Impact Summary: Increases to Road User Charges 2019/20

Agency Disclosure Statement

The Ministry of Transport is solely responsible for the analysis and advice set out in this Regulatory Impact Summary (RIS), except as otherwise explicitly indicated. This analysis and advice has been produced for the purpose of informing key policy decisions to be taken by Cabinet.

Executive summary

This RIS provides an analysis of options for increasing road user charges (RUC) revenue to ensure there is sufficient revenue available through the National Land Transport Fund (NLTF) to deliver on the Government's land transport investment priorities, as set out in the Government Policy Statement on land transport (GPS) 2018 and in the New Zealand Transport Agency's National Land Transport Plan 2018-2021.

On balance, the preferred option is an increase in RUC rates to deliver an equivalent increase in RUC revenue equal to the 3.5 cent increase to the petrol excise duty (PED) rate. The preferred methodology to achieve this is by using NLTF expenditure for 2019/20 to set rates by the cost allocation model (CAM), and by increasing the rates which are below the levels indicated by the Ministry's modelling by more than rates which are above those levels.

Increases to PED, with an equivalent increase in RUC rates, were previously approved by Cabinet [CAB-18-MIN-0115] and announced by the Minister of Transport in order to provide sufficient revenue to implement GPS 2018 without imposing unreasonable additional costs on individuals and businesses.

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Background

The purpose of this Regulatory Impact Summary (RIS) is to evaluate options for increasing road user charges (RUC) revenue to fund the implementation of the Government Policy Statement on land transport 2018 (GPS) 2018 and the New Zealand Transport Agency's National Land Transport Plan 2018-2021 (NLTP).

GPS 2018 signals the Government's land transport investment priorities for the next ten years. This investment will be funded through revenue derived mainly from several hypothecated taxes and charges¹, including petrol excise duty (PED) and RUC. This revenue is channelled into the National Land Transport Fund (NLTF).

The NLTP sets out activities that can receive funding from the NLTF under the Land Transport Management Act 2003. The NLTP must give effect to GPS 2018. Priority is given to activities that give effect to the priorities set out in the GPS 2018: safety, access, value for money and the environment.

The 2018–21 NLTP represents an investment of \$16.9 billion in the transport system. This includes \$12.9 billion from the NLTF, co-investment of \$3.4 billion from local government, and \$547 million in Crown funding.

Most NLTF revenue comes from PED, RUC and motor vehicle registration fees (MVR) broken down (on an annual basis) as follows:

| • | PED | \$1,957 million |
|---|-----|-----------------|
| • | RUC | \$1,594 million |
| • | MVR | \$228 million. |

In addition, Crown funding enables public monies to be spent on specific or general activities using funds appropriated by Parliament through the Budget process. Decisions regarding Crown funding are made by Cabinet.

Both NLTF and Crown funding have been oversubscribed in the past, i.e. there have been more projects proposed than there is funding available to deliver them.

Forecasting work for GPS 2018 showed that in order to deliver on all of the Government's priorities for land transport as outlined in the GPS 2018, additional revenue will be required.

On 3 April 2018 Cabinet agreed that the proposed increases in PED of 3-4 cents per annum for three years, and equivalent increase in RUC, be reflected in the draft GPS [CAB-18-MIN-0115].

On 20 June 2018, the Cabinet Economic Development Committee (DEV) agreed to three petrol excise duty (PED) increases of 3.5 cents per litre over three consecutive years, starting in 2018, and noted that the Minister of Transport will report back to DEV to seek approval for increases in RUC rates for 2019 and 2020. [DEV-18-MIN-0123]

This regulatory impact summary considers the following three options for increasing RUC rates for 2019/20, of which Option three is preferred:

- Option one: retain the status quo (no change in RUC rates);
- Option two: increase RUC revenue through a 5.55 percent increase in all RUC rates;
 and

¹ The revenue is 'hypothecated' in the sense that there are legislative constraints (in the *Land Transport Management Act 2003*) that govern how this revenue can be used.

 Option three: increase total RUC revenue by approximately 5.55 percent by increasing selected rates, up to a maximum of 7 percent and leaving some rates unchanged.

Most people who use New Zealand's roads contribute towards their upkeep. Operators of petrol powered vehicles pay levies, taxed at source, in the price of their fuel through PED. Fuels taxed at source are petrol, compressed natural gas (CNG), and liquefied petroleum gas (LPG). Others, such as owners of light diesel vehicles and heavy vehicles such as trucks, pay through RUC. Vehicle owners must pay RUC if their vehicle is over 3.5 tonnes manufacturer's gross laden weight or uses diesel or other fuel not taxed at source. The RUC system uses a number of different charges that vary depending on the weight and configuration of the vehicle.

Key limitations/constraints on analysis

Time constraints

NLTP commitments are based on the additional revenue agreed by Cabinet being available from 1 July 2019. The *Road User Charges Act 2012* requires 42 days between the gazetting of new RUC rates and when the new rates go into effect. New RUC rates will need to be gazetted by 20 May 2019 for the new rates to come into force by 1 July 2019.

Constraints on cost-benefit analysis

The GPS 2018 sets funding ranges for different types of activity (for example, road policing, public transport, state highways). However, the New Zealand Transport Agency (NZ Transport Agency) have determined the specific projects that will be funded within those ranges, through the NLTP.

As part of the process of developing the NLTP, the NZ Transport Agency conducted costbenefit analyses on individual projects that are proposed to be funded (fully or partially) out of the NLTF.

An Investment Assessment Framework (IAF) is used to assess and prioritise business cases, programmes, plans, projects and other activities to be submitted for funding consideration. The IAF is used by the NZ Transport Agency in developing the NLTP and to make investment decisions during the NLTP period.

The Ministry of Transport has assumed investment through the NLTP will have an overall benefit/cost ratio greater than one, so there will be a net benefit from the investments undertaken.

Data constraints

The Ministry of Transport uses its cost allocation model (CAM) to indicate appropriate RUC rates. The CAM calculates 'base rates' for each vehicle type, taking into account a number of factors, including the weight of the vehicle, size of the vehicle (amount of space taken up on the road) and the number of axles, which impacts the amount of road wear caused by the vehicle for a given vehicle weight (more axles generally means less road wear).

The CAM seeks to ensure that users pay according to the cost they impose on the road network, albeit with averaging in the distribution of costs within the various weight and vehicle configuration categories.

In the past the CAM has used expenditure and travel data from the prior year to set RUC rates for the following year. The rates the CAM calculates are called 'base rates'. The actual RUC rates set in regulations are generally higher than the base rates to account for increased investment required in the following year.

The amount of money spent in different activity classes (for example, maintenance, road policing) can change from year to year. Because of this, the CAM base rate for each RUC vehicle type can move up and down. However, when this happens successive governments have taken the approach that the actual RUC rates set in regulations stay static or increase and do not decrease.

This approach has been taken to ensure that the RUC system provides a level of predictability and stability for RUC vehicle users between years, while ensuring that revenue needs can be met to fund the government's priorities as directed by the GPS and implemented through the NLTP.

However, GPS 2018 represents a significant shift in transport priorities. This means that the amount of money spent in different activity classes has changed significantly. As a result of the way rates have been set historically, and the shift in transport spending, in 2018/19, actual RUC rates were considerably higher for a number of very heavy vehicle types (some over 40 percent) than the CAM base rates for those vehicle types would indicate. This has impacted the equity of RUC rates where the rates paid by some vehicle types no longer accurately reflect the true costs these vehicles place on the network.

The table in appendix A shows the difference between the 2018/19 actual RUC rates and the CAM base rates. Overall there are approximately 700,000 light RUC vehicles (non-petrol vehicles with a gross mass of less than 3.5 tonnes, many of which are diesel utes) and approximately 150,000 heavy vehicles (gross mass of greater than 3.5 tonnes). The exact number of vehicles for each vehicle type in appendix A has not been identified.

Because the CAM has historically looked back one year when setting RUC rates, the CAM is vulnerable to fluctuations in terms of the base rates that it identifies. The CAM categorises all cost in the NLTF according to engineering judgements about how the costs are generated. There are five categories of costs that are allocated in different ways based on engineering judgements. These are listed in appendix B. The Ministry of Transport intends to review the CAM in the near future.

For this round of RUC increases we have attempted to look forward to what will actually be spent on the road network in 2019/20. This is intended to improve the equity of RUC rates. To do this we have attempted to allocate costs of delivering the transport projects for 2019/20 from the NLTP expenditure forecasts.

These forecasts are subject to change as expenditure is incurred by the NZ Transport Agency. This could result in the rates calculated by the CAM and the allocation of costs according to damage and wear differing from actual expenditure. This means that calculated rates may differ from the actual cost of maintaining and improving the transport network. This could impact the equity of the final rates that are calculated.

Constraints on options analysis

When the Minister of Transport announced the PED increases of 3.5 cents per litre for each of 2018, 2019 and 2020 he also announced that an equivalent increase in RUC would be made. This paper considers the impact of achieving this equivalent increase consistent with the Cabinet decision to increase PED in 2019 and 2020.

This paper considers alternative methods to increase RUC revenue and does not look at alternative (non-RUC) options to generate the revenue required. During consultation on GPS 2018, some submitters suggested alternative options to increasing PED and RUC, such as congestion pricing and tolling. These options were considered out of scope as a short-term solution to funding the Government's transport priorities, as outlined in the GPS 2018. These options are being considered through other Ministry of Transport work that is looking at over the medium to long-term to achieve greater equity and take advantage of new opportunities presented by technological developments.

Assumptions underpinning impact analysis

This analysis considered options to generate additional RUC revenue, equivalent to the 3.5 cent increase in PED in 2019, needed to fund the Government's transport priorities, as outlined in the GPS 2018. This is in response to the Cabinet decision in 2018 to increase PED by 3.5 cents per litre, each year for three years, with an equivalent increase in RUC.

The analysis in this paper is based on achieving levels of RUC revenue required to fund expenditure targets in the GPS 2018. The analysis is based on forecast revenue as at November 2018.

Current Situation (Status Quo)

Investment in the land transport network is mainly funded by several hypothecated revenue sources, including RUC. Investment in the land transport system over the next ten years will be guided by the funding ranges set in GPS 2018. The priorities laid out in GPS 2018 have informed the development of the NLTP, which details, at a project level, how the land transport revenue will be spent.

The RUC system (approximately 41 percent of NLTF revenue) consists of a set of distance based rates, which differ depending on the size, weight and configuration of the vehicle. The system is designed to account for, and recover charges based on, the different impacts imposed on the road network by different types of vehicles. An objective of the RUC system is to keep rates equitable for all vehicle types. We define 'equitable' here as meaning that each RUC rate reflects use of the road network as well as the damage and wear caused by vehicles to which that RUC rate applies.

Based on historical figures, the share of PED revenue in the NLTF is slowly dropping and therefore the reliance on RUC is increasing. This is largely a consequence of an increasing proportion of light diesel vehicles in the fleet, mostly utes. Revenue generated from PED depends on the amount of fuel consumed. Vehicle fuel efficiency and vehicle kilometres travelled (VKT) are key factors that affect fuel consumption. Fuel efficiency of the light petrol fleet has been improving for a number or years and is predicted to continue to improve as the uptake of more fuel efficient vehicles (and electric vehicles) increases.

VKT could also be affected by a modal shift towards public transport, active modes, coastal shipping or rail freight. This could potentially be induced by increased investment in these modes from the NLTF. However, this hinges on whether there will actually be significant uptake of these modes over time, which is difficult to predict.

Ministry of Transport modelling assumes that economic growth is correlated with increased VKT. For example, VKT growth stalled during the Global Financial Crisis, but it is not clear whether this causal relationship will continue to hold in future.

The NLTF model also assumes that increases in fuel prices and RUC rates decrease VKT. This is supported by economic analysis that was done for the model in the past. The

elasticities calculated for this assumption are relatively low, so the overall effect is assumed to be relatively small, reflecting that people still depend heavily on road travel despite the price of fuel and RUC.

NLTF revenue is also generated from motor vehicle registration (MVR) fees, property sales of land acquired for roads but not utilised, and a variety of other sources which are, collectively, much smaller than either PED or RUC. The NZ Transport Agency also has the ability to make limited use of financing, which is repaid out of the NLTF.

The transport revenue identified above is hypothecated meaning that all the revenue generated from transport revenue streams is invested back into the transport network. These funding streams outlined above have not been sufficient to meet transport investment requirements over the past decade.

RUC and PED rates need to be increased regularly to keep up with transport investment requirements. RUC rates (and PED) have been increased frequently in the past in response to revenue shortfalls. This was most recently done in 2018 to fund the GPS 2018 where expenditure is expected to increase. At the time it was announced that the increases would be phased in over three years.

For some projects, the Crown has needed to inject additional revenue sourced from general taxation to meet the costs. In the past, Crown funding has been used for specific transport projects outside of the scope of the GPS (e.g. funding rail infrastructure) or where the government has an interest in the specification and delivery of a project (e.g. City Rail Link). Crown funding has also been used to establish funds that may operate independently of the NLTF or leverage the NLTF (e.g. the Urban Cycleway fund and the Provincial Growth Fund).

Both NLTF and Crown funding sources have been oversubscribed in the past.

Problem definition

Modelling work conducted by the Ministry of Transport and the NZ Transport Agency has shown that in order to deliver on all of the Government's priorities for land transport as outlined in the GPS 2018, additional revenue will be required. As noted above, this has been a recurring issue over the past decade.

GPS 2018 proposes approximately \$45.1 billion of investment over the period from 2018 to 2028. At the time of the GPS 2018 revenue forecasting projected that, land transport revenue will total approximately \$40 billion over the period covered by the GPS 2018, creating a shortfall of approximately \$5 billion over ten years.

To cover the shortfall in revenue, Cabinet approved increases in PED of 3.5 cents per litre over three consecutive years and noted that the Minister of Transport will report back to the Cabinet Economic Development Committee (DEV) to seek approval for increases in RUC rates for 2019 and 2020.

To achieve an increase in RUC that is the equivalent of an increase to PED of 3.5 cents per litre, RUC revenue needs to increase by 5.55 percent (\$90.6 million) in 2019/20.

Objectives

The options should achieve the following key objectives:

 that sufficient RUC revenue will be available in 2019/20 to implement the spending priorities included in the GPS 2018.

- that RUC rate increases should be reasonable for users.
- that RUC rates should be equitable between vehicle types.

The following objectives have also been taken into consideration:

- that, so far as practical, the pay-as-you-go model for land transport funding is preserved.
- that the hypothecated revenue model for land transport funding is preserved.

Who is affected and how?

Most New Zealanders will be affected either directly or indirectly by an increase in RUC rates. Individuals and businesses who drive a non-petrol vehicle will be directly affected by the rate increases. Indirectly, individuals and businesses will be affected through increased costs of transport being passed on to them as consumers through increased prices for goods and services.

The cost of RUC is estimated to be approximately 10 percent of the total costs for a road freight operator (other costs include fuel, wages, insurance and depreciation). Because rates will increase by different amounts for different vehicle types, it is difficult to predict the magnitude of total cost increases for road freight operators.

Constraints on the scope for decision making

As mentioned in the 'constraints on analysis' section, there are inconsistencies with the current RUC system which can result in significant differences between base rates and regulated RUC rates for a number of heavy vehicle types. This constrains the amount that rates can be raised on these vehicles, because the current regulated rates are already inequitable between RUC vehicle types (according to modelling).

An equivalent increase in RUC revenue equal to the 3.5 cent increase to PED was approved by Cabinet [CAB-18-MIN-0115] and announced by the Minister of Transport in order to provide sufficient revenue to implement GPS 2018. RUC increases cannot exceed the equivalent 3.5 cent increase in PED that has already been approved by Cabinet. The increase in RUC revenue should be equal to the PED increase to ensure that equity is maintained between the costs imposed on petrol vehicles through PED and non-petrol vehicles through RUC.

Options and impact analysis

The Ministry of Transport has assessed two methods for increasing RUC rates, as well as maintaining the status quo (Option one), presented below. The options presented here reflect the simplest approach to increasing rates (Option two) and the approach that the Ministry considers provides the greatest level of reasonableness and equity between vehicle types (Option three).

Officials have identified the following three options for consideration:

² "Equitable' means that the RUC rates reflect use of the road network as well as the damage and wear vehicles cause.

- Option one: retain the status quo (no change in RUC rate);
- Option two: increase RUC revenue through a 5.55 percent increase to all RUC rates;
- Option three: increase total RUC revenue by approximately 5.55 percent by increasing selected rates, up to a maximum of 7 percent and leaving some rates unchanged.

Rather than applying the increase to all RUC rates, option three only applies an increase to selected rates, up to a maximum of 7 percent, and leaves some rates unchanged. This option tries to achieve better equity between the RUC rates for different vehicle types by focusing the increase on those vehicle types where the proposed new rate is below the CAM base rate and minimising increases to, or not increasing at all, rates which are above the CAM rates. This approach has not been attempted before with the current CAM.

During the process of identifying the three options for increasing RUC rates in 2019/20 two variations for achieving the required revenue in a more equitable way between vehicle types were also considered. These approaches were:

- Option A Using 2017/18 actual expenditure, revenue and VKT data to set rates for 2019/20. This was the approach that has been used in the past.
- Option B Using 2017/18 actual MVR revenue and VKT data and adjusting 2017/18
 actual expenditure based on the published GPS activity classes to set rates for
 2019/20. This approach modifies the one above by taking into account the change in
 spending by activity class in GPS 2018. Like option three itself, this was a new
 approach to setting rates that has not been attempted before with the current CAM.

An assessment by the Ministry of Transport of both these approaches determined that option B was the better approach. Option B provides the best methodology to improve the equity between the RUC rates paid by vehicle types and better align RUC rates with the base rates recommended by the CAM. It does this by providing rates that are guided by planned expenditure in the 2019/20 year. The assessment of these approaches can be found in the Ministry of Transport briefing: "Process for setting 2019/20 Road User Charges and Petrol Excise Duty to fund the Government Policy Statement on land transport 2018" dated 25 January 2019.

The three primary options presented here are evaluated against the following criteria:

- **Revenue sufficiency** the option generates sufficient revenue to implement the investment priorities laid out in GPS 2018 in a manner that is efficient and sustainable. The preferred option should deliver RUC rates that meet the expected revenue outcomes equivalent to a 3.5 cents per litre increase in PED.
- Reasonableness the additional costs imposed should be reasonable. RUC rate
 increases should not be more than seven percent per annum. Introduction of
 changes to RUC should be phased in over time to ensure that unexpected cost
 increases are not placed on road users.
- **Equity between vehicle types** different groups of road users are contributing in proportion to the costs they generate as far as practicable.³ As far as practicable, all rates should be fair, reasonable and impartial; and people who impose greater costs on the road network should pay more.

³ For example, drivers of light petrol vehicles contribute on a per-litre basis through PED. Drivers of light diesel vehicles contribute on a per-kilometre basis through RUC. These vehicles impose roughly the same costs on the road network, so should be contributing roughly the same amount of revenue.

Option one - status quo

This option would retain the current RUC rates. Total additional RUC revenue generated over the remaining nine years of GPS 2018 under this option would be approximately \$810 million less than what is forecast to be required over that time.

Rating against revenue sufficiency criterion - low

The revenue required from road user charges in 2019/20 to deliver the GPS is \$1,698 million. This option delivers \$1,630 million, which is a shortfall of \$59 million.

Maintaining the status quo means it would be necessary to either:

- fund transport investment from general taxation revenue, which would go against the objectives of preserving the pay-as-you-go and hypothecated revenue models;
- use a larger programme of financing than what is already proposed, which would impose additional costs on the NLTF over time; or
- require the NZ Transport Agency to scale back its planned programme of investment across a number of areas. This would see the Government not delivering on its GPS 2018 commitments. It could also result in additional costs for road users including continued and worsening congestion, particularly in large urban areas such as Auckland, declining road safety and reduced investment in walking and cycling.

Rating against reasonableness criterion – medium

As rates would not change this option would impose no additional direct financial costs on road users as current rates of RUC would remain at current levels. No vehicle type would see an increase to the RUC rate.

If funding from other sources was necessary, land transport funding would move away from the principles that the pay-as-you-go model for land transport funding is preserved, and that the hypothecated revenue model for land transport funding is preserved.

This may reduce the reasonableness of this option as funding from other sources would be required to deliver the Government's transport objectives as set out in GPS 2018. Using general taxation to fund land transport would place some of the burden for land transport funding on general taxpayers who may not necessarily see a benefit from the transport infrastructure expenditure.

Rating against equity between vehicle types criterion – medium/low

If RUC rates are kept constant at the level they currently are while PED increases by 3.5 cents per litre, PED vehicles will pay \$63.20 per 1000 km which would be \$4 per 1,000 km greater than the equivalent light RUC vehicle. This would result in inequity between light diesel RUC vehicles and the equivalent light petrol vehicle.

Forecasting using the CAM indicates that for a number of heavy vehicle types the RUC rate set in regulations is inequitable when compared to the CAM indicative base rates and the rates paid by other vehicle types.

⁴ Note that this assumes that VKT does not change. If VKT increases at historic rates then the additional revenue will be higher. This also applies to options two and three.

A number of heavy vehicles in particular are paying more than the CAM indicates they should be based on the estimated level of damage caused by these vehicles. This inequity will remain if rates stay as they are. The differences between what was paid in 2018/19 and the CAM base rate for each vehicle type is shown in appendix A.

Vehicle types that currently pay the correct rate or less, as calculated using the CAM, will contribute less than the damage and wear they cause to the road network and will contribute less towards common costs than vehicle types that are already paying more than the CAM base rates indicate. These heavy vehicles are effectively subsiding those vehicle types that are paying less than the CAM indicates. This will continue under this option.

Option two – increase all RUC rates by 5.55 percent (equivalent of a 3.5 cent PED increase)

Rating against revenue sufficiency criterion – high

The revenue required from road user charges in 2019/20 to deliver the GPS is \$1,698 million. This option delivers \$1,721 million, which is an excess of \$32 million.

Rating against reasonableness criterion – medium/low

Historically RUC rate increases have been limited to a maximum increase of 10 percent per annum. An increase of 5.55 percent for each RUC rate is below the 10 percent limit but would further increase costs for those vehicle types that are already paying well above the CAM base rates. The rate applied to those vehicles would not be reasonable.

Rating against equity between vehicle types criterion – low

As noted earlier in this paper the CAM calculates 'base rates' for each vehicle type, taking into account a number of factors, including the weight of the vehicle, size of the vehicle (amount of space taken up on the road) and the number of axles, which impacts the amount of road wear caused by the vehicle (more axles generally means less road wear). This ensures that vehicle types pay for the damage and wear that they cause to the road network based on the use of the network.

Appendix B contains a breakdown of how the CAM categorises all costs in the NLTF according to engineering judgements about how the costs are generated.

Increasing all rates with a blanket increase of 5.55 percent would fail to account for the different levels of road wear and damage that each vehicle type causes. RUC rates should be set so that all vehicles pay equally per km travelled towards common costs (costs that cannot be allocated to a particular vehicle such as weather damage, public transport or road signs). When rates are higher than the CAM indicates it is assumed that the additional revenue above the damage and wear the vehicle causes goes towards common costs. Effectively, those vehicles that have rates that are higher than indicated by the CAM are subsidising the common cost contributions of vehicles that have a rate lower than the CAM indicated rate.

This option would increase the level of inequity between rates experienced by some heavy RUC vehicles. While some additional recovery is necessary to recover the expenditure in the prior year while making new investments, any level of over recovery should be proportionate across all RUC rates. The blanket increase fails to account for the differences between the factors the CAM takes into account when allocating costs.

If this option was adopted nine vehicle types would have RUC rates over recovering against the CAM base rate by over 40 percent. This is an increase to the six vehicle types that have over recovery of greater than 40 percent in 2018/19.

Option three – increase total RUC revenue by approximately 5.55 percent by increasing selected rates up to a maximum of 7 percent and leaving some rates unchanged.

Rather than raising the required revenue by an increase of 5.55 percent increase to all RUC rates, this option tries to achieve better equity between the RUC rates for different vehicle types by applying the bulk of the increase to those vehicle types where the proposed new rate is below the CAM base rate.

Rating against revenue sufficiency criterion – high

The revenue required from road user charges in 2019/20 to deliver the GPS is \$1,698 million. This option delivers \$1,720 million, which is an excess of \$31 million.

Rating against reasonableness criteria – medium/high

With this option, 24 vehicle types, out of 89, will face an increase in the RUC rate. Four vehicle types, including light diesel vehicles, will face a seven percent increase⁵ (as shown in the appendix C) in the RUC rate. Light RUC vehicles would have faced an increase of 15 percent if rate increases were not restricted to seven percent. Note that seven percent is greater than the 5.5 percent increase faced by PED vehicles.

Rating against equity between vehicle types criterion – medium/high

There will continue to be some equity issues between vehicle types where some rates increase by more than others or the RUC rate will be less than an equivalent PED vehicle. However, option three ensures that those using the road and paying rates in 2019/20 will be paying for investment required by the 2019/20 use of the road if the forecast expenditure occurs.

For rates to be fair the average PED vehicle⁶ should pay PED equal to the RUC paid for an equivalent light diesel vehicle. For 2019/20, the 3.5 cent increase in PED will mean the average PED vehicle user will pay \$63.20 per 1000 km. The proposed RUC rate for a light diesel vehicle under this option is \$63.48 per 1000 km.

Capping the increase to 7% means that additional revenue needs to be obtained from other RUC categories. Because most of these are already greater than the CAM rates, the further increases mean these vehicle categories are prescribed rates even further above the CAM rates than they were previously. The model we have developed has increased rates at the lower end of those paying more than the CAM rates, with the higher rates left unchanged. There are no new rates which are more than 24% above the CAM rates. Existing rates which are more than 24% above the CAM rates have been left unchanged.

⁵ RUC rates are set to be in whole dollars once GST has been added. The light vehicle category is proposed to be increased by 7.35%, which is \$73 (GST incl). If a strict 7% cap was applied it would be \$72 (GST incl), which is only 5.99%.

⁶ 9.51/100km real world fuel consumption as calculated across the current NZ fleet.

Although spending on land transport is increasing, keeping rates as low as possible or constant for these vehicle types should reduce the level of inequity as the contribution per kilometre of these vehicles as a proportion of total RUC revenue will decrease.

If the approach recommended here of increasing rates that are below the rates proposed by the CAM, while minimising increases to those above it is continued in future years, the inequity between rates will decrease over time.

Using the CAM to set the rates by using the forecast expenditure ensures that vehicles pay for the damage and wear they are expected to cause to the network in 2019/20.

Impacts of the preferred option

Option three is the preferred approach, because it performs best against the criteria laid out in the previous section, and also provides the best fit with the objectives.

Table 1: RUC Revenue option ratings against criteria

| | Option one | Option two | Option three |
|------------------------|--------------|-------------|---------------|
| Revenue sufficiency | Low | High | High |
| Reasonableness | Medium | Medium/ Low | Medium / High |
| Equity between vehicle | Low / Medium | Low | Medium / High |
| types | | | |

Costs and benefits

It is not possible to complete a detailed cost-benefit analysis at this time, because the individual projects that will be funded by this revenue have not yet been defined and it is not possible to identify the individual projects that will be funded through this increase. This will happen as part of the development of the NLTP, at which point the NZ Transport Agency will carry out detailed cost-benefit analysis on the individual projects.

It is relatively simple to define the additional direct costs of GPS 2018: approximately \$5 billion in additional costs to road users over ten years through higher rates of PED and RUC. Businesses will bear a high share of this additional cost, particularly additional RUC costs. The Ministry of Transport is assuming that businesses in general will pass the increased transport costs to consumers through higher prices for goods and services. However, there may be situations at the margin where this will not be possible.

The types of benefits achieved by the proposed RUC increases will include reduced congestion, greater accessibility, safety benefits and increased walking and cycling.

For the purposes of this analysis, the Ministry of Transport is assuming that the overall NLTP programme will have a BCR of greater than one, so there will be a net benefit from a higher level of investment. The Ministry of Transport has conducted analysis of the average BCRs of a range of projects in each of the GPS activity classes (for example, state highway improvements, public transport). This analysis shows a wide range of BCRs across different activity classes, with the lower end of the range sitting around two. This supports the assumption that the overall programme of NLTP investment will have a net benefit.

Equity between vehicle types and reasonableness

The NLTF funds the majority of transport expenditure. The NLTF is made up of transport users' contributions such as PED, RUC, and MVR. The rate of PED is the same for every litre of petrol imported into or produced in New Zealand, while RUC rates differ depending on the size and configuration of the vehicle.

The amount of money from the NLTF spent in different areas (for example, maintenance, road policing) can change from year to year. For 2018, there was a situation where actual RUC rates (as set in regulations) were considerably higher for a number of very heavy vehicle types (some by more than 40 percent) than the indicative base rates for those vehicle types would suggest they should have been. This issue has existed for a number of years. Under the preferred approach for RUC rates in 2019/20, the rate increase for any vehicle types that are identified as having rates that are above those recommended by the CAM, are kept to a minimum. However, rates will not decrease, so some rates will continue to be above that indicated by the CAM. If this approach is continued over time the incidence of inequitable rates between vehicle types should decrease as other rates increase and those who are paying more than the CAM calculates will see no, or smaller, increases. It should be noted that this 'equalisation' is likely to take some time and will be influenced by any significant change in expenditure patterns.

The preferred option and VKT consumption elasticity

In the short run and long run VKT for RUC vehicles will decrease as a result of the increased costs of travel due to higher RUC rates. The elasticity in short-run (<1 year) is -0.12, and in the long-run (5+ years) it is -0.24. These elasticities imply that a 10 percent (real) rise in the cost of a kilometre will reduce VKT by 1.2 percent in the short term and 2.4 percent in the long term (assuming no change in other determinants of VKT).

Despite an increase in the costs of transport leading to a reduction in VKT for individual vehicle owners/users, overall VKT is expected to increase as a result of New Zealand's increasing population and levels of economic activity.

Under the preferred option, 24 of 89 RUC vehicle types will face an increase in RUC rates and based on the elasticities above the VKT for those vehicle types will decrease. Table 2 below illustrates the reduction in VKTs due to the increased RUC rates. The table only looks at the short-term impact.

An overview and summary of the 24 vehicle types that will see an increase in rates in 2019/20 is included as Appendix D.

Table 2 – Impact of RUC rate increase on VKT and RUC revenue

| | Impact of RUC Rate increase on VKT and RUC Revenue | | | | | | |
|--------------|--|----------------|----|-------------------|-------------|-----|------------------|
| Vehicle Type | RUC Rate Increase | RUC KM 2019/20 | RU | C Revenue 2019/20 | VKT Change | RU | C Revenue Change |
| 1 (<= 3.5) | 7.4% | 10,414,268 | \$ | 661,079,605 | - 126,489.1 | \$ | 37,800,071 |
| 1 (4 - 6) | 6.8% | 67,340 | \$ | 4,625,958 | - 817.9 | \$ | 240,152 |
| 1 (>9) | 6.9% | 3,433 | \$ | 1,011,925 | - 4.1 | \$ | 64,534 |
| 2 (<= 6) | 6.9% | 468,989 | \$ | 31,401,848 | - 5,696.2 | \$ | 1,682,448 |
| 2 (7 - 9) | 7.0% | 229,515 | \$ | 24,348,578 | - 2,787.6 | \$ | 1,320,289 |
| 2 (10 - 12) | 6.5% | 254,687 | \$ | 36,542,093 | - 3,093.4 | \$ | 1,797,740 |
| 2 (> 12) | 6.7% | 249,954 | \$ | 65,857,457 | - 3,035.9 | \$ | 3,379,945 |
| 311 (<= 18) | 6.9% | 51,087 | \$ | 14,393,071 | - 620.5 | \$ | 769,400 |
| 311 (> 18) | 7.0% | 27,109 | \$ | 9,382,140 | - 329.3 | \$ | 506,395 |
| 6 (<= 12) | 7.1% | 3,658 | \$ | 337,165 | - 44.4 | \$ | 18,441 |
| 6 (13 - 18) | 6.9% | 37,518 | \$ | 11,190,150 | - 455.7 | \$ | 590,540 |
| 6 (> 18) | 6.9% | 632,972 | \$ | 230,071,433 | - 7,687.9 | \$ | 12,247,182 |
| 14 (AII) | 6.9% | 485,635 | \$ | 176,939,984 | - 5,898.4 | \$ | 9,391,276 |
| 19 (AII) | 6.9% | 3,386 | \$ | 1,101,118 | - 41.1 | \$ | 58,144 |
| 28 (> 10) | 6.8% | 1,298 | \$ | 337,448 | - 15.8 | \$ | 17,605 |
| 37 (> 10) | 3.5% | 37,765 | \$ | 9,753,130 | - 458.7 | \$ | 213,918 |
| 939 (AII) | 6.6% | 115,785 | \$ | 6,544,344 | - 1,406.3 | \$ | 328,134 |
| 309 (AII) | 6.7% | 15,950 | \$ | 4,618,605 | - 193.7 | \$ | 238,705 |
| 408 (AII) | 3.0% | 140,625 | \$ | 45,611,387 | - 1,708.0 | \$ | 807,461 |
| H73 (AII) | 3.0% | 5,588 | \$ | 3,207,123 | - 67.9 | \$ | 54,495 |
| H81 (AII) | 1.2% | 47,895 | \$ | 17,284,017 | - 581.7 | \$ | 843 |
| H82 (AII) | 1.2% | 13,998 | \$ | 7,303,131 | - 170.0 | -\$ | 2,464 |
| H95 (AII) | 8.9% | 44,250 | \$ | 19,854,751 | - 537.4 | \$ | 1,394,562 |
| H96 (AII) | 3.2% | 39,823 | \$ | 22,162,303 | - 483.7 | \$ | 431,806 |
| Total | | 13,392,526 | \$ | 1,404,958,763 | - 162,624.7 | \$ | 73,351,622 |

Increasing RUC rates will see overall VKT decrease by just over 162,500 kilometres across the vehicle categories that are affected. Light passenger vehicles (vehicle type 1 (<=3.5)) will see VKT decrease by almost 126,500 kilometres.

As RUC rates are increasing the RUC revenue from these vehicle types will increase by \$73 million in 2019/20. If elasticities were not considered RUC revenue would increase by \$90 million for these vehicle types.

Social impact assessment

The regulatory impact statement supporting the 2018 increase in RUC rates and PED addressed the social impact of increases to PED and RUC rates. For more information on the social impacts of RUC and PED increases please see the Regulatory impact summary that supported these rate increases.

https://www.transport.govt.nz/assets/Uploads/Land/Documents/3a6bfcc315/RIS-Funding-the-Government-Policy-Statement-on-land-transport-2018-SIGNED.pdf

The Ministry of Transport has done some further analysis on how much more households will have to spend on RUC per week, assuming that the individuals will travel using a light diesel vehicle that is subject to RUC.

Table 3 below illustrates that, based on Household Travel Survey data from 2015 to 2018, the cost to all households of an increase in RUC will increase by the same value as the increase in RUC. The average household will see an increased cost of \$87.45 per annum based on 17,491 kilometres travelled per year.

Table 3 – RUC cost per Household by income band and change in RUC cost

| | KM driven and RUC Costs by Household Income | | | | | | |
|------------------------------|---|----|---------------|------------------|----------|--------|----------------|
| Household income where known | Equivalised | | 8/19 RUC Cost | 2019/20 RUC Cost | | Increa | se in RUC Cost |
| | household income | | | | | | |
| | KM driven per year | | | | | | |
| \$20000 or less | 6,230 | \$ | 423.25 | \$ | 454.79 | \$ | 31.54 |
| \$20,001 - \$ 30,000 | 9,144 | \$ | 621.79 | \$ | 667.51 | \$ | 45.72 |
| \$30,001 - \$50,000 | 15,397 | \$ | 1,047.00 | \$ | 1,123.98 | \$ | 76.98 |
| \$50,001 - \$70,000 | 23,927 | \$ | 1,627.04 | \$ | 1,746.67 | \$ | 119.63 |
| \$70,001 - \$100,000 | 31,505 | \$ | 2,142.34 | \$ | 2,299.87 | \$ | 157.53 |
| \$100,001 - \$150,000 | 25,465 | \$ | 1,731.62 | \$ | 1,858.95 | \$ | 127.33 |
| \$150,001 or more | 27,218 | \$ | 1,850.82 | \$ | 1,986.91 | \$ | 136.09 |
| All known incomes | 17,491 | \$ | 1,189.39 | \$ | 1,276.84 | \$ | 87.45 |

Equalised values have been used to try and take account of the number of people in the household. The equalisation methodology is the 1988 Revised Jensen Scale (as referenced from "Household incomes in New Zealand: Trends in indicators of inequality and hardship 1982 to 2016" by Ministry of Social Development (July 2017).

Taxes that increase the cost of using vehicles, such as RUC, may be regressive as they will increase the cost of non-discretionary travel (for example, travel to work by car where there is no viable alternative). Using travel data and income bands above, assuming that household income is at the mid point of the band, Table 4 below illustrates that the proportion of household income spent on RUC for all, income ranges, except for the top income bracket, are between 2.5 percent and 2.7 percent of total household incomes. With increases to RUC rates this will increase to 2.7 percent to 2.9 percent of household income. Note that approximately 18% of households in NZ use a diesel vehicle in any given week ⁷.

Table 4 – RUC as a proportion of household income

| RUC as a proportion of household income | | | | | |
|---|----------------------------------|----------------------------------|--|--|--|
| Household income | 2018/19 RUC proportion of Income | 2019/20 RUC proportion of income | | | |
| \$25,000 | 2.5% | 2.7% | | | |
| \$40,000 | 2.6% | 2.8% | | | |
| \$60,000 | 2.7% | 2.9% | | | |
| \$85,000 | 2.5% | 2.7% | | | |
| \$125,000 | 1.4% | 1.5% | | | |

The Ministry of Transport acknowledges that despite lower income households spending less on travel through RUC rates they are likely to be relatively more affected by the proposed RUC increases.

Lack of travel choices in parts of New Zealand means that getting around by private vehicle remains a necessity for many people. Furthermore, lower income households tend to live further away from city centres where there are less transport options than for households

⁷ Based on information from the NZ Household Travel Survey. Note that the vehicle must be parked at the house overnight and available to be used by the household whether private or company owned.

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closer to the city centre. This makes these households more likely to be more dependent on their private vehicles to get around.

The RUC increase will also increase total spending on non-discretionary travel by a larger percentage for lower income households than for high income households. It is possible in some cases that these households will not have scope to decrease travel by private vehicle. To absorb the additional cost, savings will have to be found elsewhere to fund the increased RUC charges. This could be difficult for low income households some of which are living beyond their means. The Statistics New Zealand National Accounts: Distribution of Household Income, Consumption and Saving 2015-16⁸ release found that the lower three Equalised Disposable Income Quintile groups had negative gross savings when comparing gross disposable income to final consumption expenditure.

Impact on inflation and indirect costs

Increases to RUC rates will have a minimal direct impact on inflation and the Consumer Price Index (CPI). As RUC rates are unique for each vehicle type we cannot assess the impact on inflation for each individual vehicle type. Therefore, we have assumed that the total increase in RUC revenue generated by option three (5.5 percent) will be equal to the increase in RUC rates. The inflation impact of the increase in RUC rates will be approximately 0.007 percent.

There may be flow on effects to inflation as companies pass on the increased costs of transport to final consumers through increased prices of goods and services. Although the inflation effect is minimal the increased cost of living will be felt hardest by those on lower incomes who spend a higher proportion of their income on necessary goods and services.

Distributional impacts

The Ministry of Transport has assumed that any workforce participation impacts will be negligible because the regressive nature of RUC will be mitigated by other non-transport related Government interventions (for example, increases in the minimum wage and increased Working for Families payments) that were introduced in 2018.

Many of the investments resulting from the priorities signalled in the GPS 2018 are likely to benefit low-income households by providing greater transport choice that is more accessible and affordable and will reduce the reliance on private motor vehicles.

Compliance and administration costs

Increasing RUC rates is a relatively standard procedure that has been done many times before. It will be relatively simple and low-cost to administer the changes, and those subject to RUC will not have to change their behaviour to comply.

The NZ Transport Agency has an existing system in place to manage the RUC system. The NZ Transport Agency and its predecessors have operated RUC since 1978 and this system is well known by most RUC vehicle owners. Vehicle owners purchase a RUC licence based on the vehicle's RUC weight and RUC vehicle type.

RUC distance licences are sold in 1,000km multiples. Vehicle owners must buy a new licence before they have driven all the distance covered by the previous licence.

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⁸ Source: Statistics New Zealand. National accounts: Distribution of household income, consumption, and saving. 27 August 2018. https://www.stats.govt.nz/experimental/national-accounts-distribution-of-household-income-consumption-and-saving

Electronic road user charges (eRUC) have operated since 2010 as an alternative collection method offering improved efficiency. Electronic system providers (ESPs) operate eRUC under contract as agents of the NZ Transport Agency.

There will be a cost to the NZ Transport Agency to update the RUC rates in its systems and to inform RUC vehicle owners about the changes that will be made to RUC rates. ESPs will also incur a cost to update their systems.

Speed of implementation

The Minister of Transport has indicated that the proposed rate changes should come into force on 1 July 2019. We will be able to fulfil the legislative requirements in time to enable the new rates to come into force by 1 July 2019, and the NZ Transport Agency has confirmed that it will be able to implement the changes by that date.

Consultation

The Treasury and the NZ Transport Agency were consulted on the proposals in this regulatory impact summary.

The Cabinet paper seeking approval of GPS 2018 contained reference to increases in PED and RUC being required to deliver the programme of investment proposed. Increases to PED and RUC were publicly announced and formed part of the public engagement on the draft GPS 2018.

There were mixed reactions to the proposed changes to PED and RUC. Many submitters accepted that increases in PED and RUC would be necessary to deliver on the Government's priorities, to create livable cities and thriving regions. However, some submitters were strongly opposed to the increases.

Outside of formal submissions on the draft GPS, around 100 pieces of correspondence were also received by the Minister and Ministry of Transport that provided negative feedback on the proposed increases. The correspondence was generally concerned that the increases would impact disproportionately on households with lower or fixed (e.g. work and income benefit) incomes.

Implementation and operation

For the 2019/20 financial year, RUC rates can be amended by Order in Council.

The RUC system consists of a set of distance based charges, which differ depending on the size, weight and configuration of the vehicle. For this reason, changing RUC rates is a more complicated process than for PED. Current RUC rates are set in the *Road User Charges* (*Rates*) Regulations 2015. These will need to be replaced by a new set of regulations.

The NZ Transport Agency is responsible for administering and collecting RUC. To implement new RUC rates by 1 July 2019, NZ Transport Agency must be given sufficient notice to enable it to change its systems as necessary. NZ Transport Agency has confirmed that it can implement changes to RUC rates within this 42 day window.

Monitoring, evaluation and review

Revenue forecasts are regularly updated with economic growth and actual revenue data. These updates will be monitored by the Ministry of Transport, NZ Transport Agency, and the Treasury, to determine whether revenue forecasts are accurately projecting the amount of revenue available to invest in the land transport network.

RUC rates will also need to be reviewed and increased in 2020 to match the 3.5 cent per litre increase in PED that has been approved by Cabinet. The PED and RUC increases will come into force at a date to be determined in 2020.



Appendix A: The percentage difference between 2018/19 RUC rates vs CAM base RUC rates

| | 2018/19 rate | CAM base rate | |
|--------------|--------------|---------------|------------------------|
| Vehicle Type | excl GST | excl GST | Recovery difference |
| and Weight | \$ / km 000 | \$ / km 000 | |
| 1 (<= 3.5) | 59.13 | 68.16 | -4.3% |
| 1 (4 - 6) | 64.35 | 72.06 | -2.3% |
| 1 (7 - 9) | 131.30 | 122.15 | 7.5% |
| 1 (> 9) | 275.65 | 252.73 | 9.1% |
| 2 (<= 6) | 62.61 | 72.30 | -5.0% |
| 2 (7 - 9) | 99.13 | 100.12 | -0.1% |
| 2 (10 - 12) | 134.78 | 125.57 | 7.3% |
| 2 (> 12) | 246.96 | 225.65 | 9.4% |
| 311 (<= 18) | 263.48 | 253.26 | 4.0% |
| 311 (> 18) | 323.48 | 284.74 | 13.6% |
| 6 (<= 12) | 86.09 | 94.54 | 0.3% |
| 6 (13 - 18) | 279.13 | 266.27 | 4.8% |
| 6 (> 18) | 340.00 | 298.36 | 14.0% |
| 14 (All) | 340.87 | 312.89 | 8.9% |
| 19 (All) | 304.35 | 280.24 | 8.6% |
| 24 (All) | 99.13 | 58.96 | 68.1% |
| 28 (<= 10) | 38.26 | 25.70 | 48.9% |
| 28 (> 10) | 243.48 | 233.83 | 4.1% |
| 29 (<= 10) | 32.18 | 20.44 | 57.4% |
| 29 (> 10) | 108.70 | 74.03 | 46.8% |
| 30 (<= 10) | 32.18 | 21.77 | 47.8% |
| 30 (> 10) | 183.48 | 104.28 | 76.0% |
| 33 (All) | 146.09 | 101.10 | 44.5% |
| 37 (<= 10) | 34.78 | 23.31 | 49.2% |
| 37 (> 10) | 249.57 | 209.23 | 19.3% |
| 43 (All) | 186.96 | 119.74 | 56.1% |
| 951 (All) | 140.00 | 93.60 | 49.6% |
| 402 (> 12) | 173.91 | 159.78 | 8.8% |
| 403 (AII) | 153.04 | 141.35 | 8.3% |

| | 2018/19 rate | CAM base rate | |
|--------------|-------------------------|---------------|------------------------|
| Vehicle Type | excl GST | excl GST | Recovery difference |
| and Weight | \$ / km 000 | \$ / km 000 | |
| 404 (All) | 156.52 | 144.20 | 8.6% |
| 929 (AII) | 79.13 | 65.58 | 20.7% |
| 939 (AII) | 53.04 | 63.32 | -8.0% |
| 308 (AII) | 337.39 | 257.32 | 31.1% |
| 309 (AII) | 271.30 | 253.91 | 6.9% |
| 408 (AII) | 314.78 | 262.08 | 20.1% |
| 413 (> 18) | 246.09 | 233.60 | 5.3% |
| 414 (All) | 213.91 | 207.53 | 3.1% |
| H61 (All) | 520.00 | 381.95 | 36.1% |
| H62 (All) | 628.70 | 464.43 | 35.4% |
| H71 (All) | 516.52 | 386.53 | 33.6% |
| H72 (All) | 172 (All) 516.52 371.27 | | 39.1% |
| H73 (All) | 3 (All) 557.39 464.79 | | 19.9% |
| H74 (All) | 734.78 | 600.79 | 22.3% |
| H81 (All) | 356.52 | 292.26 | 22.0% |
| H82 (All) | 515.65 | 422.14 | 22.2% |
| H83 (All) | 739.13 | 631.23 | 17.1% |
| H84 (AII) | 369.57 | 261.77 | 41.2% |
| H85 (AII) | 519.13 | 367.65 | 41.2% |
| H86 (AII) | 766.96 | 537.66 | 42.7% |
| H87 (All) | 356.52 | 284.75 | N/A |
| H88 (AII) | 515.65 | 407.54 | N/A |
| H89 (AII) | 739.13 | 605.09 | N/A |
| H75 (All) | 392.17 | 277.09 | 41.5% |
| H76 (All) | 541.74 | 382.97 | 41.5% |
| H91 (All) | 304.35 | 232.67 | N/A |
| H92 (All) | 368.70 | 333.79 | 10.5% |
| H93 (AII) | 495.65 | 425.25 | N/A |
| H94 (AII) | 340.87 | 266.56 | 27.9% |
| H95 (All) | 412.17 | 362.86 | 13.6% |
| H96 (All) | 539.13 | 449.91 | 19.8% |
| H97 (All) | 271.30 | 182.18 | 48.9% |
| l | | <u> </u> | |

| | | Т | T |
|----------------------------|--------------|---------------|------------------------|
| | 2018/19 rate | CAM base rate | |
| Vehicle Type and Weight | excl GST | excl GST | Recovery difference |
| una weight | \$ / km 000 | \$ / km 000 | |
| H98 (AII) | 354.78 | 266.80 | 33.0% |
| H99 (AII) | 481.74 | 343.17 | 40.4% |
| H30 (AII) | 225.22 | 193.05 | 16.7% |
| H31 (All) | 333.04 | 289.35 | N/A |
| H32 (AII) | 460.00 | 376.40 | N/A |
| H33 (AII) | 281.74 | 251.23 | 26.7% |
| H34 (All) | 389.57 | 347.53 | N/A |
| H35 (All) | 516.52 | 434.58 | 18.9% |
| H11 (All) | 279.13 | 234.94 | 18.8% |
| H12 (All) | 412.17 | 326.40 | 26.3% |
| H14 (All) | 155.65 | 80.13 | N/A |
| H15 (All) | 288.70 | 119.49 | N/A |
| H36 (All) | 336.52 | 287.66 | 17.0% |
| H37 (All) | 469.57 | 379.12 | 23.9% |
| H17 (All) | 91.30 | 42.32 | N/A |
| H18 (All) | 183.48 | 112.61 | N/A |
| H19 (All) | 248.70 | 174.88 | 42.2% |
| H38 (All) | 567.83 | 460.43 | 23.3% |
| H77 (All) | 557.39 | 497.64 | 12.0% |
| H01 (All) | 424.35 | 364.45 | 16.4% |
| H13 (All) | 508.70 | 407.71 | 24.8% |
| H40 (All) | 509.57 | 432.04 | 17.9% |
| | | | |

Appendix B: Cost Allocation Model Cost Categories

There are five categories of costs that are allocated in different ways based on the engineering judgements.

- Common costs (powered vehicle costs) are shared equally between all kilometres travelled on-road by all powered vehicles. These are costs that cannot be attributed to a specific class of vehicle, such as public transport subsidies and repairs for weather related damage.
- **Heavy vehicle costs** are attributed to all vehicles over six tonne gross vehicle mass (GVM). This is assumed to vary in direct proportion to heavy VKT. Most of these costs relate to enforcement of regulations specific to heavy vehicles, principally by the New Zealand Police's Commercial Vehicle Safety Team.
- Space related costs are allocated according to a vehicle's classification in terms of "passenger car equivalents". For example, a truck towing a trailer is equal to three passenger vehicle equivalents. These are assumed to vary based on kilometres travelled by vehicles of different sizes.
- Gross weight related costs are allocated directly in proportion to the average laden
 weight of vehicles in each RUC licence class. These are the costs related to the
 required strength of bridges and other structures and are assumed to vary according
 to kilometres travelled by the vehicle type multiplied by the total gross vehicle weight.
- Pavement wear costs (equivalent standard axle) are allocated using a formula that
 calculates a wear index for a vehicle based on its assumed laden weight and tyre
 and axle layout. Essentially this is the assumed damage that the vehicle does to the
 road surface and how the vehicle weight is distributed through contact with the road
 surface.

Appendix C: Proposed changes to individual RUC rates for 2019/20

These tables detail the RUC rates that would be increased under the preferred approach of increasing total RUC revenue by 5.55 percent, with individual rate increases to be capped at 7% and an objective of minimising increases to rates already above the CAM base rates. This table sets out only the 24 rates which are proposed to be increased; there are a further 65 rates which remain unchanged. 'CAM base rate' refers to the rate calculated by the CAM for each vehicle type based on NLTF expenditure and distance travelled data for the 2017/18 financial year.

| Vehicle Type and | Prior year rates | CAM base rate | Adjusted rate | Difference | Rounded RUC Rate | Revenue |
|------------------|------------------|---------------|---------------|---------------|---------------------|------------------|
| Weight | excl GST | excl GST | excl GST | vs prior year | incl GST | excl GST (\$000) |
| | \$ / km 000 | \$ / km 000 | \$ / km 000 | % | \$ / km 000 | |
| 1 (<= 3.5) | 59.13 | 68.16 | 63.48 | 7.4% | 73 | \$ 669,109 |
| 1 (4 - 6) | 64.35 | 72.06 | 68.70 | 6.8% | 79 | \$ 4,682 |
| 1 (> 9) | 275.65 | 252.73 | 294.78 | 6.9% | 339 | \$ 1,013 |
| 2 (<= 6) | 62.61 | 72.30 | 66.96 | 6.9% | 77 | \$ 31,783 |
| 2 (7 - 9) | 99.13 | 100.12 | 106.09 | 7.0% | 122 | \$ 24,644 |
| 2 (9 – 12) | 134.78 | 125.57 | 143.48 | 6.5% | 165 | \$ 36,986 |
| 2 (> 12) | 246.96 | 225.65 | 263.48 | 6.7% | 303 | \$ 66,657 |
| 6 (<= 12) | 86.09 | 94.54 | 92.17 | 7.1% | 324 | \$ 341 |
| 6 (12<=18) | 279.13 | 266.27 | 298.26 | 6.9% | 398 | \$ 11,326 |
| 6 (> 18) | 340.00 | 298.36 | 363.48 | 6.9% | 106 | \$ 232,866 |
| 311 (< 18) | 263.48 | 253.26 | 281.74 | 6.9% | 343 | \$ 14,567 |
| 311 (> 18) | 323.48 | 284.74 | 346.09 | 7.0% | 418 | \$ 9,496 |
| 14 (All) | 340.87 | 312.89 | 364.35 | 6.9% | 419 | \$ 179,089 |
| 19 (All) | 304.35 | 280.24 | 325.22 | 6.9% | 374 | \$ 1,114 |
| 28 (> 10) | 243.48 | 233.83 | 260 | 6.8% | 299 | \$ 342 |
| 37 (> 10) | 249.57 | 209.23 | 258.26 | 3.5% | 297 | \$ 9,872 |
| 939 (AII) | 53.04 | 63.32 | 56.52 | 6.6% | 65 | \$ 6,624 |
| 309 (AII) | 271.3 | 253.91 | 289.57 | 6.7% | 333 | \$ 4,675 |
| 408 (AII) | 314.78 | 262.08 | 324.35 | 3.0% | 373 | \$ 46,165 |
| H73 (All) | 557.39 | 464.79 | 573.91 | 3.0% | 660 | \$ 3,246 |

| Vehicle Type and | Prior year rates | CAM base rate | Adjusted rate | Difference | Rounded RUC Rate | Revenue |
|------------------|------------------|---------------|---------------|---------------|---------------------|------------------|
| Weight | excl GST | excl GST | excl GST | vs prior year | incl GST | excl GST (\$000) |
| | \$ / km 000 | \$ / km 000 | \$ / km 000 | % | \$ / km 000 | |
| H81 (All) | 356.52 | 292.26 | 360.87 | 1.2% | 415 | \$ 17,494 |
| H82 (All) | 515.65 | 422.14 | 521.74 | 1.2% | 600 | \$ 7,392 |
| H95 (All) | 412.17 | 362.86 | 448.7 | 8.9% | 516 | \$ 20,096 |
| H96 (All) | 539.13 | 449.91 | 556.52 | 3.2% | 640 | \$ 22,431 |

Appendix D: RUC vehicle types impacted by proposed changes to individual RUC rates for 2019/20

| RUC vehicle type and weight | Example |
|--|----------|
| NOO venicle type and weight | Example |
| Type 1: Powered vehicles with two axles | |
| Not more than 3.5 tonnes | |
| More than 3.5 and not more than 6 tonnes | |
| More than 9 tonnes | |
| Type 2: Powered vehicles with one single-tyred space axle and one twin-tyred spaced axle | |
| Not more than 6 tonnes | |
| More than 6 and not more than 9 tonnes More than 9 and not more than 12 tonnes | |
| More than 12 tonnes | |
| Type 6: Powered vehicles with 3 axles | |
| Not more than 12 tonnes | |
| More than 12 and not more 18 tonnes More than 18 tonnes | |
| | |
| Type 311: Powered passenger vehicles with three axles | |
| Not more than 18 tonnes More than 18 tonnes | |
| Type 939: leading trailer with three twin-tyred, or single large-tyred, close axles | A |
| All RUC weights | 0 00 000 |

| RUC vehicle type and weight | Example |
|---|--------------|
| Type 14: Powered vehicles with four axles All RUC weights | |
| Type 19: Powered vehicles with five or more axles All RUC Weights | |
| Type 28: Unpowered vehicles with two axles More than 10 tonnes | • |
| Type 37: Unpowered vehicles with three axles More than 10 tonnes | |
| Type 309: Towing vehicles with three axles that are part of a combination vehicle with a total of at least 9 axles All RUC weights | 0 00 000 000 |
| Type 408: Towing vehicles with four axles that are part of a combination vehicle with a total of at least 8 axles | 00 00 00 00 |
| All RUC weights | 00 00 000 00 |

Type H73: Towing vehicle that is part of an overweight combination vehicle consisting of a type 6 RUC vehicle towing a type 43 RUC vehicle with a permit weight of not more than 50,000kg

All RUC weights

Type H81: Towing vehicle that is part of an overweight combination vehicle consisting of a type 14 RUC vehicle towing a type 43 RUC vehicle with a permit weight of not more than 48,000kg

All RUC weights

RUC vehicle type and weight

Type H82: Towing vehicle that is part of an overweight combination vehicle consisting of a type 14 RUC vehicle towing a type 43 RUC vehicle with a permit weight of more than 48,000kg but not more than 53,000kg

All RUC weights

Type H95: Towing vehicle that is part of an overweight combination vehicle consisting of a type 14 RUC vehicle towing a type 951 RUC vehicle with a permit weight of more than 50,000kg but not more than 54,000kg.

All RUC weights

Type H96: Towing vehicle that is part of an overweight combination vehicle consisting of a type 14 RUC vehicle towing a type 951 RUC vehicle with a permit weight of more than 54,000kg but not more than 58,000kg.

All RUC weights

