THIS IS THE END OF THE LINE

RECONSTRUCTING TRANSIT OPERATING FUNDING IN CANADA

MAY 2024

LEADING MOBILITY

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Executive Summary

Millions of Canadians rely on public transit to move through their communities. After ridership suddenly dropped at the start of the pandemic, service was put on a lifeline with reduced operating revenue. Revenue and ridership are both still yet to fully recover nationally, and a new model for funding transit operations is urgently needed. Failure to establish a new model could have implications not only on societal challenges such as reducing emissions from transportation and improving affordability in urban areas, but also impact how Canadians move, travel and experience the city for generations to come.

This project identified options to address transit operating funding shortfalls in Canada while developing policy recommendations for the different orders of government. It investigated how urban transit operations are currently funded across Canada, and attempts to understand how each order of government is positioned in terms of their fiscal capacity, legislative authority and available revenue tools to fund transit operations. Operating funding gaps for transit agencies to maintain their existing services and realize service expansions are included in this discussion. In addition, transit financing models of three comparator G7 countries and existing urban Canadian examples were reviewed to establish an understanding of best practices. A suite of policy recommendations was then generated for all levels of Canadian Government. For many Canadian transit agencies, new revenue tools alone will not be able to meet the growing fiscal challenges for transit operations. Each level of government has mandates, plans and policies related to climate action, population growth and immigration, equity, economic development and affordability that will significantly rely on useful, reliable and convenient transit service. A summary of policy recommendations is provided in ***Box i***.

BOX I: Summary of policy recommendations for different levels of government

The Government of Canada needs to continue supporting public transit agencies with operating funding as part of several federal mandates such as climate action, affordability, economic growth and meet demand put on transit systems from population growth and immigration to urban regions. A review of how three comparator countries in the G7 fund public transit was reviewed in the preparation of this report and found several examples ranging from full to partial subsidies from senior levels of government to options to use capital funding.

For instance, the Federal Republic of Germany recently introduced national legislation to cap monthly transit fares for regional trains, buses and trams across the country at €49. In order to realize this program and legislation, the Federal Government is subsidizing half of the costs at €3.0 Billion per year. This will ensure that German cities and transit agencies in each region have a dedicated operating funding source, and reduce their reliance on fares to provide transit service. In working toward operating subsidies like this, the Federal Government of Canada should establish a national commission to develop a new model for transit operating funding with representatives appointed by all levels of government including First Nations. The Federal Government should also partly subsidize the operating costs of new transit system expansions and improvements that are funded by the new Permanent Transit Fund until an acceptable level of fare revenue is generated from ridership.

The Provincial Governments must work with municipalities, urban regions and their transit systems to identify solutions to transit operating cost pressures. Part of this includes adopting new legislation that allows them to implement alternative revenue tools to meet the growing demand for transit in Canadian cities expand transit systems and reduce reliance on property tax and transit fares. New transit improvements and expansions should also be partly subsidized by provincial governments, especially when public transit services are supporting programs that are within the mandate of the province (e.g. access to health services, low-income supports and economic development). In addition, the provinces need to advocate on behalf of municipalities to the Federal Government for a tripartite national commission to develop a new model for transit operating funding that involves a dedicated stream of operating funding coming from senior levels of government.

Municipalities and Transit Agencies need to undertake financial modelling for the operating costs of new transit expansions and plans, and increase public transparency for the consequence of not securing enough funding to operate them. New revenue tools should be explored and followed by the development of a business case and implementation plan based on a defined set of criteria. It is important that any new revenue from these alternative tools is dedicated to fund public transit operations, and not allocated to general revenue for the municipality. To secure public approval, there needs to be a traceable outcome between rendering of a new revenue tool and the investment of new funds of these tool(s) to their intended purpose of improving transit service.

Based on information gathered from existing policy documents and interviews with staff from cities, transit agencies, advocacy organizations, and industry experts, new revenue tools were proposed for eight Canadian cities. A primary purpose of this report is to help municipalities and transit agencies build the case for new revenue tools that could work towards stable funding and possible service expansion. These cities included Metro Vancouver, BC; Calgary, AB; Edmonton, AB; Winnipeg, MB; Toronto, ON; Ottawa, ON; Greater Montréal, QC and Halifax, NS. Seven new revenue tools from a longer list of twenty were ultimately proposed, and three were analyzed in the context of each city. The tools included Benefit Area Taxes, Off-Street Parking Taxes, Vehicle Levies, Vehicle Kilometres Travelled (VKT) Tax, City Sales Tax, Electric Vehicle Charging Tax, and Transportation Network Company Fee.

Each tool was assessed in each jurisdiction through a Multiple Account Evaluation that incorporated six common objectives defined in consultation with transit agencies. These objectives included impacts on mode share, impacts on equity, feasibility of implementation, revenue potential, alignment with city or regional goals, and level of risk. Regulatory authorities of each municipality in respect to their ability to implement the revenue tool was not treated as a fatal flaw.

Each tool was evaluated to determine if it could fully meet, partially meet or not meet each objective. Based on this analysis, the revenue tools listed in ***Box ii*** are recommended for implementation in the eight Canadian cities.

BOX II: Recommended revenue tools for implementation in eight Canadian cities based on objectives in study

Metro Vancouver - Vehicle Levy

TransLink has the necessary legislative authority to implement Vehicle Levies, meaning that this tool also has limited risk. Vehicle Levies may influence households to own fewer vehicles and therefore slightly increase mode share for transit, walking and cycling in the region. The amount of revenue that can be generated from this tool will vary based on the scope and parameters of its implementation.

Prairie Cities (Calgary, Edmonton, Winnipeg) - Vehicle Levy

Based on the operating revenue shortfalls identified for these cities, a Vehicle Levy is likely to generate moderate revenue due to high vehicle ownership rates within these municipalities. Vehicle Levies would require enabling legislation from the Provincial Governments but would be a stable source of revenue, and could influence households to own fewer vehicles and increase sustainable mode shares.

Toronto – Off-Street Parking Taxes

The City of Toronto has the legislative permission to establish a Non-Residential Off-Street Parking Levy (commonly referred to as a Commercial Parking Levy), one of two forms of Off-Street Parking Taxes studied in this report. This tool could generate a predictable and significant amount of operating revenue while potentially increasing sustainable mode shares by reducing parking supply and making it difficult for drivers to find a space, while additional funding could be dedicated to stabilize funding and possibly increase TTC service. In addition, this tool could advance numerous city building and affordable housing objectives if landowners are given the option to convert parking spaces to new mixed-use developments.

Ottawa - Vehicle Levy

Based on the operating revenue shortfall identified in this study, a Vehicle Levy would likely generate moderate revenue for OC Transpo.

However, Vehicle Levies would come with considerable political risk in Ottawa as they require enabling legislation from the Province, which recently removed vehicle registration fees. Despite this challenge, Vehicle Levies would present the City of Ottawa with an opportunity to work toward climate action goals and objectives by discouraging high levels of automobile ownership and potentially influence Ottawans to take transit, walk or cycle.

Greater Montréal - Vehicle Kilometres Travelled (VKT) Tax

A VKT Tax in Montréal would be equitable because it charges road users directly for congestion and roadway costs that they impose, and could influence higher levels of transit ridership and sustainable mode shares by sending a price signal to drivers. Despite having high initial implementation costs and requiring provincial legislation, there is significant revenue potential from this tool that could be used to improve transit service in the region.

Further, Montrealers are already familiar with zone-based transportation costs from the existing zone fare structure charged on the Metro and REM systems while revenue collection structures are already in place for tolls on two regional bridges which could be expanded.

Halifax - VKT Tax

A VKT Tax in Halifax would send a price signal to drivers and influence higher sustainable mode shares while simultaneously encouraging Haligonians to locate near rapid, high-frequency transit services, increasing demand for higher density development along corridors. While legislative amendments are required, revenue generation structures are already in place to collect tolls on both bridges over Halifax Harbour and could be expanded across Halifax Regional Municipality (HRM). As such, Haligonians are already familiar with paying a form of VKT Tax. There is also significant revenue potential for a VKT Tax in Halifax that could cover both the capital costs to establish new services in and operating budget needs for HRM's rapid transit strategy.

Photo source: Brad Killen

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Photo source: Winnipeg Transit

1 Introduction

Introduction

Public transit systems in Canada are typically funded by municipal subsidies primarily derived from property taxes, and fare revenues.[1] In some jurisdictions, alternative revenue sources such as motor fuel taxes and paid parking have been used to generate funding for transit operations.[2] However, these existing revenue sources are either vulnerable to societal or economic disturbances. Prior to the COVID-19 pandemic, fare revenues covered approximately 51% of all transit operating costs in Canada in comparison to 39% in the United States. While cities and agencies were able to rely on this source of revenue to cover a considerable amount of their operating costs, it left transit systems vulnerable to declines in ridership. At the height of the pandemic, ridership dropped across the country by 85% and transit agencies quickly came under intense financial pressure to keep delivering services.[3] From a coordinated effort and advocacy from the transit industry, federal and provincial governments delivered over $4.6 Billion in financial support for operating costs through the Safe Restart Agreement. Yet, the Federal Government discontinued their support for transit operating funding in their 2023 budget, and only the Provinces of BC, Manitoba, and Quebec have continued to back transit systems as they recover from the pandemic, while the Ontario Government has agreed to provide three years of operating funding for the Eglinton Crosstown and Finch West LRTs.[4]

Canadian governments must address the challenge to fund public transit to maintain existing operating and service standards in urban areas across the country.[5] Though the extent to which ridership and revenue have recovered differs by city, many systems have not achieved a full recovery. In addition, remote or hybrid working arrangements have resulted in changing travel patterns with less passengers required to commute daily to their place of work. Prior to the pandemic, full time office workers were the largest transit ridership cohort for the Toronto Transit Commission (TTC) representing 26% of all trips.[6] As such, fare revenues from monthly passes have significantly dropped, and not just in Toronto but other cities including Vancouver as well.[7] Collectively, these lingering impacts from the pandemic continue to require further subsidy of transit services from alternate sources of revenue.

1: Cooper et al., 2022
2: TransLink, 2023; BC Transit, 2022; Town of Canmore, 2022
3: Canadian Urban Transit Association (CUTA), 2021
4: CUTA, 2023
5: CBC News, 2022; Jeffords, 2022; Osman, 2022
6: TTC & French, 2023
7: TransLink & French, 2023

Public transit is also experiencing funding challenges that are not purely related to the operation of the system. As an integral part of the urban realm, public transit is also vulnerable to other societal trends and risks that are linked to everyday life including housing affordability, substance abuse and public health. Negative trends in each of these domains can affect the safety and comfort of transit use, and influence the overall perception of this essential public service. These societal challenges in particular were exacerbated by the COVID-19 pandemic and, apart from housing affordability and an increase in unhoused individuals, can be reasonably attributed to an increase in offences against transit customers and employees, incidents of overdoses and a general drop in customer satisfaction across Canada.[8] Responding to safety related challenges to ensure that transit remains a competitive and attractive mode of mobility has required additional operating resources and is a growing cost pressure.

Despite these challenges, cities and transit agencies across the country need to maintain and expand their networks or increase the frequency of services to reduce emissions from transportation and improve equity in their mobility systems. Equity is especially pertinent while the Federal Government maintains ambitious immigration targets, whereas immigrants are the largest source of population growth in Canadian cities and have a higher reliance on public transit for urban mobility.[9] For significant transit improvements to generate ridership and provide reliable service, cities and transit agencies require an overhaul in the financing structure for public transit operations in Canada.

If operating revenue challenges are not addressed, a downward spiral for public transit service in Canada is inevitable. Often described as the "public transit death spiral," initial cuts to service as a result of reduced operating revenue will make riders wait longer, transit vehicles more crowded, reduce convenience, and grow perceptions of unsafety. More riders will return to cars, revenue will fall further, and the cycle will repeat itself. Some cities or agencies may respond by raising fares, which will reduce the attractiveness of taking transit. This cycle will have disproportionate impacts on equity-deserving communities and populations including low-income workers that are likely to be women, people of colour and Indigenous people, seniors, and people with disabilities.[10]

This project sought to identify options to address financial challenges associated with transit operating funding in Canada and proposed policy recommendations for different levels of government. It investigates how urban transit operations are funded across Canada, and attempts to understand how each order of government is positioned in terms of their fiscal capacity, legislative authority and available revenue tools to fund transit operations. Operating funding gaps for transit agencies to maintain their existing services and realize service expansions are included in this discussion. In addition, transit financing models of three comparator countries and existing urban Canadian examples are reviewed to establish an understanding of best practices related to senior government funding in the day to day operations of public transit. Based on information gathered from existing policy documents and interviews with staff from cities, transit agencies, advocacy organizations, and industry experts, three new revenue tools are proposed for eight different Canadian cities and a suite of policy recommendations for different levels of government are defined.

8: Leading Mobility Consulting, 2022
9: Amar & Teelucksingh, 2015
10: CUTA, 2021

How To Read This Report

This report was written for planning, policy and government professionals in Canada to provide an overview of the operating challenges faced by urban public transit systems. Given the report's practical nature, as well as the diverse audience it intends to inform, the findings are presented in a number of ways and can be engaged on two levels:

5-minute read

To achieve a fundamental understanding of the report's findings, explore the collective policy recommendations for all levels of government in section 5. Then, browse the objectives used to assess the viability of new revenue tools that could be used to fund public transit in the eight Canadian urban regions beginning on page 40. Focus on the guiding questions associated with each objective and read the summary tables for the tools proposed for each of the urban regions.

Impacts on Mode Share

Does the revenue tool support increased mode share for transit and active transportation?

above: example of an objective and an associated guiding question

below: example of a summary table for three revenue tools proposed for an urban region in the report

Objective	Vehicle Levy	VKT Tax	EV Charging Tax
Mode Share	●	●	●
Equity	◐	●	◐
Implementation	●	○	○
Revenue Potential	●	●	◐
Alignment with Regional Objectives	●	●	◐
Risk	●	●	◐

● fully meets ◐ partially meets ○ does not meet

15-minute read

Focus on some of the lessons for Canada learned from how three other G7 countries fund transit operations in section 4. Then, browse the collective policy recommendations for transit agencies and all levels of government in section 5. Afterwards, at a high level, explore the objectives used to assess the viability of new revenue tools that could be used to fund public transit in the eight Canadian urban regions. Focus on the guiding questions associated with each objective, and read about the City that interests you including its context, transportation goals and objectives, challenges in transit operating funding and each of the revenue tools proposed for the jurisdiction.

5-hour read

The full report provides an in-depth examination of the challenges facing cities and their transit agencies to fund operations across Canada.

Photo source: Jean-Karim Dangou

2 Approach

Approach

This study took place over three unique phases beginning with Discover, where city regions included in the study were researched to understand transit funding challenges and objectives across the country alongside a review of best practices. The findings from this initial stage informed Phase 2, Engage, where interviews were conducted with staff and officials from eight Canadian cities and/or their transit agencies, national municipal or transportation advocacy organizations, and industry experts. Phase 3, Define, included the analysis of data collected from the initial two phases, which led to the formulation of policy and funding recommendations for transit operating funding across the country.

Phase 1: Discover

Literature Review / Best Practices

A review of existing academic literature and best practices in transit funding was conducted to identify types of transit costs and how they are typically funded in Canada. This also included research on alternative revenue tools used by a number of agencies within Canada and internationally. Further, existing academic literature, policies and other resources were scanned to learn how three comparator G7 countries fund public transit operations with a specific focus on governance, types of revenue tools, and how transit funding intersects with climate action and modal shift to sustainable travel.

Eight Urban Regions

An initial scan of Canadian cities identified seventeen urban regions for possible inclusion in the study and included Greater Victoria and Metro Vancouver, BC; Calgary and Edmonton AB; Regina and Saskatoon, SK; Winnipeg, MB; Toronto and Ottawa, ON; Montréal and Quebec City, QC; Charlottetown, PE; Fredericton, Moncton and St. John, NB; Halifax, NS; and St. John's, NL. These cities were chosen based on the size of their regional populations. Out of these urban regions, it was decided to focus on Metro Vancouver, Calgary, Edmonton, Winnipeg, Toronto, Ottawa, Greater Montréal and Halifax due to the scale and complexity of their representative transit systems.

A policy scan of each of the eight urban regions was conducted to learn relative goals and objectives for local public transit and transportation planning. Documents examined included long range plans, transportation policies, investment and priority plans, annual budgets, Council and Board directions, reports, studies, and applicable provincial or federal legislation that could help inform the research. Each document was checked for applicable objectives or planned transportation improvements, financial implications associated with the objectives and improvements, and general notes for information that could be valuable to this report. Collectively, the documents in the policy scan were used to generate interview questions for municipal and transit agency staff, advocacy organizations and industry experts in engagement as part of Phase 2.

Phase 2: Engage

Using the knowledge and understanding gained in Phase 1, interviews were conducted with staff that are directly involved in long range planning and finance at each city and/or transit agency, as well as advocacy organizations and industry experts. Discussions primarily focused on existing revenue sources and emerging challenges in transit operating funding, the considerations and objectives that would be important for assessing the viability of new revenue tools for transit service, and roles for different levels of government.

Phase 3: Define

Using the research conducted in Phase 1 combined with the findings from engagement in Phase 2, data were analyzed to identify broad findings at the national level such as cost drivers for transit operations, the range of funding shortfalls, and relationships between cities, transit agencies and other levels of government. In addition, a Multiple Account Evaluation was used to analyze three revenue tools in the context of each city region that could address transit operating funding challenges. This evaluation considered multiple objectives expressed as important by the majority of transit agencies to assess the viability of a new revenue tool to fund transit operations. Finally, policy recommendations for different levels of government for funding transit operations were proposed based on findings from initial research in Phase 1 and engagement in Phase 2.

The costs of providing public transit service can be expected to continue to increase as cities across the country continue pursuing ambitions of creating sustainable and equitable transportation networks. There are three different types of transit costs: capital costs, maintenance costs, and operating costs.

Photo source: Robert Macleod

3

Overview of Transit Costs

Overview of Transit Costs

Capital Costs

Capital costs are expenses for new infrastructure and include the price tags for the construction of subway lines, bus depots, and procuring transit vehicles. According to CUTA, there were $85.2 Billion worth of transit expansion projects planned across the country in 2018, with approximately $39.2 Billion of the projects (46%) fully funded.[11] Many more significant capital projects have since been announced including the Surrey-Langley SkyTrain Extension ($4.0 Billion), Stage 1 of the Green Line LRT in Calgary ($5.5 Billion), Metrolinx Subways Program in the Greater Toronto Area ($33.8 Billion) and Halifax's BRT program ($217 Million).[12] Capital funding requirements for transit projects in Canada are often partially funded by the Federal Government through the Investing in Canada Infrastructure Program (ICIP). However, the Federal Government is scheduled to introduce a Permanent Transit Fund in 2026 that will be a dedicated source of capital funding for transit projects, replacing ICIP.

Maintenance Costs related to State of Good Repair

Maintenance costs are those associated with keeping a public transit network in a state of good repair (SOGR) to ensure that they can be operated safely and efficiently. Day to day maintenance costs, such as conducting work on rail guideways, repairing transit vehicles and updating fare payment software to improve user accessibility are typically captured in operating costs. However, larger scale SOGR costs such as replacing rails on a long section of a subway line or station upgrades and renovations are considered large capital projects and may qualify for capital investment from senior levels of government. Significantly, the Federation of Canadian Municipalities (FCM) estimates that over $9.5 Billion of public transit assets are considered to be in poor condition and require repair. Restoring these assets to proper working condition will require between $10-20 Billion of capital investment.[13]

Operating Costs

Operating costs are expenses for providing services each day on the transit system. Examples of operating costs include operator wages, fueling transit vehicles, and expenses for running transit

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11: CUTA, 2019

12: Province of British Columbia, 2023; City of Calgary, 2023a; Metrolinx, 2023; Halifax Regional Municipality, 2020a

13: Federation of Canadian Municipalities (FCM) & French, 2023

vehicle facilities such as utilities and wages for administrators. Operating costs can vary depending on service variables such as revenue hours, revenue kilometres, the number of vehicles in service and passenger boardings.[14] Based on budget documents reviewed, annual operating costs for the cities and transit systems examined in this study in 2023 ranged from $131.4 Million in Halifax, NS to $3.1 Billion in Greater Montréal, QC as shown in ***Table 1***.

Table 1: Transit operating budget for 2023 from eight transit agencies and authorities included in study. Operating budget is organized from highest to lowest.[15]

Transit Agency	2023 Gross Operating Budget
Autorité régionale de transport de Montréal (Greater Montréal)	$3.1 Billion
Toronto Transit Commission	$2.3 Billion
TransLink (Metro Vancouver)	$2.2 Billion
OC Transpo (Ottawa)	$706.2 Million
Edmonton Transit Service	$502.0 Million
Calgary Transit	$473.1 Million
Winnipeg Transit	$238.6 Million
Halifax Transit	$131.4 Million

An 'Underfunding Trap'

In communities developing their public transit systems, large capital investments are needed to expand the network while maintenance and operating costs are initially somewhat lower. As transit networks grow over time and reach their full buildout, capital expenses typically reduce while costs for operations and maintenance increase, particularly as infrastructure lifecycles. However, cities may not have the financial resources and revenue tools to operate and maintain network expansions and could quickly become plagued by an 'underfunding trap.'[16]

Cities, transit agencies and different levels of government have been expected to provide public transit service using public budgets because transit and transportation infrastructure are public assets. However, existing revenue tools including property and fuel taxes are insufficient to provide service beyond current levels in transit systems around the world.[17] One study notes that urban transit system reliance on fuel tax revenues is particularly problematic as personal automobiles are increasingly becoming fuelled by other sources (e.g. electrification) that are not as easily taxable as today's fuels including gasoline.[18] As such, many cities and transit agencies around the world are seeking to diversify their revenue streams.[19]

14: Lai & Miller, 2020
15: Autorité régionale de transport métropolitain (ARTM), 2023a; TTC, 2023a; TransLink, 2023; City of Ottawa, 2023a; City of Edmonton, 2023a; City of Calgary, 2023b; City of Winnipeg, 2023a; Halifax Regional Municipality, 2023a
16: Ardila-Gomez & Ortegón-Sánchez, 2015
17: Ardila-Gomez & Ortegón-Sánchez, 2015
18: Ljungberg, 2016
19: Ardila-Gomez & Ortegón-Sánchez, 2015

Photo source: Jay Wennington

4

International Comparisons

International Comparisons

Three other G7 nations were selected as case studies to establish a fundamental understanding of how comparator countries finance public transit operations. These G7 countries - Germany, the United Kingdom & the United States - were selected based on the build out of their public transit systems. Findings were mostly generated from a scan of academic articles, and government resources and websites.

Photo: Julian Hochgesang

Germany

Germany is a federally organized nation with a vertical tiered system of sixteen federal states, of which Berlin, Hamburg and Bremen are city states. Within the federal states are either unitary urban districts or rural districts comprising several municipalities. The German constitution strongly supports subsidiarity with decisions largely made on an uncentralized basis while federal and state competences are defined. Individual municipalities have a right to self-administration, but their administrative responsibilities can vary greatly because they can take the form of a federal state, urban district, or municipality within a rural district.[20] As such, public transit operations are not only funded by local municipalities and passenger fares but also federal and state governments.[21]

Public transit funding for heavy rail and non-heavy rail services are distinctly different. With respect to heavy rail services, legislation passed in 1996 changed the responsibility for operating local service from the federal government to the federal states.[22] Since then, local services have been tendered out to private companies with increasing competition in the market to keep fares low.

20: Gühnemann, 2009
21: Weghmann, 2023
22: Weghmann, 2023

Some federal states take on the role of administering and tendering these services through an executive authority, whereas others have authorized regional cooperative associations. The twenty-seven executive authorities in Germany have an annual purchasing volume to cover operating costs, rolling stock and infrastructure maintenance associated with running the regional railways. To cover these costs, the federal government provides a fixed amount of funds from their annual budget to the executive authorities. The purchasing volume may change year to year, but in 2009 the amount transferred from the Federal Government was €6.7 Billion.[23]

Meanwhile, light (non-heavy) rail operations funding is the responsibility of municipalities with revenue sourced from fares, municipal property taxes, tax transfers from national budgets, and specific fees from parking and development. Special state government programs incentivize regional transit organizations (Verkehrsverbunds) to fully coordinate all aspects of transit operations and ticketing, while operations are either tendered to private companies or carried out by the municipality.[24] However, some cities fund their local public transport through municipal cross-subsidization. For example, Munich's transit system (MVG) is entirely owned and operated by the city through its public utility (SWM) and is Germany's second largest municipal transport enterprise. To combat any federal subsidy constraints, SWM has subsidized financial losses in public transport using surpluses gained in their electricity division.[25]

Municipal transit agencies in Germany strongly emphasize long term operating costs when making decisions on new infrastructure investments and service changes. For instance, Berlin and Hamburg turn to rapid bus services on arterial roads with frequencies as low as 4 minutes, with a main focus on reliability, convenience and travel speed to compete with the automobile. One of Hamburg's MetroBus lines carries up to 50,000 passengers per day, which, in the past, may have been considered to justify more expensive subway service. However, with a focus on operating costs, the City opted for buses.[26]

Public transportation financing has arguably entered a period of reform in the past year. In the summer of 2022, a €2.5 Billion subsidy allowed all adult German citizens to purchase a monthly transit pass for the cost of €9. This scheme was a resounding success, with approximately half of all German adults opting in. After this trial ended in September, full fares were restored and the federal government subsequently came under immense pressure to reinstate a low-cost, monthly fare. In March 2023, the country passed national legislation for a €49 per month transit pass for transit on regional trains, metros, buses and trams. Half of the €6 Billion annual cost to subsidize this new program is paid by the federal government, with the other half provided by the federal states.[27]

Lessons for Canada

Germany has similar national policies related to climate change as Canada, with a target of becoming net zero by 2050.[28] The government enables cities and transit agencies to work towards this by providing stable sources of both operating and state of good repair revenue each year. This allows cities and transit agencies to maintain service levels, and keep their transport infrastructure in a state of good repair. Additional revenue gained from providing transit service can be used to

23: Gühnemann, 2009
24: Buehler & Pucher, 2011; Gühnemann, 2009
25: Weghmann, 2023
26: Buehler & Pucher, 2011
27: Oltermann, 2023
28: Federal Government of Germany, 2023

expand the transportation network or increase service levels on existing routes. In turn, this can induce modal shifts away from automobiles and reduce emissions. Further, the Federal Government's fare subsidies for the €49 monthly transit pass provide individual transit systems' with a guaranteed funding source for operations. This reduces their vulnerability to societal disturbances, such as pandemics, that could result in lower ridership and fare revenues. In addition, subsidizing fares and reducing the monthly cost of a regional transit pass benefits equity-deserving communities by lowering the cost of living.

Photo: Josh Mills

United Kingdom

Since the 1980s, public transit has followed a broader national trend in the United Kingdom to deregulate and privatize public services. For local bus and tram services, there are two means by which this takes shape: a private operator takes the full revenue risk for a service, or those where local governments deem a service is necessary and contract it to a private operator on a tendered or franchised basis.[29]

Apart from a few jurisdictions, revenue streams for public transit services are mostly derived from farebox revenues and local authority support. In particular, local bus operators outside of London received £3.4B in operating revenue during the last full financial year prior to the COVID-19 pandemic with 59% generated by fares and 41% from public money. In addition, bus operators are required to pay a national fuel duty. To recover part of this duty, the Department of Transport provides a central subsidy through the Bus Services Operators Grant to offset fuel costs, keep fares low and maintain services that would otherwise have low profitability.[30]

29: Vickerman, 2021
30: House of Lords, 2022

Transport for London (TfL), the capital city's transportation department, operates arguably one of the most notable transit systems in the world. TfL funds operations for the London Underground through a wholly owned subsidiary, while bus services are planned by the enterprise but contracted and delivered by private operators in franchised blocks.[31] Fare revenues represent the largest portion of operating funding for the mass transit system as a whole, while approximately one-third of operating revenue is derived from TfL's congestion pricing, ultra low emission zone and other road network charges.[32] These road network use charges accounted for approximately £3.0 Billion in revenue for the 2023-2024 operating budget for public transit services.[33]

Recovery from the COVID-19 pandemic is a major operating cost driver in the United Kingdom. During the pandemic, parliament delivered £2.0 Billion in emergency operating funding to support bus services while ridership dropped. In order to unlock this funding, operators were required to keep at least 90% of services running, but was later reduced to 80% in September 2022. The government did not want services to be reduced to 80% but rather establish a steady state for what local bus funding could look like. It was due to expire in October 2022 but an additional £130 Million was announced to carry some struggling systems to March 2023.[34] Further, the Department for Transport dedicated £60 Million to subsidize a £2 single ticket fare cap from January to March 2023 for local bus services in an effort to get people back on buses and reduce congestion and emissions. Over 130 bus operators outside of London took part in this scheme and passengers were expected to save almost one-third of the average £2.80 bus fare.[35] Meanwhile, a £1.0B operating relief package was provided to TfL to maintain services in London in the first year of the pandemic.[36]

A number of factors continue to threaten public transit service and expansion in the United Kingdom. Similar to Canada, changing travel patterns from the COVID-19 pandemic threaten to significantly reduce public transit services. In particular, the end of emergency funding from the government could lead to reductions in local bus service by 20%. In addition, local authority support was already declining prior to the pandemic but has accelerated since health restrictions were first introduced.[37] Further, there is always great competition for public money. In the UK, funding for public transit lags behind education and health services, and transit projects usually require large sums of money spent over long periods of time. This has rendered investing in transit projects in the UK as politically unpopular as they are unlikely to receive tangible benefits in a single term in office.[38] Collectively, these factors are beginning to build the case for new revenue streams for public transit in an effort to maintain and expand services.

31: Vickerman, 2021
32: Transport for London, 2023a
33: Transport for London, 2023b
34: House of Lords, 2022
35: UK Department of Transport, 2022
36: Vickerman, 2021
37: House of Lords, 2022
38: Enoch et al., 2004

INTERNATIONAL COMPARISONS

Lessons for Canada

Like Canada, the United Kingdom's National Government has climate action and healthcare targets. Through the Climate Change Act, the National Government has a legislated mandate to achieve net zero emissions across the country by 2050. In addition, the National Health Service maintains a goal to improve access to healthcare, and references transport options as a factor that affects an individual's choice to seek care.[39] By subsidizing a portion of operating costs for fuel, the UK's Federal Government provides municipal and regional transit systems with a reduced cost burden to maintain service levels or expand the network. This helps to both provide sustainable transportation options beyond personal vehicles to reduce emissions, and may also provide vital connections to healthcare services at medical offices and hospitals. For healthcare in particular, the connection between public transit and access to health has been well documented. For example, a study prepared for the Department of Transport highlights how missed appointments at a specialist health facility in Wolverhampton dropped by 60% after the health and transport sectors worked together to introduce a bus service.[40]

The ability to use a variety of road network charges including congestion pricing to fund public transport has reduced - though not eliminated - Transport for London's vulnerability to societal disturbances that influence travel patterns and revenues from fares. In turn, when these disturbances do occur, the system may require less support from senior levels of government to maintain service levels. London's political system was restructured to create a new, elected Mayor with powers to manage the transportation system and raise taxes to fund improvements. This enabled Ken Livingstone to win on a platform that included, and subsequently implemented, congestion pricing.[41] Without these new powers, it may have proven difficult or impossible to implement such a source for public transport, and perhaps left Transport for London more vulnerable and reliant on senior government funding. However, Canadian transit agencies are able to use a limited set of revenue tools as defined by provincial legislation. If provincial legislation permitted transit agencies to implement a diverse set of revenue tools, it could improve their financial sustainability, and ability to operate existing transit networks and future expansions.

39: National Health Service, 2018
40: NatCen Social Research, 2019
41: Litman, 2011

Photo: Amy Chen

United States of America

Cities and transit agencies in the US rely on both government support and their own revenue to fund operations. While the cost-share for operations can vary from agency to agency, the Congressional Budget Office estimates that two-thirds of all income for transit agencies is sourced from governments. States or local agencies cover three-quarters of this share, while the federal government covers the remaining one-quarter. Transit agency revenues account for the remainder of the total costs and are sourced from a combination of fare revenues, and taxes and tolls levied by the agency.[42]

The Federal Government has provided financial support to public transit since the 1960s and has stipulated conditions governing the allocation of subsidies from other levels of government.[43] The Federal Transit Administration (FTA) provides subsidies through grants that are allocated based on the size and density of an area's population, amount of local transit infrastructure, demand for public transportation, and other relative characteristics. Some grants can also be distributed on a competitive basis, while some of the FTA's programs use both approaches. Most grants are intended to support new capital projects, but can also be used for operations and maintenance. Approximately three-quarters of the FTA's funding comes from the mass transit account of the Highway Trust Fund (HTF) while the remainder is sourced from the general fund of the Treasury. Federal funding for public transit averaged $13 Billion per year from 2016 to 2021, but has been raised to $18 Billion with the passing of the Infrastructure Investment & Jobs Act from 2021 to 2026.[44]

At the local and regional level, many US transit agencies levy a small sales tax on top of existing sales taxes that represents the largest source of dedicated transit funding after annual federal transfers. Sales taxes are also seen as a relatively acceptable means to raise funds for transit projects and operations in the US. Notably, Los Angeles County voters approved a 0.5% sales tax increase to expand and increase transit services in 2016.[45] Similarly, voters in the Sound Transit District of western Washington State approved tax increases in 1996, 2008 and 2016 to build and operate the regional mass transit system, including a number of significant light rail extensions.[46]

42: Congressional Budget Office, 2022
43: Li & Wachs, 2004
44: Congressional Budget Office, 2022
45: Litman, 2022
46: Sound Transit, 2023

INTERNATIONAL COMPARISONS

Significantly, cordon congestion pricing, a form of Vehicle Kilometres Travelled (VKT) Tax, was recently approved by the US Government and State of New York for implementation in New York City. Congestion has steadily continued to grow in New York City and has significantly affected travel times for a variety of road users. Between 2010 and 2019, travel speeds in Central Manhattan decreased by 22% to an average of 7 mph, while local bus speeds decreased by 28%.[47] The introduction of the cordon zone in New York marks the first iteration of a mobility pricing scheme in North America. The Metropolitan Transportation Authority will begin charging drivers entering Midtown Manhattan up to $23.00 per day as soon as Spring 2024, generating $1 Billion in revenue to fund mass transit.[48] The new scheme will also improve travel times for those who need to drive, while reducing air pollution.[49]

Like in Canada, ridership on US transit systems plummeted with the onset of the COVID-19 pandemic in March 2020 and resulted in a steep reduction in revenue from fares. Although ridership partially rebounded later in 2020, it remained well below pre-pandemic levels throughout 2021. To help transit agencies, Federal lawmakers responded with nearly $70 Billion in one time funding in 2020 and 2021, though agencies could choose to either use it for operations or capital programs.[50] This supplemental funding provided during the pandemic was vital to support public transportation systems across the country. State and local governments have also seen a sharp rise in federal transfers and grants, which represents an indirect financial boost to transit agencies. Meanwhile, transit agency revenues from major taxes, such as sales taxes, cumulatively grew by 6% from July 2020 to July 2021.[51]

State legislature involvement in transit operating funding could also be on the rise while transit agencies continue to grapple with lingering effects from the pandemic. New York State has committed to raising taxes on large businesses to fund budget shortfalls of the Metropolitan Transportation Authority in New York City as ridership and revenue recovers, while California recently committed $3.1 Billion to public transit agencies in the state.[52]

47: US Department of Transportation, 2023a
48: Ley, 2023; Butera, 2023
49: US Department of Transportation, 2023a
50: Congressional Budget Office, 2022
51: Congressional Budget Office, 2022
52: Kamisher et al., 2023

As part of its 2023 budget, the State of California agreed to provide $1.1 Billion over three years to avoid harsh cuts in public transit service, while lawmakers also redirected $2 Billion from capital infrastructure to operations, combining for a total of $3.1 Billion earmarked for transit service.

Lessons for Canada

The US Department of Transportation's Strategic Plan aims to reduce inequities in communities across the country by promoting safe, affordable, accessible and multimodal access to opportunities and services while reducing transportation-related disparities, adverse community impacts and health effects.[53] Federal funding streams available to public transit, while mostly used for capital projects, do allow for cities and transit agencies to use the funding for operations. Many of the Government of Canada's transportation policies and programs similarly highlight the need to provide multimodal access to opportunities and services to improve social equity. For example, the Investing in Canada Infrastructure Program aims to build strong, dynamic and inclusive communities, and ensure families have access to modern, reliable services that improve their quality of life.[54] Yet, none of these permanent programs allow Canadian transit agencies to apply for or use funding for operating local systems. Disallowing and not providing options for transit agencies to use senior government funding for operating costs, that could result in lower transit service levels, could have significant impacts on equity-deserving communities in accessing education, employment and essential services.


Photo: Chris Desort

Implications for Senior Government Policy in Canada

The discussion above outlines how other comparator countries in the G7 partly fund public transit operations through government subsidies in order to meet similar goals and objectives held by senior levels of government in Canada. Public transit is indeed a critical service that is needed in order for both Federal and Provincial Governments to fulfill several mandates within their jurisdictions. As highlighted by the Federal Department of Finance, the Government of Canada's central focus since 2015 has been on investing in the middle class, strengthening Canada's social safety net, growing the economy and making life more affordable for Canadians. Yet, transportation is the second highest household expense in Canada after shelter costs.[55] In a nation-wide housing crisis, multimodal and affordable transportation options are necessary to help Canadians reduce their day to day living expenses.

53: US Department of Transportation, 2022
54: Infrastructure Canada, 2023
55: Statistics Canada, 2019

INTERNATIONAL COMPARISONS

Canada is also experiencing an unprecedented level of growth from immigration. Yet, immigrants to Canada are more likely to rely on public transit when they settle in Canadian cities.[56] It is important that public transit remains a convenient, affordable and attractive alternative to driving for newcomers. Otherwise, newcomers may opt to purchase and commute with a personal vehicle, and thereby contribute to congestion and increase greenhouse gas emissions from transportation. Economic growth is also dependent on mobility options to support Canadians in getting to work. Public transit is a critical public service that provides millions of Canadians with mobility options for accessing employment in ports, major commercial areas, industrial sites, as well as healthcare and education institutions.

All levels of government have also made significant climate action commitments that significantly rely on a modal shift away from personal automobiles to sustainable transportation options, including public transit. The Federal Government, along with many of the Provinces including British Columbia, Alberta, Québec and Nova Scotia, have set targets to significantly reduce GHG emissions across sectors including from transportation in order to become net-zero by 2050.[57] However, cities and transit agencies engaged in this study had low confidence that emissions reduction targets can be met without a new model for transportation operating funding that allows them to continue providing existing transit service and expand their networks.

Finally, access to transportation options is critical for individual health outcomes. Though healthcare falls under provincial jurisdiction in Canada, there have also been recent efforts by the Federal Government to assist the provinces with healthcare funding.[58] While Canadians can undoubtedly benefit from increased healthcare funding, they must be able to access healthcare facilities. Providing public transit operating funding that sustains service to health institutions would ensure that Canadians with lower incomes can equally benefit from improved healthcare services.

Public transit agencies are unable to access a dedicated source of operating funding from either Federal or Provincial Governments that would strengthen their financial sustainability and ability to provide convenient and reliable service in their communities.

56: Heisz & Schellenberg, 2004
57: Government of Canada, 2022; Province of Alberta, 2023c; Province of British Columbia, 2023d; Province of Nova Scotia, 2023; Province of Québec, 2018a
58: Chiang, 2023

This presents a significant challenge to fulfilling these mandates of both senior levels of government, and how we fund this needs to change. Partly subsidizing or providing options to use senior government funding for public transit operations as highlighted in the examples from Germany, the United Kingdom and the United States may help the Federal and Provincial Governments to fulfill these mandates.

This study proposed several policy recommendations focused on actions that Canadian municipalities, transit agencies and provinces should take to address transit operation cost pressures including further study or implementation of new revenue tools. However, there are a number of policy recommendations and actions that apply to all cities, transit agencies and provinces, and some that could have distinct implications for different levels of Canadian government. These collective policy recommendations are discussed and summarized in the next section.

Photo source: City of Whitehorse

5 Policy Recommendations

Policy Recommendations

The Federal Government of Canada

The Federal Government should:

1. Establish a tripartite national commission tasked with developing a new model for transit operating funding that includes commitments from the Federal Government

   Public transit needs to be recognized as an essential service in the country by all governments, including at the Federal level.[59] Every transit agency engaged in this project stated that they had either low or zero confidence that both existing and future transit service operations could be funded using existing revenue tools and current funding models in their cities and provinces. A new model for transit operating funding that includes operating funding commitments from the Federal Government would enable cities and transit agencies to expand and operate their networks with service levels that make public transit a viable means of traveling through Canadian communities. This is of interest to the Federal Government to successfully fulfill mandates including affordability, immigration, economic growth, and climate action. Establishing a tripartite national commission consisting of officials from all levels of government and transit agencies dedicated to finding and implementing a new funding model for public transit operations could help all levels of government in fulfilling their respective mandates.

59: Beasley, Cooper & French, 2023

2. Provide subsidies for operating costs of new transit capital projects funded by the Permanent Transit Fund

   Many staff from the transit agencies that were interviewed as well as CUTA highlighted their advocacy to the Federal Government for operating subsidies to be included by the new Permanent Transit Fund. Moreover, FCM's policy statement for public transit and mobility calls on the Federal Government to develop targeted programs to provide operational funding to municipalities and transit agencies to support the expansion or improvement of transit service, expand or improve the delivery of para-transit services, and enable agencies to reduce or eliminate fares for marginalized groups. However, the Federal Government was only interested in funding the capital costs of new transit service, or capital costs for maintaining existing infrastructure in a state of good repair. Yet, unlike the other G7 countries studied in this project, the Federal Government does not provide direct operating subsidies nor an option to transit agencies to use capital funding for operations.

   The minute that a transit agency takes on capital for a new project, they start to lose money on it. There is a significant amount of time before a new transit service, be it a new bus, light rail or subway line becomes viable from an operational funding standpoint. Very few examples exist of new transit lines in Canada that quickly generated viable ridership after opening day.[60]

   At minimum, the Federal Government should include an operating subsidy for a proportion of the total operating costs for a defined period of time after new improvements funded by federal capital dollars become operational. While the scope of such a subsidy would need to be decided through consultation with cities, transit agencies and the provinces through the National Commission, one option could include requiring the Federal Government to fund a portion of operating costs for a defined period of time after the new service opens. The subsidy could also be altered to only cover fuel or electricity costs to power the new transit lines or improvements. Nonetheless, the scope of the Permanent Transit Fund should be expanded beyond capital funding in order for transit agencies to operate new transit projects or improved services. Another option for funding to be used for operations, as is available to US transit agencies who receive federal funds and grants, could be considered though it may not be effective in adequately addressing the operational funding needs of the transit agency.

60: Colle & French, 2023

POLICY RECOMMENDATIONS

The Provincial Governments of Canada

The Provincial Governments should:

1. Work with municipalities, regions and their transit systems to identify solutions to transit operating funding cost pressures and adopt new legislation that allows them to use alternative revenue tools

   Municipalities, and therefore their transit agencies, are sometimes referred to as "creatures of the province" meaning that they are legislated to manage cities within provincial laws and regulations. This legislation includes types of taxation and user fees available to them to fund public goods and services.[61] This project undertook a comprehensive examination of three revenue tools that could be used to fund public transit in eight different cities across Canada. The findings for each city or urban region are located in the following section. In each city, enabling legislation or permissions from the Province would be required to fund at least one of the three tools analyzed. Yet, the level of ongoing dialogue about transit operating funding between cities, regions, transit agencies and the provinces widely varies by jurisdiction. Some agencies have regular touchpoints with Provincial staff and elected officials, while other provinces have retracted operating subsidies or have not shown any interest in identifying solutions to operating funding challenges being faced in the cities.

   At minimum, the Provinces need to work with municipalities and their transit agencies to identify solutions, and provide enabling legislation that allows them to implement new revenue tools that could solve operating funding challenges and cost pressures. Otherwise, senior levels of government could be required to provide additional relief funding for transit operations well into the future. Moreover, transit operating funding requirements are dynamic and will change over time. Establishing close relationships and dialogue with transit agencies is important to address new and emerging operational needs, and provide legislative requirements for new revenue tools as necessary.

61: Epstein, 2017

2. Provide ongoing operating funding support to municipal and regional transit systems as they take an increasing role in fulfilling provincial and federal mandates

   There is increasing pressure on the Provinces to respond to a number of societal challenges faced by Canadians including issues in healthcare systems, the housing crisis, climate emergency and the rising cost of living. Public transit either directly or indirectly plays a pivotal role in responding to each of these challenges. This study has repeatedly highlighted that public transit can improve affordability, reduce emissions and reduce household costs associated with transportation. Notably, the Province of Manitoba previously provided 50% of operating costs net of fare revenue from increases to or new transit services in Winnipeg until 2017, while 31% of the ARTM's 2023 budget is a direct subsidy from the Province of Quebec.[62] In addition, a portion of operating costs for municipal transit systems in British Columbia outside of Metro Vancouver are directly subsidized by the Province through BC Transit.[63] Further, the Province of Ontario recently committed to providing operating costs for the Finch West and Eglinton Crosstown LRT as they open from 2024 to 2027.[64] Similar subsidies for new transit services and improvements could enable cities and agencies to implement them faster and help provinces realize climate action and affordability objectives.

   Further, if the provinces respond to some of these broader challenges by expediting planning programs or building new infrastructure that will eventually require transit service, provinces should provide operating funding subsidies for those services. Otherwise, operating budgets for local and regional transit agencies could be further stretched and require service optimization or cuts. For example, the Province of Nova Scotia recently approved the construction of a new hospital in an industrial area of Halifax that will require new transit service. Halifax Transit highlighted during engagement for this project that serving the new hospital in this area will be challenging and would not normally be considered viable. Yet, transit service will be vital for employment mobility for healthcare workers and patients to access health services at the new hospital. Similarly, the Province expedited the planning and development for over 22,000 new low-density housing units in nine suburban areas of Halifax in part of a response to the housing crisis in 2022.[65] However, lower density, residential areas are less financially viable to serve with transit in comparison to medium to high density, mixed-use developments.[66] As such, Halifax Transit will recover less operating costs through fare revenue and will take on additional operating cost increases. In any province, if there are provincial mandates driving growth that require new or improved transit service, they need to be active in providing operating support to the responsible transit agency.

62: City of Winnipeg & French, 2023; ARTM, 2023a
63: BC Transit, 2023
64: Province of Ontario, 2023
65: HRM & French, 2023
66: Suzuki et al., 2013

POLICY RECOMMENDATIONS

3. Advocate on behalf of municipalities, urban regions and their transit systems to the Federal Government to establish a tripartite national commission tasked with developing a new model for transit operating funding

Every transit agency engaged in this study highlighted the need for a new model for funding transit operations in addition to legislative permissions for new revenue tools. Most agencies, as well as CUTA and FCM stated that identifying a new model for transit operating funding would require Federal Government involvement.[67] A previous media release from TransLink's Mayors Council related to the $479 Million in emergency operating funds received from the Province in early 2023 called on the Federal Government to establish a tripartite national commission to develop a new model for funding transit operations.[68] Such a commission could establish roles and responsibilities for funding new and improved transit services in the future, and identify possible operating funding programs in the new Federal Permanent Transit Fund. It is recommended that the Provinces also advocate for this national commission to eventually develop a funding model that is more resilient and equitable by relying less on regressive or declining revenue sources such as fuel taxes, fares and property taxes.

67: CUTA & French, 2023; FCM & French, 2023
68: TransLink Mayors Council, 2023

Municipalities and Transit Agencies

Municipalities and Transit Agencies should:

1. Undertake financial modelling for the operating costs of new transit expansions, and increase public transparency on the consequences for not funding them

   This study closely examined operating budgets for existing transit services and undertook a scan of transportation master plans, transit plans, and other documents. The findings for each city or urban region are located in the following section. However, it was unclear as to how much new transit services would cost to operate in many agencies, and some staff were unable to comment on potential cost pressures associated with realizing transit improvements that outlined in local or regional transportation plans. One option would be to undertake financial modelling and forecasting for the costs associated with realizing the future visions of transportation plans immediately after adopting them. Transit agencies would then understand and be able to communicate operating funding gaps. For example, TransLink clearly states in their 10-Year Priorities that realizing all of the planned improvements and service expansions will add an additional $1.2 Billion in annual operating costs.[69] Yet, operating costs for other significant transit expansions across the country - including projects such as Ontario Line in Toronto or Blue Line Extension in Montréal - could not be found.

   After defining the costs associated with realizing transit expansions, cities and transit agencies would then be able to communicate them to the public and explain the consequences for not funding them. For example, not funding the operating costs for the UBC Extension of the Millennium Line in Vancouver could result in increased congestion on roads to the university (a significant economic regional hub) and students missing their classes or result in service cuts to other transit routes in the region. Meanwhile, failure to secure operating funding for the primary transit network in Calgary or the rapid transit strategy in Halifax will result in increased air pollution from further single occupancy vehicle use and the municipalities not meeting their mode share targets in their climate or transportation plans. Further, cities, regions and their transit agencies need to communicate impacts related to immigration and settlement. Communicating the collective impacts for not securing adequate operational funding may help cities and transit agencies build public and political support for new revenue tools and approaches to transit operating funding that can meet local and regional objectives for mobility.

69: TransLink, 2022b

POLICY RECOMMENDATIONS

2. Hire and/or assign staff that are designated to prioritize new expansion projects, work on and advocate for enabling legislation for new revenue tools and operating funding from senior government partners

   Transit agencies with dedicated funding staff are very successful in securing operating and capital funding investments. Some agencies such as TransLink and the TTC already have staff that are assigned to prioritize projects and advocate for adequate funding from senior levels of government. However, staff from other agencies highlighted that these key positions either do not exist or were not filled at the time that they were engaged and that this is inhibiting efforts to make progress in securing funding for their transit systems.

   Dedicated staff can show senior government and funding partners that financial sustainability and responsibility is a priority for the organization and that they are focused on securing funding. This also enables transit agencies to build relationships with senior government elected officials and staff to collectively build the case for investment. In particular, stronger relationships are mutually beneficial as funding requests or enabling legislation for new revenue tools can be better aligned to priorities of all levels of government.

3. Explore alternative revenue tools and build the business case for using them to fund transit operations using a defined set of objectives

   This project used six objectives in a multiple account evaluation to assess the viability of new revenue tools in eight Canadian cities or urban regions. These six objectives were chosen because they were common either between all or the majority of transit agencies. However, transit agencies also referenced other criteria, and it is recommended that alternative revenue tools - either included in this project or others - are further studied and analyzed based on their own objectives to determine their viability in their jurisdiction. Between increasing transparency and undertaking further analysis, transit agencies should be able to build a business case for new revenue tools and find support from local taxpayers and elected officials in multiple levels of government to implement them.

4. Dedicate revenue generated from new funding tools to public transit operations

   This project examined the municipal and transit authority budget documents for eight Canadian urban regions and found that the level of local government funding support and investment varies. Due to numerous competing needs of annual operating budgets, it is recommended that any revenue gained from new funding tools implemented by municipalities and transit authorities be secured and dedicated for transit operations through applicable bylaws and regulations.

The Remainder of This Report

The remainder of this report focuses on what municipalities can do to diversify their revenue tools in order to fund public transit operations. Focus is given to eight Canadian urban regions whose transit systems are facing a range of fiscal challenges as they look to address significant policy objectives related to climate change, social equity, and urban growth among others. However, new revenue tools alone will not be able to solve these challenges and additional, sustained operating support from senior levels of government is required. The above recommendations combined with the following revenue tool analysis for each urban region provide a series of considerations for ensuring that public transit can continue to provide essential, reliable and useful service across Canada for generations to come.

Photo source: Ewan Streit

6 Revenue Tools

Revenue Tools

Transit Operating Budget Shortfalls & Cost Drivers

The cost to operate a transit system is derived from a series of factors including, but not limited to, operating hours, the types of technologies used, services offered, employee wages and fuel costs. All public transit agencies engaged for this study stated that they were experiencing operating budget shortfalls but the extent of their fiscal challenges were largely dependent on the size of their system, the number of operating hours, and types of services and technologies being offered to customers. Operating budget shortfalls, when considering the need to both maintain existing service levels and realize long-term transportation plans, ranged from $22 Million to $3.5 Billion. In addition, every transit agency engaged cited pandemic recovery, population growth including immigration, and inflation as key operating cost drivers. But how should an agency approach their operating shortfall, and with what revenue tools?

Arriving at a Funding Formula

In order to address a funding shortfall for transit operations, a series of new revenue tools or significant increases in revenue from existing sources will be required along with funding from senior levels of government. A funding formula can help to visualize how this might be achieved. It can be considered as an equation with a number of inputs on one side, and a series of outputs on the other. In the context of transit funding, this formula might express the relationship between the revenue from existing or new funding tools and the budgetary needs of providing transit service. This relationship could be expressed as follows:

> *Revenue from Tool A + Revenue from Tool B + ... = Transit's Budgetary Need*

However, transit's budgetary need actually comes first and is not easily altered. The variables on the left of this equation, the inputs, are adjusted to meet this need. For many cities and transit agencies, new inputs to this formula need to be considered to not only provide for growth of the transit system but also sustain existing or restore pre-pandemic service levels. It is also worth noting that no single revenue tool alone might achieve the operating budgetary needs to maintain or expand transit services in Canadian urban regions. This was commonly highlighted by transit agencies, cities, advocacy organizations and industry experts engaged in Phase 2. Rather, transit agencies and cities should pursue a diverse revenue portfolio that can sustainably fund the cost of operating a system and proposed expansions.[70]

70: French et al., 2023

Objectives for Selecting a Revenue Tool

Selecting a new funding source for a public service such as transit requires more than just evaluating the potential revenue that can be generated. In an ideal scenario, new revenue tools would be able to work toward achieving many of the goals and objectives for transportation and broader planning in each city or region. Each city and transit agency was asked to define objectives that would be useful in assessing the viability of a new revenue tool to fund public transit in their respective jurisdictions. Transit agencies and cities engaged in this study all highlighted that considerations for new revenue tools should include impacts on mode share and equity. Most agencies and cities cited feasibility of implementation, ongoing administration and relative revenue potential. Meanwhile, staff from a few agencies and advocacy organizations mentioned that revenue tools should be aligned with municipal or regional goals, particularly with respect to land use plans and strategic development. These objectives are further detailed below, with some focus questions to increase the clarity of each objective.

Impacts on Mode Share

Does the revenue tool support increased mode share for transit and active transportation?

Many cities, transit agencies, and senior levels of government have greenhouse gas emission and Vehicle Kilometres Travelled (VKT) reduction targets. For instance, TransLink and the City of Calgary aim to have 50% and 60% of all trips undertaken by sustainable modes respectively by 2050, while the Federal Government has set a target to reduce greenhouse gas emissions to 40% below 2005 levels by 2030.[71] Several revenue tools explored in this project could support these objectives by influencing increased transit ridership and uptake of active transportation while disincentivizing driving. These options encourage efficient and sustainable travel choices while seeking to manage demand for the optimization of the transportation network, operating under an umbrella term known as transportation demand management (TDM). Revenue tools that follow TDM principles to positively impact mode share can encourage drivers to other travel options, and improve other options through revenue generated.[72]

Adding cost to private vehicle use or ownership is often regarded as a penalty or unfair treatment to drivers, but in reality it is removing a subsidy and providing equal opportunity to users of other transportation modes. Ultimately, mobility is a public good and everyone has a right to move around our communities. In addition, revenue sources that disincentivize private vehicle use and direct funding toward more efficient modes of transport improve mobility as a whole.[73] Vehicle owners who choose to drive may also benefit from reduced congestion as a result of new revenue tools that disincentivize automobile use. Further, increased ridership provides increased fare revenue, an additional boost to revenue above and beyond what TDM revenue tools collect directly.

71: TransLink, 2022a; City of Calgary, 2021a; Government of Canada, 2022
72: Cooper et al., 2022
73: Cooper et al., 2022

Impacts on Equity

Equity is a central consideration to any evaluation of not just new revenue tools for transit, but also individual transportation projects. Equity objectives are persistent in transportation plans and policies across the country, including the City of Winnipeg's goal to ensure that transit is inclusive, and TransLink's target for no household in Metro Vancouver to spend more than 45% of their annual income on housing and mobility combined.[74] Moreover, transportation is the second highest household day to day expense after housing.[75] As such, staff from transit agencies and cities highlighted that equity must be a key consideration due to high rates of inflation to living costs in recent years.

Does the revenue tool treat those in the same socioeconomic circumstances equally?

If a new revenue tool impacts those in the same socioeconomic circumstances differently, it may have fallen short on a form of equity termed horizontal equity.[76] Horizontal equity assumes that similar people should be treated relatively equally, and that people receive a level of service in accordance with how much they are willing to pay, and pay for what they ultimately get unless subsidies are specifically justified.[77] For example, if two households with similar incomes are taxed differently based on a type of criteria, such as the location of their home, there must be a clear policy rationale for the difference. One means of thinking about this difference is the benefits principle, which holds that taxes should be assigned according to who benefits from public goods and services. For example, if a household is taxed at a higher rate because it is located near transit and therefore receives the associated benefits (less traffic, higher land values and access to multiple modes of travel), it can be said that tax fairness is maintained.

74: City of Winnipeg, 2021a; TransLink, 2022a
75: Statistics Canada, 2019
76: Cooper et al., 2022
77: Litman, 2022

Can the tool be applied progressively according to income and/or wealth?

In the context of a revenue tool, vertical equity refers to the distribution of impacts between people who differ in wealth, ability or need. Vertical equity can be tied to the ability-to-pay principle, which holds that those with the ability to pay more in taxes or fees should do so, while those who have less ability should pay less or have access to flexible price structures. This principle has become popular in transit fare policies, including Calgary Transit's Low Income Monthly Pass sliding scale fare where customers can purchase a discounted monthly transit pass at three different price points depending on their household income.[78] The ability to advance, support and maintain vertical equity is a desirable feature when considering a new revenue tool, but municipalities typically do not have strong redistributive powers. As such, revenue tools with this capability are likely to require provincial legislation changes.[79]

Implementation

How fast can the revenue tool be implemented? How does the revenue tool fit into existing regulation/ legislation?

Revenue tools that a municipality or transit agency already has the legislative authority to implement are promising because of the immediacy and certainty of the funding they could provide. Otherwise, based on the legal context for municipal or regional powers in Canada, the provinces must approve legislation that allows the city or agency to collect revenues from these sources. Aside from the delays that process could cause, the necessary legislation from a Province may never come to reality.[80] However, the majority of Canadian municipalities and transit agencies are only permitted to raise revenues from few sources. Cities, metropolitan regions and transit agencies need to build a business case for their provinces to provide enabling legislation and subsequently implement new revenue tools. As such, tools that require legislative amendments may still be evaluated to partially meet this objective in this project rather than be excluded entirely.

Will the introduction and ongoing management of the revenue tool be resource intensive?

Any new revenue tool that is used to fund public transit operations will come with implementation costs while they are established as well as continued management, administration and oversight. Revenue tools that minimize these costs are attractive options, while additional consideration should be given to scenarios where initial implementation costs are high but ongoing administration costs are low and vice versa. In the case where both costs are low, it is likely to meet this objective.

78: City of Calgary, 2023c
79: Cooper et al., 2022
80: Cooper et al., 2022

Revenue Potential

Will the tool contribute substantive revenue to transit operations?

As highlighted previously, the range of operating budget shortfalls for transit agencies and systems across the country vary greatly, and transit providers are being continuously called upon for growing service needs. New sources of revenue can help to cover the rising costs that come with service expansion in addition to other operating cost drivers. For this objective, more promising tools are those that can create more revenue. At minimum, the costs of administering and managing a revenue tool must be offset by the funding that they can provide. Revenue maximums are often set by political and market conditions, or what taxpayers and the market can bear.

This study provides broad revenue estimates where supportive data are available, but mostly explores potential revenue through high, medium, and low scenarios based on the unique contexts of the eight city regions. The assumptions made to arrive at these broad estimates are discussed under the revenue potential section for each tool explored for each city region. An example assumption would be for a tax that is applied spatially, the affected area and rate at which the tax is levied would both influence the amount of revenue that can be generated.

How reliable and sustainable is the revenue tool?

Reliability and sustainability represent different values that can be used to compare revenue tools and were cited as important factors by all cities and transit agencies engaged in this study. For instance, a funding tool that provides $500 million one year but could drop to $200 million in five years may be an unattractive option for the purpose of funding transit operations. One current example of an unattractive option is a motor fuel tax. This tax is currently levied on the sale of gasoline and diesel for powering personal vehicles with internal combustion engines (ICEs).

As more provinces seek to limit the number of new vehicles powered by ICEs sold across the country and encourage Canadians to purchase more electric vehicles, the revenue from this source can only be expected to decline further, and has created a financial risk for transit agencies that rely on this revenue tool. Notably, TransLink's 10-Year Investment Plan forecasts a decrease of $80 Million in annual revenue from motor fuel taxes in Metro Vancouver by 2032.[81] Instead, cities and transit agencies should opt for a funding tool that provides a more predictable and sustainable cash flow. To realize service planning and transit growth, it is imperative to have secure, reliable funding that can meet the operational needs of a transit agency year over year.

Meanwhile, sustainability refers to the longevity of a revenue tool. Introducing new taxation methods is never an easy feat and the administrative overhead of establishing a new revenue source may not be advisable if it cannot be maintained over the long term. Adopting a new revenue tool that will no longer generate profit in the short term would be a wasted effort and could result in political difficulty.[82]

Alignment with City or Agency Objectives

How can the revenue tool support the long term planning goals of the City or Transit Agency?

Though this objective was referenced slightly less in engagement with cities and transit agencies compared to others, a new revenue tool could have both positive and/or negative effects on other long term planning goals and strategies.[83] For instance, different types of taxation such as a benefit area tax could affect the type and location of development in a city and either support or contradict a regional growth strategy that encourages more compact, accessible communities as opposed to sprawl.[84] It is essential to examine new revenue tools holistically and determine possible impacts on organizational objectives and the delivery of other municipal or regional services.

A series of diverse policies are reviewed from each of the cities and transit agencies engaged in this study and include city-wide development plans, strategic plans, and other policies and bylaws passed by city or regional councils. However, special attention is given to long-term local or regional land use policies (such as a regional growth strategy or municipal development plan) due to the complex relationship between land use and transportation. Evaluating the impacts of and selecting a new revenue tool that impacts land use policies could render positive results in an attempt to shift toward more sustainable modes of mobility.

81: TransLink, 2022c
82: Cooper et al., 2022
83: Cooper et al., 2022
84: Litman, 2022

REVENUE TOOLS

Risk

How flexible and adaptable is the revenue tool to changing political and economic conditions?

Flexibility is an important quality for a new revenue tool because it would allow a city or transit agency to adapt to changing political and economic winds. Many options have negative consequences if they are not carefully designed and managed. One of the threats to flexibility for a new revenue tool is that cities and transit agencies in Canada rely on provincial approval for many of their powers. As such, agility and quick turnarounds to establish new revenue tools can be difficult to achieve. In addition, tools that are able to withstand economic shocks and broader societal trends are seen as more adaptable. Therefore, options with flexibility built in from the outset are more likely to serve not just cities and agencies with new sources of revenue, but also transit customers who will benefit from reliable service resulting from sustainable revenue.[85]

85: Cooper et al., 2022

New Revenue Tools

An environmental scan of academic articles, industry reports, budget documents, and other literature generated a list of alternative funding tools that could be used to generate revenue for transit. This resulted in a collection of twenty potential taxes, levies and charges. This list of alternative funding tools was sent to staff from cities, transit agencies, advocacy organizations and industry experts engaged in Phase 2 of the study. During interviews, participants were asked which tools would be best suited to fund transit operations both in their own jurisdictions or others across Canada. This allowed for the list of revenue tools to be subsequently narrowed for evaluation against the objectives described previously. Nine of these tools were identified and subject to further screening for each Canadian urban region explored further in this report, as shown in *Table 2*.

Table 2: Revenue Tools for Study

Include in Study	Acknowledge in Study
Benefit Area Tax	Community Revitalization Levy
Real Estate Opportunities*	Dedicated Property Tax Levy
Off-Street Parking Taxes	Development Charges
Vehicle Levy	Negotiated Exactions
Motor Fuel Tax*	Land Transfer Tax
Vehicle Kilometres Travelled (VKT) Taxes	High Value Homes Tax
Regional Sales Tax	Station Leasing
Electric Vehicle Charging Tax	Municipal Parking Fees
Transportation Network Company (TNC) Fee	Variable Vehicle Tax
	Advertising
	Tourism Levy

*It should be noted that real estate opportunities and motor fuel taxes were further screened for each Canadian urban region, but were not subsequently assessed.

Screening

To identify three revenue tools for further analysis in each city region, this study further screened the finalized list of nine revenue tools to the following questions:

- Is this tool currently used to fund transit operations in the city / region?
- Has this tool been assessed for funding city / authority operations?
- Can the tool be implemented under existing legislation?
- Does the tool have interdependencies with specific programs or tools?
- How successful will the tool be given the context of the region (e.g. geography, existing transportation trends etc.)?

Multiple Account Evaluation

After selecting three revenue tools through the screening process, each one was further evaluated against the objectives. Considering the clarifying questions for each objective, revenue tools were assessed as to whether they could ● fully meet, ◐ partially meet or ○ do not meet the objectives. Some revenue tools for each objective have similar considerations pertaining to all of the cities for which they are proposed. For example, Off-Street Parking Taxes are proposed for six of the eight cities and the evaluation for their impact on mode share includes similar considerations in each jurisdiction that enable this tool to fully meet the objective. Similarly, VKT Taxes are proposed for Metro Vancouver, Toronto, Montréal and Halifax, and the assessments for their impacts on equity also discuss some closely related factors that enable this tool to fully meet the objective. Other revenue tools that are proposed for multiple cities may incorporate similar factors as well. Based on the transportation trends and built environments in Calgary, Edmonton and Winnipeg, further screening for revenue tools in these three cities yielded similar recommendations for new revenue tools. As such, these cities were consolidated and are presented as "The Prairie Cities".

Photo source: Albert Stoynov

6A Metro Vancouver

Metro Vancouver, British Columbia

Land Acknowledgment

Metro Vancouver is located on the traditional, ancestral and unceded territories of the **q̓íc̓əy̓** (Katzie), **q̓ʷɑ:ńʌ̓əń** (Kwantlen), **kʷikʷəʌ̓əm** (Kwikwetlem), **máthxwi** (Matsqui), **xʷməθkʷəy̓əm** (Musqueam), **qiqéyt** (Qayqayt), **se'mya'me** (Semiahmoo), **Sḵwx̱wú7mesh Úxwumixw** (Squamish), **sc̓əwaθən məsteyəxʷ** (Tsawwassen) and **sə́lílwətaʔɬ** (Tsleil-Waututh) First Nations.

Metro Vancouver Overview

Metro Vancouver is home to over 2 million people and includes twenty-one municipalities, the Tsawwassen First Nation and one unincorporated Electoral Area. Transit service is provided by TransLink, a regional transit authority that is governed by the *South Coast British Columbia Transportation Authority Act (SBCTA Act)*. TransLink operates over 245 bus routes, three SkyTrain rapid transit lines, the SeaBus passenger ferry between Downtown Vancouver and the North Shore, and the West Coast Express commuter rail line from Mission to Downtown Vancouver. In addition, TransLink is responsible for operating and maintaining over 675km of the major regional road network, including five bridges that span the Fraser River, and the Metro Vancouver Transit Police.[86]

Approximately 75% of regional commute mode share is taken by automobiles, while the other 25% of commutes are taken by public transit, walking and cycling. However, the proportion of commutes taken by sustainable modes vary by municipality. For example, transit, walking, cycling and other modes were reported to make up 45% of commute mode share in the City of Vancouver in 2021, whereas these modes were only used by 9.8% of commuters in the City of Maple Ridge.[87]

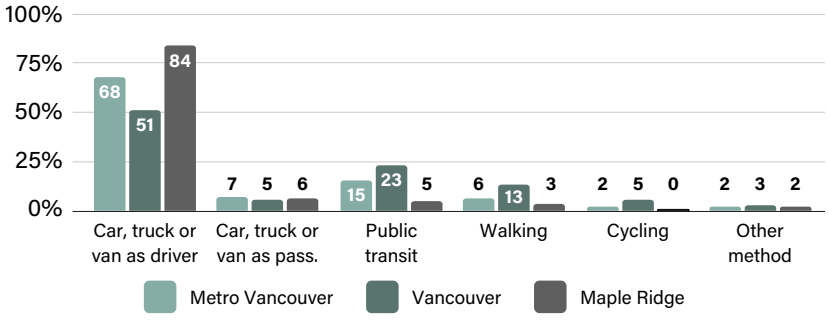

Figure 1: Commute Mode Shares in Metro Vancouver[88]

86: TransLink, 2021
87: Statistics Canada, 2022a
88: Statistics Canada, 2022a

Transportation Goals & Objectives

The *SCBCTA Act* requires that TransLink develop and update a regional transportation plan with subsequent prioritization plans - the "10-Year Priorities" and "10-Year Investment Plans". These major transportation and priority plans are approved by TransLink's Mayors Council consisting of elected representatives from all 21 regional municipalities, Electoral Area A and Tsawwassen First Nation. *Transport 2050* is Metro Vancouver's regional transportation plan and was passed by the Mayors Council in 2022. The plan includes a number of significant objectives including the elimination of greenhouse gas emissions from transportation in the region, 50% of all trips to be taken by transit, walking and cycling, and for all households to not spend more than 45% of their annual income on housing and transportation combined by 2050[89]. Meanwhile, the current 10-Year Priorities include significant bus service expansion, a gondola to Simon Fraser University, the extension of the Millennium SkyTrain line to the University of British Columbia, and replacing approximately one-third of the bus fleet with battery-electric buses.[90]

Funding Sources & Emerging Challenges

Current Operating Costs & Revenue Tools

Operating costs for the enterprise in 2023 are forecasted to be approximately $2.2 billion and include expenses for transit, transit police, roads and bridges, and corporate costs.[91] The *SCBCTA Act* outlines the tools that TransLink can use to generate revenue for transit operations and capital projects. Of the tools available through this act, TransLink currently funds operations using transit fares, a regional motor fuel tax, off-street parking sales taxes, hydro levies and a portion of the region's property taxes. Though not currently used, TransLink is also able to generate revenue from a benefit area tax, bridge tolls and vehicle levies.[92] Tolls were previously levied on drivers using the Port Mann and Golden Ears bridges to generate revenue but were removed by the Provincial Government in 2017.

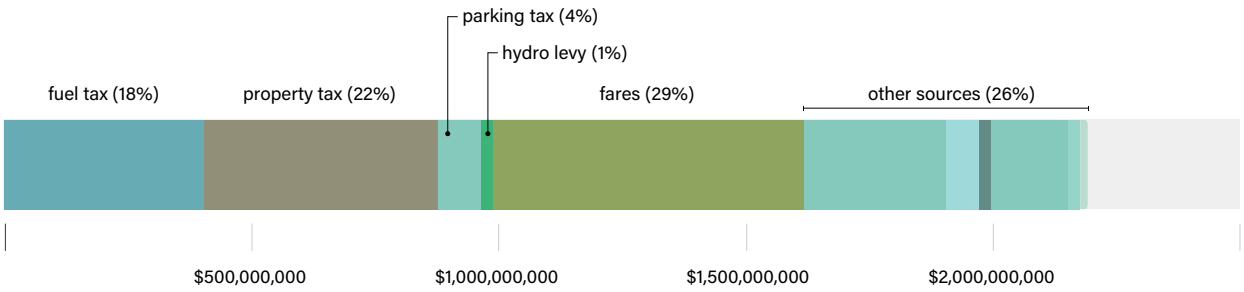

Figure 2: 2023 TransLink Operating Budget

89: TransLink, 2022a
90: TransLink, 2022b
91: TransLink, 2023
92: Province of British Columbia, 1998

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In comparison to other budget expenses paid for by property tax to municipalities in the region, property tax earmarked for TransLink represents a relatively small percentage of services paid for by a regional property taxpayer in comparison to other large Canadian urban regions. The amount of property tax dedicated for TransLink each year varies by regional municipality and relative land assessment values. For example, the property tax transfer to TransLink was just under 10% of property tax burden to households in the City of Vancouver, compared to 8.5% in the City of Surrey and 4.4% in the City of New Westminster in 2022.[93]

Table 3: Transfer to TransLink Compared with Other Municipal Budget Expenditures in 2022 in the City of Vancouver[94]

Rank	Service	Percentage of all Expenditures
1	Utilities	23%
2	Police	21%
3	Transfer to TransLink	10%
4	Fire	9%
5	Parks & Recreation	8%
5	Municipal Debt & Capital	8%
5	Corporate Support	8%

Table 4: Transfer to TransLink Compared with Other Municipal Budget Expenditures in 2022 in the City of Surrey[95]

Rank	Service	Percentage of all Expenditures
1	Police Services	22.8%
2	Water, Sewer & Drainage	22.5%
3	Parks, Recreation & Culture	14.7%
4	Engineering Services	10.8%
5	General Government	9.6%
6	Transfer to TransLink	8.5%

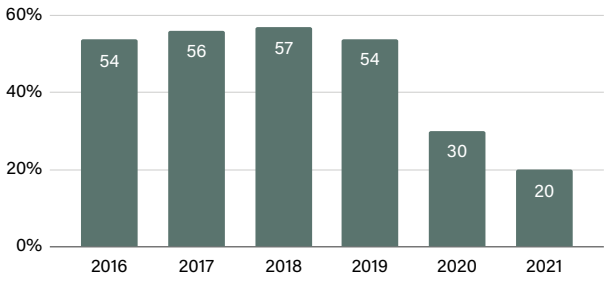
93: Province of British Columbia, 2023b
94: Province of British Columbia, 2023b; City of Vancouver, 2022. Estimate is based on a hypothetical scenario where transfers to TransLink were line items within the municipal budget. Overall percentage for TransLink is based on Provincial data focused on tax burden for a representative household in Vancouver..
95: Province of British Columbia, 2023b; City of Surrey, 2022. Estimate is based on a hypothetical scenario where transfers to TransLink were line items within the municipal budget. Overall percentage for TransLink is based on Provincial data focused on tax burden for a representative household in Surrey.

Table 5: Transfer to TransLink Compared with Other Municipal Budget Expenditures in 2022 in the City of New Westminster[96]

Rank	Service	Percentage of all Expenditures
1	Utilities	32%
2	Police Services	15.9%
3	General Government	13.8%
4	Engineering	13.7%
5	Parks and Recreation	9%
7	Transfer to TransLink	4.4%

Operating Cost Drivers

There is low confidence that TransLink will be able to fund and run the improvements in the *10-Year Priorities* without new approaches to and regional revenue tools for transit operating funding, and operating pressures with existing service are beginning to show. TransLink staff cited inflationary costs for fuel and wages, population growth primarily from increased immigration to the region and pandemic recovery as some of the key operating cost drivers to maintain existing service levels.[97] These increasing costs have resulted in a serious decline in the revenue/cost ratio each year, meaning that other funding sources are required to stabilize and sustain transit service. As of 2021, the fare revenue/cost ratio had decreased to 20% from 54% in 2019 before the pandemic, while the number of revenue hours per capita have started to decline since health restrictions were first introduced in 2020.[98] Ridership in terms of boardings is slowly recovering from the COVID-19 pandemic, but fare and ancillary revenues from system operations has not kept the same pace due to changes in regional travel patterns and remote working arrangements.[99]



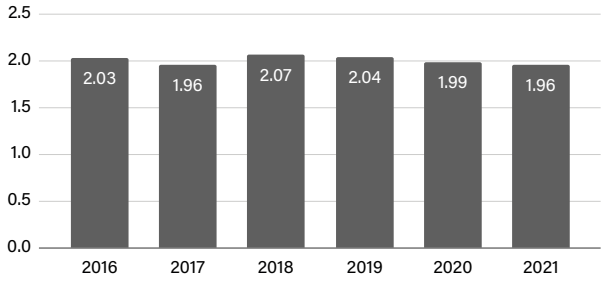


Figure 3 (above left ↖): TransLink Revenue/Cost Ratio[100]

Figure 4 (above right ↗): TransLink Revenue Hours per Capita[101]

96: Province of British Columbia, 2023b; City of New Westminster, 2022. Estimate is based on a hypothetical scenario where transfers to TransLink were line items within the municipal budget. Overall percentage for TransLink is based on Provincial data focused on tax burden for a representative household in New Westminster.
97: TransLink, Cooper & French, 2023
98: CUTA, 2022
99: TransLink, Cooper & French, 2023
100: Total operating revenues divided by total operating costs. (CUTA, 2022)
101: The number of revenue service hours provided per person in the city. (CUTA, 2022)

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Service improvements and expansions from the *10-Year Priorities* will come with an additional $1.2 billion annual operating cost. This includes a 130% increase in bus service across the region, a 10% increase in Expo & Millennium Line service, a 60% increase in Canada Line service and operating costs from significant transit network expansions noted in "Transportation Goals & Objectives" above.[102] As such, all three of Transport 2050, the 10-Year Priorities and 10-Year Investment Plan have highlighted the need for the transportation authority to unlock a series of new revenue tools.[103] TransLink staff also cited inflationary costs for fuel and wages, and population growth primarily from increased immigration to the region as operating cost drivers to maintain existing service levels.[104]

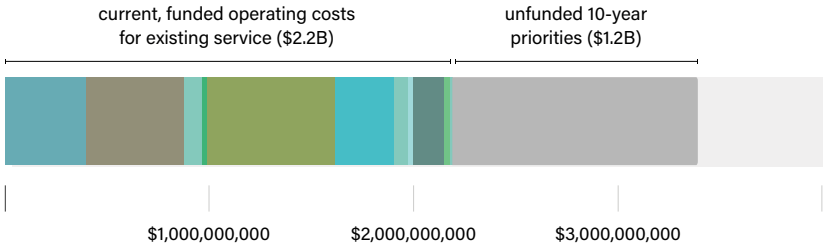

Figure 5: TransLink Operating Budget & Operating Funding Shortfall for 10-Year Priorities (TransLink, 2022b; TransLink, 2023).

In the coming decade, system ridership and fare revenues are expected to recover from the COVID-19 pandemic. However, the increasing shift to electric and alternative fuel vehicles means that TransLink cannot continue to rely on the regional gas tax, which makes up 18% of current operating revenues, and property taxes could become oversubscribed. Annual revenue received from the gas tax in particular is expected to decline by approximately $80 Million from 2022 to 2031.[105]

In February 2023, the Mayors Council made a request to the Federal and Provincial governments to each provide $250M in emergency relief funding to help TransLink sustain and expand services in coincidence with increasing ridership and post-pandemic financial challenges. The news release also recommended that the Federal Government launch a tripartite national commission alongside the provinces, local governments and transit agencies to develop a new funding model for transit.

102: TransLink, 2022b
103: TransLink, 2022a-c
104: TransLink, Cooper & French, 2023
105: TransLink, 2022c

The financial request was granted by the Provincial Government with $479M in emergency funding to stabilize transit fares and service for two years, and expand the system in alignment with TransLink's 10-Year Priorities. The Province also committed to continuing discussions with the Federal Government on a potential funding partnership.[106] More recently, TransLink approved a stopgap Investment Plan to increase bus service, but there remains significant challenges to secure adequate funding to maintain service levels and to achieve further service expansion with projects in the *10-Year Priorities* like the Millennium Line Extension to UBC, SFU Gondola and BRT corridors.

Revenue Tool Screen

Table 6: Revenue Tool Screen for Metro Vancouver, BC

Revenue Tool	Benefit Area Tax	Real Estate Opportunities	Off-Street Parking Tax	Motor Fuel Tax	Vehicle Levy	VKT Tax	Regional Sales Tax	EV Charging Tax	TNC Fee
Is this tool already used to generate revenue for transit operations?	No	No	Yes	Yes	No	No	No	No	No
Has the tool been assessed in the region?	Yes	Yes	N/A	N/A	Yes	Yes	Yes	No	No
Can the tool be implemented under existing legislation?	Yes	No	Yes	Yes	Yes	No	No	No	No
Does this tool have interdependencies with specific programs or tools?	Yes	Yes	No	No	No	Yes	No	No	Yes
How successful will the tool be given the context of the region (e.g. geography, transportation trends etc.)?	Low	Low	High	Low	Med	High	High	Med	Low to Med
Was this tool a key topic of discussion with agency staff during engagement?	No	No	Yes	No	Yes	Yes	No	No	No

106: Province of British Columbia, 2023c

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Based on the revenue tool screen questions above in ***Table 6***, this paper examines vehicle levies, VKT taxes and EV Charging taxes as potential revenue tools to fund transit operations in Metro Vancouver. These three tools are examined further to determine if they fully meet, partially meet or do not meet the study objectives, as summarized in ***Table 7*** below.

Objective	Vehicle Levy	VKT Tax	EV Charging Tax
Mode Share	●	●	●
Equity	◐	●	◐
Implementation	●	○	○
Revenue Potential	●	●	◐
Alignment with Regional Objectives	●	●	◐
Risk	●	◐	◐

● fully meets ◐ partially meets ○ does not meet

Table 7: Multiple Account Evaluation of Revenue Tools Proposed for Metro Vancouver

Alternative Revenue Tool A: Vehicle Levy

What is it?

A tax or surcharge directly added to the existing Provincial vehicle registration fee that would be charged to Metro Vancouverites when they renew their car insurance and registration each year. In Montréal, residents currently pay a $45.00 contribution to public transit on the renewal of their vehicle registration. In the 2023 budget, the ARTM expects to generate approximately $62.9 Million from vehicle levies for transit service in Greater Montréal.[107] Starting in 2024, vehicles in the region will pay $59.00, and the ARTM expects to raise a total of $125 Million with the new increase.[108] Thirty-three US states and twenty-seven local jurisdictions also use vehicle registration fees and levies to fund transportation improvements that often include public transit.[109]

Why look at this tool?

TransLink has the legislative authority under the *SCBCTA Act* to implement a vehicle levy, and attempted to implement it in the late 2000s.[110] Named a Transportation Improvement Fee, the implementation of this Vehicle Levy was not realized due to opposition by or within the Provincial Government and Mayors Council.[111] However, given the provincial structures already in place to collect existing vehicle registration fees, administration and management of this tool would require less resources, and there are other precedents of this tool being used in Canada.

Mode Share

● FULLY MEETS OBJECTIVE

Vehicle Levies are a fixed fundraising tool collected from vehicle owners and therefore have a limited transportation demand management impact on mode share in comparison to other vehicle charges such as a Motor Fuel Tax or VKT Tax.[112] However, Vehicle Levies may have a small effect in dissuading people from purchasing a second vehicle for their household, though the size of this effect depends on the actual cost of the Levy.[113] If the Levy is able to generate enough revenue to improve transit service or regional cycling and walking connections, this may make sustainable means of travel more desirable and induce mode shifts for some trips.

Vehicle Levies can also be targeted towards vehicles of different types and characteristics such as axle count, age, or gross vehicle weight.[114] Therefore, TransLink could decide to impose a levy targeting a specific type of vehicle such as large SUVs and light pickup trucks that have higher fatality rates from collisions with pedestrians and people riding bicycles.[115] This could persuade purchasers of new cars to opt for a smaller model, thereby generating a higher perceived sense of safety on regional roads that in turn encourages people to walk or cycle.

107: ARTM, 2023a
108: Sherwin, 2023
109: Litman, 2022
110: Province of British Columbia, 1998
111: French et al., 2023
112: Litman, 2022
113: Cooper et al., 2022
114: Kitchen & Slack, 2016
115: Robertson, 2006

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Equity

◐ PARTIALLY MEETS OBJECTIVE

Generally, Vehicle Levies are considered to be an equitable means to fund public transit operations. Automobile use leads to significant external costs for governments in the form of infrastructure and maintenance as well as negative environmental costs. A Vehicle Levy can therefore be conceptualized as a reimbursement of these costs from motorists to transit users who have lower external costs to governments.[116]

At the citizen level, a flat Vehicle Levy is progressive because car ownership tends to correlate with an individual or a household's income. In addition, this tool does not place any cost burden on the lowest income households who are likely to not own a vehicle. As such, a regional vehicle registration levy could be considered vertically equitable.[117] However, the Levy could represent an inequitable burden for households that must own one or more vehicles due to a number of factors including home and work locations and available alternative transportation options. Despite this consideration, vehicle registration rates in British Columbia are the lowest in Canada, and a Levy with a similar fee to existing precedents in Quebec would present a minimal financial burden compared to other costs associated with owning and operating a vehicle including insurance, fuel and repairs.[118]

Implementation

● FULLY MEETS OBJECTIVE

TransLink has the legislative authority to implement and generate revenue from Vehicle Levies under the *SCBCTA Act* and has considered this as a potential source of transit operating funding in the past. This previous attempt to establish regional Vehicle Levies was not successful due to opposition by the Provincial Government and Mayors Council.[119]

If TransLink were to reconsider implementing Vehicle Levies, staff would need to develop an approach to implementing the tool alongside stakeholders including boards of trade, provincial staff and receive approval from the Board of Directors and Mayors Council.

116: Litman, 2012
117: Cooper et al, 2022
118: French et al., 2023
119: Bernard, 2016

After broader consultation with public taxpayers, regional municipalities and key stakeholders, the scope and parameters for the Levy would need to be refined and receive approval from the Board and Mayors Council. TransLink would then need to work with the Insurance Corporation of British Columbia (ICBC) to establish and implement the administration requirements associated with the new vehicle levy, making adjustments as necessary over time to meet changing needs of the authority and citizens of Metro Vancouver. Once established, it is estimated that ongoing administration and management costs associated with the vehicle levy would be low.

Revenue Potential

● FULLY MEETS OBJECTIVE

Vehicle Levies present a stable and predictable revenue option for transit operating funding. Once established, it is estimated that ongoing administration and management costs associated with the vehicle levy would be low given the provincial structure already in place with ICBC. However, overall revenue that could be generated from this tool is dependent on the approved rate set by TransLink, and to what extent it is flexible and can grow each year. For example, a Vehicle Levy that is changeable each year as budgetary needs shift, or indexed to inflation would have higher potential than one flat rate that does not change.

Once a fee for the vehicle levy has been approved and set, it is relatively easy to calculate how much revenue will be available to TransLink each year. Based on the rate increase being established for residents on the Île de Montréal in 2024 ($59.00 per vehicle) and the population of passenger vehicles in Metro Vancouver counted in 2022 by ICBC, TransLink could generate an estimated $80.2 Million.[120] However, this figure could be higher if the parameters were expanded to include personal pickup trucks or other types of vehicles that are not captured in this vehicle category.

Alignment with Regional Objectives

● FULLY MEETS OBJECTIVE

A Vehicle Levy adds a minor, fair cost to car ownership that could nudge households to own less vehicles while boosting operating revenue for transit that could make it a more attractive mode of travel. This would support a regional objective to reduce the amount of time spent in congestion by 20% by 2050.[121] This supports land use goals in *Metro 2050*, the regional growth strategy, such as creating a compact urban area and supporting sustainable transportation choices.[122] A Vehicle Levy may indirectly impact urban form as Metro Vancouverites seek to reduce their transportation costs, in turn driving demand for densification that enables transit oriented or 15-minute communities.

120: Insurance Corporation of British Columbia (ICBC), 2022
121: TransLink, 2022a
122: Metro Vancouver, 2022

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Risk

● FULLY MEETS OBJECTIVE

While dependent on the scope, parameters and actual fee associated with a Vehicle Levy, there can be expected to be minimal political and economic risk. TransLink already has the necessary legislation to implement a vehicle levy, and is unlikely to present a great political risk. While it may have proved difficult to implement in the past, TransLink has set ambitious targets for transit system expansion as part of *Transport 2050*, with additional operating costs estimated at $1.2 Billion from the *10-Year Priorities* alone.[123] As such, revenue tools like Vehicle Levies that do not require legislative amendments could be implemented quickly and would allow the authority to begin funding some improvements in the near-term. Taxes that represent a minimal cost burden to taxpayers are also generally more palatable than those with higher fees. At the same time, the economic flexibility of the Vehicle Levy is dependent on its scope and parameters. It could present low economic risk if it is implemented with means to grow over time by either being indexed to inflation or with permissions to be adjusted year to year to cover higher or lower transit operating costs.

123: TransLink, 2022b

Alternative Revenue Tool B: Vehicle Kilometres Travelled (VKT) Taxes

What is it?

Drivers are levied a fee that is dependent on the distance that they travel. VKT Taxes can operate in a variety of ways and are also known as mobility pricing, congestion pricing, decongestion pricing, distance-based charging, mileage based user fees and road use charging. London, UK has used VKT Taxes among other road based charges to fund a significant portion of Transport for London's operating costs. In the latest annual budget, £3.0 Billion - or one-third - of all operating funding for Transport for London was sourced from road network use charges.[124] Meanwhile, New York, NY is set to be the first jurisdiction in North America to implement cordon congestion pricing, a form of VKT Tax, after recently receiving approval from the state legislature and federal government. The scheme in New York will charge drivers up to $23.00 per day to enter Lower Manhattan and is expected to generate $1.0 Billion in revenue to fund mass transit.[125]

Why look at this tool?

A Vehicle Kilometres Travelled (VKT) Tax is an ideal, equitable user fee on road usage with a clear, intuitive policy rationale that can be easily communicated. There are also numerous secondary policy options that can be considered in the implementation of a scheme, and it is seen in many jurisdictions as the future of transportation funding. TransLink has also extensively researched the possibility of implementing a VKT Tax, which has shown promise for congestion management in the region and was examined by the Mobility Pricing Independent Commission (MPIC) as an alternative to the regional motor fuel tax. Two particular schemes - Congestion Point Charges and Multi-zone Distance Based Charges - were explored in the MPIC report and recommended for further study before proceeding with implementation.[126]

Mode Share

● FULLY MEETS OBJECTIVE

By accurately pricing road usage, a VKT Tax sends a price signal to drivers and encourages more efficient travel choices. Single-occupancy car trips impose some of the highest collective external costs including vehicle emissions, deterioration of roads and highways, public safety and time spent in congestion.[127] However, the personal costs to drivers are not always reflected in the shared burden of this mode of travel, and the series of travel choices could look different if road use was priced through fair and efficient means.

A VKT Tax could also influence land use changes and development that supports shorter trips and an overall shift to sustainable modes. By implementing a cost to travel further, demand for homes and services in different parts of the region could reasonably increase and spur mixed-use development in more neighbourhoods.

124: Transport for London, 2023a
125: Ley, 2023; Butera, 2023
126: Mobility Pricing Independent Commission (MPIC), 2018
127: Cooper et al., 2022

METRO VANCOUVER

Equity

● FULLY MEETS OBJECTIVE

A well-structured VKT Tax could lessen current inequities in the regional transportation system including between individual drivers, and drivers and those using other modes of transportation. A VKT Tax in Metro Vancouver would be equitable because it charges road users directly for congestion and roadway costs that they impose.

Opponents of VKT Taxes often suggest that drivers with long commutes will be unfairly penalized. However, people with higher incomes typically drive more at congested times of day. As such, a VKT Tax that focuses on congestion and road demand could be more equitable than one that charges the same rate irrespective of when people drive.[128] Further, a VKT Tax scheme concentrated on congestion could yield higher revenues than required to fund some transportation investment priorities. The MPIC report recommended exploring how excess revenues could alleviate affordability concerns through reductions in other taxes used to fund the transportation system, tax credits or rebates to low-income households, and reductions in fares.[129]

Implementation

○ DOES NOT MEET OBJECTIVE

Bridge tolls, another form of VKT Tax, were previously levied on the Golden Ears and Port Mann bridges but were removed by the Provincial Government in 2017. TransLink does not currently have enabling legislation to implement a VKT Tax in Metro Vancouver and would require provincial approval. The MPIC report put forth a roadmap to implementation in its findings. It first suggests a number of studies to finalize Phase 1 that focuses on the feasibility of a VKT Tax scheme in the region including studies to assess affordability and equity impacts that could be addressed by caps and discounts, impacts on transport-intensive businesses, and available technology.[130]

128: MPIC, 2018
129: MPIC, 2018
130: MPIC, 2018

After these additional studies are complete, TransLink would enter Phase 2 focused on policy development that includes acquiring the necessary legislation, functional design and consultation with regional stakeholders. Acquiring legislation could prove difficult with numerous political hurdles, and TransLink would also need to enter revenue sharing and coordination agreements with the Province as the owner and operator of the system.[131]

In the third phase, focused on implementation, necessary technology and equipment would be procured, installed and tested, while staff would be hired and operating procedures developed. A considerable amount of public outreach would also be required to inform drivers of how the system operates, how to opt-in and manage accounts, and how fees are derived within parameters of the program.[132] Once implemented, the use of information technology means much of the ongoing program administration can be automated, supported by staff to respond to issues and resolve customer concerns.

Revenue Potential

● FULLY MEETS OBJECTIVE

There is considerable revenue potential from a VKT Tax in Metro Vancouver. Based on the findings of the MPIC report, a Congestion Point Charge scheme could deliver annual net revenues for $1.1-$1.5 Billion. Meanwhile, a Multi-zone Distance Based Charge scheme could provide annual revenues of $1-$1.6 Billion, with the assumption that the motor fuel tax is replaced. Both schemes provide a high amount of revenue that could be used to fund a significant portion of the operating costs associated with system expansion in the current *10-Year Priorities*.

Once established and implemented, a VKT Tax would present a moderately predictable and stable source of revenue for TransLink's operating funding. In addition, a range of rates could be applied to different types of vehicles such as passenger vehicles and commercial trucks. A VKT Tax will continue to collect needed revenue while drivers continue to use roads.[133] Some decline may be expected over time as travelers take charges into consideration when making long-term decisions such as where to live.[134]

131: MPIC, 2018
132: MPIC, 2018
133: Cooper et al., 2022
134: Litman, 2022

METRO VANCOUVER

Alignment with Regional Objectives

● FULLY MEETS OBJECTIVE

Elements of a VKT Tax system already operate in principle with the zone-based fare system used for SkyTrain, SeaBus and West Coast Express. If TransLink was to follow the recommendations of the MPIC report and implement either a Congestion Point Charge or Multi-zone Distance Based Charge scheme on a regional scale for drivers, outcomes would be well aligned with regional transportation and land use objectives. Both schemes would influence a shift from driving to alternative transportation modes including transit, walking and cycling, and would reduce emissions from the transportation system. Moreover, the Congestion Point Charge system would reduce regional congestion by between 20-25%, and improve travel time reliability by 17-20% all while reducing transportation emissions by 2-3%.[135] These statistics collectively work toward multiple significant objectives in *Transport 2050*.

A VKT Tax could also increase demand for higher density, mixed-use development in more areas of the region. This would support numerous strategies in *Metro 2050* including focusing growth in urban centres and frequent transit development areas; developing resilient, healthy, connected and complete communities with a range of services and amenities; and promoting land development patterns that support a diverse regional economy and employment opportunities close to where people live.[136]

Risk

◐ PARTIALLY MEETS OBJECTIVE

A VKT Tax is adaptable because rates can be set by policy according to financial need and economic capacity.[137] This renders this tool highly flexible to changing economic conditions and cost pressures associated with operating the regional transportation system. On the other hand, a VKT Tax is considerably vulnerable to political risk. Political support for it is vulnerable to and shaped by public opinion, and further consultation was recommended as part of the next phase of implementation of this tool in the region.[138]

135: MPIC, 2018
136: Metro Vancouver, 2022
137: Cooper et al., 2022
138: Broughton, 1998; MPIC, 2018

Alternative Revenue Tool C: Electric Vehicle (EV) Charging Tax

What is it?

A regional surtax passed on to drivers when charging their electric vehicles. No existing precedent of an EV Charging Tax to fund transit service could be found.

Why look at this tool?

An EV Charging Tax would be similar to the Motor Fuel Tax that TransLink already levies on the sale of gasoline and diesel in Metro Vancouver. While Motor Fuel Tax revenues are declining, the region has experienced the highest adoption rate of electric vehicles in Canada, where over one-fifth of all new automobile sales in 2022 were electric cars.[139] There are many publicly accessible electric vehicle charging stations across Metro Vancouver, and many municipalities also already collect fees at their own stations including the City of Vancouver and City of North Vancouver. Further, electric vehicles are widely considered to be beneficial for the environment through reduced air pollution but actually have significant upstream and downstream negative externalities associated with the production of lithium batteries and use of public infrastructure. An EV Charging Tax could reduce the use of electric vehicles and help to limit these negative externalities.

Mode Share

● FULLY MEETS OBJECTIVE

Inherently a fuel tax, increasing the cost to charge an electric vehicle will provide drivers with a price signal and encourage other modes of transportation while simultaneously contributing to transit operating revenues that could enable system expansions or service improvements and attract ridership. Instead of applying a one-time fee to car ownership like a Vehicle Levy, an EV Charging Tax would impose a smaller recurring cost that would vary depending on how much a driver uses their car. Depending on the rate levied, an EV Charging Tax could create a strong transportation demand effect because it adds these incremental costs to each trip that drivers make. As such, even households that choose to replace their Internal Combustion Engine (ICE) vehicles powered by gasoline, diesel and other oil-based fuels with electric cars may choose other modes when appropriate.

139: S&P Global, 2023

METRO VANCOUVER

Equity

◐ PARTIALLY MEETS OBJECTIVE

This tool can be considered equitable considering it would fund transit service, which disproportionately benefits marginalized groups and those with low-incomes, at the expense of higher income households that are more likely to own electric vehicles. The purchase price for an electric vehicle comes at a relatively high price point compared to ICE vehicles. Higher income households are therefore more likely to be able to purchase an electric vehicle and install charging infrastructure in their home. Residents who want to avoid paying the EV Charging Tax can opt out of it by reducing the amount that they drive their electric vehicles and use alternative modes of transportation such as transit, walking or cycling.

The manufacturing of electric vehicles also creates negative environmental and social externalities, and therefore external inequities, to produce and charge lithium batteries. In the Chilean Atacama region, part of what is more broadly known as South American Lithium Triangle, the mining industry continues to extract a large amount of groundwater in one of the driest desert areas of the world to produce lithium for electric vehicle batteries. In turn, this has forced migration of populations from villages and ancestral settlements through water scarcity and an increasingly erratic water supply.[140] In addition, the mining practices use evaporation ponds that expose products to wind and severe storms. Geochemically, lithium is a highly mobile element and there is a high chance that it can be released into the environment and affect nearby communities.[141] Powering electric vehicles in BC would also require a doubling of power that is currently generated. A study from the University of Victoria in 2019 found that this could be feasible through a multitude of sources including wind, solar, geothermal and hydro.[142] However, further expanding hydroelectric production could impact salmon and other fish populations, a critical food source for some BC Indigenous communities. Limiting the demand for electric cars and their use through an EV Charging Tax could work toward addressing these external inequities.

140: Agusindata et al., 2018
141: Figueroa et al., 2013
142: Keller et al., 2019

Despite having the potential to address these inequities, an EV Charging Tax would have negative impacts on vertical equity in the long-term as more electric vehicles enter the market and become the majority of the regional vehicle population. The tax would place a greater burden on low-income individuals who must drive.

Implementation

○ DOES NOT MEET OBJECTIVE

Establishing an EV Charging Tax has high implementation costs. TransLink would need to receive permission from the Province and legislative amendments would need to be made to the *SCBCTA Act*. Similar to other tools, TransLink would need to consult RTAC, boards of trade, BC Hydro, provincial staff, the Board of Directors and Mayors Council, and public taxpayers to develop an approach to implementing the tax. Additional coordination and approval would be required from the BC Utilities Commission to establish an approved rate.

The scope and parameters for an EV Charging Tax would also influence the implementation costs of this revenue tool. If the EV Charging Tax was only applied at publicly accessible charging stations, it could be expected that there would be less implementation costs required as TransLink could work with private charging companies to build the rate into electricity purchases at the charging station. However, much higher implementation costs could be expected if the tax was also applied to residential dwellings. Coordination with ICBC would be necessary to identify electric vehicle owners, while close collaboration with the private sector and BC Hydro would be required to install a meter in their residences to determine how much power is being used to charge the vehicle at home and then levy the tax.

Revenue Potential

◐ PARTIALLY MEETS OBJECTIVE

In the short to medium term, revenue from this tool could be expected as low to moderate. The number of electric vehicles registered in Metro Vancouver in 2022 was just over 55,000, while hybrid vehicles numbered over 75,000. Collectively, these 130,000 vehicles amounted to just under 10% of the entire vehicle population of Metro Vancouver municipalities.[143] However, the number of new electric vehicle sales in Metro Vancouver in comparison to other Canadian cities is significantly higher, where over one-fifth of all new automobile sales in 2022 were electric cars and trucks.[144] As such, revenue may be low in the short term but grow to moderate in the medium term.

The amount of revenue that could be generated from an EV Charging Tax would also be dependent on the rate set and whether or not it is charged at residential dwellings or only at publicly accessible charging stations. Significantly higher revenue could be generated if it is applied to residential dwellings, but TransLink and the Province would need to weigh the long-term benefits against high upfront implementation costs and ongoing administration costs to collect revenue. Further, an EV Charging Tax is inherently a fuel tax and is therefore vulnerable to the same longevity and stability concerns. If the EV Charging Tax is effective in reducing the number of trips taken by electric vehicles, then less revenue will be generated from reduced demand for electricity to power vehicles.

143: ICBC, 2022
144: S&P Global, 2023

METRO VANCOUVER

Alignment with Regional Objectives

◐ PARTIALLY MEETS OBJECTIVE

Metro 2050 and *Transport 2050* both include goals and objectives related to the elimination of greenhouse gas emissions from the transportation system.[145] An EV Charging Tax could dissuade some automobile customers from purchasing an electric car, or prolong the decision to switch to one from an ICE vehicle, in turn resulting in a slower reduction in carbon emissions from the tailpipe. However, an EV Charging Tax can be considered in alignment with regional priorities as it would generate additional operating revenue for public transit. This increase in operating funding could lead to service increases and expansions that make transit more convenient and reliable, attracting more riders and work toward other objectives in these plans including 50% of all trips taken by transit, walking and cycling by 2050, and eliminating negative upstream and downstream externalities from regional mobility.[146]

Risk

◐ PARTIALLY MEETS OBJECTIVE

Given the societal impetus to electrify our transportation systems in Canada, there is likely no political will to implement this revenue tool at this time. The Province of British Columbia has also adopted *CleanBC*, a plan to lower climate changing emissions by 40% by 2030 that includes accelerating the switch to zero-emission vehicles, including electric cars.[147] That being said, there is likely to be considerable increases in electric vehicle sales in the coming decades, whereas the Province has updated *CleanBC* to mandate that all new cars sold in British Columbia must be zero-emission vehicles by 2035.[148] Therefore, there is less economic risk and this revenue tool may grow and become a stable source of revenue in the coming decades.

145: Metro Vancouver, 2022; TransLink, 2022a
146: TransLink, 2022a
147: Province of British Columbia, 2018
148: Province of British Columbia, 2021

Policy Recommendations

TransLink should:

- Begin consultation with regional and provincial partners and work toward establishing a Vehicle Levy as permitted by the SCBCTA Act;
- Resume efforts to establish and implement a regional VKT Tax in Metro Vancouver with regional and provincial partners; and
- Conduct a feasibility study to determine potential success of an EV Charging Tax in funding transit operations in Metro Vancouver, including the scope and parameters of such a levy.

The Province of British Columbia should:

- Come to the table to implement a regional VKT Tax;
- Provide TransLink with enabling legislation for a wide variety of revenue tools to enable the authority to respond to the changing operational funding demands of the regional transportation system; and
- Continue to advocate to the Federal Government for a tripartite national commission alongside the provinces, local governments and transit agencies to develop a new funding model for transit.

Photo source: Chris French

6B

The Prarie Cities

The Prairie Cities: Calgary, Edmonton & Winnipeg

Land Acknowledgment

Calgary is located on the ancestral territory of the Blackfoot Confederacy, made up of the Siksika, Piikani, Amskaapipiikani and Kainai First Nations; and the traditional territories of lethka Nakoda Wicastabi First Nations, comprised of the Chiniki, Bearspaw, and Goodstoney First Nations; and the Tsuut'ina First Nation. Calgary is also homeland to the Northwest Métis and to Métis Nation Alberta, Region 3.

Edmonton is located within Treaty 6 Territory and within the Métis homelands of Métis Nation Alberta, Region 4. This land is part of the traditional territory of many First Nations such as the Nehiyaw (Cree), Denesuliné (Dene), Nakota Sioux (Stoney), Anishinaabe (Saulteaux) and Niitsitapi (Blackfoot).

Winnipeg is located in Treaty One Territory, the home and traditional lands of the Anishinaabe, Ininew and Dakota peoples, and in the National Homeland of the Red River Métis.

Calgary Overview

Calgary, AB is located in the foothills of the Rocky Mountains and is Canada's fourth largest metropolitan area by population with over 1.3 Million residents. Public transit is operated by Calgary Transit, a business unit of the City of Calgary. Calgary Transit operates an extensive light rail transit system, along with 150 bus routes serving 6,208 bus stops, as well as Calgary Transit Access for citizens with physical or cognitive disabilities.[149] In the previous census, the majority of Calgary's commute mode share was made by automobiles, while only 8.8% of commuters used the public transit system, and 8% used other modes including walking and cycling.[150]

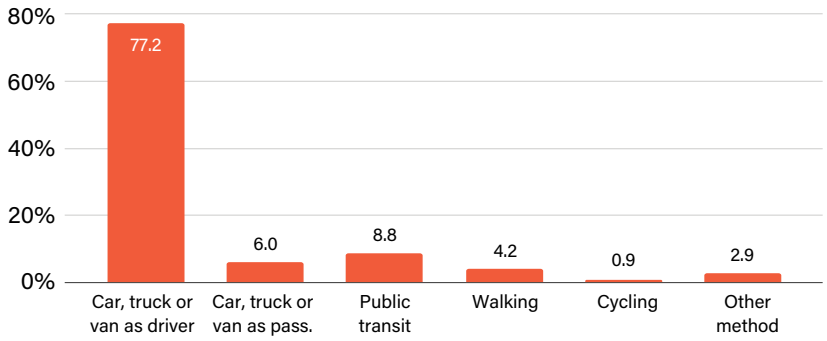


Figure 6: Commute Mode Share in Calgary[151]

149: City of Calgary, 2022b
150: Statistics Canada, 2022b
151: Statistics Canada, 2022b

Transportation Goals & Objectives

The City of Calgary's *Climate Action Strategy* and *Municipal Development Plan* set ambitious goals and objectives for transportation. The *Climate Action Strategy* in particular has set a for a 60% reduction in emissions from transportation by 2030, with over 60% of trips taken by transit, walking and cycling by 2050. In addition, the strategy calls for a 25% reduction in vehicle kilometres travelled per capita, and for 95% of all residents to be living within two kilometres of a dedicated transit facility such as an LRT or BRT route.[152] Meanwhile, the *Municipal Development Plan* provides direction to develop a Primary Transit Network (PTN) and link land use decisions to transit.[153]

The City of Calgary recently adopted an update to *RouteAhead*, the 30-Year strategy for Calgary Transit with a vision to integrate movement and land use by creating an intuitive, safe, accessible, and welcoming system that is convenient to use for Calgarians and visitors. The plan envisions an extensive Primary Transit Network consisting of LRT network extensions and expansions, and a number of corridors where the exact technology will be later determined based on future land development.[154]

Funding Sources & Emerging Challenges

Current Operating Costs & Revenue Tools

As noted in the 2023-2026 *Service Plans and Budgets*, the cost to operate Calgary Transit in 2023 is approximately $473.1 Million. The operating costs with the current system are expected to increase incrementally to $496.9 Million in 2026.[155] Out of all expenses in the 2023 budget, public transit is the fourth highest expenditure behind debt servicing, police services, and wastewater treatment and collection.

Table 8: Top 5 Operations Expenditures in the City of Calgary's 2023 Service Plan and Budget [156]

Rank	Service	Expenditure	Percentage of Overall Budget
1	Corporate Costs and Debt Servicing	$571.3 Million	12.2%
2	Calgary Police Service	$563.5 Million	12.0%
3	Wastewater Treatment and Collection	$506.1 Million	10.8%
4	**Calgary Transit**	**$473.1 Million**	**10.4%**
5	Water Treatment and Supply	$317.3 Million	6.8%

152: City of Calgary, 2021a
153: City of Calgary, 2020
154: City of Calgary, 2023d
155: City of Calgary, 2022a
156: City of Calgary, 2023b

Alberta's *Municipal Government Act* outlines the funding tools that municipalities can use to generate revenue. Calgary Transit's operating revenue is sourced primarily from property tax and fare revenue. In the 2023 operating budget, property tax accounts for 58.9% of operating costs, while 37.1% is sourced from fares and the remaining 4.1% is covered by other sources such as advertising, and a subsidy from the Province of Alberta for their low-income transit pass program. This program supports low-income Calgarians by providing affordable mobility options.[157]

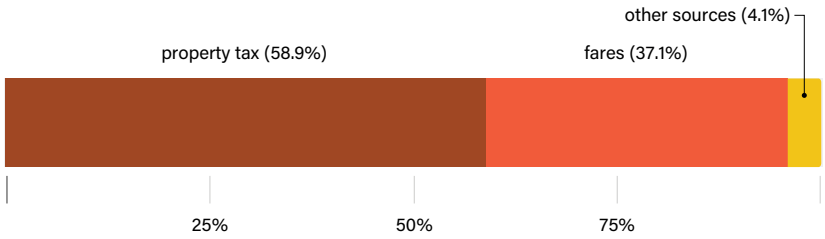
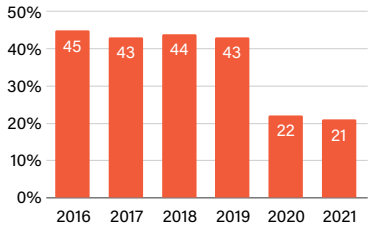


Figure 7: Revenue Sources for Calgary Transit Operating Budget in 2023 ($473.1 M)[158]

Operating Cost Drivers

Calgary Transit is currently facing significant cost drivers from population growth, inflation on fuel and wages, and labour shortages. In addition, Calgary Transit continues to suffer lingering effects from the pandemic such as trip patterns, and has had to rely on property taxes to cover lost fare revenue. In 2019, fares generated 38% of Calgary Transit's revenue for operating costs, while the remainder was drawn from property taxes and other sources. In comparison, fares only accounted for 19% of operating costs during the pandemic.[159] Collectively, these funding challenges have resulted in a $33 Million shortfall in operating costs for 2023 as well as an overall decline in Calgary Transit's Revenue / Cost Ratio and revenue hours per capita.[160]



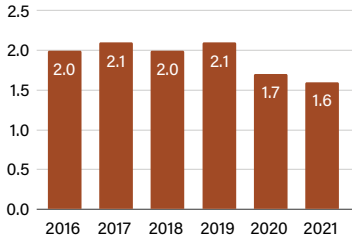


Figure 8 (above left ↖): Calgary Transit Revenue / Cost Ratio[161]

Figure 9 (above right ↗): Calgary Transit Revenue Hours per Capita[162]

157: City of Calgary, Cooper & French, 2023
158: City of Calgary, Cooper & French, 2023
159: City of Calgary, Cooper & French, 2023
160: City of Calgary, Cooper & French, 2023; CUTA, 2022
161: The number of revenue service hours provided per person in the city. (CUTA, 2022)
162: Total operating revenues divided by total operating costs. (CUTA, 2022)

Expanding Calgary's transit system to fully realize the Primary Transit Network will also require an additional 1.3 Million service hours, which is expected to add $127.4 Million to the annual operating budget in the next ten years.[163] This figure does not factor in the additional operating cost with the opening of the Green Line, estimated in the 2013 version of RouteAhead to be $57.3 Million for operations between North Pointe and Seton through Downtown Calgary.[164]

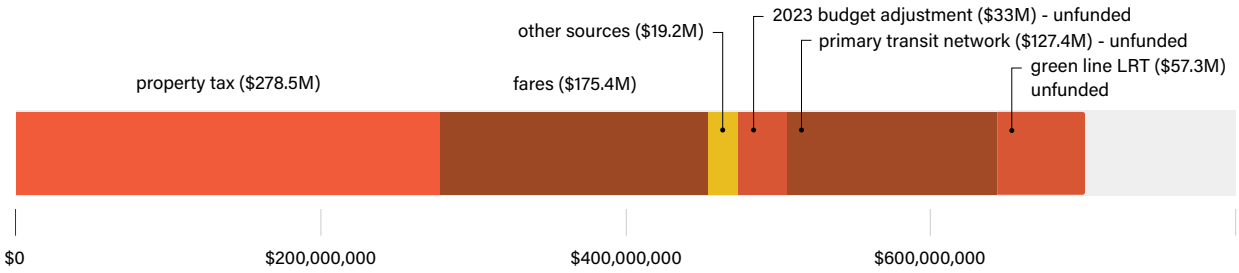


Figure 10: Unfunded operating costs from immediate pressures for maintaining existing services and system expansion for Calgary Transit[165]

Regardless of whether fare revenues fully recover to pre-pandemic levels, Calgary Transit will require a new approach to funding transit operations including new revenue tools. Relying on property tax to cover increases in operating costs will be difficult considering that a 1% increase in property tax may only generate up to $10 Million.[166] Significantly, a recent update to RouteAhead provides direction for the City to consider alternative revenue tools to ensure predictable and consistent funding to implement the plan. The plan describes a successful operating funding approach that involves a layered strategy to find efficiencies with current operations and maintenance, optimize fare revenues, and identify and implement new revenue sources.[167] If growing operating costs are not addressed, Calgary Transit will not be able to expand its network or improve services, and the City will not meet its mode share and climate targets. There will be operating budget challenges with commencing operations for the Green Line, no implementation of the full primary transit network, and an inequitable transportation system to serve the needs of the City's residents and businesses.

163: City of Calgary, 2023d; City of Calgary, 2023e
164: City of Calgary, 2013
165: Sourced from City of Calgary, 2013; City of Calgary, 2022a; and City of Calgary, Cooper & French, 2023.
166: City of Calgary, Cooper & French, 2023
167: City of Calgary, 2023d

Edmonton Overview

The City of Edmonton is home to over 1 million people and is the capital city of Alberta.[168] Edmonton Transit Service (ETS), a department of the City, operates two light rail lines with eighteen stations and 126 bus routes with 5,130 bus stops. In addition, ETS operates on-demand bus service for select neighbourhoods, seniors' residences and attractions across Edmonton, as well as a Dedicated Accessible Transit Service (DATS) for Edmontonians who are unable to use the conventional transit system.[169] 85.1% of commuters in Edmonton travel by automobile, while 8.1% of commuters use the public transit system. The remaining 6.8% of commuters walk, cycle or use other modes of transportation to reach their workplace or school.[170]

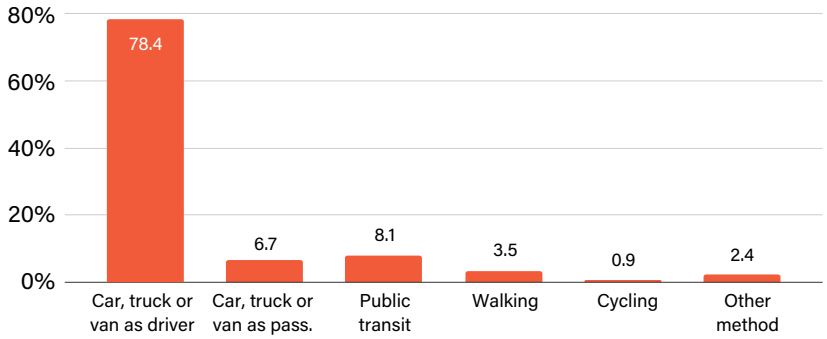


Figure 11: Commute Mode Share in Edmonton, AB[171]

Transportation Goals & Objectives

Edmonton's City Plan calls for 50% of all trips in the City to be taken by walking, cycling and public transit and also maintains a goal for no household to spend more than 35% of its income on transportation and housing combined.[172] The Energy Transition Strategy similarly includes a 50% modal share target by 2040 with direction to implement the mass transit system and redesign the transit system to boost ridership through increased reliability and service improvements.[173]

168: Statistics Canada, 2022c
169: City of Edmonton, 2023c
170: Statistics Canada, 2022c
171: Statistics Canada, 2022c
172: City of Edmonton, 2020a
173: City of Edmonton, 2021a

Significant additions to the transit system to accommodate population growth are proposed in Mass Transit Planning for 1.25 Million People, and include an LRT extension to Heritage Valley, two new BRT-Lite routes, and a number of rapid buses.[174]

Funding Sources & Emerging Challenges

Current Operating Costs & Revenue Tools

The operating cost for buses, LRT and DATS on the Edmonton Transit Service in 2023 was listed at $428.2 Million. Out of all city expenditures in the 2023 operating budget, public transit ranked second behind police service for expenses funded by property taxes.[175]

Table 9: Top 5 Expenditures in 2023 City of Edmonton Operating Budget[176]

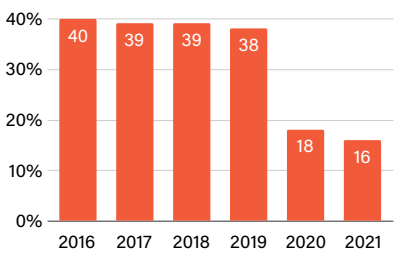
Rank	Service	Expenditure	Percentage of Overall Budget
1	Edmonton Police Service	$487.5 Million	14.8%
2	Edmonton Transit Service	$429.5 Million	13%
3	Debt Repayment	$342.6 Million	10.4%
4	Parks and Roads Services	$250.4 Million	7.6%
5	Fire Rescue Services	$224.0 Million	6.8%

Alberta's *Municipal Government Act* outlines the funding tools that municipalities can use to generate revenue. The City of Edmonton funds Edmonton Transit Service operations using property taxes and fares, with a small portion of revenue collected from park and rides and advertising on the system, along with a provincial subsidy for low-income transit passes.[177] The proportion of costs covered by these sources could not be discerned within budget documents for 2023.

Operating Cost Drivers

A previous report found that these existing revenue tools are not keeping pace with growth in the Edmonton region, while the pandemic severely impacted the reliability of fare revenue to fund day to day operations.[178] During engagement, City staff expressed very low confidence that planned system expansions and therefore broader organizational targets for mode share and emissions reduction could be met with existing revenue tools. In addition to system expansion, staff cited pandemic recovery along with population growth and immigration as being key cost drivers.[179] These cost drivers have impacted the Edmonton Transit Service's revenue / cost ratio that has been declining since 2016, and has accelerated since the beginning of the pandemic. They have also prevented ETS from increasing service hours alongside population growth, whereas the number of revenue hours per capita has declined since 2016.[180]

174: City of Edmonton, 2021b
175: City of Edmonton, 2023a
176: City of Edmonton, 2023a
177: City of Edmonton, 2023a
178: Cooper et al., 2022
179: City of Edmonton & French, 2023
180: CUTA, 2022



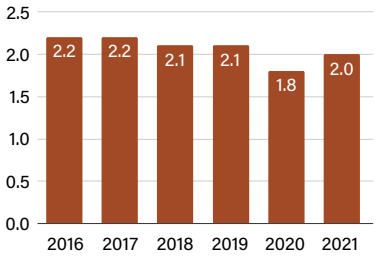


Figure 12 (above left ↖): Edmonton Transit Service Revenue / Cost Ratio[181]

Figure 13 (above right ↗): Edmonton Transit Service - Revenue Hours per Capita[182]

In the 2023-26 Operating Budget, the cost of operating the system is expected to increase from $502 Million in 2023 to $526 Million by 2026, requiring a combined additional $21 Million to maintain existing service.[183] However, a recent report to City Council identified that an additional $174 Million of ongoing operating funding will be required by 2033 to grow transit service levels.[184] Further operating costs can be expected with the eventual opening of the Metro Line to Blatchford.

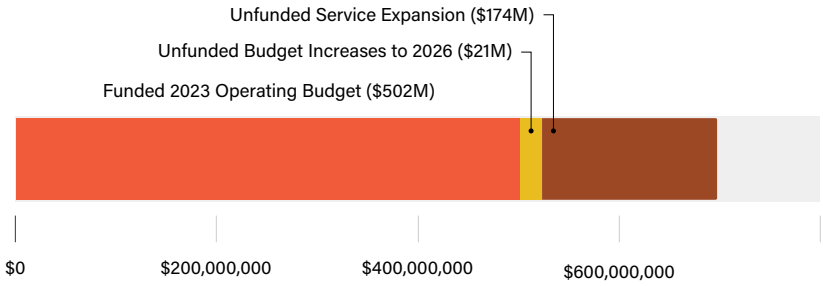


Figure 14: Unfunded operating costs from budget increases to 2026 and system expansion for Edmonton Transit Service[185]

If the Edmonton Transit Service does not have sufficient operating revenue to fund transit service and continues to be limited within existing operating and capital funding constraints, the City will not be able to expand or improve the network to accommodate near term population growth. This means service reductions for Light Rail Transit, and no Bus Rapid Transit network.

181: The number of revenue service hours provided per person in the city. (CUTA, 2022)
182: Total operating revenues divided by total operating costs. (CUTA, 2022)
183: City of Edmonton, 2023a
184: City of Edmonton, 2023d
185: Sourced from City of Edmonton, 2023a and Cooper et al., 2022

Winnipeg Overview

Winnipeg is the capital of Manitoba and is the province's largest city home to over 700,000 people.[186] Winnipeg Transit, a department of the City of Winnipeg, operates a network of eighty-seven bus routes reaching 5,170 bus stops.[187] Like the other prairie cities, the City of Winnipeg has a high automobile commute mode share and approximately 82.6% of commuters traveling to their daily place of work by personal vehicles. 9.3% of commuters use public transit, while 8% walk, cycle or use other modes.[188]

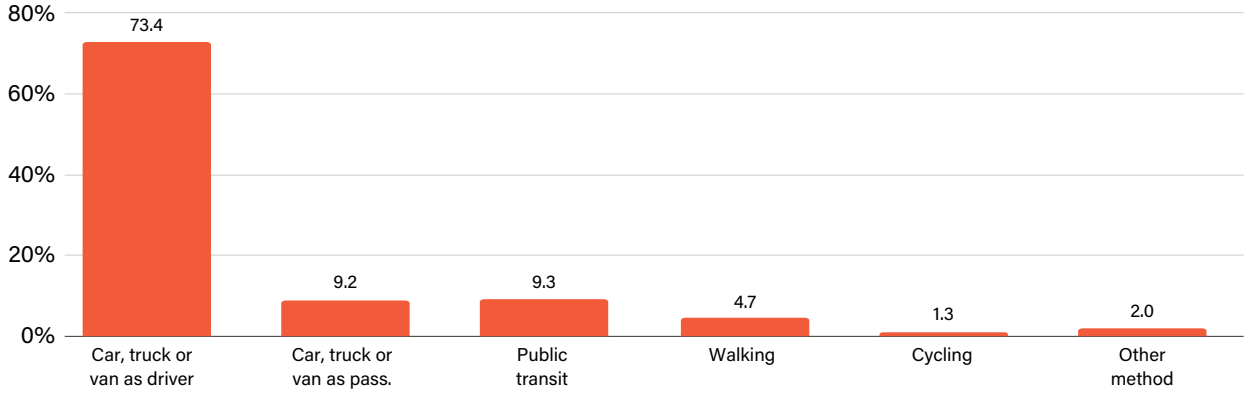


Figure 15: Winnipeg Commute Mode Share[189]

Transportation Goals & Objectives

The *Winnipeg Transit Master Plan* has nine network goals that uphold the transit vision for Winnipeg including increasing ridership, improving downtown mobility and a network that improves multimodal mobility while complementing land use development. This plan also includes four new route classifications to inform improvements and expansions to the transit network to realize the overall vision.[190] Meanwhile, *OurWinnipeg* 2045 is the City's Development Plan and contains a number of environmental resilience objectives and policies related to transportation including prioritizing sustainable modes as the mobility options of choice, reducing road congestion through uptake in active and public transportation. The plan also includes prioritizing enhancements in sustainable transportation to enable economic prosperity and transit-oriented development is reflected in many of its city building policies.[191]

In addition, Winnipeg's *Transportation Master Plan* contains six key strategic goals including a transportation system that is dynamically integrated with land use, supports active, accessible and healthy lifestyle options, and is financially sustainable.[192] Further, the *Winnipeg Climate Action Plan* targets a 17% reduction in transportation related emissions based on 2011 levels by 2030, with 50% of all trips in the City taken by transit, walking, cycling and carpooling.[193]

186: Statistics Canada, 2022d
187: City of Winnipeg, 2023b
188: Statistics Canada, 2022d
189: Statistics Canada, 2022d
190: City of Winnipeg, 2021a
191: City of Winnipeg, 2022a
192: City of Winnipeg, 2011
193: City of Winnipeg, 2018

Funding Sources & Emerging Challenges

Current Operating Costs & Revenue Tools

The cost to operate Winnipeg Transit in 2023 was listed in the preliminary operating budget at $238.6 Million, and was the second highest listed City expenditure (11.5% of the overall budget) behind the Winnipeg Police Board.[194]

Table 10: Top 5 Expenditures in 2023 Preliminary Budget[195]

Rank	Service	Expenditure	Percentage of Overall Budget
1	Winnipeg Police Service	$327.0 Million	15.8%
2	Winnipeg Transit	$238.6 Million	11.5%
3	Road Construction & Maintenance	$191.1 Million	9.2%
4	Wastewater	$180.5 Million	8.7%
5	Fire & Rescue Response	$148.1 Million	7.2%

The *City of Winnipeg Charter* outlines assessments, forms of taxation and levies that the City of Winnipeg can use to generate revenue, including for transit operations. Like many other Canadian cities and transit agencies, the City of Winnipeg primarily uses property tax and fare revenue to fund transit operations. Historically, the Province of Manitoba would subsidize 50% of operating costs net of fare revenue for Winnipeg Transit and the funding applied to both existing service levels and increases to service. This legislation made it easier for the City to add transit service and make improvements to the network as the funding from the subsidy would help to offset the operating cost of new service. However, the legislation was repealed by the Progressive Conservative government in 2017 for any new increases in operating costs and has left the City of Winnipeg responsible for a significant, growing funding gap.

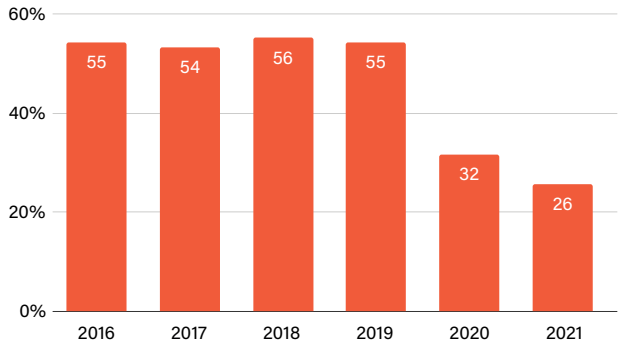
In 2022, the cost to operate Winnipeg Transit was $212.3 Million. The overall cost was mostly funded by property tax (46%) and fare revenue (32%), while the Province provided their annual partial subsidy for service improvements to 2017 and some emergency operating funding for pandemic recovery as well (20%). A small portion of revenue was generated from advertising and other city programs (2%).[196] The proportion of

194: City of Winnipeg, 2023a
195: City of Winnipeg, 2023a
196: City of Winnipeg, 2021b

revenue from different sources to fund Winnipeg Transit's 2023 operating budget could not be determined from City budget documents.

Operating Cost Drivers

Winnipeg Transit faces similar operating cost drivers to other agencies including inflationary costs from fuel and wages, population growth and immigration, an overall effort to build more ridership through improved service, and pandemic recovery.[197] These cost drivers are reflected in Winnipeg Transit's revenue / cost ratio. Prior to the pandemic, this ratio hovered around 55%, but has since significantly declined to 26%. In addition, this has prevented Winnipeg Transit from making any considerable increases to service levels over the past six years as shown by the agency's revenue hours per capita.[198] The *Transit Master Plan* also highlights this broader challenge, stating that operating expenses are increasing faster than revenue, and that a change in approach to funding transit, service provision or fare increases will be required to maintain service levels.[199]



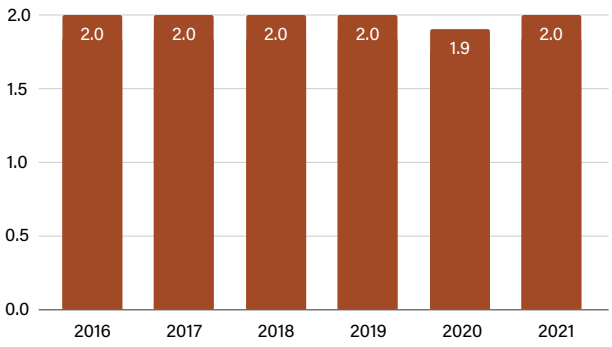


Figure 16 (above left ↖): Winnipeg Transit Revenue / Cost Ratio[200]

Figure 17 (above right ↗): Winnipeg Transit Revenue Hours per Capita[201]

Based on reduced ridership from the pandemic, the 2023 Preliminary Operating and Capital Budget forecasted a $13.4 Million shortfall from lost fare revenue.[202] The Winnipeg Transit Master Plan estimates that a 12% increase in operating costs will be required to reach minimum service levels to realize the future transit network in Winnipeg, primarily with off-peak service improvements on weekends.[203] Based on the 2023 operating budget of $238.6 Million, this would require a total increase of $28.6 Million.[204] However, Mayor Scott Gillingham recently warned that more increases in City subsidies may be required to maintain existing service levels and could reach an additional $37 Million per year.[205]

197: City of Winnipeg & French, 2023
198: CUTA, 2022
199: City of Winnipeg, 2021a
200: The number of revenue service hours provided per person in the city. (CUTA, 2022)
201: Total operating revenues divided by total operating costs. (CUTA, 2022)
202: City of Winnipeg, 2023a
203: City of Winnipeg, 2021a
204: City of Winnipeg, 2023a
205: Pursaga, 2023

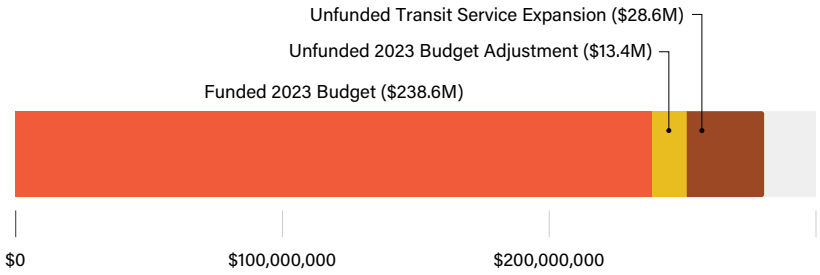


Figure 18: Winnipeg Transit Operating Budget & Service Expansion[206]

Based on pre-pandemic numbers, a 1% increase in property tax would generate $4 Million for the City of Winnipeg as a whole. As such, property tax increases alone are not a viable option to realize increased operating costs for the existing system and future network proposed in the *Transit Master Plan*.[207] Winnipeg Transit anticipates ridership to recover to 90% of pre-pandemic levels, while further ridership growth and recovery will need to be generated from new customers. Therefore, the City of Winnipeg must find new revenue tools or funding structures to operate improved transit services to make the system a convenient, reliable and affordable alternative for moving around the community. Failure to secure new sources of operating funding would also jeopardize off-peak service improvements that could improve mobility options for equity-deserving community members, especially women,[208] as well as no new transitways or rapid transit infrastructure downtown.

206: Funded 2023 budget derived from City of Winnipeg (2023a). Unfunded budget adjustment is representative of operating funding shortfall driven by pandemic revenue and ridership recovery and was identified in City of Winnipeg & French (2023). Operating budget shortfall for transit service expansion in Transit Master Plan derived from City of Winnipeg (2021) and operating budget proposed for 2023 in City of Winnipeg (2023a).

207: City of Winnipeg & French, 2023

208: Grisé et al. (2022) found that women tend to travel on transit more often at off-peak times including mid-afternoons, evenings and weekends

Revenue Tool Screen

Table 11: Revenue Tool Screen for the Prairie Cities: Calgary, Edmonton and Winnipeg

Revenue Tool	Benefit Area Tax	Real Estate Opportunities	Off-Street Parking Tax	Motor Fuel Tax	Vehicle Levy	VKT Tax	City Sales Tax	EV Charging Tax	TNC Fee
Is this tool already used to generate revenue for transit operations?	No	No	No	No	No	No	No	No	No
Has the tool been assessed in the region?	Yes	Yes	Yes	Yes	Yes	Yes	No	No	Yes
Can the tool be implemented under existing legislation?	No	No	No	No	No	No	No	No	Yes
Does this tool have interdependencies with specific programs or tools?	Yes	Yes	No	Yes	Yes	Yes	No	Yes	Yes
How successful will the tool be given the context of the region (e.g. geography, transportation trends etc.)?	Low	Low	High	Low	Med	High	Med	Low	Med
Was this tool a key topic of discussion with agency staff during engagement?	No	No	Yes	No	Yes	No	No	No	No

Based on the revenue tool screen questions above in ***Table 11***, this paper examines Off-Street Parking Taxes, Vehicle Levies and Transportation Network Company (TNC) Fees as potential revenue tools to fund transit operations in Calgary, Edmonton and Winnipeg. These three tools are examined further to determine if they fully meet, partially meet or do not meet the study objectives, as summarized in ***Table 12*** below.

Table 12: Multiple Account Evaluation of Revenue Tools Proposed for Transit Operations in Calgary, Edmonton and Winnipeg

Objective	Off-street Parking Tax	Vehicle Levy	TNC Fee
Mode Share	●	●	◐
Equity	◐	◐	◐
Implementation	◐	◐	●
Revenue Potential	●	●	◐
Alignment with Regional Objectives	●	●	●
Risk	◐	●	◐

● fully meets ◐ partially meets ○ does not meet

Alternative Revenue Tool A: Off-Street Parking Tax

What is it?

A tax levied on off-street, privately owned and operated parking sales or spaces. Many municipalities and regional transit agencies use parking taxes under two different schemes to generate revenue for public transit. As part of its funding portfolio, TransLink collects a tax on parking sales in parking spaces that are privately owned and operated across Metro Vancouver. In 2018, the agency's taxation authority was increased from 21% to 24% and was forecasted to generate $87 Million in 2023.[209] In addition, the City of Montréal levies a tax on the surface area of off-street parking on non-residential land parcels as a surcharge on property taxes. Rates range from $6.25 per square metre to $12.45 per square metre for interior parking lots, and $2.00 per square metre to $50.10 per square metre depending on the area of the city. Revenue generated from this tax on off-street parking spaces is earmarked for the City's annual transfer to the Autorité régionale de transport métropolitain (ARTM), the regional transportation planning and funding agency.[210]

Why look at this tool?

Off-Street Parking Taxes contribute to transportation demand management and can have a positive impact on influencing sustainable travel choices. Investigating methods of parking pricing as a tool to shift travel demand to low carbon modes is also explicitly referenced in Calgary's *Climate Strategy*. In addition, expanding parking pricing has also been referenced as a necessary initiative to reach mode share targets in Edmonton's City Plan. Further, depending on the off-street parking tax scheme used, this tool could support higher land use density objectives and influence higher sustainable mode shares as directed by the *Winnipeg Climate Strategy*. There are also Canadian precedents for this tool along with a clear, intuitive policy rationale that can be easily communicated.[211]

Mode Share

● FULLY MEETS OBJECTIVE

In North America, abundant free or cheap parking is often expected, but research has shown that inefficiently priced parking and parking minimums have led to undesirable outcomes for cities.[212] Off-Street Parking Sales Taxes could raise additional revenue for and use of transit while simultaneously reducing vehicle usage in the prairie cities. If drivers want to avoid paying higher parking fees from the taxes, they could choose to use other modes such as public transit or active transportation. This may have a great effect in Calgary, which already has some of the highest downtown parking rates in North America.[213]

209: TransLink, 2023
210: Ville de Montréal, 2023a
211: Cooper et al., 2022
212: Shoup, 2011
213: City of Calgary, 2015

If the Cities chose to pursue a non-residential Off-Street Parking Levy as an additional mill rate to property taxes, property owners who want to avoid paying the levy could reduce the parking supply on their lot by repurposing some parking stalls to other uses. This would also provide drivers with less choice for parking their vehicle and could influence them to travel by transit, walking or cycling. Notably, a previous study estimated that this may result in a 10% reduction in the inventory of free off-street parking spaces in Calgary. [214]

Equity

◐ PARTIALLY MEETS OBJECTIVE

Like other revenue tools that add costs to drivers, an Off-Street Parking Sales Tax will have different impacts on different households even if incomes are the same. The relative burden of an Off-Street Parking Sales Tax increases as incomes decrease. This vertical equity concern could be partially mitigated with a low-income parking pass program, a solution that has been implemented in Seattle, but is unlikely to be applied in privately owned and operated parking lots in the Prairie Cities.[215]

Meanwhile, there are no perceivable equity concerns to communities at large if the Cities were to introduce an Off-Street Parking Levy on the number of spaces on a non-residential property as an additional mill rate to property tax. There may be marginal impacts on some property owners that could have smaller spiralling effects such as slight increases in the cost of higher retail prices.[216] However, the Cities could establish a minimum area threshold to protect smaller businesses and property owners that may be impacted by parking levies.[217] Alternatively, property owners could be given the option to repurpose parking stalls for other uses such as community spaces, or even housing.

214: City of Calgary, 2015
215: Cooper et al., 2022
216: Litman, 2022
217: French et al., 2023

Implementation

◐ PARTIALLY MEETS OBJECTIVE

Implementing an off-street parking tax under either program will be demanding from an implementation perspective and require provincial legislative amendments to the Municipal Government Act in Alberta and Part 8 of the City of *Winnipeg Charter Act* in Manitoba. The Cities would need to create an inventory of all off-street parking spaces that the tax may apply to within the scope and parameters. In addition, a licensing process for parking vendors must be created for an Off-Street Parking Sales Tax, and regulations would need to be established for informational requirements like reporting, record keeping and auditing. More consideration would be required for how the tax is collected, but all aspects involve costs for initial introduction and ongoing management.[218]

In comparison, if the Cities were to introduce an Off-Street Parking Levy on spaces on non-residential properties as an additional mill rate to property tax, zoning changes on non-residential parcels would be necessary but less management resources may be required once established. Data such as the inventory of parking spaces would live in property records and revenue would be collected once per year when property taxes are due.

Revenue Potential

● FULLY MEETS OBJECTIVE

Revenue from Off-Street Parking Sales Taxes on privately owned facilities could be fairly flexible and large in the context of the Prairie Cities. However, revenue would likely fluctuate alongside other broader transportation demand patterns such as the number of car trips and locations of trip generators. This gives Off-Street Parking Sales Taxes similar reliability challenges to transit fare revenues and TNC Fees.

If the Cities were to introduce an Off-Street Parking Levy on private, non-residential spaces in their jurisdictions, their transit agencies could expect significant and predictable revenues for funding operations. The Cities could set any rate desired within the bounds of new legislation required from the Provinces to implement this revenue tool. For example, under an assumption that there could be as many as 1-2 off-street parking spaces in the Prairie Cities per capita, and each space is charged a levy of $50 each year, the levy could generate $100 per capita.[219] Based on this assumption and not including any exemptions that may be created, approximately $131 Million, $101 Million and $75 Million could potentially be generated each year for Calgary Transit, Edmonton Transit Service and Winnipeg Transit respectively. However, a previous study estimated that the the City of Calgary could generate between $98 Million and $125 Million per year if off-street parking spaces were levied a charge of $1 per day.[220]

218: Cooper et al., 2022
219: Estimate from Litman, 2022 based on historical land use planning practices in North America that encouraged high parking minimums
220: City of Calgary, 2015

Alignment with City Policies & Objectives

● FULLY MEETS OBJECTIVE

Off-Street Parking Sales Taxes support numerous organizational targets and objectives for each of the Prairie Cities. Off-Street Parking Sales Taxes would support the City of Calgary's *Municipal Development Plan's* target of achieving 45% mode share by sustainable modes, and work toward a 25% reduction in vehicle kilometres travelled by 2050 as targeted in the *Climate Strategy*.[221] In addition, Off-Street Parking Sales Taxes support numerous objectives and actions of *Calgary Parking Policies*.[222] Meanwhile, Off-Street Parking Sales Taxes would help the City of Edmonton work toward numerous targets in the Big City Moves of the *City Plan* including 50% of trips made by transit and active transportation and achieving a total community-wide carbon budget of 135 megatonnes. Parking fees, in this case Off-Street Parking Sales Taxes, paid by drivers are a user fee-based tool that supports transit and sustainable transportation practices, and also therefore aligns with *Council Policy C624* as well.[223] Further, off-street parking sales taxes would work toward key directions in the *Winnipeg Climate Action Plan* that aims to shift Winnipegers out of single occupancy vehicles.

221: City of Calgary, 2020; City of Calgary, 2021a
222: City of Calgary, 2021b
223: Cooper et al., 2022

If the Cities were to introduce an Off-Street Parking Levy on non-residential properties as an additional mill rate to the property tax, some property owners and developers may seek to reduce or eliminate the number of stalls on their parcel to avoid paying the rate. This could spur development, such as housing and mixed-uses, supporting the Calgary *Municipal Development Plan's* City-Wide policies to shape a more compact urban form through vibrant and transit-supportive mixed uses, activity centres and main streets, and create great communities with housing choices.[224] Similarly, this could potentially result in more housing being built along key transit corridors in Edmonton, supporting the *City Plan's* Big City Move of 50% of new units added through infill city-wide.[225] Such development in Winnipeg would also support *OurWinnipeg 2045's* city building objectives including the integration of resilient land use, transportation and infrastructure planning and investments, and facilitate development opportunities that complete already established communities.[226]

Risk

◐ PARTIALLY MEETS OBJECTIVE

Both programs described for off-street parking taxes have considerable risk involved with their implementation. Both would require significant political support and legislative amendments in Alberta and Manitoba, and take a significant amount of resources and time to establish their operations (e.g. building a parking inventory by parcel, licensing agreements, regulations, program administration etc.). In addition, an Off-Street Parking Sales Tax would be vulnerable to economic disturbances that reduce the amount that drivers would normally travel, leaving prairie transit agencies without a significant source of operating funding. However, a non-residential Off-Street Parking Levy is more predictable and would not rely on drivers ending trips in paid parking stalls as it is a determined annual fee paid by property owners each year.

224: City of Calgary, 2020
225: City of Edmonton, 2020a
226: City of Winnipeg, 2022a

Alternative Revenue Tool B: Vehicle Levy

What is it?

A tax or surcharge directly added to the existing provincial vehicle registration fee when it is renewed with the Province of Alberta or Province of Manitoba each year. In Montréal, residents currently pay a $45.00 contribution to public transit on the renewal of their vehicle registration. In the 2023 budget, the ARTM expects to generate approximately $62.9 Million from vehicle levies for transit service in Greater Montréal.[227] Starting in 2024, vehicles in the region will pay $59.00, and the ARTM expects to raise a total of $125 Million with the new increase.[228] Thirty-three US states and twenty-seven local jurisdictions also use vehicle registration fees and levies to fund transportation improvements that often include public transit.[229]

Why look at this tool?

The Provinces of Alberta and Manitoba already collect vehicle registration fees, meaning that there is an administrative structure already in place at the Provincial level that can support implementation. Vehicle Levies also provide predictable revenue potential for budgeting purposes with a clear and intuitive policy rationale that is easily communicated. Moreover, the prairie cities have a high auto mode share, meaning that there is likely a high vehicle population and therefore considerable revenue potential that could address the operating pressures faced by their transit agencies. Vehicle Levies were also noted as a potential tool that could be used in working toward multiple municipal transportation and planning objectives in a report to the City of Edmonton's Urban Planning Committee in February 2021.[230]

227: ARTM, 2023a
228: Sherwin, 2023
229: Litman, 2022
230: City of Edmonton, 2021c

Mode Share

● FULLY MEETS OBJECTIVE

A Vehicle Levy may achieve a double effect on mode share by adding minor cost pressures to drivers while also raising transit revenue that could be used to increase service levels. The transportation demand management effect of a Vehicle Levy is unlikely to generate as strong of a mode shift as tools that create costs that recur more often such as a VKT Tax or Motor Fuel Tax. However, a small annual fee may influence households to reduce the number of vehicles that they own, from two cars to one for example.[231]

Vehicle Levies can also be targeted towards vehicles of different types and characteristics such as axle count, age, or gross vehicle weight.[232] Therefore, the Cities could decide to impose a levy targeting a specific type of vehicle such as large SUVs and light pickup trucks that have higher fatality rates from collisions with pedestrians and people riding bicycles.[233] This could dissuade purchasers of new cars to opt for a smaller model, thereby generating a higher perceived sense of safety on regional roads that in turn encourages people to walk or cycle.

Equity

◐ PARTIALLY MEETS OBJECTIVE

Generally, Vehicle Levies are considered to be an equitable means to fund public transit operations. Automobile use leads to significant external costs for governments in the form of infrastructure and maintenance as well as negative environmental costs. A Vehicle Levy can therefore be conceptualized as a reimbursement of these costs from motorists to transit users who have lower external costs to governments.[234]

At the citizen level, a flat Vehicle Levy is progressive because car ownership tends to correlate with an individual or a household's income. In addition, this tool does not place any cost burden on the lowest income households who are likely to not own a vehicle. As such, a Vehicle Levy could be considered vertically equitable.[235] However, the Levy could represent an inequitable burden for households that must own one or more vehicles due to a number of factors such as home and work locations and available alternative transportation options. The impact of this burden would require further investigation, but a Vehicle Levy with a similar fee to existing precedents in Quebec is minimal compared to other costs associated with owning and operating a vehicle including insurance, fuel and repairs.[236]

231: Cooper et al., 2022
232: Kitchen & Slack, 2016
233: Robertson, 2006
234: Litman, 2012
235: Cooper et al., 2022
236: French et al., 2023

Implementation

◐ PARTIALLY MEETS OBJECTIVE

Implementing a Vehicle Levy would require legislative amendments to the *Traffic Safety Act* in Alberta and Drivers and Vehicles Act in Manitoba, but the ongoing management of this tool is unlikely to be resource intensive.[237] Intergovernmental agreements, developed with stakeholders such as Alberta Transportation and Manitoba Public Insurance, on who collects the fees and how revenue is shared would also be required. However, because the Provinces already charge vehicle registration fees, the necessary structures are already in place and only a local fee would need to be added to the existing process.[238]

The Cities would also need to develop an approach to implementing the tool alongside internal stakeholders, committees and provincial staff, and receive approval from their Councils and the Provinces. After consultation with the public and refining the scope and parameters, the Cities would need to work with local registry agents in Alberta or Manitoba Public Insurance to establish and implement the administration requirements of the new Levy, making adjustments as necessary over time to meet the changing budgetary needs of the municipal transit agencies.

237: Province of Alberta, 2023b; Province of Manitoba, 2023
238: Cooper et al., 2022

Revenue Potential

● FULLY MEETS OBJECTIVE

Since a Vehicle Levy requires legislative amendments, the exact fee that the Cities would be able to charge and associated flexibility is unknown. Rates could be changeable each year as operating budget needs change, indexed to inflation, locked in at a nominal price, or set to some other measure. Even a nominal rate has revenue potential that is comparable to other tools in this report, while a similar levy to the 2024 rate in Montréal ($59.00) on the current vehicle population in Calgary could generate just under $60 Million. Using the same rate, approximately $42.1 Million could be generated from Vehicle Levies in Edmonton.[239] No data on the vehicle population in the City of Winnipeg could be found for generating revenue estimates, but given the high auto mode share and relative budgetary need of Winnipeg Transit, a Vehicle Levy could have moderate revenue potential.

Alignment with City Objectives

● FULLY MEETS OBJECTIVE

A Vehicle Levy aligns with many of the Prairie Cities' organizational targets and objectives, including key directions in Calgary's *Municipal Development Plan* and Big City Moves in Edmonton's *City Plan* for land use and mobility by supporting public transit service and disincentivizing vehicle ownership.[240] A Vehicle Levy with revenue earmarked for transit operations also aligns with many of *OurWinnipeg* 2045's environmental resilience objectives by prioritizing sustainable transportation as the mobility options of choice. It also has the potential to support Policy 2.7 to reduce road congestion as Winnipegers may opt to limit the number of vehicles registered in their household, and thereby decrease the number of cars operating on Winnipeg roadways.[241]

A Vehicle Levy and other transportation demand management tools may also indirectly impact urban form as residents of the Prairie Cities seek to reduce their transportation costs and switch to transit and active transportation.[242] This shift to other modes may create long-term pressures for land use changes including the creation of complete communities where residents are able to run daily errands without the use of a car. This would directly work toward the goals and objectives of the City of Winnipeg's *Complete Communities 2.0* by providing necessary urban structure support in mobility through improving transit service, while long-term pressures for land use change could create demand for infill and intensification within existing communities.[243]

239: Estimate derived using 2020 vehicle population data from the Province of Alberta
240: City of Calgary, 2020; City of Edmonton, 2020a
241: City of Winnipeg, 2022a
242: Cooper et al., 2022
243: City of Winnipeg, 2022b

Risk

● FULLY MEETS OBJECTIVE

While dependent on the scope, parameters and actual fee associated with a Vehicle Levy, there can be expected to be minimal political and economic risk. Taxes that represent a minimal cost burden to taxpayers are generally more palatable than those with higher fees and could be more politically popular. However, a Vehicle Levy as a surcharge to the existing vehicle registration fee could carry moderate political risk in Winnipeg as the Province of Manitoba removed a fee increase in 2020 that was enacted by a previous political administration.[244] Despite the fact that a lower fee for a Vehicle Levy could be more palatable and politically popular than other revenue tools with higher fees, it is uncertain if the Province would consider tabling legislation for the City of Winnipeg to add a surcharge to vehicle registrations to fund transit operations.

At the same time, the economic flexibility of the Vehicle Levy is dependent on its scope and parameters. It could present low economic risk if designed and implemented with means to grow over time by either being indexed to inflation or with permissions to be adjusted year to year to cover higher or lower transit operating costs.

244: Province of Manitoba, 2020

Alternative Revenue Tool C: Transportation Network Company (TNC) Fee

What is it?

A flat or variable fee charged to TNCs (ride hailing companies) on a per ride basis with revenue dedicated to transit operations. The City of Chicago levies TNC fees targeted toward reducing congestion by incentivizing shared trips and public transit use. The fee levied can range from $0.55 to $8.00 per trip. Meanwhile, TNCs in Seattle are subject to a $0.10 surcharge with revenue directed to incentives for drivers of wheelchair accessible vehicles, while a $0.08 fee is levied to cover the cost of enforcing and regulating TNC licensing. An additional $0.57 fee is charged to support affordable housing near transit, a streetcar line and other goals. These fees add up to $0.75 per trip, a charge that is unlikely to deter many TNC users.[245]

Why look at this tool?

TNCs could be implemented in the near-term with no legislative changes required from the Province and low ongoing administrative costs, and there are also many North American precedents. It also responds to a significant transportation industry disruption from ride hailing companies that have increased traffic congestion in cities.[246] The City of Winnipeg in particular has also experienced a recent, significant increase in the use of ridehailing companies compared to taxis. In 2020, just 10% of vehicle for hire trips were taken by TNCs, but this rate grew to two-thirds by 2022.[247]

Mode Share

◐ PARTIALLY MEETS OBJECTIVE

TNC Fees may nudge users toward public transit, walking and cycling, increasing the mode share of these travel options while also raising revenue for public transit operations. However, TNCs are an attractive alternative to private car ownership despite their drawbacks such as increased congestion. If TNCs influence citizens to abstain from personal vehicle ownership, they could support transit and active transportation uptake. Yet, increasing the cost of using TNC services could disincentivize their use and cause residents of the prairie cities to turn to their own vehicles. If the Cities were to pursue a TNC Fee to generate revenue for transit, the structure and charge itself must be set at the right level so that the net impact on travel choices is positive.[248]

245: Cooper et al., 2022
246: Diao et al., 2021
247: MacLean, 2023
248: Cooper et al., 2022

Equity

◐ PARTIALLY MEETS OBJECTIVE

A TNC Fee needs to be structured carefully so that it can support equity. Generally, a TNC Fee used to generate revenue for transit can be considered equitable because it raises funds for a service that is heavily relied on by equity-deserving communities. A TNC Fee can also use trip location data to reduce fees in low-income areas and raise them in others such as the airports, downtowns, or entertainment areas. At the same time, a TNC Fee could increase the burden of these user fees, especially for low-income individuals who may not be able to afford a personal vehicle and are therefore more likely to rely on TNCs for some trips.[249]

Implementation

● FULLY MEETS OBJECTIVE

Each of the prairie cities currently collect licensing fees ranging from $5,000 to $20,000 in Calgary, $3,106 to $20,706 in Edmonton, and $25,000 to $65,000 in Winnipeg depending on the size of the TNC per local bylaws. All three cities also charge a small per trip fee to cover the costs of administering the licensing programs.[250] In Calgary, TNCs must also pay $15 per associated driver to use their app on Calgary roads.[251]

To add a TNC Fee with revenue dedicated to transit, amendments would be required to the *Livery Transport Bylaw 20M2021* in Calgary, *Bylaw 17400 - Vehicles for Hire* in Edmonton, and *Vehicles for Hire By-law - 129/2017* in Winnipeg.[252] If the cities sought to implement a more complex TNC Fee, such as one that incorporates the equity considerations discussed above, there would be moderate implementation costs associated with system design and research. The cities would also need to indicate in the bylaw amendments that revenue from the new fees would be for the purpose of funding public transit operations. Otherwise, revenue from the new fees may only go to program administration or general revenue in annual budgets. Once established, a TNC Fee would have low administration and maintenance costs over the long term, especially considering that the necessary structures to collect revenue are already in place.[253]

249: Cooper et al., 2022
250: City of Calgary, 2021c; City of Edmonton, 2023b; City of Winnipeg, 2017
251: City of Calgary, 2021c
252: City of Calgary, 2021c; City of Edmonton, 2023b; City of Winnipeg, 2017
253: Cooper et al., 2022

Revenue Potential

◐ PARTIALLY MEETS OBJECTIVE

Without detailed trip data from ridehailing companies in the prairie cities, it is difficult to predict the amount of revenue that they could generate due to changing travel patterns from the COVID-19 pandemic. Prior to the pandemic, annual TNC Revenue for the City of Chicago was expected to be $40 Million in 2020, while the City and County of San Francisco anticipated $32 Million from their TNC Fees. Revenue from a TNC Fee could be expected to be moderate, assuming trip volumes eventually recover and rate structures are similar to the precedents listed above.[254] This could especially be true in Winnipeg where the use of ridehailing companies has been increasing.[255]

Alignment with City Objectives

● FULLY MEETS OBJECTIVE

TNC Fees have the potential to support numerous organizational objectives and targets of the prairie cities. In Calgary, a TNC Fee would work toward several of the *Municipal Development Plan's* City-Wide policies related to transportation and are aligned with the City's *Council Policy CFO010 - User Fees Policy*.[256] In Edmonton, a TNC Fee would similarly support multiple Big City Moves targets related to transportation in the *City Plan*, and align with *Council Policy C624 - Fiscal Policy for Revenue Generation*.[257] Further, TNC Fees are well aligned with *OurWinnipeg's* objectives and targets related to transportation.[258] No matter how TNC Fees are implemented on the prairies, they must be structured in a way so that they improve travel choices and incorporate equity considerations to fully align with organizational objectives.[259]

Risk

◐ PARTIALLY MEETS OBJECTIVE

TNC Fees are likely to have little political risk as there are already necessary implementation structures in place that can support this revenue tool in the near term. However, TNC Fees are vulnerable to economic risk because they rely on the operation of a private sector service provider. If TNCs stopped operating in the prairie cities, their transit agencies would be left with an unexpected revenue gap.[260] As such, operating in Calgary, Edmonton and Winnipeg must be continually attractive and viable to the companies, and close collaboration with representatives from TNCs in implementing this fee would be required.

254: Cooper et al., 2022
255: MacLean, 2023
256: City of Calgary, 2008; City of Calgary, 2020
257: City of Edmonton, 2020b
258: City of Winnipeg, 2022a
259: Cooper et al., 2022
260: Cooper et al., 2022

Policy Recommendations

The City of Calgary should:

- Re-examine the impacts and potential for TNC Fees to be used as a funding tool for Calgary Transit operations, and, if the business case is supportive, subsequently amend Livery Transport Bylaw 20M2021 to allow the City to collect the fees and direct revenue to transit operations;
- Conduct a feasibility study to determine potential options for a vehicle levy as a revenue tool to fund Calgary Transit operations and then, if promising, advocate for enabling legislation from the province; and
- Study different forms of off-street parking taxes and identify the scope and parameters for implementing a version of this tool to fund Calgary Transit operations.

The City of Edmonton should:

- Re-examine the impacts and potential for TNC Fees to be used as a funding tool for Edmonton Transit Service, and, if the business case is supportive, subsequently amend Bylaw 17400 - Vehicles for Hire to permit the City to collect the fees and direct revenue to transit operations;
- Conduct a feasibility study to determine potential options for a vehicle levy as a revenue tool to fund Edmonton Transit Service and then, if promising, advocate for enabling legislation from the Province; and
- Study different forms of off-street parking taxes and identify the scope and parameters for implementing a version of this tool to fund Edmonton Transit Service operations.

The Province of Alberta should:

- Amend the Municipal Government Act to enable Alberta municipalities to fund transit operations through a series of revenue tools. This will allow transit agencies in the province to respond to the changing needs and operating cost drivers of local public transit systems; and
- Advocate to the Federal Government for a tripartite national commission alongside the provinces, local governments and transit agencies to develop a new transit funding model.

The City of Winnipeg should:

- Undertake a study of the impacts and potential for TNC Fees to be used as a funding tool for Winnipeg Transit, and, if the business case is supportive, subsequently amend Vehicles for Hire By-law - 129/2017 to permit the City to collect the fees and direct revenue to transit operations;
- Conduct a feasibility study to determine potential options for a vehicle levy as a revenue tool to fund Winnipeg Transit operations and then, if promising, advocate for enabling legislation from the Province; and
- Study different forms of off-street parking taxes and identify the scope and parameters for a implementing a version of this tool to fund Winnipeg Transit operations.

The Province of Manitoba should:

- Amend the City of Winnipeg Charter Act to enable the City of Winnipeg to fund transit operations through a series of revenue tools. This will allow Winnipeg Transit to respond to the changing needs and operating cost drivers associated with providing local transit services;
- Reinstate the Provincial subsidy of 50% of the operating costs net of fare revenue for new and expanded transit services; and
- Advocate to the Federal Government for a tripartite national commission alongside the provinces, local governments and transit agencies to develop a new funding model for transit.

Photo source: Tianlei Wu

6C Toronto

Toronto, Ontario

Land Acknowledgment

The City of Toronto is located on the traditional territory of many nations including the Mississaugas of the Credit, the Anishnabeg, the Chippewa, the Haudenosaunee and the Wendat peoples and is now home to many diverse First Nations, Inuit and Métis peoples. The City is covered by Treaty 13 signed with the Mississaugas of the Credit, and the Williams Treaties signed with multiple Mississaugas and Chippewa bands.

Toronto Overview

Toronto, ON is Canada's largest city by population and is home to over 2.7 Million people. The Greater Toronto Area (GTA), including the City of Toronto and regional municipalities of Durham, Halton, Peel and York, has a collective population of over 6 Million people.[261] The Toronto Transit Commission (TTC) is a City agency responsible for establishing, operating and maintaining the local public transit system in the City of Toronto, though some services extend into Peel Region and York Region.[262] The TTC operates the largest transit system in Canada on 3 rapid transit lines including the subway network with 70 stations, 18 streetcar routes and 160 bus routes, including express bus routes. [263] The TTC also operates Wheel-Trans, a door-to-door transit service for individuals with accessible transportation needs. Significantly, over 95% of the City's population lives within a five-minute walk of transit service during peak hours.[264]

The City of Toronto has one of the highest commute mode shares for sustainable modes of transportation in all of Canada. Almost 36% of commuters travel to their daily place of work by public transit, walking or cycling, while 61% drive. 3.2% of commuters travel by other modes.[265]

261: Statistics Canada, 2022e
262: City of Toronto, 2023b
263: TTC, 2020
264: TTC, 2020
265: Statistics Canada, 2022e

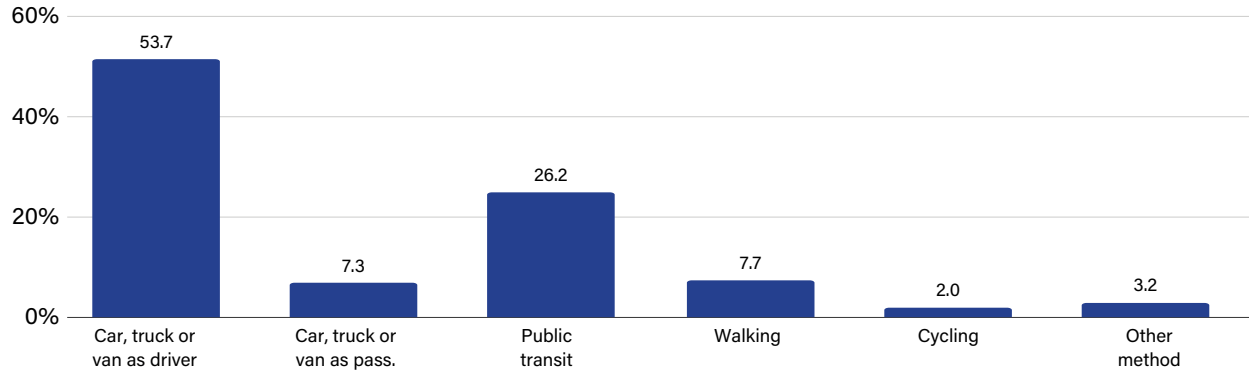


Figure 19: Commute Mode Share for the City of Toronto, ON.[266]

Transportation Goals & Objectives

Toronto's *Official Plan* outlines numerous objectives for the development of the City that are crucially dependent on a fast, convenient and high-quality transit system connecting growth areas. Specifically, Chapter 1 of the plan envisions a network where public transit is universally acceptable and buses and streetcars are an attractive choice for travel, and a system that links areas of housing and employment while also providing access to healthcare, goods and services, recreation and education.[267] *TransformTO* is the City's climate strategy that aims for a 65% reduction in greenhouse gas emissions from 1990 levels by 2030, and an overall 45% reduction by 2025. This strategy also has a goal for 75% of commute trips to school or work under 5km to be taken by public transit, walking or cycling by 2030.[268]

Specific objectives for operations of the local transit system are outlined in the TTC's 2019 5-year *Service Plan and 10-year Outlook*. Through five pillars of opportunity, the TTC aims to enhance the transit network, enhance the customer experience at key stop areas, improve service reliability, prioritize surface transit, and accelerate integration with regional transit partners and complimentary modes of transport. The plan also contains a twenty point action plan for the Commission to improve existing services and incorporate future customers to 2024. Some actions include accommodating population and employment growth, enhancing the streetcar network and improving surface transit schedules.[269] The new 5-year corporate plan and 5-year service plan was introduced in the May 16, 2024 board agenda and contains further planned network expansions such as the opening of rapid transit lines 5 and 6, and implementing the line 3 future busway.

Metrolinx, a provincial transit agency delivering transit expansion projects in the Greater Golden Horseshoe Region, has a regional transportation plan that includes the City of Toronto. The plan aims for 25% of all trips in the region to be taken by walking, cycling and transit, and for 38% of all residents to be living within walking distance of transit.[270] Metrolinx is also delivering several rapid transit projects within the City of Toronto including the Eglinton Crosstown LRT (Line 5), Finch West LRT (Line 6) and the Ontario Line.

266: Statistics Canada, 2022e
267: City of Toronto, 2022
268: City of Toronto, 2021a
269: TTC, 2020
270: Metrolinx, 2018

Funding Sources & Emerging Challenges

Current Operating Costs & Revenue Tools

As noted in the 2023 *City of Toronto Budget Summary*, the cost to operate the TTC in 2023 was forecasted to be $2.3 Billion.[271] Out of all expenses in the operating budget, public transit is the second highest expenditure behind cost-shared social services.

Table 12: Top 5 Operations Expenditures in the City of Toronto's 2023 Budget[272]

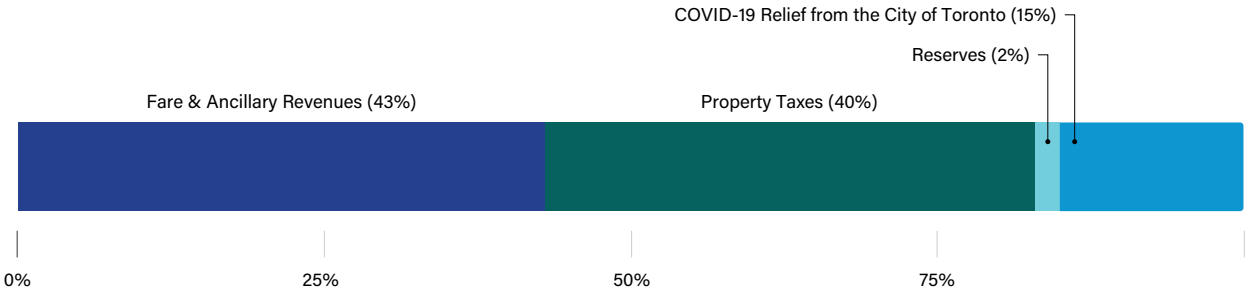
Rank	Service	Expenditure	Percentage of Overall Budget
1	Cost-shared Social Services	$4.47 Billion	27.7%
2	Toronto Transit Commission	$2.38 Billion	14.7%
3	Emergency Services	$2.17 Billion	13.4%
4	Rate Programs	$2.04 Billion	12.6%
5	Financing	$1.20 Billion	7.5%

The *City of Toronto Act* outlines the revenue tools that the City and its agencies can use to raise funds for public services. Of the tools available, the City currently collects property taxes, land transfer taxes and third party signage taxes. The City is also able to levy a tax on the sale of tobacco and alcohol, entertainment and amusement taxes, vehicle levies, off-street parking taxes, and user fees on public services among other options.[273] The City used vehicle levies as a means to generate revenue until 2010, but a previous Council voted to repeal the charge. In addition, the Act previously allowed the City to use road pricing, and a previous City Council endorsed a plan to add road tolls to the Don Valley Parkway and Gardiner Expressway with direction to further study congestion pricing. However, the Province subsequently denied implementation of these tools based on other permissive criteria in the *City of Toronto Act* after it gained traction at City Council.[274]

271: City of Toronto, 2023a
272: City of Toronto, 2023a
273: City of Toronto, 2021b
274: TTC & French, 2023

Currently, the TTC uses fare revenue, property taxes, advertisements and retail to fund the operating costs of the local transit system.

Figure 20: TTC revenue sources to fund the 2023 operating budget.[275]

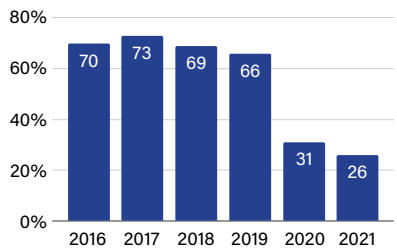


Operating Cost Drivers

The TTC's operating expenses continue to increase from factors such as driver wages and inflation on the prices of fuel, population growth and immigration, and additional staffing required for future transit service expansions. The TTC also highlighted that emerging concerns related to safety on the transit system have emerged and resulted in additional operating cost pressures from hiring new special constables and the deployment of outreach specialty teams on the subway system. In 2017, the system's revenue-cost ratio was 73%, where almost three-quarters of all operating revenue was generated by fares and ancillary sources. This level of fare revenue compared to the operating cost of a transit system was unheard of anywhere else in North America.[276] However, the increasing costs from some of the above factors have resulted in a steady decline in the revenue-cost ratio in recent years, reaching a low of 26% in 2021 as a result of the COVID-19 pandemic. The revenue-cost ratio is starting to recover, but has still not yet reached pre-pandemic levels. In addition, the number of revenue hours per capita has not grown substantially.[277]

275: TTC, 2023a
276: TTC & French, 2023
277: CUTA, 2022

TORONTO



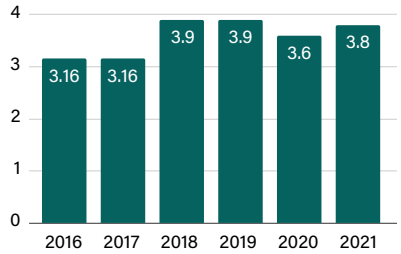


Figure 21 (above left ↖): TTC Revenue / Cost Ratio[278]

Figure 22 (above right ↗): TTC Revenue Hours / Capita[279]

Rapid transit lines 5 and 6 are scheduled to open in 2024, and these expansions will create additional cost pressures for the TTC. However, up to $1.2 Billion in provincial operating supports was recently granted to the City of Toronto as part of the Ontario-Toronto New Deal. Through the Subway and Transit Safety, Recovery and Sustainable Operations Fund as part of the New Deal, the TTC will receive $110 Million per year to partially subsidize the first three years of operation (2024-2027) on Lines 5 and 6.(Citation 288) This is welcome support from the Province, but the TTC will have to absorb operating costs beginning in 2027.

In addition, the TTC continued to face operating pressures in 2022 and 2023 as a result of lost fare revenue from the COVID-19 pandemic. This resulted in a $478.5 Million shortfall from both years combined that had to be balanced using City reserves. Additional budgetary pressures of $111 Million and $44 Million are forecasted for 2024 and 2025 respectively and do not include any system expansions or service improvements.

278: The number of revenue service hours provided per person in the city. (CUTA, 2022)

279: Total operating revenues divided by total operating costs. (CUTA, 2022)

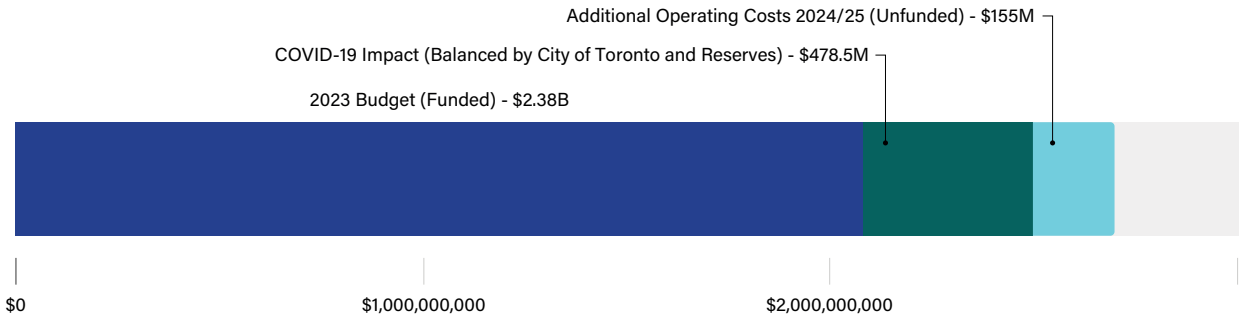


Figure 23: 2023 TTC Operating Budget & Financial Pressures[280]

Significantly, the TTC had to reduce the frequency of off-peak services on the Toronto Subway and increase fares by $0.10 on single tickets to meet growing operating cost pressures in the 2023 budget.[281] If the TTC is required to continually raise fares while cutting service, public transit in Toronto may fall over a fiscal cliff. Riders may be discouraged from using the service, leading to further cuts in a never ending cycle.[282] The TTC must maintain existing service while expanding the transit network to meet the needs of the City of Toronto's growth and development, as well as climate targets in TransformTO. The Province of Ontario has significant system expansions planned and under construction such as the Ontario Line and extensions of Lines 1, 2 and 5 that will indeed transform how Torontonians get around. However, the TTC will be tasked with funding the operations of these improvements as part of the integrated network, and will add new pressures to the operating budget. A new funding model for transit operations, including new revenue tools, is needed that reduces reliance on farebox revenue to cover operating costs.[283]

280: TTC, 2023a
281: TTC, 2023a
282: CUTA, 2021
283: TTC & French, 2023

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Based on the revenue tool screen questions in ***Table 13***, this paper examines Off-Street Parking Taxes, VKT Taxes and City Sales Taxes as potential revenue tools to fund transit operations in Toronto. These three tools are examined further to determine if they fully meet, partially meet or do not meet the study objectives, as summarized in ***Table 14***. Prior studies conducted on dedicated revenue tools for transit in Toronto have looked at vehicle levies and revenue tools tied to the economic trends and broader consumption that may grow more over time to meet the changing budgetary needs of a growing city, including public transportation. As such, this project investigated a possible City Sales Tax to generate revenue for public transit operations in Toronto.

Revenue Tool Screen

Table 13: Revenue Tool Screen for Toronto, ON

Revenue Tool	Benefit Area Tax	Real Estate Opportunities	Off-Street Parking Tax	Motor Fuel Tax	Vehicle Levy	VKT Tax	City Sales Tax	EV Charging Tax	TNC Fee
Is this tool already used to generate revenue for transit operations?	No	No	No	No	No	No	No	No	No
Has the tool been assessed in the region?	Yes	No	Yes	No	Yes	Yes	Yes	No	Yes
Can the tool be implemented under existing legislation?	No	No	Yes	No	Yes	Yes	No	No	Yes
Does this tool have interdependencies with specific programs or tools?	Yes	Yes	No	Yes	Yes	Yes	No	Yes	Yes
How successful will the tool be given the context of the region (e.g. geography, transportation trends etc.)?	Low	Low	High	Low	Low to Med	High	High	Low	Med
Was this tool a key topic of discussion with agency staff during engagement?	No	No	Yes	No	Yes	Yes	Yes	No	No

TORONTO

Table 14: Multiple Account Evaluation of Revenue Tools Proposed for Toronto Transit Commission

Objective	Off-street Parking Tax	VKT Tax	City Sales Tax
Mode Share	●	●	◐
Equity	◐	●	◐
Implementation	●	○	○
Revenue Potential	●	●	●
Alignment with City Objectives	◐	●	◐
Risk	◐	◐	◐

● fully meets ◐ partially meets ○ does not meet

Alternative Revenue Tool A: Off-Street Parking Tax

What is it?

A tax levied on off-street, privately owned and operated parking sales or spaces. Many municipalities and regional transit agencies use parking taxes under two different schemes to generate revenue for public transit. As part of its funding portfolio, TransLink collects a tax on parking sales in parking spaces that are privately owned and operated across Metro Vancouver. In 2018, the agency's taxation authority was increased from 21% to 24% and was estimated to generate $87 Million in 2023.[284] In addition, the City of Montréal levies a tax on the surface area of off-street parking on non-residential land parcels as a surcharge on property taxes. Rates range from $6.25 per square metre to $12.45 per square metre for interior parking lots, and $2.00 per square metre to $50.10 per square metre depending on the area of the city. Revenue generated from this tax on off-street parking spaces is earmarked for the City's annual transfer to the Autorité régionale de transport métropolitain (ARTM), the regional transportation planning and funding agency.[285]

Why look at this tool?

Off-Street Parking Taxes contribute to transportation demand management and can have a positive impact on influencing sustainable travel choices. Expanding parking pricing could help the City of Toronto reach mode share targets in *TransformTO* and support mixed use development patterns envisioned in the *Official Plan*. There are also Canadian precedents for this tool along with a clear, intuitive policy rationale that can be easily communicated, while the City of Toronto has the legislative authority to establish a levy on off-street, non-residential parking spaces.[286]

Mode Share

● FULLY MEETS OBJECTIVE

In North America, abundant free or cheap parking is often expected, but research has shown that inefficiently priced parking and unnecessary parking minimums have led to undesirable outcomes for cities.[287] Off-Street Parking Sales Taxes could generate revenue for transit while simultaneously reducing car use in Toronto. If drivers want to avoid paying higher parking fees with taxes, they could choose to use other modes such as public transit or active transportation.[288]

If the City chose to pursue an Off-Street Parking Levy as an additional mill rate to property taxes, property owners who want to avoid paying the levy on the space could reduce the parking supply on their lot by repurposing spaces to other uses, including new mixed-use development that supports sustainable mobility. Combined with the City's recent abandonment of parking minimums which could lead to less parking spaces being constructed in new developments, this tool could result in a future built form that provides drivers with less choice for parking their vehicle and encourages them to take transit, walk or cycle.

284: TransLink, 2023
285: Ville de Montréal, 2023a
286: Province of Ontario, 2006
287: Shoup, 2011
288: Cooper et al., 2022

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Equity

◐ PARTIALLY MEETS OBJECTIVE

Like other revenue tools that add costs to drivers, an Off-Street Parking Sales Tax will have different impacts on different households even if incomes are the same. The relative burden of an Off-Street Parking Sales Tax increases as incomes decrease. These vertical equity concerns could be partially mitigated with a low-income parking pass program, a solution that has been implemented in Seattle, but is unlikely to apply to privately owned and operated parking in Toronto.[289]

Meanwhile, there are no perceivable equity concerns to communities at large if the City of Toronto was to introduce an Off-Street Parking Levy on the number of spaces on a non-residential property as an additional mill rate to property tax. There could be more significant impacts on smaller businesses and property owners, but a minimum area threshold could be established to protect these stakeholders. In addition, consideration could be given to spaces dedicated to carpooling, park-and-ride, carshare companies, and expectant mothers, or provide accessible parking or electric vehicle charging.[290] There could also be marginal impacts on some property owners that could have smaller spiraling effects like increases in the cost of higher retail prices.[291] Geographic considerations through the implementation of graduated rates should also be considered as this tool's impact would vary significantly across Toronto.[292] Finally, property owners could be given the option to repurpose parking stalls for other uses such as community spaces or housing to avoid paying the Levy.

289: Cooper et al., 2022
290: City of Toronto, 2023c
291: Litman, 2022
292: City of Toronto, 2023c

Implementation

● FULLY MEETS OBJECTIVE

Implementing off-street parking taxes will be demanding from an implementation perspective and could require provincial legislative amendments to the *City of Toronto Act* depending on the scheme chosen by the City. A previous report suggested that implementation of an off-street parking tax could take between twelve and eighteen months including the development of an inventory and program criteria, making modifications to the billing system, and testing and implementing the fee with notice to property owners.[293]

An Off-Street Parking Sales Tax is not permitted under the *City of Toronto Act* and would require substantial legislative amendments from and consultation with the Provincial Government. In addition, a licensing process for parking vendors must be created, and regulations established for informational requirements like reporting, record keeping and auditing. More consideration would be required for how revenue under this scheme would be collected, but all aspects involve costs for initial introduction and ongoing management.

On the other hand, if the City were to introduce an Off-Street Parking Levy on non-residential parking spaces as an additional mill rate to property tax, no new legislative permissions would be required. However, the tax should be based on the total area of a property used instead of a rate per parking stall, whereas a levy based on the number of stalls could be viewed as an indirect tax, which is not permitted under the *City of Toronto Act*.[294] Once established, ongoing management of this scheme is expected to be minimal as data such as the inventory of parking spaces would live in property records and revenue would be collected once per year when property taxes are due.

Revenue Potential

● FULLY MEETS OBJECTIVE

Revenue from Off-Street Parking Sales Taxes in privately owned facilities could be low to moderate in the context of the City of Toronto because unpaid parking spaces would not be captured. Revenue would also fluctuate alongside other broader transportation demand patterns such as the number of car trips and locations of trip generators.[295] This gives Off-Street Parking Taxes similar reliability challenges to fare revenues and TNC Fees.

If the City were to introduce an Off-Street Parking Levy on parking spaces in Toronto, the TTC could expect significant, predictable revenues for funding transit service. Depending on how rates are set on paid and unpaid parking spaces, a previous study of revenue options for Toronto found that the City could collect between $191-$575 Million each year.[296] Even considering potential exemptions, this represents a significant amount of revenue that could be earmarked for TTC service.

293: City of Toronto, 2023c
294: City of Toronto, 2023c
295: Cooper et al., 2022
296: City of Toronto, 2021b

TORONTO

Alignment with City Policies & Objectives

◐ PARTIALLY MEETS OBJECTIVE

Off-Street Parking Taxes support numerous parking policies in the *Official Plan* including Policy 8 of Chapter 2.2.1 to discourage all-day parking in Downtown Toronto, and Policy 13b of Chapter 2.2.4 by encouraging new development in employment areas to take place in forms and densities that support transit.[297] In addition, tools such as Off-Street Parking Sales Taxes that disincentivize driving and influence changes in travel patterns to transit, walking and cycling are well aligned with climate targets for transportation in *TransformTO*.[298] Further, if the City permitted zoning changes on parcels to allow infill housing on non-residential properties where there are currently surface parking spaces and gave property owners the option to develop these areas of the parcel, this tool could support land use policy objectives in the *Official Plan*. Some policies include Policy 6b of Chapter 2.2.3 for creating housing options in the community along avenues, and numerous policies in Chapter 2.3.1 focused on healthy neighbourhoods.[299]

Despite being relatively well-aligned with organizational objectives, an Off-Street Parking Levy on non-residential parking spaces would be an additional commercial property tax. New forms of commercial property taxes are inconsistent with some City policies to reduce the impact on assessment related increases on commercial properties.[300] As such, this tool can only be considered to partially meet this objective.

Risk

◐ PARTIALLY MEETS OBJECTIVE

There is some political risk in establishing an Off-Street Parking Sales Tax in the City of Toronto as legislative changes to the City of Toronto Act would be required. This scheme would also be vulnerable to economic disturbances that reduce the number of trips that Torontonians take, leaving the TTC without a source of operating funding. However, a non-residential Off-Street Parking Levy that is added onto property tax would come with minimal political or economic risk. No legislative changes to the City of Toronto Act would be required and this scheme would have more predictable and stable revenue.

297: City of Toronto, 2022
298: City of Toronto, 2021a
299: City of Toronto, 2022
300: City of Toronto, 2021c; City of Toronto, 2023c

Alternative Revenue Tool B: Vehicle Kilometres Travelled (VKT) Taxes

What is it?

Drivers are levied a fee that is dependent on the distance that they travel. VKT Taxes can operate in a variety of ways and are also known as mobility pricing, congestion pricing, decongestion pricing, distance-based charging, mileage based user fees and road use charging. London, UK has used VKT Taxes among other road based charges to fund a significant portion of Transport for London's operating costs. In the latest annual budget, £3.0 Billion - or one-third - of all operating funding for Transport for London was sourced from road network use charges.[301] Meanwhile, New York, NY is set to be the first jurisdiction in North America to implement cordon congestion pricing, a form of VKT Tax, after recently receiving approval from the state legislature and federal government. The scheme in New York will charge drivers up to $23.00 per day to enter Lower Manhattan and is expected to generate $1.0 Billion in revenue to fund mass transit.[302]

Why look at this tool?

A VKT Tax is an ideal tool for an equitable user fee on road usage with a clear, intuitive policy rationale that can be easily communicated. There are also numerous secondary policy options that can be considered in the implementation of a VKT Tax, and it is seen in many jurisdictions as the future of transportation funding. The City of Toronto also previously explored and proposed road tolls, a closely related revenue tool, for the Don Valley Parkway and Gardiner Expressway.

Mode Share

● FULLY MEETS OBJECTIVE

By accurately pricing road usage, a VKT Tax sends a price signal to drivers and encourages more efficient travel choices. Single-occupancy car trips impose some of the highest collective external costs including vehicle emissions, deterioration of roads and highways, public safety and time spent in congestion.[303] However, the personal costs to drivers are not always reflected in the shared burden of this mode of travel, and the series of travel choices could look different if road use was priced through fair and efficient means. A VKT Tax would give the City of Toronto an opportunity to recapture both the direct costs of driving at the municipal level and also the indirect, external costs such as greenhouse gas emissions from tailpipes, public safety (car accidents), and congestion.[304]

A VKT Tax could also influence land use changes and development that supports shorter trips and an overall shift to sustainable modes. By implementing a cost to travel further, demand for homes and services in different parts of the city could reasonably increase and spur mixed-use development in more neighbourhoods.

301: Transport for London, 2023a
302: Ley, 2023; Butera, 2023
303: Cooper et al., 2022
304: Haines & Burda, 2016

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Equity

● FULLY MEETS OBJECTIVE

A well-structured VKT Tax could improve current inequities in the local transportation system including between individual drivers, and drivers and those using other modes of transportation. A VKT Tax in Toronto would be equitable because it charges road users directly for congestion and roadway costs that they impose.

Opponents of VKT Taxes often suggest that drivers with long commutes will be unfairly penalized. However, people with higher incomes typically drive more at congested times of day. As such, a VKT Tax that focuses on congestion and road demand could be more equitable than one that charges the same rate irrespective of when people drive.[305] It could also yield higher revenues than required to fund some alternative transportation. A 2015 report to the City of Toronto's Executive Committee that proposed road tolls for the DVP and Gardiner Expressway would result in a surplus that could be used to fund public transit.[306] Low-income and equity-deserving communities have a significantly higher reliance on public transit, and would therefore benefit from a VKT Tax that generates revenues to improve their mobility options. Furthermore, low-income people who must drive can also be supported by exemptions built into a VKT Tax program similar to tax credits already used for Ontario sales taxes, sales tax on energy and property taxes.[307]

Another important equity consideration for VKT Taxes is the quality of alternative travel options along corridors or within areas where such a fee is levied. The previous road toll scheme proposed for the Gardiner Expressway followed the direct path of the Lakeshore Line on the GO Train, presenting a viable alternative to driving along this corridor. However, the City of Toronto has the largest proposed capital program for transit in all of Canada valued at over $37 Billion with many significant system expansions included.[308] Realizing the system expansion plans and operating them with revenue from a VKT Tax alongside other capital improvements in active transportation infrastructure for walking and cycling would present Torontonians with a multitude of viable alternatives to driving and satisfy this concern.

305: Haines & Burda, 2016
306: City of Toronto, 2015
307: Haines & Burda, 2016
308: TTC, 2021

Implementation

○ DOES NOT MEET OBJECTIVE

The *City of Toronto Act* does permit the City to toll highways and roads but only within special permissions and a tolling scheme must meet criteria prescribed by the Province. These permissions and criteria include defining the portions of highways and roads that would charge a toll to drivers.[309] However, there is no explicit language pertaining to broader congestion pricing schemes and legislative amendments are likely required.

Beyond obtaining legislative amendments, the functional design of a VKT Tax would need to be decided through extensive consultation with other municipal and regional stakeholders. If the chosen design is a zone or cordon system, the City would need to construct or affix necessary infrastructure and technology such as overhead gantries and cameras. The City would also need to establish an operations and oversight team to manage the VKT Tax system, and undertake more public outreach to inform drivers of how the system operates, to opt-in and manage accounts, and fees are assessed.[310] Once implemented, the use of information technology means much of the ongoing program administration can be automated and supported by staff to respond to issues and customer concerns.

One final consideration for a VKT Tax program in Toronto relates to the City's geographic location within the Greater Golden Horseshoe region. A VKT Tax on vehicles in Toronto alone could affect economic activity in the City compared to other municipalities in the region as drivers could simply choose to end their trip and access goods and services outside of zones where the tax is charged. In addition, severe congestion does not only occur on roadways in Toronto but across the entire region on provincial highways.[311] Consultation with Metrolinx and the Province is recommended to determine if a regional VKT Tax may be more appropriate before proceeding with a program solely for the City of Toronto.

Revenue Potential

● FULLY MEETS OBJECTIVE

There is considerable revenue potential from VKT Tax in Toronto and the amount of funds that could be generated are based on the scope and parameters of the program. A previous study found that a VKT Tax under a cordon pricing program could generate between $89 Million and $377 Million per year. Once established and implemented, a VKT Tax would present a moderately predictable and stable source of revenue for the TTC's operating funding. In addition, a range of rates could be applied to different types of vehicles such as passenger vehicles and commercial trucks, and a VKT Tax will continue to collect revenue as long as drivers use roads in the City.[312] Some decline may be expected over time as travelers take charges into consideration when making long-term decisions such as where to live.[313]

309: City of Toronto, 2016b
310: City of Toronto, 2016b
311: Amborski, 2017
312: Cooper et al., 2022
313: Litman, 2022

TORONTO

Alignment with Regional Objectives

● FULLY MEETS OBJECTIVE

A VKT Tax is well aligned with the City of Toronto's local transportation and land use objectives. A VKT Tax would influence a shift from driving to alternative transportation modes including transit, walking and cycling, and would reduce emissions from the transportation system. These factors alone support the *TransformTO* target to have 75% of all trips to school and work under 5km taken by transit, walking and cycling, and increase bus and streetcar service levels to encourage low-carbon sustainable mobility.

A VKT Tax with revenue dedicated to transit service would also support numerous land use policies and strategies in Chapter 2 of the *Official Plan* - Shaping the City. The tax could drive demand for high-density, mixed use development in close proximity to transit. This factor alone would support Policy 2b of Chapter 2.2, which states that growth will be directed to centres, avenues, employment areas and downtown to concentrate jobs and people in areas well served by surface transit and higher-order transit stations.

Risk

◐ PARTIALLY MEETS OBJECTIVE

A VKT Tax is adaptable because rates can be set by policy according to financial need and economic capacity.[314] This renders the tool highly flexible to changing economic conditions and cost pressures associated with operating Toronto's transit system. On the other hand, a VKT Tax is considerably vulnerable to political risk because the City can only levy tolls on highways and roads with additional permission from the Provincial Government. Beyond tolling highways, there is no explicit language that states that the City could use a broader congestion pricing scheme like a VKT Tax and legislative amendments to the City of Toronto Act would likely be required. Most significantly, a prior proposal for road tolls on the Gardiner Expressway and Don Valley Parkway was subsequently denied by the Province. After further studying the potential impacts and implementation of a VKT Tax, it is recommended that the City undertake an extensive engagement and education campaign to build vital public support that could shape favourable political interest.

314: Cooper et al., 2022

Alternative Revenue Tool C: City Sales Tax

What is it?

A tax levied on the sale of goods and services that is earmarked for transit service. After transit fares, sales taxes are the second largest source of dedicated transit operating funding in the United States.[315] In Seattle, voters agreed to increases in sales taxes for transit expansion and operations on three occasions in 1996, 2008 and 2016, and the current rate is 1.4%.[316] Meanwhile, the Central Ohio Transit Authority generated 42% ($152 Million) of its operating revenue in 2021 for transit services in the Columbus Metropolitan Area from a regional sales tax.[317]

Why look at this tool?

TTC staff stated that new funding tools used that can increase revenue in step with economic growth would be valuable as the system looks to expand over time.[318] In addition, the Province of Ontario already collects sales taxes meaning that there are necessary structures in place for collecting revenue from this tool. There are also strong precedent examples of US jurisdictions using sales taxes to fund public transit. Further, the City's Executive Committee recently passed a motion for City Council to request that the Province amend the City of Toronto Act to be able to implement a Municipal Sales Tax that applies to the purchase of goods and services within Toronto and/or a portion of the existing Harmonized Sales Tax.[319]

Mode Share

◐ PARTIALLY MEETS OBJECTIVE

Sales Taxes would not directly incentivize Torontonians to shift from driving to alternative modes of transportation such as transit, walking and cycling. They are paid at the time of a transaction and are unrelated to travel activity. However, Sales Taxes are considered to at least partially meet this objective because they would create additional revenue for the TTC, which could then use the revenues to increase service levels or expand the transit network making it a more convenient and reliable alternative to driving.

315: Litman, 2022
316: Sound Transit, 2023
317: Central Ohio Transit Authority (COTA), 2021
318: TTC & French, 2023
319: City of Toronto, 2023d

TORONTO

Equity

◐ PARTIALLY MEETS OBJECTIVE

Sales Taxes are considered regressive because they collect a larger share of household income from poorer households than wealthier households.[320] This effect on low-income Toronto households could be partially mitigated by exemptions on necessities or rebate programs.[321] Despite being inherently regressive, Sales Taxes can be considered horizontally equitable because public transit benefits consumers. However, this relationship is relatively indirect as people and businesses who benefit most do not necessarily pay more sales taxes.[322] In addition, residents and businesses with similar incomes would pay similar rates, making this tool horizontally equitable. Further, Sales Taxes would be charged to Torontonians and visitors alike who all contribute to the wear and tear of transportation infrastructure.[323]

Implementation

○ DOES NOT MEET OBJECTIVE

The City of Toronto is not permitted to levy a City Sales Tax within its borders under the City of Toronto Act. Therefore, implementation of this tool relies on enabling legislation from the Province, and would likely need a referendum to get permission from Torontonians to establish the tool. The Province of Ontario already collects an 8% Provincial Sales Tax (PST) on the sale of goods and services as part of the 13% Harmonized Sales Tax (HST). The other 5% of the HST is made by the Federal Goods and Services Tax (GST).[324] Because the HST is a value-added tax, businesses are able to claim any credits for HST included in their own purchases of goods and services, and are only required to remit the net amount to taxing authorities. It would be difficult to remit a transit Sales Tax when there are multiple layers of tax being charged because many businesses operate across Toronto's municipal borders and most purchase goods from within and outside of the City.[325] Therefore, it is likely that the City would need to implement a non-refundable Sales Tax for the TTC.

320: Lederman et al., 2020
321: City of Toronto, 2021b
322: Litman, 2022
323: Lederman et al. (2020) explain how people that live in a jurisdiction with a sales tax and visitors to the same area cannot avoid paying a sales tax.
324: Province of Ontario, 2023b
325: City of Toronto, 2021b

Implementation costs for a non-refundable Sales Tax dedicated to transit operating funding (separate from the HST) would be high due to significant administrative oversight and compliance monitoring required. These supports would likely be needed at either the Municipal, Provincial or Federal level and could therefore require intergovernmental collaboration.[326]

Revenue Potential

● FULLY MEETS OBJECTIVE

The revenue potential of this tool would be relative to the rate set by the City. Sales Tax revenues tend to be relatively stable, but are also tied to trends in consumption. Assuming that the City's population continues to grow, and more people purchase goods and services in the City, revenue could be expected to increase over time. The net revenue that the City of Toronto could expect to generate from a 1% sales tax for the TTC would be upwards of $360 Million.[327] A previous study also found that the City, using sales tax rates between 0.5% and 2.0%, could generate between $125 Million and $515 Million.[328]

Alignment with City Objectives

◐ PARTIALLY MEETS OBJECTIVE

Large Sales Tax differences could influence development to take place between different jurisdictions.[329] However, Sales Taxes levied for public transit like those explored in previous studies for Toronto tend to be set at relatively low rates and would therefore not make any significant impact on future development.[330] In addition, the revenue from this tool would be used to fund public transit operations on the existing and future TTC network, which is part of numerous city building objectives in the *Official Plan*. As such, this tool can be considered to partially meet this objective.

Risk

◐ PARTIALLY MEETS OBJECTIVE

A City Sales Tax with revenue directed to transit operating funding has considerable political risk. Establishing the tax would require a referendum with city voters, which, if passed, would initiate the implementation of the tax rate. However, its fate ultimately rests among politicians because this tool requires approval from elected officials at both the Municipal and Provincial level who could subsequently repeal the tax through a change of government or policy. Meanwhile, a City Sales Tax for funding TTC operations is somewhat vulnerable to economic risk as would be tied to consumption patterns. If the economy entered a period of recession and Torontonians resorted to making less purchases, revenue from the tax could leave the TTC without a significant source of operating funding. However, consumption patterns have typically rebounded quickly from economic downturns in the previous two decades, and revenue could be expected to grow alongside both the economy and the City's population.

326: City of Toronto, 2021b
327: City of Toronto, 2021b
328: City of Toronto, 2016a
329: Litman, 2022
330: City of Toronto, 2016a; City of Toronto, 2021b

Policy Recommendations

The Toronto Transit Commission should:

- Continue to advocate for COVID-19 relief funding from the provincial and federal governments for transit operations while revenue recovers from lingering effects of the pandemic and until either the City is granted permission to use new revenue tools to fund transit operations or a new funding model for transit operations in Ontario between different levels of government is established.

The City of Toronto should:

- Implement a non-residential off-street parking levy as permitted by the City of Toronto Act and dedicate revenue to public transit through enacting bylaws and regulations; and
- Conduct further econometric modelling to build the case for, and consult with local, regional and provincial partners to study the potential impacts of VKT Taxes in the City of Toronto as a revenue tool to fund public transit operations.

The Province of Ontario should:

- Provide the City of Toronto with enabling legislation for a wide variety of revenue tools to enable the authority to respond to the changing operational funding demands of the Toronto Transit Commission; and
- Advocate to the Federal Government for a tripartite national commission alongside other provinces, local governments and transit agencies to develop a new funding model for transit.


Tunney's Pasture
OC Transpo

6D Ottawa

Ottawa, Ontario

Land Acknowledgment

The City of Ottawa is built on unceded Algonquin Anishinabe Territory. The peoples of the Algonquin Anishinabe Nation have lived on this territory for millenia. Their culture and presence have nurtured and continue to nurture this place.

Ottawa Overview

The City of Ottawa is the national capital of Canada and is home to over 1 Million people. Public transit service is operated by OC Transpo, a transit commission owned by the City of Ottawa. OC Transpo operates two LRT lines that serve seventeen stations, an integrated bus network of over 190 routes across the city and a Para Transpo service for registered customers who are unable to use the conventional system.[331] 76.8% of commuters in Ottawa drive or are vehicle passengers, while 11.2% travel by public transit and 11.9% by walking, cycling and other modes. In comparison to the City of Ottawa, the Ottawa-Gatineau region has a slightly higher auto driver commute mode share while less residents carpool, use transit, walk or cycle.[332]

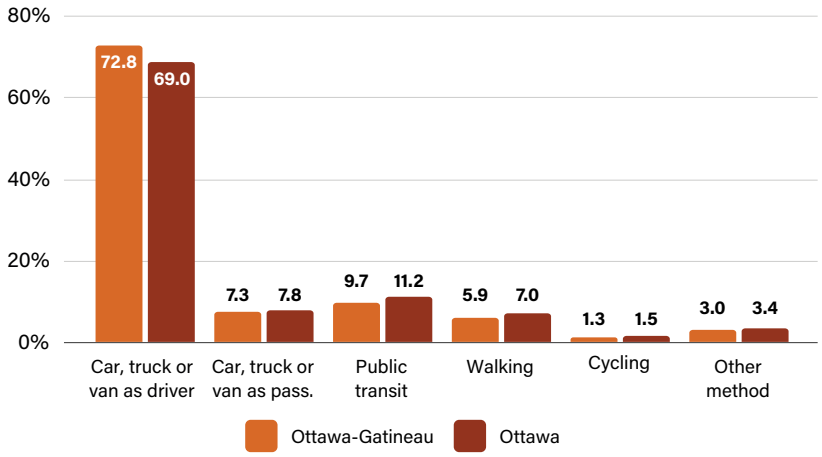

Figure 24: Commute Mode Share in the Ottawa-Gatineau region and City of Ottawa.[333]

331: OC Transpo, 2023
332: Statistics Canada, 2022f
333: Statistics Canada, 2022f

Transportation Goals & Objectives

The City's *Transportation Master Plan* aims to reduce the number of trips taken by car to 59% and for 26% of all trips to be taken by public transit by 2031. The plan also contains several LRT expansion projects, BRT routes and an O-Train extension from Greenboro to Riverside South.[334] A forthcoming update to the *Transportation Master Plan* will contain renewed calls to expand the rapid transit and transit priority network in Ottawa, while prioritizing improvements that meet riders' needs and can attract new customers with an enhanced focus on reliability and accessibility.[335] Meanwhile, *Energy Evolution: Ottawa's Community Energy Transition Strategy* includes direction to realize the concept transit network in the *Transportation Master Plan*, with increased service frequency on the LRT and BRT networks by 2030, and achieve net-zero emissions from transportation by 2050.[336]

Meanwhile, the City of Ottawa's *Official Plan* contains several big policy moves that set direction for the development of the municipality. Big Policy Move 1, focused on new development and land use, contains a target for 60% of all future growth to be accommodated in Ottawa's existing built area, while Big Move Policy 2 targets the majority of all trips to be taken by transit, walking and cycling by 2046. Developing and providing 15-minute communities with high quality, sustainable transportation infrastructure is noted as an essential action to realize these targets.[337]

Funding Sources & Emerging Challenges

Current Operating Costs & Revenue Tools

The cost to operate OC Transpo in 2023 was listed in the City's budget at $706.2 Million and was the second highest of all operating expenses.[338]

Table 15: Top 5 Operating Expenditures in 2023 City of Ottawa Budget[339]

Rank	Service	Expenditure	Percentage of Overall Budget
1	Community & Social Services	$964M	21.6%
2	Transit	$706M	15.8%
3	Water / Sewer / Solid Waste	$589M	13.2%
4	Capital Formation Costs	$403M	9.0%
5	Ottawa Police Services	$397M	8.9%

334: City of Ottawa, 2013
335: City of Ottawa, 2023b
336: City of Ottawa, 2020
337: City of Ottawa, 2022
338: City of Ottawa, 2023a
339: City of Ottawa, 2023a

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Outside of Toronto, the revenue tools available to Ontario municipalities including Ottawa that can be used to fund city and public transit services are governed by permissions in the *Municipal Government Act*. Operating funding for OC Transpo is derived from fares, a dedicated transit levy in property tax, and revenue from miscellaneous sources such advertising and other services.[340] Fares and ancillary revenues were collectively forecasted to cover only 23% of operating costs in 2023, while 55% and 15% of costs were expected to be covered by property tax and city reserves for the commission respectively. 7% of the budget was unfunded due to lingering effects from the pandemic and the City had hoped to receive financial assistance from senior levels of government to cover these costs.[341]

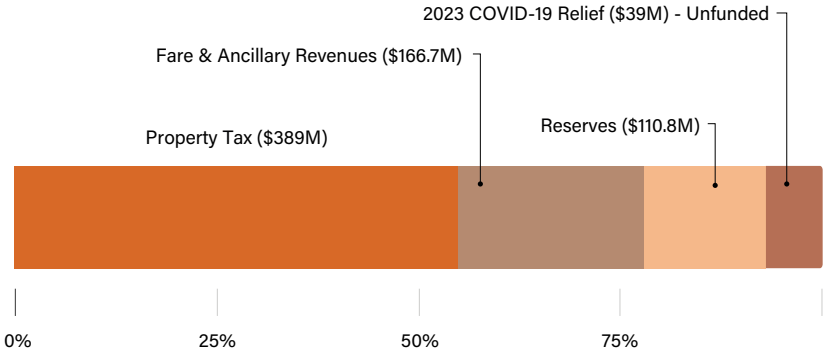


Figure 25: OC Transpo 2023 Budget Revenue Sources[342]

340: City of Ottawa & French, 2023
341: City of Ottawa, 2023a
342: City of Ottawa, 2023a

Operating Cost Drivers

Realizing the future transit network as outlined in the *Transportation Master Plan* will come with significant operating cost increases for OC Transpo. A 2019 report to Council estimated that the full realization of the future transit network would come with collective additional operating costs of $27.1 Billion over the next thirty years. When averaged over the thirty years, this represents an additional $90.3 Million per year.[343]

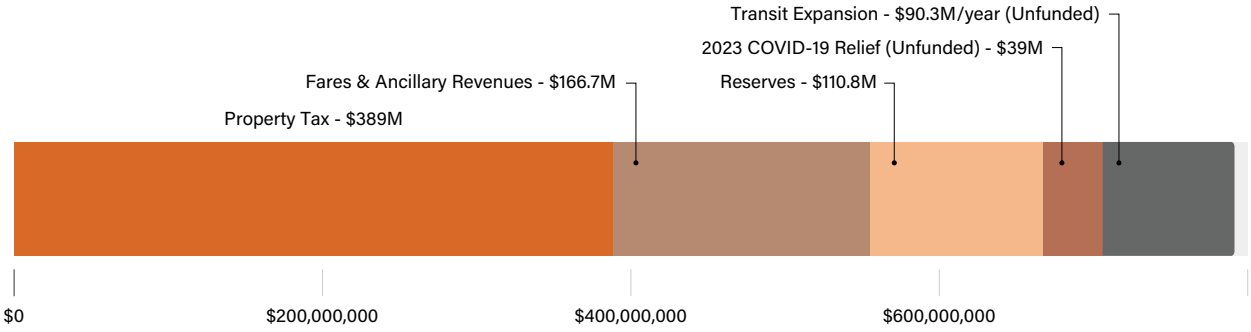
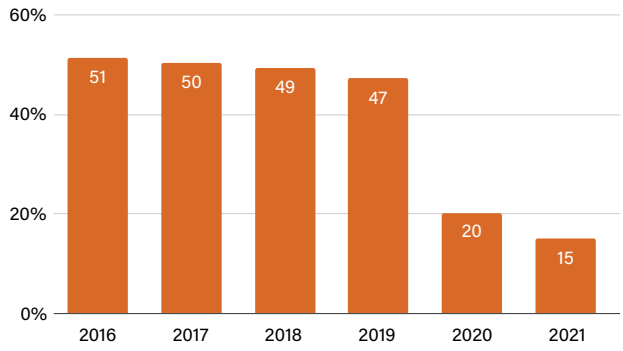


Figure 26: 2023 OC Transpo Operating Budget Sources & Funding Shortfall for System Expansion[344]

However, the City of Ottawa currently faces short-term operating cost increases associated with population growth, inflation costs from fuel prices and operator wages, and recovery from the COVID-19 pandemic. These factors led to a steady decline in OC Transpo's revenue / cost ratio prior to the pandemic, with a subsequent drop from 47% to 20% after the introduction of COVID-19 related health restrictions in 2020. In addition, OC Transpo services have fallen while the City of Ottawa's population growth continues to grow. Prior to the pandemic, OC Transpo provided between 2.6 and 2.7 service hours per capita but service provision has fallen to 2.2 hours per capita since 2020.[345]



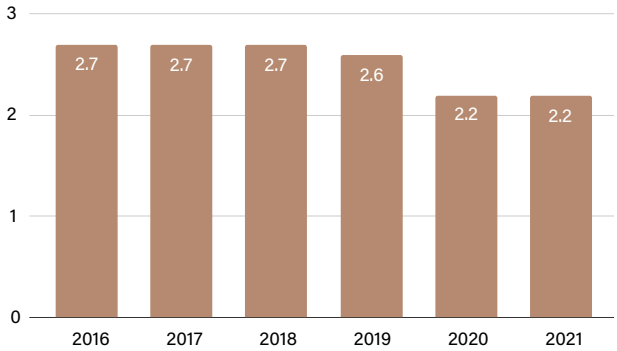


Figure 27 (above left ↖): OC Transpo Revenue / Cost Ratio[346]

Figure 28 (above right ↗): OC Transpo Service Hours per Capita[347]

343: City of Ottawa, 2019
344: City of Ottawa, 2023a
345: CUTA, 2022
346: The number of revenue service hours provided per person in the city. (CUTA, 2022)
347: Total operating revenues divided by total operating costs. (CUTA, 2022)

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As highlighted previously, the City had hoped that 7% of the budget that was unfunded would be covered by senior levels of government. This request, valued at $39 Million, was not met by either the Province or Federal Government and the City must now find other resources to fund this shortfall.[348] In addition, the request only included the shortfall in revenue from existing service, and did not include the added pressure from implementing light rail transit that was supposed to be funded from increased ridership above pre-pandemic levels. The annual cost pressure is closer to $100 Million per year, and could require a 25% increase in the transit levy in municipal property tax.[349]

Without new revenue tools or approaches to fund operations for both existing and future transit expansions, the City of Ottawa will be unable to meet its municipal climate targets or facilitate an equitable transportation system in our nation's capital. Failure to implement and collect revenues from new sources will cause complexities for the Stage 2 extensions of the LRT network, and also result in no increases to bus services. OC Transpo is currently undertaking a system wide network review with a lens of service optimization to help address increasing operating costs and a slower return to ridership recovery.

348: Pringle, 2023
349: City of Ottawa & French, 2023

Revenue Tool Screen

Table 16: Revenue Tool Screen for OC Transpo

Revenue Tool	Benefit Area Tax	Real Estate Opportunities	Off-Street Parking Tax	Motor Fuel Tax	Vehicle Levy	VKT Tax	City Sales Tax	EV Charging Tax	TNC Fee
Is this tool already used to generate revenue for transit operations?	No	No	No	No	No	No	No	No	No
Has the tool been assessed in the region?	No	No	No	No	No	No	No	No	No
Can the tool be implemented under existing legislation?	No	No	No	No	No	No	No	No	Yes
Does this tool have interdependencies with specific programs or tools?	Yes	Yes	No	Yes	Yes	Yes	No	Yes	Yes
How successful will the tool be given the context of the region (e.g. geography, transportation trends etc.)?	Low	Low	High	Low	Med	High	Low	Low	Med
Was this tool a key topic of discussion with agency staff during engagement?	No	No	Yes	No	Yes	Yes	Yes	No	No

Based on the revenue tool screen questions above in ***Table 16***, this paper examines Off-Street Parking Taxes, Vehicle Levies and Transportation Network Company (TNC) Fees as potential revenue tools to fund OC Transpo operations in Ottawa. These three tools are assessed to determine if they fully meet, partially meet or do not meet the study objectives, as summarized in ***Table 17*** below.

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Table 17: Multiple Account Evaluation of Revenue Tools Proposed for OC Transpo

Objective	Off-street Parking Tax	Vehicle Levy	TNC Fee
Mode Share	●	●	◐
Equity	◐	◐	◐
Implementation	◐	◐	●
Revenue Potential	●	●	◐
Alignment with City Objectives	●	●	●
Risk	◐	●	◐

● fully meets ◐ partially meets ○ does not meet

Alternative Revenue Tool A: Off-Street Parking Taxes

What is it?

A tax levied on off-street, privately owned and operated parking sales or spaces. Many municipalities and regional transit agencies use parking taxes under two different schemes to generate revenue for public transit. As part of its funding portfolio, TransLink collects a tax on parking sales in parking spaces that are privately owned and operated across Metro Vancouver. In 2018, the agency's taxation authority was increased from 21% to 24% and was estimated to generate $87 Million in 2023.[350] In addition, the City of Montréal levies a tax on the surface area of off-street parking on non-residential land parcels as a surcharge on property taxes. Rates range from $6.25 per square metre to $12.45 per square metre for interior parking lots, and $2.00 per square metre to $50.10 per square metre depending on the area of the city. Revenue generated from this tax on off-street parking spaces is earmarked for the City's annual transfer to the Autorité régionale de transport métropolitain (ARTM), the regional transportation planning and funding agency.[351]

Why look at this tool?

Off-Street Parking Taxes contribute to transportation demand management and can have a positive impact on influencing sustainable travel choices.[352] Parking pricing mechanisms are also highlighted as tools to shift travel demand to low carbon modes in *Energy Evolution: Ottawa's Community Energy Transition Strategy* and support mixed-use development patterns in the *Official Plan*.[353] There are also Canadian precedents available for this tool along with a clear, intuitive policy rationale that can be easily communicated.[354]

Mode Share

● FULLY MEETS OBJECTIVE

Abundant free or cheap parking is often expected by drivers in North America, but research has shown that inefficiently priced parking and unnecessary parking minimums have led to undesirable outcomes for cities.[355] Off-Street Parking Sales Taxes could generate revenue for transit while simultaneously reducing car use in Ottawa. If drivers want to avoid paying higher parking fees with taxes, they could choose to use other modes such as public transit or active transportation.[356] If the City chose to introduce Off-Street Parking Levies as an additional mill rate to property taxes, landowners who want to avoid paying the fee on their spaces could reduce the parking supply on their lot. This would also provide drivers with less choice for parking their vehicle and could induce more transit ridership or influence them to travel by walking or cycling.

350: TransLink, 2023
351: Ville de Montréal, 2023a
352: Litman, 2022
353: City of Ottawa, 2020; City of Ottawa, 2022
354: Cooper et al., 2022
355: Shoup, 2011
356: Cooper et al., 2022

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Equity

◐ PARTIALLY MEETS OBJECTIVE

Like other revenue tools that add costs to drivers, an Off-Street Parking Sales Tax will have different impacts on different households even if incomes are the same. The relative burden of an Off-Street Parking Sales Tax increases as individual or household incomes decrease. Vertical equity concerns could be partially mitigated with a low-income parking pass program, a solution that has been implemented in Seattle, but is unlikely to apply to privately owned and operated parking in Ottawa.[357]

Meanwhile, there are no perceivable equity concerns to the community at large if the City of Ottawa was to introduce a non-residential Off-Street Parking Levy as an additional mill rate to property tax. There could be more significant impacts on smaller businesses and property owners, but a minimum area threshold could be established to protect these stakeholders. There could also be marginal impacts on some property owners that could have smaller spiraling effects like increases in the cost of higher retail prices.[358] Geographic considerations through the implementation of graduated rates, as is done by the City of Montréal, should also be considered as this tool's impact would vary significantly across Ottawa.[359] Further, property owners could be given the option to repurpose parking stalls for other uses such as community spaces, or even housing, to avoid paying the Levy.

Implementation

◐ PARTIALLY MEETS OBJECTIVE

Implementing an Off-Street Parking Tax through any program will be demanding from an implementation perspective and require enabling legislative changes to the *Municipal Act*. In particular, amendments and additions would be required to Section 100 that currently prohibits municipalities from regulating off-street parking on non-city owned properties.[360] The City of Ottawa would also need to create an inventory of all off-street parking spaces that the tax may apply to within the scope and parameters. Establishing this inventory would have high initial implementation costs.

357: Cooper et al., 2022
358: Litman, 2022
359: Ville de Montréal, 2023a
360: Province of Ontario, 2001

For an Off-Street Parking Sales Tax, a licensing process for parking vendors would need to be created, and regulations must be established for informational requirements like reporting, record keeping and auditing. Further consideration would be required for how the tax will be collected, but all aspects of this Off-Street Parking Tax program involve costs for initial introduction and ongoing management.

If the City were to introduce an Off-Street Parking Levy as an additional mill rate to property tax, zoning changes on non-residential properties might be necessary but less management resources may be required once established. Data such as the inventory of parking spaces would live in property records and revenue would be collected once per year when property taxes are due. As such, minimal ongoing management and administration costs could be expected and this tool could therefore be considered to partially meet this objective.

Revenue Potential

● FULLY MEETS OBJECTIVE

Revenue from Off-Street Parking Sales Taxes on privately owned facilities could be fairly flexible and large in the context of the City of Ottawa. Initial revenue from this tool may be low but could increase as additional parking pricing mechanisms come online such as paid parking in off-street lots where it is currently free. However, revenue from an Off-Street Parking Sales Tax scheme would likely fluctuate alongside other broader transportation demand patterns such as the number of car trips and locations of trip generators.[361] As such, an Off-Street Parking Sales Tax comes with similar reliability challenges that are associated with fare revenues and TNC Fees.

If the City were to introduce a non-residential Off-Street Parking Levy in Ottawa, OC Transpo could expect significant, predictable revenues for funding transit service. The City could set any rate desired within the bounds of new legislation required from the Province. For example, under an assumption that there could be as many as 1-2 off-street parking spaces in Ottawa per capita, and each space is charged a levy of $50 each year, the levy could generate $100 per capita.[362] Based on this assumption and not including any exemptions that might be enacted, the City of Ottawa could generate approximately $101.7 Million per year for OC Transpo service. This tool can be considered to fully meet this objective with this significant and predictable revenue that could be directed to transit service.

361: Cooper et al., 2022

362: Assumption that there could be between 1-2 off-street parking spaces per capita in a city is derived from Litman, 2022

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Alignment with City Objectives

● FULLY MEETS OBJECTIVE

Off-Street Parking Taxes are well aligned with numerous goals and objectives for transportation and development in the City of Ottawa. Off-Street Parking Sales Taxes would be a direct cost to drivers and could influence modal shifts to sustainable modes of transportation including transit, walking and cycling. This would support the 21% active transportation mode share target by 2030 in *Energy Evolution: Ottawa's Community Energy Transition Strategy*, as well as the 2031 transportation mode share targets of 26% of trips by transit, 10% by walking and 5% by cycling in the *Transportation Master Plan*.[363]

If the City were to introduce non-residential Off-Street Parking Levy as an additional mill rate to the property tax, some property owners and developers may seek to reduce or eliminate the number of stalls on their parcel to avoid paying the rate. This could lead to development, including housing, on surface parking lots that would support city-wide policies in the *Official Plan* such as Policy 4.2.1 that stipulates that the City will enable greater flexibility and an adequate supply and diversity of housing options in Ottawa. In addition, infill development through intensification on off-street parking lots would work toward Policy 4.1.2 to promote healthy 15-minute neighbourhoods and Policy 4.1.4 to support the shift to sustainable modes of transportation by allowing other uses, and reducing the number of stalls, in parking lots.[364]

Risk

◐ PARTIALLY MEETS OBJECTIVE

Both programs discussed for Off-Street Parking Taxes have considerable risk involved with their implementation. Both would require significant political support and legislative amendments to the Municipal Act. In addition, an Off-Street Parking Sales Tax would be vulnerable to economic disturbances that reduce the amount Ottawa residents and businesses travel and require parking, leaving OC Transpo without a significant source of operating funding. However, an Off-Street Parking Levy is more predictable and would not rely on drivers ending trips in paid parking stalls as it is a determined annual fee paid by property owners each year. As such, this tool partially meets this objective.

363: City of Ottawa, 2013; City of Ottawa, 2020
364: City of Ottawa, 2022

Alternative Revenue Tool B: Vehicle Levy

What is it?

A fee that would be charged when Ontario license plates registered in the City of Ottawa are renewed each year. Currently, there are no vehicle registration fees charged on most vehicles in the Province of Ontario, but there is precedent of this tool being used in other jurisdictions around North America. In Montréal, residents currently pay a $45.00 contribution to public transit on the renewal of their vehicle registration. In the 2023 budget, the ARTM expects to generate approximately $62.9 Million from vehicle levies for transit service in Greater Montréal.[365] Starting in 2024, vehicles in the region will pay $59.00, and the ARTM expects to raise a total of $125 Million with the new increase.[366] In addition, Ottawa's neighbouring municipality, Gatineau, QC is currently in discussion with the Province of Quebec to raise the vehicle registration tax to fund transit. Thirty-three US states and twenty-seven local jurisdictions also use vehicle registration fees and levies to fund transportation improvements that often include public transit.[367]

Why look at this tool?

The Province of Ontario requires drivers to renew their license plates every one to two years despite not charging any registration fee. Drivers renew their license plates online or in-person at ServiceOntario centres, meaning that a supportive structure already exists where this levy could be charged. Vehicle Levies also provide a predictable revenue for budgeting purposes with a clear and intuitive policy rationale that is easily communicated. Further, Ottawa has a relatively high auto mode share, meaning that there is likely a high vehicle population that could provide moderate revenue to address operating shortfalls facing OC Transpo.

Mode Share

● FULLY MEETS OBJECTIVE

A Vehicle Levy would add minor cost pressures on drivers while also raising transit revenue that could be used to increase service levels. The transportation demand management effect of a Vehicle Levy is unlikely to generate as strong of a mode shift as tools that create costs that recur more often such as Off-Street Parking Sales Taxes or VKT Taxes. However, a small annual fee may influence households to reduce the number of vehicles that they own, from two cars to one for example.[368]

Vehicle Levies can also be targeted towards vehicles of different types and characteristics such as axle count, age, or gross vehicle weight.[369] Therefore, the City of Ottawa could decide to impose a levy targeting a specific type of vehicle such as large SUVs and light pickup trucks that have higher fatality rates from collisions with pedestrians and people riding bicycles.[370] This could dissuade purchasers of new cars to opt for a smaller model, thereby generating a higher perceived sense of safety on regional roads that in turn encourages people to walk or cycle.

365: ARTM, 2023a
366: Sherwin, 2023
367: Litman, 2022
368: Cooper et al., 2022
369: Kitchen & Slack, 2016
370: Robertson, 2006

OTTAWA

Equity

◐ PARTIALLY MEETS OBJECTIVE

Generally, Vehicle Levies are considered to be an equitable means to fund public transit operations. Automobile use leads to significant external costs for governments in the form of infrastructure and maintenance as well as negative environmental costs. A Vehicle Levy can therefore be conceptualized as a reimbursement of these costs from motorists to transit users who have lower external costs to governments.[371]

At the citizen level, a flat Vehicle Levy is progressive because car ownership tends to correlate with an individual or a household's income. In addition, this tool does not place any cost burden on the lowest income households who are likely to not own a vehicle. As such, a Vehicle Levy could be considered vertically equitable.[372] However, the levy could represent an inequitable burden for Ottawa households that must own one or more vehicles due to a number of factors such as home and work locations and available alternative transportation options. The impact of this burden on Ottawans would require further investigation, but a Vehicle Levy with a similar fee to existing precedents in Quebec is minimal compared to other costs associated with owning and operating a vehicle including insurance, fuel and repairs.[373]

Implementation

◐ PARTIALLY MEETS OBJECTIVE

Legislative amendments to both the *Municipal Act* and *Highway Traffic Act* are required to enable the City of Ottawa to charge Vehicle Levies. No particular clauses related to vehicle fees that can be charged by municipalities could be found in the Municipal Act, but would likely need to be created.[374] Meanwhile, Section 5a of the *Highway Traffic Act* stipulates that the Lieutenant Governor in Council may make regulations "providing for the payment of fees for the issue, renewal replacement or transfer of permits, licences and number plates under this Act and prescribing the amount of fees."[375] Clauses in both acts related to a municipality's ability to implement a vehicle levy that are interconnected would need to be written.

371: Litman, 2012
372: Cooper et al., 2022
373: French et al., 2023
374: Province of Ontario, 2001
375: Province of Ontario, 1990

Intergovernmental agreements on who collects the fees and how revenue is shared would also be required. However, because the Province already requires drivers to register and renew their licence plates, the necessary structures are already in place and only a local fee would need to be added into the existing process. Therefore, once intergovernmental agreements are established and the levy has begun being charged to motorists, ongoing management and administration costs could be minimal.

The City of Ottawa would also need to develop an approach to implementing vehicle levies in close consultation and collaboration with local stakeholders such as the Ottawa Board of Trade, provincial staff, the City's Transportation Committee, and the City's Finance and Corporate Services Committee. After consulting the public and local stakeholders, and refining the scope and parameters, the City would need to work with ServiceOntario to establish and implement the administration requirements of the new levy. Adjustments may be necessary over time to meet the evolving budgetary needs of OC Transpo.

Revenue Potential

● FULLY MEETS OBJECTIVE

Since a Vehicle Levy requires legislative amendments, the exact fee that the City of Ottawa would be able to charge and associated flexibility is unknown. Rates could be changeable each year as operating budget needs change, indexed to inflation, locked in at a nominal price, or set to some other measure. Even a nominal fee has revenue potential that is comparable to other tools in this report. A similar fee to those charged in other jurisdictions such as Montréal could have moderate revenue potential in Ottawa.[376]

Alignment with City Objectives

● FULLY MEETS OBJECTIVE

A Vehicle Levy supports city-wide policies in the Official Plan including Policy 4.1.2 to promote healthy 15-minute neighbourhoods. A vehicle levy may indirectly impact urban form as Ottawans seek to reduce their transportation costs, in turn driving demand for densification that enables transit oriented or 15-minute communities. This tool also adds a minor, fair cost to car ownership that nudges households to own less vehicles, while boosting operating revenue for transit that could make it a more attractive mode of travel. This would support the City's 26% mode share target for transit by 2031 in the Transportation Master Plan.

376: Cooper et al., 2022

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Risk

◐ PARTIALLY MEETS OBJECTIVE

Implementing a Vehicle Levy in the City of Ottawa could be expected to have moderate political risk. While taxes and charges that represent a minimal cost burden to taxpayers are generally more palatable and politically popular than those with higher fees, the Province of Ontario repealed vehicle license plate (registration) fees in 2022. This recent policy change at the provincial level would present a significant challenge to the City of Ottawa in acquiring necessary legislation in the Municipal Act and Highway Traffic Act to implement a Vehicle Levy charged at the time of issuing and renewing license plates.

At the same time, the economic flexibility of the Vehicle Levy is dependent on its scope and parameters. In addition, some residents and businesses may try to register their vehicles in the Province of Québec to avoid the fee given the close proximity to the Provincial border and City of Gatineau. Nonetheless, Vehicle Levies could come with low economic risk if designed and implemented with means to grow over time by either being indexed to inflation or with permissions to be adjusted year to year to cover higher or lower transit operating costs.

Alternative Revenue Tool C: Transportation Network Company (TNC) Fee

What is it?

A flat or variable fee charged to TNCs (ridehailing companies) on a per ride basis with revenue dedicated to transit operations. The City of Chicago levies TNC fees targeted toward reducing congestion by incentivizing shared trips and public transit use. The fee levied can range from $0.55 to $8.00 per trip. Meanwhile, TNCs in Seattle are subject to a $0.10 surcharge with revenue directed to incentives for drivers of wheelchair accessible vehicles, while a $0.08 fee is levied to cover the cost of enforcing and regulating TNC licensing. An additional $0.57 fee is charged to support affordable housing near transit, a streetcar line and other goals. These fees sum to $0.75 per trip, one that is unlikely to deter many TNC users.[377]

Why look at this tool?

TNC Fees could be implemented in the near-term with low maintenance costs while there are also many North American precedents. It also responds to a significant transportation industry disruption from ridehailing companies that have contributed to increased traffic congestion in cities.[378]

Mode Share

◐ PARTIALLY MEETS OBJECTIVE

TNC Fees may nudge users toward public transit, walking and cycling and increase the mode share of these travel options while also raising revenue for public transit operations. However, TNCs are an attractive alternative for some trips for people who may not own a car despite their drawbacks such as increased congestion. If TNCs influence citizens to abstain from personal vehicle ownership, they could support transit and active transportation uptake. Yet, increasing the cost of using TNC services could disincentivize their use and cause Ottawans to turn to their own vehicles. If the City of Ottawa was to pursue a TNC Fee to generate revenue for transit, the structure and charge itself must be set at the right level so that the net impact on travel choices and mode shift to transit, walking and cycling is positive.[379]

Equity

◐ PARTIALLY MEETS OBJECTIVE

A TNC Fee needs to be structured carefully so that it can support equity. Generally, a TNC Fee used to generate revenue for transit can be considered equitable because it raises funds for a service that is heavily relied on by equity-deserving communities. A TNC Fee can also use trip location data to reduce fees in low-income areas and raise them in others that have significantly high demand such as Ottawa International Airport, downtown or popular tourism destinations including Byward Market. At the same time, a TNC Fee could increase the burden of these user fees on low-income individuals in Ottawa who may not be able to afford a personal vehicle and are therefore more likely to rely on TNCs for some trips.[380] As such, this tool is only partially meets this objective.

377: Cooper et al., 2022
378: Diao et al., 2021
379: Cooper et al., 2022
380: Cooper et al., 2022

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Implementation

● FULLY MEETS OBJECTIVE

The City of Ottawa already collects licensing fees for TNCs through the *Vehicle for Hire By-law (By-law No. 2016-272)*. The fees levied on TNCs are the lowest of all cities explored for this tool in this report and range from $911.00 to $7,751.00 per year depending on the number of vehicles in each company. A $0.11 per trip fee is also charged to passengers.[381] Amendments to this By-law would be required in order to charge an additional fee dedicated to OC Transpo transit operations. Additional studies and consultation with ridehailing companies may be required if the City of Ottawa sought to implement a more complex TNC Fee that incorporates equity considerations as described above. However, a TNC Fee would have low administration and maintenance costs over the long term once established, especially considering that a structure to collect revenue is already in place.[382]

Revenue Potential

◐ PARTIALLY MEETS OBJECTIVE

Without detailed trip data from ridehailing companies in Ottawa, it is difficult to predict the amount of revenue that the City could generate. Prior to the pandemic, annual TNC Revenue for the City of Chicago was expected to be $40 Million in 2020, while the City and County of San Francisco anticipated $32 Million from their TNC Fees. However, it is difficult to determine how much revenue potential TNC Fees could have due to changes in travel patterns from the COVID-19 pandemic. Revenue from a TNC Fee could be expected to be low to moderate, assuming trip volumes recover and rate structures are similar to the precedents listed above.[383]

381: City of Ottawa, 2016
382: Cooper et al., 2022
383: Cooper et al., 2022

Alignment with City Objectives

● FULLY MEETS OBJECTIVE

TNC Fees have the potential to support several of the City of Ottawa's *Official Plan* and *Transportation Master Plan's* objectives and targets. However, they must be structured in a way so that they improve travel choices and incorporate equity considerations while maintaining a TNC's profitability from operating in the capital.

Risk

◐ PARTIALLY MEETS OBJECTIVE

TNC Fees are likely to have minimal political risk as there are already necessary implementation structures in place that can support this revenue tool in the near term. However, TNC Fees are vulnerable to economic risk because they rely on the operation of a private sector service provider. If TNCs stopped operating in Ottawa, OC Transpo could be left with an unexpected revenue gap.[384] As such, operating in the nation's capital must continually be attractive to the companies, and close collaboration with representatives from TNCs in implementing this fee would be required.

384: Cooper et al., 2022

Policy Recommendations

The City of Ottawa should:

- Study different forms of off-street parking taxes and identify the scope and parameters for implementing a version of this tool to fund OC Transpo operations, and advocate for enabling legislation from the Province;
- Conduct a feasibility study to determine potential options for a vehicle levy as a revenue tool to fund OC Transpo operations;
- Undertake econometric modelling to build the case for, and consult with local, regional and provincial partners to study the potential effects of, and subsequently amend the *Vehicle for Hire By-law (By-law No. 2016-272)* to establish TNC Fees as a revenue tool for funding OC Transpo; and
- Raise the licensing fees for TNCs operating in the City, which are notably low compared to other Canadian jurisdictions, to reflect or closely match the fees levied by their comparators.

The Province of Ontario should:

- Amend the Municipal Act among other necessary provincial laws and regulations to enable Ontario municipalities to fund transit operations through a series of revenue tools. This will allow transit agencies in the province to respond to the changing needs and operating cost drivers of local public transit systems; and
- Advocate to the Federal Government for a tripartite national commission alongside the provinces, local governments and transit agencies to develop a new funding model for transit.

Photo source: Stephen Wright

6E

Montréal

Montréal, Québec

Land Acknowledgment

Montréal is located on the traditional territory of the Kanien'kehà:ka, and is a place that has long served as a site of meeting and exchange among many Indigenous Peoples including the Kanien'kehà:ka of the Haudenosaunee Confederacy, Huron/Wendat, Abenaki and Anishinaabeg.

Overview

The City of Montréal is the second largest city in all of Canada by population and is home to over 1.9 Million people. The city is located on an island in the St. Lawrence River with multiple other cities on either side forming the Greater Montréal metropolitan area that, collectively with the City, is home to over 4.2 Million people.[385]

The main transit operator within the City of Montréal is the Société de transport de Montréal (STM), which provides service on a network of four metro lines and 221 bus routes.[386] Regional rail services are provided by exo, and other bus operations to the North and South shores of the St. Lawrence River are provided by the Société de transport de Laval (STL) and Réseau de transport de Longueuil (RTL). Long range planning and financing for all transit service in Greater Montréal is undertaken, overseen and provided by the Autorité régionale de transport métropolitain (ARTM) with approval from elected officials in the Communauté métropolitaine de Montréal (CMM). This governance model between the ARTM and CMM was set up by the Government of Quebec in 2017 to integrate regional land use and transportation planning in the region.[387] As such, analysis for operational funding for Greater Montréal is examined with a focus on the budgetary requirements and revenue tools available to the ARTM, though the effects on and contributions to or from local transit operators like the STM and regional municipalities may be noted.

In Greater Montréal, just over 75% of commuters travel using a vehicle whereas the other 25% travel by public transit, walking, cycling and other modes. In the City of Montréal, a lesser proportion of commuters use a car (56.7%) while 41.6% take public transit, walk or cycle.[388]

385: Statistics Canada, 2022g
386: Société de transport de Montréal (STM), 2023a
387: ARTM, 2023b
388: Statistics Canada, 2022g

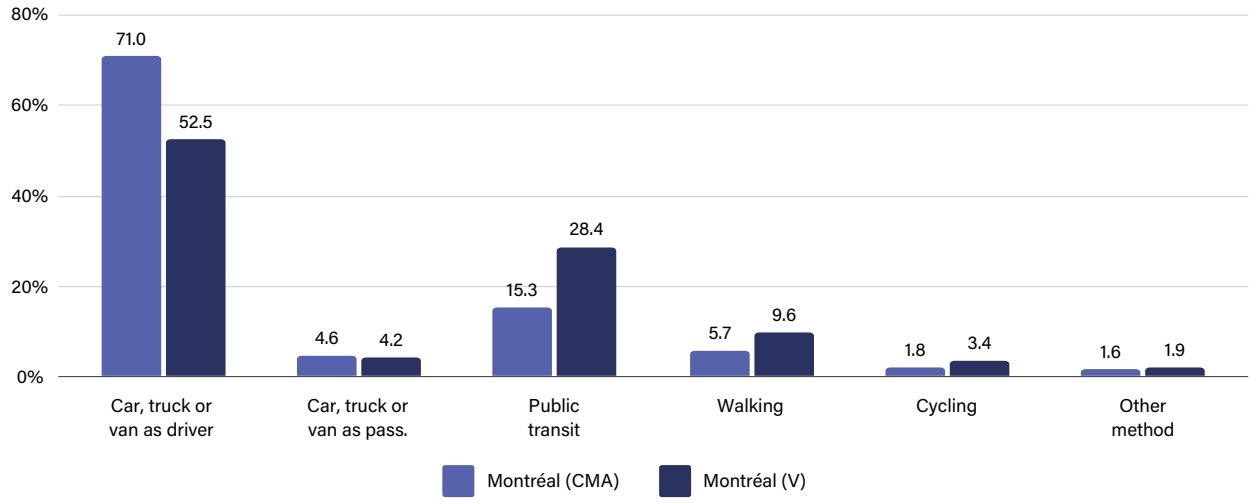

Figure 30: Montréal Commute Mode Share[389]

Transportation Goals & Objectives

The Province of Québec has set ambitious targets related to transportation in the province, including a province-wide reduction of greenhouse gas emissions of 37.5% below 1990 levels by 2030 and achieving carbon neutrality by 2050, and for 55% of city buses to be electrified by 2030.[390] The ARTM's *Plan stratégique de développement du transport collectif (Strategic Plan for the Development of Public Transport)* follows these targets, and also aims for 60% of new population growth to 2031 to be accommodated within close proximity of the regional transit network.[391] Further, *Le Plan métropolitain d'aménagement et de développement (PMAD) (The Greater Montréal Metropolitan Land Use and Development Plan)* includes a target of increasing transit modal share during morning peak hours to 35%.[392] Meanwhile, the City of Montréal is currently undertaking the planning for Montréal 2050 that will integrate transportation and land use planning. Initial goals being considered for this plan include improving accessibility across the City, and implementing active transportation infrastructure in all neighbourhoods to allow sustainable mobility and creating zero-emission zones to reduce emissions.[393]

High quality public transit service is essential in delivering this collective vision to enable Montréalers to travel around the city without the use of a personal vehicle. Significant public transit expansions are being planned by the ARTM that will be operated by STM in the future including the extension of metro line 1 to Anjou and a Bus Rapid Transit line along Pie-IX Boulevard. Another notable transit expansion that will transform how Montréalers move through their communities, is the Réseau express métropolitain (REM).[394]

389: Statistics Canada, 2022g
390: Province of Québec, 2018a
391: ARTM, 2021
392: Communauté métropolitaine de Montréal (CMM), 2023
393: Ville de Montréal, 2022
394: STM, 2023b

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Funding Sources & Emerging Challenges

Current Operating Costs & Revenue Tools

Sections 79-84 of the *Loi sur l'Autorité régionale de transport métropolitain* outline the tools available to the ARTM to generate revenue for transit services in the Greater Montréal region.[395] Of the ARTM's expected $3.0 Billion revenue in 2023, 57% is sourced from fares and municipal contributions primarily derived from property taxes, while 25% is provided through operating grants and supports for the ARTM from the Province of Quebec, and 5% is generated through vehicle levies and gas taxes. An additional 6% of revenue is from ongoing COVID-19 relief provided by the province, while 2% is from a grant associated with the opening of the REM and other sources such as advertising.

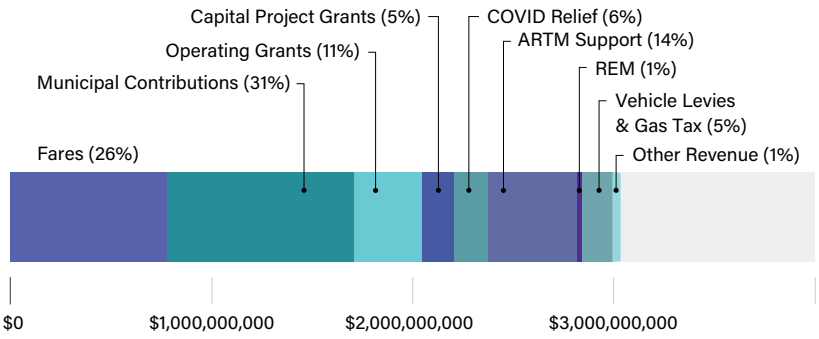

Figure 31: 2023 ARTM Revenue Sources[396]

395: Province of Québec, 2016
396: ARTM, 2023a

Municipal contributions to public transit service in the region are provided by property taxes collected by each city. The exact contribution and relative proportion of municipal expenditures transferred to the ARTM varies by city. In the City of Montréal, public transit is the fifth highest public service expenditure and the annual transfer to the ARTM represents 9.9% of the 2023 budget.[397]

Table 18: Top 5 Municipal Expenditures for the City of Montréal in 2023[398]

Rank	Service	Expenditure	Percentage of Overall Budget
1	Public Safety (including Police Service)	$1.2 Billion	18.4%
2	Debt Servicing	$1.2 Billion	17.6%
3	General Administration	$743.5 Million	11%
4	Recreation and Culture	$696.2 Million	10.3%
5	Transfer to ARTM for Public Transit	$669.1 Million	9.9%

397: Ville de Montréal, 2023b
398: Ville de Montréal, 2023b

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Operating Cost Drivers

Numerous transit projects and expansions are planned for the Montréal region including the extension of the Blue Line (Line 5) to Anjou, completion of the Pie-IX BRT, and the build out of the REM network. However, significant cost drivers including population growth, inflation to the price of fuel and electricity, wage indexation, pandemic recovery, and system expansion have resulted in a short-term operating funding gap of approximately $3.5 Billion over five years. This figure alone will require a doubling of the current revenues being generated from the ARTM's[399] existing funding sources. This shortfall will limit overall service increases on local systems, including the STM that will only be able to provide an additional 1% increase in service per year over the next five years.[400]

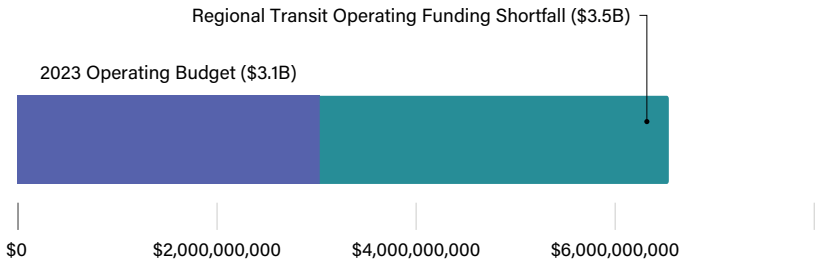
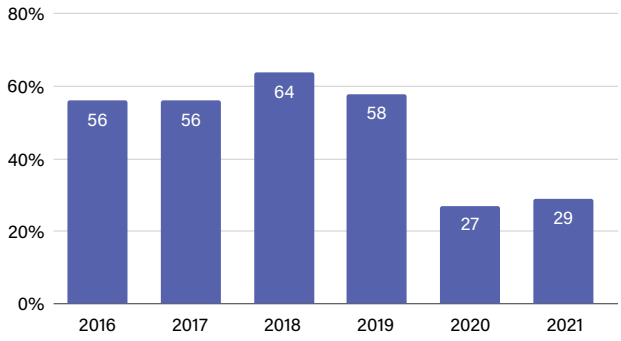


Figure 32: 2023 ARTM Budget & Regional Transit Operating Funding Shortfall[401]

399: STM & French, 2023
400: STM & French, 2023
401: ARTM, 2023a; STM & French, 2023

These cost drivers have significantly impacted local transit operators' ability to provide service increases to keep up with demand and attract new riders to the transit system. Prior to the pandemic, the STM achieved a revenue-cost ratio between 56% and 64% while the revenue vehicle hours per capita remained relatively stable between 3.36 and 3.6.[402] However, the pandemic significantly impacted the level of service that could be provided and the revenue / cost ratio more than halved from 58% to 27%, and the revenue service hours per capita declined slightly to 3.3.[403] The most noticeable reduction in the level of service on STM's network was the elimination of the "10-minute max" network, which was a commitment to provided maximum 10 minute service between 6:00am and 8:00pm on the most frequent bus lines that had stood since 2008. Most of these routes now offer up to 12- or 14-minute service outside of peak hours.[404]



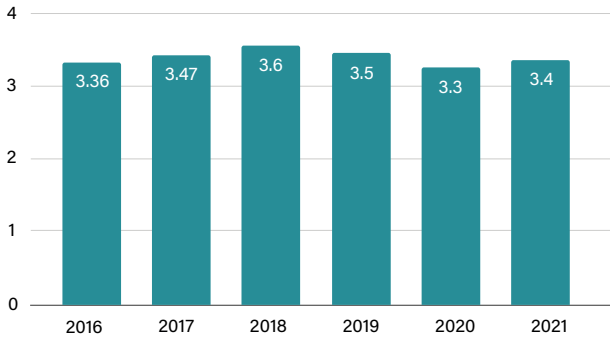


Figure 33 (above left ↖): STM Revenue / Cost Ratio from 2016 to 2021[405]

Figure 34 (above right ↗): STM Revenue Vehicle Hours per Capita from 2016 to 2021[406]

402: CUTA, 2022
403: CUTA, 2022
404: STM & French, 2023
405: The number of revenue service hours provided per person in the city. (CUTA, 2022)
406: Total operating revenues divided by total operating costs. (CUTA, 2022)

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Emergency funding allowed local transit operators to maintain adequate service levels through the pandemic. For instance, the STM was able to maintain service around 90% of pre-pandemic levels on its local transit network. However, there is low confidence that the ARTM will be able to continue funding existing services under the current operating funding structure and through existing revenue tools, and property taxes alone will not be able to cover this immense revenue shortfall. New revenue tools combined with a new approach to funding transit operations are required to realize the future transit vision for the Montréal region. If new revenue tools and a new approach to funding are not established, significant planned service expansions and increases will not be realized. Significant new transit infrastructure like the Pie-IX BRT and the Blue Line Extension will not provide the high levels of service that they were conceived for. More significantly, the Province of Québec will be unable to meet its greenhouse gas emissions reductions goals, and the City of Montréal will be unable to support reduced car dependency in neighbourhoods without viable transit to serve longer trips taken by Montrealers.

Revenue Tool Screen

Table 19: Revenue Tool Screen for Greater Montréal (ARTM)

Revenue Tool	Benefit Area Tax	Real Estate Opportunities	Off-Street Parking Tax	Motor Fuel Tax	Vehicle Levy	VKT Tax	City Sales Tax	EV Charging Tax	TNC Fee
Is this tool already used to generate revenue for transit operations?	No	No	Yes	Yes	Yes	No	No	No	No
Has the tool been assessed in the region?	No	Yes	N/A	N/A	N/A	Yes	No	No	Yes
Can the tool be implemented under existing legislation?	No	No	N/A	N/A	N/A	No	No	No	Yes
Does this tool have interdependencies with specific programs or tools?	Yes	Yes	N/A	N/A	N/A	Yes	No	Yes	Yes
How successful will the tool be given the context of the region (e.g. geography, transportation trends etc.)?	Med	Med	N/A	N/A	N/A	High	Med	Med	Med
Was this tool a key topic of discussion with agency staff during engagement?	No	Yes	N/A	N/A	N/A	Yes	No	No	No

Based on the revenue tool screen questions above in ***Table 19***, this paper examines Benefit Area Taxes, VKT Taxes, and Electric Vehicle Charging Taxes as potential revenue tools to fund transit operations in Montréal. These three tools are examined further to determine if they fully meet, partially meet or do not meet the study objectives, as summarized in ***Table 20*** below.

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Table 20: Multiple Account Evaluation of Revenue Tools Proposed for Transit Operations in Greater Montréal

Objective	Benefit Area Tax	VKT Tax	EV Charging Tax
Mode Share	◐	●	●
Equity	●	●	◐
Implementation	◐	◐	○
Revenue Potential	●	●	◐
Alignment with City Objectives	◐	●	◐
Risk	◐	◐	◐

● fully meets ◐ partially meets ○ does not meet

Alternative Revenue Tool A: Benefit Area Tax

What is it?

A local tax levied on property within a defined area near transit infrastructure, such as a line or stations, with revenue directed for transit operations. This form of property tax creates a direct link between the value of transit access and properties within a service area, and is a small surtax in addition to conventional, wealth-based property taxes.[407] Halifax Regional Municipality currently charges Benefit Area Taxes (BATs) on residential and resource properties that are situated within one kilometre of a conventional or community transit stop.[408] In addition, TransLink has the authority to generate revenue using a BAT but only began studying numerous implementation options in 2020. 400 metre and 800 metre BAT zones were examined with an emphasis on rapid transit, and levies on residential and commercial properties around new and existing transit infrastructure were considered.[409] BATs have also been created in numerous US cities such as Miami, Los Angeles and Denver.[410]

Why look at this tool?

Montréal has an extensive network of rail, metro and bus services with significant expansions to the rapid transit network planned in the coming decade including the REM and Blue Line extension. A BAT would allow the CMM, ARTM, transit operators like STM, regional municipalities, and individual residents to trace the benefit of the level of transit service provided. In addition, development right charges are currently levied by the ARTM on new developments within 1km of REM stations to fund the construction costs of the project, and will also be imposed around the future Blue Line Extension. As such, the regional authority has a precedent of levying charges that reflect the benefits that proximity to transit provides to property owners.[411]

Mode Share

◐ PARTIALLY MEETS OBJECTIVE

In comparison to a direct form of transportation demand management like a VKT Tax, BATs affect travel choices by making transit a more convenient and attractive option. A BAT would provide operating revenue that could be used by regional transit agencies to maintain and improve service levels that are likely to attract more riders. This would have a positive effect as well because increasing the number of riders will lead to additional fare revenue.[412]

However, the authority charging a BAT in Montréal would need to consider if the rate will create a disincentive for Montrealers to locate near transit infrastructure. If the tax discourages development, residents or businesses to locate near transit, it could reduce transit ridership and demand for sustainable transit-oriented development.[413]

407: Cooper et al., 2022
408: HRM, 2023a
409: Cooper et al., 2022
410: Litman, 2022
411: ARTM, 2023c
412: Cooper et al., 2022
413: Litman, 2022

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Equity

● FULLY MEETS OBJECTIVE

BATs would impose different tax rates on different areas of the region and could raise potential equity concerns. However, these variations in tax rates still maintain horizontal equity because they are directly linked to the benefits received. In addition, BATs support vertical equity because transit revenue would disproportionately benefit low-income individuals who are likely to have a higher reliance on the transit system. They also preserve property tax equity because they reflect property values similar to conventional property taxes and only add a spatial aspect.

Besides preserving both horizontal, vertical and property tax equity, homeowners within a designated BAT area would be burdened with the new tax and low-income homeowners in particular may have a reduced ability to pay the additional fees. However, this concern could be resolved with deferrals or exemptions in order to avoid displacement of these Montréal households.[414]

Implementation

◐ PARTIALLY MEETS OBJECTIVE

The ARTM, regional transit agencies and municipalities do not currently have authority to introduce BATs and would require legislative changes to use this tool. The ARTM, regional transit agencies and municipalities do not currently have the authority to introduce BATs and would require legislative changes to use this tool to fund operations, or levy them on existing transit routes and infrastructure. If levied by the ARTM, amendments to the *Loi sur l'Autorité régionale de transport métropolitain* would be needed, while legislative changes to the *Loi sur la fiscalité municipale (Act Respecting Municipal Taxation)* would be required if a BAT was assessed and charged by regional municipalities. In addition, technical studies and consultation with local stakeholders and the public would be required to ensure that BAT rates and boundaries are set appropriately. However, BATs require only minimal ongoing administrative costs because they are a form of property tax, and the supporting structures for property taxes are already in place in Québec. Municipalities or the ARTM would simply need to add a new mill rate to designated properties within the set boundaries that shows the distinct BAT rate separate from conventional property taxes.

414: Cooper et al., 2022

Revenue Potential

● FULLY MEETS OBJECTIVE

Potential revenue that can be generated from a BAT is dependent on several factors, but could generate moderate to high revenue in the long-term.[415] One obvious factor is the rate of the surtax within the geographic boundaries. An appropriate rate would consider the measurable economic benefits provided to property owners by proximate transit access. The location and boundaries of the BAT are an additional factor that could impact the revenue potential of the tool, whereas a greater distance from transit infrastructure will yield a higher revenue. In addition, the assessed value of properties within a BAT area will also affect the amount of revenue as this is indirectly influenced by municipal control through zoning. For instance, if restrictive zoning in regional municipalities limits densities below what the economy might otherwise produce, cities could consider increasing zoning allowances within the BAT area.[416] One final and important consideration involves deciding if the BAT will be levied on properties located near existing transit infrastructure or will only be introduced on future lines and improvements. Collectively, these variables influencing the revenue potential of BATs are flexible and ultimately involve choices from decision-makers and issuing authorities. Economic evidence and public consultation with Montrealers and local stakeholders could help support these choices.

Alignment with Regional Objectives

◐ PARTIALLY MEETS OBJECTIVE

BATs would support regional objectives by increasing the operating funding available to transit agencies that could lead to service increases and expansions that make transit more convenient and reliable. This could attract more riders and work toward the CMM's goal of increasing the modal share of public transit in the morning peak hour to 35%, and the City of Montréal's objective of improving accessibility across the city.[417] However, there are potential risks associated with BATs as well. Demand for locating near transit could decrease if the tax rate is set too high and absorbs all of the value offered to nearby properties. In turn, this could lead to development taking place away from transit and would work against the CMM's goal of driving 60% of new residential growth in transit-oriented development areas, and the City of Montréal's efforts to integrate transportation and land use planning.

415: Litman, 2022
416: Cooper et al., 2022
417: CMM, 2023; Ville de Montréal, 2022

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Risk

◐ PARTIALLY MEETS OBJECTIVE

A BAT in Montréal could come with considerable political opposition from boroughs if it is perceived as outweighing the benefits of nearby transit service.[418] Additional political risk could be dependent on if the new BAT is levied on properties near new transit infrastructure such as the REM or Pie-IX BRT line, or existing lines and services as well. If levied on the latter, residents and businesses could see the BAT as just another tax and generate more political opposition.

On the other hand, there is minimal economic risk associated with BATs as they are inherently a form of property tax that is levied each year. Upzoned areas within the BAT may have some economic risk, but revenue could be expected to be stable once development occurs.[419]

418: Cooper et al., 2022
419: Litman, 2022

Alternative Revenue Tool B: Vehicle Kilometres Travelled (VKT) Taxes

What is it?

Drivers are levied a fee that is dependent on the distance that they travel. VKT Taxes can operate in a variety of ways and are also known as mobility pricing, congestion pricing, decongestion pricing, distance-based charging, mileage based user fees and road use charging. London, UK has used VKT Taxes among other road based charges to fund a significant portion of Transport for London's operating costs. In the latest annual budget, £3.0 Billion - or one-third - of all operating funding for Transport for London was sourced from road network use charges.[420] Meanwhile, New York, NY is set to be the first jurisdiction in North America to implement cordon congestion pricing, a form of VKT Tax, after recently receiving approval from the state legislature and federal government. The scheme in New York will charge drivers up to $23.00 per day to enter Lower Manhattan and is expected to generate $1.0 Billion in revenue to fund mass transit.[421]

Why look at this tool?

A Vehicle Kilometres Travelled (VKT) Tax is an ideal tool for an equitable user fee on road usage with a clear, intuitive policy rationale that can be easily communicated. There are also numerous secondary policy options that can be considered in the implementation of a scheme, and it is seen in many jurisdictions as the future of transportation funding. There are also many natural crossing points across the Montréal region where VKT Taxes could be charged under congestion point charge of zone-based schemes. In addition, tolls, another form of VKT Tax, are already charged on two regional bridges and were previously considered for the new Samuel de Champlain Bridge.[422] Further, the Greater Montréal region is already familiar with zone-based transportation costs from zone fares charged on the metro and REM systems.

420: Transport for London, 2023a
421: Ley, 2023; Butera, 2023
422: Infrastructure Canada, 2019

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Mode Share

● FULLY MEETS OBJECTIVE

By accurately pricing road usage, a VKT Tax sends a price signal to drivers and encourages more efficient travel choices. Single-occupancy car trips impose some of the highest collective external costs including vehicle emissions, deterioration of roads and highways, public safety and time spent in congestion.[423] However, the personal costs to drivers are not always reflected in the shared burden of this mode of travel, and the series of travel choices could look different if road use was priced through fair and efficient means. A VKT Tax would present an opportunity for the CCM, ARTM, regional transit agencies and municipalities to recapture both the direct costs of driving and also the indirect, external costs such as greenhouse gas emissions from tailpipes, public safety (car accidents), and congestion.[424]

A VKT Tax could also influence land use changes and development that supports shorter trips and an overall shift to sustainable modes. By implementing a cost to travel further, demand for homes and services in different parts of the city could reasonably increase and spur mixed-use development in more neighbourhoods.

423: Cooper et al., 2022
424: Haines & Burda, 2016

Equity

● FULLY MEETS OBJECTIVE

A well-structured VKT Tax could improve current inequities in the regional transportation system including between individual drivers, and drivers and those using other modes of transportation. A VKT Tax in Montréal would be equitable because it charges road users directly for congestion and roadway costs that they impose. Opponents of VKT Taxes often suggest that drivers with long commutes will be unfairly penalized. However, people with higher incomes typically drive more at congested times of day. As such, a VKT Tax that focuses on congestion and road demand could be more equitable than one that charges the same rate irrespective of when people drive.[425]

The demographics that could be most affected by a VKT Tax include men and high-income groups and residents who live in places where driving a vehicle is necessary. On the other hand, if revenues are used to benefit public transit, women, low-income and equity-deserving communities who have a significantly higher reliance on the service would greatly benefit from a VKT Tax.[426] Furthermore, low-income people who must drive or small enterprises that rely on making deliveries to support their business model can also be supported by exemptions built into a VKT Tax program that are similar to tax credits already used in Québec.

Another important equity consideration for VKT Taxes is the quality of alternative travel options along corridors or within areas where such a fee is levied.[427] For example, the previous toll considered for the Samuel de Champlain Bridge is located along a corridor where the new REM service recently opened and provides a direct, viable alternative to driving. In addition, a considerably high number of Montrealers live within walking distance of fast and frequent transit provided by the regional rail and metro networks.[428] Extensions to the REM network along with planned expansions to the STM Metro and introduction of the Pie-IX BRT line will provide even more options to move throughout the City without the use of a private vehicle. Realizing transit system expansion plans and operating them with revenue from a VKT Tax alongside other improvements in active transportation infrastructure for walking and cycling would present Montrealers with a plethora of viable alternatives to driving and satisfy this concern.

425: Eliasson & Mattsson, 2006
426: Eliasson & Mattsson, 2006
427: Yu et al., 2017
428: Rocha, 2013

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Implementation

◐ PARTIALLY MEETS OBJECTIVE

The ARTM would need to acquire provincial approval and receive enabling legislative changes to the *Loi sur l'Autorité régionale de transport métropolitain* to implement a VKT Tax, but the costs associated with implementing this tool in Montréal could vary widely depending on the design of the tax program. There are already two tolled bridges in the Montréal region, meaning that a structure for collecting revenue from a VKT Tax under either a congestion point or multi-zone distance based scheme already exists and could be expanded.[429] There are also many natural geographic boundaries that could support these VKT Tax programs. Therefore, these types of VKT Tax programs could come with lower implementation costs, and this tool can be considered to partially meet this objective. However, higher implementation costs could be expected if the ARTM introduced a program that levied a per-kilometre fee that measures the distance travelled by an individual vehicle. In the US, some state programs provide onboard units that are connected to on-board diagnostics ports inside of vehicles that are registered in VKT Tax areas. Implementing this program would require close collaboration and agreements with Société de l'assurance automobile du Québec (SAAQ) and insurance brokers to have these units installed in vehicles around Montréal.

Regardless of how VKT Taxes are implemented, numerous studies would be required to assess affordability and equity impacts in the region, impacts on transport-intensive businesses, and available technologies to support a chosen program. Necessary equipment would need to be procured, installed and tested, and the operator of the VKT Tax program would need to hire staff and develop operating procedures. A considerable amount of public outreach would also be required to inform drivers of how the system operates, how to opt-in and manage accounts, and how fees are derived within parameters of the chosen program. Once implemented, the use of information technology means that ongoing program administration can mostly be automated, with support from staff to resolve customer concerns.

429: A25, 2023; A30 Express, 2023

Revenue Potential

● FULLY MEETS OBJECTIVE

There is considerable revenue potential from VKT Tax in Greater Montréal and the amount of funds that could be generated are based on the scope and parameters of a chosen program. Many transportation authorities across North America are looking for alternative revenue tools to replace dwindling gas tax revenues and opt-in, pilot program versions of VKT Taxes have been implemented in some US states to test this tool as a possible solution. If this tool is being considered as a viable replacement for a significant revenue source, it can likely provide moderate levels of revenue for transit operations.[430] A VKT Tax would also provide reliable revenue as long as drivers continue to use public roads in the region.

Alignment with Regional Objectives

◐ PARTIALLY MEETS OBJECTIVE

A VKT Tax would support numerous regional and municipal objectives related to transportation and development in Montréal. A VKT Tax sends a direct price signal to drivers and would encourage them to travel by other modes such as transit, walking and cycling. This would support the CMM's goal of increasing the modal share of public transit in the morning rush hour to 35%,[431] and STM's target of increasing ridership by 10%.[432] A VKT Tax could also encourage Montrealers to locate near rapid, high-frequency transit services to provide a viable alternative to driving and avoid paying the tax. This could increase demand for high density, mixed-use development near transit and support the CMM's goal of providing 60% of all new household growth in transit-oriented development areas.[433]

However, if a VKT Tax is applied at a smaller scale such as the Island of Montréal, this tool would effectively act as a cordon charge while surrounding areas of the region remain untaxed. This could have negative effects on travel choices and land-use patterns where different municipalities see their populations grow from people trying to avoid the tax. This would be contrary to the CMM's goal of providing 60% of all new household growth in transit-oriented development areas as most high-frequency, rapid transit service is located and operated within the Island of Montréal.[434] It is therefore recommended that this specific type of VKT Tax program be avoided.

430: Cooper et al., 2022
431: CMM, 2023
432: STM, 2017
433: CMM, 2023
434: CMM, 2023

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Risk

◐ PARTIALLY MEETS OBJECTIVE

A VKT Tax is adaptable because rates can be set by policy according to financial need and economic capacity. This renders this tool highly flexible to changing economic conditions and cost pressures associated with operating the regional transportation system. On the other hand, a VKT Tax is considerably vulnerable to political risk.[435] Political support for it is vulnerable to and shaped by public opinion, and close consultation and collaboration with the public and local stakeholders would be necessary in designing a program for this tool. Minimal political support could be expected for implementing a VKT Tax in the short-term as the Province of Québec denied a previous proposal to introduce tolls, another form of this tool, on the Samuel de Champlain Bridge.[436]

435: Cooper et al., 2022
436: Infrastructure Canada, 2019

Alternative Revenue Tool C: Electric Vehicle Charging Tax

What is it?

A regional surtax passed on to drivers when charging their electric vehicles. No existing precedent of an Electric Vehicle (EV) Charging Tax to fund transit service could be found.

Why look at this tool?

An EV Charging Tax would be similar to the Motor Fuel Tax that is already collected by the Province of Québec. While Motor Fuel Tax revenues are declining, Greater Montréal has experienced the second highest adoption rate of electric vehicles in Canada after Metro Vancouver, where 16% of all new automobile sales in 2022 were electric cars. Moreover, the Province of Québec has the highest number of zero-emission vehicles registered out of all provinces in Canada.[437] Further, structures for collecting a fee could be easily established through Electric Circuit, a company operated by Hydro Québec that provides and levies fees on EV charging at stations around Montréal. Electric vehicles are widely considered to be beneficial to the environment but actually have significant upstream and downstream negative externalities associated with the production of lithium batteries and use of public infrastructure.

Mode Share

● FULLY MEETS OBJECTIVE

Inherently a fuel tax, increasing the cost to charge an electric vehicle will provide drivers with a price signal and encourage other transportation modes while simultaneously contributing to transit operating revenues. Trips made by private car, including electric vehicles, impose a greater impact on the transportation network compared to public transit and active transportation given the amount of space required on roads and for parking.

Instead of applying a one-time fee to car ownership like a Vehicle Levy, an EV Charging Tax would impose a smaller recurring cost that would vary depending on how much a driver uses their car. Depending on the rate levied, an EV Charging Tax could create a strong transportation demand effect because it adds these incremental costs to each trip that drivers make. As such, even households that choose to replace their Internal Combustion Engine (ICE) vehicles powered by gasoline, diesel and other oil-based fuels with electric cars may choose other modes when appropriate. Further, this tool will provide increased transit operating revenue that could be used to increase service levels and attract ridership.

437: S&P Global, 2023

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Equity

◐ PARTIALLY MEETS OBJECTIVE

This tool can be considered equitable considering it funds transit operations, which disproportionately benefit marginalized groups and those with low-incomes, at the expense of higher income households that are more likely to own electric vehicles. Currently, the purchasing cost for an electric car comes at a relatively high price point compared to ICE vehicles. Higher income households are therefore more likely to be able to purchase an electric vehicle and install charging infrastructure in their home. Residents who want to avoid paying the electric vehicle charging tax can opt out of it by not driving as much or at all and use alternative modes of transportation such as transit, walking or cycling. As for an EV Charging Tax's impact on citizens in similar socioeconomic circumstances, any differential impacts are explained by how much they drive.

The manufacturing of electric vehicles also creates negative environmental and social externalities, and therefore external inequities, to produce and charge lithium batteries. In the Chilean Atacama region, part of what is more broadly known as South American Lithium Triangle, the mining industry continues to extract a large amount of groundwater in one of the driest desert areas of the world to produce lithium for electric vehicle batteries. In turn, this has forced migration of population from villages and ancestral settlements through water scarcity and an increasingly erratic water supply.[438] In addition, the mining practices use evaporation ponds that expose products to wind and severe storms. Geochemically, lithium is a highly mobile element and there is a high chance that it can be released into the environment and affect nearby communities.[439]

438: Agusindata et al., 2018
439: Figueroa et al., 2013

Implementation

○ DOES NOT MEET OBJECTIVE

Establishing an EV charging tax has high implementation costs. Should the ARTM seek to establish an EV Charging Tax, legislative amendments to the Loi sur l'Autorité régionale de transport métropolitain would be required. The ARTM would need to consult with regional municipalities, boards of trade, Hydro Québec, provincial staff, the CMM, and public taxpayers to develop an approach to implementing the tax. Additional coordination with and approval from Hydro Québec would be required to establish an approved rate.

The scope and parameters for an EV Charging Tax also affect the implementation costs of this revenue tool. If the EV Charging Tax was only applied at publicly accessible charging stations, it could be expected that there would be less implementation costs required as the ARTM could work with private charging companies to build the rate into electricity purchases at the charging station. However, much higher implementation costs could be expected if the tax also applied to residential dwellings. Coordination with the SAAQ would be necessary to identify which vehicle owners already have an electric vehicle, while close collaboration with the private sector and Hydro Québec would be required to install a meter in individual residences to determine how much power is being used to charge the vehicle at home.

Revenue Potential

◐ PARTIALLY MEETS OBJECTIVE

In the short to medium term, revenue from this tool could be expected as low to moderate. The number of electric vehicles registered in the City of Montréal was just under 22,000 at the end of 2022, while there were an additional 9,930 in the City of Laval, another regional municipality.[440] These vehicles amount to 2.8% and 3.2% of all registered vehicles in these cities alone. However, the number of new electric vehicle sales in Greater Montréal in comparison to other Canadian cities is significantly higher, where 16% of all new automobile sales in 2022 were electric cars and trucks.[441] As such, revenue potential may be low in the short term but grow to moderate in the medium to long term.

The amount of revenue that could be generated from an EV Charging Tax would be dependent on the rate set and whether or not it is charged at residential dwellings or only at publicly accessible charging stations. Significantly higher revenue could be generated if applied to residential dwellings, but the CMM, ARTM and Province of Québec would need to weigh the long-term benefits against upfront implementation costs associated with installing meters for vehicles in homes across Greater Montréal.

Finally, an EV Charging Tax is inherently a fuel tax and is therefore vulnerable to the same longevity and stability concerns. If the EV Charging Tax is effective in reducing electric vehicle use, then less revenue will be generated from reduced demand for electricity to power vehicles.

440: Association des Véhicules Électriques du Québec, 2023
441: S&P Global, 2023

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Alignment with Regional Objectives

◐ PARTIALLY MEETS OBJECTIVE

The Province of Québec has adopted an ambitious target of having one million electric vehicles registered in the province by 2030 and continuously supported the deployment of charging stations in communities.[442] An EV Charging Tax could dissuade some automobile customers from purchasing an electric car, or prolong the decision to switch to one from an ICE vehicle, in turn resulting in a slower reduction in carbon emissions from the tailpipe. However, an EV Charging Tax can be considered in alignment with regional priorities as it would generate additional operating revenue for public transit. This increase in operating funding could lead to service increases and expansions that make transit more convenient and reliable, attracting more riders and work toward other objectives in the same provincial policy, including making urban transit trips more attractive and competitive. This would also support additional regional and municipal policy directions, including the CMM's goal of increasing the modal share of public transit in the morning rush hour to 35%, and the City of Montréal's objective of improving accessibility across the community.[443]

Risk

◐ PARTIALLY MEETS OBJECTIVE

Given the societal impetus to electrify our transportation systems in Canada, there is likely no political will to implement this revenue tool at this time. The Province of Québec has also adopted a target for over one million electric vehicles to be registered by 2030. As such, there is likely to be minimal support from the Province to implement an EV Charging Tax.[444] That being said, Greater Montréal continues to be one of the leading metropolitan areas in Canada for registering new electric vehicles and more sales can only be expected in the coming decades. Therefore, there is less economic risk and this revenue tool may grow and become a stable source of revenue in the coming decades.

442: Province of Québec, 2018b
443: CMM, 2023; Ville de Montréal, 2022
444: Province of Québec, 2018b

Policy Recommendations

The ARTM should:

- Undertake econometric modelling and study the potential impacts of a Transit Benefit Area Tax within one kilometre of the rapid transit and rail networks in the Greater Montréal region for funding public transit operations;
- Study different VKT Tax programs that could operate in the Greater Montréal region and how they may impact affordability and equity, transport-intensive businesses, and available technologies to support the programs; and
- Conduct a feasibility study to determine the potential success of an EV Charging Tax in funding transit operations in Greater Montreal.

The Province of Québec should:

- Provide the ARTM with enabling legislation for a wide variety of revenue tools to enable the authority to respond to the changing operational funding demands of the regional transportation system; and
- Advocate to the Federal Government for a tripartite national commission alongside the provinces, local governments and transit agencies to develop a new operating funding model for public transit.

Photo source: Halifax Transit

6F Halifax

Halifax, Nova Scotia

Land Acknowledgment

The Halifax Regional Municipality is located in Mi'kma'ki, the ancestral and traditional lands of the Mi'kmaq people.

Halifax Overview

Halifax Regional Municipality (HRM) is the capital of Nova Scotia and home to almost 440,000 people. The population is rapidly growing and experienced an overall growth of 9.1% between 2016 and 2021.[445] Halifax Transit is a department of HRM and operates seventy-two bus routes and two ferry routes, and provides over 1 Million hours of service each year to Haligonians. Its fleet consists of 369 conventional buses, forty-seven access-a-buses, and five ferries. Transit routes connect three ferry terminals, eleven bus terminals, fourteen park-and-ride lots while the vehicle fleet operates out of two transit facilities.[446] Approximately 80% of all commuters in Halifax drive or are vehicle passengers, while just over 8% use the public transit system and over 10% walk, cycle or travel by other modes.[447]

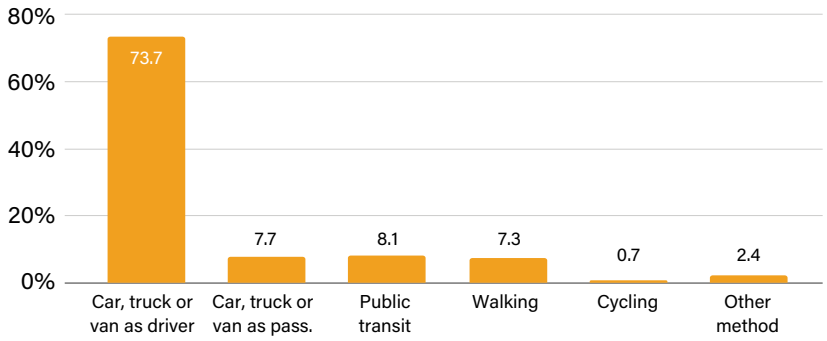

Figure 35: Commute Mode Share in HRM[448]

445: Statistics Canada, 2022h
446: Halifax Regional Municipality (HRM), 2023a
447: Statistics Canada, 2022h
448: Statistics Canada, 2022h

Transportation Goals & Objectives

The *Integrated Mobility Plan* is HRM's long-range transportation plan and aims for a 30% region-wide sustainable mode share with 18% of trips taken by public transit and 12% by active transportation including walking and cycling by 2031. The plan incorporates considerations for expanding the transit network such as Bus Rapid Transit (BRT), a larger ferry network, and commuter rail, and seeks to enhance transit service by implementing transit priority measures and improving the integration of transit service with land use and settlement patterns.[449] In addition, Chapter 5.2.3 of *HalifACT 2050*, HRM's climate strategy, focuses on decarbonizing transportation with a specific goal of achieving mode share targets in the *Integrated Mobility Plan* by building and expanding infrastructure for public transit and active transportation.[450]

Halifax Transit also has an ambitious *Rapid Transit Strategy* that includes three new ferry routes between Downtown Halifax and three new terminals at Mill Cove, Larry Uteck and Shannon Park, along with four new BRT routes. The strategy also has four other key policy directions focused on planning for higher density mixed-use around rapid transit; ensuring affordable housing and amenities are near rapid transit; improving connectivity near and active transportation infrastructure around stations; and a long-term vision of rapid transit integration with local land use.[451] Meanwhile, the *Regional Municipal Planning Strategy* includes direction to promote land settlement patterns and urban design approaches that support fiscally and environmentally sustainable transportation modes. This land use plan also includes housing directions to design communities that are accessible to all mobility needs and are well connected with other parts of the region.[452]

Funding Sources & Emerging Challenges

Current Operating Costs & Revenue Tools

The gross cost to operate Halifax Transit in 2023-2024 is $131.5 Million and was the third-highest expenditure in HRM's annual budget (13.4%) behind fiscal services (25.1%) and policing (14.5%).[453]

Table 21: Top 5 Tax Supported Expenditures in 2023-24 HRM Budget

Rank	Service	Expenditure	Percentage of Overall Budget
1	Fiscal Services	$246.2 Million	25.1%
2	Police (Halifax Regional & Transfers to RCMP)	$141.3 Million	14.5%
3	Halifax Transit	$131.5 Million	13.4%
4	Public Works	$124.1 Million	12.7%
5	Halifax Regional Fire & Emergency	$85.5 Million	8.5%

449: HRM, 2017
450: HRM, 2020b
451: HRM, 2020b
452: HRM, 2014
453: HRM, 2023a, HRM 2023b

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Revenue tools available to Halifax Regional Municipality to generate funding for municipal services including transit operations are governed by the *Halifax Regional Municipality Charter (HRM Charter)*. Of note, HRM generates revenue for public transit using a Benefit Area Tax, which is a local tax levied on property within a defined area near transit infrastructure such as a line or stations. The Benefit Area Tax creates a direct link between the value of transit access and properties within one kilometre of each transit stop, and is a small surtax in addition to conventional, wealth-based property taxes. This tool is responsible for raising the most revenue (45%) for operating costs for Halifax Transit in the 2023-24 HRM budget. [454] Other operating revenue for Halifax Transit is generated primarily from general property tax and transit fares, with a small amount from other sources such as advertising.

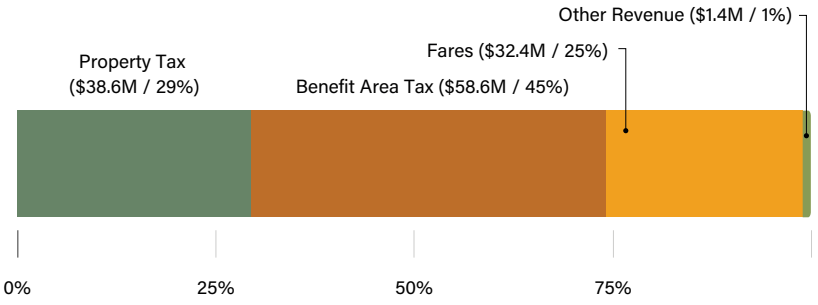


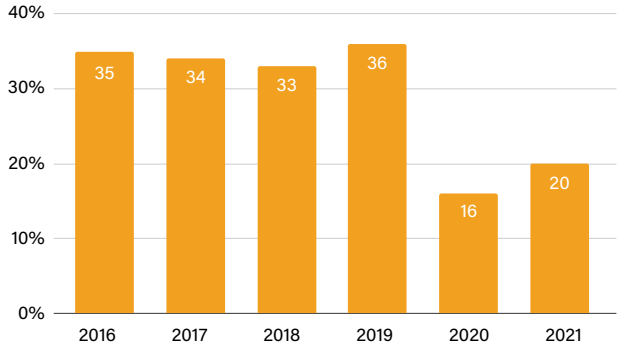
Figure 36: 2023 Halifax Transit Operating Budget[455]

HRM previously dedicated a portion of all property taxes to transit operating funding, but this mill rate was removed in 2023 due to political contention in rural areas of the municipality where the benefits of transit service in the broader region were not as easily traced. The funding requirements that would otherwise be required from this mill rate are now collected from the general property tax rate.[456]

454: HRM, 2023a
455: HRM, 2023a
456: HRM & French, 2023

Operating Cost Drivers

One of the biggest cost drivers for Halifax Transit is population growth in the municipality.[457] As highlighted previously, HRM's population grew by over 9% between 2016 and 2021,[458] and the growth rate in Downtown Halifax in particular is leading all downtowns in Canada.[459] Increases in inflationary costs such as driver wages and fuels for transit vehicles was also cited as another driver. For instance, Halifax Transit budgeted for an average diesel cost of $0.91 per litre in 2022-23, but the actual cost was closer to $1.00 per litre.[460] Further operating cost increases can be traced to lingering effects from the COVID-19 pandemic. Staff from the HRM highlighted that fare revenue recovery has been forecasted to 82.5% of pre-pandemic levels for 2023-24. Collectively, these increasing cost drivers have resulted in a decline in the revenue / cost ratio for Halifax Transit, while the number of revenue service hours per capita has remained relatively stable between 2.3 and 2.6 over the past six years.



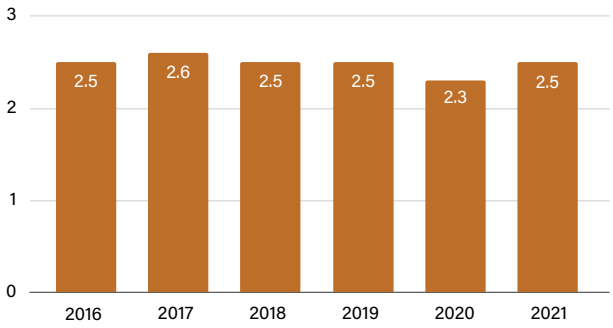


Figure 37 (above left ↖): Halifax Transit Revenue / Cost Ratio[461]

Figure 38 (above right ↗): Halifax Transit Revenue Hours per Capita[462]

Halifax Transit and HRM Council are also aware of significant additional operating costs that will come with the strategic rapid transit projects planned for the municipality. In addition to increases on existing transit services, the new BRT lines and ferry routes are expected to add between $15 Million and $22 Million to the annual operating budget.[463] These projects alone could represent a 16% increase in annual operating costs for Halifax Transit.

457: HRM & French, 2023
458: Statistics Canada, 2022f
459: HRM & French, 2023
460: HRM & French, 2023
461: The number of revenue service hours provided per person in the city. (CUTA, 2022)
462: Total operating revenues divided by total operating costs. (CUTA, 2022)
463: HRM, 2020b

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Figure 39: 2023 Halifax Transit Operating Revenue and Shortfall from Future Strategic Transit Projects[464]

There is minimal confidence that Halifax Transit will be able to realize system expansions such as the new BRT lines and ferry services within the existing funding parameters available to the department, and with ridership and fare revenues still not back to pre-pandemic levels.[465] A 1% increase to property taxes for HRM would generate $10 Million in additional revenue if it is dedicated to Halifax Transit. From the outset, this may look as if a 2.1% increase in HRM property taxes could cover operating costs for the strategic rapid transit projects. However, considerable capital funding is also needed to realize these projects which could also require increases from property tax. Additional costs may come from provincial land use planning and management including new areas where housing has been fast tracked in the suburbs where transit service costs will be higher, and a new hospital in an industrial area that is difficult to reach by transit.[466] Yet, transit service to these locations to support the mobility needs of Haligonians will be expected. As such, Halifax Transit and HRM will require new tools and approaches to funding public transit operations in the Nova Scotian capital.

464: HRM, 2020b; HRM, 2023b
465: HRM & French, 2023
466: HRM & French, 2023

Revenue Tool Screen

Table 22: Revenue Tool Screen for Halifax, NS

Revenue Tool	Benefit Area Tax	Real Estate Opportunities	Off-Street Parking Tax	Vehicle Levy	VKT Tax	Regional Sales Tax	EV Charging Tax	TNC Fee
Is this tool already used to generate revenue for transit operations?	Yes	No	No	No	No	No	No	No
Has the tool been assessed in the region?	N/A	No	No	No	Yes	No	No	Yes
Can the tool be implemented under existing legislation?	N/A	No	No	No	No	No	No	No
Does this tool have interdependencies with specific programs or tools?	N/A	Yes	No	Yes	Yes	No	Yes	Yes
How successful will the tool be given the context of the region (e.g. geography, transportation trends etc.)?	N/A	Med	High	Med	High	Med	Med	Med
Was this tool a key topic of discussion with agency staff during engagement?	N/A	No	Yes	Yes	Yes	No	No	No

Based on the revenue tool screen questions above in ***Table 22***, this paper examines Off-Street Parking Taxes, Vehicle Levies and VKT Taxes as potential revenue tools to fund transit operations in Halifax. These three tools are examined further to determine if they fully meet, partially meet or do not meet the study objectives, as summarized in ***Table 23*** below.

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Table 23: Multiple Account Evaluation of Operating Revenue Tools Proposed for Halifax Transit

Objective	Off-street Parking Tax	Vehicle Levy	VKT Tax
Mode Share	●	●	●
Equity	◐	◐	●
Implementation	◐	◐	◐
Revenue Potential	●	●	●
Alignment with City Objectives	●	●	●
Risk	◐	●	◐

● fully meets ◐ partially meets ○ does not meet

Alternative Revenue Tool A: Off-Street Parking Tax

What is it?

A tax levied on off-street, privately owned and operated parking sales or spaces. Many municipalities and regional transit agencies use parking taxes under these two different schemes to generate revenue for public transit. For instance, TransLink collects an Off-Street Parking Sales Tax on parking spaces that are privately owned and operated across Metro Vancouver as part of its funding portfolio. In 2018, the agency's taxation authority was increased from 21% to 24% and was estimated to generate $87 Million in 2023.[467] In addition, the City of Montréal levies a tax on the surface area of off-street parking on non-residential land parcels as a surcharge on property taxes. Rates range from $6.25 per square metre to $12.45 per square metre for interior parking lots, and $2.00 per square metre to $50.10 per square metre depending on the area of the city. Revenue generated from this tax on off-street parking spaces is earmarked for the City's annual transfer to the Autorité régionale de transport métropolitain (ARTM), the regional transportation planning and funding agency.[468]

Why look at this tool?

Off-Street Parking Taxes contribute to transportation demand management and can have a positive impact on influencing sustainable travel choices.[469] Parking pricing mechanisms are also highlighted as a possible tool for transportation demand management in the *Halifax Transportation Demand Management Functional Plan* and potentially housing growth targets as prescribed in the *Regional Municipal Planning Strategy*.[470] There are also Canadian precedents available for this tool along with a clear, intuitive policy rationale that can be easily communicated.[471]

Mode Share

● FULLY MEETS OBJECTIVE

Abundant free or cheap parking is often expected by drivers in North America, but research has shown that inefficiently priced parking and unnecessary parking minimums have led to undesirable outcomes for cities.[472] Off-Street Parking Sales Taxes could generate revenue for transit while simultaneously reducing car use in Halifax. If drivers want to avoid paying higher parking fees from these taxes, they could choose to use other modes such as public transit or active transportation.[473] If HRM chose to pursue a non-residential Off-Street Parking Levy as an additional mill rate to property taxes, property owners who want to avoid paying the levy on the space could reduce the parking supply on their lot to avoid the charge. This would provide drivers with less choice for parking their vehicle and could influence them to take transit, walk or cycle.

467: TransLink, 2023
468: Ville de Montréal, 2023a
469: Litman, 2022
470: HRM, 2010; HRM, 2014
471: Cooper et al., 2022
472: Shoup, 2011
473: Cooper et al., 2022

HALIFAX

Equity

◐ PARTIALLY MEETS OBJECTIVE

Like other revenue tools that add costs to drivers, an Off-Street Parking Sales Tax will have different impacts on different households even if incomes are the same. The relative burden of an Off-Street Parking Sales Tax increases as incomes decrease. Vertical equity concerns could be partially mitigated with a low-income parking pass program, a solution that has been implemented in Seattle, but is unlikely to apply to privately owned and operated parking in Halifax.[474]

Meanwhile, there are no perceivable equity concerns to the community at large if HRM was to introduce an Off-Street Parking Levy on non-residential properties as an additional mill rate to property tax. There could be more significant impacts on smaller businesses and property owners, but a minimum area threshold could be established to protect these stakeholders. There could also be marginal impacts on some property owners that could have smaller spiraling effects like increases in the cost of higher retail prices.[475] Geographic considerations through the implementation of graduated rates, as is done by the City of Montréal, should also be considered as this tool's impact would vary significantly across Halifax.[476] Property owners could also be given the option to apply for permits to and potentially repurpose parking stalls for other uses such as community spaces, or even housing.

Implementation

◐ PARTIALLY MEETS OBJECTIVE

From the outset, establishing an Off-Street Parking Tax under any program or scheme will be demanding from an implementation perspective and require enabling legislative changes to the *HRM Charter*. In particular, amendments and additions would be required to Section 94(2)a-e that stipulates the types of tax rates that can be assessed on commercial properties.[477] HRM would also need to create an inventory of all off-street parking spaces that the tax may apply to within the scope and parameters. Establishing this inventory would have high initial implementation costs and would likely require significant staff resources and/or support from consultants.

474: Cooper et al., 2022
475: Litman, 2022
476: Ville de Montréal, 2023a
477: Province of Nova Scotia, 2008

For an Off-Street Parking Sales Tax, a licensing process for parking vendors would need to be created, and regulations established for informational requirements like reporting, record keeping and auditing. Further consideration would be required for how the tax will be collected, but all aspects involve costs for initial introduction and ongoing management.

If HRM were to introduce non-residential Off-Street Parking Levies as an additional mill rate to property tax, less management resources may be required once established. Zoning changes may be needed to accommodate developers and property owners who wish to reduce the size of their parking lots to avoid paying a higher rate under the Off-Street Parking Levy. Meanwhile, data such as the inventory of parking spaces would live in property records and revenue would be collected once per year when property taxes are due. As such, minimal ongoing management and administration costs could be expected and this tool could therefore be considered to partially meet this objective.

Revenue Potential

● FULLY MEETS OBJECTIVE

Revenue from Off-Street Parking Sales Taxes on privately owned and operated facilities could be fairly flexible and large in the context of HRM and Halifax Transit's emerging needs for operating funding. Initial revenue from an Off-Street Parking Sales Tax may be low but could increase as additional parking pricing mechanisms come online such as paid parking in off-street lots where it is currently free. However, revenue from an Off-Street Parking Sales Tax scheme would likely fluctuate alongside other broader transportation demand patterns such as the number of car trips and locations of trip generators.[478] This gives Off-Street Parking Sales Taxes similar reliability challenges that are associated with fare revenues and TNC Fees.

If HRM were to introduce a non-residential Off-Street Parking Levy, Halifax Transit could expect significant, predictable revenues for funding transit service. HRM could set any rate desired within the bounds of new legislation required from the Province. For example, under an assumption that there could be as many as 1-2 off-street parking spaces in Halifax per capita, and each space on average is charged a levy of $50 each year, the levy could generate $100 per capita.[479] Based on the population of HRM in the 2021 census,[480] annual revenue could be as high as $44 Million. This tool can be considered to fully meet this objective.

478: Cooper et al., 2022
479: Assumption that there could be between 1-2 off-street parking spaces per capita in a city is derived from Litman, 2022
480: Statistics Canada, 2022

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Alignment with City Objectives

● FULLY MEETS OBJECTIVE

Off-Street Parking Sales Taxes would be a direct cost to drivers and could influence modal shifts to sustainable modes of transportation including transit, walking and cycling. This would support the mode share targets outlined in the *Integrated Mobility Plan*, and direction to disincentivize single-occupant vehicle trips as stipulated in the *TDM Functional Plan*.[481]

If HRM were to introduce an Off-Street Parking Levy as an additional mill rate to the property tax, some property owners and developers may seek to reduce or eliminate the number of stalls on their parcel to avoid paying the rate. This could lead to development, including housing, on existing surface parking lots or with lower numbers of stalls in new developments. Such results would support directions in the Regional Municipal Development Plan to promote land settlement patterns and urban design approaches that support sustainable transportation modes, and the target of at least 75% of new housing being built in the regional centre or urban communities.[482]

Risk

◐ PARTIALLY MEETS OBJECTIVE

Both programs discussed for Off-Street Parking Taxes have considerable risk involved with their implementation. Both would require significant political support at both the local and provincial levels, with provincial legislation amendments to the *HRM Charter* also required. Off-Street Parking Sales Taxes would be vulnerable to economic disturbances that reduce the amount Haligonians drive and require parking, potentially leaving Halifax Transit without a significant source of operating funding. In comparison, an Off-Street Parking Levy is more predictable and would not rely on drivers ending trips in paid parking stalls as it is a determined annual fee paid by property owners each year. As such, Off-Street Parking Taxes can be considered to partially meet this objective.

481: HRM, 2010; HRM, 2017
482: HRM, 2014

Alternative Revenue Tool B: Vehicle Levy

What is it?

A fee that would be charged to owners of vehicles registered in HRM when they renew their Nova Scotia Motor Vehicle Permit. In Montréal, residents currently pay a $45.00 contribution to public transit on the renewal of their vehicle registration. In the 2023 budget, the ARTM expects to generate approximately $62.9 Million from vehicle levies for transit service in Greater Montréal.[483] Starting in 2024, vehicles in the region will pay $59.00, and the ARTM expects to raise a total of $125 Million with the new increase.[484] Thirty-three US states and twenty-seven local jurisdictions also use vehicle registration fees and levies to fund transportation improvements that often include public transit.[485]

Why look at this tool?

The Province of Nova Scotia charges drivers a Motor Vehicle Permit (similar to a vehicle registration) that, for most vehicles, can be renewed every two years. Drivers renew their license plates online or in-person at Access Nova Scotia locations, meaning that an adequate structure already exists where this levy could be charged. Vehicle Levies also provide a predictable revenue for budgeting purposes with a clear and intuitive policy rationale that can be easily communicated.[486] Further, Halifax has a relatively high auto mode share, meaning that there is likely a high vehicle population that could provide moderate revenue to address operating shortfalls facing Halifax Transit.

Mode Share

● FULLY MEETS OBJECTIVE

A Vehicle Levy would add minor cost pressures on drivers while also raising transit revenue that could be used to increase service levels. The transportation demand management effect of a Vehicle Levy is unlikely to generate as strong of a mode shift as tools that create costs that recur more often such as Off-Street Parking Sales Taxes or VKT Taxes. However, a small annual fee may influence households to reduce the number of vehicles that they own, from two cars to one for example.[487]

483: ARTM, 2023b
484: Sherwin, 2023
485: Litman, 2022
486: Cooper et al., 2022
487: Cooper et al., 2022

Vehicle Levies can also be targeted towards vehicles of different types and characteristics such as axle count, age, or gross vehicle weight.[488] The Province of Nova Scotia's Motor Vehicle Permits for passenger vehicles and light to medium weight commercial vehicles are already charged according to the net weight of the vehicle.[489] Therefore, the structure for HRM to impose a levy targeting a specific type of vehicle such as large SUVs and light pickup trucks that have higher fatality rates from collisions with pedestrians and people riding bicycles is already in place.[490] This could dissuade purchasers of new cars to opt for a smaller model, thereby generating a higher perceived sense of safety on regional roads that in turn encourages people to walk or cycle.

Equity

◐ PARTIALLY MEETS OBJECTIVE

Generally, vehicle levies are considered to be an equitable means to fund public transit operations. Automobile use leads to significant external costs for governments in the form of infrastructure and maintenance as well as negative environmental costs. A vehicle levy can therefore be conceptualized as a reimbursement of these costs from motorists to transit users who have lower external costs to governments.[491]

At the citizen level, a flat Vehicle Levy is progressive because car ownership tends to correlate with an individual or a household's income. In addition, this tool does not place any cost burden on the lowest income households who are likely to not own a vehicle. As such, a Vehicle Levy could be considered vertically equitable.[492] However, the levy could represent an inequitable burden for Halifax households that must own one or more vehicles due to a number of factors such as home and work locations and available alternative transportation options. The impact of this burden on Haligonians would require further investigation, but a Vehicle Levy with a similar fee to the one in Greater Montreal is minimal compared to other costs associated with owning and operating a vehicle including insurance, fuel and repairs.[493]

488: Kitchen & Slack, 2016
489: Province of Nova Scotia, 2015
490: Robertson, 2006
491: Litman, 2012
492: Cooper et al., 2022
493: French et al., 2023

Implementation

◐ PARTIALLY MEETS OBJECTIVE

Implementing a Vehicle Levy would require legislative amendments to Section 306 of the *Motor Vehicle Act* that prohibits municipalities from regulating the registration of motor vehicles.[494] Additional amendments are likely required to the *HRM Charter* as well, but the ongoing management of this tool would not likely be resource intensive. Intergovernmental agreements, developed with key stakeholders including Access Nova Scotia, on who collects the fees and how revenue is shared would be required. However, because the Province already charges vehicle registration fees, the necessary structures are already in place and only a local fee would need to be added to the existing process.

Revenue Potential

● FULLY MEETS OBJECTIVE

Since a Vehicle Levy requires legislative amendments, the exact fee that HRM would be able to charge and associated flexibility is unknown. Fees could be changeable each year as operating budget needs change, indexed to inflation, locked in at a nominal price, or set to some other measure. Even a nominal fee has revenue potential that is comparable to other tools in this report. A similar fee to those charged in other jurisdictions such as Montréal could have moderate revenue potential in HRM.[495] Exact estimates were not derived as open data for vehicles registered within HRM could not be found.

Alignment with City Objectives

● FULLY MEETS OBJECTIVE

A Vehicle Levy aligns with Chapter 8.2 of the *TDM Functional Plan* by charging a fee that begins to shift public costs borne from private vehicles back to their owners.[496] It also is well aligned to many of the Regional Municipal Planning Strategy's key directions for land use and mobility by supporting public transit service and adding a minor disincentive to vehicle ownership. A Vehicle Levy and other transportation demand management tools may also indirectly impact urban form as Haligonians seek to reduce their transportation costs and switch to transit and active transportation.[497] This shift to other modes may create long-term pressures for land use changes including the creation of complete communities where residents are able to run daily errands without the use of a car.

494: Province of Nova Scotia, 1989
495: Cooper et al., 2022
496: HRM, 2010
497: HRM, 2014; Cooper et al., 2022

HALIFAX

Risk

● FULLY MEETS OBJECTIVE

While dependent on the scope, parameters and actual fee associated with a Vehicle Levy, there can be expected to be minimal political and economic risk. Taxes that represent a minimal cost burden to taxpayers - in this case drivers in HRM - are generally more palatable than those with higher fees and could be more politically popular. At the same time, the economic flexibility of the Vehicle Levy is dependent on its scope and parameters. It could present low economic risk if designed and implemented with means to grow over time by either being indexed to inflation or with permissions to be adjusted year to year to cover higher or lower transit operating costs.

Alternative Revenue Tool C: Vehicle Kilometres Travelled (VKT) Taxes

What is it?

A tax levied on drivers that is charged based on the distance that they travel. VKT Taxes can operate in a variety of ways and are also known as mobility pricing, congestion pricing, decongestion pricing, distance-based charging, mileage based user fees and road use charging. London, UK has used VKT Taxes among other road based charges to fund a significant portion of Transport for London's operating costs. In the latest annual budget, £3.0 Billion - or one-third - of all operating funding for Transport for London was sourced from road network use charges.[498] Meanwhile, New York, NY is set to be the first jurisdiction in North America to implement cordon congestion pricing, a form of VKT Tax, after recently receiving approval from the state legislature and federal government. The scheme in New York will charge drivers up to $23.00 per day to enter Lower Manhattan and is expected to generate $1.0 Billion in revenue to fund mass transit.[499]

Why look at this tool?

A Vehicle Kilometres Travelled (VKT) Tax is an ideal tool for an equitable user fee on road usage with a clear, intuitive policy rationale that can be easily communicated. There are also numerous secondary policy options that can be considered in the implementation of a scheme, and it is seen in many jurisdictions as the future of transportation funding. In addition, tolls, another form of VKT Tax, are already charged by the Province on the Angus L. MacDonald Bridge and A. Murray Mackay Bridge. As such, an administration and revenue collection structure that could support VKT Taxes in HRM already exists and may only require procuring additional equipment and staff for expansion.

Mode Share

● FULLY MEETS OBJECTIVE

By accurately pricing road usage, a VKT Tax sends a price signal to drivers and encourages more efficient travel choices. Single-occupancy car trips impose some of the highest collective external costs including vehicle emissions, deterioration of roads and highways, public safety and time spent in congestion.[500] However, the personal costs to drivers are not always reflected in the shared burden of this mode of travel, and the series of travel choices could look different if road use was priced through fair and efficient means. A VKT Tax would present an opportunity for HRM and Halifax Transit to recapture both the direct costs of driving and also the indirect, external costs such as greenhouse gas emissions from tailpipes, public safety (collisions), and congestion.[501]

A VKT Tax could also influence land use changes and development that supports shorter trips and an overall shift to sustainable modes. By implementing a cost to travel further, demand for homes and services in different parts of the city could reasonably increase and spur mixed-use development in more neighbourhoods.

498: Transport for London, 2023a
499: Ley, 2023; Butera, 2023
500: Cooper et al., 2022
501: Cooper et al., 2022

HALIFAX

Equity

● FULLY MEETS OBJECTIVE

A well-structured VKT Tax could improve current inequities in the regional transportation system including between individual drivers, and drivers and those using other modes of transportation. A VKT Tax in Halifax would be equitable because it charges road users directly for congestion and roadway costs that they impose. Opponents of VKT Taxes often suggest that drivers with long commutes will be unfairly penalized. However, people with higher incomes typically drive more at congested times of day. As such, a VKT Tax that focuses on congestion and road demand could be more equitable than one that charges the same rate irrespective of when people drive.[502]

The demographics that could be most affected by a VKT Tax include men and high-income groups and residents who live in places where driving a vehicle is necessary. On the other hand, if revenues are used to benefit public transit, women, low-income and equity-deserving communities who have a significantly higher reliance on the service would greatly benefit from a VKT Tax.[503] Furthermore, low-income people who must drive or small enterprises that rely on making deliveries to support their business model can also be supported by exemptions built into a VKT Tax program that are similar to tax credits already used in Nova Scotia.

Another important equity consideration for VKT Taxes is the quality and viability of alternative travel options along corridors or within areas where such a fee is levied.[504] Realization and operation of the proposed BRT and ferry routes in the *Rapid Transit Strategy* with revenue from a VKT Tax would present Haligonians with a plethora of convenient alternatives to moving around the municipality. For example, a Bedford resident who commutes to Downtown Halifax would have several options including a new BRT line and two new ferry terminals closeby.

502: Eliasson & Mattsson, 2006
503: Eliasson & Mattsson, 2006
504: Yu et al., 2017

Implementation

◐ PARTIALLY MEETS OBJECTIVE

HRM would need to acquire provincial approval and receive enabling legislative changes to the *HRM Charter* and Section 306 of the *Motor Vehicle Act* to implement a VKT Tax, but the costs associated with establishing this tool in Halifax could vary widely depending on the design of the tax program. The Province of Nova Scotia already collects tolls on the Angus L. MacDonald and A. Murray Mackay Bridges, meaning that a structure for collecting revenue from a VKT Tax under either a congestion point or multi-zone distance based scheme already exists and could be expanded.[505] Therefore, these types of VKT Tax programs could come with lower implementation costs, and this tool can be considered to partially meet this objective.

Higher implementation costs could be expected if HRM introduced a program that levied a per-kilometre fee that measures the distance travelled by an individual vehicle. In the US, some state programs provide onboard units that are connected to on-board diagnostics ports inside of vehicles that are registered in VKT Tax areas. Implementing this type of program would require close collaboration and agreements with Access Nova Scotia and insurance brokers to install these units in vehicles registered in HRM.

Regardless of how VKT Taxes are implemented, numerous studies would be required to assess affordability and equity impacts in HRM, impacts on transport-intensive businesses, and available technologies to support a chosen program. Rates for VKT Taxes would need to be decided by the Nova Scotia Utility and Review Board, which has a commission responsible for establishing toll rates on the Halifax Bridges.[506] Necessary equipment would need to be procured, installed and tested, and the operator of the VKT Tax program would need to hire staff and develop operating procedures. A considerable amount of public outreach would also be required to inform drivers of how the system operates, how to opt-in and manage accounts, and how fees are derived within parameters of the chosen program. Once implemented, the use of information technology means much of the ongoing program administration can be automated, supported by staff to resolve customer concerns.

Revenue Potential

● FULLY MEETS OBJECTIVE

There is considerable revenue potential from VKT Tax in Halifax Regional Municipality and the amount that could be generated from a comprehensive program is likely to exceed the required capital and operational funding requirements to realize the Rapid Transit Strategy. Many transportation authorities across North America are looking for alternative revenue tools to replace dwindling gas tax revenues and opt-in, pilot program versions of VKT Taxes have been implemented in some US states to test this tool as a possible solution. If this tool is being considered as a viable replacement for a significant revenue source, it can likely provide moderate levels of revenue for transit operations.[507] A VKT Tax would also provide reliable revenue as long as drivers continue to use public roads in Halifax.

505: Halifax Harbour Bridges
506: Nova Scotia Utility and Review Board, 2023
507: Cooper et al., 2022

HALIFAX

Alignment with City Objectives

● FULLY MEETS OBJECTIVE

A VKT Tax would support numerous objectives related to transportation and development in Halifax. A VKT Tax sends a direct price signal to drivers and would encourage them to travel by other modes such as transit, walking and cycling. This would work toward HRM's goal of having 30% of all commute trips taken by public transit and active transportation as stipulated in the *Integrated Mobility Plan*.[508] VKT Taxes, including congestion pricing, are also directly referenced as means to disincentivize driving in the *TDM Functional Plan*.[509] A VKT Tax could also encourage Haligonians to locate near rapid, high-frequency transit services to travel by other means than driving and avoid paying the tax. This could increase demand for high density, mixed-use development near transit and community nodes, supporting HRM's target of at least 75% of all new housing located in the regional centre and urban communities, and direction to focus growth where goods and services are already available.[510]

Risk

◐ PARTIALLY MEETS OBJECTIVE

A VKT Tax is adaptable because rates can be set by policy according to financial need and economic capacity.[511] This renders this tool highly flexible to changing economic conditions and cost pressures associated with operating the local transit system. However, a VKT Tax is considerably vulnerable to political risk. Political support for it is shaped by public opinion, and close consultation and collaboration with the public and local stakeholders would be necessary in designing a program for this tool. Members of HRM Council would have to be in favour of any VKT Tax proposal, and Provincial support would be necessary due to legislative changes in the *HRM Charter* and *Motor Vehicle Act* required for implementation. As such, this tool can only be considered to partially meet this objective.

508: HRM, 2017
509: HRM, 2010
510: HRM, 2014
511: Cooper et al., 2022

Policy Recommendations

Halifax Regional Municipality should:

- Study different forms of off-street parking taxes and identify the scope and parameters for implementing a version of this tool to fund Halifax Transit operations
- Conduct a feasibility study to determine potential options for a vehicle levy as a revenue tool for Halifax Transit operations and then, if promising, advocate for enabling legislation from the Province; and
- Study different VKT Tax programs that could operate in Halifax Regional Municipality and how they may impact affordability and equity, transport-intensive businesses, and available technologies to support the programs.

The Province of Nova Scotia should:

- Provide Halifax Transit with operating funding support for a defined period once regional land use plans, such as housing fast-tracked in the outskirts of HRM, enacted by the Province have been built and require transit service to the new communities;
- Consult with and provide enabling legislation to HRM that would allow Halifax Transit to fund operations using a diversity of new revenue tools; and
- Advocate to the Federal Government for a tri-partite national commission alongside the provinces, local governments and transit agencies to develop a new operating funding model for public transit.

Photo source: Chris French

7 Conclusion

Conclusion

Public transit is an essential service in Canada and emerging challenges in funding operations need to be addressed by all levels of government. This project identified options to address financial challenges associated with transit operating funding in Canada and developed policy recommendations for different levels of government. Research and analysis took place over three unique phases. The initial phase defined eight Canadian cities and urban regions for focus. A scan of their related policies, plans, legislation, budgets and strategies was conducted to establish a fundamental understanding of goals and objectives for transportation systems in each city, and how public transit is currently funded. In addition, a review of existing academic literature and best practices in transit funding was conducted to identify types of transit costs and alternative revenue tools that could be used for transit operating funding. This included an investigation of how three different G7 countries finance public transit operations. Municipal and regional transit agencies, advocacy organizations and industry experts were then engaged in the second phase of this study through interviews. These interviews confirmed emerging challenges in transit operating funding, defined objectives for assessing the viability of new revenue tools to fund transit service, and identified possible roles for different levels of government in addressing challenges to operating funding. The third and final phase analyzed these data and assessed three alternative revenue tools that could be used for funding public transit operations in the eight urban regions and recommended policy options for local, regional, provincial and federal levels of government.

For many Canadian transit agencies, no singular revenue tool alone will be able to meet the growing fiscal challenges for transit operations. Transit funding is dynamic, and operating needs and revenue sources will eventually need to change over time. In addition, the objectives used by a transit agency to determine the viability of a new revenue tool may also change in conjunction with broader societal challenges faced by Canadians. This project found that impacts on travel choices to move drivers away from single occupancy vehicles to sustainable modes of transportation in the face of the climate crisis as well as impacts on equity and feasibility of implementation were the most important objectives to transit agencies. However, Alignment with City or Regional Objectives may become more important, especially as cities seek to accommodate population growth and build affordable housing in mixed-use communities within their existing developed areas.

Municipalities, regional governments and transit agencies need to direct funding to transit, and identify and be transparent with the public of the consequences for not addressing operating funding shortfalls. They also need to assess and subsequently advocate for enabling legislation from the Provinces for new revenue tools. The Provinces need to work with municipalities to address operating shortfalls by providing enabling legislation, and also subsidize new or improved transit services. This study highlighted two examples of how provinces could become involved in transit operating funding. They may either providing annual subsidies as is done by the Province of Québec with the ARTM,[512] or by funding a portion of new transit services as was previously provided by the Province of Manitoba to the City of Winnipeg.[513] It is also essential for the Provinces to recognize that plans or mandates, such as new healthcare or educational institutions and development areas, will require municipal or regional transit agencies to provide new or improved service to these sites. These new or improved services fundamentally impact a transit agency's bottom line, and could lead to service cuts or optimization of their network in other areas without a provincial operating subsidy.

The Federal Government has a fundamental role in transit operating funding and must recognize that public transit service is critical to achieving greenhouse gas emissions targets, welcoming immigrants to Canada, and reducing everyday living costs for Canadians from coast to coast. At minimum, the Federal Government needs to establish a tripartite national commission dedicated to finding a new model for public transit operating funding. Not establishing a new model for transit operating funding could have implications for national economic growth, particularly from increasing demand for alternative means of employment mobility. Recommendations for the Federal Government to provide operating subsidies were also included in this study.

In summary, a cordial effort is required from transit agencies and all levels of government to address the challenges associated with transit operating funding in Canada. **Failure to address these challenges and establish a new direction for funding transit operations will have implications not only on how we approach climate change, congestion on our streets and affordability in urban areas, but also impact how Canadians move, travel through and experience the city for generations to come.**

512: ARTM, 2023b
513: City of Winnipeg & French, 2023

Recommendations for Further Study

This project initially identified a long list of revenue tools that could be used to fund transit operating funding, and was subsequently shortened to a list of nine tools for further assessment in Canadian cities. Three of these tools were assessed under the unique contexts of the eight Canadian urban regions selected for study. Further study could be conducted for how feasible additional revenue tools listed in this project or others could be implemented and address transit operating funding challenges in Canadian cities.

In addition, this project explored how three other G7 countries - Germany, the United Kingdom and United States of America - finance public transit operations. Further research could include a more comprehensive study of international best practices from the other G7 countries - France, Italy and Japan - or be expanded to G20 countries. Findings from such a study may result in additional policy recommendations for different levels of Canadian governments and their involvement in transit operating funding.

This report also identified policy recommendations related to senior government operating subsidies for new transit projects. However, these recommendations were focused on subsidies provided directly to public transit agencies in Canada. Yet, many recent, new transit expansion projects including the Valley Line in Edmonton and the REM in Montreal have been delivered as public-private partnerships. Better known as P3 projects, private sector corporations often operate these new lines for a dedicated period of time to reclaim their capital investment. Yet, these new transit lines and infrastructure provide invaluable public benefit to the many passengers they serve each day. Future studies should consider emerging roles and responsibilities for governments as they relate to operating funding for P3 projects.

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A

Appendices

Appendix A

Sample Engagement Agendas

Municipality / Transit Agency

1. Introductions - 5 min
2. Current Plans, Policies and Funding Sources - 10 min
    - Transportation Plans, Investment Plans, Funding Strategies, Revenue Studies, Policies and Objectives
        - What plans, strategies or studies might be missing from the policy scan?
        - Current transit funding sources
    - What revenue tools are currently used to fund public transit?
    - What revenue tools are available to your organization that may not be used now?
3. Emerging Challenges in Transit Service Funding - 10 min
    - What is the City / Transit Agency's confidence that planned service expansions, operations for new capital projects or broader organizational objectives can be met with existing revenue sources?
    - What are your cost drivers for additional operating funding in the short, medium and long-term? E.g. pandemic recovery, population growth etc.
4. Alternative Revenue Tools - 15 min
    - What objectives would your City / Transit Agency use to assess the viability of new revenue tools for funding transit operations? Are there any particular objectives that are important to you?
    - This study will analyze up to three alternative revenue tools to help fund transit operations in each city or region that is being examined, including in (City). Based on the objectives discussed, what other new, creative funding tools that could help fund transit operations have been explored or do you think could be useful to (City / Transit Agency)?

5. Roles of Federal / Provincial / Regional / Local Governments - 10 min
    - What discussions have you had with your local council about transit funding?
    - Are you having active conversations with higher levels of government about alternative revenue tools for public transit service? If yes, what is their level of interest?
6. Other Considerations - 5 min
    - Are there any other considerations that should be made with respect to further analysis of, or possible challenges to, transit operating funding as they relate to (City / Transit Agency) or your urban region?
7. Next Steps - 5 min

APPENDIX A

Sample Engagement Agendas

Advocacy Organization

1. Introductions - 5 min
2. Emerging Challenges in Transit Service Funding – 10 min
    - What is (organization's) historical context on this topic? What work has been done?
    - What is (organization's) confidence that planned service expansions, operations for new capital projects or broader organizational objectives among transit agencies can be met with existing revenue sources?
    - What are some of the most prominent cost drivers for additional operating funding in the short, medium and long-term? E.g. pandemic recovery, population growth, immigration etc.
3. Alternative Revenue Tools – 15 min
    - What objectives would your organization use to assess the viability of new revenue tools for funding transit operations in cities across Canada? Are there any particular objectives that are important to you?
    - This study will analyze up to three alternative revenue tools to help fund transit operations in each city or region that is being examined. Based on the objectives discussed, what other new, creative funding tools that could help fund transit operations have been explored or do you think could be useful to Canadian transit agencies? Are there any that would be suitable for all member agencies/organizations?
4. Roles of Federal / Provincial / Regional / Local Governments - 15 min
    - What discussions have you had with local city or regional councils about transit funding?
    - Are you having active conversations with higher levels of government about alternative revenue tools for public transit service? If yes, what is their level of interest?

5. Other Considerations - 5 min
    - Are there any other considerations that should be made with respect to further analysis of, or possible challenges to, transit operating funding as they relate to transit agencies in Canada?
6. Next Steps - 5 min

APPENDIX A

Sample Engagement Agendas

Industry Experts

1. Introductions - 5 min
2. Current Sources of Transit Funding
    - What revenue tools are currently used to fund public transit in some of the municipalities that you are working with?
    - What are some of the revenue tools that are available to the municipalities that you are working with but might not currently be used? Why are they not being used?
3. Emerging Challenges in Transit Service Funding – 10 min
    - Can you outline and discuss some of the work you may have been involved in, or are currently doing on this file?
    - What is your confidence that the agencies or municipalities that you are working or have worked with planned service expansions, operations for new capital projects or broader organizational objectives can be met with existing revenue sources?
    - What are some of the most prominent cost drivers for additional operating funding in the short, medium and long-term, in cities that you are currently working with? E.g. pandemic recovery, population growth, immigration etc.
4. Alternative Revenue Tools – 15 min
    - What objectives do you think should be used to assess the viability of new revenue tools for funding transit operations in cities across Canada? Are there any particular objectives that are more important than others?
    - This study will analyze up to three alternative revenue tools to help fund transit operations in each city or region that is being examined. Based on the objectives discussed, what other new, creative funding tools that could help fund transit operations have been explored or do you think could be useful to Canadian transit agencies? Are there any that would be suitable for all member agencies/organizations?
5. Roles of Federal / Provincial / Regional / Local Governments - 15 min
    - What are some of the conversations about transit funding

being held at the local level as they pertain to any municipalities you currently are working with or have worked with? Or, what are some of the conversations that you are aware of?

- Are / were there any conversations with senior levels of government about this? What are / were they like? What is their level of interest?

6. Other Considerations - 5 min
    - Are there any other considerations that should be made with respect to further analysis of, or possible challenges to, transit operating funding as they relate to transit agencies in Canada?
7. Next Steps - 5 min

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