

Heavy Vehicle Road Reform Consultation Paper

Proposed changes to the way heavy vehicle charges are set and invested

September 2020



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Consultation Process

Request for engagement, feedback and comments

Infrastructure and Transport Ministers have asked for public consultation on a proposed new system for setting and investing heavy vehicle charges. Governments have not yet agreed to implement these reforms. Infrastructure and Transport Ministers and the Council on Federal Financial Relations will, in 2020-21, consider options for potential reforms. Your views will inform these considerations.

As a first step, interested parties are invited to read this consultation paper and express interest in participating in online small group workshops – to gather feedback and discuss issues. Contact us via the email address below. Online workshops are being planned for September 2020. Written submissions are being called for by 28 October 2020. This consultation paper includes a number of questions, intended to guide consultation discussion. But your feedback and engagement need not be limited to the questions asked.

If you wish to make a formal written submission, please do so via email. All information (including name and address details) contained in submissions may be made available in public on the Infrastructure and Transport Ministers website unless you indicate that you would like all or part of your submission to be treated in confidence. Automatically generated confidentiality statements in emails do not suffice for this purpose. Respondents who would like part of their submission to remain in confidence should provide this information marked as such in a separate attachment.

Legal requirements, such as those imposed by the *Freedom of Information Act 1982* (Cth), may affect the confidentiality of your submission.

Closing date for submissions: 11.59 pm AEDT on Wednesday 28 October 2020.

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Introduction

The Commonwealth, state and territory governments and the Australian Local Government Association are looking at a new and better national system for setting heavy vehicle charges and investing the funds raised in roads. The new system aims to boost productivity, and deliver better government investment in roads by giving users more of a say.

This paper outlines this new system and seeks stakeholder views as input to inform Governments' consideration of the new national system. Governments have agreed in principle a new system will have four broad elements:

1. Service level standards

National service level standards will be established with road categories that each have levels of service covering the things road users care about—like safety, reliability and access. Also important will be users' willingness to pay. The standards will be developed with all road users (including heavy vehicle users) and will guide all government road investments.

2. Expenditure planning and determining what costs are recoverable from heavy vehicles

States and territories will develop road expenditure plans. An independent body or bodies will assess the plans using the service level standards to determine what costs of road investment are recoverable from heavy vehicle users.

3. Independent setting of heavy vehicle charges

An independent body will use the determination of what is recoverable (from Reform Element 2) and calculate heavy vehicles' share of the expenditure. It will use this to decide the national fuel-based Road User Charge rate, and recommend baseline registration charges for states and territories. Charges would be calculated using a forward-looking cost base.

4. Dedicated road funding (hypothecation)

Revenue from heavy vehicle charges will be dedicated to road infrastructure. While road investments will also continue to be funded from general revenue, a steady and predictable stream of heavy vehicle funding dedicated to roads can help provide productivity benefits to the heavy vehicle industry.

Together these four elements make up a new system:

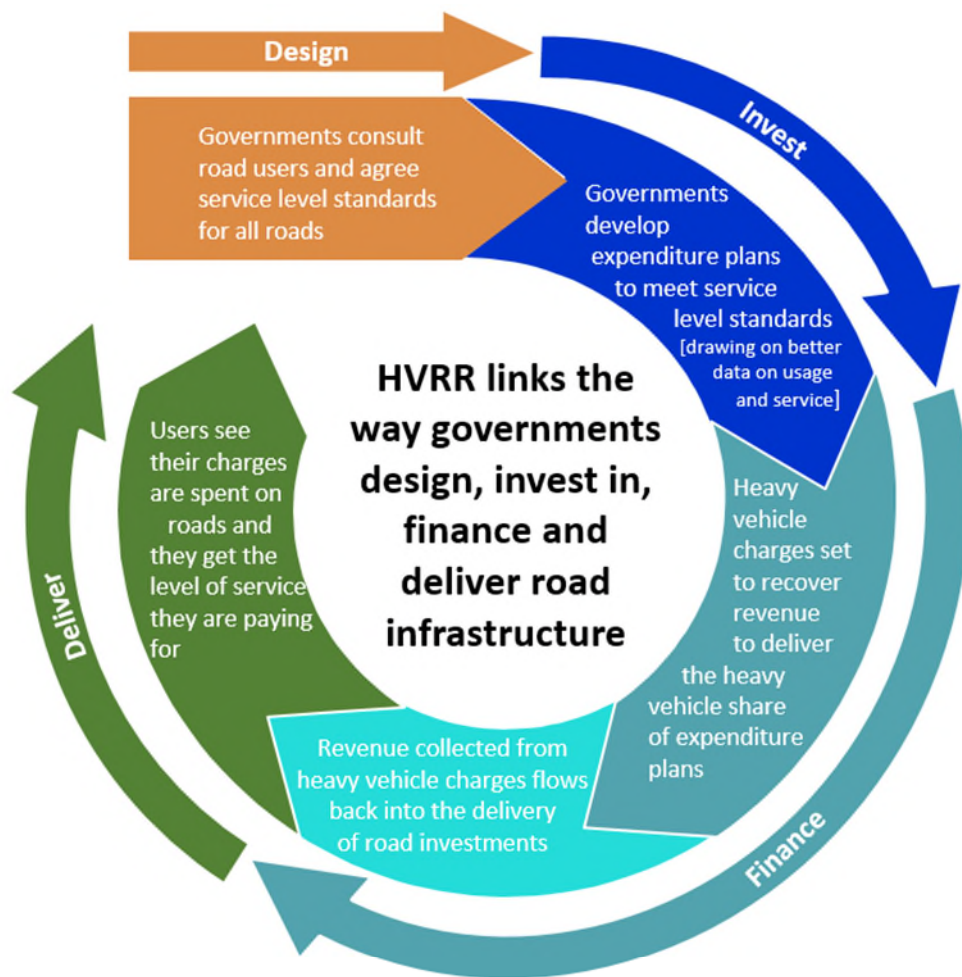


Figure 1: The proposed new system

A more detailed diagram outlining the revised system is at **Figure 2** overleaf.

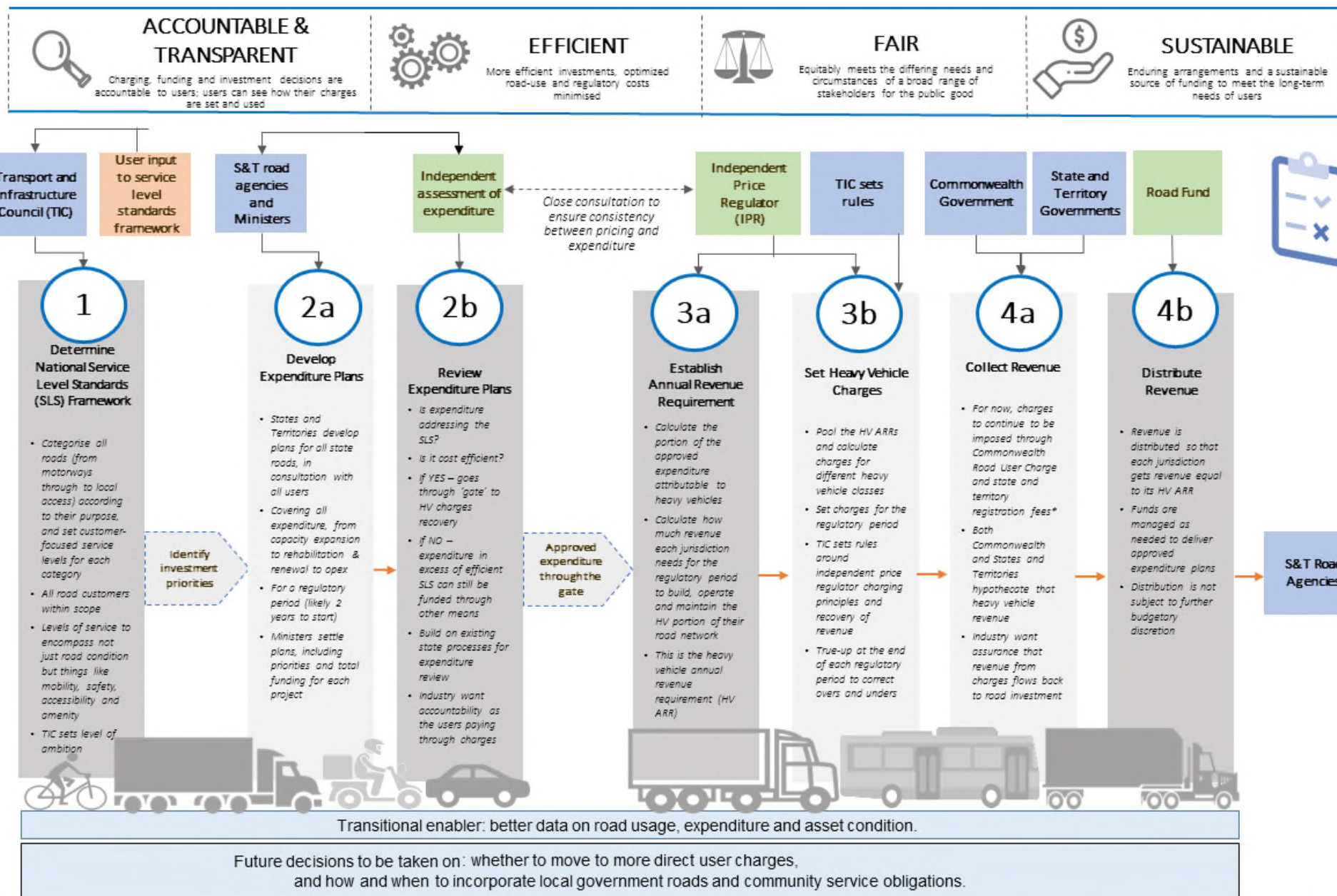


Figure 2: How the proposed new system would work

Context

Since the current heavy vehicle charging and investment system was put in place in the 1990s, some new issues have emerged and ideas on better ways to do things have been put forward.

Under the current system there is no national service level standards framework. Therefore, there is no nationally consistent understanding of what road users want and need from roads, nor is there a detailed understanding of what users are willing to pay for. There are existing road categories and measures of service at the state and territory level which understand user needs, but these frameworks differ across jurisdictions, and so cannot be used as the basis for setting national charges.

The states and territories deliver the roads for which they are responsible, and the Commonwealth provides states and territories both ongoing and one-off grant funding for road investments.

States and territories report total road expenditure to the National Transport Commission, which adds up all the spending, and calculates the heavy vehicle charges that would be needed to recover the heavy vehicle share of governments' spending on roads. The calculated charges aim to recover the heavy vehicle share of road expenditure shortly after it is incurred. Therefore the estimated heavy vehicle charges have been volatile in the past, presenting challenges for both industry and governments.

The National Transport Commission advises Infrastructure and Transport Ministers on heavy vehicle charges. Infrastructure and Transport Ministers consider this advice, and then propose the rate of heavy vehicle charges, namely the fuel-based Road User Charge and registration fees. The Commonwealth has the final say on setting the Road User Charge, and each state or territory has the final decision on registration fees within its jurisdiction.

Heavy vehicle charges recover about \$3.3 billion, or around 22 per cent of the total cost of building, renewing and maintaining roads. Most revenue raised from heavy vehicles, including revenue from the fuel-based Road User Charge, goes into general revenue (rather than being directly linked to expenditure on roads).¹



Photo: Unsplash

¹ Some states and territories do hypothecate heavy vehicle revenue from registration charges or licence fees.

A better system of paying for and investing in heavy vehicle road infrastructure

In developing these proposed reforms, Governments have been guided by the following principles:

Efficient	More efficient investments, optimised road-use and regulatory costs minimised
Sustainable	The system meets the long-term needs of users
Accountable and transparent	Charging, funding and investment decisions are accountable to users. Users can see how their charges are set and used
Fair	The system aims to equitably meet the differing needs and circumstances of a broad range of stakeholders

The proposed new system would see stronger links between:

- what users want and are prepared to pay for (as captured by the service level standards)
- what investments are planned and paid for by users (through independent determination of what costs are recoverable from heavy vehicle users and independent price setting)
- the investment of heavy vehicle revenue back into the roads (by dedicating heavy vehicle revenue to road funding)

Modelling from Deloitte Access Economics estimates a better charging and investment system can deliver productivity benefits of up to \$6 billion over the next 20 years.² Most of these benefits would come from increased focus on road maintenance and investments that reflect user preferences, which can improve safety, productivity and reduce vehicle operating costs. Over time, the reforms can help deliver the infrastructure users want, including small capital works like overtaking opportunities, road widening and rest areas.

Improving productivity matters—road transport activity represents around three per cent of Australia's GDP. This is likely to grow, with the road freight task forecast to increase by more than 35 per cent over the next 20 years. Productivity gains in the road freight sector can reduce costs for businesses and consumers, as road transport is part of the supply chain for most businesses.

Longer term, these reforms lay the foundation for a vehicle charging and investment system which can adapt to future developments like autonomous and electric vehicles. The new arrangements these reforms would put in place could later be built on to apply to other road users and to deliver the kinds of road infrastructure needed to support autonomous vehicles.

Figure 3 sets out what we have heard from stakeholders about the main issues with the current system. It also shows what the proposed new system would look like, and what the reforms could deliver for heavy vehicle users, communities and governments.

² Deloitte Access Economics, 'Economic analysis of potential end-states for the heavy vehicle road reform' 30 June 2017, available at: <https://www.infrastructure.gov.au/roads/heavy/files/DIRD-HVRR-reform-CBA-ncic.pdf>

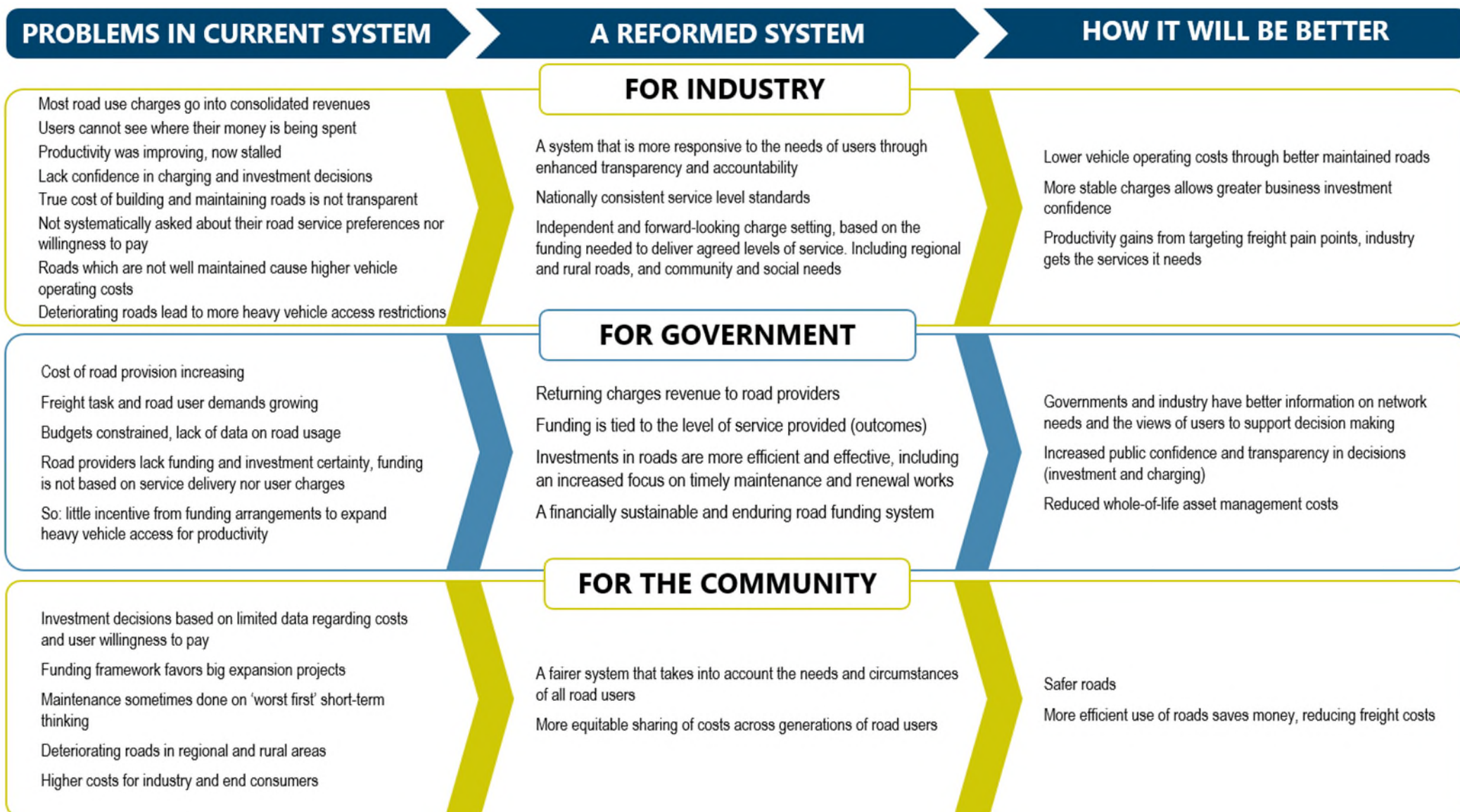


Figure 3: Problems with the current system, what a new system would look like, and how it will be better

1. Service level standards

Proposed element

In November 2018, Infrastructure and Transport Ministers agreed to develop service level standards (standards) for Australia's roads. The standards will have different road categories, with a range of service for each category. Roads will be assigned to a category based on the function of the road. It is likely the standards will capture all types of roads, including those usually managed by local governments. 'Service levels' will include things road users experience and care about, such as safety, road condition, speed and reliability; all of which will be overlayed with their willingness to pay (see text box below). It will be important for the standards to be developed in close consultation with users as well as being consistent with other initiatives such as the development of the next National Road Safety Strategy.

What might service level standards look like?

- The service level standards would aim to capture what users are willing to pay for, and have ranges of service for different types of road.
- For major urban freeways, the standards might capture that users are willing to pay for a road with high reliability, separated traffic, multiple lanes, lighting etc.
- For roads connecting two rural towns, the standards could reflect that it wouldn't be feasible to provide (and users wouldn't want to pay for) all the things freeways have. Instead, users might be willing to pay for regular rest stops, bridge upgrades to allow heavy vehicle access, clear signage and safer corners.
- The service level standards would aim to capture these preferences and differences in a systematic and nationally consistent way. The standards would have ranges of service levels, to allow for differences across regions.



Photo: Unsplash



Photo: Unsplash

The standards will not mandate a minimum standard for roads. Rather, they would seek to document what all road users want from different types of roads. Heavy vehicle operators can expect to contribute to the costs of providing services within or up to the standard through user charges.

The standards will be set by Infrastructure and Transport Ministers, after considering user views and willingness to pay. The standards adopted by Infrastructure and Transport Ministers may need to be looked at and, if necessary, updated every few years as data improves, the system is tested, and user preferences change.

The standards will be the foundation of a new system. They will be used to assess state and territory expenditure plans to decide what can be recovered from heavy vehicle users (Reform Element 2). This in turn decides the heavy vehicle charges set by the independent price regulator (Reform Element 3). This flows through to what revenue state and territory governments receive. This means state and territory governments will be funded for delivering investments in line with standards.

National service level standards aim to deliver:

- A system that is more open and responsive to user preferences—a systematic framework to capture road user preferences and use them to inform road funding and investment decisions.
- A tool to help governments improve their road investment decision-making by providing a national and complete understanding of user wants and needs from different types of road across the road network.
- National consistency in reporting road service delivery.
- A yardstick, to determine what costs can be passed on to heavy vehicles through national charges.

Design considerations: national service level standards

Note that separate consultations on service level standards is planned for later in 2020

Scope of service level standards

When governments plan investments, they need to consider the needs and views of a range of different stakeholders, including heavy and light vehicle drivers, cyclists and pedestrians. To usefully inform investment planning, the standards therefore have to consider the needs and preferences of all users, not just heavy vehicle users. However, heavy vehicle users would be key stakeholders in setting the standards. Heavy vehicle users currently pay about 22 per cent of overall road expenditure, and as a group who uses roads as an economic service, the heavy vehicle industry will have clear needs and preferences that can be taken into account.

Building on existing road classification schemes

Most states and territories already have in place a road classification scheme and road levels of service. These are being built on to develop the standards. While a useful foundation, existing state and territory road categories and service levels are not nationally consistent, and so are not able to be used in setting national charges.

The goal is to deliver a nationally consistent set of standards, which considers the needs and preferences of customers and the social and economic functions of roads.

User input to the service level standards

User input to the standards is needed to make sure they reflect user needs and willingness to pay. If service levels are set too high, users could pay for services they do not want. If service levels are too low, this could lead to the deterioration of the road network.

It is likely Infrastructure and Transport Ministers would look at and, if necessary, update the standards every few years. There are potentially different ways to capture the views of users in these processes. One option would be to hold full public consultation on the standards. Alternatively, a consultative user-group could be convened each time the standards are to be reviewed, to provide a formal mechanism for input. Or a standing user-input group could be established, to advise governments continuously.

Whichever approach is taken, there will be opportunities to draw on existing research and data sources to understand user preferences.

Question for stakeholders

1. What do you see as the pros and cons of establishing service level standards?
2. What are the most important things for the service level standards to capture?
3. What mechanism/s should be established to make sure the service level standards reasonably reflect the views of users, including their willingness to pay? For example, how can a wide range of stakeholders be represented in the process?
4. What mechanisms could be used to review the service level standards periodically? For example, should there be a standing body, or consultation periodically when the service level standards are reviewed.

2. Expenditure planning and determining what costs can be recovered from heavy vehicles

Proposed element

Using the service level standards (Reform Element 1), state and territory governments would plan their road investments. Under Reform Element 2, these plans would be independently assessed against the service level standards. The assessment would determine what expenditure can be recovered from heavy vehicles and therefore goes through ‘the gate’ for independent setting of heavy vehicle charges (Reform Element 3).

The assessment of what expenditure is recoverable would look at the level of service to be provided by the investment, and the cost effectiveness of the investment.

The exact principles underlying the assessment of what expenditure is recoverable from heavy vehicle users need further development, but broadly the level of service provided by the investment would be measured against the service level standards. The cost-effectiveness of the investment would check the planned costs are reasonable for delivering the chosen level of service.

Under this proposed new system, governments will still retain the final say on what investments are made. Governments will be able to choose to deliver a higher or lower level of service than is set out in the service level standards. The independent determination of what expenditure is recoverable from heavy vehicle users (Reform Element 2) will assess the proposed spending against the national service level standards, which apply to all users. However, under these reforms, the assessment only determines how much heavy vehicle users should pay. If governments want to spend more to deliver a higher level of service than set out in the service level standards, they could, but the extra cost of this would not be assessed as recoverable from heavy vehicle users, and could not be passed on through national charges.

To give a simplified example, if a government planned to build a four lane road, when the service level standards indicate a two lane road is appropriate for the function of that road for the foreseeable future, then this independent assessment would determine only the efficient cost of a two lane road would be recoverable from heavy vehicle users. The government could still choose to build the four lane road, but the heavy vehicle charges calculated by the independent price regulator would only include heavy vehicle users’ share of two lanes.

Expenditure planning and independent determination of what costs can be recovered from heavy vehicles aim to deliver:

Expenditure plans which more closely match user preferences

- More of a focus in expenditure planning on things important to users.
- Assurance as to what heavy vehicle users are paying for.
- Users get assurance that expenditure which is not cost-efficient or is above what is needed to meet the service level standards will not be included in the heavy vehicle charges calculated by the independent price regulator.
- Assurance the costs are being shared fairly—it would not be fair for users in some states to pay for investments in other states which deliver an excessively high level of service to local users.

Design options

User input to expenditure plans

There is a role for user input into the planning of road investments, to assist in prioritising different investment options. This expenditure planning will continue to be done at the state and territory level, likely through jurisdictions' budget processes, which means users should provide input to expenditure plans at the state or territory level.

Scope of the assessment of expenditure plans

When assessing expenditure plans to determine what can be recovered from heavy vehicles, the body/ies conducting the assessment would need to assess all road expenditure, not just the part of spending that relates to heavy vehicle users. Heavy vehicles use many of the same roads as light vehicles, meaning it would be impractical to assess projects only against the needs of heavy vehicle users.

Balancing rigour and cost

Governments are aware of the need to design the independent determination process to be cost effective and not duplicate existing review processes. It will also need to be rigorous enough to give industry and governments assurance and make sure there is national consistency of what is being recovered from users.

While there are existing reviews of expenditure, there is not currently any process exactly akin to a review of proposed expenditure against service level standards. This element will therefore require governments to establish new processes. It may be possible to reduce the administrative costs of the assessment process by using existing infrastructure planning processes where appropriate. For example, preparing business cases for larger projects, benchmarking projects costs within a jurisdiction, planning against the national service level standards, and applying consistent project assessment methodologies may reduce the time and resources needed to assess proposed expenditure.

Governance arrangements for the independent determination of what expenditure is recoverable

To provide adequate assurance to road users that only appropriate costs are being included in heavy vehicle charges calculations, the determination would need to be independent of governments, transparent and with the right expertise to credibly perform this role.

Much of the current road investment planning and decision-making takes place at the state and territory level, or with the close involvement of state and territory governments. There could be merit in the assessment of expenditure plans taking place at the state and territory level, so it is closer to investment decision-making. Much of the expertise in investment planning and assessment is also within state and territory government agencies.

On the other hand, a key goal of the determination process is to make sure there is broad national consistency of what is recovered, to make sure excessive costs in any jurisdiction are not shifted to national heavy vehicle charges.

Different governance options for how to determine what expenditure is recoverable from heavy vehicle users could include:

- State/territory-based determination, where each state may choose an independent body to decide what costs can be recovered from users, in accordance with nationally agreed guidelines. This might build on existing state or national bodies.
- National body determination, to make sure the determination is made consistently across all jurisdictions, and gain economies of scale.
- A hybrid model, for example, an independent state or territory nominated body may undertake user engagement and assessment of expenditure plans while a national body oversees these reviews, making checks and queries where needed to ensure consistency and rigour.

An issue with solely state/territory determination of what expenditure is recoverable is the misalignment between the interests of local users within a state or territory, and the interests of national users. Most of the benefits of road investments go to local users, but the cost of the investments would be spread across users nationally because the Road User Charge applies nationally and all heavy vehicle users pay it. This could mean states or territories, in trying to deliver the best outcome for users in their jurisdictions, may seek to spend more on roads than it would be reasonable for national users to contribute towards. If the determination of what is recoverable were solely state-based, each jurisdiction could be incentivised to seek better outcomes for its own road users by assessing more expenditure as recoverable from heavy vehicles. The system would need checks to ensure that over time this doesn't lead to heavy vehicle users paying for excessive investments, inflating heavy vehicle charges.

A national-only determination process could also have issues. Approaches to road planning can vary amongst states and territories. It may be challenging for a single, national body to fully understand and work with all these processes.

The hybrid model provides a potential way of dealing with this tension. Much of the review could take place at the state/territory level for those jurisdictions willing to undertake this work. This would make use of state and territory expertise. There would still be a national body with the power to check these reviews, and ensure that only allowable costs were being passed through to national heavy vehicle charges. However, for a hybrid model to be effective, there would need to be clear division of responsibilities between state/territory bodies and the national body to reduce duplication. A hybrid model would also forgo economies of scale that could be gained from a single national body.

Question for stakeholders

5. Which model for independently determining what expenditure is recoverable from heavy vehicle users would you prefer and why?
6. If some or all of the independent determination of what is recoverable from heavy vehicle users will take place at the state level, what checks could be put in place to ensure national consistency of expenditure recovery?
7. How important is the independence of the body/ies assessing expenditure?
8. What benefits to users do you think particular expenditure review mechanisms might offer compared to the administrative costs associated with that mechanism?

3. Independent setting of heavy vehicle charges

Proposed element

Under the proposed new system, once the amount of recoverable expenditure has been determined (Reform Element 2), heavy vehicle charges need to be set to recover heavy vehicles' share of the expenditure. Heavy vehicle charges would be collected through the current collection methods of the Road User Charge (i.e. through the fuel system) and registration charges.

An independent body or bodies would first decide the heavy vehicle share of the expenditure approved under Reform Element Two. It/they would use this to decide the rate of the Commonwealth Road User Charge. This independent setting of the road user charge is different to the current system, as currently governments agree the rate of the Commonwealth Road User Charge.

The independent body or bodies would also recommend national baseline registration charges to states and territories, based on what needs to be recovered to meet the cost of the heavy vehicle share of roads that are consistent with the service level standards. For registration charges, the proposed new system would be similar to the current Pay-as-you-Go (PAYGO) system, where each state and territory government makes its own final decisions on charges.

While the Road User Charge would be independently set, registration charges would only be recommended. States and territories could continue to offer registration concessions (for example to primary producers) or to charge an additional premium above the recommended registration charges. For example, it would be open for a state or territory to charge an additional premium on the recommended baseline registration charges to provide a higher level of service to road users in their jurisdiction. Having the recommended national baseline registration charges calculated independently would ensure transparency—industry could see if governments chose to charge above or below the recommended rate.

Independent setting of heavy vehicle charges aims to deliver:

Greater certainty for industry and road providers

- Setting charges based on a forward-looking cost base model could allow heavy vehicle operators to benefit from increased government spending on long-lived assets without their charges rising sharply, as heavy vehicles' share of the expenditure would be recovered from heavy vehicle users over a longer timeframe.
- Smoother prices means a more durable system—reducing large swings in heavy vehicle charges and revenue is important to both industry and governments.
- Independent setting of the Road User Charge combined with dedicated funding (Reform Element 4), gives state and territory road providers certainty they will receive reimbursement for expenditure that is consistent with the service level standards.

A fairer and more transparent charge setting process

- Independent price setting and calculation can improve confidence in the charge-setting process.
- A forward-looking approach to charges could allow the costs of investments to spread to future users, improving inter-generational equity.

It is proposed the independent body would calculate heavy vehicle charges using a model known as a forward-looking cost base. A forward-looking cost base can reduce volatility and improve inter-generational equity, as assets are paid-off over a longer time period.

What is a forward-looking cost base?

Instead of looking at what has already been spent on roads and recovering that spending shortly after it is incurred, a forward-looking cost base determines how much revenue should be collected by spreading the cost of future road investments over the lifetime of those roads, similar to how a business might finance a large purchase of equipment.

A forward-looking cost base is a way of setting charges so road managers get a steady stream of revenue to fund road maintenance, renewal and construction. Users would also pay more predictable charges. This approach is used in other sectors like water and electricity.

To work out how much should be collected from users, revenue is calculated using three components:

- return on capital - so revenue collected in the future has the same value as revenue collected today;
- depreciation - to reflect the lifecycle of an asset;
- operating and maintenance costs.

See the Appendix to this paper for more details.

This consultation paper builds on the matters covered in the 2018 Regulation Impact Statement on Independent Price Regulation³ by seeking views on independent price setting in relation to other reform elements.



Photo: Department of Infrastructure, Transport, Regional Development and Communications

³ The final regulation impact statement is available at: <https://ris.pmc.gov.au/2019/12/17/independent-price-regulation-heavy-vehicle-charges>

Design considerations

Volatility of heavy vehicle charges

A key aim of the forward-looking cost base is to reduce volatility of charges. There have been past examples of substantial changes in heavy vehicle charges. For example, in 2012, the Road User Charge increased by 10.4 per cent.

Under a forward-looking cost base, heavy vehicle charges may still go up if governments spend more, and go down if governments spend less. But a forward-looking cost base would see charges move more slowly in either direction than under the current charging system.

Question for stakeholders

9. How important is the aim of reducing volatility of heavy vehicle charges?
10. Does a forward-looking cost base seem to be a better way of assigning charges over time?
11. What, if any, additional information would you like to have about the proposed forward-looking cost base?
12. How important is the element of independence in assessing expenditure and charge-setting?

Governance of the charge setting process

Consultations on the 2018 Regulation Impact Statement on Independent Price Regulation proceeded on the assumption there would be a national independent price regulator. While the Commonwealth Road User Charge (which applies nationally and which all heavy vehicle users pay through the fuel excise system) is in place, there would need to be a national decision on the rate of that charge. Consistent with current arrangements, there would also be a role for state and territory level decision-making processes, to decide registration charges.



Photo: Department of Infrastructure, Transport, Regional Development and Communications

Functions of independent price setter/s

Under the reforms the independent price regulator/s will have a predominately technical role. It/they will use the outcome of the assessment under Reform Element 2 to set the fuel-based Road User Charge and recommend national baseline registration charges to states and territories. More specifically, the independent price regulator/s (individually or collectively) would have the following main functions:

- Receive information from jurisdictions on forecast road-related planned expenditure⁴ and actual road expenditure, and information/reports from the assessment of planned expenditure (under Reform Element 2).
- Calculate the heavy vehicle share of the recoverable road expenditure.
- Calculate the heavy vehicle revenue each jurisdiction should receive from heavy vehicle users using a charge-setting approach agreed by Infrastructure and Transport Ministers.
- Determine the national Road User Charge and baseline state and territory heavy vehicle registration charges for different heavy vehicle classes to recover the sum of each jurisdiction's heavy vehicle revenue needs for the regulatory period.
- Determine the proportion of Road User Charge revenue to be distributed to each jurisdiction.
- Calculate a 'true-up' to resolve any differences between recoverable expenditure and heavy vehicle charges. This would make sure the jurisdiction receives only the revenue from heavy vehicle charges it is entitled to for the expenditure it has actually delivered.
- Using best available evidence, to periodically review and determine the method for allocating costs between heavy vehicles and other road users.

User engagement will be integral to the price setting process. Under current arrangements, the National Transport Commission periodically reviews its cost model through a process called a determination. During this determination process it consults with the heavy vehicle industry on the assumptions and data underpinning the model, and on recommended future rates of charges for different classes of heavy vehicles. This would likely continue under an independent price regulator/s, with the regulator/s undertaking engagement and consultation processes as a core part of its/their work.

Question for stakeholders

13. What advantages and disadvantages are there to establishing independent pricing regulation?
14. What are the advantages and disadvantages of the independent price regulator functions being held by a separate body to the body/ies with the expenditure review function?
15. Are there any other functions or responsibilities the independent price regulator should have under the proposed new system?
16. What pricing principles should apply to the independent price regulator/s with the above work?
17. Under the proposed new system, should heavy vehicle registration fees be nationally consistent and based on nationally agreed service level standards like the Commonwealth Road User Charge would be?

⁴ The new arrangements would likely have a regulatory period of 2-3 years of planned expenditure.

4. Dedicating heavy vehicle revenue to roads (hypothecation)

Proposed element

Under the new system, revenue from heavy vehicle charges would be dedicated to investment in the road network. The Commonwealth would distribute revenue collected from the Road User Charge to states and territories for spending on roads. In addition, each state and territory would dedicate the revenue it collects from recommended heavy vehicle registration charges for spending on roads.

Dedicating heavy vehicle revenue to road infrastructure aims to deliver:

Transparency for users—revenue from charges is invested back into the roads

- The heavy vehicle revenue states and territories receive would only be spent on funding and financing roads.

A financially sustainable stream of funding for states and territories to manage roads

- Each state and territory would have flexibility as to which projects or costs it could spend the hypothecated revenue.
- More revenue certainty can allow sophisticated longer-term management of assets (including lower cost maintenance).

More efficient management of road assets, improving efficiency

- More optimal maintenance improves the roads, reducing heavy vehicles' operating costs.
- International examples have shown significant gains from managing road-assets on a long-term basis.

User preferences will underpin heavy vehicle funding

- Heavy vehicle charges will return revenue to the states and territories based on their delivering investments which are consistent with the service level standards.

The importance of dedicating heavy vehicle funds

The key benefit of dedicating heavy vehicle revenue is it returns revenue to the states and territories based on their delivering investments which are consistent with the service level standards. This will make it easier for state and territory governments to fund projects which meet user needs and preferences.

Dedicating revenue will also provide states and territories with a long-term, predictable, and sustainable revenue stream. This revenue stream can be used to target more optimal road maintenance. More optimal maintenance can reduce costs for road providers, as well as reduce vehicle operating costs for road users:

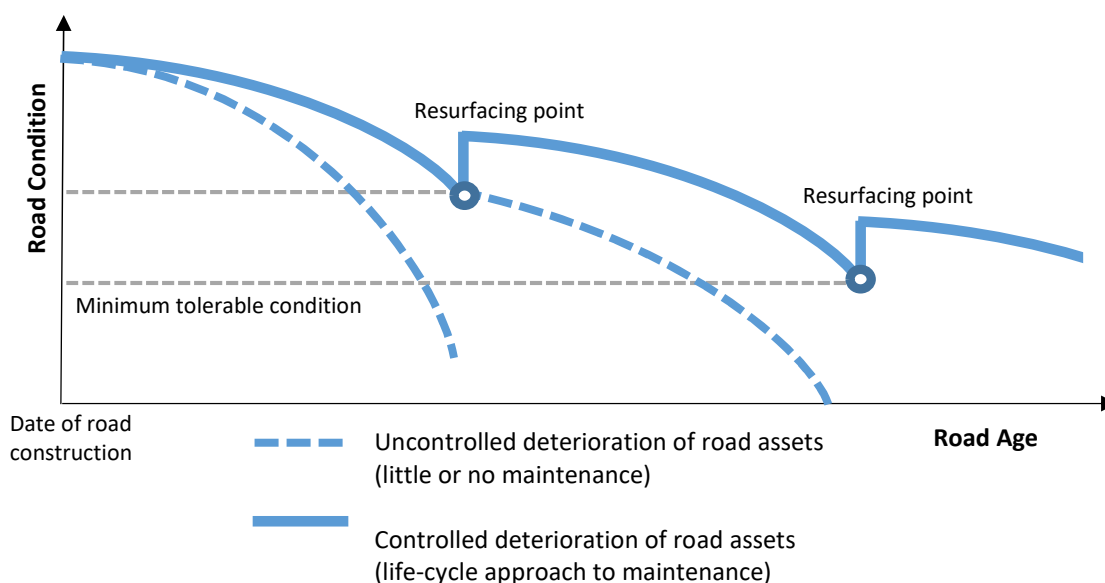


Figure 4: How proactive spending on road treatments (regular maintenance and renewal) extends asset life and saves money in the long term (hypothetical sealed road)

Design options

Model for dedicating the heavy vehicle charges

The following approach is proposed for dedicating heavy vehicle road revenue to road infrastructure.

- States and territories collect heavy vehicle registration charges within their jurisdiction and use it within their jurisdiction on road infrastructure projects.
- The Commonwealth will collect the fuel-based Road User Charge and hypothecate the revenue to each jurisdiction based on the jurisdiction's share calculated by the independent price regulator.
- A monitoring process will ensure each jurisdiction ultimately receives its share of recoverable heavy vehicle revenue.
- Each jurisdiction would have the flexibility to use their heavy vehicle revenue to fund or finance a range of road-related expenditure. This may include financing the cost of borrowing, or saving for future spending on roads. The jurisdiction's share of heavy vehicle revenue together with other sources of funding or finance will enable road providers to deliver on their approved expenditure plans.
- The independent price regulator (under Reform Element 3) would calculate a 'true-up' to resolve any differences between recoverable expenditure and heavy vehicle charges. For example, the true-up would make adjustments if revenue from charges is lower or higher than forecast, or governments decided not to proceed with proposed investments. The true-up would make sure that the jurisdiction receives only the revenue from heavy vehicle charges it is entitled to for the expenditure it delivers.

Question for stakeholders

18. Do you have any comments about how charges are proposed to be dedicated to road infrastructure?
19. What publicly available reporting from either regulatory bodies or state and territory governments would be useful?

Related processes and summary of questions

Related processes

There will be separate consultations to further develop the details of the nationally consistent service level standards in 2020-21.

If governments decide to implement the reforms, there will be further consultation on implementation details.

The reforms outlined in this paper primarily apply to state government roads. In the future, similar reforms could be applied to roads managed by local councils. Feedback is welcome on how best to design these reforms so they can be extended to local governments in the future, should governments decide to do so.

Heavy vehicle charges are collected through the fuel-based Road User Charge and state and territory registration charges. The National Heavy Vehicle Charging Pilot is underway to test alternative methods of collecting heavy vehicle charges. This Pilot is at an early stage. This paper does not consider changes to the mechanisms used to collect charges.

If governments decide to proceed with the reforms looked at in this paper, there would be an implementation period of several years while the required processes, governance and institutions are established, and detailed design work completed.



Photo: Department of Infrastructure, Transport, Regional Development and Communications

Summary of questions

1. What do you see as the pros and cons of establishing service level standards?
2. What are the most important things for the service level standards to capture?
3. What mechanism/s should be established to make sure the service level standards reasonably reflect the views of users, including their willingness to pay? For example, how can a wide range of stakeholders be represented in the process?
4. What mechanisms could be used to review the service level standards periodically? For example, should there be a standing body, or consultation periodically when the service level standards are reviewed.
5. Which model for independently determining what expenditure is recoverable from heavy vehicle users would you prefer and why?
6. If some or all of the independent determination of what is recoverable from heavy vehicle users will take place at the state level, what checks could be put in place to ensure national consistency of expenditure recovery?
7. How important is the independence of the body/ies assessing expenditure?
8. What benefits to users do you think particular expenditure review mechanisms might offer compared to the administrative costs associated with that mechanism?
9. How important is the aim of reducing volatility of heavy vehicle charges?
10. Does a forward-looking cost base seem to be a better way of assigning charges over time?
11. What, if any, additional information would you like to have about the proposed forward-looking cost base?
12. How important is the element of independence in assessing expenditure and charge-setting?
13. What advantages and disadvantages are there to establishing independent pricing regulation?
14. What are the advantages and disadvantages of the independent price regulator functions being held by a separate body to the body/ies with the expenditure review function?
15. Are there any other functions or responsibilities the independent price regulator should have under the proposed new system?
16. What pricing principles should apply to the independent price regulator/s with the above work?
17. Under the proposed new system, should heavy vehicle registration fees be nationally consistent and based on nationally agreed service level standards like the Commonwealth Road User Charge would be?
18. Do you have any comments about how charges are proposed to be dedicated to road infrastructure?
19. What publicly available reporting from either regulatory bodies or states and territory governments would be useful?

Appendix: Forward-looking cost base

The following explains how the adoption of a forward-looking cost base (FLCB) in the charge setting process can reduce charge volatility for industry.

Charges are more stable under an FLCB because the recovery of government spending on roads is spread over the lifecycle of each road asset. The steady stream of revenue provided under an FLCB can also provide road managers with the confidence to finance more optimal asset management practices.

Charge calculation under a FLCB

Under a FLCB, the amount of revenue to be collected through heavy vehicle charges or **Annual Revenue Requirement (ARR)** is calculated with reference to the following building blocks:

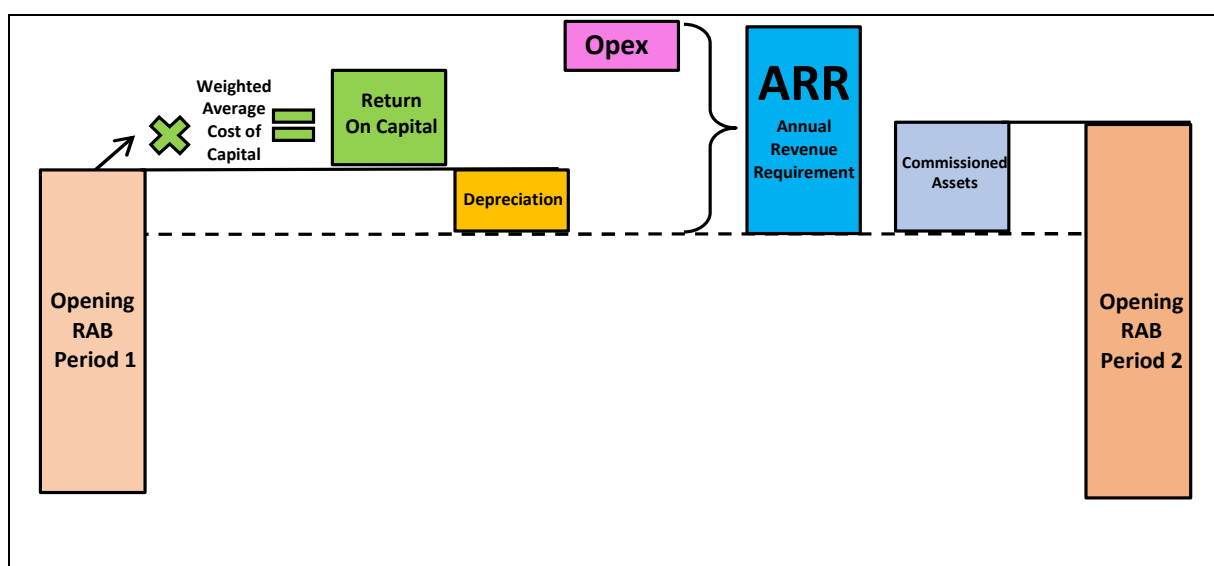


Figure 5: Visual representation of the building blocks of a FLCB

Opening Regulated Asset Base (RAB)	Represents the value of road assets (aka 'capital') at the beginning of the regulatory period
Return on capital	Allows a road manager to finance its investment in road assets that it uses to provide its services. It is calculated by applying a 'Weighted Average Cost of Capital' (WACC) to the value of the RAB. This is akin to an interest rate which ensures revenue collected in the future is of the same value as revenue collected now
Depreciation	Compensates a road manager for the annual deterioration of road assets or RAB, providing a stream of income from which to renew and replace those assets. Each asset that comprises the RAB has an estimated useful life, which determines the rate at which it is deemed to depreciate each year. The sum of those asset depreciation values is the depreciation building block
Operating expenditure or 'opex'	Allows a state road manager to recover the operating and maintenance costs of providing road services. The opex building block is a non-capital item and is not added to the RAB as this type of expenditure is recurrent in nature and required continuously to provide a road service. Expenditure that falls into the category of opex is typically relatively small and have benefits which are expected to last less than 12 months

The sum of these building blocks gives the ARR, the revenue a road manager is entitled to for each regulatory year to allow them to finance, build, maintain and operate their road network.

At the end of year one, the opening value of the RAB for the next year is calculated by subtracting the depreciation building block from the opening RAB and adding in any new assets built, **Commissioned Assets**. That is, adding in the value of all approved expenditure that creates a new asset or upgrades an existing asset.

After each regulatory period, there would be a 'true-up'. Any under or over recovery would be added to or subtracted from the next period's ARR. This will ensure industry only pays for investments that are actually delivered.

Smoother charges for users under an FLCB

The National Transport Commission (NTC) has developed and tested a FLCB prototype model. The prototype model uses expenditure forecast data provided by the states and territories to establish an annual revenue requirement under plausible policy assumptions. The prototype model shows that charges set under a FLCB would be smoother than under the current PAYGO model for determining charges.

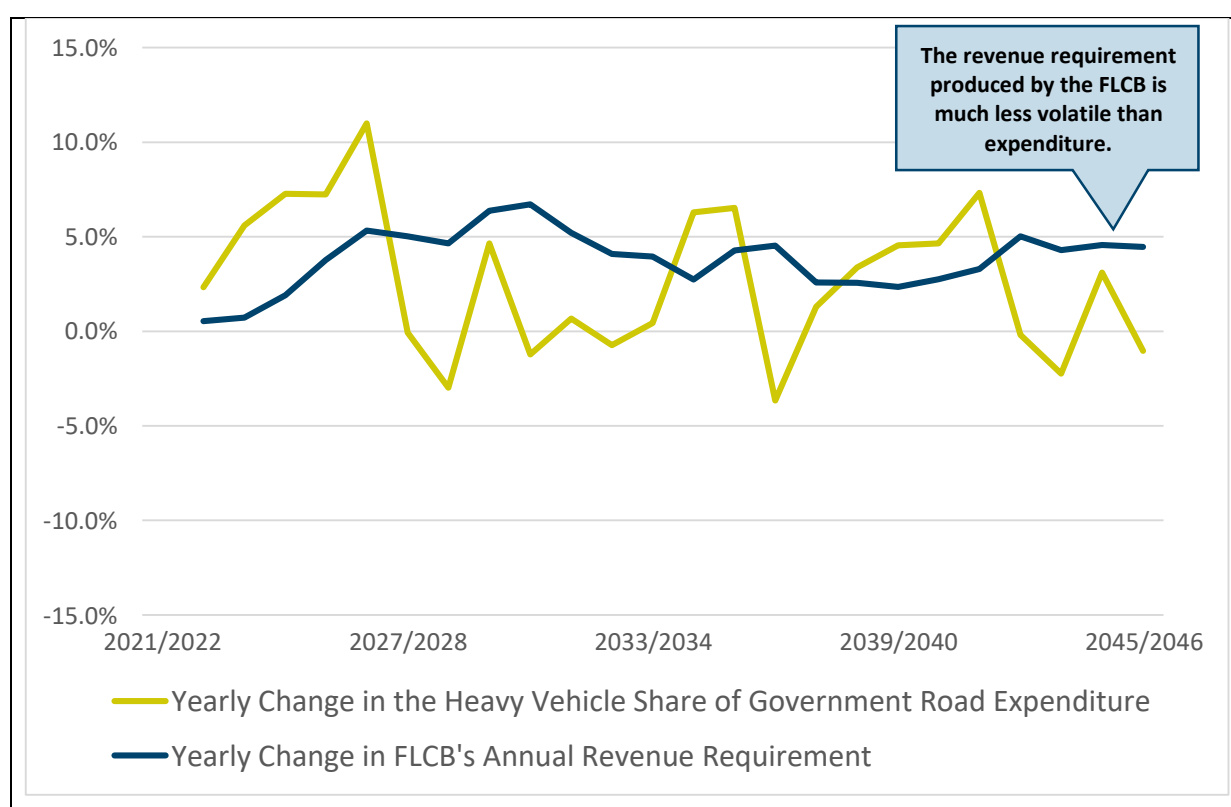


Figure 6: Yearly change in the heavy vehicle share of government road expenditure and FLCB's Annual Revenue Requirement based on hypothetical forecast road expenditure

Significantly, the prototype FLCB model shows the benefits offered by an FLCB in allowing governments to increase capital expenditure to for example, address road maintenance backlogs, whilst spreading the recovery of that expenditure over time. This means that under a FLCB, increases in capital expenditure on long-lived road assets do not result in immediate significant changes in the RAB or ARR or the charges paid by heavy vehicle operators.

The scenario modelled in Figure 6 is for illustrative purposes. The scenario modelled tries to replicate how historically expenditure tends to be relatively volatile. It tries to replicate this by randomly increasing and decreasing expenditure growth based on how expenditure has fluctuated in the past.

How an FLCB reduces charge volatility

The NTC's FLCB prototype model shows that it is feasible to set charges using an FLCB as the data to forecast and categorise road expenditure data is readily available. The prototype model in particular highlights the importance of a number of key FLCB policy settings to supporting stable and predictable heavy vehicle charges. These include:

- **The value of the opening Regulated Asset Base (RAB)**

One of the main determinants of the ARR and heavy vehicle charges is the opening RAB which affects the ARR through the return on capital and depreciation building blocks. The method used to set the value of the opening RAB is usually a practical one, decided after all other aspects of the model are finalised including expenditure forecasts, cost allocation, WACC, depreciation, and any price guard rail policy.

To ensure charge stability and predictability the value of the opening RAB could be set at a level which when multiplied by the WACC produces an ARR consistent with maintaining existing heavy vehicle charge levels.

This approach is often called a 'line in the sand' approach and is recommended by the 2017 report by Farrier Swier on Financial Policy Elements of a FLCB. The approach has the advantage of being relatively transparent and simple. Over time, the opening RAB would be depreciated out, and new assets would replace it, meaning the impact of setting a nominal value for the opening RAB will reduce over time, see Figure 7.

The line in the sand approach has been used in other similar reforms to explicitly achieve price stability, for example in Melbourne's water businesses and NSW electricity distribution.

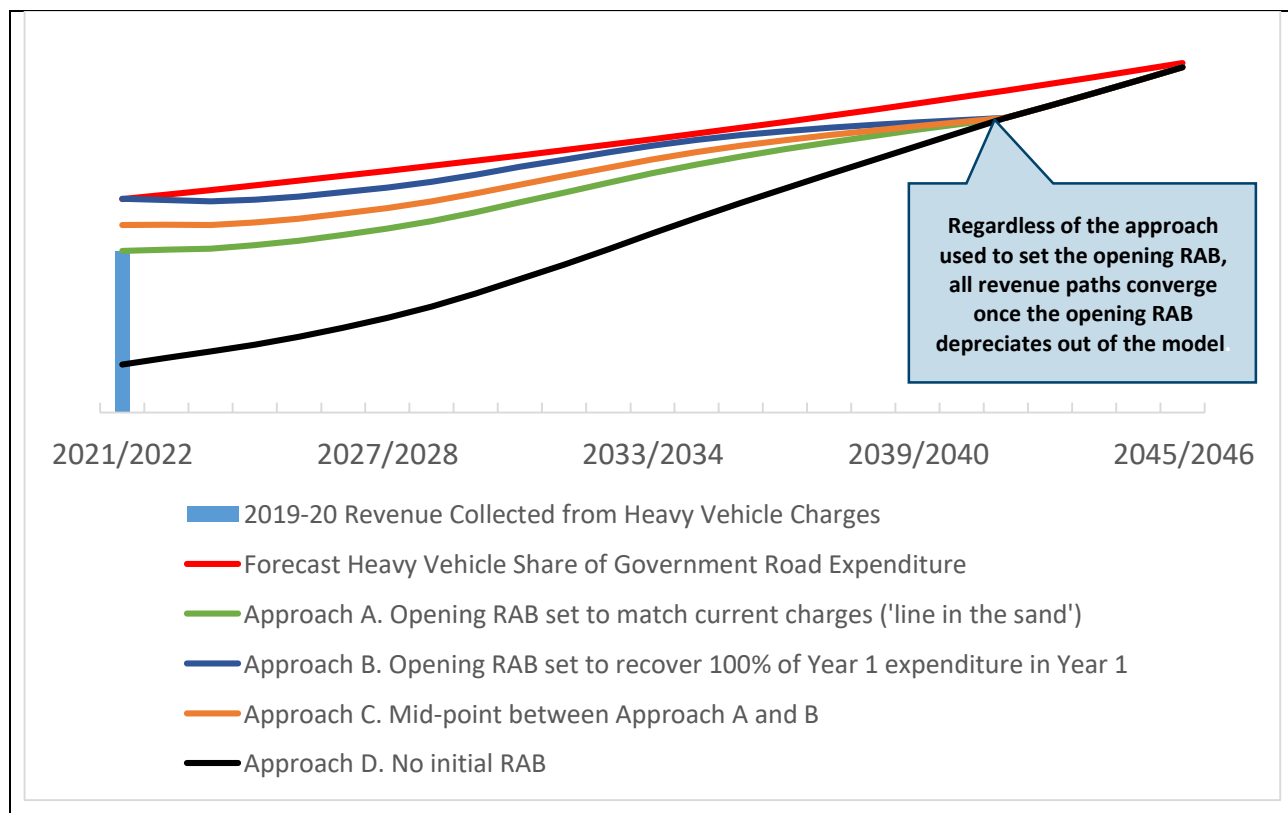


Figure 7: Revenue from Heavy Vehicle Charges in \$ billions derived from different approaches to setting the opening RAB and based on hypothetical forecast road expenditure

- **Return on capital**

The return on capital building block (calculated by multiplying the RAB by a WACC) compensates governments for debt and equity financing costs and ensures revenue recovered in the future has the same net present value as if it was recovered today.

The return on capital building block is another FLCB feature that reduces charge volatility. This is because the building block allows road expenditure in a given year to not match the amount of revenue derived from charges. The return on capital building block allows road managers to receive the revenue they require to deliver road expenditure plans by borrowing against future ARR's should the current year ARR not match their expenditure for that year. This borrowing can occur alongside the borrowing that may be done by treasuries as the majority of road funding would still need to come from light vehicles or other revenue sources.

To support road managers borrowing against their future revenue from charges, a jurisdiction-specific WACC can be set to reflect their actual cost of borrowing. This could be achieved by tying each jurisdiction's WACC to the 10 year average yield on its 10-year bonds. A 10 year average would smooth any volatility in interest rates.

This approach is also necessary to ensure there is no distortion incentives to spend under an FLCB. There is little risk associated with governments' revenue raising power to justify a return above the cost of borrowing (or risk premium).

- **Depreciation (return of capital)**

The depreciation building block allows road managers to recover road investments over the life of their assets. Depreciation is deducted from the RAB each year as it is recovered through the ARR and the resulting charges. The setting of depreciation schedules is thus an important factor in determining charges under an FLCB and can be set with an eye to reducing charge volatility.

For example depreciation schedules for assets in the RAB can be set to broadly reflect the actual physical lives of road assets. And subject to the availability of data there could be separate depreciation schedules for different asset categories for each jurisdiction.

Perfect alignment between the depreciation schedules for FLCB assets and the actual physical lives of assets is not necessary as the entire cost of an asset will be recovered in net present value terms irrespective of the time profile of that recovery. The delayed recovery of assets under an FLCB is compensated for by the 'return on capital' derived from the RAB.