

# FALLS FLAT: COMPARING THE TTC'S FARE POLICY TO OTHER LEADING TRANSIT AGENCIES



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## **EXECUTIVE SUMMARY**

The Toronto Transit Commission (TTC) is a laggard compared to other big-city transit operators when it comes to its fare policy.

Transit agencies around the world use a number of different models when setting fares – but few have the flat fare model currently used by the TTC. Of the 20 transit agencies surveyed for this report, 15 – or 75% – charge customers a fare based on distance travelled.

Some agencies also offer transit customers a discount if they travel in off-peak hours, with one agency offering free rides to customers who shift their downtown commute outside of the morning rush hour. Other agencies offer customers the option of purchasing “short-distance” fares that allow travel for a few stops.

Some agencies use a combination of distance, peak and off-peak fares.

Additionally, nearly every transit agency uses an electronic fare card, making it easier to calculate fares by distance or time. A number of electronic fare systems have been in place for more than a decade, with some agencies developing an electronic fare card that can be used at local retailers – allowing customers to use their card to both pay for transit trips and purchase goods.

Transit in Toronto is never far from top of mind for its residents or elected officials. But amidst the often-heated discussions over how to improve transit service and operations in the city, the topic of the TTC’s fare policy is rarely discussed. Our analysis shows that the TTC’s flat fare policy is an exception when compared to other leading transit agencies from around the world.

Before the TTC, elected officials or regulators propose expansion plans – and the spending necessary to finance it – to handle growing ridership, they should scrap the flat fare model that limits customer choice and fails to more accurately charge customers for the services they use.

## **I. THE TTC'S CURRENT FARE POLICY**

The TTC currently uses a flat fare model. Customers riding the TTC pay one fare – in the form of cash, token or metropass – for one continuous trip. For example, a customer can purchase a ticket to ride the subway, then transfer to a bus or streetcar to complete the journey, with no restrictions on the length of time per trip or the distance travelled. A customer will pay the same fare whether she travels for one stop, or across the city. All forms of transit – subway, streetcar and bus – cost the same fare.

For the limited number of TTC buses that continue past city boundaries, customers pay a higher fare of \$4.00. The TTC also operates a number of express bus routes during the peak morning and afternoon travel times to the downtown core and surrounding neighbourhoods. Customers pay the traditional TTC fare plus an additional fare – meaning a customer paying with tokens would pay an additional \$2.80 – to ride the express services. Customers can also purchase monthly stickers for \$40 to use the express buses, on top of a metropass.

Customers using the TTC and transferring to neighbouring suburban transit systems, such as York Region Transit (YRT) or MiWay in Mississauga, must purchase different fares for each of the transit systems. A customer travelling on the TTC and then transferring to York Region Transit must pay both a TTC and YRT fare.

Customers pay the same fare whether they are travelling during peak periods – the morning or afternoon rush hours – or off-peak hours, such as in the evening or on weekends.

## **II. WHY IT'S TIME FOR SOMETHING NEW**

The TTC should redesign its fare policy for three reasons.

Firstly, the TTC – in tandem with the provincial transit agency, Metrolinx – is both constructing and proposing a large expansion of the transit across the city. Calls for further expansion come as certain parts of the TTC are crowded or nearing capacity during peak travel periods, particularly in the morning for commuters using the subway to travel to the downtown core.

Using distance or peak and off-peak fares allows the TTC to better allocate the costs of that expansion. For example, the TTC expects total public transit ridership into the downtown core to increase by 55% by 2031, but the source of that traffic is unevenly distributed, with trips from outside the city expected to grow by 83% over that time period, while trips from within Toronto will grow by just 17%. That trend in an increase in long-distance ridership is one of the reasons cited by the TTC to build the Downtown Relief Line (DRL), which would divert riders off the busy Yonge subway during the morning commute.

A flat fare model ensures that those riders who are causing overcrowding – a combination of customers travelling long distances and those travelling during times of high travel demand – don't pay the additional costs they impose on the overall transit system. A new fare model would allow the TTC to better allocate those costs to the customers responsible for them.

Other TTC expansions will also come at a cost for all customers. The TTC's extension of the University subway line to Vaughan, for example, is expected to cost the agency more to operate than it will collect in fares. That difference will eventually be passed on to all TTC customers.

Secondly, a new fare system would allow the TTC to avoid some of the proposed system expansions by offering discounts to entice customers to travel outside of peak commuting hours. An analysis done by CPI last year showed that offering residents and TTC riders a free ride to the downtown core in the hours prior to peak hours would save the agency more than a billion dollars over the next two decades by eliminating the need to build even the shortest version of the DRL. Differentiated fares – whether by distance or time – could help alleviate demand on the TTC during busy times and avoid costly overbuilding.<sup>1</sup>

The third reason relates to the rollout of the Presto electronic fare card across the TTC and other regional transit systems, some of which are already using Presto. An electronic fare card system would allow the TTC to better track when people are entering and exiting the transit system, as well as how far they are travelling, what time of day they are travelling and how many transfers they are using. That data can be used to better allocate the cost of service to the amount of service consumed and, ultimately, a better fare policy.

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<sup>1</sup> "Toronto's Suburban Relief Line" can be downloaded at <http://cpi.probeinternational.org>.

### **A Closer Look: London and Singapore transit systems move more people while using more complicated fare systems than Toronto**

Both London and Singapore transit systems use sophisticated fare policies that charge customers based on a combination of distance-travelled and peak and off-peak usage. Both cities also move more people and attract a great percentage of commuters to public transit than private automobiles.

In the Greater Toronto Area (GTA), the percentage of commuters travelling to work by public transit has budged slightly to 23% by 2011, from 22% in 2001, according to data from the National Household Survey. Within the City of Toronto, that percentage has moved just slightly to 36% from 35%, respectively, even though the total number of kilometres of transit has increased 14% over the same time.

In London, in contrast, the number of workers commuting by public transit has increased more dramatically over that same period. In 2011, the percentage of workers commuting by public transit increased to 48.3% from 42.1% in 2001. That increase was a result of public transit attracting commuters out of their cars, as the percentage of workers commuting by car fell to 26.3% in 2011 from 33.5% in 2001.

The number of cars driving into and out of London has been declining for years – even before the city launched its central congestion charge in 2003. Traffic crossing into the Inner London cordon (an area more than half the size of Toronto and outside the congestion charge) has declined by 8.8% since 1999. Meanwhile, average traffic speeds during rush hour have increased slightly since 2006 after declining for years.

In Singapore, the percentage of commuters who use public transit to get to work is 63%, the same level it was in 2004 and up from 58% in 2008. Meanwhile, the average speed on expressways in peak travel times is now at a 10-year high of 64.1 kph, likely a result of the city's advanced tolling and congestion charge scheme.

Singapore – which has a long history of innovation in the transport sector – is also experimenting with a number of creative ways to deal with crowding and congestion on public transit. Customers using the country's transit agency can purchase a discounted monthly pass for all off-peak hours. The off-peak pass can be used at any time other than peak travel periods, which the agency defines as weekdays between 6:30 and 9:00 a.m. and between 5:00 and 7:30 in the evening. The country has also offers commuters travelling to a select number of downtown subway stations a free ride if they travel before 7:45 a.m. in order to ease overcrowding.

### III. HOW THE TTC STACKS UP

Consumer Policy Institute compared the TTC to 20 other leading transit agencies in cities from around the world, including some of the largest in terms of ridership, such as Tokyo, Beijing and Hong Kong, among others. 75%, or 15 of the 20 transit agencies, use some form of distance-based pricing or peak and off-peak fares for their urban metro or light rail networks. A few transit agencies, such as Washington D.C. and London, use a combination of both of these types of fare systems.

Cities such as Zurich and Copenhagen employ fairly complicated zone systems made of up of several zones. Customers calculate their fare by determining how many zones they will pass through during each trip. Other cities, such as Seoul and Beijing, among others, calculate the fare by distance travelled, with the distances often grouped together. For example, in Seoul, all customers are charged the same rate for the first 10 kilometres of travel. Each additional 5 kilometres costs extra. Once the customer has travelled for 40 kilometres, she is charged an additional fee for every 10 kilometres travelled. Customers can also transfer to buses for free and are charged based on the distance travelled over the entire trip (including transfers).

Even among cities with flat fares, there are differences. In Paris, for example, customers pay a fare to ride the subway (Metro), but that fare does not include a free transfer to a city bus. In Sao Paulo, customers can purchase a discounted fare if they ride during the early morning hours before the peak morning commute, but all other rides cost the same, no matter how far the customer travels. Additionally, a number of European cities – such as Paris and Barcelona – are significantly smaller in geographic size than Toronto (or similar to the old City of Toronto). In those cities, transit customers can ride the metro network for a flat fare, but then pay by distance once they leave those condensed urban boundaries.

Cities such as Berlin and Zurich offer customers a short-distance fare, which allows them to buy a discounted ticket if they are travelling for just a few stops. This encourages customers to use public transit for local shopping and other short trips. Zurich also offers a discounted monthly pass for customers travelling after 9:00 a.m.

For a detailed look at each transit agency reviewed in this report, see the section V.

**Table 1 Comparing the TTC to other transit agencies**

	Peak/Off-peak	Distance-/zone-based	Flat fare	Short-distance option	Electronic fare card
Amsterdam		✓			✓
Barcelona <sup>2</sup>		✓	✓		
Beijing		✓			✓
Berlin		✓		✓	
Copenhagen		✓			✓
Hong Kong		✓			✓
London	✓	✓			✓
Melbourne	✓	✓			✓
Moscow			✓		✓
New York City			✓		✓
Paris <sup>3</sup>		✓	✓		✓
Sao Paolo	✓		✓		✓
Seoul		✓			✓
Shanghai		✓			✓
Singapore	✓	✓			✓
Stockholm		✓			✓
Sydney	✓	✓			✓
Tokyo		✓			✓
<b>Toronto</b>			✓		
Washington D.C	✓	✓			✓
Zurich	✓	✓		✓	✓

<sup>2</sup> Note that the flat fare is only in effect for customers travelling within the city of Barcelona, which is about 1/6<sup>th</sup> the size of Toronto. The subway, largely, does not leave the city's borders. Customers travelling on trains outside of the city's boundaries, pay based on a zone-based system.

<sup>3</sup> Paris is similar to Barcelona in that the flat fare ticket only covers customers using the city's metro system. The metro system runs, largely, within the city's borders, which is also about 1/6<sup>th</sup> the size of Toronto. Customers leaving the city's borders pay fares based on a zone system. Customers also don't get a free transfer from the subway to the bus.

#### **IV. RECCOMENDATIONS**

1. Move the TTC to a distance-based formula that is already used by public transit agencies around the world. If the TTC and Metrolinx combine ticketing – as is likely – under the Presto electronic fare card, a distance-based fare system could ensure that short distance riders in the dense urban areas of Toronto don't subsidize long-distance riders. Research shows that many low-income residents in urban areas (among others) use public transit for short trips. A distance-based or zone-based fare model would be of net benefit to these riders, while more accurately charging long-distance riders for the costs they impose on the overall transit system.
2. Consider charging peak and off-peak fares. The TTC, like many other services, experiences a surge in usage during busy time periods, particularly the morning commute (less so in the afternoon and early evening). High demand during busy travel periods is the primary reason the TTC and other officials have cited in calling for more subway lines, streetcar tracks and buses to be added to the transit system. Off-peak fares could be used as a way to shift some of that demand and, ultimately, prevent future fare increases needed to pay for that expansion.
3. Study how fare increases can be tied to system expansion. The TTC and other transit agencies and elected officials are proposing, or building, a number of expansions to the transit system. The TTC should examine whether these costs will be passed on to all customers in the form of higher fares. The TTC should look at whether these costs should be borne by the customers most benefiting from the new services. Some utilities, such as natural gas, ensure that any expansion is paid for by those directly benefiting from new services. The TTC should consider using that model when expanding the transit system.

## **V. DETAILED BREAKDOWN OF FARE POLICIES AROUND THE WORLD**

We have broken down each transit system and explained its fare system. For this study we only looked at subway systems, or urban light rail systems if a city did not currently have a metro. Many cities have both urban subway systems, as well as suburban rail systems. Also, many subway systems, particularly in Europe, service only the traditional city, such as Paris and Barcelona, which are much smaller than Toronto geographically.

### **Amsterdam, distance-based**

The Dutch capital's transit system uses a distance-based fare system. All fares for customers using the electronic card system start with a boarding fee of €0.88 and then charge customers a variable distance fee of €0.151 per kilometre. One-time customers or visitors can purchase a one-hour ticket for €2.90 or multi-day, unlimited passes.

### **Barcelona, flat and zone-based**

The subway for Barcelona is distance-based, but all Metro stations are in zone 1. For trains going to other regions around the city, there is a zone-based system with 6 zones. One thing to consider is the significantly smaller geographic size of Barcelona compared to Toronto. Barcelona is 39 square miles in size, compared to 243 square miles of Toronto.

### **Beijing, distance-based**

Customers using Beijing's subway system pay fares based on distance travelled. A fare for a single journey shorter than six kilometres is three yuan (\$US 0.49). For trips between six and 12 kilometres the fare increases to four yuan. After 12 kilometres customers pay an additional yuan per 10 kilometres, up to 32 kilometres. Beyond 32 kilometres, customers pay an additional yuan for every 20 kilometres travelled.

### **Berlin, zone-based**

Berlin's public transit agency charges customers fares depending on what zones they are travelling to and from. The agency currently has three different zones, A, B and C. It also offers customers a short-distance fare, which can be used for 3 stops. Fares are charged for travel between two zones – A to B, or B to C – or for all three zones. Customers travelling within one zone either purchase the short-distance ticket or one for two zones (customers can't purchase one zone tickets).

### **Copenhagen, zone-based**

The Danish capital's transportation system uses one ticket for all buses, trains and subway (just two lines that recently opened in 2002 and 2007, respectively). Fares are

calculated on a zone-based system, consisting of nine separate zones. The basic fare charges customers for travel within two zones.

### **Hong Kong, distance-based**

Often considered one of the best transit agencies in the world, Hong Kong's Mass Transit Railway (MTR) charges customers for distance travelled. The fare for a one-way single ticket can range from \$3.50 (HK) to \$55. Discounted fares are available for customers using the Octopus Card, the city's electronic fare card system. The MTR also offers "first class" travel on its oldest line.

### **London, zone-based, and peak and off-peak**

The London Underground uses both a zone, distance-based fare policy and peak and off-peak fares. The subway is divided into nine different zones (though almost all stations are within the first six zones), with a trip from some of the furthest regions to central London costing 15% more if the customer pays by cash. Customers using the city's electronic fare card, called Oyster, receive discounts on every trip. Trips that take place outside of zone 1 – if a customer was travelling from zone 2 to zone 6, for example – are also discounted. Off-peak fare discounts can reach up to 40%.

### **Melbourne, zone-based, flat**

Melbourne's public transit agency, until recently, operated on a two-zone system, based on distance. The government recently announced that it would cap the fare for all customers to that of a Zone 1 fare, meaning customers can now travel between the two zones for the price they previously paid to travel in one. Customers travelling only in Zone 2 pay a lower fare. The government also announced that trams – similar to Toronto's streetcar network – would be free for all riders in the central business district. The commuter rail network continues to operate on a zone-based system, as well as offering customers off-peak discounts. Melbourne was a leader in kick-starting a trial run of free rides for commuters travelling before the peak morning travel period.

### **Moscow, flat fare**

The Russian capital's subway system charges customers a flat fare for all rides. If a customer wants to transfer from the subway to a bus or trolley, she will have to purchase a more expensive ticket. The agency also offers a 90-minute unlimited ride ticket that allows customers to transfer between all forms of transit – subway, trolleybus, bus and tram – within the specified time.

### **New York City, flat fare**

New York City's subway charges customers a flat fare of \$2.75 per ride, regardless of how far or what time the trip is taken. The M.T.A., as the transit agency is called, has in the past floated the idea of implementing off-peak fares, but has yet to do so. The

many regional rail lines that bring millions of workers into downtown New York every day offer a range of distance-based and off-peak fares.

### **Paris, flat fare, zone-based**

Customers using the Paris Metro and other train lines within city limits pay a flat fare. The Paris Metro largely services the city of Paris, which is significantly smaller in size than Toronto – 40.7 square miles and 243 square miles, respectively. Customers cannot transfer to buses using a Metro ticket. Customers travelling beyond the city limits using the regional rapid transit system – known as RER – purchase zone-based tickets.

### **Sao Paulo, flat fare, off-peak fare**

Sao Paulo's subway system has moved to what it calls a "single" ticket, which allows customers up to four trips on one ticket. In total, a customer can take the subway once and then three additional transfers to city buses. If the customer uses only the subway – and never transfers to a bus – the ticket is discounted. The single ticket is a flat rate and doesn't change with distance travelled or the time of the trip. The agency does offer an "early riser" fare that offers a discount to those customers travelling between 4:40 am and 6:15 am.

### **Seoul, distance-based**

The Korean capital's subway system uses a distance-based fare system. All customers are charged the same rate for the first 10 kilometres of travel. Each additional five kilometres costs extra. Once the customer has travelled for 40 kilometres, she is charged an additional fee for every 10 kilometres travelled. Customers can also transfer to buses for free and are charged based on the distance travelled of the entire trip.

### **Shanghai, distance-based**

Customers using Shanghai's subway system pay distance-based fares. The starting fare is either 2 or 3 yuan for the first six kilometres, depending on which line they are using. If the length of the trip is between six and 16 kilometres, the fare increases to either three or four yuan, again, depending on what line the customer is using. After 16 kilometres the fare increases by one yuan for each six or 10 kilometres, depending on the subway line.

### **Singapore, distance-based**

Singapore's public transit system uses a combination of distance-based fares and off-peak discounts. All customers pay a base fare that includes either the first kilometre or three kilometres of travel, depending on which line they are using. The fare then increases incrementally the further the customer travels – though the incremental increase becomes smaller the longer they travel.

Customers can also purchase a discounted monthly pass for all off-peak hours. While a typical monthly pass costs customers \$120 (Singapore \$) a month, the discounted pass reduces that price tag by one-third and costs \$80. The off-peak pass can be used at any time other than peak travel periods, which the agency defines as weekdays between 6:30 and 9:00 in the morning and between 5:00 and 7:30 in the evening. All weekends and public holidays are considered off-peak. The transit agency says that 60 percent of all trips taken on public transit occur in off-peak hours.

### **Stockholm, zone-based**

Stockholm's public transit system is divided into three zones, A, B and C. A single ticket to the furthest zone – Zone C – will cost a customer twice as much as a ticket used solely in the city centre and near suburbs, Zone A. The transit agency also offers time-based tickets that allow customers unlimited travel across the entire system for a certain period of time (1-day, 3-day, 7-day, 30-day and 90-day).

### **Sydney, peak and distanced-based**

Customers using Sydney's train network – the city has no subway and only very limited light rail – pay a fare based on the distance-travelled, as well as a discount for off-peak hours. The distance travelled is broken down into five zones, 0-10 kilometres, 10-20 kilometres, 20-35 kilometres, 35-65 kilometres and 65 kilometres plus. Those customers using the transit agency's electronic fare card will receive a 30% discount if they travel outside of 7-9 a.m. and 4-6.30 p.m. during the week on certain train lines and 6-8 a.m. and 4-6.30 p.m. during the week on others.

### **Tokyo, distance-based.**

Japan's capital city has two subway operators, the Tokyo Metro with its nine lines and Tokyo Metropolitan Bureau of Transportation (Toei) with its four lines. Tokyo Metro charges customers using its subway system on distance travelled. The distances are lumped into zones – 1-6 kilometres, 7-11 kilometres, 12-19 kilometres, 20-27 kilometres and 28-40 kilometres. A fare from the outermost zone to central Tokyo costs nearly twice as much as trips taken within the central zone. Toei uses a similar fare mode that calculates fares based on the minimum distance travelled between two stations. Other than a few interchanges, customers must purchase different tickets if they switch between the two operators.

### **Washington D.C., distance-based, off-peak**

The U.S. capital's metro system uses both a fare-by-distance and time-based fare policy. During peak hours, a one-way trip costs customers between \$2.15 and \$5.90 (US), depending on how far they travel. Peak hours are in effect on weekdays from opening until 9:30 a.m. and 3-7 p.m., as well as Friday and Saturday nights from midnight to close. During off-peak hours – which include all other times and federal holidays – the

cost of a one-way ride ranges from \$1.75 to \$3.60, depending on the length of the trip. The agency also offers a number of discounts to students, senior citizens and customers with disabilities.

### **Zurich, zone-based, off-peak fare**

Zurich offers customers tickets based on a zone system. The city and surrounding regions are divided into dozens of zones. Customers calculate the fare by counting how many zones with they will travel through during their trip. Tickets in the central part of Zurich are counted twice. Zurich also offers a discounted monthly pass if customers travel after 9:00 am.