

**Submission to the Productivity Commission Inquiry into
Public Infrastructure**

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Heavy Vehicle Charging and Investment Reform

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Introduction

The Heavy Vehicle Charging and Investment Reform (HVCI) welcomes the opportunity to provide a submission and participate in the Productivity Commission Inquiry into Public Infrastructure.

HVCI is a dedicated project seeking to develop and implement reforms to heavy vehicle charges and the way in which roads are provided to support heavy vehicle usage. The reform spans both the demand and supply side of road provision, although is partial in nature as it only addresses heavy vehicle usage. While this Inquiry has a broad focus, this submission is limited to the scope of the HVCI project.

This submission seeks to provide comment on a number of issues raised in the Issues paper, specifically:

- The disconnects in the current arrangements for providing public road infrastructure
- Revenue certainty supports better planning and delivery of infrastructure
- The importance of user charges as a signal for road use and source of revenue
- The importance of accountability and independent price setting
- Local government as a provider of road infrastructure
- The incentive qualities of risk
- Public vs private financing

It should be noted that this submission does not reflect the views of any particular government.

1.1 Background to HVCI

The Heavy Vehicle Charging and Investment (HVCI) reform project has been established to design a new charging and investment framework to deliver more efficient charging and infrastructure provision for heavy vehicle services. It is governed through a multi-jurisdictional board of senior government officials and industry members with an independent Chair.

The reform is intended to replace an existing national charging framework of registration charges and a fuel based Road User Charge (RUC), which was established in 1992 and had the important feature of introducing a clear user pays principle for heavy vehicles, treating them on a commercial basis. However, the current charging arrangements have a number of deficiencies, including the unsustainability of the RUC in its current form¹ and the absence of any linkage of the charging regime to the heavy vehicles road services supply side (that is the planning, prioritisation, funding and delivery of heavy vehicle road expenditure). These deficiencies severely limit the ability of the system to improve further the access, productivity and performance of the heavy vehicle road transport sector.

¹ The RUC is administered through the fuel tax credit arrangements. The fuel excise effectively acts as a ceiling to the rebate i.e. operators are not able to receive a rebate beyond the level of the fuel excise which is currently set at 38.1 cents per litre (and is not indexed). Given the current rate of increase of the RUC, HVCI has estimated that the RUC is likely to reach the fuel excise ceiling in 5-7 years.

These deficiencies were identified in the 2007 Productivity Commission report, Road and Rail Infrastructure Pricing. The report did not identify any systematic mis-pricing of heavy vehicles' use of roads relative to rail pricing but concluded that the current charging framework for heavy vehicles did little to provide information to either users or suppliers of the road network about the cost and value associated with the network. Further, and importantly, the current arrangements do not cover the planning for expenditure and funding of heavy vehicle use of the road network.

The 2010 OECD Review of the Australian Economy also identified the need for reform in the charging, planning and delivery of heavy vehicle road services as an important microeconomic reform.

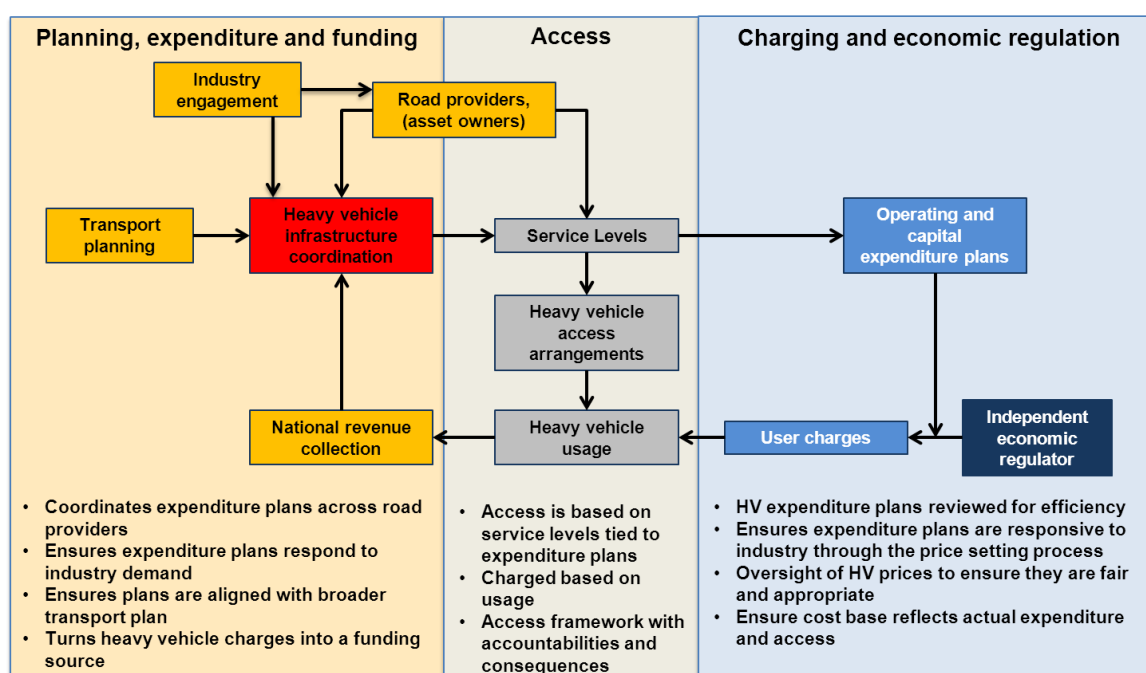
The reform was identified at the last COAG meeting in December 2013 as a major transport reform with COAG seeking further advice on HVCI proposals at its next meeting.

1.2 The proposed HVCI reform

HVCI seeks to introduce a market based framework for the provision and use of road services, similar to the approach used for utilities and other network natural monopolies.

Core to the proposed reformed system is setting user charges based on forward projected expenditure, applied on the basis of actual road usage and cost with the resultant revenue being used as a funding source for heavy vehicle road expenditure. A schematic representation of the reformed system is set out in Figure 1.

Figure 1. A new functional system underpinning reform



The reform to date has considered a number of different charging options (ranging from a national fuel based charge to a state specific mass-distance-location charge) which have shown to significantly impact on the effectiveness of supply side reforms.

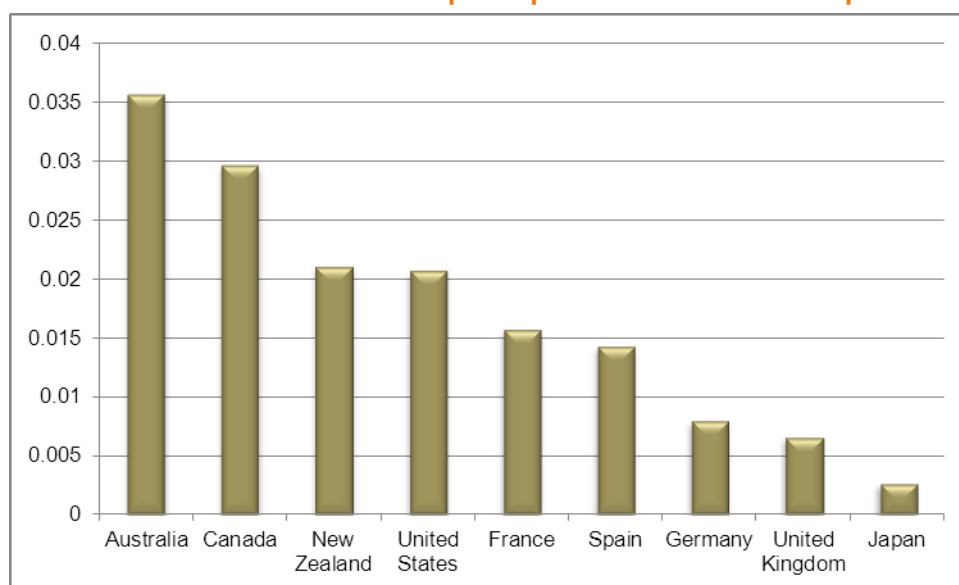
Whilst the specifics of the reform are still the subject of design and agreement by governments, initial assessment of the benefits indicate the gains associated with such a reform are significant at almost \$22billion in net benefits as a result of stronger financial incentives leading to lower costs of road provision and better access for the heavy vehicle fleet.

1 Australia's road network

Australia's road network extends more than 820,000 kilometres,² including around 670,000 kilometres³ of local roads servicing a vast land area and a widely spread population. It is a key part of Australia's supply chains. Each year, heavy vehicles transport more than 2,000 million tonnes⁴ of domestic freight on local, state and national road networks in Australia⁵. By 2030, this freight load is forecast to double; the ability of the road freight sector to meet this need is crucial to Australia's economic future.

Australia ranks highly compared to other developed countries in terms road length per head of population (see Figure 1). Current expenditure on roads across all three levels of government exceeds \$17 billion annually, with the heavy vehicle share currently estimated at around \$2.8 billion. The efficiency of road provision is therefore of particular importance for Australia's competitiveness.

Figure 1. Total road network kilometres per capita – international comparisons



Source: HVCI (2013)⁶

Freight transport costs depend on the road surface, proximity to supply and logistic ports, distance travelled, and the type of truck, which in turn, is restricted by the road design. Road agencies' expenditure decisions determine a road surface, route and design. Those decisions are based on planning and funding arrangements, which have changed little in the past 40 years, and do not reflect the needs of heavy vehicle users. The tax rebate system that supports current heavy vehicle charging arrangements has been in place since the early 1990s and is not sustainable.

Provision of roads is a government responsibility. In Australia, all three tiers of government are involved in different aspects of road provision. State and local governments provide arterial and local roads respectively. There are several nationally significant transport corridors (the National Land Transport Network), which are the combined responsibility of states and the Commonwealth Government. These form the current network hierarchy. (See Box 2)

² Bureau of Infrastructure, Transport and Regional Economics (2012) at Table T1.3

³ (Australian Automobile Association, 2005)

⁴ Based on 2010 data provided in PWC's Final Report, Australian Trucking Association – A future strategy for road supply and charging in Australia, March 2013, at p.10

⁵ Heavy vehicles also provide a range of other services, such as passenger transport.

⁶ Length data is sourced from Total Road Network (km): World Bank Infrastructure Data accessible at <http://data.worldbank.org/topic/infrastructure>, and population data is sourced from national statistics in Wikipedia.

Box 1 Australia's road network hierarchy

- National Land Transport Network (2.8 per cent of Australia's roads by length): Network of 'nationally significant' roads that form the primary land transport corridors in Australia, including national highways, links to ports and airports, rail and intermodal connections. The National Land Transport Network is defined in the *AusLink (National Land Transport) Act 2005*.
- Arterial roads (around 20 per cent): Roads in urban areas with heavy volumes of traffic movements and roads in rural areas, which are the primary links between a capital city and adjoining states and their capital cities, between a capital city and key towns, between key towns and between important centres. Arterial roads include the National Land Transport Network.
- Local roads (around 80 per cent): Roads that connect urban centres, town centres and local areas to arterial roads. Local roads also connect homes to schools, shops and recreational areas.

Source: PricewaterhouseCoopers (2013a, p. 31) ⁷

2 Current system for providing heavy vehicle road services

The system for delivering road services to heavy vehicles is complex. Most of the functions related to heavy vehicle services also meet the needs of light vehicles. Because there are multiple funding flows, and most of these are indirect, it is difficult to develop a good understanding of where money comes from and where it is spent. Decisions about investment in roads and bridges, the service specifications for given roads and how projects and programs are prioritised are not transparent to the general public.

It is impossible to understand the problems with the current system without understanding how the system works and who makes key decisions.

This section provides an overview of the current arrangements for providing heavy vehicle road services.

2.1 Road infrastructure planning and investment for heavy vehicles

Public road infrastructure is provided through a combination of local governments and state road agencies. The network reflects the need to connect communities. As such, planning is largely driven by consideration of growth and congestion. Heavy vehicle requirements of the road network drive road pavement strength decisions for roads as well as usage driven maintenance. Despite the considerable impact heavy vehicles have on the road network, and the commercial value of freight transport, relatively few investments are driven by heavy vehicle demands in their own right.

This is particularly an issue in local government areas where funding constraints will often lead to councils prioritising people movement over heavy vehicle traffic. As a result, access to the road network can be constrained, particularly for high productivity vehicles that are generally longer or heavier than other vehicles.

Funding constraints also sometimes act as a disincentive for transport plans to be overly transparent as road providers seek to manage expectations of industry.

⁷ PricewaterhouseCoopers listed as sources of this information Austroads (1998), World Bank (2012) and AusLink (National Land Transport) Act National Land Transport Network Determination 2005 (No. 1).

2.2 Charging for heavy vehicle use of roads

Heavy vehicle charges are currently calculated by the NTC to reflect an estimate of the heavy vehicle share of annual road expenditure based on historic averages. It does not reflect expenditure required to meet current or future demand. On this basis, heavy vehicle expenditure is estimated at around \$2.8 billion of the \$17 billion spent on roads annually⁸. This expenditure is recovered through a combination of registration charges and a fuel based Road User Charge (RUC).

Registration recovers around 35% of heavy vehicle road costs while the RUC recovers around 65%. RUC revenues flow to the Commonwealth while registration charge revenues flow to the jurisdiction in which the vehicle is registered, rather than where the expenditure took place. Table 1 below provides an estimate of the revenues from heavy vehicle charges collected by each jurisdiction.

Table 1. Estimate of current heavy vehicle charges revenue collection

Jurisdiction	Current revenue collected by jurisdiction (\$)
NSW	\$279,672,365
Victoria	\$323,011,958
Queensland	\$318,878,166
Western Australia	\$222,062,905
South Australia	\$109,840,247
Tasmania	\$24,012,919
ACT	\$3,408,262
Northern Territory	\$21,584,629
Total state revenue	\$1,302,471,450
Commonwealth	\$1,843,041,775
Total Heavy vehicle charges revenue	\$3,145,513,225

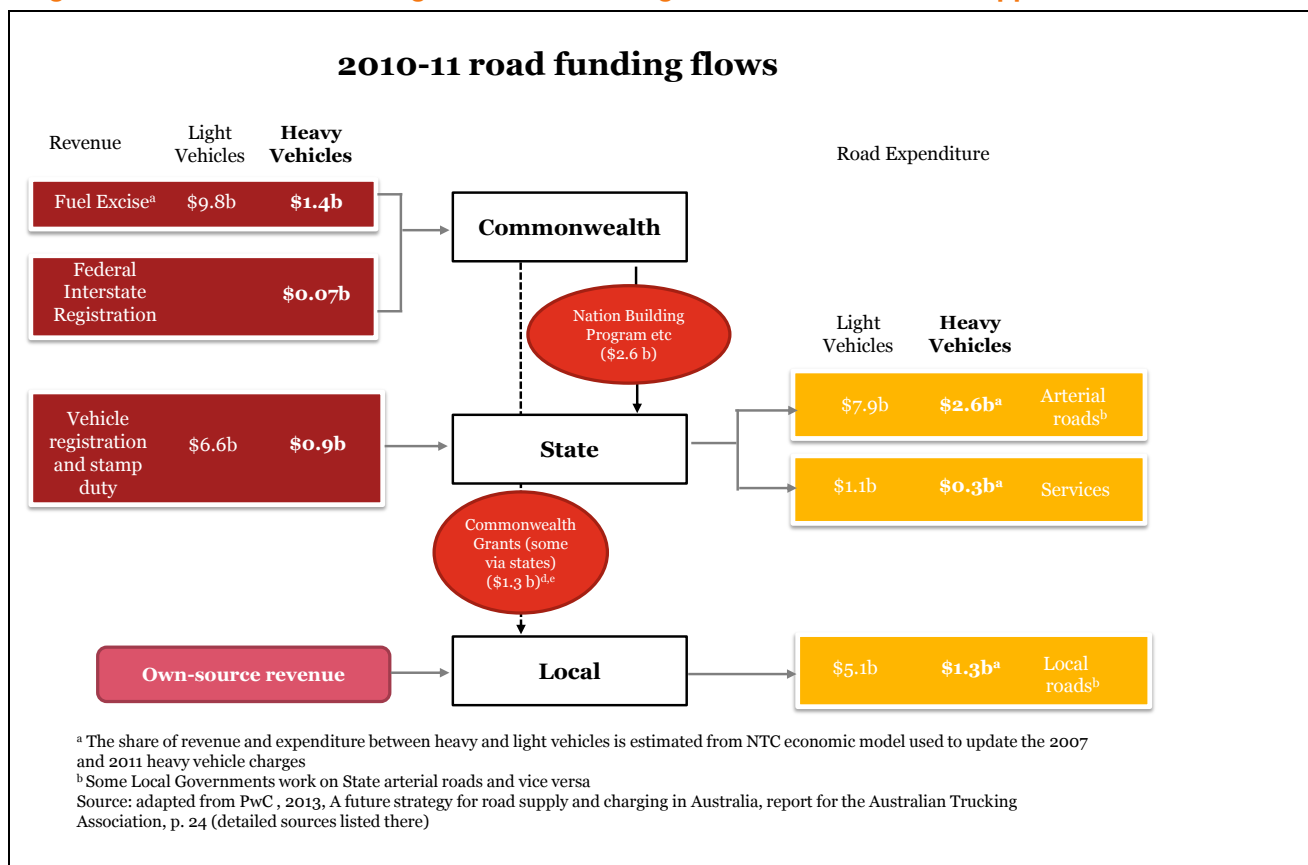
Source NTC

As a result, while heavy vehicles pay heavy vehicle charges, for the most part, the associated revenues do not provide a funding source for road expenditure. Instead, most charges revenues flow into federal and state general funds.

Funding for roads comes from a variety of sources, including local government rates, the Commonwealth (primarily through the Building Australia Fund) and state general revenues. Figure 2 below describes current funding flows.

⁸ NTC, *Heavy vehicle charges – Report to the Standing Council on Transport and Infrastructure*, February 2012

Figure 2. Current funding flows and funding under fees for service approach

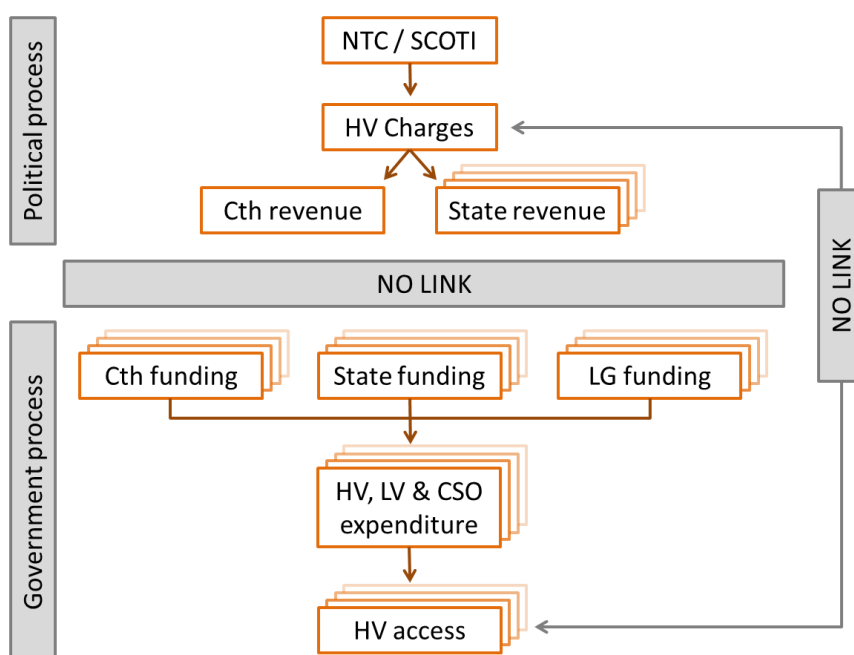


The Commonwealth Grants Commission takes into account road expenditure and registration revenue when determining relativities for the allocation of GST revenue between the states and territories.

Funding will generally vary from year to year to reflect changing government priorities.

The following diagram shows the disconnect between revenue and funding in road provision for heavy vehicle services.

Figure 3. Current heavy vehicle charging and investment arrangements



HV = heavy vehicles

LV = light vehicles

CSO = Community service obligations

3 Problems with the current system

The problems with the current arrangements and the underlying cause of them are summarised in Table 2.

Table 2. Problems and causes in current charging and investment system

Problem	Cause
Lost productivity from lack of access	Deficiencies in road infrastructure prevent more productive heavy vehicles accessing road networks, resulting in additional costs and lost productivity. This is caused by the lack of any link between the charges paid by users and the expenditure needed to provide access to heavy vehicles – lack of this link means local and state road providers have no incentive to provide improved access.
Inadequate road maintenance	There is concern with lack of maintenance on the existing road network. Available funding tends to be prioritised for new investments. This is a result of a lack of transparent and accountable arrangements for planning and expenditure prioritisation.
Complex funding and investment arrangements	Current funding and investment arrangements are complex and opaque, with no direct participation by the industry in the planning process.
Poor accountability for	There is a lack of accountability for road adequacy to meet heavy vehicle needs. There is no link between the funds received by governments and

Problem	Cause
road adequacy	the monies actually spent, and required to be spent, to maintain a given level of road service.
Weak coordination	There is weak coordination in the long-term strategic planning for local, state and national road networks.
Funding uncertainty	Funding uncertainty leads to inefficient whole of asset life management focus and reluctance to move from a protective to consumptive model.
Road provider inefficiency	Road providers have not faced the microeconomic reforms undertaken in other infrastructure industries. Experience in reforming other government-owned infrastructure industries suggests that there could be problems with the productive efficiency of road providers that have not undergone such reforms and lack commercial incentives.
Charging arrangements are not sustainable, inefficient, inequitable, and non-transparent	Not sustainable Current limits on revenues collected through road user charges (created by the fuel excise) will be reached within seven years and possibly sooner. Once these limits are reached, the RUC will not provide additional revenue with the only source for additional funding being the inefficient, inequitable and lumpy registration fees. . Changes are required to address this problem. Inefficient Current heavy vehicle charges are not economically efficient. Charges do not provide information to infrastructure suppliers and users on the demand for road services, and the cost of meeting that demand. The structure of charges is not cost reflective. Inequitable Current heavy vehicle charges are inequitable. The current charges are highly averaged, particularly registration charges. This means significant cross subsidies between operators. Ineffective determination The current charging determination system is ineffective. It creates pressure for a negotiated outcome underpinned by conservative analysis, where charges do not consistently reflect actual changes in expenditure.

4 Better arrangements to support public infrastructure

4.1 Revenue certainty supports better planning and delivery of infrastructure

The lack of effective planning has long been identified as a barrier to efficient and effective investment. At the heart of the problem is a lack of coordination between the various parties involved in the planning framework and a lack of financial incentives and funding certainty to support the system.

Currently, road providers are funded largely through annual budget processes which reflect the changing priorities of governments. This means that road funds are competing with other government services and commitments rather than responding to the users of the network. This lack of funding certainty means that road providers are often operating in either an opportunistic or inexpedient manner, depending on the availability of funds. The variation of funding from year to year that is not aligned with funding requirements means that road providers are unable to undertake efficient maintenance or capital expenditure. HVCI discussions with road providers around the country have highlighted the problem. Many have indicated that road expenditure cycles are largely driven by the budget cycle. As a result, this can mean that road works are undertaken at a time that is inappropriate (eg before heavy rainfall months) or are concentrated into a short period of time putting greater pressure on road construction and inflating costs. Funding limitations also means that roads works may not be of a sufficient standard to meet the demands of users. As a result, the heavy vehicle industry is not paying costs commensurate with the level of road service being provided by road providers.

In order to improve the planning and provision of roads, HVCI is strongly of the view that there must be a stronger relationship between the revenues associated with user charges and the provision of the road network. That is, heavy vehicle charges revenues should flow back to road providers as a source of funding for road provision and maintenance. In doing so, road providers are able to undertake works in a more phased and efficient manner, with a strong incentive for road providers to understand and respond to road users to protect revenue streams.

4.2 The signalling power of user charges

Charges are most useful as a signal when they are closely aligned with costs. Charges that have a clear linkage to costs are able to communicate the true cost of road usage to users. This enables users to make the best usage decisions to minimize their total costs. This may mean using a different type of vehicle, or, where possible, using a different route or mode. These usage decisions in turn provide a strong signal to road providers as to where users most value the network and where they may need to focus expenditure to lower road lifecycle costs and enable more productive usage of the road network..

The creation of a strong relationship between charges and costs also means that the undesirable revenue flows that currently exist (i.e. some jurisdictions or road providers within jurisdictions being systematically over-compensated or under-compensated relative to their costs⁹) will be addressed, allowing road providers to be adequately funded to be more responsive to demand.

4.3 The importance of accountability and independent price setting

Whilst the direct flow of funds to road providers will provide a stronger relationship between the user and the provider, it is important to note that road providers are effectively monopolies, and like any monopoly, the lack of competition can limit its responsiveness and efficiency. Therefore, a regulatory

⁹ For example, a jurisdiction with lower than average costs of supplying roads will, other things equal, be over-compensated if charges are set on the basis of average costs across Australia.

framework is important to underpin the planning and funding framework and ensure the road provider is delivering agreed services in a responsive and efficient manner.

An independent price setting agency is also important to provide stability and certainty of prices, benefitting both industry and road providers. Currently, heavy vehicle charges are set through a political process which can undermine the robustness of the charge setting process. If this arrangement were to occur under a new funding arrangement, it could affect the ability of road providers to receive adequate funds for their road program or could alternatively lead to industry paying more than they reasonably should.

4.4 The incentive qualities of risk

Within any commercial environment financial risks drive behaviour. In particular, revenue risk focusses businesses on delivering goods and services that are responsive to their customers.

Road providers should behave in the same way. However, currently, there are no financial incentives in place to drive road provider behavior so that they are responsive to their customers. Revenue risk is created by making heavy vehicle charges revenue a source of funding for road providers. This relationship forces road providers to better understand and respond to customer demand to ensure adequate revenues are collected to deliver on agreed services. The regulatory framework further supports the arrangement by holding road providers accountable for delivering agreed services.

4.5 Local government as a provider of road infrastructure

Within Australia there are 552 local government councils, each with a road provider function. Despite the fact that local government roads are critical for providing the distribution network for freight, they are currently excluded from directly receiving revenues from heavy vehicle charges. Instead, councils are reliant on council rates and government grants to provide their road networks as well as other council services. A fundamental issue with this arrangement that compromises local governments' ability to prioritise heavy vehicle expenditure is that there is no funding provided from heavy vehicle road charges, though in the case of Western Australia a portion of registration revenue is passed onto local councils. This effectively gives councils incentives to prioritise rate payer services rather than heavy vehicle road services. As a result, a large number of infrastructure bottlenecks are created on the local road network, often referred to as the first and last mile issue. These impose a significant productivity cost as vehicles either have to decouple trailers and run multiple trips or operators use smaller less productive vehicles that will be able to travel over the entire route.

The ability for local governments to directly receive revenues from heavy vehicle usage creates a stronger incentive to provide access. However, the large number of councils would make it extremely difficult for them to participate as individual entities in the reform given the need for road providers to have a strong understanding of future industry demand and drivers of demand as well as interact with the broader planning function as well as the economic regulator. In addition, the number of councils would make the economic regulators task unwieldy. HVCI is therefore working with local governments across Australia to develop regional local government groups that better support a coordinated approach to road provision.

5 Financing issues

5.1 Public vs private financing

Financing addresses the ‘lumpiness’ in funding over time. It refers to how a road provider approaches the need for up-front expenditure on road maintenance or upgrades. It is distinct from funding, which is the revenue stream that then pays for the upfront expenditure.

The current system of road infrastructure provision depends on public financing. Some exceptions include the development of various freeways in major cities through public-private partnerships, and a few isolated instances where individual supply chain participants (particularly in mining) have contributed to the financing of road upgrades.

Various government and industry stakeholders have indicated a strong desire to access private financing to complement more traditional government financing. This reflects a number of drivers, including wanting to explore more flexible arrangements, where government budget constraints and debt preferences are not the sole determinant of the scale of commercial road investment.

HVCI consideration of private financing options has identified the following limitations for this reform:

- the cost of private financing is generally higher than that of government financing, which will necessarily need to flow through to heavy vehicle charges
- to be ‘off balance sheet’ for governments, the private sector would need to be responsible for demand (or patronage) risk and there must not be any government guarantee of revenues
- there would be more private sector interest and competition if there was a defined pipeline of potential commercial projects of sufficient size and volume to warrant the private sector allocating and devoting resources.

A particular constraint is the cost of tendering for private public partnerships. Advice from treasuries has indicated that the high cost of tendering makes private financing prohibitive in smaller projects (i.e. under \$100m), regardless of the net benefits and revenue on offer. A more streamlined tendering approach for smaller “boutique” projects such as first and last mile investments may better support private financing arrangements.

Given the partial nature of the HVCI reform, public financing is likely to be preferred by road providers. However, there are likely to be some instances in key supply chains where the private sector may seek to invest in specific road infrastructure and the HVCI reforms will not establish additional barriers to this.

6 Conclusions

This Inquiry into Public Infrastructure comes at an important time. The demands on Australia’s road infrastructure are set to continue to grow as population increases and the freight task increase. At the same time, government revenues are becoming more constrained with reduced taxation revenue and increased demand for public services. It is especially critical in this environment that infrastructure provision is efficient and the resulting network supports productivity.

The HVCI reforms seek to create a stronger relationship between heavy vehicle user charges and road provision. Whilst the reform is only partial in nature, it has explored the issues relevant for a more complete reform. In particular it has found:

- The current system of heavy vehicle road pricing and road provision is not efficient and is not responsive to the demands of heavy vehicle users.
- Heavy vehicle charges are disconnected from road expenditure and therefore do not provide strong financial incentives to support more productive access to the road network.
- A lack of funding certainty means that road providers are unable to efficiently provide the road network and instead are caught in a cycle of under and over investing, depending on government priorities.
- Current funding mechanisms favour capital investment with inadequate maintenance. This restricts the level of access and benefit associated with the capital investment as road providers “protect” the network.
- Charges need to be reflective of costs to provide strong signals to users and providers of the road network and ensure that revenues flow back appropriately to road providers.
- The lack of accountability of road providers and independent price setting means that heavy vehicle charges are subject to political pressures and road providers do not have to demonstrate efficiency of expenditure or promote productivity through the road network.
- Local government is an important provider of road services and needs to be part of the system.
- The costs of tendering are prohibitive on small projects that have high net benefits and would otherwise be attractive for private financing. A more streamlined tendering process for PPPs may support private financing.

The HVCI reforms are seeking to address these issues through the reform of heavy vehicle charges as well as reforming the way in which governments provide road services to heavy vehicle users to be more responsive and accountable to demand. In doing so, the reform seeks to improve productivity of the heavy vehicle sector and associated supply chains through lower costs and better access in the order of around \$22 billion in net benefits. The partial nature of the reforms limits the benefits. Proposals resulting from this inquiry will magnify them.

Should you wish to discuss in more detail any elements of this submission or HVCI reforms, please do not hesitate to contact Meena Naidu, HVCI Project Director, at meena.naidu@roadreform.gov.au.