

The Scope of the Environmental Assessment of High-Speed Rail Between Kitchener and London Must Include Alternatives

Summary, August 15, 2018

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1 - Introduction

The members of InterCityRail believe that improved public transportation is necessary for southwestern Ontario. We also believe that enhanced passenger rail is part of the solution. We believe that any implementation needs to be evidence-based.

From the start, we thought HSR was poorly conceived and that spending \$11 billion, destroying more than 1,000 acres of farmland and tearing up city centres in the process, made no sense.

2 - Restricted Individual Environmental Assessment

The previous government announced that HSR would be subject to an Individual Environmental Assessment (EA) and then secretly, and perhaps illegally, restricted the EA to 250 kph trains in a straight line through some of the most fertile farmland in Ontario.

Kathryn McGarry, then Minister of Transportation, refused to discuss the restricted EA with InterCityRail, or with any local municipalities.

3 - What We Suspect

We have been unable to discover why the Minister of Transportation restricted the EA. We suspect that it was because **all** previous studies done by the government were designed to support the strictly political decision to build HSR and the government knew it was impossible to publicly defend a full EA based on the documents it had prepared.

Furthermore, the only place in Ontario that 250 kph HSR is even remotely feasible is between Kitchener and London. The restricted EA was designed to prevent the rural communities from being able to object to the EA, as any objection raised would be declared to be out of scope and would not be considered.

4 - What Will Happen

If the restricted EA continues in its current form, and the Terms of Reference are set without considering anything outside of the scope, it is possible that the Minister of the Environment could approve the EA. We suspect that the current government will not build HSR because the economic and social benefit of such as a large disruptive investment cannot be justified. However, once the Minister of the Environment approves the EA, the land will be protected from development and this will prevent agricultural and industrial investment along the route.

A subsequent government can then build HSR without any further studies or approvals, even if the promised travel times, projected ridership numbers, and construction costs are unsubstantiated and clearly not adequate for a successful project.

Given such a risk, the current EA cannot be allowed to proceed with the restrictions in place. Even if HSR is never built, the impact of the restricted EA on people's lives and livelihoods will last forever.

5 – What We Know

Most of what we know can be found in the material supplied to the bidders for the Study for High Speed Rail – Environmental Assessment Terms of Reference (RFB #TENDER_7661).

Additional material was discovered by Freedom of Information Requests.

The details supporting the following items can be found on our website, www.intercityrail.org, and in particular, within the Briefing Book, which is posted in the Documents section: www.intercityrail.org/wordpress/wp-content/uploads/2018/05/Briefing_Book.pdf.

6 – The Issues

Restrictions

1. The previous government claimed that the scope of the EA had been restricted because previous studies had examined “alternatives to” HSR. However, MTO admitted to us that no previous studies had been done on alternatives: instead, all studies had looked at the economic justification for 300 kph HSR trains.
2. The First Class Partnership study done in 2014, which initiated the HSR project, was erroneous and misleading. The study was done in London, England, took only two weeks to complete, and used Google Earth to determine the route.

Union Station

3. Metrolinx plans to expand GO Transit from 1,500 trains per week to 6,000 trains per week, and Union Station is already a significant choke point in the system. VIA Rail trains are already being delayed due to congestion. Why would HSR bring another 50 trains per day into Union Station when there is already insufficient platform and track capacity?

Rural Areas

4. Rural communities and agricultural organizations were never consulted.
5. Rural residents would not be able to access HSR without driving to either London or Kitchener. VIA Rail will cease to exist in southwestern Ontario if HSR is implemented. The impact on communities not served by HSR (including Chatham, Georgetown, Glencoe, Ingersoll, St. Marys, Sarnia, Stratford, Strathroy, Windsor, Woodstock and Wyoming) was never considered.
6. The impact on farmland was never considered. More than 1,000 acres of farmland would be permanently taken out of production and this land, if planted into wheat, is enough to produce 4.3 million loaves of bread per year, every year.

7. Many roads would be closed by HSR, preventing farmers from accessing their land, their suppliers and their customers. Fire, police and ambulance services will all be disrupted, as well as school buses, postal delivery, etc.
8. Slow, large farm equipment will be forced onto the few regional roads that will remain open.
9. The consultants and MTO have no understanding of Agricultural Business Units and the need for individual farmers to meet the requirements of the Nutrient Management Act.

Urban Centres

10. No attempt has been made to integrate HSR into local transportation modes in Kitchener, or London. However, modal integration is a key justification for investment in HSR in any jurisdiction.
11. No attempt has been made to explain the amount of expropriation and demolition that would occur in the residential and downtown areas of London and Kitchener (Guelph, Acton, Rockwood, Brampton are not part of this EA, but massive disruption will occur in all urban areas through which HSR passes).
12. Trains would travel through urban areas at 175 kph. No consideration has been made of the effects of noise and vibration.
13. Additional land required for HSR tracks and freight bypasses in stations, sidings for slow trains, etc., has not been quantified.
14. The government assumes HSR can use existing freight lines. These lines can't be used because CN and CP do not allow the overhead 25kv catenaries that are necessary for delivering power to electric trains.

Costs

15. There is no data to support the number or costs of trains required for the schedule. The government has budgeted \$70 million for train sets, but we believe the cost will be closer to \$700 million. No replacement costs have been allocated, although we note that Amtrak is replacing its Acela trains after only 20 years of service.
16. The costs for the Brampton Freight Bypass (\$8 billion), or the connection to Pearson Airport (cost unknown) are not included in the \$11 billion estimated for the Toronto to London segment. The estimate of \$54 million per km for HSR does not include any room for unforeseen problems. Transit infrastructure projects are historically 45% over budget.
17. Operating costs are expected to be around \$40 million per year. Interest payments on \$11 billion are about \$450 million per year at 4%. Insurance costs are unknown.

Ridership

18. There is no justification to run trains at 250 kph between Kitchener and London while only running at 200 kph between Toronto and Kitchener.
19. The projected ridership numbers are unjustifiably optimistic. The number of cars on the roads, used to justify HSR, do not agree with the MTO traffic camera counts on the 401. Furthermore, the government predicts there is a demand for 9,000 passengers per day, but are providing enough train capacity for 50,000 passengers per day.
20. Projected ridership does not consider any sensitivity to fares. This was what was wrong with the projections for the Union Pearson Express. UPX has been subsidized \$52.26 per ride since the start of operation. UPX will never pay for itself.

On-Train Travel Times

21. The maximum distance travelled between Toronto and London at 250 kph would be 66.7 km (not 88.3 km as used in the government's calculations). HSR trains would be used at their maximum speed capability for only one-third of the total distance.
22. The on-train travel time of 73 minutes between Toronto and London — a number frequently mentioned by the previous administration — is wrong. It is understated by about 30%: on-train travel times (door close to door open) will be at least 105 to 110 minutes. Once reasonable residential speeds, safe deceleration parameters, station buffer zones and the correct distance available for 250 kph operation are factored in, actual on-train travel times will be about 110 minutes and trains will be at 250 kph for 15.1 minutes, or less than 14% of the total time.
23. On-train travel time does not include travel to the station, parking, accessing the platform, waiting for the train, boarding, and the reverse at the other end.
24. The government claims to use European standards for the calculation of travel times but has used 0.9 m/s^2 for deceleration. This is only allowed for trains with handholds (i.e., subways, LRT); it is not allowed for any coach where passengers are expected to be walking around. The European number normally used for deceleration is 0.5 m/s^2 .
25. The government claims that a right of way is 26 metres. They have confused this with the Canadian standard for clearance. The actual additional right of way is about 40 metres for a shared corridor and 50 metres for a dedicated corridor; however, additional space is required for snow fences and animal barriers. Snow control is critical, as HSR has about one-third the axle loading of a freight train and freight trains must slow down if there is drifting on the tracks to prevent derailment.

A train travelling 250 kph will take 2.7 km to stop, plus the reaction time for the operator, plus the required safety buffer zone. European experience has shown that an engineer requires 8 seconds to react; at 250 kph, the train would travel almost 3.5 km before it

could stop. By the time the train engineer sees a snow drift or an animal on the track, it would be too late to stop.

Summary of Recommendations

- Restrictions on the EA should be removed so that all options can be studied.
- Rural communities must be consulted.
- Urban centres need to understand the impacts of expropriation, demolition, excavation and construction.
- Stations must connect with other transportation modes.
- Project costs and timelines are significantly understated.
- Ridership and travel times must be properly validated.
- Capital and operating costs must be calculated fully.

Going Forward

- Existing VIA Rail corridors between Kitchener and London, and between Brantford and London, can be utilized for improved, affordable, frequent and fast rail service, thus minimizing disruptions to urban and rural communities, as well as expropriations. The timeline to implement significant rail improvements would also be greatly reduced.
- A one-hour travel time between Kitchener and Toronto can be achieved using existing infrastructure with the Brampton freight bypass and the Guelph line upgrade.
- The federal government is investing in VIA Rail and this should be leveraged by the Province.
- Serious consideration should be given to other solutions, such as those proposed by Oxford County, the Southwestern Ontario Transportation Alliance and InterCityRail.