

# Draft Regional Transportation Plan Comments

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

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## Summary

Metrolinx's draft Regional Transportation Plan (RTP) covers a wide range of topics, but it will be challenging to implement the entire plan in the projected 25 years. Beyond the current wave of transit projects, there is no committed funding to achieve the vision for a regional transit network, and there is no list of prioritized projects. If Metrolinx is providing options to government, these should also come with a list of priority projects and associated costs, including both capital and operations.

## Introduction

The Pembina Institute supports Metrolinx's transportation planning initiatives and its efforts to update its vision and priorities as part of a 5-year review of the Regional Transportation Plan (RTP). An effectively designed and implemented regional plan can ensure improved transportation options for Greater Toronto and Hamilton area residents, meaningful reductions in greenhouse gas (GHG) emissions, and improved quality of life as we grow our urban centres.

The region is going to have to work hard over the next twenty years to meet GHG reduction targets. The Ontario Climate Change Action Plan commits to a 15% reduction of GHG emissions by 2020, and 80% by 2050. In order to achieve these targets, public transit will have to be almost fully electric by the end of 2041.<sup>2</sup>

We support the vision and goals outlined in the draft RTP. However, we also think there are areas for improvement in the plan and in the broader governance structures that will ensure its

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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 The Atmospheric Fund for partnering in preparing this submission.

<sup>2</sup> City of Toronto, *Transform TO: Climate action for a healthy, equitable and prosperous Toronto – report #2 – the pathway to a low carbon future* (April 20, 2017), 2.  
<https://www1.toronto.ca/City%20of%20Toronto/Environment%20and%20Energy/Climate%20and%20Energy%20Goals/Transform%20TO/PDFs/REPORTS/Report%202/PE%20Staff%20Report%20Published.pdf>

implementation. Whereas the plan presents a long list of laudable actions, many are presented as “proposed” or “to explore.” While this might lead to further study, there are no mechanisms in place to ensure they are pursued, but urgent action is needed in the region. We outline our recommendations below.

## Paying for the plan: it’s time to set things straight

The draft RTP sets out an ambitious plan to build and operate a region-wide transit system with an estimated capital cost of \$45 billion without identifying the source of the additional capital and operating revenue required. A 2017 study on transit indicates that the net capital and operating funding gap for new and existing infrastructure is 2 billion per year.<sup>3</sup> There is a substantial role for Metrolinx to play in supporting both the construction and operation of these public transit projects across the province.

Metrolinx’s 2013 Investment Strategy has not moved forward, nor have the recommendations from the subsequently established Transit Investment Strategy Advisory Panel. A regional transportation authority needs the ability to raise revenue and independently allocate it to projects selected via robust, transparent and consistent business case analyses. Lacking this ability, Metrolinx’s plan will not have staying power.

## Recommendations

The recommendations or series of options produced via the Regional Transportation Plan must come with cost estimates, including an acknowledgement of the future operation, maintenance and rehabilitation costs associated with transit investments, even where these will not be borne by the province.

Metrolinx should set an annual revenue target to directly fund transit, and the province should approve any recommended sustainable revenue tools that meet this target. Metrolinx and the province should also support municipalities who are taking a leadership role in establishing alternative revenue tools to fund transit. There could also be a role for federal government to fund the delivery of the regional transportation plan, rather than individual transit projects. Metrolinx, along with federal, provincial, and municipal governments should coordinate revenue to deliver on comprehensive transportation networks, rather than single transit lines.

It is important to also recognize how funding mechanisms can encourage increased transit ridership, reduce congestion, and ultimately affect GHG emissions. As such, we recommend re-visiting policies identified in the 2013 Metrolinx Investment Strategy and additional mobility

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<sup>3</sup> Transport Action Ontario, *Update on Funding Gaps for GTHA Rapid and Conventional Transit* (September 2017), 2. <http://ontario.transportaction.ca/wp-content/uploads/2017/09/TAO-GapUpdate2017-09.pdf>

pricing opportunities. These include a regional gas tax, a business parking levy, paid parking at transit stations, and road pricing. Revenue tools that have the co-benefit of discouraging single occupant vehicle trips should be a consideration when selecting funding mechanisms.

## Pushing for a higher transit mode share through coordinated land use planning

The growth in transit trips is not keeping up with population growth in areas that currently have a high transit mode share. According to Metrolinx's forecast models, transit trips will increase from 1.2 million to 1.9 million, but transit mode share will stay roughly the same, increasing from 14.2% to 14.7%.<sup>4</sup> Without coordinated land use and transportation efforts, it is difficult to ensure that the existing transportation network proposal will even achieve this modest transit mode share increase.

The proposed transit network focuses on increasing transit in areas that currently have low transit mode share. The plan states that areas with a current mode share of less than 5% will experience a 25% growth in population and a 20% growth in transit.<sup>5</sup> While it is important to expand and enhance transit services across the region, focusing more population growth and transit investments in areas that already have a high transit mode share could support a higher transit modal shift. Again, coordinated land use and transportation planning are essential to support a well-used, and effective transportation network.

## Recommendations

Coordinate more employment and residential development around existing transit in order to further increase transit access. With \$45 billion in additional investments in transit infrastructure and services<sup>6</sup>, and a commitment to reduce GHG emissions to 80% below 1990 levels by 2050, the region should be reaching for a deeper mode shift.

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<sup>4</sup> Metrolinx, *The Draft 2041 Regional Transportation Plan* (2017), 100. [https://www.metrolinxengage.com/sites/default/files/draft\\_rtp.pdf](https://www.metrolinxengage.com/sites/default/files/draft_rtp.pdf)

<sup>5</sup> Metrolinx, *The Draft 2041 Regional Transportation Plan* (2017), 23. [https://www.metrolinxengage.com/sites/default/files/draft\\_rtp.pdf](https://www.metrolinxengage.com/sites/default/files/draft_rtp.pdf)

<sup>6</sup> Metrolinx, *The Draft 2041 Regional Transportation Plan* (2017), 109. [https://www.metrolinxengage.com/sites/default/files/draft\\_rtp.pdf](https://www.metrolinxengage.com/sites/default/files/draft_rtp.pdf)

## Enabling the delivery of the RTP through policy and governance

Implementing the 2041 transportation network outlined in the draft RTP requires municipalities to support the regional vision, and deliver on local infrastructure and services like the priority bus routes, local bus services and pedestrian and cycling connections to major transit infrastructure. These components, which are delivered by municipalities, are essential to creating a coherent and comprehensive regional transit network that feeds into regional transit services. There are currently no mechanisms in place to ensure that municipal plans align with the RTP.

International best practice indicates that a strong governance structure is critical to delivering high quality and integrated public transit services.<sup>7</sup> A lack of clearly defined roles and responsibilities between municipal and provincial transportation agencies has resulted in costly delays in the planning as well as implementation phases of major transportation projects across the province.<sup>8</sup>

The draft RTP recommends improving the integration of land use and transportation by enacting regulations in the *Metrolinx Act* (2006) to create a Transportation Planning Policy Statement (TPPS) and require municipalities to align their transportation master plans with the transportation objectives in the RTP.<sup>9</sup> Enacting a TPPS would provide the RTP the legislative status to achieve regional goals for land use and transportation. It is also extremely important that municipal transportation plans align with the RTP so the region is working together to build a regional transportation network. With the Growth Plan for the GGH, there is a precedent for a process of conformity to provincial policy in municipal plans. The review and approval of municipal transportation master plans should take place in tandem with the review of official plans to ensure a streamlined and coordinated process.

Considering there are currently no mechanisms in place to ensure municipalities coordinate local transportation plans with the RTP, the draft RTP should provide an approach on how the agency plans to engage with municipalities.

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<sup>7</sup> Toronto Region Board of Trade, *Discussion paper: Build regional transportation now* (2014), 13. [https://www.bot.com/portals/0/unsecure/advocacy/2014\\_TRBOT\\_BuildRegionalTransportation.pdf](https://www.bot.com/portals/0/unsecure/advocacy/2014_TRBOT_BuildRegionalTransportation.pdf)

<sup>8</sup> Toronto Region Board of Trade, *Discussion paper: Build regional transportation now* (2014), 14. [https://www.bot.com/portals/0/unsecure/advocacy/2014\\_TRBOT\\_BuildRegionalTransportation.pdf](https://www.bot.com/portals/0/unsecure/advocacy/2014_TRBOT_BuildRegionalTransportation.pdf)

<sup>9</sup> Metrolinx, *The Draft 2041 Regional Transportation Plan* (2017), 90. [https://www.metrolinxengage.com/sites/default/files/draft\\_rtp.pdf](https://www.metrolinxengage.com/sites/default/files/draft_rtp.pdf)

## Recommendations

Enact regulations in the *Metrolinx Act* that create a Transportation Planning Policy Statement and require municipal transportation master plans to align with the RTP. These two regulations are critical to actually deliver on the vision and goals of the RTP.

The RTP should acknowledge the lack of representation municipalities have in the decision making process for regional plans and develop an approach for engaging with municipalities to ensure local support for delivering the regional transportation network.

## Increasing the transparency of transit project business cases

Metrolinx is faced with the challenge of planning and building infrastructure in a time where public confidence in institutions and governments is at an all-time low.<sup>10</sup> Recent revelations about the politicization of Metrolinx's decision-making processes have further eroded public perceptions.<sup>11</sup> To gain public trust and ensure public support for transit investments, Metrolinx must revise its practices according to the highest standards of transparent, consistent, evidence-based decision-making.

Business case analyses (BCAs) are one tool for assisting in the decision-making process for funding and prioritizing transit projects. The existing Metrolinx BCAs provide an overview of costs (e.g. investment, vehicles, noise, operations and maintenance) and benefits (e.g. travel time savings, safety, accessibility, greenhouse gas reductions). It is a common tool used to appraise and evaluate different projects (e.g. highway vs. rail), alternative designs (e.g. bus rapid transit vs. light rail transit), or a 'do nothing' scenario to investing in infrastructure.<sup>12</sup>

While relying on BCAs to evaluate design alternatives on a single corridor can be helpful, challenges arise when comparing projects with varying goals and variables. For example, the objective of one transit project may be to reduce crowding on the transit network, while another project may aim to increase accessibility to low-income neighbourhoods. Metrolinx is planning on using a Standardized Prioritization Framework to compare and prioritize projects in the 2041 RTP. If BCAs are to be used at such an early stage of planning, data limitations

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<sup>10</sup> Pew Research Center, "Public trust in government: 1958-2017" May 3, 2017. <http://www.people-press.org/2015/11/23/1-trust-in-government-1958-2015/>

<sup>11</sup> Ben Spurr, "Metrolinx pressured to approve GO station in minister's riding," *Toronto Star*, August 28, 2017. <https://www.thestar.com/news/gta/transportation/2017/08/28/metrolinx-pressured-to-approve-go-station-in-ministers-riding.html>

<sup>12</sup> Louis-Etienne Couture, Shoshanna Saxe and Eric Miller, *Cost-benefit analysis of transportation investment: A literature review* (iCity, 2016), 3. <http://uttri.utoronto.ca/files/2017/10/16-02-04-01-Cost-Benefit-Analysis-of-Transportation-Investment-A-Literature-Review.pdf>

should be acknowledged. If BCAs are to be used at such an early stage of planning, measurement limitations related to ridership forecasts as well as social and environmental impacts should be acknowledged.<sup>13</sup> There are also many social and environmental impacts that are challenging to monetize or weigh.

The City of Toronto provides a good example of how a prioritization framework can be used at an early planning phase. In 2013 the City of Toronto developed, in consultation with public stakeholders, eight criteria on which transit projects would be evaluated. For each criteria there were a handful of quantifiable measures used to score how a transit project performed in each category. Instead of providing a ratio or a score for each transit project, the final evaluation uses circles to rank each project. None of the criteria are weighed, and it allows the strengths and weaknesses of each project to be clearly seen (Figure 1).

Criteria	Projects																							
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X
	Relief Line East (subway)	Yonge North Subway Extension	Durham-Scarborough BRT	Dundas Street BRT	Don Mills LRT	Eglinton LRT West Extension	Finch West LRT Extension (West)	Finch West LRT Extension (East)	Highway 427 BRT (South)	Highway 427 BRT (North)	Jane LRT	McCowan Road BRT	Malvern LRT	Scarborough Malvern LRT	Sheppard East LRT Extension	Steeles LRT/BRT West	Steeles LRT/BRT East	Waterfront West LRT	Bloor-Danforth Subway West Extension	Kingston Road BRT	Sheppard Corridor (Yonge to Dufferin)	Waterfront East LRT	Relief Line Extension (Danforth to Eglinton)	St. Clair Streetcar/LRT Extension
Choice	●	◐	◑	◒	◓	◔	◕	◖	◗	◘	◙	◚	◛	◜	◝	◞	◟	◠	◡	◢	◣	◤	◥	◦
Experience	●	◐	◑	◒	◓	◔	◕	◖	◗	◘	◙	◚	◛	◜	◝	◞	◟	◠	◡	◢	◣	◤	◥	◦
Social Equity	◐	◑	◒	◓	◔	◕	◖	◗	◘	◙	◚	◛	◜	◝	◞	◟	◠	◡	◢	◣	◤	◥	◦	◐
Shaping the City	●	◐	◑	◒	◓	◔	◕	◖	◗	◘	◙	◚	◛	◜	◝	◞	◟	◠	◡	◢	◣	◤	◥	◦
Healthy Neighbourhoods	◐	◑	◒	◓	◔	◕	◖	◗	◘	◙	◚	◛	◜	◝	◞	◟	◠	◡	◢	◣	◤	◥	◦	◐
Public Health and Environment	◐	◑	◒	◓	◔	◕	◖	◗	◘	◙	◚	◛	◜	◝	◞	◟	◠	◡	◢	◣	◤	◥	◦	◐
Affordability	◐	◑	◒	◓	◔	◕	◖	◗	◘	◙	◚	◛	◜	◝	◞	◟	◠	◡	◢	◣	◤	◥	◦	◐
Supports Growth	●	◐	◑	◒	◓	◔	◕	◖	◗	◘	◙	◚	◛	◜	◝	◞	◟	◠	◡	◢	◣	◤	◥	◦

Figure 1: City of Toronto transportation evaluation<sup>14</sup>

<sup>13</sup> Louis-Etienne Couture, Shoshanna Saxe and Eric Miller, *Cost-benefit analysis of transportation investment: A literature review* (iCity, 2016), 9. <http://uttri.utoronto.ca/files/2017/10/16-02-04-01-Cost-Benefit-Analysis-of-Transportation-Investment-A-Literature-Review.pdf>

<sup>14</sup> City of Toronto Planning, presentation to the Planning and Growth Management Committee, *Update on the Feeling Congested Initiative*, December 4, 2013, 18. <http://www.toronto.ca/legdocs/mmis/2013/pg/bgrd/backgroundfile-64550.pdf>

## Recommendation

Metrolinx should make public the Standardized Prioritization Framework in clear, accessible language. It should use an established, standard methodology for conducting BCAs and make public the input data, all assumptions, and the outputs from the analysis in order to allow public scrutiny and understanding of recommendations. This information should be provided on an accessible platform in standard formats for each project considered. Metrolinx board meetings where BCAs are received and questioned must be open to the public and allow public comment.

Although the creation of Metrolinx was intended to de-politicize transit decision making in the GTHA, it has not achieved this objective and it remains unclear who makes final decisions on major investments. If Metrolinx does not make final decisions about transit investments, this dynamic needs to be made explicit. Once Metrolinx has evaluated projects and made its recommendations public, the agency should make it very clear when and why they would make any adjustments.

## Depending less on parking as a way to access transit

The draft RTP mentions the use of parking management to encourage car sharing and to prepare the system for a future of autonomous vehicles (AV).<sup>15</sup> The draft RTP also acknowledges that free parking at GO stations is not sustainable and that reducing parking availability, and/or charging for parking, will help shift trips away from driving.<sup>16</sup> One of the priority actions for strategy 4 (Integrate Land Use and Transportation) is to coordinate parking requirements with expansion of transit services, and reduce minimum parking requirements in new developments.<sup>17</sup>

In 2016, around 62% of trips to GO stations (around 60,000) were accessed by driving and parking (i.e., park and ride). According to the draft plan, if the plan is implemented, park and ride will increase to around 75,000 trips in 2031, but will only represent 36-38% of trips, as the rest of GO rail riders will reach GO stations by carpool, walking, transit, biking or taxi.<sup>18</sup> Although the overall share of people driving to GO rail stations and parking will decrease, the

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<sup>15</sup> Metrolinx, *The Draft 2041 Regional Transportation Plan (2017)*, 88. [https://www.metrolinxengage.com/sites/default/files/draft\\_rtp.pdf](https://www.metrolinxengage.com/sites/default/files/draft_rtp.pdf)

<sup>16</sup> Metrolinx, *The Draft 2041 Regional Transportation Plan (2017)*, 69. [https://www.metrolinxengage.com/sites/default/files/draft\\_rtp.pdf](https://www.metrolinxengage.com/sites/default/files/draft_rtp.pdf)

<sup>17</sup> Metrolinx, *The Draft 2041 Regional Transportation Plan (2017)*, 69. [https://www.metrolinxengage.com/sites/default/files/draft\\_rtp.pdf](https://www.metrolinxengage.com/sites/default/files/draft_rtp.pdf)

<sup>18</sup> Metrolinx, *The Draft 2041 Regional Transportation Plan (2017)*, 69. [https://www.metrolinxengage.com/sites/default/files/draft\\_rtp.pdf](https://www.metrolinxengage.com/sites/default/files/draft_rtp.pdf)

absolute number of “park and ride trips,” and the provision of parking will increase by around 15,000 spaces.

GO Transit operates over 65,000 parking spaces at its rail stations. As a 2013 report states, this makes GO Transit “one of the largest parking operators in North America.”<sup>19</sup> As such, parking capacity should not be a constraint to station access, and strategies other than investing in expanding parking infrastructure should be in place to improve station access and encourage increased rail use. While the culture has been that people use GO Transit service in suburban areas because they can drive, the provision of parking can no longer be the expectation in order to access transit.

The provision of free parking only encourages people to drive to GO Rail stations, rather than find an alternative like walking, biking or taking transit. According to a study by the Clean Air Partnership, only around 0.5% reach GO stations by bike.<sup>20</sup> A recent study estimated that 33% of car trips in the GTHA could be replaced with a bike trip, and that there was high cycling potential for many trips to and from GO Transit stations that are less than five kilometres.<sup>21</sup>

## Recommendations

Rather than increasing parking around GO stations by 15,000 spaces, GO Transit should no longer invest in additional parking spaces, and should manage existing parking supply through pricing and providing pedestrian and cycling connections to transit stations. Metrolinx should also explore opportunities to redevelop existing parking lots and lead by example in terms of supporting appropriate land use and densities around high order transit.

As one of the largest parking operators in Ontario, Metrolinx should play a key role in providing public access to electric vehicle (EV) charging stations and incentivize EV adoption for those who still need to drive to access GO transit services. Metrolinx could provide preferred parking closer to the station for EVs.

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<sup>19</sup> Metrolinx, *GO Transit Rail Parking and Station Access Plan* (2013), 1. [http://www.metrolinx.com/en/regionalplanning/projectevaluation/studies/GO\\_Transit\\_Rail\\_Parking\\_and\\_Station\\_Access\\_Plan\\_EN.pdf](http://www.metrolinx.com/en/regionalplanning/projectevaluation/studies/GO_Transit_Rail_Parking_and_Station_Access_Plan_EN.pdf)

<sup>20</sup> Raktim Mitra and Nancy Smith Lea, *Cycling potential in the Greater Toronto and Hamilton Area (Preliminary Findings)* (2016), 46. [http://www.cleanairpartnership.org/wp-content/uploads/2016/10/Cycling-Potential-in-GTHA\\_Report.pdf](http://www.cleanairpartnership.org/wp-content/uploads/2016/10/Cycling-Potential-in-GTHA_Report.pdf)

<sup>21</sup> Raktim Mitra and Nancy Smith Lea, *Cycling potential in the Greater Toronto and Hamilton Area (Preliminary Findings)* (2016), 47. [http://www.cleanairpartnership.org/wp-content/uploads/2016/10/Cycling-Potential-in-GTHA\\_Report.pdf](http://www.cleanairpartnership.org/wp-content/uploads/2016/10/Cycling-Potential-in-GTHA_Report.pdf)



Metrolinx should work closely with municipalities to ensure that local transit services offer a viable last-mile trip to transit stations. Metrolinx should continue to support shared mobility options like ridesharing and carpooling through incentives and programs like Smart Commute.

## Using behaviour change tools to further shift travel demand: Transportation Demand Management

The RTP recognizes how Transportation Demand Management (TDM) will help shift travel mode share to transit and active transportation. Some tools recommended include vanpooling, HOV lanes, telecommuting and park and rides. The RTP suggests looking into new approaches like dynamic fares, parking charges, HOV lanes and TDM plans for large sites and employers.<sup>22</sup>

Metrolinx invests a large amount in carpooling and ridematching without providing evidence to the efficacy of this transport mode for reducing single occupant vehicle trips to and from work. The Smart Commute program's main focus is ridematching with over 300 employers.<sup>23</sup>

A great opportunity to introduce transportation demand management that will shape travel behaviour in new developments is through developer-led TDM plans in new developments. However, Metrolinx has to depend on municipalities to require developments to implement TDM plans. Each municipality has different development application processes, meaning that Metrolinx cannot ensure the appropriate TDM measures are being taken in areas surrounding higher-order transit investments. TDM plans as part of the development process is crucial to embed TDM in land use.

## Recommendations

Metrolinx should place more of a focus on assisting developers in integrating TDM plans into a project. Metrolinx can provide tools for creating a TDM plan, and provide resources that demonstrate cost savings, benefits and consumer attractiveness of TDM plans.

Metrolinx should be an actor pushing for maximum parking requirements (rather than minimums) and incentivizing developments around existing transit infrastructure in order to get more people using transit and out of cars. Most municipalities currently use parking minimums, so Metrolinx should work with municipalities to either lower these existing minimums and increase cycling minimums, or advocate for parking maximums in mobility hubs or urban growth centres.

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<sup>22</sup> Metrolinx, *The Draft 2041 Regional Transportation Plan (2017)*, 73. [https://www.metrolinxengage.com/sites/default/files/draft\\_rtp.pdf](https://www.metrolinxengage.com/sites/default/files/draft_rtp.pdf)

<sup>23</sup> Metrolinx, *The Draft 2041 Regional Transportation Plan (2017)*, 73. [https://www.metrolinxengage.com/sites/default/files/draft\\_rtp.pdf](https://www.metrolinxengage.com/sites/default/files/draft_rtp.pdf)

If the Transportation Planning Policy Statement is enacted, the TPPS should include requirements and targets for municipal TDM plans to address mode share and transit use.

## Taking the High-Occupancy Vehicle network further: toward mobility pricing

The draft RTP plans to expand the current high-occupancy vehicle (HOV) network from 110 to 1,130 kilometers of lanes. The goal is to leverage this network to roll out a Frequent Regional Express Bus network.

We fully support the expansion of the HOV network and expanding frequent regional buses on these routes. However, to manage growth to more than 10 million people in the GTHA by 2041, we will need more demand management tools to manage automobile congestion.

The roll out of an HOV network should be paired with forms of congestion pricing, such as high-occupancy (HOT) lanes and highway tolling. Together these tools can raise significant revenue to support the transit build-out and operations called for in the draft RTP<sup>24</sup>, and will help to alleviate some of the GTHA traffic congestion that costs the region as much as \$5 billion annually.<sup>25</sup> The HOV network provides an interesting opportunity to match congestion pricing with new transit options. While the draft plan recognizes the potential for congestion pricing and parking fees it does not take concrete steps in this direction.

Metrolinx should coordinate with MTO, as MTO's Multi-Modal Transportation Plan for the GGH calls for reviewing the HOV network and developing a HOT lane network. Lessons learned from the MTO HOT lane pilot program on Highway 427 and the QEW can help inform the expansion of that program and complementary congestion pricing tools.

## Recommendations

Initiate, via the RTP and/or the Multimodal Plan for the GGH, a comprehensive study of congestion pricing scenarios for the proposed HOV network including full tolling scenarios. Metrolinx should also explore other mobility pricing opportunities with a view towards discouraging drive-alone trips, and generating further revenue for sustainable transportation

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<sup>24</sup> The Pembina Institute's 2015 report "Fare Driving" explored the benefits of distance-based congestion pricing, with peak and off-peak rates. For a scenario with distance-based pricing on the 401, 404, 400 and QEW and the full buildout of the Big Move transit network, the report estimated that peak hour traffic could be reduced by an average of 21% on these roadways per day in 2032. <http://www.pembina.org/pub/fare-driving>

<sup>25</sup> Benjamin Dachis, *Evaluating government infrastructure investment* (CD Howe, 2013), 2. [https://www.cdhowe.org/sites/default/files/attachments/research\\_papers/mixed/Commentary\\_385\\_0.pdf](https://www.cdhowe.org/sites/default/files/attachments/research_papers/mixed/Commentary_385_0.pdf)

investments. In addition to HOT lanes, other road tolling and vehicle kilometres travelled (VKT) fees could address road congestion.

## Ensuring the successful implementation of the Frequent Rapid Transit Network

The draft RTP proposes establishing a regional Frequent Rapid Transit Network (FRTN) which would stitch together GO RER, the TTC subway and priority bus corridors on 400 series highways with local networks of LRT and BRT. The routes would run along highly congested corridors and connect major centres and areas of high density. The network would provide 10-15 minute service all day, seven days a week.

An approach centered on frequency is an excellent approach. Often overlooked in debates and studies, frequency is the hallmark of a transit system that offers users the freedom and flexibility they need to adopt transit use as a primary mode of transportation. In fact, satisfaction with frequency and travel time are the two factors most likely to make a person recommend their transit system to someone else (or least likely to recommend if unsatisfied).<sup>26</sup> Metrolinx should ensure that headways remain less than fifteen minutes along the FRTN; 15 minutes is the maximum headway under which a service can be considered frequent, and the service must be available on evenings and weekends.

Other necessary elements for a successful implementation of a FRTN is regional fare and service integration, and coordination across municipalities to build the local transit services that are the backbone of the FRTN.

## Recommendations

There is a lack of clarity about how the FRTN will be implemented at the municipal level. For example, the plan should clarify who would operate and fund the LRT and BRT lines that would form part of this network. Along with consultation of municipalities, a Transportation Planning Policy Statement as proposed in the *Metrolinx Act (2006)* would help to ensure that municipal plans align with, and work towards, the FRTN.

Metrolinx needs to establish targets and timelines for the rollout of electric buses on GO bus corridors.

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<sup>26</sup> Transit Center, *Who's on board 2016: What today's riders teach us about transit that works* (2016), 22, [http://transitcenter.org/wp-content/uploads/2016/07/Whos-On-Board-2016-7\\_12\\_2016.pdf](http://transitcenter.org/wp-content/uploads/2016/07/Whos-On-Board-2016-7_12_2016.pdf)

## Clarifying the implications of the proposed Strategic Goods Movement Network

The draft RTP proposes a Strategic Goods Movement Network (SGMN). The SGMN corridors would be developed to support truck movements across the region and connect them to freight hubs.

A SGMN is critical to improve goods movement efficiency in the GTHA. The Pembina Institute has learned from municipalities through interviews and focus groups<sup>27</sup> that there is a strong desire for the province to establish a regional SGMN to support their local freight efforts and ensure cross-boundary coordination and harmonization. As such, the proposed network is a move in the right direction.

The draft RTP does not clarify the status of the proposed SGMN or if and how municipalities will be required to reflect the SGMN in their transportation plans. The *Metrolinx Act (2006)* does not designate any duties to Metrolinx related to goods movement. This means there is currently no staff that is responsible for delivering on goods movement policies like the proposed SGMN. If the SGMN is to come to fruition, there needs to be an agency that is accountable and monitoring its implementation.

The region will see rapid technological change in the freight sector (e.g. electrification and automation of heavy trucks, fuel switching as a result of federal policy, information technology systems, etc.). It would be prudent to study the SGMN against these trends to ensure the region is not only improving current goods movement, but optimizing freight operations in the future.

### Recommendations

If a SGMN is to be included in the RTP, Metrolinx needs to clarify the steps required to finalize it. A broader exercise to conduct an inventory of regional employment lands, required to support Growth Plan implementation, would also support the validation of the SGMN in terms of capacity, routes, future needs, etc. This work will allow municipalities move forward with their own, coordinated freight plans.

Metrolinx also needs to provide guidance to municipalities about how to reflect the SGMN within their local plans and the expectations and norms for doing so. There may be an opportunity to link this work to the Ministry of Transportation's Freight-Supportive Guidelines.

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<sup>27</sup> Lindsay Wiginton, *Local planning for goods movement in Ontario* (October 2017), 5. <http://www.pembina.org/reports/local-freight-planning-in-ontario-final.pdf>

Along with consultation of municipalities, a Transportation Planning Policy Statement as proposed in the *Metrolinx Act (2006)* would help to ensure that municipal plans align with, and work towards, the SGMN. This will bring the region closer to having a coordinated and consistent regional goods movement network and plan.

There needs to be an agency, whether it is Metrolinx or the Ministry of Transportation, that is held accountable for overseeing a regional freight strategy and ensuring the SGMN is implemented.

## Defining success: measuring environmental impact

The RTP discussion paper proposes GHG emissions and vehicle kilometres travelled (VKT) as key performance indicators.<sup>28</sup> The metrics proposed in the RTP discussion paper to measure these indicators were not comprehensive. Further, they were omitted from the draft RTP. The draft RTP does not mention the environmental benefits of the 2041 transportation network or how the impact will be measured.

In Ontario, emissions from the transportation sector contribute 35% of provincial emissions, representing the largest source of GHG emissions from all sectors. Road transportation is the most significant component of these emissions (Figure 2).<sup>29</sup> 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. 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.” 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.

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<sup>28</sup> Metrolinx, *Discussion paper for the next regional transportation plan: Greater Toronto and Hamilton Area* (August 2016). [http://www.metrolinx.com/en/regionalplanning/rtp/RTP\\_Discussion\\_Paper\\_EN.pdf](http://www.metrolinx.com/en/regionalplanning/rtp/RTP_Discussion_Paper_EN.pdf)

<sup>29</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>

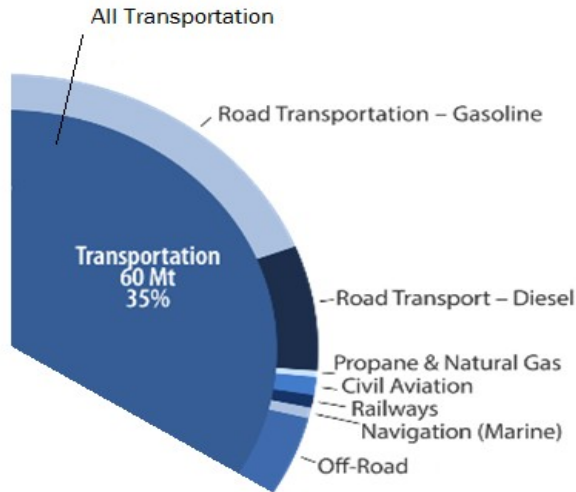


Figure 2 Emissions by Sector in Ontario

## Recommendations

The Pembina Institute recommends 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. Metrolinx should add more robust measures for the key performance indicators on emissions and air quality to those proposed in Metrolinx's *Monitoring Handbook*,<sup>30</sup> by:

- Adding separate measures for emissions from ground freight in the GTHA,<sup>31</sup>
- Adding separate measures for emissions from transit vehicles in the GTHA, in order to capture progress made through the electrification of transit,<sup>32</sup>
- Calculating emissions from personal automobiles in relation to the distance and volume of trips made in the GTHA,

<sup>30</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>31</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).

<sup>32</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.

- 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>33</sup>
- Adding distance of single passenger trips per capita as a metric, in order to capture progress in mode shift and land use planning.

The updated RTP should set a clear goal for GHG emissions reductions from the transportation sector in the GTHA, in line with the provincial emissions targets. Metrolinx should also ensure these goals are clearly communicated to the public, and provide accessible public reporting at regular intervals on all KPIs established in the RTP.

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<sup>33</sup> The Ontario Ministry of the Environment and Climate Change collects this data.