

**Response of Transport Action Ontario to a Request for Input to a
Proposed Multimodal Goods Movement Strategy for Ontario.**

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Section 1 : Context for Action

(Consultation document pages 1 – 17)

(1) – (4) Transport Action Ontario is a volunteer, non –governmental provincial organization, which is a key participant in a national organization called Transport Action Canada (TAC), located in Ottawa, ON. TAC, a non-profit NGO with charitable status, is the mother organization not only for TAO; but also for Transport 2000, (Quebec); Transport Action Atlantic, (Maritimes); Transport Action Western, which represents the Prairie Provinces, and Transport Action BC; which represents British Columbia. TAO is currently headquartered in Toronto, with membership across Ontario.

Both TAO (and TAC) have been in existence for many decades advocating for environmentally, socially and economically sustainable public transportation for Ontarians, and through TAC, for all Canadians. In recent years, these organizations have given much attention to Ontario's underused and inefficient rail transport networks for both commuter transport, and intercity rail passenger and freight use. A major concern has been and continues to be the urgent need for introduction and expansion of innovative technologies to improve both multimodal goods transport to best serve the people of Ontario and passenger transport by rail. TAO believes the two have a symbiotic relationship in terms of energy and economic efficiency. We also support rational integration of road, rail and air modes, including appropriate use of each mode with respect to environmental sustainability and in context of climate change.

(5) TAO is interested in, and is closely following transport developments around the world in order to learn from innovative examples elsewhere which may be applicable to Ontario. This includes new rail transport technologies, including potential manufactures and markets in Ontario and elsewhere, and more efficient, sustainable ground transport links between centres in Ontario and other regions of Canada and North America.

(6) NO. While we appreciate that roads currently carry 77% of total freight tonnage moved in Ontario, the current Ontario transport network and pattern of public investment is too heavily biased towards cars and truck transport with insufficient attention and focus given to emerging potentials of multimodal technologies and developments in rail based transport,[outside of North America]. These include rapid improvements in railway infrastructure and related communications and control systems, new techniques and economics of railway electrification, higher speed rail operations, higher speed freight operations using high speed passenger infrastructure for more rapid multimodal shipments between cities, and RO-RO electrified rail transport, an innovative, sustainable method of recapturing more multimodal freight and other high value shipments back onto railways and reducing travel time for multimodal truck transport deliveries across Ontario, and ultimately across Canada.

(7) It is impossible for Ontario industries to access 21st century world markets with its present 19th C. railway infrastructure and some current thinking. If present decision makers move in the direction of diversifying into more regionally sustainable transport

modes, or “intermodes”, some critical major problems of urban vehicular congestion, energy inefficiency, road safety, and environmental pollution, could be addressed simultaneously, with the result that Ontario could see enormous growth in investment in 21st C .regional and inter - provincial railway infrastructure within the next 20 years. This could open up an entirely new and dynamic future for both the Ontario economy and the Canadian economy. It would take innovative solutions to urban and regional transportation and related higher skilled employment needs and opportunities in Ontario, in an exciting, new direction.

(8) Virtually all jurisdictions around the world, with 19th and early 20 th C. railway networks, have either substantially electrified or begun to electrify their railways over the past 20 – 30 years. e.g. Australia, [including most of its respective states], Brazil, Byelorussia, China, Croatia, Czech republic, Denmark, Finland, Greece, Hungary, India, Malaysia, Morocco, Poland, Portugal, Russia, Saudi Arabia, Serbia, Slovenia, Slovakia, Spain, Sweden, South Korea, Taiwan, Turkey, the UK, to say nothing of Argentina, Austria, Belgium, Chile, France, Germany, Holland, Italy, Japan, Norway, Russia, and South Africa, Sweden, Switzerland, and the US, most of which have had electrification on at least some of their key railways for a century or more.

Many of these countries are the size of the province of Ontario, some are smaller and others larger. Many have climates similar to Ontario. Some have more centrally planned economies, while others are more private sector dominated. Some are more naturely well- endowed with sustainable energy, most are less so. Nevertheless, most are actively engaged in expanding higher speed railway operations for both passengers and freight within their countries and, if they are not island nations, connecting seamlessly with their neighbours. Many of these countries, and regions are using the unique advantage which electrification provides in: operating their railwaysn at speeds well above normal highway speed limits (e.g.128 – 200kph); while substantially reducing dependence on fossil fuels; and recovering substantial energy from braking of both freight and passenger trains. Most also appreciate that railway systems which are solely, diesel powered are: seriously speed and acceleration limited; generate large amounts of CO2 and CAC per locomotive; produce much higher noise levels (e.g.>30db at the property line);. for most locomotives).Instead, many of these countries are taking advantage of emerging railway technologies to operate both passenger and freight trains at greater speeds and higher energy and economic efficiency than is occurring on Ontario, or Canadian railways.

A small exception is in the province of Quebec, where the AMT has been operating an upgraded electrified commuter and freight line serving a limited area of Montreal’s north shore. Unfortunately, AMT has chosen to take a cheaper approach (in the short term) by delaying electrification of line extensions linking Montreal with Mascouche in one direction and St. Jerome in another. Instead, AMT is depending on new combined use diesel electric and electric “hybrid” locomotives to power commuter trains through Montreal’s Mount Royal Tunnel and into Central Station. This older electrified tunnel line was planned, built and operated by CN, after its predecessor private company,

CNR, (Canadian Northern Railway) went bankrupt almost 100 years ago, following the loss of a key developer partner on the Titanic.

About 60 years ago, a fossil fuel accident within Montreal's Mount Royal tunnel, demonstrated, why a 5 km. electric railway tunnel with no safety access, emergency escape routes or fire suppression might be ill equipped to handle a serious accident involving fossil fuel combustion. [In this earlier era accident, the combustible was naphtha in a freight car, which was accidentally ignited while parked in Central station. A locomotive engineer on duty at the time, made a heroic effort to hook up and get this burning car out of the station, and through to the tunnel's north portal, where it could more safely be extinguished. He was trying to avoid putting large numbers of people within the station at risk, Unfortunately, that brave engineer and the burning car never made it. His heavy, electric locomotive, was much slower than anticipated, and its slow speed was of little help in suppressing the rapid build up of flames and smoke, behind the locomotive.

This bit of railway history underlines the importance of building and operating technically safe, rail transport, including necessary backup and escape systems to ensure public safety. Hopefully, when AMT upgraded the tunnel's electrics 20 years ago, someone included an emergency system to address this issue. If Montrealers were lucky, the TSB might have insisted on it.?

Section 2 Maintain a modern, efficient and reliable multimodal transportation system (Consultation document pages 20 – 21)

Before addressing this broad question, TAO would suggest using the words "energy efficient and sustainable" instead of efficient and reliable

Items (1)- (2) a key transport investment by Quebec and Ontario, and possibly, the Government of Canada, together with the private sector, would be *development of a mixed use, two - four track, medium speed electrified rail corridor linking Windsor, Chatham, London, Woodstock, Aldershot (Hamilton), Oakville, Toronto (Union Station), Oshawa, Cobourg, Trenton / Belleville, Kingston, Brockville, Cornwall, Dorval (PET Airport), Montreal (Central Station), Three Rivers, Quebec City, Riviere du Loup** The existing privately owned double track line would have at least two additional new publicly owned tracks added, so as to be able to permanently ensure medium high speed performance on the Windsor - Quebec City portion of the line.

* Footnote: Riviere du Loup has been designated as an important stop on the Gulf of St. Lawrence sector of our proposed St. Lawrence River - Great Lakes multi use rail corridor, since it is the last point along the shore of the Gulf of St. Lawrence, where there is an existing 24 hour vehicle ferry operating 24 / 7 throughout the year, extensively serving north shore communities and regions, This ferry links RDL, on the south shore with St. Simeon, on the north shore, and with many regional highways provides the entire north shore with year around vehicular access. RDL, or its urban region, might

also be an appropriate location for a RORO, and TOFC, rail transport loading and service center.

Within this key interprovincial corridor, it is also proposed that *Ontario and Quebec jointly assist in the establishment of a series of municipal or regional, cooperative or third sector financed roll on roll off (RORO) truck loading centres, approximately 320 – 640 kms. apart.* At these points, truckers, who may have already reached their legal maximum allowed hours of driving for the day, could phone ahead and reserve space, and roll their rig(s) onto an interregional or interprovincial electrified train on schedule. Once on board they could relax, wash up, eat, sleep or just rest, in a “rolling truck stop”. Comprised of several sleepers and /or café lounge cars, while an attached electric locomotive pulls them and their premium, multimodal truck transport on special flat cars, together with those of 30 – 50 others t least a further 8 – 10 more driving hours along the railway corridor. At that point, they might, once more legally roll their rig(s) off the train and safely drive on, to their scheduled delivery point. Alternatively, they might remain on the train some additional miles, while being moved closer to that destination..

The cost to each trucker need be little more than normal for over the road costs of operation. This could include: fuel, wear and tear and depreciation of their transport equipment, equivalent tax savings for reduced highway use, [possibly in the form of an annual provincial road tax rebate to truckers for moving their rigs off road and onto rail; an insurance reduction rebate for mileage or time that their rig is off the road moving by rail at less risk, as well as the equivalent of normal hotel and restaurant expenses accrued for sleeping accommodation, showers, meals and rest period stopovers (e.g. tea, coffee, and bathroom breaks) for each road trip. In addition, either truckers or their companies might pay a slight premium for the higher speed and travel time advantage, gained by covering a significant distance by higher speed rail instead of driving the entire route distance. With current communications, and careful coordination, it need not be difficult for individual drivers, either through unions, cooperatives, or through their private companies, to arrange or pre arrange backhaul loads for much of their return distance.

Rolling stock for such a project might be developed and /or financed by a public private partnership which might include trucking industry and /or union pension funds.. The process might be similar in concept to public marine ferries currently operating within or between many provinces and regions (e.g. B.C., SK., NWT, ON., PQ, PEI - NS, NFLD – NS).

An integral requirement of mixed use multimodal electrified railway corridors would include: *elimination or relocation of numerous level crossings, and their replacement with pedestrian, cycle ,car and truck overpasses and underpasses.* [This is particularly important in areas where higher speed, and heavy rail traffic is anticipated;] *mandating establishment of in cab control and communication systems, on locomotives operating within the corridor, which ,would also ensure positive train control (PTC), would facilitate higher speeds and safer operatioin in inclement weather; installation of improved roadbeds, ties, track anchors, high speed rail switches, increased radii of.*

curvature on selected sections; rebuilt or replacement bridges and viaducts at selected river crossings; and improved security fencing to help ensure public safety.

(3) Improved infrastructure listed in (2) would: *reduce travel time for both goods movement and passenger transport by 1/2 – 1/3; reduce truck emissions to zero (CO₂ and CACs), [while trucks or TOFCs are transported over the rail system]; reduce intercity truck traffic on major highway corridors by an estimated 20%, [and to the extent that the RORO truck transport flows could bypass major urban areas by rail, a great deal of long distance truck transport generated congestion on some major urban highways, including the 401, could be relieved]; and reduce noise (at the railway property line) by 30db, by shifting from diesel-electric to electric power for railway locomotives. Electric locomotives also have the advantage of being able to recover up to 80% of braking energy, either for use aboard the train, for transmission to a train nearby, which is starting up or accelerating, and / or sell-back of up to 30% of this energy to the nearest substation of the respective utility. By comparison, the energy cost of running a truck transport load of goods across Ontario by road, is approximately 5X the energy cost of moving those same goods on an electrified railway which uses sustainable energy, Energy can also represent 25% of transport operating cost..*

(4) The most important federal investment in trade and transportation could be the creation of an agency, which TAO might call *FPERDA, [The Federal Provincial Electrified Railway Development Agency (or Authority). Federal and Provincial responsibilities under an Act governing such a railway entity would be that it would be empowered to organize, plan, design, contract, finance, administer and control the safe operation of passenger and freight trains on an integrated interprovincial (national) electrified rail infrastructure network, and on designated corridor(s).*

(5) Some important Fed. – Prov. capital investment and PPP priorities for rail transport infrastructure, in addition to the notion of RORO truck and /or TOFC or COFC loading centres, described above, *might include development of assistance to private railways for construction or reconstruction of new "shared use" "International Gateway " railway tunnels, beneath the International waterways, linking Canada with the US, at Windsor and /or Sarnia, Ontario; a new railway tunnel beneath the Welland Canal, linking Ste.Catharines, with Niagara Falls, ON.; a new railway viaduct at Trenton Ontario, across the Trent River, capable of handling higher speed express passenger trains, on at least two tracks, without the need to slow down to safely cross existing older bridges, viaducts, and lanes of track with sharp curves; a new grade separation of the CN and CP mainlines at Shannonville (Here, there is a similar problem of railway slowdowns for safety); a new higher speed rail mainline realignment and new viaduct required at Napanee, ON.; a new higher speed railway bypass line around the north side of Kingston, ON.; a new elevated railway ,embankment, and viaduct between Cornwall and the Ontario Quebec border. If Quebec firmly supports this intercity higher speed rail concept, then it might be persuaded to agree to contribute its portion of the cost of the line on east side of the provincial border extending at least, to Dorion/ Vaudreuil. It is suggested that these new infrastructure investments, if substantially publicly funded, should remain permanently under public control, instead of continuing to subsidize*

private railway improvements, in the hope that they might cooperate in allowing use of their lines for scheduled VIA rail passenger trains, which is the current modus operandi.

Such an investment could *reduce travel time for RO-RO truck transport between Toronto and Montreal from more than 7 hours to under 5 hours*, depending on selected operating design speed of the line, and the technology used to load and unload RORO trains, exclusive of reduced vehicle congestion and variable delays on metropolitan highways in both Toronto and Montreal. It would also *reduce passenger rail travel time from current VIA schedules of more than 5 hours centre to centre, to less than three hours* [depending on the number of intermediate scheduled stops, stop times, and quality of infrastructure improvements completed.

This proposed mixed use electrified rail system does not assume high speed rail HSR or VHRSR speeds (e.g. 280 – 360 kph.). Full HSR or VHRSR trains on their own tracks and ROWs could reduce travel times between Canada's two largest cities to two hours or less, but at higher capital and operating cost, even if the passenger rail system were shared with high speed parcel post and multimodal fast freight or air cargo shipments. (See selected references for further details)

Nevertheless,, *a well -designed mixed use electrified railway corridor would allow max. speeds of 220 - 250 kph. for passenger EMUs on two central, higher speed tracks within a four- six track electrified mixed use rail corridor. This would also provide a good base for a wide range of higher speed passenger and freight rolling stock, and could be expanded by high speed regional trains to serve the needs of intermediate towns and cities, as well as serving key airports within the corridor.*(e.g. Trenton airbase, PET and Pearson International airports, even John Munro International in Hamilton, [with the help of a proposed LRT link].It could also serve regional airports such as Ancien Lorette in Quebec City, and Windsor or London in SW Ontario.

(5) *Governments need, on occasion, to invest in maintaining and protecting key short line railways,(e.g. Huron Central, ACHB, and Shining Waters Railway),* The recent loss of the OVR and the important rail corridor it represents, over the longer term, is a tragedy which TAO does not want to see repeated.

Section 2 (b)

(Consultation document pages 21 –22)

Ontario should sit down with the Federal government and negotiate an affordable, reasonable fare structure for all users of VIA, ONR and GO Rail, or rail bus services, so that differential train and bus fares do not become a serious impediment to substantially increased passenger rail use, and concomitant to that, reasonable RO-RO, COFC ,and TOFC transport fares, fee arrangements or charges..

Truck Safety: There is wide public perception in Ontario that trucks and truck transports on roads and highways are causing a serious number of fatalities and injuries as well as

serious delays, snarls, and overall congestion to the motoring public. Causes of some recent events are variable including equipment or mechanical failure, irresponsible servicing of trucks and truck tires, and driver fatigue [which is one reason we have suggested serious consideration of the RORO option]. An important step would be for *the Province to establish a Task Force to review existing data, study the matter carefully and report back publicly on its findings.*

Section 2(c) Partnerships for a system-wide approach to transportation planning (Consultation document pages 22 – 23)

(1.) Establish a provincial forum and other measures (e.g. seminars and publications) to ensure that Ontario is staying current and understanding real emerging trends facing its industries. It is important to include other stakeholders such as trade unions, NGOs, transit and transportation planners, municipal urban and regional planners, and even some important transport rolling stock and equipment manufacturers ,in these forums.

(a) Regular consultation with key industries in Ontario. One would hope that consultations would include key transport industries such as, long term investors in the transport sector, transport consumer organizations, railway operators, railway unions, and railway rolling stock and equipment manufacturers,

(b) Consultations and reviews of what industries, in jurisdictions competitive with Ontario, are doing in other parts of the world, to maximize the benefits to their industrial economies of first class railway infrastructure investments and modernized rail operations. See in particular Section 1 Item (9) above.

(c) The present Federal government is now substantially “laissez faire”, off loading or reducing key historic Federal functions for infrastructure investment and environment as rapidly as possible. This includes its responsibility to maintain and protect future railway corridors for transcontinental goods traffic, such as the Ottawa Valley route linking Montreal, and Ottawa with North Bay, Sudbury and points west (e.g. Other reductions in federal functions include reduced investments in VIA Rail, TSB, the Rail Crossing Fund, and various transport related research agencies, which developed over many decades..

Most provincial governments have many requirements for safety and environmental regulations, etc., on the books. Thus far there appears to have been insufficient interest, resources, or sustained commitment to enforce, expand or reallocate, even what already exists, in more constructive ways. At the same time, at the urban level most municipalities are too busy running away from many regulatory responsibilities, vis. safety and human comfort, environmental sustainability, reductions in travel time, and energy efficiency. Also the municipal level, particularly in some larger cities, has achieved an abysmal level of intellectual leadership and basic knowledge, particularly among some mayors and their respective executive committees.

There is also a widely held, belief in the myth that: (i) existing ICVs, diesel buses, and diesel powered tractor trailer units will be here forever, and all that is needed is to build more 400 series highways to accommodate them; (ii) the price of fossil fuel will not increase very much in the future; (iii) Canadians need not worry about alternative approaches for future passenger and goods transport, because Canada has virtually unlimited energy resources. Therefore, there is no need to worry about running out, or about climate change caused or exacerbated by excessive fossil fuel consumption. Also, to some c.c. deniers, climate change is either not real or has not been sufficiently proven!.

To some minds, problems such as urban congestion, and /or the inefficient and wasteful use of urban land are not serious because Canada is so large and there is so much more land out there to continue to exploit and/ or waste. Unfortunately, some of these attitudes have become more commonplace since the late 1970s, resulting in many setbacks to the kind of planning progress which had been achieved in earlier decades in Ontario, and elsewhere across Canada. An important and tragic example was the fire sale of CN as a crown corporation for a fraction of its real value in the mid 1980s, with little public information, discussion or review. This occurred, after successive earlier Federal governments with greater vision, had spent more than 60 years, and a great deal of public resources in developing CN into one of the largest and most efficient passenger and Class I freight railways in North America. The early decision by its new private sector directors to move its HQ and key planning staff out of the country; virtually closing down the eastern end of this important national corridor; and shifting a great deal of traffic through the USA, at the expense of eastern Canada, and Ontario's longer term development, was and still is a national tragedy.

TAO believes that national railways are too important to Canada's future to be allowed to be continually frittered away and irresponsibly dissipated. One can now begin to envisage some of the difficulties and expense of planning for the future of Ontario and Canada's railway infrastructure, when future governments, and rail focused community interest groups must now work around private, secret, corporate decisions taken outside the country.

(3) Establish a provincial advisory council on sustainable transportation, and invite well informed participants from all regions and intermodal transport interests to participate. This Council might be tasked with preparing an annual report and commissioning relevant technical papers. Such a Council might convene an interprovincial or intra - provincial conference on higher speed rail for Ontario's (and Canada's) future commuters, intermodal freight shippers, rail based tourists and interregional passengers. This might also help to demonstrate that Ontario is serious about higher speed rail and related issues such as electrification and is considering important options to enhance its extensive rail served regions.

(4) Where should Ontario focus its efforts?

First, focus on *Ontario as a whole* .Does Ontario have an energy efficient ground transport system that makes it possible to move people and goods across the entire province in a day or less than a day? Is it working to develop such a system?

Second, through agencies such as ONR and Metrolinx and GORail Ontario could *work closely with municipalities in the north and south, east and west to improve accessibility through affordable energy efficient, sustainable transport. including: commuter and interregional rail passenger service, rail bus feeder services, and fast freight service to more Ontario communities,.*

An enhanced Windsor - Toronto - Kingston - Montreal Quebec City Higher Speed Rail corridor,would provide a major high speed spine to and from which many rail routes could connect..

A south branch would link London, Woodstock, Aldershot, Toronto by VIA Rail, and the north branch would link London, K –W, Pearson International Airport, and Toronto Union Station.. This could be done jointly by VIA Rail (express) and GORail (locals) feeding VIA Rail intercity express trains at key centres.

A north branch ,would link; London, Kitchener - Waterloo, Pearson Airport and Toronto Union Station, by VIA and the south VIA route, London, Aldershot, Oakville, and Toronto Union, By GO Rail the southern route would serve London, Woodstock, Paris, Aldershot, Burlington and all points currently served by GO between Aldershot and Toronto Union Station. GO Rail and GO Railbus would continue to serve all of the interstitial, intermediate centres along this line. On the north route as on the south route GORail, would serve a wide range of intermediate towns and cities including Stratford, K –W, Guelph, Brampton, Pearson International, Toronto Weston, Toronto Bloor Street and Toronto Union Station.

An improved electrified Niagara Falls - Hamilton VIA Rail / Amtrak express rail corridor, would be fed into by GO Rail buses as well as LRT's and municipal buses at key centres, such as Niagara Falls, Ste. Catharines, Hamilton and Aldershot. This corridor itself could also be served by higher speed GO Rail local trains" linking Aldershot Station, Hamilton, Stoney Creek, Grimsby, Beamsville, Vine land, Ste.Catharines, and Niagara Falls..

On the north shore of Lake Huron, as along the north shore of Lake Ontario, there is a continuous band of urban communities served in part by what is left of a 19th C. railway. The first CPR line linking Sudbury and Sault Ste.Marie. CP has now given up this line to the Huron Central Short Line Railway. This single track railway is in poor shape and its

speed downgraded accordingly. Despite its primitive condition, it still links the communities of Copper Cliff, Nairn, Espanola, Massey, Spanish / Serpent River (Elliot Lake), Blind River, Thessalon, and Echo Bay (Ekoba); and the Sault, where it connects with an old industrial and tourist (short line) railway, the ACHB (Algoma Central Hudson Bay Railway) linking SSM with Hearst

The higher speed passenger rail corridor linking Toronto with NF could be strengthened by an electrified RORO route linking NF with Sudbury, and Sault Ste. Marie, and even on to Wawa, with the help of a substantially improved short line connection between Sudbury, and SSM. This route would also tie into the present joint CPVIA and CN VIA rail corridors linking Toronto with Sudbury. With good cooperation from CN and CP, a strong link through NW Ontario could be developed by linked RORO routes from NF, Windsor or Sarnia, and Cornwall (Montreal

In this way, transport drivers would have added hundreds of additional kilometers to their daily logs while sleeping, eating and relaxing, not having to drive an additional 550 – 600 kilometers in their driving day. Drivers would drive off their RORO train rested and relaxed .

In the short term, Canadian railways are moving in the same direction as those in the US despite the fact that Canada and Ontario has much more sustainable energy than the US. The US model unlike the strategy of EU Russia and Asia depends on a larger and larger number of inefficient diesel locomotives up to 9 in some instances to power close to 300 cars and more than 600 containers over railway systems built almost 100 years ago and barely up to the task. .

This means more, noisier, but powerful and less energy efficient locomotives [as many as 5 -7] distributed strategically over the length of longer trains , and building longer bypass tracks without grade separations at crossings (e.g.. 5000 ft (100 cars) – 10000ft (200 cars) – 12000 ft (240 cars) along single track Transcon corridors so that the trains which now extend over two miles (e.g. 12000 feet) can safely pass.

To be able to pass more than two miles of train in one direction with two miles of train in the other direction on a single track line with each using 6 – 7 diesel locomotives / train (e.g. and much as 26000 - 35000 hp of diesel locomotives) is no small task, especially when the trains are comprised of double stacked containers, and can extend at least 12000 ft today and much more in future..

In the next twenty years, substantial improvements in the CN mainline through NW Ontario ,from Long lac to Winnipeg could result in faster travel times for both VIA passengers and RORO truck transport drivers, ,but only if electrification is introduced in this corridor. While electrification would result in a much faster quieter, and cleaner ride for both rail passengers and RORO truck drivers or other passengers on RORO, electrification requires more trains per hour (at least three / track direction at conventional speeds}. Thus Instead of a few long trains per day, many shorter trains

could do the same task, if they were automated,, then the pressure to increase the productivity of a single engineer driving longer trains would also abate and rail traffic flows would be much more even and stable

.What this might mean is that electrified railways could see automated and semi automated trains running around the clock using traction energy more efficiently and serving the needs of passengers in larger as well as smaller communities, as well as truckers who will continue to move a wide variety of goods overland .Thus two and three mile passing tracks on single track lines may begin to be displaced by multi track corridors as Canadian railways discover that there may be better ways to move containers than always double stacked on 2 1/2 - 3 1/2 mile or even 5 mile long trains...

Thus, It is quite possible to envisage substantial increases in both RORO and intercity rail passenger traffic both from SW to NE for passenger and RORO traffic, e.g. Windsor to RDL, and from South to Northwest and vice versa for RORO traffic, between places like Geraldton/Longlac Winnipeg,Thunder Bay and NF,as well as Cornwall and Windsor.

Third, focus greater efforts on persuading the Federal government to take a more constructive and participatory role with respect to its constitutional responsibilities for railways. In particular, the Federal government should be encouraged to help in expediting higher speed interprovincial railway infrastructure; interprovincial RO-RO multimodal rail freight services, [which it already does for marine services in many regions]; greater assistance to provinces for intercity, rail based, commuter services; joint efforts with the Province in assisting important short lines; and assistance with the development of an interprovincial electrical grid.. Among other things, this would help to ensure a basic network of “sustainable energy” for interregional railway electrification across Ontario (See paper by A. Regenstreif, Feb. 2011 attached; See also “Canada needs an electrified railway from coast to coast” Avrum Regenstreif, CCPA Monitor November 2009 pp.28-30, attached.)

Fourth, begin discussions ASAP with the new government of Quebec with respect to development of strategies to advance the cause of higher speed multimodal mixed use passenger and freight operations between Ontario and Quebec, and in future, interprovincial higher speed railway passenger services to other provinces; and with respect to the purchase of electricity for some of eastern and northern Ontario’s railway needs which might be more efficiently provided from either Quebec or Manitoba sources, if Ontario’s sustainable electricity sources are insufficient over the next two decades..

Section 2 (d)

Improve integration of sustainable practices into goods movement

By intensively advocating, as TAO does, for improved passenger railway use for commuters, more reasonable service for intercity passenger corridors, higher speed rail infrastructure, and innovative programmes for improvement of multimodal freight service such as RO –RO, and TOFC as well as advocating for electrification of railway corridors with higher intensity use , we believe that, *TAO is supporting bold initiatives to advance the cause of new and renewed 21st C..railway infrastructure and rolling stock for sustainable multimodal rail freight and passenger transport in Ontario and in Canada.*

(1) *In order for railway electrification to work most efficiently and sustainably, it is essential to generate and sustain sufficient traffic flows 24/7, including passenger and multimodal freight activity)within designated multi track corridors .Although freight and passenger trains, and even commuter trains, may not necessarily all share the same specific track at higher or lower speeds, They must all share the same over head electricity distribution and supply, either from a common power substation, and /or to carry recovered braking energy to and from nearby passenger and freight traffic substations along the line). In addition, mixed use corridors facilitate the sharing of: maintenance and operations staff and equipment,; the same safety devices, including signals, communications and control networks, ;much of the same multitrack corridor real estate, ,much of the same, public security and operational safety systems, and many of the same station and line operation facilities.*

In addition, focus on measures to: (a) reduce truck and bus idling on local roads (b) Improve efficiency in recovery of braking energy for all electric trains; and (c) Locate loading centres and other intermodal installations to minimize off – property traffic congestion

(2) Most effective role for Province in promoting freight sustainability.

(a) A statement from the Premier that the Province is strongly supportive of new technical and environmental initiatives to modernize railway systems in Ontario and is prepared to act rapidly, step by step, within a reasonable time frame, and will work closely with other governments and the private railways to bring it about.(e.g. The time frame for the Big Move was and is too slow!) Literally, tens of thousands of skilled jobs for Ontarians, and a huge boost for the Ontario economy vis a vis sustainable infrastructure development, are at stake.

(b) Reach out to Quebec and get both provinces together on this initiative ASAP.TAO strongly believes that with the right initiatives and strategy, Quebec would be a willing partner with Ontario in such a project.

(3) Critical technological barriers to sustainability

(a) for electrical supply to power an electrified railway corridor, Ontario may need at least 10 small scale new or rebuilt hydro plants and/or hydraulic wind “storage hydraulic units” (e.g. cap.< 50MW each) distributed over a distance of approx. 600 kms. Located near proposed railway corridors in Central and SW Ontario. This need not pose a technological barrier if available lead time is used effectively

(b) There may be insufficient land available in a few critical locations to permit future 4 – 6 track electrified corridors and there may have to be some compromises. Alternatively, needed tracks may have to be separated spatially, , rail traffic, may have to be more tightly scheduled at certain times of the day,, week, or year,, on selected routes. Intercity electric passenger trains may have to be either duplexed, or connected nose to nose, on certain routes to ensure needed capacities, Some day time RO –RO trains may have to be lengthened to carry more vehicles. On some commuter lines, diesel electrics may have to be phased out or relocated earlier than anticipated, if their acceleration and braking capabilities are inadequate to maintain schedules, competitive with newer electric trains or emus..

(3) Critical Behavioral barriers to sustainability

In addition to the issues recited in Section (2), One might observe that the most *important behavioral barrier is lack of personal experience of Ontarians and Canadians with railways elsewhere.* Since most have never been to Europe with its integrated, electrified, urban and regional railways, its fast efficient regional commuter trains, (RERs or S Bahns), and its intercity high speed trains such as the TGV,(France), Thalys,(France, Belgium, Netherlands, Luxembourg and Germany), ICE 2,(Germany and France) the [X2000](#),(Sweden and Norway) the AVE (Spain and France),or the Red Arrow, VHSR trains linking Rome and Milan in 2 hours and 45 mins. (at speeds up to 360 kph.)

To overcome this perceived barrier, TAO suggests that TVO might be brought into the picture and encouraged to show a number of recent videos (e.g. David Suzuki and his daughter, riding on a high speed train in Europe .It may be in the video library of CBC’s ” the Nature of Things”, or in TVOs own film library. Also readily available, from Alstom (the French rolling stock manufacturer) is a video of France’s national railway, SNCF, as it established the world speed record for a VHSR (Very High Speed Train) in 2007, with the French Minister of Transport and the President of the SNCF on board as spectator passengers.

Another way might be to send a TV film crew to Europe with the task of doing a film story following the path of a train load of eastern European truck transports, and their drivers, arriving on a train of clean, fast, electric locomotive pulled flat cars with sleeping cars and café–lounges or dining cars, pulled by a clean, quiet, fast., electric locomotive.

The station might be Salzburg ,Austria, Mozart”s birthplace. It is 8:30 in the morning and this RORO, or as the Austrians call it, a, “ Rollende Strassen” train, has completed an overnight journey from Romania, Hungary, or Slovenia, and is about to head off westward through the Alpine tunnels and valleys of Austria, Switzerland, Italy, ,and or France, before arriving at its final destination in either France, NW Germany.or the Netherlands, later in the day..The drivers on board will have gained one or two days,avoided heavy mountain traffic congestion, tunnel and highway tolls, conserved fuel, and reduced their stress.

.Currently, western Europe is developing a network of high speed multimodal freight trains which will run on the the EU’s High Speed Rail (HSR) infrastructure which is now completed or under construction. It already links many major cities of the EU,. Rome, Milan, Zurich, Frankfurt, Paris, Madrid and London are already on the network, and more will be on it within the next few years.This network which will also provide high speed overnight rail shipments and parcel delivery using HSR trains when passenger demand is lower. The system is also linked to HSR stations at some key international airports such as CDG, Frankfurt - Main, Schipol, Dusseldorf, and Berlin’s newest International Airport. (For further details see references) This might also be documented in a suggested Ontario Government video.

Note: An Ontario TV crew might also film a daytime video riding on a Spanish AVE high speed train, which travels every half hour between Madrid and Barcelona. AVE trains literally fly by hundreds of trucks and cars on major highways which are moving steadily at an estimated 100 –120 kph. Meanwhile, the speed on the digital readout in the AVE coach is 297 - 302 kph. and remains steady at about that speed, for close to two hours, as the train travels between Spain’s two largest cities. By comparison, typical travel time by car or truck for this trip is 6 1/2 – 7 1/2 hrs : by AVE train 2 1/2 hours (city center to city centre);, by jet plane and taxi to and from the respective airports 3 1/2 – 4 hrs.

(4) How can Ontario’s land use planning framework better support planning for sustainable facilities and supply chains?

Like highways, railways in Ontario are geographically fixed assets, which have for the most part been in place for a very long time (e.g. many for more than 100 –130 years). Often land uses have been allowed to grow around these railways with little consideration of possible need for their future expansion. Some ROWs have either been encroached on and or they were never envisaged as having to be widened and their number of tracks increased to accommodate the demands of a new era of more intensive, higher speed ground transport and its associated requirements. Consequently a series of important structural and serious technical decisions are going to have to be taken very soon with regard to Ontario’s future railway infrastructure.

The political and technical problems which Metrolinx is currently facing and will continue to face are a small part of this larger transportation picture. With the advent of the age of

the higher speed electric locomotive, electrified high speed railways, and more efficient and more refined signal, communications and control systems, as well as the newer types of power supplies which such systems require, Ontario's transport sector will increasingly face important new challenges and priorities.

Structure manufacturing and assembly ops. to be accessible by as rail as well as road unless RORO, or conventional TOFC, or COFC is to be the selected intermodal option.

It should be mandatory that new industrial infrastructure include an energy plan, transport plan as well as sewer and water services, and road access plans..

Structure intercity or interregional transport so that manufacturing can access delivery and shipping points for both air, rail as well as road

Use railways, as well as highways to structure development as well as resource extraction

Decentralize economic development in linear fashion among a number of smaller centres along rail lines as well as highways. This can be done along routes where there may already be a highway and an old railway (e.g. Short Line) in need of upgrading and infrastructure renewal and which has many well distributed, well established .older settlements or towns in need of fresh investment and economic stimulus both public and private. Thus railways as well as highways and infrastructure can help to structure economic development.

Intensify development along GO Rail lines and add tracks where necessary to facilitate adequate capacity and higher speed operations. On higher speed lines grade separate for public safety.

A major question emerging is: Does Ontario go on building major highway infrastructure to address congestion and use that mechanism to provide for most ground transport supply and demand needs ad infinitum, or does it consider new approaches, which will expand skilled employment, develop more sustainable energy and transport paths, and open the door to a range of new technologies and manufacturing opportunities appropriate to a 21st C. industrial economy?.

Section 2 (e)

Promote our strengths and successes to maximize the value of our investments

(1) *Educational materials for the Ontario public* [See suggestions Item 2 (d). Also Continue to attract world class conferences and seminars.

(2) Support selected publications to advance a 20 year (long range) development agenda

(3) Semi – permanent travelling rail transport exhibits might be located on rail sidings at the CNE or elsewhere in the GTHA, and / or moved by rail or road throughout Ontario.

(3) Investment in a number of mobile demonstration projects and / or simulation models. e.g. RO-RO tractor trailer operation could be demonstrated including comparative economics, in key areas of Ontario (even before electrification is implemented). (i) to measure potential reductions in highway congestion; (ii) reduction in over the road energy and operating costs by truckers; (iii) Test operating costs and requirements of a full scale “rolling truck stop” operation.(iv) Assess what kind of shift in truck traffic demand from selected highways, which different technologies might produce, and (v) what changes in truck tractor equipment might be required to make them work most effectively in various Ontario settings. I

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