Submission No 8

ROAD ACCESS PRICING

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AUSTRALASIAN RAILWAY ASSOCIATION SUBMISSION

To

Committee on Transport and Infrastructure

On

Inquiry into Road Access Pricing

INQUIRY INTO ROAD ACCESS PRICING

The Australasian Railway Association (ARA) welcomes the opportunity to provide a submission to the NSW Committee on Transport and Infrastructure's Inquiry into Road Access Pricing. The ARA recognises that efficient and effective road access pricing is critical to the operation of the Australian transport system and the nation's productivity. With the forecast increase in Australia's freight task, the ARA acknowledges efforts to investigate road pricing options and appreciates the NSW Committee on Transport and Infrastructure Inquiry's commitment to secure a productive future for NSW Freight and Logistics. This submission outlines the ARA's views on this matter.

AUSTRALASIAN RAILWAY ASSOCIATION

The ARA is the peak body representing all passenger, freight and track operators and the wider rail supply industry in Australia, New Zealand and Indonesia. Our fundamental purpose is to create an environment that will permit the Australasian rail industry to prosper.

The ARA is actively involved in the development of rail policy to ensure the industry's views are represented. As well as shaping policy in the areas of passenger, freight, rail safety regulatory reform, the environment, technology and research, the ARA is also involved in programs aimed at improving the productivity, capacity and overall safety of the Australasian rail industry.

Key industry information including the Australian Rail Industry Report, the Road Pricing Reform in Australia paper, the National Rail Freight Strategy and the Single National Land Transport Economic Regulator paper are available on our website at www.ara.net.au . The ARA encourages the Committee on Transport and Infrastructure to refer to these documents as part of its investigation into this issue.

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NSW FREIGHT TASK: A CLOSER LOOK

The NSW freight task is significant and continuously growing. In 2011, 409 million tonnes of freight was transported in NSW.[1] It is estimated that by 2031 the freight task in NSW will double to 794 million tonnes.[2] Mining products represent almost half the current freight task due to the high volumes generated by the coal industry, at approximately 170 million tonnes per year.[3] Coal is expected to remain the largest and fastest growing bulk freight task in NSW. With respect to freight movements at ports, containerised freight through Port Botany has grown more than seven percent for the past ten years, with 2 million TEUs units moving through the Port in 2011.[4] Over the next 20 years, it is estimated that containerised freight moving through NSW ports will continue to grow at the same rate.

The NSW Government has recently released the Long Term Transport Master Plan. This, along with an appropriate road access pricing regime will help the NSW Government achieve an efficient and effective freight transport system.

WHAT IS ROAD PRICING?

Road pricing is direct charging for the use of roads. This pricing regime is different to road based taxation regimes such as vehicle registration and fuel excise, where charges are directly applied for the ownership of vehicles and consumption of fuels. The fundamental objective of road pricing regimes is to establish functioning markets for road infrastructure. Road access charging regimes can also be used to manage travel demand to reduce road congestion, promote sustainable transport options and improve the safety and environmental performance of transportation.

There are a number of methods in applying road pricing including toll charges for specific road infrastructure, cordon charging for a defined geographical area or whole-of-network charging.

[1] Transport for NSW, Draft NSW Freight and Ports Strategy, November 2012.
[2] Ibid.
[3] Ibid.
[4] Ibid.

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The ARA is supportive of the whole-of-network charges where all road infrastructure is priced according to usage, namely distance travelled, location, time, weight and so on. This mechanism of road pricing covers usage in both urban and non-urban areas.

CURRENT SYSTEM OF ROAD ACCESS CHARGING

The PAYGO System

Under the current road pricing regime, heavy vehicles are charged for the use of arterial and local roads via a national system referred to as a 'pay as you go' system (PAYGO). In simple terms the PAYGO system estimates the cost of road service provision and recovers expenditure in the period in which it is incurred. The National Transport Commission (NTC) is responsible for the calculation of a three year moving average of road expenditure to determine the cost base that is to be recovered through the PAYGO system.

The PAYGO system calculates the following expenditure as costs: road surface or pavement maintenance, rehabilitation and construction costs, servicing and operating expenses, bridge maintenance and rehabilitation costs, safety and traffic improvement costs, non-pavement asset extensions and improvement costs (land acquisition costs associated with road improvement) and costs incurred in other miscellaneous activities (only for arterial roads).

Fifty percent of these costs are deemed to be common costs and shared equally by all road users. The remaining costs are attributed to different vehicle classes as each vehicle class has a distinct impact on the costs incurred.

Shortfalls of the PAYGO system

The PAYGO system does not fully recover costs relating to road usage particularly costs generated by heavy vehicles employed for freight movements. As mentioned above, 50 percent of the road usage costs is considered as common costs and is paid for by all road users equally. Moreover, a number of road costs are excluded from the PAYGO system, and there is cross-subsidisation within vehicle classes, which consequently leads to failure to fully recover all road costs. Details of these issues are set out below.

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Inappropriate classification of common costs

The current PAYGO system takes a large portion of costs associated with bridge maintenance/extensions/upgrades, road and pavement rehabilitation and extensions, and land acquisitions as common costs amongst all classes of vehicles. This calculation is false as it ignores the fact that heavy vehicles disproportionately damage bridges, roads and pavements due to their heavy weight. It also ignores the need to reinforce these road structures to accommodate the weight of heavy vehicles which is a cost above and beyond road maintenance for general vehicle use. In effect, this system allows small passenger vehicles to subsidise large commercial freight operators for the provision of roads.

Exclusion of certain road costs

The PAYGO system also largely excludes costs associated with the provision of local and rural roads. Local councils are asked to provide subsidised road infrastructure for all road users. While the provision of access and amenity to passenger vehicles has strong merit, it is unclear as to why local residents should subsidise road infrastructure for commercial businesses such as trucking companies.

Cross-subsidisation within heavy vehicle classes

Under the current road charging regime, the PAYGO system calculates the total kilometres travelled by each vehicle class and attributes costs equally to each vehicle in operation. This calculation allows high frequency users to be subsidised by low frequency users. For example, a heavy vehicle owned and operated by an interstate freight company will be used continuously and will, most likely, travel on well-maintained interstate routes, whereas a heavy vehicle owned by a farmer will be used less frequently and mostly during high seasons and on less well-maintained regional roads. Under the current PAYGO system, the farmer or user with similar road usage patterns will subsidise the commercially run and more profitable freight company.

Inadequate approximation of costs

The current PAYGO system uses approximation instead of real figures which inadvertently creates under-recovery of costs from heavy vehicles. For example, fuel excise is used in the PAYGO system as a proxy for actual road usage. However, this is a poor proxy as fuel usage of a vehicle does not fully reflect how or to what extent the vehicle damages the road.

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Moreover, the use of historical costs to appropriate future road costs also lends itself to under recovery. In general road usage and the need to provide and maintain road infrastructure has been increasing, which means that using historical evaluation would underestimate costs associated with the maintenance of current infrastructure and the provision of new infrastructure.

In sum, the current road access pricing does not accurately reflect the road usage by different road users or vehicle types and therefore is unable to provide competitive neutrality between all land transport modes. It also does not account for the social costs and benefits of land transport.

WHY DO WE NEED ROAD PRICING REFORM?

As mentioned earlier in this submission, Australia needs a functioning market for freight transport and the functioning market must: 1) allow for the full recovery of the cost of road infrastructure, 2) maintain competitive neutrality between modes of transport; and 3) give accurate price signals to road users.

This section outlines in detail why we need road pricing reforms.

The need for competitive neutrality between land transport modes

The current road access charging system or PAYGO creates an effective subsidy for heavy use vehicles. This is in contrast to rail access charging, which is determined on the principle of full cost recovery. The differences between two systems place rail at a competitive disadvantage as the operating costs for rail are higher. Rail service providers are spending up to 30-40% of their operating costs on rail access charges while heavy vehicle operators are only spending about 5% of total costs on road charges.[5] Excluding the access costs, rail freight's costs are some 50 – 70% lower than road freight.[6]

[5] Australasian Railway Association, The Future for Freight 2005 >, 2005
[6] Ibid.

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The need to account for the social costs and benefits of land transport

An effective road access pricing regime needs to account for the social costs and benefits of different land transport modes. These social costs or externalities include congestion, safety, energy security, environmental impact (e.g. noise and emissions) and so on. The current road pricing regime does not take into account the relative social costs and benefits of each transport mode. Therefore, governments must intervene to ensure that market mechanisms such as road pricing incorporate such social costs or benefits into price signals, ensuring optimal social and environmental outcomes from transport decisions.

If governments cannot internalise these costs, they must ensure that the mode that exhibits the best safety and environmental performance receives incentives or subsidies to ensure that the community enjoys the benefits of this superior performance. For example, rail transport may be selected over heavy vehicles for freight transport because rail helps relieve congestion. A 2011 study published by the ARA shows that the average freight train takes 110 trucks off the road. This reduces truck movement by around 49.7 million truck kilometres a year, or 3100 times the distance between Sydney and New York.[7] Moreover, rail freight may again be chosen for freight transport because it helps reduce carbon emissions. The same study also shows that in one year, one freight train travelling between Melbourne and Brisbane reduces carbon emissions by the same amount as planting 600 hectares of trees.[8] This would cover Sydney's CBD, Hyde Park, the Domain, the Botanical Gardens, Pyrmont and Central Station or an area almost 8.5 times the size of Brisbane's CBD.[9]

ROAD PRICING MODELS – OVERSEAS EXPERIENCE

There are many different road pricing models that can be used to ensure that heavily-used heavy vehicles fully pay for road-related costs, and internalise all the social costs outlined earlier in this submission. The following table clearly outlined international experience on this issue.

[7] Deloitte Access Economics. The True Value of Rail, October 2011
[8] Ibid.
[9] Ibid.

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TABLE 1: INTERNATIONAL ROAD PRICING EXPERIENCE

Country	Purpose	Road Pricing Model	Technology	Impact of Road Pricing	Revenues and Costs
Sweden	Manage congestion and protect environment	Cordon pricing, variable charge based on time of day	Number plate recognition	20% reduction in city centre congestion 10-14% decrease in emissions	Gross revenues (09) $US 120 million
United Kingdom	Manage congestion and protect environment	Cordon pricing, flat daily rate	Number plate recognition	Up to 25% reduction in city centre traffic	Gross Revenues (09) $US 435 million Overhead costs $US 212 million
Singapore	Manage congestion	Cordon pricing, expressway charging by time of day and class of vehicle	Dedicated comms (DSRC) & smart cards	Reached average road speed targets of 45-65 kph on expressways & 20-30 kph on roadways	Gross revenues (08): $US 90 million Overhead costs $US 18 million
Germany	Generate revenue, promote user pays principle & protect environment	Mass Distance Heavy Vehicle Charging based on emissions class and axle loads on highways	GPS, GSM, DSRC, number plate recognition	Empty truck trips declined 7% 58% shift to less polluting trucks Less than 2% violation rate	Gross Revenues (08) $US 5 million Overhead costs: $US 750 million
Czech Republic	Generate revenue, promote user pays principle & protect environment	Mass Distance Heavy Vehicle Charging based on emissions class and axle loads on highways	DSRC, number plate recognition	Information not available	Gross Revenues (08): $US 340 million Overhead costs: $US 100 million
Netherlands (proposed)	Manage congestion, generate	National distance based	GPS, GSM & number plate	NA	NA

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	revenue, promote user pays principle & protect environment	charging on all roadways	recognition		
Austria	Finance extension & operation of motorway network	Heavy Vehicle Charging scheme, mainly on highways, based on distance and axles	DSRC	Less than 1% evasion rate	$US 1.5 billion
Norway	Generate revenue to finance new infrastructure	Toll rings	NA	Revenues represent 35% of annual road budget, revenues funded more than 100 road projects	NA
Switzerland	Charge the real cost of road use, internalisation of external costs, finance new railway infrastructure, limit heavy vehicle traffic growth	Heavy Vehicle Charging scheme on all roads, based on distance, weight and emission class	Tachograph, GPS, DSRC	NA	$US 1.3 billion

Adapted from US Department of Transportation, Transport Research Board & American Association of State Highway & Transport Officials, International Scan: Reducing Congestion & Funding Transportation Using Road Pricing, April 2010

As seen from the table above, a number of countries have used a combination of cordon pricing and congestion charging in their road access charging regimes. Cordon charging is mostly used as a tool to manage road demand for scarce inner-city road infrastructure. Cordon pricing can be used to manage congestion by placing a variable price on limited urban road space. Variable prices can also be imposed on different vehicle classes.

Revenues from road charges

Revenues received from road charges have been used for different purposes around the world, but most was to finance future road or rail projects. For examples, in Norway, road charging revenues has been used to part-finance new roads since 1934 (over 100 projects), and now

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represents 35% of the annual road budget. In Switzerland, revenues received from the road charging scheme has been used finance new transalpine railway tunnels. As cities develops and demand for infrastructure and transport rises, any additional sources of revenue for government can be used in the provision of this infrastructure. There is overwhelming evidence to suggest that where revenue raised through road pricing is directly attributed to public transport or general transport improvements, public acceptance is greatly increased.

GOVERNMENT ROAD PRICING REFORM AGENDA

In recent times, significant policy attention and initiatives have been directed at transport reform, particularly road access pricing reform. Despite this, no significant action has been taken on road charging reform to date. Some of these initiatives include the COAG Road Reform Plan (CRRP) which was tasked to consider alternative models of heavy vehicle road pricing and funding. The CRRP found that the prices heavy vehicles pay were not efficient as they did not reflect the distance travelled, their weight or the maintenance costs of different types of roads that they travel on.

Following the release of the findings, the CRRP then conducted a feasibility study into alternative charging and funding arrangement for heavy vehicles. The study found that reform was feasible if charges were linked to road funding and investment changes. The study recommended that new arrangements for heavy vehicle road investment and direct charging should be developed for consideration by COAG along with the preparation of any necessary agreements to give effect to those arrangements.

In July 2012, COAG noted the recommendations of the Feasibility Study and allowing the CRRP to proceed. The CRRP was then renamed as the Heavy Vehicle Charging and Investment Reform (HVCI) to reflect its new and broadened scope. The HVCI is tasked to oversee the development of framework to support the package of charging, funding and investment reforms. In late 2012, the HVCI has submitted a number of heavy vehicle charging, funding and governance reform options to the Standing Committee on Transport and Infrastructure (SCOTI) for endorsement. The options are as follows:

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1. Status quo: The current PAYGO system - historical cost recovery through national registration charges and Road User Charge (RUC). Funding through annual government budget process.
2. Incremental reform model: Introduction of a heavy vehicle investment and maintenance fund, a more appropriate split between the RUC and registration and partial application of Mass Distance Location (MDL) charges on a voluntary basis through incremental charges.
3. MDL and road fund model: reformed user charges set by independent economic regulator combines with jurisdiction based funds for heavy vehicle investment and maintenance.
4. Corporatisation model: reformed user charges set by an independent economic regulator with funds flowing to corporatised service providers with shadow pricing and funding for light vehicles.

These options are currently being further developed for public consultation in mid-2013.

The investigation will feed into a report known as a Regulatory Impact Statement (RIS) for consideration by the Council of Australian Governments (COAG).

In NSW specifically, Transport for NSW (TfNSW) is in the process of developing the NSW Freight and Ports Strategy. The ARA urges the Committee to liaise extensively with TfNSW on this issue and to ensure that a strategic whole-of-network approach to road access pricing is adopted in the proposed NSW Freight and Ports Strategy.

RECOMMENDATIONS

1. The ARA recommends that the NSW Government support a national approach to road access pricing and implement mass-distance-location (MDL) heavy vehicle charging on a trial basis. MDL heavy vehicle charging is the most effective road pricing reform mechanism that can be implemented in NSW. This form of road access pricing would address the significant shortcomings of the current PAYGO system, target vehicles that cause the most damage to road infrastructure, be cost effective in terms of implementation and operation, and have the ability to capture the social and environmental impacts of freight transportation. In addition to these advantages, MDL can also be quickly implemented.

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2. The ARA recommends that the NSW Government work with other jurisdictions to establish a single national land transport economic regulator: long has the arbitrary delineation of road and rail created inconsistent economic regulations that have provided an artificial price advantage to road freight. The ARA believes that a single national economic regulator for land transport would ensure that consistent principles underpin any road pricing regime and rail access charges. This in turn would ensure competitively neutrality between road and rail freight and an efficient and competitive market for land transportation.

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