

Submission to the  
**Senate Inquiry into the Operations of  
Existing and Proposed Toll Roads in Australia**

**Public Transport Users Association  
July 2017**

# Introduction

The Public Transport Users Association (PTUA) welcomes the opportunity to contribute to the Inquiry into the Operations of Existing and Proposed Toll Roads in Australia.

The PTUA advocates for a comprehensive, efficient, environmentally friendly and socially inclusive public transport network throughout Melbourne and Victoria. As we discuss below, toll roads can divert from the development of an efficient and inclusive transport system, and we therefore caution against government support for toll road proposals.

## Interaction of commercial considerations with public policy objectives

Australian toll road operators are typically private sector businesses with obligations to their investors in accordance with relevant regulation such as the *Corporations Act 2001*. For example, toll road operators will wish to maximise tolls and traffic on their assets to maximise profitability.

"Inflation-linked toll escalation and traffic growth underpin Transurban's ability to build secure year on year returns from our existing toll road assets."  
(Transurban 2008, p.2)

While desirable for toll road operators, increasing tolls and traffic have a range of negative impacts for broader society. These include increased traffic - and associated congestion - on feeder roads, increased vehicle emissions and higher household transport costs. It is important to note that negative effects may not be obvious on the toll roads themselves, but may manifest elsewhere on the road network. For example, there may be an increase in congestion or traffic crashes on local roads used as part of additional journeys that are induced by the toll road<sup>1</sup>, despite apparently low rates on the toll road itself.

The cost of most of these broader impacts will not be borne by the toll road operator, but will fall on the rest of society, such as in the form of higher government taxes or council rates to address additional health costs or local infrastructure capacity.

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<sup>1</sup> "Induced traffic" is discussed further below.

**Table 1: Some external costs of road use**

|                                 |  |
|---------------------------------|--|
| <i>Land use</i>                 | Land under roads could instead be used for housing, public open space, horticulture, agriculture, etc.   |
| <i>Barrier effect</i>           | Vehicle traffic and wide roads impede, delay and inconvenience people on foot or bike and degrade the amenity of the area.   |
| <i>Noise pollution</i>          | Motor vehicles are the primary source of noise pollution in urban areas (particularly near major roads), which has a range of negative health effects.                         |
| <i>Air pollution</i>            | Air pollution, particularly from motor vehicles, is linked to respiratory illnesses and over 2,000 deaths each year.   |
| <i>Water pollution</i>          | Fluids from cars and tyre debris, including a range of heavy metals, can be significant sources of pollution into surface and groundwater.                                     |
| <i>Greenhouse gas emissions</i> | Emissions of carbon dioxide and other greenhouse gases from road transport are a significant component of Australia's overall emissions.                                       |
| <i>Road trauma</i>              | Around 1,500 people are killed and more than 30,000 people are hospitalised due to crashes each year.  |
| <i>Health</i>                   | Over-reliance on motor vehicle transport contributes to sedentary lifestyles that are a risk factor in lifestyle-related illnesses costing in region of \$60 billion annually. |

Since these broader costs are external<sup>2</sup> to the toll road operator, they are subordinate to their primary objectives of profitability and return on investment. Thus enhancing revenue growth will take priority in their planning over broader social objectives. It is these objectives of private return on investment that would be the primary driver of any "market-led proposals" made by toll road operators to government. This raises an inherent conflict between the interests of toll road operators and public policy objectives such as social inclusion, public health, liveability and environmental sustainability.

While wishing to maximise per-vehicle tolls, toll road operators will not wish to do so in such a way that significantly diminishes traffic volumes. To put it another way, tolls are largely aimed at funding the project by providing a return to investors after construction and operating costs, and are not intended to act as a demand management tool to minimise the externalities outlined above (with the possible exception of optimising traffic flows). So while tolls may be considered a form of road pricing, they only act to finance the project while failing to adequately account for many externalities of vehicle use. Therefore, they are unlikely to encourage the socially optimal level of road use, all externalities considered.

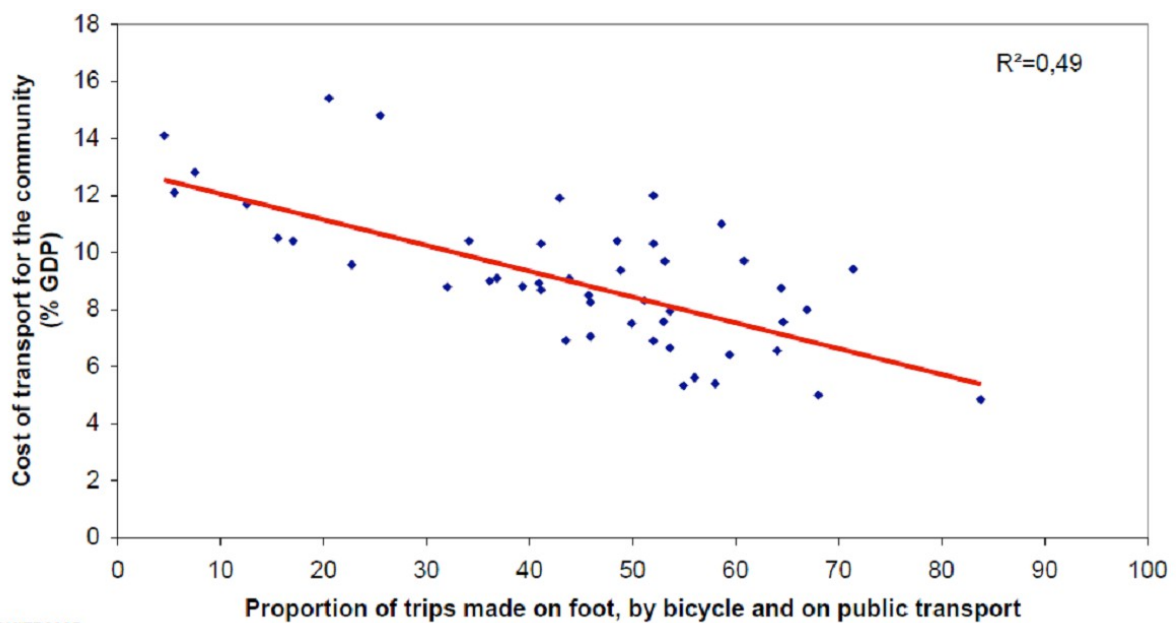
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<sup>2</sup>"External costs" are those costs imposed on unrelated parties rather than borne fully by the person making the decision.

Were the socially optimal level of road use to be achieved through pricing all externalities, it is likely that traffic volumes may not justify such extensive investment in additional road capacity. However, this is clearly not in the interests of the profit-maximising toll road operators, and such effective demand management will be discouraged in market-led proposals or other policy interventions.

In many cases, public policy objectives will be better served by enhancement of public transport services to provide more efficient and inclusive transport options. However, such improvements are likely to be crowded-out by “market-led” transport planning, leaving households vulnerable to an overall costlier transport system.

**Figure 1: Cost of transport for the community vs modal split**



(Vivier & Pourbaix 2006)

*“When you’re a hammer, everything looks like a nail.”*

*When asked at a presentation if they had considered a rail alternative to the Westgate Tunnel proposal, Transurban replied that they are a “road company”.*

The proposed Westgate Tunnel in Melbourne is a pertinent example of commercial interests advancing a proposal that is a poor match with the broader public interest. This market-led proposal would significantly increase general traffic capacity directly into the Melbourne CBD and result in higher traffic volumes and serious harm to urban amenity (Lucas 2017). Traffic induced by this road would also add to traffic volumes in the western suburbs and exacerbate the negative effects of road traffic outlined above. Such a design is arguably unique among recent major road proposals in that it is a major radial road project explicitly directing large volumes of low occupancy vehicles into the central city in clear contravention of broader strategies to shift inner city journeys to public transport, walking and cycling.

“By 2020

- 90 per cent of all commuter trips to the CBD will be by public transport, cycling or walking — the 2006 journey to work census figure was 72 per cent.

By 2030

- 80 per cent of all trips to the City of Melbourne will be by public transport, cycling or walking — the latest Victorian Integrated Survey of Travel and Activity (VISTA) 2009 figure is 50.9 per cent.
- 95 per cent of all trips within the municipality will be by public transport cycling and walking — the latest VISTA 2009 figure is 84 per cent.”

City of Melbourne Transport Strategy (City of Melbourne 2012, p.114)

"For Melbourne to continue to be a globally connected and competitive city with strong and healthy communities and higher social and economic participation, the share of trips by public transport, as well as active transport modes such as walking and cycling, must increase."

Plan Melbourne – Metropolitan Planning Strategy (DELWP 2017, p.62)

The WGT also performs poorly in the serving the aim of the original Westgate Distributor (WGD) proposal that the Victorian ALP included in its *Project 10,000* policy paper ahead of the 2014 Victorian state election. The original WGD was intended to get heavy commercial vehicles off residential streets in the inner west by providing more direct access to the Port of Melbourne from the Westgate Freeway and did not include provision for additional general traffic capacity directly into the Melbourne CBD.

However, by major expansion of the scope to include radial passenger travel to the Melbourne CBD, the Westgate Tunnel can be expected to induce substantial extra passenger vehicle traffic that will greatly impede the efficient movement of commercial vehicles (PTUA 2017). Furthermore, in the absence of whole-of-network pricing the significantly higher tolls for heavy commercial vehicles relative to light vehicles on CityLink may act as a disincentive for HCVs to use the WGT and therefore result in failure to fully resolve the problem of trucks on residential streets in the inner west. In contrast, the commercial interests of the project proponent would be well-served by a large volume of additional light vehicle traffic, and arguably not harmed by penalising heavy vehicles that cause a disproportionate amount of wear to the road surface and that may instead choose to use publicly-maintained roads.

While toll road operators endeavour to portray themselves as good corporate citizens, we also note their significant financial contributions to political parties (e.g. see Table 2) and the potential for political donations to influence government decisions (McMenamin 2016).

**Table 2: Donations to ALP and Coalition declared by Transurban – 1999-2000 to 2015-16**

|                                   | 1999-2000      | 2000-01       | 2001-02       | 2002-03       | 2003-04       | 2005-06       | 2006-07        | 2007-08        | 2008-09       | 2009-10       | 2010-11       | 2014-15       | 2015-16       | Total          |
|-----------------------------------|----------------|---------------|---------------|---------------|---------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|---------------|----------------|
| <b>Australian Labor Party</b>     |                |               |               |               |               |               |                |                |               |               |               |               |               |                |
| ALP - ACT                         |                |               |               |               |               |               |                |                |               |               | 500           |               |               | 500            |
| ALP - NSW                         |                |               | 5,000         | 29,200        | 15,600        | 20,330        | 30,570         | 51,495         | 11,500        | 9,500         | 1,000         |               | 1,500         | 175,695        |
| ALP - Queensland                  |                |               |               |               | 15,000        | 2,250         |                |                |               |               |               |               | 3,100         | 20,350         |
| ALP - Victoria                    | 11,500         | 21,000        | 22,850        |               |               | 2,600         | 11,000         | 18,628         | 10,775        | 12,339        | 12,573        |               | 4,950         | 128,215        |
| Progressive Business              |                |               |               |               | 3,900         | 22,025        | 23,799         |                |               |               |               |               |               | 49,724         |
| ALP - national                    |                | 11,000        |               |               |               | 1,485         |                | 21,773         |               |               |               |               | 7,700         | 41,958         |
| <b>ALP - Total</b>                | <b>11,500</b>  | <b>32,000</b> | <b>27,850</b> | <b>29,200</b> | <b>34,500</b> | <b>48,690</b> | <b>65,369</b>  | <b>91,896</b>  | <b>22,275</b> | <b>21,839</b> | <b>14,073</b> |               | <b>17,250</b> | <b>416,442</b> |
| <b>Liberal-National Coalition</b> |                |               |               |               |               |               |                |                |               |               |               |               |               |                |
| Coalition - NSW                   |                |               |               | 6,500         | 14,200        | 18,798        | 27,930         | 26,745         | 3,514         | 10,469        | 4,000         | 1,340         | 8,120         | 121,616        |
| Coalition - Queensland            |                |               |               |               |               | 3,250         |                |                |               |               |               | 12,000        | 3,100         | 18,350         |
| Coalition - SA                    |                |               |               |               |               | 500           |                |                |               |               |               |               |               | 500            |
| Coalition - Victoria              | 100,000        |               |               |               | 36,818        | 6,000         | 20,300         | 5,950          | 5,720         | 1,500         | 10,700        | 4,600         | 7,250         | 198,838        |
| Coalition - national              |                |               |               |               |               | 7,900         | 1,750          |                |               |               | 1,100         |               |               | 10,750         |
| <b>Liberal Party - Total</b>      | <b>100,000</b> |               |               | <b>6,500</b>  | <b>51,018</b> | <b>25,013</b> | <b>45,415</b>  | <b>32,515</b>  | <b>7,920</b>  | <b>11,219</b> | <b>15,800</b> | <b>17,940</b> | <b>15,470</b> | <b>328,810</b> |
| <b>National Party - Total</b>     |                |               |               |               |               | <b>11,435</b> | <b>4,565</b>   | <b>180</b>     | <b>1,314</b>  | <b>750</b>    |               |               | <b>3,000</b>  | <b>21,244</b>  |
| <b>Coalition - Total</b>          | <b>100,000</b> |               |               | <b>6,500</b>  | <b>51,018</b> | <b>36,448</b> | <b>49,980</b>  | <b>32,695</b>  | <b>9,234</b>  | <b>11,969</b> | <b>15,800</b> | <b>17,940</b> | <b>18,470</b> | <b>350,055</b> |
| <b>Total ALP &amp; Coalition</b>  | <b>111,500</b> | <b>32,000</b> | <b>27,850</b> | <b>35,700</b> | <b>85,518</b> | <b>85,138</b> | <b>115,349</b> | <b>124,591</b> | <b>31,509</b> | <b>33,808</b> | <b>29,873</b> | <b>17,940</b> | <b>35,720</b> | <b>766,497</b> |

Note: Due to deficiencies in the reporting of political donations in Australia (Ng 2016), these figures should be considered indicative rather than exhaustive.

# Effectiveness of road capacity expansion

There is now copious evidence of the failure of major road projects to provide enduring congestion relief in urban environments. Expansion of road capacity induces additional vehicle traffic in a number of ways including:

- encouraging additional low-value journeys that were previously not considered worthwhile;
- shifting existing journeys from other modes such as public transport into private vehicles;
- changing the timing of existing private motor vehicle journeys from less congested times; and
- encouraging land use changes that lengthen journeys and/or require additional journeys.

Over time these additional journeys fill the additional road capacity and cause travel delays to return to previous levels. In some cases congestion ends up worse than prior to the road expansion due to what is known as the Downs-Thomson Paradox. Where road expansion encourages journeys to shift away from public transport, service frequencies may be reduced as a result, causing more people to shift to private motor vehicles and road congestion to increase beyond previous levels (Mogridge 1990).

At least as long ago as 1994, it was recognised that “increases in traffic on improved roads are, in general, not offset by equivalent reductions in traffic on unimproved alternative routes” (HM Department of Transport 1994).

Despite promises in the 1990s that CityLink would free Melbourne from congestion, traffic delays only five years after opening were worse than those predicted for 2011 under the no-build scenario (Odgers 2009). Analysis performed for the EastLink toll road in eastern Melbourne asserted, somewhat bizarrely on the basis of rural examples rather than more relevant urban evidence, that induced traffic would be insignificant (Wilmot 2006).

Unfortunately these lessons do not appear to have been learned in Australia, including in Victoria where the Auditor-General found in 2011 that road planners:

“...did not adequately assess the traffic induced by these improvements, communicate the risks, or estimate the impact of the economic benefits. These shortcomings create a risk of over-estimating the benefits and giving decision-makers false confidence.... Unlike road authorities in the UK and New Zealand, VicRoads does not have adequate guidelines for forecasting traffic in congested areas.”  
(Victorian Auditor-General 2011)

Again in 2013 the Victorian Auditor-General found that:

"[t]he absence of a transparent framework for assessing the traffic congestion impacts of related expansion proposals means it cannot be assured that they are the most effective and economical options for managing congestion in the long term.

Although alleviating congestion is often one of several drivers for such proposals, current approaches to assessing their congestion benefits do not sufficiently

demonstrate the extent to which they address the supply- and demand-side causes of congestion, or how they contribute to increased congestion by inducing extra road use.

This limits confidence in the soundness of related infrastructure expansion decisions."

(Victorian Auditor-General 2013)

These systematic failures to properly account for induced traffic persist in assessment of the proposed Westgate Tunnel toll road which features in a market-led proposal put forward by Transurban. For example, transport modelling performed for the project overlooks land use impacts which are an important driver of medium- to long-term induced traffic (Pittman 2017). Thus the Victorian Government looks set to provide the world with yet another expensive example of how new urban roads fail to solve congestion.

While the benefits of new roads are frequently overstated, so too are the costs of doing nothing, or the "no build" scenarios. Nicolaisen and Naess (2015) outline the "pessimism bias" built into much traffic modelling that predicts much higher congestion levels than actually eventuate when proposed roads do not proceed to construction. In effect, the absence of road capacity **reduces**, rather than **induces**, actual traffic volumes relative to the forecasts of traffic models, and travel times where a proposed road is **not** built are better than expected.

This has also been observed where removal of existing road capacity has not resulted in expected traffic chaos, but instead encouraged adoption of more efficient travel behaviour such as use of public transport (Chung *et al*, 2012). Thus the congestion costs of no-build scenarios are frequently overstated, along with the purported benefits of building toll roads based on (similarly overstated) travel time savings (Pittman 2017). Therefore we should remain sceptical of claims about large economic contributions from toll roads.



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