

# Regional Transportation Plan Review

## Pembina Institute's submission to Metrolinx's 2016 review<sup>1</sup>

by Dianne Zimmerman and Lindsay Wiginton | November 29, 2016

### Summary

The Pembina Institute is pleased to have the opportunity to submit to Metrolinx's discussion paper on the regional transportation plan. In 2008, Metrolinx released its "Big Move" regional transportation plan (RTP). Metrolinx is currently in the process of updating this strategy, and in August 2016 released a discussion paper reviewing the RTP. In this submission, we've outlined key recommendations in the areas of GHG emissions targets, transit improvement and goods movement efficiency. At 35%, the transportation sector is the largest contributor to Ontario's emissions. With this in mind, we believe Metrolinx has a key role to play in helping the province meet its legislated climate change targets. By establishing targets for GHG emissions, and keeping environmental impact in mind for all decisions, Metrolinx can help lower the province's emissions. In our recommendations below, we have researched and offered thinking on how Metrolinx can move forward in the key areas of transit and goods movement.

## 1. Setting ourselves up for success: Establishing targets for GHG emissions and other key performance indicators

### **We recommend that Metrolinx and the Province of Ontario:**

- Add more robust measures for the key performance indicators on emissions and air quality to those proposed in Metrolinx's *Monitoring Handbook*,<sup>2</sup> by:
  - Adding separate measures for emissions from ground freight in the GTHA,<sup>3</sup>

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<sup>1</sup> This report was prepared by the Pembina Institute for the Pembina Foundation for Environmental Research and Education. The Pembina Institute would like to thank Gideon Forman and Peter Miasek for their helpful review of earlier versions of this submission.

<sup>2</sup> Metrolinx, *The Big Move Baseline Monitoring Report*, prepared by Arup, Associated Engineering and Lura (2013), Appendix A: Monitoring Handbook, Updated July 2014, 19-22.  
[http://www.metrolinx.com/en/regionalplanning/rtp/technical/09\\_The\\_Big\\_Move\\_Baseline\\_Monitoring\\_Report\\_EN.pdf](http://www.metrolinx.com/en/regionalplanning/rtp/technical/09_The_Big_Move_Baseline_Monitoring_Report_EN.pdf)

<sup>3</sup> Recognizing that freight indicators may be difficult to obtain, the share of freight moved outside of peak hours could be used as a proxy for freight emissions (emissions being higher during congested periods).

- Adding separate measures for emissions from transit vehicles in the GTHA, in order to capture progress made through the electrification of transit,<sup>4</sup>
- Calculating emissions from personal automobiles in relation to the distance and volume of trips made in the GTHA,
- Adding more detailed measures for air quality beyond the proposed approach of number of smog days, including criteria air contaminants such as nitrogen oxide (NO<sub>x</sub>) and particulate matter levels.<sup>5</sup>
- Set a clear goal for GHG emissions reductions from the transportation sector in the GTHA in the updated RTP, in line with the provincial emissions targets.
- Provide accessible public reporting on all KPIs established in the RTP at regular intervals.

The transportation sector contributed 23% of Canada's total greenhouse gas (GHG) emissions in 2014, with road transportation as the most significant and growing component.<sup>6</sup> In Ontario, emissions from the transportation sector contributed 35% of provincial emissions, representing the largest source of GHG emissions from all sectors. Similar to the trend at the national level, road transportation is the most significant component of these emissions (Figure 1).<sup>7</sup>

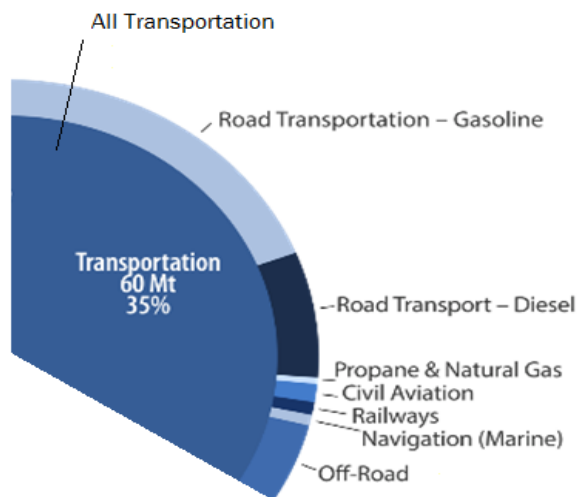


Figure 1. The transportation sector is the largest source of GHG emissions in Ontario, and road transportation makes up the bulk of these emissions

Source: Ontario Ministry of the Environment and Climate Change

<sup>4</sup> To measure the efficiency of the transit system as a whole, an efficiency index could be used: emissions avoided due to mode shift to transit/emissions from transit system.

<sup>5</sup> The Ontario Ministry of the Environment and Climate Change collects this data.

<sup>6</sup> Environment and Climate Change Canada, *National Inventory Report 1990-2014: Executive Summary* (2016), 10. [https://www.ec.gc.ca/ges-ghg/662F9C56-B4E4-478B-97D4-BAABE1E6E2E7/2016\\_NIR\\_Executive\\_Summary\\_en.pdf](https://www.ec.gc.ca/ges-ghg/662F9C56-B4E4-478B-97D4-BAABE1E6E2E7/2016_NIR_Executive_Summary_en.pdf)

<sup>7</sup> Ontario Ministry of the Environment and Economy, *Ontario's Climate Change Strategy* (2015), 25. <https://dr6j45jk9xcmk.cloudfront.net/documents/4928/climate-change-strategy-en.pdf>

A leader among provinces in its response to climate change, Ontario has established a Climate Change Strategy and a Climate Change Action Plan wherein it aims to reduce GHG emissions to 80% below 1990 levels by 2050 and build a prosperous low-carbon economy. In this strategy, the province recognizes that “emissions from passenger cars trips alone (well over 10 million per day) are greater than the emissions from Ontario's iron, steel, cement, chemicals sectors combined” and that “Ontario must transition as many existing drivers as possible to transit, cycling and walking.”

To address these challenges, the RTP aims to establish “an effective and integrated transportation system to keep people and goods moving sustainably” and to “manage growth and address climate change to 2041,” working in concert with the Growth Plan.<sup>8</sup> In keeping with these objectives, the RTP discussion paper proposes GHG emissions as a key performance indicator, and the province’s plans to electrify the GO train system represent a big step for reducing emissions from existing transit infrastructure.

We believe that, in light of the province’s continued commitments to mitigating climate change – as well as new supportive policies at the federal level – the importance of the updated RTP in supporting these objectives cannot be understated. We recommend strengthening the measurement of GHG emissions and air quality within the monitoring process and more closely tying the RTP’s emissions reduction objectives to Ontario’s overall climate commitments.

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<sup>8</sup> Metrolinx, *Discussion Paper for the Next Regional Transportation Plan* (2016), 4.  
[http://www.metrolinx.com/en/regionalplanning/rtp/RTP\\_Discussion\\_Paper\\_EN.pdf](http://www.metrolinx.com/en/regionalplanning/rtp/RTP_Discussion_Paper_EN.pdf)

## 2. Transit: Providing real alternatives to the car for getting between home and work

### 2.1 Pursuing the full vision of the “Big Move”

#### **We recommend that Metrolinx and the Province of Ontario:**

- In the updated RTP, renew the commitment to build out a full regional rapid and frequent transit network. This would include restoring certain projects from Schedule 2 of the 2008 RTP to the updated RTP, including projects not identified as part of the committed “Next Wave”, but considered priority based on regional objectives, consultation with municipalities and their constituents, equity considerations and favourable business case analyses.
- Make public the assumptions and methods used in its business case analyses as well as the full results of each business case analysis that is conducted.
- In order to maximize transparency and clarity for the public, clearly indicate in the updated RTP which projects have committed funding and which do not at this point in time.

The 2008 RTP presented a vision for over 1,200 km of new rapid transit in the GTHA in 2031.<sup>9</sup> Fully realized, this vision would ensure that 80% of residents in the region would live within 2 km of rapid transit<sup>10</sup> (up from 43% in 2001<sup>11</sup>).

Since this 2008 plan, with the help of over \$30 billion in provincial funding, 52 km has been added to the pre-existing 61 km rapid transit network and funding has been committed to another 519 km.<sup>12</sup> Metrolinx predicts that with the completion of this “next wave”<sup>13</sup> of committed projects, 21% of residents and 33% of jobs will be located within 800m of rapid transit in 2031<sup>14</sup> (no estimate for the share of residents and jobs within 2 km in 2031 was given under this scenario).

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<sup>9</sup> Move the GTHA, *Backgrounder to Report Are We There Yet?* (2016), 3. [http://movethegtha.com/wp-content/uploads/2016/08/AreWeThereYet\\_Backgrounder.pdf](http://movethegtha.com/wp-content/uploads/2016/08/AreWeThereYet_Backgrounder.pdf)

<sup>10</sup> Metrolinx, *The Big Move* (2008), 23.

[http://www.metrolinx.com/thebigmove/Docs/big\\_move/TheBigMove\\_020109.pdf](http://www.metrolinx.com/thebigmove/Docs/big_move/TheBigMove_020109.pdf)

<sup>11</sup> Metrolinx, *The Big Move Baseline Monitoring Report*, 12.

<sup>12</sup> Move the GTHA, *Backgrounder to Report Are We There Yet?* (2016), 3

<sup>13</sup> “Next Wave” projects include: YRT Viva BRT, Mississauga Transitway BRT, Toronto-York Spadina Subway Extension, Eglinton Crosstown LRT, Finch West LRT, Huontario LRT, Hamilton LRT, Sheppard East LRT, and GO Regional Express Rail.

<sup>14</sup> Metrolinx, *Discussion Paper for the Next Regional Transportation Plan* (2016), 19.

The map provided on page 17 of the RTP discussion paper shows projects that are funded, completed or under development to 2025, but does not show proposed projects on a longer time horizon. As such, several projects identified in the 2008 RTP are not identified in the discussion paper (see Figure 1 and Figure 2 below). However, many of these projects are considered priority based on regional objectives, consultation with municipalities and their constituents, equity considerations and favourable business case analyses.

It should be noted that in some cases, Environmental Assessments (EAs) or Transit Project Assessment Processes (TPAPs) have been completed for projects (or parts of projects) whose future is uncertain.

With a projected population growth of nearly 3 million – or 50% – in the GTHA between 2015 and 2041,<sup>15</sup> we need the highest level of ambition on transit expansion to make up for years of neglected investment, while sustainably accommodating future travel demand. While the completed and committed projects represent a significant contribution, we are concerned that by focusing on optimizing these investments, we will fail to pursue the other important expansions laid out in the 2008 RTP and identified as priorities by local municipalities.

SCHEDULE 2: 25-YEAR PLAN FOR THE REGIONAL RAPID TRANSIT AND HIGHWAY NETWORK



Figure 1. Plan for the rapid transit network in 2031 identified in the 2008 RTP<sup>16</sup>

<sup>15</sup> *ibid*, 49

<sup>16</sup> Metrolinx, *The Big Move* (2008), 94.

[http://www.metrolinx.com/thebigmove/Docs/big\\_move/TheBigMove\\_020109.pdf](http://www.metrolinx.com/thebigmove/Docs/big_move/TheBigMove_020109.pdf)

Figure 4: GTHA Rapid Transit Network in 2025 (Funded and Completed Projects) and Projects under Development

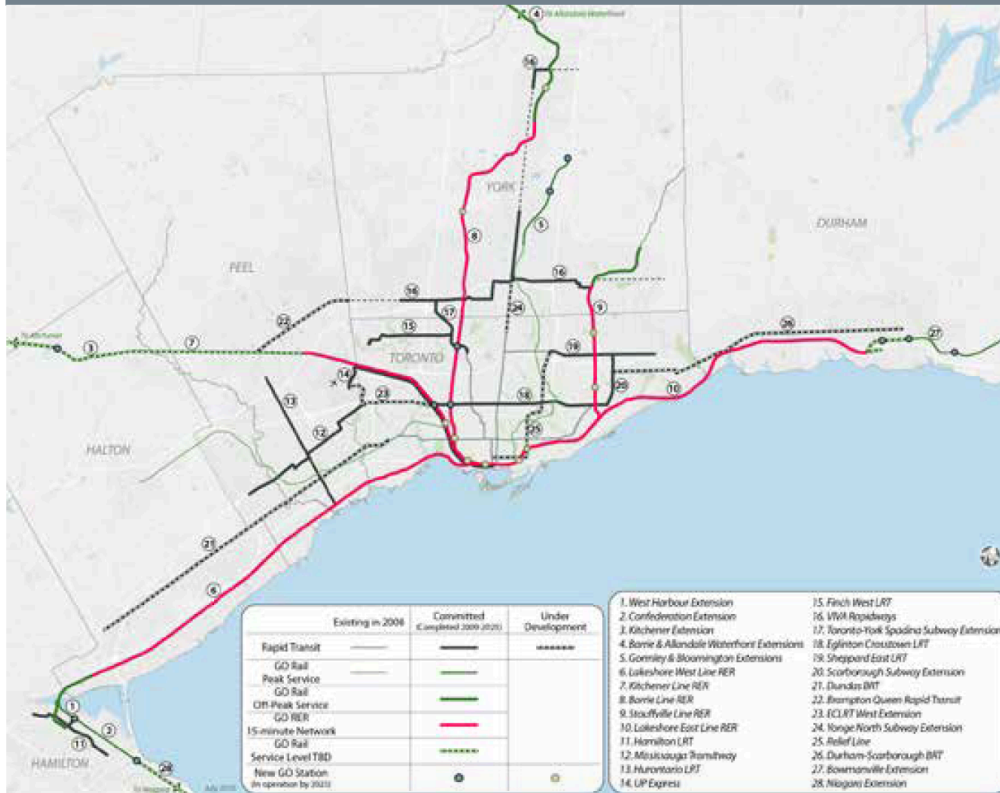


Figure 2. Plan for the rapid transit network in 2025 identified in the 2016 RTP discussion paper<sup>17</sup>

## 2.2 Tackling the funding gap

**We recommend that Metrolinx and the Province of Ontario:**

- In order to maximize transparency and ensure that means match ambitions, accelerate the update of the Metrolinx Investment Strategy to align with the release of the updated RTP. This would include discussing investment options with stakeholders within the scope of the present review process.
- Acknowledge future operation, maintenance and rehabilitation costs associated with transit investments in all discussions and plans, even where these will not be borne by the province.
- Support municipalities who are taking a leadership role in establishing alternative revenue tools to fund transit.
- Set an annual revenue target to directly fund transit and adopt new, sustainable revenue tools that meet this target.

<sup>17</sup> Metrolinx, *Discussion Paper for the Next Regional Transportation Plan* (2016), 17.

The 2008 RTP identified the development of an investment strategy as one of nine priority actions in order to “provide immediate, stable and predictable funding”<sup>18</sup> for a comprehensive regional rapid transit network. Metrolinx released a strategy in 2013, identifying four recommended sources of funding: a 1% increase to HST, 5 cents per litre on the regional fuel and gasoline tax, a business parking levy on all off-street non-residential parking spaces and amendments to the Development Charges Act. Three additional tools to advance policy goals were recommended: high occupancy toll lanes, pay for parking at transit stations, and land value capture.<sup>19</sup> Other actors, including a government-appointed panel and the business community, have since proposed these and other tools. We believe the tools that have the potential to simultaneously address driving behavior and therefore reduce GHG emissions should be highlighted. The previously proposed tools that meet these criteria include a phased and capped increase to the gas and fuels taxes across Ontario, a region-wide business parking levy, a charge for parking at transit stations<sup>20</sup>, and highway tolls.<sup>21</sup>

Importantly, these tools were designed to bring in guaranteed, predictable revenue that would be allocated not only to capital transit investments – to which provincial funding has recently been directed – but also to operations, maintenance, financing and rehabilitation. Revenue would also be allocated to complementary local transit projects. These other areas of spending are all crucial to a functioning system and represent a very significant amount of the cost of transit. It is worth noting that up until the early 1990s there was a different paradigm: the Province of Ontario paid 50% of the operating losses of transit agencies, which is no longer the case.<sup>22</sup>

Three years after the release of the Metrolinx Investment Strategy, with the exception of modifications to the Development Charges Act, none of these recommendations has been implemented. This raises serious questions about how we will get projects built and keep them running. A recent report has estimated that by 2027, the GTHA will be short \$2.5 billion in annual operations, maintenance and rehabilitation funding for the new rapid transit projects that will be online at that time.<sup>23</sup> Some municipalities are also struggling with operating

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<sup>18</sup> *The Big Move* (2008), 68.

<sup>19</sup> Metrolinx, *Investing in our region, Investing in our future* (2013), 59.  
[http://www.metrolinx.com/en/regionalplanning/funding/IS\\_Full\\_Report\\_EN.pdf](http://www.metrolinx.com/en/regionalplanning/funding/IS_Full_Report_EN.pdf)

<sup>20</sup> To counter potential negative effects on ridership, a modest parking charge could be offset by fare reductions in the short term and scaled up over time.

<sup>21</sup> We explored the potential for a congestion charge in Toronto and the GTA in a 2015 report entitled “Fare Driving”: <https://www.pembina.org/reports/fare-driving.pdf>. Highway tolls could be implemented immediately, with phased increases matching the completion of rapid transit projects as commuters obtain more options.

<sup>22</sup> Jennifer Palisoc, “How does the TTC’s funding compare to other transit agencies?” *Global News*, November 13, 2014. <http://globalnews.ca/news/1670796/how-does-the-ttcs-funding-compare-to-other-transit-agencies/>

<sup>23</sup> *Move the GTHA, Backgrounder to Report Are We There Yet?* (2016), 7



shortfalls for local networks.<sup>24</sup> If solutions are not found quickly, there is a risk that service levels will decline and discourage transit riders, particularly “choice riders” — those who have the option to use a car.

Experiences in other jurisdictions have demonstrated that the public is ready to support new approaches where revenue is dedicated to transportation, allocation is transparent, and selected projects have solid business cases. We know that fare revenues alone are not enough to sustain a transit system and that a simple reallocation of provincial and municipal budgets can’t free up the necessary funds.<sup>25</sup> Moreover, many revenue tools can be designed to provide incentives for drivers to choose transit, getting us closer to our transportation emissions goals in the process. Other jurisdictions in Canada, the U.S. and globally have succeeded in establishing publicly-supported revenue tools.<sup>26</sup>

## 2.3 Getting fares right

### **We recommend that Metrolinx and the Province of Ontario:**

- More closely link the review of fare integration with the development of an overall investment strategy, which we proposed to accelerate above.
- Establish, in the short term, a co-fare or integrated fare between the City of Toronto and 905 municipalities and between the City of Toronto and the GO network.
- Reconsider the commitment to revenue-neutral modifications to the fare structure, an approach which appears to limit the potential to increase overall ridership through fare revision in the short term. Instead, alternative revenue tools should be pursued to make up for any projected short-term revenue loss.

Our regional transportation system was established at a time when our transit goals were simpler: to shuttle suburban dwellers to and from their 9 to 5 jobs in the downtown core. Although this type of travel will clearly remain a reality in the GTHA, the 2008 RTP set out to enable travel across the region and foster viable employment and housing nodes outside of the downtown. This approach would allow for more efficient use of transit infrastructure, relieve stress on existing lines and increase transit accessibility to and within municipalities in the 905. One crucial component of facilitating inter-municipal movement and making proposed cross-boundary transit projects viable is getting transit fares right.

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<sup>24</sup> As mentioned in our recent blog, we were encouraged by the fact that a significant share of new federal transit funding was allocated to “state of good repair” investments in the GTHA: <https://www.pembina.org/blog/greasing-wheel-federal-transit-funding-a-win-for-toronto-commuters>.

<sup>25</sup> Transit Investment Strategy Advisory Panel, *Making the Move: Choices and Consequences* (2013), 51. <http://www.toronto.ca/legdocs/mmis/2014/ex/bgrd/backgroundfile-67455.pdf>

<sup>26</sup> Lindsay Wiginton, *Eye on the Prize*, (Pembina Foundation 2016). <http://www.pembina.org/pub/eye-on-prize>



The GTHA is made up of 11 different transit agencies that set and manage their own fares. While riders can travel between 905 municipalities (with the exception of Milton) for one fare, and a reduced co-fare is offered for transfers between GO Transit and 905 municipal systems, there is no fare agreement between the TTC and surrounding municipalities, nor between the TTC and GO Transit.<sup>27</sup> This results in negative effects on transit ridership, including discouraging transit use for trips across the Toronto boundary.<sup>28</sup> Beyond forcing travelers to make less convenient transit choices, this reality suppresses ridership potential that could be unlocked without any additional infrastructure investment and limits options for service integration across municipal boundaries.

For this reason we support, in principle, the Government of Ontario's intention to establish an integrated fare system across the GTHA, reaffirmed most recently in the mandate letter presented by the Premier Wynne to the Minister of Transportation.<sup>29</sup>

However, we also acknowledge important concerns about the impact of a modified fare system on low-income and other socially excluded populations, who depend more closely on transit.<sup>30</sup> In addition, we acknowledge the importance of municipal autonomy in setting and managing transit fares and operating budgets. Transparency about the methods and rationale used for establishing fares is crucial for the current fare structure and any future modifications.

Through our review of studies released by Metrolinx and its partners,<sup>31,32,33</sup> we have made the following observations:

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<sup>27</sup> Metrolinx, *Transit Fares in the GTHA Today – An Overview* (2015), 4.

[http://www.metrolinx.com/en/regionalplanning/fareintegration/Transit\\_Fares\\_in\\_the\\_GTHA\\_Today-An\\_Overview\\_EN.pdf](http://www.metrolinx.com/en/regionalplanning/fareintegration/Transit_Fares_in_the_GTHA_Today-An_Overview_EN.pdf)

<sup>28</sup> Metrolinx, "GTHA Fare Integration," Presented at the Metrolinx Board of Directors Meeting on June 28, 2016, 7.

[http://www.metrolinx.com/en/docs/pdf/board\\_agenda/20160628/20160628\\_BoardMtg\\_Fare\\_Integration\\_Update\\_EN.pdf](http://www.metrolinx.com/en/docs/pdf/board_agenda/20160628/20160628_BoardMtg_Fare_Integration_Update_EN.pdf)

<sup>29</sup> Kathleen Wynne, Premier of Ontario, letter to the Minister of Transportation, September 23, 2016. Available at

<https://www.ontario.ca/page/september-2016-mandate-letter-transportation>

<sup>30</sup> Kramer, A., Borjian, S., Camargo, F., Graovac, A. and Falconer, R., "Accessibility planning for social equity: An analysis of current and future transit networks in the Toronto region" (2016) (to be presented at the annual meeting of the Transportation Research Board in January 2017).

<sup>31</sup> Steer Davies Gleave, *GTHA Fare Integration: Concept Evaluation Backgrounder* (2016), prepared for Metrolinx.

[http://www.metrolinx.com/en/regionalplanning/fareintegration/GTHA\\_Fare\\_Integration-Concept\\_Evaluation\\_Backgrounder\\_EN.pdf](http://www.metrolinx.com/en/regionalplanning/fareintegration/GTHA_Fare_Integration-Concept_Evaluation_Backgrounder_EN.pdf)

<sup>32</sup> Steer Davies Gleave, *GTHA Fare Integration Strategy: Fare Structure Evaluation – Draft for Discussion* (2015), prepared for Metrolinx.

[http://www.metrolinx.com/en/regionalplanning/fareintegration/GTHA\\_Fare\\_Structure\\_Evaluation\\_EN.pdf](http://www.metrolinx.com/en/regionalplanning/fareintegration/GTHA_Fare_Structure_Evaluation_EN.pdf)

<sup>33</sup> City of Toronto, *Fare Policy: Current State Assessment*, Attachment 7 to the materials provided under item EX16.1, meeting of the Toronto Executive Committee, July 12-15, 2016.

<http://www.toronto.ca/legdocs/mmis/2016/ex/bgrd/backgroundfile-94625.pdf>

- The impact of any one fare structure concept on ridership, GHG emissions, equity and other important factors can only be understood when details such as specific rates are proposed.
- A regional distance-based component to fares should continue to be considered at the regional scale, if it could contribute to region-building objectives (ie. reducing sprawl and increasing GO ridership for short/medium trips).
- The commitment to a revenue-neutral modification to the fare structure (ie. offsetting reductions in one area with increases in another) appears to limit ambitions to increase overall ridership in the short term, which should be the primary goal of fare integration.
- Addressing the most important inefficiencies in the current system —particularly eliminating the fare barrier for travel between 905 municipalities and the City of Toronto — appears to have major potential benefits without centralizing the entire system.

## 2.4 Connecting transit and employment

### **We recommend that Metrolinx and the Province of Ontario:**

- When reviewing the criteria for mobility hubs, ensure that planned hubs are as aligned as possible with existing employment density. In accompanying provincial land use policies, set separate targets for employment and population densities at hubs/centres in order to realistically direct employment growth across the region.
- Recognize the potential challenges of both developing new office employment and attracting tenants outside of the downtown core, and work with municipalities where appropriate to develop realistic, effective plans
- Consider connectivity to existing and potential future employment as a highly-weighted factor in the prioritization of future rapid transit projects.
- Maintain a leadership role in efforts to develop urban and transportation solutions for reducing car trips to the airport megazone.
- Pursue pilot projects for last-mile transportation solutions in lower-density employment areas in order to develop best practices that can be deployed across the region.

Ensuring that residents' work trips can be done via direct, affordable transit across the region is a key component of growing ridership. In this effort, there are two important considerations: (1) serving existing employment areas with transit and (2) developing new employment around transit.

These efforts can also contribute to the broader objectives of achieving transit-supportive densities at station areas across the GTHA. Currently, the majority of planned and existing

Major Transit Station Areas fall below<sup>34</sup> the target population and job density ranges defined in the Ministry of Transportation's Transit-Supportive Guidelines<sup>35</sup> and Metrolinx's Mobility Hub Guidelines.<sup>36</sup>

We think that Metrolinx' RTP discussion paper and supporting documents provide important reflections on the topic of connecting transit and employment. Below, we provide some additional considerations.

#### 2.4.1 Connecting transit and office employment

It is important to consider office and other types of employment separately with respect to transit service. It is generally easier to serve office employment with rapid transit since it can be more dense and tends to generate peak hour demand.<sup>37</sup> Unlike retail and other kinds of service employment however, office employment does not necessarily follow residential growth: office employment in the GTHA is currently largely constrained to three areas: the downtown financial core, Markham/Richmond Hill and the 401 corridor in Mississauga.<sup>38</sup> Since 2006, office growth has been concentrated in downtown Toronto.<sup>39</sup> A complex set of factors, including market forces and local amenities, have been shown to affect office employers' location decisions. So far, successful conditions have not generally been in place and have contributed to a hesitancy to develop offices outside of the downtown core.<sup>40</sup>

Despite this reality, the province projects the addition of 1.5 million jobs to the GTHA between 2011 and 2041 – equivalent to a 40% increase over this period – and it aims for the majority of future employment growth of all types to occur outside of the City of Toronto.<sup>41</sup> In addition, some of the most significant committed investments in transit expansion for projects such as GO RER, will depend in part on a demand for reverse commuting for ridership.

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<sup>34</sup> Ontario Ministry of Municipal Affairs and Housing, *Performance Indicators for the Growth Plan for the Greater Golden Horseshoe, 2006* (2015), 11. <http://www.mah.gov.on.ca/AssetFactory.aspx?did=10849>

<sup>35</sup> Ontario Ministry of Transportation, *Transit-Supportive Guidelines* (2012), 24. <http://www.mto.gov.on.ca/english/transit/pdfs/transit-supportive-guidelines.pdf>

<sup>36</sup> Metrolinx, *Mobility Hub Guidelines for the Greater Toronto and Hamilton Area* (2011), 23. <http://www.metrolinx.com/en/projectsandprograms/mobilityhubs/MobilityHubGuidelines.pdf>

<sup>37</sup> Strategic Regional Research Alliance, *The Future of Office Development in the GTHA: The Nodal Study* (2015), 11. <https://static1.squarespace.com/static/52e56487e4b06bec4dd7898a/t/56ddb4dfab48defc357afe35/1457370344304/SRRR.TheNodalStudy.Final.pdf>

<sup>38</sup> Strategic Regional Research Alliance, *The Future of Office Development in the GTHA: The Nodal Study* (2015).

<sup>39</sup> Hemson Consulting Ltd. and IBI Group, *Context Paper on The Regional Economy, Demographic Outlook and Land Use: Full Report* (2016), [http://www.metrolinx.com/en/regionalplanning/rtp/technical/02\\_Context\\_Paper\\_Report\\_EN.pdf](http://www.metrolinx.com/en/regionalplanning/rtp/technical/02_Context_Paper_Report_EN.pdf)

<sup>40</sup> Strategic Regional Research Alliance, *The Future of Office Development in the GTHA: The Nodal Study* (2015), 11.

<sup>41</sup> Metrolinx, *Discussion Paper for the Next Regional Transportation Plan* (2016), 4.

## 2.4.2 Considerations for the airport megazone and other lower-density employment areas

The airport megazone presents the most significant challenge – and opportunity – with regards to implementing transportation solutions for lower-density employment areas. The Pearson Airport area is home to the second largest concentration of jobs in the GTHA (after downtown Toronto), with nearly 300,000 jobs – but on six times the area.<sup>42</sup> Currently, nearly one million trips are made to and from the airport megazone each day for all purposes, and about 94% of these trips are made by car.<sup>43</sup> The anticipated job growth in this area is expected to parallel the overall growth in the region, at 41% to 2031.<sup>44</sup> Unlike other manufacturing dominated employment areas, the airport megazone is also home to over 60,000 jobs in finance and business services.<sup>45</sup>

Metrolinx identified high-order transit connectivity to the Pearson Airport district as one of the nine strategic priorities in the 2008 RTP and has since conducted further study and begun increasing transit service in partnership with local municipalities.<sup>46</sup> The Mississauga Transitway, currently under construction, is one example. We believe that Metrolinx, in its role as a regional coordinator of transit, could continue to play a key role in identifying solutions, including last-mile solutions, for transportation to the airport megazone. These solutions can in turn be applied to other non-office employment areas across the region.

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<sup>42</sup> Blais, P. “Unlocking the potential of the Airport Megazone,” *A Neptis Policy Brief* (2016), 2. <http://www.neptis.org/publications/unlocking-potential-airport-megazone>

<sup>43</sup> Blais, P. “Unlocking the potential of the Airport Megazone,” *A Neptis Policy Brief* (2016), 12.

<sup>44</sup> Metrolinx, “Transportation Study of the Pearson Airport Area,” (2015), 3. [http://www.metrolinx.com/en/docs/pdf/board\\_agenda/20150303/20150303\\_BoardMtg\\_Airport\\_Area\\_Study\\_EN.pdf](http://www.metrolinx.com/en/docs/pdf/board_agenda/20150303/20150303_BoardMtg_Airport_Area_Study_EN.pdf)

<sup>45</sup> Blais, P. “Unlocking the potential of the Airport Megazone,” *A Neptis Policy Brief* (2016), 16.

<sup>46</sup> Steer Davies Gleave, *Transportation Study of the Pearson Airport Area – Executive Summary* (2015), prepared for Metrolinx. [http://www.metrolinx.com/en/regionalplanning/projectevaluation/studies/Airport\\_Area\\_Study-Executive\\_Summary\\_EN.pdf](http://www.metrolinx.com/en/regionalplanning/projectevaluation/studies/Airport_Area_Study-Executive_Summary_EN.pdf)

## 3. Goods Movement: making the freight sector more efficient

### **We recommend that Metrolinx and the Province of Ontario:**

- Establish a provincial sustainable goods movement strategy which includes targets to reduce GHG emissions and improve air quality with an emphasis on criteria air contaminants.
- Dedicate staff and appropriate funding to allow Metrolinx to deliver on its goods movement strategy.
- Establish an internal Metrolinx Green Freight Innovation Lab with dedicated staff to focus on research, innovation and congestion reduction.
- Establish a third-party led data centre and communications hub for transportation data
- Transition the Urban Freight Forum into a Smart Freight Association<sup>47</sup> made up of municipalities, public and private freight stakeholders, representatives from all levels of government and members from the environmental and health communities.

### 3.1. Importance of reducing freight emissions

The transportation sector is the largest source of GHG emissions in Ontario, and freight represents 10% of the province's total emissions.<sup>48</sup> It has been the fastest growing sub-sector of transportation since 2000, and is projected to become the largest energy-consuming segment of transportation globally by 2030.<sup>49</sup> This is due to a number of factors including growing populations and businesses, manufacturing goods from international markets, the increasing popularity of online shopping and the expectation of receiving goods quickly.

Addressing freight emissions will require a systems level approach with intervention through a myriad of policy and regulatory changes, advancements in low carbon technological and innovative solutions, behavioural changes and improved logistical systems and data.

It's a big task, but taking action in this subsector of transportation emissions will have knock-on benefits for Ontarians. Cars and trucks are the most significant source of nitrogen oxide emissions in cities and contribute to smog and respiratory illnesses. For example, a city-wide model of Toronto shows that NOx emission concentration is highest along every major highway

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<sup>47</sup> The Region of Peel has called for a Smart Freight Association, <http://uttri.utoronto.ca/files/2016/03/S1-Saiyed-PeelGoodsMovement-FreightDay5-Feb26-16.pdf>

<sup>48</sup> Environment and Climate Change Canada, *National Inventory Report 1990-2014: Greenhouse Gas Sources and Sinks in Canada* (2016) (NIR), Part 3 (A11), freight includes heavy duty trucks, rail, domestic aviation and marine.

<sup>49</sup> ExxonMobile, *The Outlook for Energy: A View to 2040*, <http://corporate.exxonmobil.com/en/energy/energy-outlook/meeting-growing-demand/demand>

in the city.<sup>50</sup> Road freight also competes for scarce space among road users, so managing goods movement can also be a tool for reducing congestion and optimizing transit and active transportation in cities.

We recommend that Metrolinx build a freight strategy that includes GHG and air pollution reduction targets. These could be modelled after California's *Sustainable Freight Action Plan* which includes improving freight efficiency in terms of value of goods and services per tonne of CO<sub>2</sub>, targets for deployment of zero-emission freight vehicles, and targets for increasing competitiveness and economic growth in the sector.<sup>51</sup>

To assist Metrolinx in reducing emissions from goods movement, we recommend establishing an external advisory committee of environmental and health professionals to provide strategic advice and solutions.

### 3.2 Metrolinx's role in goods movement

In the 2008 RTP, goods movement was one of nine strategies that were considered priority actions.<sup>52</sup> Metrolinx was tasked to develop “a comprehensive strategy for goods movement within the GTHA and between the GTHA and other regions.” The strategy is intended to find opportunities to improve efficiency, increase capacity and competitiveness in the region, and reduce GHGs and other pollutants<sup>53</sup>. Two key factors determined the need for a goods movement strategy; the adverse environmental impacts of truck-generated GHG emissions, and the adverse financial impact of congestion on both GTHA residents and on competitiveness in the global economy.<sup>54</sup> We believe the province has an important role to play in improving freight efficiency and transitioning to zero and low carbon transportation options. By doing so, the province will transform Ontario's transportation system in a way that is beneficial to local air quality and reduces GHG emissions, while still supporting our economy.

### 3.3 Challenges facing the trucking industry

Freight is an important part of Ontario's economic engine. The Ministry of Transportation's *Freight-Supportive Guidelines* notes that trade between Ontario and the United States amounted to over \$284 billion in 2011 and almost 40% of Ontario's economy is generated by freight-

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<sup>50</sup> Kathryn Grond and Eli Angen, *Greening the Goods* (Pembina Institute 2014), 11.  
<https://www.pembina.org/reports/greening-the-goods.pdf>

<sup>51</sup> California's Sustainable Freight Action Plan,  
[http://www.casustainablefreight.org/files/managed/Document/281/CSFAP\\_AppendixB\\_FINAL\\_07272016.pdf](http://www.casustainablefreight.org/files/managed/Document/281/CSFAP_AppendixB_FINAL_07272016.pdf)

<sup>52</sup> Metrolinx, [http://www.metrolinx.com/thebigmove/Docs/big\\_move/TheBigMove\\_020109.pdf](http://www.metrolinx.com/thebigmove/Docs/big_move/TheBigMove_020109.pdf), 20

<sup>53</sup> *Ibid*, 55

<sup>54</sup> Metrolinx, “Urban Goods Movement, full report”,  
[http://www.metrolinx.com/en/regionalplanning/rtp/technical/05\\_Urban\\_Goods\\_Movement\\_Report\\_EN.pdf](http://www.metrolinx.com/en/regionalplanning/rtp/technical/05_Urban_Goods_Movement_Report_EN.pdf), iv

intensive industries.<sup>55</sup> We will increasingly feel pressure on our transportation networks as we are vying for the same space to move people, as well as goods and services. The result is traffic congestion, noise on our streets and increased air pollution and GHG emissions.

The freight industry is facing a growing number of challenges. Rising urban land costs means that more warehousing and distribution centres tend to be in the suburbs – particularly in the 905 region – increasing travel times as well as kilometres travelled. Many urban deliveries face traffic delays, and time spent circling city streets to find parking, both of which decreases fuel efficiency. All of these challenges lead to increasing costs for the trucking industry and increased emissions from their operations. If the province and Metrolinx took a lead role in setting a effective freight strategy, it would be a win-win for both the environment and the economy.

### 3.4. Need for better freight data and innovation

As indicated in Metrolinx’s *Plan for Urban Goods Movement Data in the GTHA* report, good data helps to develop performance indicators for monitoring and benchmarking and develops models to help us understand the relationships between goods movement system inputs and outputs.<sup>56</sup> We therefore support Phase II of the Urban Goods Movement Data, a goods movement data program, and recommend that this data be publicly available, for improved access and transparency. We also believe that Ontario universities should continue to play an important role by providing additional research for transportation, land-use and environmental modelling and analysis.<sup>57</sup> Freight offers an excellent opportunity for innovation, and we believe Metrolinx should harness this opportunity and champion an innovation lab focused on making the freight sector more efficient.

#### *Environmental reporting*

As part of the publicly available transportation data centre, we recommend that Metrolinx establish CAC and GHG baselines, metrics and methodologies for tracking progress to meet the key performance indicators.

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<sup>55</sup> Ministry of Transportation, “Freight-Supportive Guidelines”, <http://www.mto.gov.on.ca/english/publications/pdfs/freight-supportive-guidelines-english.pdf>, 6

<sup>56</sup> Metrolinx, “A plan for urban goods movement data in the GTHA”, [http://www.metrolinx.com/en/regionalplanning/goodsmovement/A\\_Plan\\_for\\_Urban\\_Goods\\_Movement.pdf](http://www.metrolinx.com/en/regionalplanning/goodsmovement/A_Plan_for_Urban_Goods_Movement.pdf)

<sup>57</sup> For example, McMaster Institute for Transportation and Logistics, University of Toronto’s Centre for Urban Freight Analysis, University of Waterloo’s Civil and Environmental Engineering – Transportation, , Queens University School of Public Policy, McGill and Ryerson



### *Communications hub*

As part of the transportation data centre, the communications hub would be designed to raise the awareness and importance of the freight sector, share research and encourage industry thought leader engagement. Work would be tailored to both a) general narratives around the economic importance of freight and the environmental impacts and opportunities and b) explore specific transportation policy priorities. This could look similar to Climate Nexus<sup>58</sup> in the United States.

### *Innovation lab*

We believe that Metrolinx should champion a research and innovation lab, looking at key opportunities to advance technologies that support zero and low carbon emissions. These could be focused on low carbon corridors and networks, ports and freight hubs along Ontario's key trade routes. The lab should also examine opportunities to reduce emissions from goods movement (e.g. last mile solutions, autonomous deliveries, freight-only lanes, GHG zoning restrictions). Lastly, there is currently an opportunity to look at congestion reduction, by develop a trucking bottleneck relief strategy within the GTHA. The federal Ministry of Transport recently announced an investment of \$10.1 billion in trade and transportation projects to help address congestion and bottlenecks. This could include, but is not limited to: new tools and programs to better manage truck loads and reduce vehicle kilometers travelled, development of neighbourhood freight forums and local delivery plans, changes in municipal policies as well as participation in the federal Smart Cities Challenge.

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<sup>58</sup> Climate Nexus website, <http://climatenexus.org/>