidization of prices — will lure either commuters or vacationers out of their vehicles.

(Tellingly, ridership for the Union Pearson Express, which began operations in June 2015, was overestimated to the point that by March 2016 ticket prices had to be cut in half —that is, heavily subsidized — to encourage use. The system still couldn’t break even [Moore 2016].)

The Special Advisor’s Report also fails to consider changes in employment patterns and disposable income. If income inequality continues to increase, a significant portion of the population will become relatively poorer. Consequently, there will be greater demand for basic travel options with low fares. The airline industry is well aware of this and is expanding its ultra-low-cost carrier model. It recognizes that a declining portion of the travelling public will pay for premium services. HSR is a premium service and will require a significant per-seat subsidy to reach planned ridership.

On the cost side as well, there is uncertainty. Currently set at approximately \$4.8 billion for the Kitchener-London segment, cost estimates are neither comprehensive nor realistic. At a minimum, the following costs have not been accounted for:

- The cost of operating, maintaining and subsidizing HSR.
- The cost of adequate numbers of trains. A typical 250-km/h train set consists of two power units and five coaches for 300 seats. The cost of each train set is about \$50 million each. To accommodate the estimated demand during peak hours, a minimum of 15 trains is required (\$2.5 billion). Expensive, dedicated facilities are required to maintain the highly specialized equipment fleet.
- The cost to expropriate the land (both in cities and countryside) required for the new portion of the corridor. In the case of farmland, most land on the route is designated Class 1, the most productive and expensive farmland in Ontario. The cost of expropriation will be higher where there are affected homes, buildings or businesses.
- The cost of litigation. Due to dramatically lowered land values on affected and nearby lands, many homeowners and landowners are likely to litigate, which will further add to government costs.
- Additional tunnels and bridges. With significant road closures throughout the affected area, traffic on roads that remain open will increase substantially (especially as farmers seek access to markets and local communities travel much further for work, school and leisure activities). Additional tunnels and/or bridges will be necessary to allow access under or over major roads. This infrastructure must be built on a scale to serve today's agricultural equipment and the forecast growth of other vehicular traffic.
- Ongoing, increased winter and other maintenance costs associated with servicing dead-end roads.

The Special Advisor's Report makes no mention of the need for urban property expropriation to meet the technical requirements of HSR as it passes through highly urbanized London. And yet London has proven resistant to major infrastructure projects, including a ring road and light rail lines. Given that electrically propelled high-speed trains are not currently permitted on CN and CP tracks, a new right of way will be required to maintain the planned average train speeds. It is reasonable to expect the matter to be highly contentious. Locating the HSR station outside the downtown core substantially diminishes its effectiveness and business case.

It is worth noting that within the past 10 years, the Obama administration provided states with funding to implement HSR, but states did not follow through when the business case was examined more closely. They turned to lower-cost, less-invasive high-performance rail instead. In Canada, Alberta rejected HSR in 2014, when it found that estimated trips of 10 million per year did not justify the \$6-\$10 billion expenditure (CBC News 2014). If 10 million trips for \$10 billion dollars were not justifiable, certainly 11 million trips for \$20 billion are not justifiable (particularly when 8.7 million of those trips are within the Kitchener/Waterloo and Toronto corridor).

Who Would Benefit from HSR? Who Would Lose?

The promise of faster transportation implies greater economic integration and more job opportunities. HSR is specifically aimed at nurturing growth among "innovation hubs" and "centres of knowledge and industry" (Government of Ontario 2016, 6).

To some extent, HSR can deliver on its promise of moving people more rapidly from home to workplace and back again. But the margin of improvement is questionable, given the many mitigating factors that cause even high-speed trains to run at less than their maximum speeds (such as restrictions on how fast they can travel through high-density areas, as well as embarking and disembarking times). The end result may not be desirable for a large number of users. It would be the exception rather than the rule for Londoners to commute to Toronto daily, since even the most optimistic scenario would involve 2.5 hours of commuting time each day, not counting time spent travelling to and from stations. Those living and working in the Kitchener to Toronto segment of the corridor stand to benefit most from improved rail service.

The outlook for communities between Kitchener and London, however, is rife with concerns.

Communities that are currently served by VIA Rail (such as Stratford, Woodstock, Brantford, St. Marys, Ingersoll, Sarnia, Chatham and Windsor) will find their rail service less reliable (as it suffers from reduced ridership due to the competition of HSR), and ultimately such service is likely to stop altogether. An ideal solution should not involve making public transit less accessible for large segments of the population.

With HSR, there can be no level road crossings. This means that many roads would be dead-ended, which would have numerous negative impacts for affected areas:

- Response time by emergency vehicles will increase significantly.
- School bus routes will be disrupted and children will have increased travel time. It might be necessary to rezone school districts.
- The cost of maintaining roads will increase dramatically, as snowploughs and other maintenance vehicles will have to deal with dead-ended roads.
- Residents will be inconvenienced because of increased travel time — both as a result of having to detour to avoid dead-ended roads and additional traffic congestion where there is an overpass.
- Values of affected properties will plummet, which will create hardship for landowners and possibly a crisis for municipalities that rely on taxation income based on property values.

For agricultural lands, the negative effects will be even greater:

- Some farms that have been in the family for generations will be lost.
- Some farms will literally be cut in half, making the land difficult (if not impossible) to access and service. In addition to the land lost through expropriation, some land will become landlocked and completely inaccessible — leading to a greater loss of farmland.
- The lack of level crossings, and the distance between overpasses or tunnels, will result in increased time for farmers travelling to and from their fields. For farmers travelling in wide, slow-moving agricultural equipment, this creates considerable delays, as well as safety hazards from being forced onto busy highways.
- Property values will drop and the cost of equivalent properties in unaffected areas will increase — making it unaffordable for many affected farmers to relocate.
- Put simply, for people living in the surrounding rural areas, the effects of HSR would be devastating. Thousands of people would lose their cohesive communities and some

would even lose their livelihoods. The current route proposed for HSR would be implemented at the expense of rural residents — who will not receive any benefit from the project.

Environmental Risks

Not only would HSR consume at least a thousand acres of prime farmland, numerous woodlots, tall grass prairie and wetlands would also be destroyed in creating the necessary clearance for HSR. The loss of habitat of native species of plants and animals is inevitable when the rail line intersects with ponds, creeks, woodlots and pasture lands. The impact of the HSR on woodlots will be profound. Changes in the composition of woodland vegetation will cause a loss of biodiversity. There will be ongoing degradation of the landscape as plant communities are disturbed in natural areas and opportunities created for invasive weed species following construction work for the HSR.

Our highways are a significant cause of animal mortality and HSR will contribute to further losses for some species. Many birds have difficulty avoiding vehicles moving at highway speeds. Preventing HSR collisions with large mammals will require a high chain link fence barrier. A fence barrier will prevent the regular movements of species, such as white-tailed deer, especially during the fall breeding season or in the winter when they are moving between feeding and shelter areas. The HSR and barrier may restrict the movement of other wildlife species, such as amphibians, that have regular seasonal movements between breeding and overwintering sites. Barriers along the length of the HSR route will cause fragmentation of the habitat of some terrestrial species.

Between Kitchener and London, habitats will be dissected into smaller patches north and south of the HSR line. The fragmentation of wildlife populations can restrict normal gene flow. Isolating small populations of an animal may reduce the viability of the species, leading to local extinction. In other areas of North America, the migration of wildlife across highways and railways has been accomplished with mixed success, using expensive underpasses and overpasses.

In meadowlands, HSR will cause loss of habitat and disturbance to species such as the bobolink and eastern meadowlark that are already challenged to find adequate breeding sites. We can expect changes in populations of many species due to a reduction of suitable habitat. Individual wildlife species respond differently to development. Some populations stressed by the disturbance of HSR may become more vulnerable to other pressures in the environment.

Another unfortunate consequence of the HSR would be the barrier to the movement of people and their ability to access the landscape, appreciate natural areas and encounter local wildlife. Ironically, a low-carbon, “sustainable” rail system — HSR — may take us backwards in preserving the ecosystems and habitat that support countless species, including humans.

Beyond “Not in My Back Yard”: Seeking the Common Good

All public infrastructure projects are disruptive to some degree and will therefore always generate a certain number of “not in my back yard” objections. It is easy to dismiss these objections as parochial, narrow-minded or at least self-serving. *Yet a normative ethical decision-making approach suggests that those affected by policy proposals have, at the very least, the*

right to be consulted and accommodated as far as possible. With all proposed changes for “public purposes” (the rationale for the “taking” or expropriation of land), the benefit of all — the common good — should be the goal. Seeking the experience and wisdom of individuals and communities is a necessary first step.

Furthermore, where there exists the threat of expropriation — long considered among the most extreme uses of government power — the interests of the individual are significant. The following paragraph is instructive in this light:

“In the 17th century, the famous English jurist Edward Coke wrote that ‘a man’s house is his castle,’ adding (in Latin), ‘one’s home is the safest refuge to everyone.’ Coke’s legal treatises are foundational documents of the common law, and this particular maxim continues to influence modern courts. Canadian Supreme Court Justice Claire L’Heureux-Dubé wrote in 1991, ‘Both the legislator and society as a whole recognise the truth of Edward Coke’s adage ... [P]roperty rights are considered fundamental in our democratic society.’” (Brubaker 2014)

Any decision by government that may lead to the expropriation of private land should meet the following minimum criteria:

- The decision-making process should be without bias or conflict of interest. Outside parties who stand to benefit financially from the decision should be given as little input or credence as possible. It is noteworthy that in his message as special advisor, the Honourable David Collenette states, “I have also concluded that there are opportunities to engage the private sector in financing and delivering the project” (Government of Ontario 2016). Such optimism is unsurprising, given that the private sector businesses consulted about this matter would profit enormously from HSR contracts. The optimism of business interests should be tempered with public skepticism and caution, since any private sector financing arrangement for the HSR project would almost certainly require the taxpayer as a backstop.
- Affected parties should be consulted prior to decision making. In the case of the HSR route proposed between London and Kitchener, InterCityRail is not aware of any consultations initiated by the Province with affected municipalities, communities, Indigenous communities or individuals. The scope of the EA should allow a full and thorough consultation with these groups, with terms of reference broad enough to allow for discussion of alternatives that would be more acceptable than HSR. It is deeply concerning that elected provincial officials continue to base their pro-HSR statements on unsubstantiated and facile claims.

The Alternative

The best alternative may be a fast, frequent and affordable intercity rail passenger service that is a mix of GO, VIA Rail and Regional Express Rail. Travelling in existing rail corridors, some trains reach speeds of up to 200 km/h. Additional tracks are used to separate passenger service from freight. It is at the core of many integrated public transportation systems now operating in thriving regions around the world. Such a system can expand and contract as demand dictates. Improvements to the rail and stations will benefit all trains (GO, VIA, Regional Express Rail and freight).

VIA Rail has recently requested funding from the federal government for dedicated passenger tracks. The federal government has committed to spending \$8 million over the next three years to review this proposal. Specifically, VIA has pitched the government on what it calls “high-frequency rail” between Toronto and Quebec City, where trains would reach top speeds of 177 km/h and avoid having to share track with freight trains, which currently get priority at bottlenecks. VIA estimates trip times would drop by as much as 25% (Platt 2018). Similar improvements could be made in southwestern Ontario. It should be noted that HSR in southwestern Ontario and VIA’s “high-frequency rail” in eastern Ontario and Quebec would, for several reasons, not be operationally compatible.

The GO system has proven itself effective within the GTA and surrounding area and could be expanded to further relieve traffic congestion in this area. Although the Special Advisor’s Report emphasizes high average service speed, this is not the only consideration of potential users: frequency, reliability, accessibility and affordability are user priorities, and these are the drivers of GO train success in the GTHA. Improvements to passenger rail services in southwestern Ontario must be modelled on these priorities and not on unqualified aspirational goals. The 2018 provincial budget calls for selective GO fare reductions, thereby acknowledging the price sensitivity of personal transportation — something that HSR currently does not.

Benefits of Upgrading and Enhancing the Existing System

Regional Express Rail offers higher than conventional speeds that shorten travel time and allow for greater frequency in service. With its ability to be adapted to existing infrastructure, it:

- lowers costs over HSR;
- minimizes the need for expropriation of land;
- minimizes the need to dead-end roads, and the disruptions to drainage systems;
- shortens implementation timelines over HSR — could start implementation in five years or less;
- can be rolled out in phases; and
- can use existing Canadian rail technology, manufacturing and skills (whereas HSR equipment and operating technology would need to be imported).

In short, a mixture of improved VIA, GO and Regional Express Rail has fewer adverse impacts on the environment and on communities than HSR. It can be implemented more quickly, at a lower cost, while providing an immediate boost to Canadian manufacturing and construction employment, and a long-term boost to the innovation sector. Integration of economic centres (“innovation hubs”), along with job creation, can still be achieved by improving existing rail systems, since travel times would not be appreciably different.

Conclusion and Recommendation

Fostering Ontario’s innovation hubs and centres of knowledge and industry should not come at the expense of its agricultural sector. To set these up as competitors where there must be winners and losers is both a false dichotomy and counterproductive. Agriculture is a business — and a vital one to the Ontario economy. In 2016, primary agriculture alone (not including agri-business or related industries) accounted for \$4.5 billion of Ontario’s GDP (Government of Ontario 2017).

Moreover, development in southwestern Ontario has always needed to be balanced against the fact that this region is home to the most valuable and productive farmland in Canada. Such land is irreplaceable. The food produced by southwestern Ontario's farmers is critical to Canadian food security and is a key factor in our potential to create truly sustainable local food systems in this province. Governments at every level have long acknowledged prime agricultural land for what it is — a finite, non-renewable resource — yet too much farmland in this part of the province has already been lost to burgeoning development. The Provincial Policy Statement clearly states the government's intention: "Prime agricultural areas shall be protected for long-term use for agriculture" (Government of Ontario 2014, 2.3.1).

HSR would cause yet more prime agricultural land to be lost to development. Its effects would be felt on farms and in rural communities far beyond the precise acreage that would be expropriated. There are better solutions to traffic congestion and high carbon emissions than a rail system that destroys productive farmland, wildlife habitat and many people's livelihoods. Economic growth and integration can be achieved without pitting sectors against one another.

HSR must be assessed in the light of real numbers and real risks, within a more holistic view of southwestern Ontario's economy, its communities and its potential to create drivers of sustainable economic growth across a variety of sectors. **The scope of the EA must be expanded to include alternatives to HSR and to other routes.**

About InterCityRail

Various local groups and individuals have joined together to form InterCityRail, an advocacy organization that promotes evidence-based solutions for improved, reliable and affordable passenger rail transportation in southwestern Ontario. InterCityRail supports the province's goals of shifting transportation patterns away from automobile use, reducing traffic congestion in major centres and on highways, and transitioning to a low-carbon economy, particularly in the transportation sector.

Our objective is to have the Province of Ontario expand its Environmental Assessment to review all viable options for enhanced rail service between London and Kitchener while providing absolute assurance that all passenger rail services currently offered by VIA Rail in southwestern Ontario remain matched to customer demand. Resolving Ontario's transportation challenges is a difficult task and must involve an assessment of all reasonable alternatives.

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