

# Regulatory Impact Statement

## Road user charges exemptions and discounts for electric vehicles

### Agency Disclosure Statement

This Regulatory Impact Statement (RIS) has been prepared by the Ministry of Transport.

It provides an analysis of options to further incentivise the uptake of electric vehicles by amending the current road user charges (RUC) exemption for light electric vehicles, along with the status quo. Other financial incentives are not considered in this RIS because they were deemed inconsistent with existing government direction on these matters. This however, does not exclude them from being considered in the future.

None of the options considered impose any additional costs on businesses or households. Instead, costs are in the form of foregone revenue to the National Land Transport Fund.

The nature and extent of many of the benefits arising from the different options have been difficult to quantify. This makes it difficult to compare the costs and benefits of the options.

The purchase price of electric vehicles will be a key driver of uptake. To better understand this driver, the Ministry of Transport commissioned Emissions Impossible to undertake research into the future price and supply of electric vehicles in New Zealand. However, it was not possible to project electric vehicle prices with any confidence, making it difficult to forecast future rates of electric vehicle uptake and the relative impact of different interventions.

There are however, several scenarios of *light* electric vehicle uptake rates (set out in Appendix 1) that could be used to estimate the costs and benefits of options. For the purposes of this RIS, costs have been estimated using the uptake targets proposed in the accompanying Cabinet paper. The Ministry commissioned Infometrics and Covec to develop an uptake model. The Ministry's base case from this model did not differ significantly from the uptake targets proposed in the attached Cabinet paper.

There is no basis to estimate what the rate of uptake for *heavy* electric vehicles in New Zealand might be, therefore the costs and benefits of any options to amend the RUC payable by heavy electric vehicles cannot be accurately quantified.

Given the time available, we have not been able to consult with the heavy vehicle sector to get its views on possible levels of heavy electric vehicle uptake. Consultation is expected to continue throughout the implementation of the government's preferred option.

Bronwyn Lauten, Senior Adviser

## Terminology

1. **Battery electric vehicle (BEV)** – a vehicle powered solely by electric batteries charged from an external source.
2. **Plug-in hybrid vehicle (PHEV)** – a vehicle that operates on a combination of batteries that are charged externally, along with a petrol or diesel motor.
3. **Electric vehicle** – either a BEV or a PHEV.
4. **Light vehicle** – a vehicle with a maximum gross mass of 3.5 tonnes or less.
5. **Heavy vehicle** – a vehicle with a maximum gross mass of more than 3.5 tonnes.

## Background

6. Transport accounts for 17 to 18 percent of New Zealand's greenhouse gas emissions. Of this, 89 percent are from road transport, with the majority from the light passenger and commercial fleet (81 percent). Emissions from the transport sector are currently 63 percent above 1990 levels and, without intervention, are projected to be 75 percent above 1990 levels by 2020.
7. New Zealand's contribution to the new global climate agreement negotiated in Paris in December 2015, is to reduce greenhouse gas emissions by 30 percent below 2005 levels, by 2030.
8. Over the coming years, New Zealand will need to consider the appropriate mix of domestic policies to achieve its target under the new climate change agreement.
9. Electric vehicles can make a significant contribution to reducing carbon dioxide emissions from transport. BEVs emit 60 percent fewer carbon dioxide emissions than petrol vehicles over their full life cycle, and around 80 percent fewer carbon dioxide emissions when driven in New Zealand.<sup>1</sup> Increasing the proportion of electric vehicles in the fleet decreases our reliance on imported fossil fuels and improves our energy security. There are also air quality benefits from greater use of electric vehicles, particularly if they are used to substitute diesel heavy vehicles that operate in urban environments.
10. The global market for electric vehicles continues to be constrained by low production volumes of electric vehicles. Economies of scale and technological improvements are starting to reduce prohibitive battery costs, but electric vehicles still have a price premium of \$10,000 or more compared to petrol or diesel equivalents. New Zealand is not initially viewed as a priority market with manufacturers focusing on large government subsidised markets that can absorb the technology premium.

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<sup>1</sup> Some emission are produced because 20 percent of New Zealand's electricity is still produced from non-renewable sources. The life cycle emissions of driving a BEV will fall as New Zealand gets closer to its target of having 90 percent of its electricity generated from renewable sources by 2025.

## **Extension of the Road User Charges exemption for electric vehicles is intended to form part of a wider package**

11. It is proposed that a joint government-industry package of measures be implemented to help realise the benefits of electric vehicles and address the barriers to uptake discussed below. These measures form a package in which they are not mutually exclusive, but mutually reinforcing. The non-regulatory aspects of the proposed package are not evaluated in this Regulatory Impact Statement (RIS).
12. The proposed package is set out in the accompanying Cabinet paper.

## **Status quo**

### **Current policies to promote the uptake of electric vehicles are having limited impact**

13. Measures have already been implemented to promote the uptake of low emission vehicles generally. These include:
  - 13.1. the New Zealand Emissions Trading Scheme (ETS), which establishes a price on emissions that flows through to the cost of petrol and diesel (the current price signal is weak at less than 1 cent per litre)
  - 13.2. the fuel economy labelling scheme
  - 13.3. light electric vehicles being exempt from road user charges (RUC) until 2020.
14. The ETS and other existing policies have had little impact on uptake of electric vehicles to date.
15. Electric vehicles currently make up a small proportion of the light and heavy vehicle fleet. There were 1,015 light electric vehicles in New Zealand representing 0.03 percent of the light vehicle fleet as at 31 January 2016.<sup>2</sup> The number of heavy electric vehicles in New Zealand is about 60 vehicles.<sup>3</sup> This represents 0.004 percent of the heavy vehicle fleet.

### **Light electric vehicles are exempt from paying RUC until 30 June 2020**

#### *About RUC*

16. Revenue for land transport comes mostly from motorists through fuel excise duty (petrol tax), RUC, and vehicle licensing charges. This revenue is allocated to the National Land Transport Fund (NLTF), which is used to pay for the National Land Transport Programme (NLTP). The NLTP sets out the NZ Transport Agency's programme for road construction and maintenance, along with other activities benefiting road users (such as road policing and public transport).
17. The purpose of the Road User Charges Act 2012 (the RUC Act) is to continue the RUC system by imposing charges on vehicles, for their use of the roads that are in proportion to the costs that the vehicles generate. The RUC Act makes all vehicles

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<sup>2</sup> The light vehicle fleet in 2014 was made up of 2.28 million light passenger vehicles and 0.47 million light commercial vehicles giving a total light fleet of 3.35 million.

<sup>3</sup> Includes 57 electric trolley buses in Wellington.

not powered by a fuel taxed at source (petrol is the only fuel taxed at source) subject to RUC, unless exempted.

*Previous Cabinet decisions about the RUC exemption for light electric vehicles*

18. In 2009, Cabinet agreed that:
  - 18.1. the Road User Charges Act 1977 and Road User Charges Regulations 1978 be amended to exempt light electric vehicles from paying road user charges
  - 18.2. a RUC exemption (that is intended to apply until one percent of the light vehicle fleet is electric) will apply until 2013, with the ability to reassess the percentage of light electric vehicles in the fleet and extend the exemption.
19. The scope for exemptions is defined in Subpart 5 of the RUC Act, in which section 37 enables the Governor-General to specify the period during which RUC are not payable in respect of light electric vehicles by Order in Council. An order made under this section:
  - 19.1. must specify the date on which the exemption expires; and
  - 19.2. may, from time to time, be amended to provide for a later date.
20. In April 2012, Cabinet agreed to extend the existing exemption from RUC for light electric vehicles until 30 June 2020. This decision reflected a slower than anticipated rate of uptake of light electric vehicles.
21. The Road User Charges (Exemption Period for Light Electric RUC Vehicles) Order 2012 makes light electric vehicles exempt from RUC until 30 June 2020. The definition of electric light vehicle in the RUC Act includes all vehicles with “motive power wholly or partly derived from an external source of electricity”. In practice, the exemption includes BEVs and PHEVs.
22. Heavy electric vehicles, which are used on the road, currently pay RUC based on their weight and the distance they travel. The RUC exemption does not currently apply to heavy vehicles.

*Impact of the RUC exemption for light electric vehicles*

23. The value of the existing RUC exemption is about \$558 per vehicle, per year assuming that the distances below are representative of the light electric vehicle fleet.

**Table 1: Average annual distance travelled by an electric vehicle**

<b>Light electric vehicles</b>	<b>Number of vehicles in sample</b>	<b>Average annual distance<sup>4</sup></b>
NZ new BEV	83	5551
Used import BEVs	56	9267
PHEVs	158	10721
<b>Total electric vehicles</b>	<b>297</b>	<b>9002</b>

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<sup>4</sup> These distances are lower than the average for the total light vehicle fleet of 12,000 kilometres per year.

24. Uptake of light electric vehicles until 2015 has been slightly lower than the levels projected in 2009 when the RUC exemption was first introduced (958 compared to 1,174). Assumptions about expected improvements in technology and other economic factors such as increasing fuel prices making electric vehicles more desirable than conventional vehicles have proved to be overstated.
25. The implied value of foregone revenue from electric vehicles already in the fleet is estimated at \$500,000 per year. This represents about 0.016 percent of the revenue to the NLTF.

## Problem definition

### **The opportunities that electric vehicles present are underexploited**

26. The contribution that electric vehicles could play in reducing emissions and achieving other co-benefits is underexploited. For example, electric vehicles produce some public benefits from lower oil imports, and fewer CO<sub>2</sub> and harmful emissions. On an individual vehicle basis these benefits are small, but they have the potential to be significant at a national level over the long term.
27. As stated above, existing policies are not significantly lifting the uptake of electric vehicles in New Zealand. The Government is therefore looking at a broad package of policies to encourage the uptake of electric vehicles. The focus is on electric vehicles because the prospect for electric vehicle uptake is much greater than for other alternative fuels at this time.
28. A report commissioned by the Ministry of Transport into future electric vehicle price and supply in New Zealand concluded that supply of electric vehicles in New Zealand will continue to be limited until costs reduce or policies are introduced to reduce cost or increase demand.

### **There are barriers to greater uptake of electric vehicles in New Zealand**

29. Barriers limiting the uptake of electric vehicles include:
  - 29.1. relatively higher purchase prices. Although electric vehicles have fallen in price, they are still more expensive to buy than equivalent conventional vehicles. Most consumers and businesses do not recognise the additional value of electric vehicles, such as their environmental benefits
  - 29.2. limited travel range of electric vehicles. The travel range of most BEVs in New Zealand is up to 150 kilometres before they require recharging. This makes their use for long journeys less appealing
  - 29.3. limited range of electric vehicles available in New Zealand, which have to compete in the market with the larger variety of conventional vehicles
  - 29.4. information problems. These problems include a lack of awareness of electric vehicles, uncertainty about the total costs of ownership, and misconceptions about electric vehicles
  - 29.5. coordination problems. For example, consumers and businesses may be reluctant to purchase electric vehicles without public charging infrastructure being widely available. However, the private sector may be reluctant to invest

in a comprehensive charging network until there is widespread uptake of electric vehicles.

### **The RUC exemption could more effectively address these barriers**

30. The current RUC exemption for light electric vehicles is a tangible signal to vehicle owners and the motor industry of the Government's support for the uptake of electric vehicles. Indirectly, this signal helps to address coordination problems by demonstrating that the Government has confidence in electric vehicle technology and reduces uncertainty in the New Zealand market.
31. The exemption also helps offset the higher purchase prices of electric vehicles and risk around total cost of ownership. This makes it an important component of a proposed package of measures to encourage the uptake of electric vehicles. However, the exemption could be amended to more effectively address barriers to uptake.
32. In particular, electric vehicle technology has now progressed to the point that makes electric vehicles a viable option for some heavy vehicle operations, such as urban bus routes and municipal waste collection. There are currently no tangible signs of government support for heavy electric vehicles despite the non-private benefits that they offer.
33. Stakeholders advise that the RUC exemption also factors into total cost of ownership calculations that large fleet operators undertake when making decisions about fleet purchases. They argue that, because businesses tend to purchase vehicles with an expectation that the vehicles will have a 3-5 year lifespan, the current end date for the light electric vehicle RUC exemption is influencing fleet buyer decision-making today.

## **Objectives**

34. The options below are assessed on the extent to which they:
  - 34.1. are effective as:
    - 34.1.1. a sign of government support for electric vehicle uptake
    - 34.1.2. an incentive that results in greater uptake of electric vehicles in the short term (i.e. over the next 5 years)
  - 34.2. are efficient from the perspective of New Zealand's economy and society, including taking account of:
    - 34.2.1. purchase, implementation, and maintenance costs for individuals, businesses, and government
    - 34.2.2. compliance costs and government administration costs
  - 34.3. pose a risk to the NLTF; RUC is a primary method of funding land transport infrastructure and any of the options must not undermine the long-term stability of the NLTF.

## Options and impact analysis

### Options to use the RUC system to encourage electric vehicle uptake

35. As stated in the disclosure statement, this RIS is limited to options to use the RUC system to encourage the uptake of electric vehicles.
36. The following options were considered:
  - 36.1. Option 1: the status quo – the RUC exemption applies to light electric vehicles until 30 June 2020 by which time they are expected to make up about one percent of the light vehicle fleet
  - 36.2. Option 2: amending the RUC exemption for light electric vehicles to apply from the date each vehicle is registered in New Zealand, for a finite period (for example, 5 years)
  - 36.3. Option 3: extending the RUC exemption to apply until two percent of the light vehicle fleet is electric
  - 36.4. Option 4: extending the RUC exemption to apply to heavy electric vehicles until two percent of the heavy vehicle fleet is electric
  - 36.5. Option 5: amending the RUC Act to enable a discounted RUC rate for heavy electric vehicles.

### Assessment of options against criteria

37. The summary assessment in the table below takes account of the relativities between the options themselves. The options are not necessarily mutually exclusive; it is possible to choose either an option for light electric vehicles, heavy electric vehicles, or some combination of both.
38. More detailed analysis which provides reasons for the ratings below is set out in the 'impacts' sections of this RIS (paragraphs 39 to 64).

**Table 2: Summary assessment of options to use the RUC system to encourage electric vehicle uptake**

	Option 1	Option 2	Option 3	Option 4	Option 5
<b>Effectiveness as a signal of government support for electric vehicles</b>	Medium.	High.	Medium.	Medium.	Low.
<b>Effectiveness as a financial incentive for the uptake of electric vehicles</b>	Low.	Medium.	Low to medium.	Medium.	Low.
<b>Compliance costs for owners of electric vehicles</b>	Low for light electric vehicles, high for heavy.	Medium.	Low.	Low.	High.
<b>Administrative burden on government</b>	Low.	Medium.	Low.	Low.	Low.
<b>Cost/risk to the NLTF</b>	Low.	High.	Medium.	Medium.	Low.

**Scale**

More favourable impact						Less favourable impact
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**Impacts**

*Option 1: Status quo*

39. The benefit of the RUC exemption to existing electric vehicles owners is \$558 per year on average, or about \$2,500 in total.<sup>5</sup> They also benefit from lower compliance costs because they do not have to purchase RUC.
40. The net present value of forgone revenue to the NLTF is estimated at \$25.5 million between now and 2020 based on the proposed targets under the wider package of measures for electric vehicles.<sup>6</sup>
41. The current RUC exemption has not been evaluated, so its effectiveness at incentivising the uptake of electric vehicles is unknown. This includes knowing the extent to which consumers are aware of the RUC exemption, and its potential value. For instance, motorists who have previously driven light petrol vehicles are unlikely to consider the saving on RUC as distinct from overall fuel costs.
42. For fleet buyers, factors such as the price premium on electric vehicles appear to have outweighed the value of the RUC exemption to date.

<sup>5</sup> Assuming the current light RUC rate of \$62 (GST inclusive) per 1,000 kilometres.

<sup>6</sup> The proposed targets are broadly in line with the rate of uptake projected by the base scenario used by the Ministry of Transport.



43. However, stakeholder feedback suggests that the RUC exemption is becoming a more important factor in fleet purchasing decisions as the price premium on electric vehicles continues to fall. In particular, they have emphasised that, because fleets typically retain vehicles for 3 to 5 years, the end date of the current RUC exemption is already starting to affect purchase decisions. This also undermines the strength of the RUC exemption as a signal of government support for electric vehicle uptake.
44. Under the status quo, we could assess whether to extend the RUC exemption closer to the end date of the current exemption, but this option is not favoured because it would not give fleet buyers the certainty that they need to commit to purchasing electric vehicles in the short-term. A signal from government that the RUC exemption will be reviewed in several years time would therefore have little impact on the overall effectiveness of the existing RUC exemption.

*Option 2: A RUC exemption for light electric vehicles from the date each vehicle is first registered in New Zealand, for a finite period (e.g. 5 years)*

45. The benefit of the RUC exemption to light electric vehicles owners is on average \$558 per year for the duration of the exemption. They also benefit from lower compliance costs because they do not have to purchase RUC.
46. The net present value of forgone revenue to the NLTF is estimated at \$56.5 to \$105 million based on the proposed targets.<sup>7</sup>
47. This option would be more effective than the status quo because it gives purchasers greater certainty over the value of the RUC exemption (about \$2,790 assuming a 5 year exemption period), and helps to mitigate risks around total cost of ownership (e.g. offsets uncertainty about real depreciation costs).
48. The administrative burden of this option to the NZ Transport Agency and electric vehicles owners could be slightly higher than the status quo because they would have to monitor when individual electric vehicles become obliged to pay RUC. Transitional arrangements would likely be needed for electric vehicles already in the fleet which may have been purchased on the basis of the existing RUC exemption. This would add further complexity to the exemption regime.

*Option 3: Extending the exemption to apply until two percent of the light vehicle fleet is electric*

49. The benefit of the RUC exemption to light electric vehicle owners is on average \$558 per year, but would be in place for 18 months longer under this option compared to the status quo. They also benefit from lower compliance costs because they do not have to purchase RUC.
50. The net present value of forgone revenue to the NLTF is estimated at \$47.6 million<sup>8</sup>.

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<sup>7</sup> Depending on whether the policy applies until light electric vehicles make up one or two percent of the light fleet, and assuming the exemption applies for 5 years from first registration in New Zealand.

<sup>8</sup> Net present value of foregone revenue, assuming 8 percent discount rate. Figures in Table 3 are not net present value.

**Table 3: Annual RUC revenue foregone if uptake targets<sup>9</sup> for light electric vehicles are met**

	2016	2017	2018	2019	2020	2021
Projected cumulative total electric vehicles (if targets met)	1,950	3,950	7,950	15,950	31,950	63,950
Electric vehicles as a % of the vehicle fleet	0.07	0.13	0.27	0.53	1.06	2.06
<b>Foregone revenue (in million \$)</b>	<b>1.1</b>	<b>2.2</b>	<b>4.4</b>	<b>8.9</b>	<b>17.8</b>	<b>35.7</b>

51. This level of forgone revenue would only begin to have a perceptible effect on the NLTF, and in turn the NLTP in the final 12 months of the exemption.
52. This option would be more effective than the status quo. In the short term, it helps support the business case for fleets that are considering purchasing electric vehicles. It is also a stronger signal of government's support for electric vehicles because it demonstrates the government's willingness to incentivise electric vehicle uptake until it has reached a more significant level of traction in the market.
53. Extending the duration of the exemption for light electric vehicles also exacerbates the risk of negative perceptions when the exemption does eventually end. Vehicle owners could see it as a sign of government withdrawing its support for electric vehicles, or as an imposition of a new cost.
54. For the sake of simplicity and equity, the exemption should continue to apply to electric vehicles already in the fleet as well as those entering the fleet.

*Option 4: Extending the RUC exemption to apply to heavy electric vehicles until two percent of the heavy vehicle fleet is electric*

55. The value of any RUC exemption to owners of heavy electric vehicles would depend on what RUC vehicle type an electric vehicle is, and how far it travels. Some examples are below.

RUC vehicle type	Average annual value of RUC exemption per vehicle, per year if electric (assuming current RUC rates and average distances travelled)
Trolley bus, like those used in Wellington	\$6,140
Medium sized 2-axle delivery truck	\$2,840
2-axle rubbish truck	\$5,560

56. Heavy electric vehicle owners would also benefit from lower transaction costs.

<sup>9</sup> Set out in accompanying Cabinet paper.

57. There are approximately 150,000 vehicles in the heavy vehicle fleet, of which about 60 are electric. The value of forgone revenue from exempting these vehicles from paying RUC is estimated at \$350,000.<sup>10</sup>
58. It is difficult to project when two percent of the heavy vehicle fleet is likely to be electric because of the limited data on potential heavy electric vehicle uptake. However, as an indication, the maximum annual foregone revenue if the two percent threshold is met in 2025 is \$24 million, or \$29 million if the threshold is reached in 2030.<sup>11</sup>
59. Relative to the purchase price and technical limitations of heavy electric vehicles, the RUC exemption alone is unlikely to be sufficient incentive to encourage uptake in the short to medium term.
60. Nevertheless, several local authorities are interested in incorporating electric buses into their urban bus fleets and, coupled with other measures in the proposed electric vehicle package, the exemption would demonstrate central government support for electric buses. It would also send a signal to manufacturers of heavy electric vehicles and may encourage them to consider New Zealand as an early market for demonstrations and trials of heavy electric vehicle technology.

*Option 5: Introducing a discounted RUC rate for heavy electric vehicles*

61. Under this option, it is proposed that heavy electric vehicles would receive a discount of equivalent value to the light electric vehicle RUC exemption i.e. \$62 per 1,000 kilometres travelled.
62. There are not enough heavy electric vehicles in the fleet to estimate the average annual distance that such vehicles would travel. As an example however, the average annual distance travelled by the trolley buses used in Wellington is 23,000 kilometres. The benefit of a RUC discount for these vehicles would therefore equate to \$1,426 per vehicle, per year. Transaction costs to heavy vehicle owners under this option would be the same as the status quo.
63. Assuming that the average distance travelled by the trolley buses is representative of the average travel of all heavy electric vehicles, the maximum annual foregone revenue once the two percent threshold is met is estimated at \$4-5 million.
64. While this option would send a stronger signal of government support for heavy electric vehicles as the status quo, it would be a much weaker signal than that sent by exempting heavy electric vehicle from paying RUC altogether. It would also be a weaker incentive than an exemption, because a discount would have little impact on the operational costs of heavy electric vehicles.

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<sup>10</sup> Includes the 57 electric trolley buses operating on Wellington roads which Greater Wellington Regional Council intends to retire from 2017. These vehicles account for about two percent of all distance travelled by 3-axle buses.

<sup>11</sup> The estimated foregone revenue increases because projected RUC revenue increases each year.

## Conclusion

65. On balance, extending the RUC exemption for light electric vehicles until 2 percent of the light vehicle fleet is electric (option 3), and introducing a similar exemption for heavy electric vehicles (option 4), are recommended if the Government wants to further incentivise the uptake of electric vehicles.
66. The primary basis for considering that options 3 and 4 may be more effective as a signal of government support and incentive for uptake is stakeholder feedback. In particular, while the current exemption for light electric vehicles does not appear to have been effective to date, stakeholders consider that coupled with expected purchase price reductions for electric vehicles and the measures in the proposed package, the RUC exemption could become more important.
67. The risk to RUC revenue of adopting options 3 and 4 is not considered significant. Moreover, the cost and risks of these options is proportionate to the benefits that arise – the greater electric vehicle uptake, the greater the cost. In this respect, if options 3 and 4 are not effective, the benefits will be low, but so will the costs.
68. While it is difficult to predict when the two percent threshold might be reached for the heavy vehicle fleet, it is reasonable to expect that it would not be reached by the end of 2021, as for the light fleet.
69. Therefore, the total amount of foregone revenue as a result of any combination of the options would not be as high as the combined value of the RUC exemptions and/or discount in any one year. Rather a loss of foregone revenue in the order of \$40 million could be expected by the end of 2021. This would be followed by a maximum of \$29 million in foregone revenue by 2030, assuming two percent of the heavy vehicle fleet is electric by that time.
70. The cost of foregone revenue to the NLTF would be managed as existing revenue and expenditure pressures currently are. The NZ Transport Agency would decide on the projects to be prioritised for funding in the NLTP. These decisions would be made in line with the Government's priorities articulated in the Government Policy Statement on Land Transport.

### *Options that are not preferred*

71. The option of introducing a RUC exemption for light electric vehicles from the date each vehicle is first registered in New Zealand, for a finite period (e.g. 5 years) (option 2) is not preferred because it:
  - 71.1. has the potential to increase the administrative burden for both the NZ Transport Agency and electric vehicle owners
  - 71.2. presents a greater risk to the NLTF than any of the other options.
72. These considerations offset the additional benefits of this option as a sign of government support for electric vehicles, and a financial incentive for uptake.
73. Introducing a discounted RUC rate for heavy electric vehicles (option 5) is not preferred either because, while it would be relatively easy for government to implement and would not pose a risk to the long-term stability of the NLTF, it would:
  - 73.1. send a weak signal of government support

- 73.2. be an ineffective incentive for uptake
- 73.3. not reduce compliance costs to electric vehicle owners.

## Consultation

- 74. No formal public consultation has been undertaken. Formal public consultation will be undertaken as part of the legislative process to implement the decisions regarding RUC payable by electric vehicles that may be agreed by Cabinet. No public consultation is proposed if Cabinet's decisions do not require legislative amendment because the changes will not impose any additional costs on businesses, road users or the general public.
- 75. Limited informal consultation was undertaken. The government-industry electric vehicle package was developed by a group from industry, local government and central government.<sup>12</sup>
- 76. While not explicitly agreed by the group, feedback suggests that the group would be supportive of extending the RUC exemption for electric vehicles, and may in fact support extending the exemption further than is proposed in this RIS. It is not proposed that the exemption is extended to more than two percent of the heavy and light vehicle fleets respectively because higher levels and prolonged periods of forgone revenue would materially hinder the development and delivery of future NLTPs.
- 77. The NZ Transport Agency, Treasury, the Ministry of Business, Innovation and Employment, the Energy Efficiency and Conservation Authority and the Ministry for the Environment have been consulted on this RIS.

## Implementation

- 78. It is proposed that any changes to primary legislation required to implement the electric vehicle package agreed by Cabinet would be progressed via an Electric Vehicle Bill which is expected to come into force by 30 June 2017. This will include any amendments to the RUC Act required to implement Cabinet's decisions regarding changes to the RUC system for electric vehicles.
- 79. Extending the exemption to apply until two percent of the light vehicle fleet is electric does not require amending the RUC Act. Based on the modelled base case uptake scenario and the proposed uptake targets, it is expected that two percent of the light vehicle fleet would be electric by the end of 2021. The current RUC Act allows the Governor-General to specify the period during which RUC are not payable in respect of light electric vehicles by Order in Council.

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<sup>12</sup> The companies and organisations involved were: the Sustainable Business Council, the Motor Industry Association, the Imported Motor Vehicle Industry Association, Air New Zealand, Mighty River Power, Vector, Contact Energy, the Electricity Network Association, Wellington Electricity, Drive Electric, Auckland Transport, Christchurch City Council, Wellington City Council, Greater Wellington Regional Council, the New Zealand Automobile Association, the Ministry of Business, Innovation and Employment, the Ministry for the Environment, the Energy Efficiency Conservation Authority and the Ministry of Transport.

80. Any RUC exemption(s) for electric vehicles would be publicised as part of the proposed electric vehicle package. In particular, it is proposed that the Energy Efficiency and Conservation Authority undertake an information and promotion campaign for electric vehicles. This could be a mechanism for advising prospective electric vehicle buyers of the value of any RUC exemption(s).

## **Monitoring, evaluation and review**

81. The Ministry of Transport actively monitors the uptake of light electric vehicles and reports to the Minister of Transport on a monthly basis. The Ministry would begin monitoring and reporting on heavy electric vehicle numbers following Cabinet's agreement to a package of measures to encourage the uptake of electric vehicles.
82. If there is a higher than expected uptake of light electric vehicles, further action may be required to manage the impact of forgone revenue on the NLTP. The Ministry of Transport would advise the Minister accordingly if this situation eventuated.

## Appendix 1

**Table 1: Alternative light electric vehicle uptake rates in New Zealand**

		2016	2017	2018	2019	2020	2021
<b>Proposed targets</b>	Annual electric vehicle sales	1,000	2,000	4,000	8,000	16,000	32,000
	Cumulative number of electric vehicles in the fleet	1,950	3,950	7,950	15,950	31,950	63,950
	Percentage of the light vehicle fleet that is electric	0.06	0.13	0.26	0.51	1.03	2.06
<b>2009 projections used when the RUC exemption for light electric vehicles was introduced</b>	Annual electric vehicle sales	1,050	2,910	4,812	6,756	8,739	
	Cumulative number of electric vehicles in the fleet	2,224	5,134	9,946	16,702	25,441	
	Percentage of the light vehicle fleet that is electric	0.07	0.17	0.32	0.54	0.82	
<b>2015 base case uptake scenario</b>	Annual electric vehicle sales	325	3,684	7,338	14,154	18,847	21,779
	Cumulative number of electric vehicles in the fleet	1,275	4,959	12,297	26,451	45,298	67,077
	Percentage of the light vehicle fleet that is electric	0.04	0.16	0.40	0.85	1.46	2.16