

# PAYING THE WAY:



**R**eliable, efficient and affordable public transit is essential for sustainable communities. More than ever, Canadian transit systems are being asked to increase service levels and fleet sizes, and to improve passenger comfort and security. At the same time, they face rising costs and the challenge of carrying more riders while keeping fares low and minimizing their impact on property taxes.

Despite the growth in provincial and federal government grants for transit infrastructure, traditional funding sources cannot support the capital and operating costs of the transit services that Canadians deserve and expect. As CUTA's *Transit Vision 2040* makes clear, ensuring the financial health of Canada's transit industry will require not just greater investments and efficiencies by all orders of government, but also more progressive approaches to generating revenue. The need for alternative transit funding mechanisms is clear.

This issue paper summarizes new research by CUTA to identify and evaluate innovative transit funding tools used in North America, Europe and Asia. The report *Alternative Funding for Canadian Transit Systems* builds on a literature review, discussions with transit professionals, and presentations from the 2014 International Practicum on Innovative Transit Funding and Financing that was hosted by CUTA and APTA in Montréal. It is worth noting that the report focuses on tools for funding (who pays) rather than financing (how payments are structured or made).

## FOR MORE INFORMATION

Readers can visit [www.cutaactu.ca](http://www.cutaactu.ca) to download a copy of the full research report by HDR Corporation, and explore the accompanying online transit funding calculator.

## ASSESSMENT FRAMEWORK

The study used the seven criteria shown in Figure 1 to evaluate 24 possible transit funding mechanisms in six categories:

- User-based charges
- Vehicle ownership charges
- Land value capture
- Land-based charges
- Non-user-based charges
- Other charges






The following sections of this issue paper discuss the key findings for each category of funding mechanism. Figure 2 provides a visual summary of these findings.


Figure 1. Criteria to evaluate funding mechanisms

<p><b>REVENUE</b></p> <p>How much revenue can be generated? How stable and predictable is the revenue over time? Can it be sustained?</p>
<p><b>SOCIAL EQUITY</b></p> <p>Is there a mismatch between those who carry the costs and those who benefit and/or impose external costs? Is the tool progressive or regressive for different income groups?</p>
<p><b>TRAVEL IMPACT</b></p> <p>Does the tool encourage efficient travel choices? What are its impacts on external costs such as congestion, collisions, travel time or air pollution?</p>
<p><b>ECONOMIC EFFICIENCY</b></p> <p>What is the tool's impact on regional productivity and competitiveness? Are there any economic distortions, and to what extent do they hinder economic development?</p>
<p><b>DEVELOPMENT IMPACT</b></p> <p>Does the tool encourage more compact development and discourage sprawl?</p>
<p><b>IMPLEMENTATION</b></p> <p>How much would implementation cost? What are the challenges? Can the tool be implemented quickly? What legal support does it require?</p>
<p><b>PUBLIC PERCEPTION</b></p> <p>What are the public perceptions of the tool? What degree of public acceptability does it enjoy? What is the level of political support?</p>

## USER-BASED CHARGES

User-based charges are levied on those who use transportation services and infrastructure, consume fuel and produce GHG emissions. Conventional funding sources in this category include fuel taxes and transit fares, while alternative funding sources could include:

-  A *carbon tax* levied per unit of carbon dioxide emitted from fuel used for transportation and other purposes
-  A *car rental levy* charged daily on vehicle rentals
-  A *cordon charge* paid by drivers entering or exiting a zone or crossing a cordon during a specific time period of a day
-  A *high-occupancy toll* for solo drivers to use a high-occupancy vehicle lane, with the expectation of reduced commute time
-  A *highway toll per kilometre driven* on a designated road or for the use of a particular facility such as a bridge or tunnel

-  A *vehicle-kilometre travelled (VKT) fee* charged to drivers for every kilometre driven in a designated area or in all areas

User-based charges are generally consistent with “user pay” principles, in that the people paying the charges are responsible for adverse community impacts such as congestion, collisions and air pollution. By reducing these impacts and encouraging efficient travel choices, the tools have positive effects on competitiveness and productivity.

User-based charges generally produce sustainable revenues over time, so are suitable funding sources for transit operating expenditures. Carbon taxes, highway tolls and VKT fees also have significant revenue potential, especially in regions with a large tax base, which make them practical for capital expenditures. They are more suitable for regions with heavy automobile use, and they can improve access, congestion and environmental conditions. They can facilitate economic development and are appropriate for economically weak regions, but are less suitable for regions with sizeable lower-income populations because they can place a proportionally greater burden on those groups.

### STOCKHOLM CONGESTION TAX

The Stockholm Congestion Tax was adopted by the Stockholm City Council in 2006 to levy a charge on vehicles entering and exiting its city centre. The primary objective was to enhance mobility, improve the environment, and provide funding for road construction in Stockholm.

The congestion taxes are levied on all vehicle users at 18 entrance points to the city, with exemptions for vehicles such as environmentally sustainable vehicles, buses, and emergency vehicles.

The charges currently vary between \$1.65 CAD and \$3.30 CAD per trip across the cordon area based on the time of day. The charges will also increase year-over-year.

### USER-BASED CHARGE - HOT

The State Route 91 (SR-91) Express Lanes are ten-mile-long high occupancy toll (HOT) lanes located in California. The lanes were implemented in 1995 to reduce traffic congestion on what had been one of the most heavily congested corridors in the state. By law, the revenues collected from the express lanes were all reinvested into SR-91.



The tolls are structured to vary by hour, day, and direction across 20 different toll levels to control road demand. In 2004, the toll rates ranged between \$1.05 and \$6.25 per trip, with the peak toll being charged during heavily congested Thursday and Friday afternoons.


Exemptions are made for vehicles with three or more occupants that can access the HOT lanes for free except for Monday through Friday from 4 to 6 p.m., when they receive a 50% discount.

*For more information on these studies, visit [www.cutaactu.ca](http://www.cutaactu.ca)*

## VEHICLE OWNERSHIP CHARGES

These funding tools target vehicle owners who cause external impacts through vehicle use, and could include:


-  An *auto insurance tax* paid by vehicle owners through auto insurance payments
-  A *new vehicle sales tax* paid by owners of new vehicles at the time of a vehicle's first registration


 A *vehicle registration fee* paid by owners of vehicles when registering a new vehicle and renewing the registration annually


Compared to user-based charges, vehicle ownership charges have less impact on travel choices and development form, but are more likely to create economic distortions including on a region's vehicle sales industry. Their sustainable, moderate revenues make them suitable sources of operating funds, and they generally have minimal implementation costs. While they are equitable in that they apply to all vehicle owners, they are inequitable in their insensitivity to differences in individuals' levels of use or external impacts. Most vehicle ownership charges require provincial legislation to be implemented in Canada.


## LAND VALUE CAPTURE


In contrast to the preceding categories that focus on vehicle drivers and owners, land value capture mechanisms target properties and developments in the vicinity of existing or potential public transit facilities in attempt to capture a portion of the benefits realized. Development cost charges are a conventional tool in this category, while alternative tools could include:


 *Land value taxation* in the vicinity of a public transit facility to capture the value created by the provision of public goods and services

 *Negotiated exaction* payments by developers, in the form of in-kind contributions for local public goods and services, in return for development approval

 A *special assessment district tax*, self-imposed by property owners in a defined district that benefits from the public transit improvements being funded

 Station *air rights* sold or leased for development above or below transit facilities

 *Tax increment* financing to fund projects by leveraging future tax revenue increases in an area to finance current infrastructure projects

 A *transportation utility fee* that treats transportation improvements as a utility and applies to all properties in a district


Land value capture mechanisms generally encourage efficient travel behaviour and create economies thanks to increased densities. Some can be implemented at the municipal level in Canada, while others need provincial legislation.


Since these mechanisms rely on narrow tax bases, they require a substantial quantity of existing and/or developable properties to be effective. Negotiated exaction, station air rights and tax increment financing can generate substantial funds so are appropriate to support capital expenditures. Special assessment districts are also generally used to support infrastructure costs. Land value taxation and transportation utility fees generate ongoing revenues and are suitable to fund operations.


By improving access to transit, these tools can have greater benefits in regions with high population densities and levels of automobile use. However, they are generally regressive and require caution in regions with large low-income populations.

## LAND-BASED CHARGES

These costs are imposed on properties regardless of their distance from transit services. Property taxes are a conventional funding tool in this category, while alternative tools could include:

 A *land transfer tax* on homebuyers purchasing a property in an area


 A *parking sales levy* as an additional sales tax on paid parking transactions

 A *parking site levy* charged per day to owners of all non-residential, off-street parking spaces in an area

Land-based charges have minimal implementation costs and can generate sustainable revenues over time, making them suitable for supporting transit operating costs. They are likely to have only a modest impact on travel choices, and may not be appropriate for challenging economic conditions. They may be slightly regressive, making them less suitable for regions with a high proportion of low-income residents. They can all be implemented in Canada, with provincial support and approval.

## NON-USER-BASED CHARGES

These levies target most households or individuals in a region with no correlation to actual polluters or beneficiaries. Sales and income taxes are conventional funding sources in this category, while alternative tools could include:

 An *employer payroll tax* withheld by employers and remitted to the government


 A *utility levy* collected each month from all utility accounts in an area


These charges impose costs on local residents and businesses that create economic distortions, making them inappropriate for regions with challenging economic conditions. They are largely inconsistent with both horizontal and vertical equity, and have minimal impacts on congestion or pollution. Non-user-based charges in Canada require provincial approval.


Non-user-based charges can provide sustainable revenues with minimal implementation costs, making them suitable sources of transit operating funds. Employer payroll taxes can generate significant revenue that also make them suitable for supporting capital expenditures.


## OTHER CHARGES

There are a number of potential funding sources that do not align with any of the preceding five categories:

 *Crowdfunding* raised through voluntary contributions by the general public

 A *hotel and accommodation levy* charged as a tax on accommodation fees

 *Monetization of city assets* through the sale of city-owned assets that are not considered core to the city's operations and responsibilities

 A *driver's licence tax* charged to drivers upon licence issuance or renewal

All of these tools have marginal effects on travel behaviour and economic efficiency, making them less effective where improving traffic and economic conditions are key goals. Most generate limited to moderate revenues, but have minimal implementation costs. They can be implemented in Canada with legislative approval. Hotel and accommodation levies, monetization of city assets, and driver's licence taxes generate sustainable revenues and are suitable for funding transit operations. In comparison, crowdfunding is not predictable and would be more appropriate to support capital expenditures. Driver's licence taxes could benefit regions with large populations.

Figure 2. Assessment of alternative transit funding mechanisms

■ More favourable      ◆ Neutral or mixed      ● Less favourable

	Revenue	Horizontal equity	Vertical equity	Travel behaviour impact	Economic efficiency	Development impact	Implementation	Public perception
<b>USER BASED CHARGES</b>								
Carbon tax	■	●	●	■	●	◆	●	■
Car rental levy	◆	●	■	■	●	◆	■	■
Cordon charge	■	■	◆	■	■	◆	●	●
High occupancy toll	◆	■	■	■	■	●	●	■
Highway toll	■	■	●	■	■	◆	●	■
Vehicle-kilometre travelled fee	■	■	◆	■	■	■	●	●
<b>VEHICLE OWNERSHIP CHARGES</b>								
Auto insurance tax	◆	◆	●	■	●	◆	■	◆
New vehicle sales tax	◆	◆	●	■	●	◆	■	◆
Vehicle registration fee	◆	◆	●	■	●	◆	■	●
<b>LAND VALUE CAPTURE</b>								
Land value taxation	◆	■	●	◆	■	◆	●	●
Negotiated exaction	◆	◆	◆	◆	■	◆	■	■
Special assessment district	◆	■	●	◆	■	◆	●	●
Station air rights	◆	■	◆	◆	■	◆	●	■
Tax increment	■	◆	●	◆	■	◆	●	■
Transportation utility fee	■	■	●	◆	■	◆	◆	■
<b>LAND-BASED CHARGES</b>								
Land transfer tax	■	■	●	●	●	●	■	●
Parking sales levy	◆	◆	■	◆	●	●	■	●
Parking sites levy	■	◆	●	■	●	■	●	■
<b>NON-USER-BASED CHARGES</b>								
Employer payroll	■	●	■	◆	●	◆	◆	◆
Utility levy	◆	●	●	◆	●	◆	■	●
<b>OTHER CHARGES</b>								
Crowdfunding	◆	◆	■	◆	◆	◆	◆	■
Hotel and accommodation levy	◆	◆	●	◆	●	◆	■	■
Monetization of city assets	■	●	◆	◆	◆	◆	●	◆
Driver's licence tax	◆	●	●	■	●	◆	■	◆

**A LOOK AHEAD**

While Canadian governments have a wide range of options to generate funds for transit, there is no perfect solution that will satisfy the diverse conditions and priorities across jurisdictions. The key to a financially sustainable future for public transit will undoubtedly lie in a combination of traditional and innovative funding tools.

As transit systems and governments continue to experiment with new funding mechanisms, every experience will offer valuable lessons. CUTA will continue to work with its members, partners and stakeholders to build a deeper and broader understanding of the needs and options for adequate, equitable, efficient, implementable and sustainable transit funding.

The Canadian Urban Transit Association (CUTA) is the voice of Canada's public transit industry. For additional information including research reports, industry updates, news bulletins and more, please contact us or visit our website.

