



8 November 2024

Dear 

Re: Official Information Act Request:

Thank you for your email on Thursday 10 October in which you requested information under the Official Information Act 1982. You requested:

“all advice given to Ministers on the Low Emissions Heavy Vehicle Fund – excluding emails and texts.”

EECA has compiled six attachments in response to your request. Please see the below table for an overview of these attachments. Please note that relevant information included in EECA’s fortnightly report to the Minister for Energy has been compiled into an excerpts document.

Document Name	Date	Information withheld pursuant to the following sections of the Act
Clean Heavy Vehicles Grant – Policy Decisions (EECA 2023 BRF 011)	1 June 2023	<ul style="list-style-type: none"> 9(2)(a) - to protect the privacy of natural persons, including that of deceased natural persons. 9(2)(f)(iv) - to maintain the current constitutional conventions protecting the confidentiality of advice tendered by Ministers and officials.
Clean Heavy Vehicles Grant – drawdown of funding from tagged contingency (EECA 2023 BRF 015)	8 August 2023	<ul style="list-style-type: none"> 9(2)(a) - to protect the privacy of natural persons, including that of deceased natural persons. 9(2)(j) – To enable a Minister of the Crown or any public service agency or organisation holding the information to carry on, without prejudice or disadvantage, negotiations (including commercial and industrial negotiations)

Information on EECA's freight transport programmes (EECA2 2024 BRF 002)	30 January 2024	<ul style="list-style-type: none"> 9(2)(a) - to protect the privacy of natural persons, including that of deceased natural persons.
Approach for introducing the Low Emission Heavy Vehicle Fund (LEHVF) to market (EECA 2024 BRF007)	17 May 2024	<ul style="list-style-type: none"> 9(2)(a) - to protect the privacy of natural persons, including that of deceased natural persons.
Final details on the Low Emissions Heavy Vehicle Fund (LEHVF) (EECA 2024 BRF 008)	21 June 2024	<ul style="list-style-type: none"> 9(2)(f)(iv) - to maintain the current constitutional conventions protecting the confidentiality of advice tendered by Ministers and officials.
LEHVF relevant excerpts from fortnightly report to the Minister for Energy	From June 2024 to October 2024	<ul style="list-style-type: none"> 9(2)(f)(iv) - to maintain the current constitutional conventions protecting the confidentiality of advice tendered by Ministers and officials.

You have the right to seek an investigation and review by the Ombudsman of this decision. Information about how to make a complaint is available at www.ombudsman.parliament.nz or freephone 0800 802 602.

Please note that it is our policy to proactively release our responses to official information requests where possible. Our response to your request will be published shortly at <https://www.eeca.govt.nz/about/news-and-corporate/official-information/> with your personal information removed.

Yours sincerely

Murray Bell
Group Manager, Policy and Regulation



BRIEFING

Clean Heavy Vehicles Grant – Policy Decisions

Date:	1 June 2023	Priority:	Medium
Security classification:	In Confidence	Tracking number:	2223-3959 EECA 2023 BRF 011

Action sought		
	Action sought	Deadline
Hon Dr Megan Woods Minister of Energy and Resources	Agree to the scope of the Clean Heavy Vehicles Grant Forward this briefing to the Ministers of Finance and Transport	12 June 2023

Contact for telephone discussion (if required)				
Name	Position	Telephone		1st contact
Daniel Brown	Manager, Energy Use Policy	██████████		✓
Hannah Overton-Holmes	Senior Policy Advisor, Energy Use Policy	██████████		
Will Jensen	Manager, Policy and Engagement (EECA)	██████████		
Alex Doyle Franklin	Policy Advisor, Policy and Engagement (EECA)	██████████		

The following departments/agencies have been consulted
Ministry of Transport, Waka Kotahi, The Treasury

Minister's office to complete:

- | | |
|---|--|
| <input type="checkbox"/> Approved | <input type="checkbox"/> Declined |
| <input type="checkbox"/> Noted | <input type="checkbox"/> Needs change |
| <input type="checkbox"/> Seen | <input type="checkbox"/> Overtaken by Events |
| <input type="checkbox"/> See Minister's Notes | <input type="checkbox"/> Withdrawn |

Comments

BRIEFING

Title

Date:	1 June 2023	Priority:	Medium
Security classification:	In Confidence	Tracking number:	2223-3959

Purpose

To seek your agreement to the objectives, scope and funding criteria for the Clean Heavy Vehicles Grant, announced as part of Budget 2023.

A second briefing by 28 July 2023 will seek drawdown of the tagged contingency for this grant and provide further detail on the grant design, abatement and incentives.

Recommended action

The Ministry of Business, Innovation and Employment and the Energy Efficiency and Conservation Authority (EECA) recommend that you:

Context

a **note** that Budget 2023 includes a tagged contingency of \$30 million over three years for a grant scheme for clean heavy vehicles, to increase the adoption of zero-emissions trucks, non-public transport buses and heavy vans

Noted

b **note** that Cabinet:

a. **directed** the Ministry of Business, Innovation and Employment to report back on the appropriate settings for the grant scheme, including analysis of the marginal abatement cost and impact on incentives

b. **agreed** that the Minister of Energy and Resources and the Minister of Finance can draw down the tagged operating contingency established above (establishing any new appropriations as necessary), subject to their satisfaction with the further work described in [the above recommendation].

Noted

c **note** that upfront capital cost is currently the main barrier to uptake of zero-emissions heavy vehicles (ZEHVs)

Noted

Objectives

d **agree** that the purpose of the grant scheme is to support 'first movers' by addressing the purchase price barrier to the adoption of ZEHVs in New Zealand

Agree / Disagree

e **agree** that the objectives of the scheme are to:

a. continue to build the transport sector's confidence to invest in the adoption of zero-emission trucks, non-public transport buses and heavy vans beyond demonstration, by supporting integration of zero emissions vehicles into their fleets

Agree / Disagree

- b. gather insights into other operational barriers to widespread uptake and commercialisation, such as charging and refuelling requirements and behaviour change amongst operators

Agree / Disagree

- c. provide market signals to international original equipment manufacturers (OEMs), with the intent of encouraging supply of ZEHVs to New Zealand.

Agree / Disagree

- f **note** that the grant is seen as the next step to demonstration funding through the Low Emission Transport Fund (LETf) and that it will support seeding of ZEHVs in the market before we see widespread uptake

Agree / Disagree

Scope

- g **agree** that the scope of the grant scheme will be limited to:

- a. zero on-road emissions trucks, non-public transport buses and heavy vans (over 3.5 tonnes)

Agree / Disagree

- b. battery-electric and hydrogen fuel cell heavy vehicles

Agree / Disagree

- c. new import retrofitted heavy vehicles

Agree / Disagree

- h **agree** that the grant scheme will not fund:

- a. vehicles eligible for the Clean Car Discount

Agree / Disagree

- b. charging or hydrogen refuelling infrastructure, as this is not the most efficient use of the grant

Agree / Disagree

- c. public transport buses, as there is already funding to support public sector buses to transition to low emission options

Agree / Disagree

Eligibility criteria

- i **agree** the grant will be administered on a first-in, first-served basis, rather than a contestable fund as this provides greater certainty and enables vehicle importers to be paid as soon as vehicles are first registered in New Zealand

Agree / Disagree

- j **note** that to incentivise purchases of clean heavy vehicles at all sizes, the level of the grant will vary according to the vehicle size

Noted

- k **note** that the next briefing will provide the proposed grant funding levels and advice on whether additional eligibility criteria should be added, including a customer cap

Noted

Next Steps

l **note** that based on the proposed grant settings, EECA considers the grant scheme could be available in market by 1 October 2023

Noted

m **note** that officials will send you a second briefing by 28 July 2023 seeking drawdown of the tagged contingency, including analysis of the impact of potentially including hybrid and dual fuel vehicles in scope, and providing further detail on the grant design, abatement and incentives

Noted

n **forward** this briefing to the Minister of Finance for his information ahead of receiving the tagged contingency drawdown briefing

Agree / Disagree

o **forward** this briefing to the Minister of Transport for his information.

Agree / Disagree



Daniel Brown
Manager, Energy Use Policy
Building, Resources and Markets, MBIE

01 / 06 / 2023



Andrew Caseley
Chief Executive
Energy Efficiency and Conservation
Authority

31 / 05 / 2023

Hon Dr Megan Woods
Minister of Energy and Resources

..... / /

Context

1. On 11 April 2023 Cabinet agreed to include a tagged contingency for a grant scheme for clean heavy vehicles as part of the Budget 2023 package. The grant scheme is intended to increase the adoption of zero-emissions trucks, non-public transport buses and heavy vans, and will help support the decarbonisation of New Zealand's transport sector. Cabinet:
 - a. **directed** the Ministry of Business, Innovation and Employment to report back on the appropriate settings for the grant scheme, including analysis of the marginal abatement cost and impact on incentives
 - b. **agreed** that the Minister of Energy and Resources and the Minister of Finance can draw down the tagged operating contingency established above (establishing any new appropriations as necessary), subject to their satisfaction with the further work described in [the above recommendation].
2. Your office asked for further policy advice on the Clean Heavy Vehicles Grant (the grant) as soon as possible after Budget 2023. We will provide this advice over two briefings, to ensure the fund is well-designed and sufficient time is given to the analysis of expected impacts.
3. This first briefing seeks your approval to the objectives, scope and criteria of the grant.
4. The second briefing will seek Joint Ministers' approval to drawdown on the tagged contingency. The briefing will include further details on the proposed grant design, including:
 - a. analysis of the initiative's potential to de-risk early adoption of zero-emission heavy vehicles and build the sector's confidence in the technology
 - b. analysis of the impact of potentially including hybrid and dual fuel vehicles in scope of the grant
 - c. the potential impact of the initiative in building manufacturers' confidence in New Zealand as a leading market in which to deploy vehicles
 - d. consideration of the expected marginal abatement cost and its impact on incentives.
5. Based on the proposed design, the Energy Efficiency and Conservation Authority (EECA) considers the grant could be available in market by 1 October 2023.

Problem definition

6. Road transport is New Zealand's biggest source of energy-related carbon emissions. Despite being a small proportion of the fleet, heavy vehicles make up around a quarter of our total transport emissions because they frequently travel long distances and are significantly heavier than light vehicles. Decarbonisation of heavy vehicles is therefore essential for New Zealand to help meet its climate change commitments.

The government has committed to reducing emissions from heavy vehicles

7. New Zealand has committed to a global memorandum of understanding (MOU) with 26 other countries, as well as subnational governments, vehicle manufacturers and fleets to increase sales of zero emissions heavy vehicles (ZEHVs) to 30% by 2030 and 100% by 2040. There are currently just 543 ZEHVs in New Zealand's fleet of around 185,000 heavy vehicles – in 2022, 226 ZEHVs entered the fleet, of which 111 were buses.¹

¹ See <https://www.transport.govt.nz/statistics-and-insights/fleet-statistics/monthly-mv-fleet/>

8. The first Emissions Reduction Plan includes commitments to:
 - a. reduce emissions from freight transport by 35% by 2035 (based on 2019 levels)
 - b. provide funding to support the freight sector to purchase zero- and low-emissions trucks.

Upfront capital cost is the main barrier to uptake of ZEHVs

9. ZEHVs have high upfront capital costs compared to internal combustion engine (ICE) vehicles, due to the high costs of the vehicles in early commercialisation and any infrastructure needed to support recharging/refuelling. Freight operators make decisions about the purchasing of new heavy vehicles years in advance and look at the Total Cost of Ownership (TCO), which includes upfront purchase prices and operating costs when making these decisions. Even though operating costs of ZEHVs are expected to be lower than ICE equivalents, this high upfront capital cost means that the TCO for ZEHVs is still significantly higher. While prices are expected to come down over time, this creates a challenge for operators in the current environment to make a business case for ZEHV adoption.
10. Barriers to ZEHV uptake other than Total Cost of Ownership include:
 - a. accessing adequate electricity supply for vehicle charging and 'first mover disadvantage' costs with network upgrades
 - b. adhering to current vehicle dimension and mass rules
 - c. availability and access to the current limited global supply of ZEHVs.
11. EECA has been providing co-funding support for demonstrating ZEHVs through the Low Emission Transport Fund (LETf), however many of these vehicles have now been successfully demonstrated and under current settings would not likely be eligible for more funding. Many of the companies EECA has worked with through the LETf have advised that they are willing to add additional vehicles into their fleets but are unable to make the business case stack up due to the upfront capital cost.
12. Vehicle manufacturers have also advised that they are willing to provide more zero emission trucks to New Zealand but require larger orders of vehicles to justify supplying New Zealand.
13. Te Manatū Waka Ministry of Transport analysis and engagement with the sector has determined that offering a purchase price subsidy would be the best way to support accelerating uptake of ZEHVs.

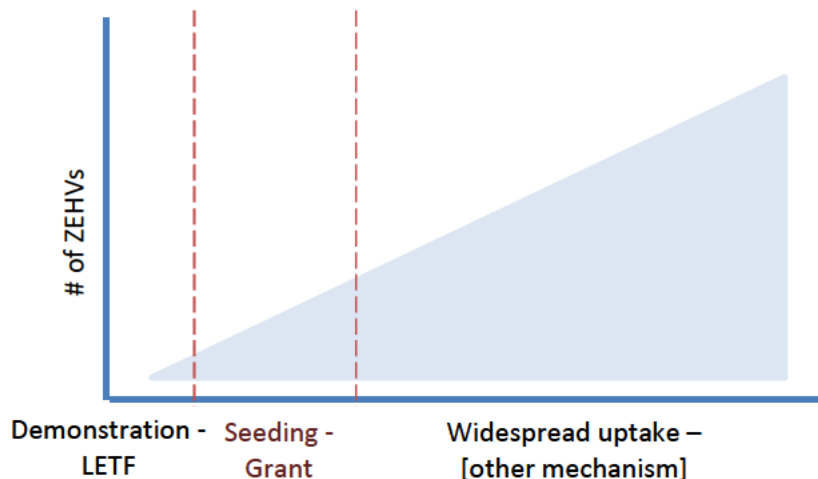
Proposed policy objectives

14. The purpose of this grant scheme is to support 'first movers' by addressing the purchase price barrier to the adoption of ZEHVs in New Zealand.
15. The proposed objectives of the fund are to:
 - a. continue to build the transport sector's confidence to invest in the adoption of zero-emission trucks, non-public transport buses and heavy vans² beyond demonstration, by supporting integration of zero emissions vehicles into their fleets

² Heavy vans with a gross vehicle mass above 3,500 kilograms, are classified as NB (medium goods vehicle) in Table A in Part 2 of the Land Transport Rule: Vehicle Standards Compliance 2022.

- b. gather insights into other operational barriers to widespread uptake and commercialisation, such as charging and refuelling requirements and behaviour change amongst operators
 - c. provide market signals to international original equipment manufacturers (OEMs), with the intent of encouraging supply of ZEHVs to New Zealand.
16. The purpose of the grant varies from the LETF, which focuses on supporting the demonstration and adoption of low emission transport technology, innovation and infrastructure. Where the LETF supports early adopters to overcome the price and availability barriers associated with a new technology's demonstration phase, eligibility through the grant will be limited to ZEHVs with technology that has been comprehensively proven.
 17. EECA's LETF project oversight and extensive industry customer engagement through administering the LETF is expected to support uptake of the grant. As both mechanisms will be administered in parallel, EECA will be able to assess whether vehicles co-funded through the LETF for demonstration purposes have met the eligibility criteria for the grant. Vice versa, vehicles which do not meet the criteria for grant funding could be referred to the LETF for funding of demonstration trials to support their future eligibility for the grant.
 18. As shown in Diagram 1 below, the grant will support seeding of ZEHVs in the market while the uptake is relatively low and before we see widespread uptake.

Diagram 1: Positioning of Clean Heavy Vehicles Grant



**Note this diagram is for illustrative purposes only and provides a high-level visual representation of the positioning of a Clean Heavy Vehicles Grant. It is not intended to provide a quantitative analysis.*

19. The proposed design settings reflect the level of funding that has been set aside for the scheme - \$30 million over the next three years. As the number of clean heavy vehicles entering New Zealand increases, further funding may be needed to either scale up or replace the scheme in the future.
20. We propose the following policy principles should support the design of the grant:
 - a. **Efficiency:** the grant is designed in a way that makes the best use of the available funding to support investment in zero-emission heavy vehicles.
 - b. **Simplicity and certainty:** the grant supports investment in zero-emission heavy vehicles through predictable, technology-agnostic criteria.
 - c. **Ease of administration:** the grant fits within EECA's mandate, is simple to set up and administer.

- d. **Impact:** the grant supports meeting our emissions reduction targets under Emissions Budgets 1 and 2.

Links to other government work programmes

21. As well as complementing the LETF, the grant scheme is part of a broader government work programme to support ZEHV uptake and transition to a low-emissions economy:
- a. Budget 2023 included funding for a hydrogen consumption rebate to accelerate the early adoption of green hydrogen in transport and industry. The rebate aims to achieve parity between the cost of hydrogen and alternative commodities, such as diesel. Some operators of hydrogen fuel cell heavy vehicles (FCEVs) may become eligible for this rebate as well as the grant.
 - b. Te Manatū Waka has an ongoing work programme to decarbonise freight and heavy vehicles. [REDACTED]
 - c. From March to May 2023, the Government consulted on the draft EV Charging Strategy. While the draft strategy includes an initial focus on charging for light EVs, it recognises areas where other vehicle modes and zero-emission energy sources may fall within scope, such as commercial heavy vehicles and green hydrogen.
 - d. The interim Hydrogen Roadmap includes the grant as one of the recently announced actions the government is taking to support hydrogen uptake in nationally strategic uses, along with the Regional Hydrogen Transition.

Proposed scope and eligibility criteria

Scope

22. Table 1 below sets out the proposed scope of the grant. We propose the scope is limited to funding for new zero on-road emissions heavy vehicles, at the first point of registration in New Zealand. The scope is intended to ensure there are no gaps or overlaps with the Clean Car Discount.

Table 1: Proposed scope of the Clean Heavy Vehicles Grant

In scope	Out of Scope
<ul style="list-style-type: none"> • Zero on-road emissions trucks, non-public transport buses and heavy vans (over 3.5 tonnes) • Both battery-electric (BEV) and FCEV heavy vehicles • New import retrofitted heavy vehicles 	<ul style="list-style-type: none"> • Vehicles eligible for the Clean Car Discount³ • Vehicles intended to use biofuel • Second hand vehicles • Charging or hydrogen refuelling infrastructure • Public transport buses

³ Vehicles with a Gross Vehicle Mass (GVM) of less than 3.5 tonnes

We consider this grant is not best placed to support the vehicles and infrastructure proposed as out of scope

23. We recommend second-hand vehicles (including retrofits of existing fleet) are out of scope, as this would not meet the objective of encouraging supply of new ZEHVs to New Zealand.
24. We recommend public transport buses are out of scope, as the Government has a requirement for all new public transport buses import sales to be zero emissions by 2025 and has already provided funding to support public transport buses to transition.

Charging and refuelling infrastructure may be best funded through other mechanisms

25. We recommend the scope of the grant does not extend to infrastructure costs for charging or hydrogen refuelling. While we recognise these costs represent another barrier to ZEHV uptake, we consider this is not the most efficient use of the grant.

We will include analysis of the potential impact of including hybrid and dual fuel vehicles in the next briefing

26. We understand you have expressed interest in the grant funding hybrid and dual fuel vehicles. At this stage, we consider it would not be appropriate to extend the scope to these vehicles for the following reasons:
 - a. This grant has been advertised as for 'zero-emissions' vehicles. While low-emissions vehicles support emissions reduction, widening the scope of the grant to non-ZEHVs does not support our commitments under the global MOU and does not meet the objective of encouraging supply of new ZEHVs to New Zealand.
 - b. Hybrid and dual fuel vehicles have a lower cost barrier to uptake, and some will be supported through the hydrogen rebate.
 - c. It is difficult to understand the emission impact and therefore determine an appropriate grant level for these heavy vehicles, as many are still in the demonstration stage. Evaluating the emissions reductions impacts of non-ZEHVs is challenging without very high visibility of consumer behaviour patterns, which would not be feasible through this grant scheme. Vehicles still in the demonstration phase are best supported through mechanisms such as the LETF.
 - d. Many manufacturers have also committed to ambitious zero-emissions sales targets over the next decade. For example, European manufacturers have collectively committed to achieving a minimum 43% of truck sales being ZEVs by 2030.
27. However, we will undertake further analysis on the potential abatement and funding levels for these vehicles, and report back with further advice in the next briefing.

Eligibility criteria

28. We recommend straight-forward eligibility criteria to support the scheme to be operational as quickly as possible. The fund will be administered on a first-in, first-served basis, to provide operators with greater certainty and to enable grants to be paid as vehicles are first registered in New Zealand. Our preliminary thinking is that funding would be paid direct to the entity importing and distributing the vehicle, at the point of vehicle registration in New Zealand. This will be explored more fully during detailed programme design.
29. EECA will develop a 'whitelist' of vehicles eligible for the grant. The list will represent vehicle technologies and applications that have already been demonstrated in New Zealand and are available to the New Zealand market. The list will be published on EECA's website to provide more certainty for vehicle purchasers and will be updated as more vehicles are available to the New Zealand market. This is consistent with the approach EECA has taken to the LETF.

Publication of the 'whitelist' is expected to manage any uncertainty around the appropriate funding stream and mitigate the risk of 'double dipping' between the grant and the LETF.

30. Public vs private sector eligibility will match the LETF. This means that for example New Zealand Post will be able to apply for a ZEHV grant, but not MBIE.
31. The grant is intended to partially fund the vehicle purchase. To incentivise purchases of clean heavy vehicles at all sizes, the level of the grant will vary according to the vehicle size; heavier vehicles will be eligible for a larger grant to account for the higher purchase price. The funding levels will not differ between BEVs and FCEVs.
32. Annex One provides a list of known ZEHVs currently or soon-to-be available on the New Zealand market for reference. Eleven of the 12 available vehicles are BEVs; officials are aware of only one hydrogen truck currently available to the New Zealand market. EECA and Te Manatū Waka will work together to develop the 'whitelist' of vehicles eligible for grant funding. The initial list may not include all vehicles currently available to purchase, however we note that the more developed market segments that will feature on the initial list (e.g., medium trucks) are more likely to achieve emissions reductions in Emissions Budget 1.
33. The next briefing will provide the proposed funding levels for different vehicle types, an estimate of the number of vehicles funded at these levels, and advice on whether additional eligibility criteria should be added.

We are considering whether soft caps may be applicable

34. There is a risk that with a first-come, first-served model, one entity could be eligible for a large proportion of the grant funding if they bring in a large vehicle order. EECA are therefore considering whether to implement a customer cap that limits the number of grants available for each vehicle class per annum per purchaser. This would help to ensure equitable access and accommodate future vehicle entry, particularly for larger vehicles. We will provide further advice on a potential cap in the next briefing, but consider that the EECA Board should have authority to adjust any cap to ensure the grant can adapt to the rapidly changing market.

Next steps

35. We will continue to consult with officials from Te Manatū Waka, Waka Kotahi and the Treasury as we develop the detailed grant design and consider incentives and abatement cost. We recommend you forward this briefing to the Minister of Finance for his background ahead of the drawdown briefing, and to the Minister of Transport for his information.
36. We will send you a second briefing (joint to the Minister of Finance) providing additional advice on the design and expected impacts of the proposed fund and seeking agreement to drawdown on the tagged contingency by 27 July 2023. That paper will incorporate your feedback and decisions on this paper.
37. We will work with your office on material to support announcements on the grant details.

Annexes

Annex One: Known electric vans and trucks available to purchase in New Zealand

Annex One: Known electric vans and trucks available to purchase in New Zealand

The table below is based on available information as at February 2023. Note that many models have 12-18 month order lead times. EECA and Te Manatū Waka will work together to develop the 'whitelist' of vehicles eligible for grant funding. The initial list may not include all of these vehicles.

	Name	Weight Class	Available to order
Electric	LDV eDeliver 9	Up to 4 tonnes	Now
	JAC N55	Up to 5.5 tonnes	Now
	Fuso eCanter	Up to 7.5 tonnes	Now
	Hyundai Mighty Electric	Up to 7.5 tonnes	Now
	XCMG E100/300/400	Up to 14 tonnes	Now
	Volvo FL	Up to 16 tonnes	Now
	Kahu EK16S	Up to 25 tonnes	Now
	Volvo FE	Up to 27 tonnes	Now
	Scania BEV	Up to 29 tonnes	Now
	SEA-Electric	Up to 29 tonnes	Now
	Tesla Semi	Up to 37 tonnes	Reliant on initial order
	Mercedes eActros	Up to 40 tonnes	TBC for NZ
	Volvo FH/FM/FMX	Up to 44 tonnes	2023/2024
XCMG E700	Up to 50 tonnes	Now	
Hydrogen	Hyzon Hymax	Up to 70 tonnes	Soon
	Hyundai Xcient	36 tonnes as tractor, 19 tonnes as rigid body	Now



To	Hon Grant Robertson MINISTER OF FINANCE Hon Dr Megan Woods MINISTER OF ENERGY AND RESOURCES		
Title	Clean Heavy Vehicles Grant – drawdown of funding from tagged contingency		
Date	8 August 2023		
EECA/MBIE reference number	EECA 2023 BRF 015 MBIE 2223-4281	Response required by:	14 August 2023
EECA priority	Routine		
Consultation	Te Manatū Waka , Waka Kotahi, The Treasury		
Attachments	Appendix One: Complementary heavy freight programmes and policy measures		

Agency contacts

Position	Name	Mobile Number	Work Number	1 st Contact
Chief Executive (EECA)	Andrew Caseley	██████████	04 470 2201	✓
Manager, Energy Use Policy (MBIE)	Daniel Brown	██████████		
Principal author (EECA)	Alex Doyle Franklin	██████████	04 470 2425	
Principal author (MBIE)	Hannah Overton-Holmes	█	03 966 6632	

Purpose

1. To provide further detail on the Clean Heavy Vehicles Grant (CHVG) design, abatement and incentives and to seek your approval to draw down the funding from the Budget 2023 tagged contingency to support the 1 October launch of the CHVG programme.

Key messages

- On 1 June 2023, the Energy Efficiency and Conservation Authority (EECA) and the Ministry of Business, Innovation and Employment (MBIE) provided a briefing to the Minister of Energy and Resources, seeking approval on the objectives, scope and funding criteria for the CHVG (refer EECA 2023 BRF 011, MBIE 2223-3959).
- In line with Budget initiative wording, officials proposed the CHVG scope be limited to funding for new zero on-road emissions heavy vehicles (ZEHVs) (battery electric vehicles and hydrogen fuel cell vehicles), at the point of first registration in New Zealand. Grants would only be for vehicles over 3.5 tonnes to ensure there are no gaps or overlaps with the Clean Car Discount (which supports vehicles below 3.5 tonnes). Funding for infrastructure costs for charging and hydrogen refuelling is excluded as there are other initiatives available to better support this infrastructure.
- As requested by the Minister of Energy and Resources, the grant scope now also includes support for entities with near new existing internal combustion engine (ICE) vehicles looking to convert to Zero-Emissions Heavy Vehicles (ZEHVs).
- Following Ministerial approval, EECA has progressed programme design for the CHVG, and has been engaging with a range of industry representatives. The parameters of the grant outlined in this briefing have received approval from the EECA Board. Subject to ministerial approval, EECA is tracking well towards launching the programme by 1 October 2023 at the latest.
- EECA estimates the CHVG will reduce carbon emissions across the heavy freight sector by around 190,000 tonnes CO₂e over 21 years¹, with a cumulative estimated marginal abatement cost (MAC – the cost to the Crown per tonne of CO₂ abated) for the programme of around \$155.
- This briefing seeks your joint approval to drawdown on the tagged contingency. It also:
 - i. Provides detailed proposed settings for the grant scheme, including analysis of the marginal abatement cost and impact of incentives
 - ii. Analyses of how the proposed grant settings support the overarching objectives of the CHVG
 - iii. Seeks direction on your preferred approach to the grant scope in relation to non-ZEHVs (diesel electric hybrid and hydrogen diesel dual fuel). Officials' preference is to launch the CHVG limited to ZEHVs, and provide further advice to support your consideration of including

¹ This is an estimation based on an average 21 year lifetime of ZEHVs.

hybrid vehicles at the second stage of the CHVG. Other options including strictly limiting the CHVG to ZEHVs, or deferring the launch until hybrid vehicles can be included from the outset.

Recommended actions

Background context

- a. **Note** that on 1 June 2023 we provided a briefing to the Minister of Energy and Resources seeking agreement to the objectives, scope and funding criteria for the Clean Heavy Vehicles Grant (CHVG), announced as part of Budget 2023 (refer EECA BRF 011, MBIE 2223-3959)
- b. **Note** that the proposed detailed grant settings reflect EECA's engagement with industry, and consultation with Te Manatū Waka | The Ministry of Transport and Waka Kotahi

Further details on the grant design

- c. **Agree** to the parameters for the CHVG as currently developed and detailed in this paper. This includes:
 - *Grant levels*: the rebate will cover 25 percent of the purchase price with a capped maximum, within various vehicle sizes, which increases as vehicle size increases, reflecting the variation of pricing across zero emissions heavy vehicles (ZEHVs).
 - *Secondhand ICEs for retrofitting to ZEHVs*: funding will be limited to supporting the capital cost of conversion with no reimbursement for the purchase of ICE vehicles. Only second-hand vehicles less than two years old when the grant launches (on 1 October 2023) will be eligible for grant funding².
 - *Cap mechanism*: a cap on the total funding an individual recipient can receive in 2023/24 being:
 - (a) End customers can receive up to \$1m in total grant funding to 30 June 2024
 - (b) Vehicle importers/suppliers are limited to processing \$4m worth of grants to 30 June 2024

Agree / Disagree

- d. **Grant** EECA's CEO the authority to make minor adjustments to the design of the grant, including the incorporation of safety elements and to determine the scheme's procurement approach

Agree / Disagree

- e. **Note** that based on the scheme settings outlined in recommendation (c) above, EECA considers the scheme meets the objectives established by Cabinet and can be available in market by 1 October 2023

² Note this means that second hand ICEs will no longer be eligible for CHVG from 1 October 2025.

Inclusion of hybrid vehicles

- f. **Note** officials have been assessing the impact of the CHVG if diesel electric hybrid and diesel hydrogen dual fuel heavy vehicles (hybrid vehicles) were incorporated into the grant scheme
- g. **Note** that including hybrid vehicles would reduce the number of ZEHVs funded through the grant, with an impact on its:
 - estimated emission reductions
 - marginal abatement cost
 - ability to meet the overarching objectives including creating a more attractive market to supply for OEM’s
- h. **Note** that due to the considerations set out in (g) above, officials’ recommendation is to exclude hybrid vehicles from the grant at this time
- i. **Note** that if you wish to include hybrid vehicles, EECA considers this is not operationally feasible to include such vehicles from 1 October 2023 and would need to provide further advice on appropriate timing for their inclusion once officials have more information on emissions verification
- j. **Agree** to either:
 - **Option A:** Launch the CHVG on 1 October 2023 with the scope limited to ZEHVs
Agree / disagree
 - **Option B (preferred):** Launch the CHVG on 1 October 2023 with the initial scope limited to ZEHVs and signal possible future incorporation of hybrid vehicles
Agree / disagree
 - **Option C (not preferred):** Defer the launch of the CHVG until hybrid vehicles can be incorporated from the outset (likely April 2024)
Agree / disagree

Reporting/review

- k. **Note** EECA will review the CHVG after six months to assess its performance against the fund objectives and make any recommendations, by 30 June 2024, if adjustments are required
- l. **Note** EECA will provide two monthly reporting on the CHVG through EECA’s Fortnightly Report to the Minister of Energy and Resources

Financial implications

- m. **Note** that on 11 April 2023, Cabinet [CAB-23-MIN-0139 refers]:
 - i) **Agreed** to establish a grant scheme for clean heavy vehicles to increase the adoption of zero-emissions trucks, non-public transport buses, and heavy vans (over 3.5 tons), and provide resources to set up, administer, and market the scheme, subject to further work on the

appropriate settings for the grant scheme, including analysis of the marginal abatement cost and impact on incentives;

- ii) **Agreed** to establish a tagged operating contingency associated with the Energy and Resources portfolio of up to the following amount to provide for the CHVG:

	\$m - increase/(decrease)				
	2022/23	2023/24	2024/25	2025/26	2026/27 & Outyears
Clean Heavy Vehicles Grant – Tagged Operating Contingency	-	10.000	15.000	5.000	-

- iii) **Directed** the Ministry of Business, Innovation and Employment to report back to the Minister of Energy and Resources and the Minister of Finance on the outcome of the further work described in recommendation m(i) above;

- iv) **Authorised** the Minister of Energy and Resources and the Minister of Finance jointly to draw down the tagged operating contingency funding in recommendation m(ii) above (establishing any new appropriations as necessary), subject to their satisfaction with the further work described in recommendation m(i) above;

- n. **Agree** that, as the further work described in recommendation m(i) above has been satisfactorily completed, the CHVG can now proceed;

- o. **Agree** to establish the following new multi-year appropriation, to run from 1 September 2023 to 30 June 2028:

Vote	Appropriation Minister	Appropriation Administrator	Title	Type	Scope
Business, Science and Innovation	Minister of Energy and Resources	Ministry of Business, Innovation and Employment	Energy and Resources: Clean Heavy Vehicles Grants 2023 – 2028 (M28) (A17)	Non-Departmental Other Expense	This appropriation is limited to providing grants to support organisations to purchase low emissions heavy vehicles or to convert heavy vehicles to low emissions technology

- p. **Note** the scope statement for this appropriation refers to grant payments for ‘low emissions’ rather than ‘zero emissions’ vehicles, to provide Ministers with flexibility to make further policy decisions on the scope of the grant;
- q. **Approve** the following changes to appropriations to give effect to the decision in recommendation n above, with a corresponding impact on the operating balance and net debt:

	\$m - increase/(decrease)			
	2023/24	2024/25	2025/26	2026/27 & Outyears
Vote Business, Science and Innovation				
Minister of Energy and Resources				
Non-Departmental Output Expense:				
Energy and Resources: Energy Efficiency and Conservation	0.750	0.750	0.750	-
Total Operating	0.750	0.750	0.750	-

	\$m - increase/(decrease)			
	2023/24	2024/25	2025/26	2026/27 & Outyears
Vote Business, Science and Innovation				
Minister of Energy and Resources				
Non-Departmental Other Expense:				
Clean Heavy Vehicles Grants 2023 - 2028		27.750		-
Total Operating		27.750		-

- r. **Note** that the indicative spending profile for the new multi-year appropriation described in recommendation (o) above is as follows:

Indicative annual spending profile	\$m - increase/(decrease)			
	2023/24	2024/25	2025/26	2026/27 & Outyears
	9.250	14.250	4.250	-

- s. **Agree** that the proposed changes to appropriations for 2023/24 above be included in the 2023/24 Supplementary Estimates and that, in the interim, the increases be met from Imprest Supply;

- t. **Agree** that the expenses incurred under recommendation q above be charged against the Clean Heavy Vehicles Grant – Tagged Operating Contingency described in recommendation m(ii) above;
- u. **Note** that, following the adjustment detailed in recommendation (s) above, the tagged operating contingency described in recommendation (m) above is now exhausted and therefore closed.

Next steps

- v. **Note** should you wish to announce the launch of the CHVG, EECA will support your office(s)
- w. **Agree** to forward this briefing to the Minister of Transport for their information.



Andrew Caseley
CHIEF EXECUTIVE, EECA
08 / 08 / 2023



Daniel Brown
MANAGER, ENERGY USE, MBIE
08 / 08 / 2023

Hon Grant Robertson
MINISTER OF FINANCE
-- / -- / --

Hon Dr Megan Woods
MINISTER OF ENERGY AND RESOURCES
-- / -- / --

Background

2. On 1 June 2023, EECA/MBIE provided a briefing to the Minister of Energy and Resources (the Minister), seeking approval on the objectives, scope and funding criteria for the Clean Heavy Vehicles Grant (refer EECA 2023 BRF 011, MBIE 2223-3959).
3. The CHVG is one of a suite of measures to support decarbonisation across the heavy transport sector. Other initiatives include support for electric vehicle charging infrastructure and hydrogen refuelling (refer Appendix One).
4. The 1 June 2023 paper set the following objectives for the CHVG:
 - Continue to build the transport sector’s confidence to invest in the adoption of zero-emission trucks, non-public transport buses and heavy vans beyond demonstration, by supporting integration of zero emissions vehicles into their fleets;
 - Gather insights into other operational barriers to widespread uptake and commercialisation, such as charging and refuelling requirements and behaviour change amongst operators;
 - Provide market signals to international original equipment manufacturers (OEMs), with the intent of encouraging supply of ZEHVs to New Zealand.
5. Table 1 below sets out the proposed scope of the CHVG, with the inclusion of hybrid vehicles still under consideration. The grant will fund new zero on-road emissions heavy vehicles (i.e. battery electric vehicles and hydrogen fuel cell vehicles), at the point of first registration in New Zealand. Grants will be available only to vehicles over 3.5 tonnes to ensure there are no gaps or overlaps with the Clean Car Discount (which supports vehicles below 3.5 tonnes).

Table 1: Agreed scope of the Clean Heavy Vehicles Grant

In scope	Out of Scope
<ul style="list-style-type: none"> • Zero on-road emissions trucks, non-public transport buses and heavy vans (over 3.5 tonnes) • Both battery-electric (BEV) and FCEV heavy vehicles • New import retrofitted heavy vehicles • Retrofitted second-hand vehicles 	<ul style="list-style-type: none"> • Vehicles eligible for the Clean Car Discount • Vehicles intended to use biofuel • Second hand vehicles • Charging or hydrogen refuelling infrastructure • Public transport buses

6. EECA has progressed the programme design for the CHVG, including engagement with a range of industry representatives to ensure the scheme design supports the overarching grant objectives and aligns with industry expectations.
7. This briefing seeks your joint approval to drawdown on the tagged contingency. In addition, it:
 - Provides detailed proposed settings for the grant scheme, including analysis of the marginal abatement cost and impact of incentives
 - Analyses of how the proposed grant settings support the overarching objectives of the CHVG

- Seeks direction on your preferred approach to the grant scope in relation to non-ZEHVs (diesel electric hybrid and hydrogen diesel dual fuel). Officials' preference is to launch the CHVG limited to ZEHVs, and provide further advice to support your consideration of including hybrid vehicles at the second stage of the CHVG. Other options including strictly limiting the CHVG to ZEHVs, or deferring the launch until hybrid vehicles can be included from the outset.
8. Subject to your consideration of the decisions sought through this briefing, EECA is tracking well towards the proposed 1 October 2023 launch of the scheme.

Further details on the CHVG design

The final proposed settings have been informed by industry engagement

9. EECA has engaged with industry representatives (vehicle manufacturers and fleet operators) to ensure aspects of the scheme's design align with industry expectations and support the overarching grant objectives.
10. Key messages from stakeholders included:
- **Consensus that the upfront capital cost of ZEHVs compared to ICE models is the primary barrier to sales** with an expectation that targeting support to address the upfront capital cost for ZEHVs will increase customer demand.
 - **Variability in timing for the supply of ZEHVs**, with an approximate 6 - 12 month lead time on international orders. There is also additional time required for any modifications vehicles need to support their specific use once they arrive in New Zealand, and international shipments of ZEHVs are often exposed to supply chain delays.
 - **Differing minimum factory orders required** to support dedicated construction of right-hand drive vehicles and delivery to New Zealand, ranging from single units to 20 vehicles. This clarified the need for grants to be issued at a vehicle importer level and supported our consideration of the appropriate caps on total funding available to manufacturers.
 - **Different business models/operational considerations:**
 - Some manufacturers distribute directly to the NZ market, others have nominated vehicle retailers. The proposed funding model should therefore accommodate a variety of business models.
 - Businesses operating with fleet leasing or rental arrangements provided assurances that the proposed high-level approach to administering the grant aligns with leasing arrangements.
 - **Comfort with the proposed data sharing requirements** to access grant funding. Industry stakeholders were comfortable to share commercially sensitive information (including vehicle

pricing) to verify that the scheme's benefits are passed on to end-customers and not absorbed at the manufacturer or importers level.

Eligibility

11. EECA will develop a 'whitelist' of vehicles that are eligible for the grant. The list will represent vehicle technologies and applications that are available, or manufacturers will make available, to the New Zealand market. EECA will publish the 'whitelist' on its website and update it as more qualifying vehicles enter the New Zealand market. This will provide certainty for vehicle purchasers on which vehicles are covered by the CHVG.
12. Vehicle importers/suppliers³ will receive grant funding at the point of first vehicle registration in New Zealand (or re-registration as a ZEHV for eligible conversion projects). In recognition of the long lead times and supply chain impacts on ZEHV deliveries, EECA will issue purchase orders to vehicle importers/suppliers at the point of factory orders being placed with funding set aside accordingly. This will provide the funding certainty required to support international orders and will be subject to agreed delivery timelines.

Safety Considerations

13. During engagement with the wider interagency group, both Te Manatū Waka | Ministry of Transport and Waka Kotahi expressed the view that additional safety features (beyond the minimum requirements for heavy vehicles set out in the Land Transport Rules) should be a condition for ZEHVs to receive CHVG support. The rationale for this is that the CHVG could present an interim measure to send signals to the market, with work underway to consider when the Government should legislate improved safety regulations for all imported heavy vehicles.
14. EECA is currently assessing whether it is appropriate to limit grant funding to vehicles that have these features, to avoid introducing additional barriers and costs in an already challenging nascent market. Early thinking is that information on the desirable vehicle safety features (including automatic emergency braking and lane keep assist) could be requested from vehicle importers/suppliers alongside other vehicle specifications required for inclusion on the whitelist, without explicitly requiring vehicles to have these features to meet eligibility.
15. EECA is currently engaging with industry and other agencies to understand how the inclusion of these safety features could impact delivery of the scheme. We will provide an update to Ministers on the approach to incorporating safety features prior to market launch.

Grant levels

16. Table Two below sets out the proposed CHVG grant levels for different heavy vehicle categories. The rebate will cover 25 percent of the purchase price with a capped maximum which increases as vehicle size increases, reflecting the variation of pricing across ZEHV vehicles.

³ Vehicle importers/suppliers includes OEMs, nominated New Zealand based vehicle distributors and qualifying New Zealand based zero-emission vehicle converters

Table Two: Proposed grant levels for new vehicles under the CHVG.

Size (Gross Vehicle Mass (GVM ⁴)) of vehicle	Grant Offered	Pricing of products in this segment (BEV/FCEV)
Heavy Vans (over 3.5 to 6 tonne GVM ⁵)	25% of purchase price, capped at \$10,000 +GST	\$90k - \$120k (vans)
Trucks and non-PT buses (over 6 to 18 tonne GVM ⁶)	25% of purchase price, capped at \$50,000 +GST	\$150k - \$250k (small trucks)
Heavy Trucks (over 18 tonne GVM ⁷ and up to 39 tonne GCM)	25% of purchase price, capped at \$100,000 +GST	Many hundreds of thousands of dollars, up to ~\$1M
Very Heavy Trucks (over 18 tonne GVM and above 39 tonne GCM ⁸)	25% of purchase price, capped at \$200,000 +GST	Many hundreds of thousands of dollars, up to ~\$1M

17. The approach to the grant’s funding levels is based on advice provided to the Minister of Transport from Te Manatū Waka in August 2022, informed through workshops, review of product pricing and literature review of international programmes. The 25 percent limit is intended to prevent over-subsidisation if vehicle purchase prices drops significantly. However, due to the high-upfront purchase price of ZEHVs, officials expect that in the near term, most vehicles eligible for the grant will receive the full rebate offered for each category.

Second hand ICE vehicles looking to convert to ZEHVs can access grant funding

18. Following consideration of the initial proposed scope, the Minister of Energy & Resources requested that the domestic retrofit of second-hand vehicles be considered in the grant. This is to allow entities who have recently purchased ICE vehicles the choice to abate their emissions through conversion to a zero-emission technology. EECA have incorporated second-hand retrofit projects into the grant design work, with advice on criteria for their inclusion being:

⁴ Gross Vehicle Mass is the maximum allowable weight of the vehicle (including empty weight, payload, driver, and any fuel).

⁵ Around 99% of the vehicles in this weight class are RUC class 2.

⁶ Around 96% of the vehicles in this weight class are RUC class 2, the remaining 4% are RUC class 6.

⁷ Nearly 57% of the vehicles in this weight class are RUC class 6, around 42% are RUC class 14.

⁸ Gross Combined Weight (GCW) is the sum of the GLWs (gross laden weights) that make up a combination vehicle. GLW is the greatest of:

- Any weight specified (following the latest modification, if applicable) as a vehicle’s GLW by the vehicle’s manufacturer
- Any weight specified as the GLW of a particular vehicle (or a a vehicle of its kind) by Waka Kotahi
- the weight of a vehicle together with any load it is carrying, including any equipment and accessories

- i) **Funding:** Limited to supporting the capital cost of conversion with no reimbursement for the historic purchase of ICE vehicles. As set out in Table Three below, entities can receive 25 percent of the conversion cost, capped at 25 percent of the total rebate available for each vehicle category.
- ii) **Vehicle age:** only entities with second-hand vehicles less than two years old when the grant launches (on or before 1 October 2023) will be eligible for grant funding.
- iii) **Safety conditions:** second-hand vehicles will need to meet the minimum safety standards required of new ZEHVs supported through the scheme or will need to be brought up to safety standards during the conversion process.

Table Three: Proposed grant levels for retrofitted vehicles under the CHVG.

Size (GVM) of retrofitted vehicle	Grant available
Heavy Vans (over 3.5 to 6 tonne GVM)	25% of conversion cost, capped at \$2,500+GST
Trucks and non-PT buses (over 6 to 18 tonne GVM)	25% of conversion cost, capped at \$12,500+GST
Heavy Trucks (over 18 tonne GVM and up to 39 tonne GCM)	25% of conversion cost, capped at \$25,000+GST
Very Heavy Trucks (over 18 tonne GVM and above 39 tonne GCM)	25% of conversion cost, capped at \$50,000+GST

Cap on total funding able to be received by an individual recipient

19. To ensure equitable access to the initiative and accommodate future vehicle entry, EECA will introduce caps on the total amount of grant funding available for recipients, irrespective of vehicle type/classification. For the first year (FY 2023/24), the following caps will apply:
- End customers can receive up to \$1 m in grant funding
 - Vehicle importers/suppliers are limited to processing \$4m worth of grants
20. These caps were developed following engagement with key industry stakeholders, with the maximum cap for vehicle importers/suppliers set at a level that is expected to enable the minimum viable factory order size required to support supply of ZEHVs to New Zealand.

Estimated impact of the CHVG programme

21. Based on the above design settings, and subject to Ministerial decisions sought through this briefing, officials have analysed the estimated impact of the CHVG.
22. To support market flexibility, rather than capping the amount of grant funding available to each vehicle classification we have developed a targeted scenario which is set out in table four below. The target approach reflects uncertainty in how the ZEHV market will evolve over the next three years and allows flexibility to support the deployment of funding across available technologies.
23. This would result in approximately 615 heavy vehicles being funded through the CHVG, across a range of vehicle sizes⁹. The target does not include retrofit projects due to uncertainty around expected uptake of grant for second hand ICE conversions.

Table Four: EECA's targeted investment through the Clean Heavy Vehicles Grant (CHVG).

Size (GVM) of vehicle	Maximum grant available	EECA target number of vehicles	Total investment
Heavy Vans (over 3.5 to 6 tonne GVM)	\$10,000	200	\$2,000,000
Trucks and non-PT buses (over 6 to 18 tonne GVM)	\$50,000	355	\$17,750,000
Heavy Trucks (over 18 tonne GVM and up to 39 tonne GCM)	\$100,000	40	\$4,000,000
Very Heavy Trucks (over 18 tonne GVM and above 39 tonne GCM)	\$200,000	20	\$4,000,000
		615	\$27,750,000

24. Based on 615 ZEHVs entering the market, we estimate that the total emissions reductions achieved through the CHVG will be approximately 190,000 tonnes CO₂e over 21 years¹⁰, with a cumulative estimated marginal abatement cost (MAC – the cost to the Crown per tonne of CO₂ abated) for the programme of around \$155.

⁹ Note these targets assume EECA would need \$0.750 million annually for establishment and ongoing operational costs to support programme delivery over the three years.

¹⁰ This is an estimation based on an average 21 year lifetime of ZEHVs.

25. For context, there are currently just 543 ZEHVs in New Zealand's fleet of around 185,000 heavy vehicles – in 2022, 226 ZEHVs entered the fleet, of which 111 were buses.¹¹
26. This marginal abatement cost aligns with what would be expected for switching to zero emission heavy vehicles, noting that switching from ICE to zero emission technologies for heavy transport would generally have materially higher costs than for light and medium transport¹². This MAC is substantially higher than more mature decarbonisation technologies (such as industrial process heat fuel switching projects under GIDI, ranging from \$12 in the first round of GIDI to \$41 in the most recent fifth round). This is to be expected due to the relatively new nature of zero emission heavy vehicles in the New Zealand market and their currently high up-front costs. This is why one of the key objectives of the CHVG is to encourage an increased supply of these vehicles into New Zealand, with the expectation that this will bring with it increased competition and reduced prices (as has been seen in the light vehicle market following the introduction of the Clean Car Discount). We would expect MAC figure to improve in future with reduced purchase prices for these vehicles.
27. It is difficult to compare this MAC to the original MAC calculated for the Clean Car Discount (about -\$150 to -\$200) as the Clean Car Discount was designed to be revenue neutral, with the cost of the rebate to the Government to be offset by the revenue from the fees. The calculation of the MAC for the Clean Car Discount also included wider costs (or cost savings) beyond the cost of the grant to government. The Clean Car Discount MAC also includes significant cost savings for electric vehicles related to lower ongoing operating costs and reduced social costs associated with harmful emissions compared to ICE vehicles. These cost savings are not included in the CHVG MAC.
28. The programme's actual emissions reductions will deviate from estimates based on the exact make up of end customers who access the grants, changes in transport route and behavioural patterns and the realised proportion of vehicles funded from each vehicle category.

¹¹ See <https://www.transport.govt.nz/statistics-and-insights/fleet-statistics/monthly-mv-fleet/>

¹² https://environment.govt.nz/assets/Publications/Files/marginal-abatement-cost-curves-analysis_0.pdf

Analysis on how the scheme will achieve objectives

29. Table Five below provides further analysis of how the programme’s key parameters are expected to support the objectives.

Table Five: Analysis of how the programme settings for the CHVG will support objectives

Objective	Support
<p>Objective 1: Continue to build the transport sector’s confidence to invest in the adoption of zero-emission trucks, non-public transport buses and heavy vans beyond demonstration, by supporting integration of zero emissions vehicles into their fleets;</p>	<p>Programme parameters as set out above have been set at a level that officials consider will build the freight sector’s confidence to invest in ZEHVs, based on our direct engagement with operators/suppliers.</p> <p>The impact of the scheme will be closely monitored via EECA’s account management function with individual clients. This will support greater insight to how fleets are progressing with their decarbonisation, and identify further opportunities for accelerating fleet operators transition to ZEHVs (and increasing uptake of the initiative).</p>
<p>Objective 2: Gather insights into other operational barriers to widespread uptake and commercialisation, such as charging and refuelling requirements and behaviour change amongst operators;</p>	<p>Data insights/reporting requirements</p> <p>Prior to receiving grant funding, customers will be requested to provide data on a range of operational factors, such as refuelling processes, key transport routes and estimated kilometres travelled. Once vehicles are operational, we will also request data on the vehicle usage and performance. This real-world data will support valuable insights into the ZEHV market, including ongoing non-price barriers.</p>
<p>Objective 3: Provide market signals to international original equipment manufacturers (OEMs), with the intent of encouraging supply of ZEHVs to New Zealand.</p>	<p>Rebate levels</p> <p>EECA is confident the vehicle categories and associated funding tiers reflect the current ZEHV market and international policy settings.</p> <p>In addition to tiers developed by Te Manatu Waka, EECA added a fourth grant tier for ‘very heavy vehicles’ to further encourage the supply of the largest ZEHVs into New Zealand. Through industry engagement, EECA sought views on required levels of funding to support ZEHV uptake, and took account of these perspectives in setting and balancing proposed tiers.</p> <p>Cap mechanism</p> <p>The introduction of caps limiting the total amount of grant funding both end customers (fleet operator) and</p>

Objective	Support
	<p>manufacturer/operators/importers can receive is expected to support equitable access to the grant and accommodate future vehicle entry.</p> <p>This will ensure that funding is not fully allocated to vehicles currently available, and supports growth in diversity of the domestic market of ZEHVs. The issuing of purchase orders will further support future entry of larger ZEHVs where there is currently a proportionately smaller supply internationally.</p>

EECA will review the CHVG programme settings after six months

- 30. It is likely that in implementation we will encounter unforeseen scenarios which reveal potential unintended consequences. Whilst we do not anticipate any of these situations will present significant risk to the programme, minor adjustments or situation-specific clarifications may be required. We are confident that adjustments can be managed whilst the scheme is operational.
- 31. A six-monthly full programme review will assess whether the current settings are supporting the Fund’s objectives and targeted uptake. If necessary, we will adjust parameters of the Fund and ensure that any changes are adequately communicated with industry and Ministers.
- 32. EECA will provide the Minister of Energy and Resources with two monthly updates on the spend profile and funding commitments of the CHVG through EECA’s routine fortnightly reporting. Additional reporting can be provided upon request.

Further analysis on the inclusion of hybrid vehicles

- 33. As committed to previously (refer EECA 2023 BRF 011, MBIE 2223-3959), officials have undertaken further analysis of the policy and technical considerations for incorporating hybrid vehicles (which includes both diesel-electric hybrid and diesel-hydrogen dual fuel) in scope of the CHVG.
- 34. The discussion around expanding the grant scope to include non-ZEHVs has primarily been based on consideration of hydrogen/diesel dual fuel vehicles. Our advice is that the grant should remain technology agnostic – therefore we recommend that if dual fuel vehicles were included in scope of the CHVG, all hybrid vehicles should be eligible.
- 35. We do not expect significant uptake of hybrid diesel electric vehicles as there is limited demand for this technology among the heavier freight classes. Across the international market, there are some hybrid diesel electric options for heavy vehicles between 3.5 to 6 tonnes GVM, and very few (if any) hybrid diesel electric trucks over 6 tonne GVM. Therefore, for the purpose of consideration of including non-

ZEHVs in the CHVG, the analysis below is based solely on uptake of hydrogen diesel dual fuel technology.

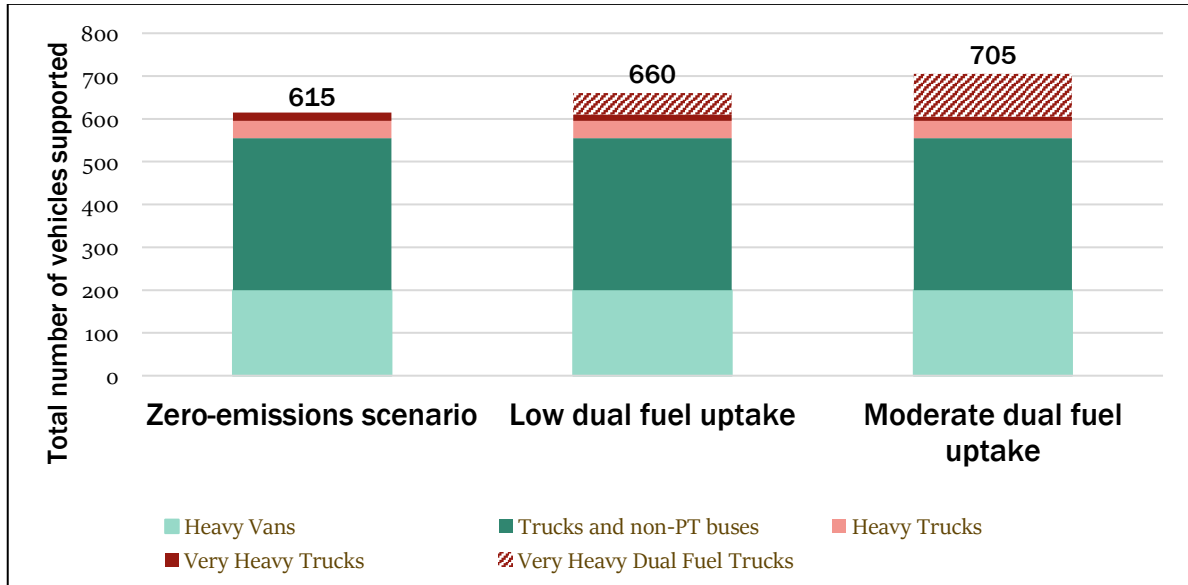
Dual fuel technology is still in the demonstration phase

36. EECA is currently supporting one project to assess the proof of concept of dual fuel technology through the Low Emissions Transport Fund (LETF). HW Richardson, a Southland-based transport company, received \$389,000 co-funding through Round 3 of the LETF to support the demonstration of hydrogen-diesel dual fuel vehicles for their heavy freight operations.
37. In March 2023, H W Richardson began operating the first of eight dual fuel vehicles and are currently testing the remaining seven trucks across a variety of different payloads and configurations (eg. milk tanker, logging, curtainsider). These are expected to be operational by the end of 2023.
38. There are significant outstanding operational considerations around the dual fuel technology that we are yet to have adequate insight into. This includes fleet operators' ability to verify the ratio of hydrogen to diesel fuel that their vehicles have consumed, which is critical for accurately calculating a vehicle's emissions profile. Without sufficient confidence in the emission reduction the technology provides, we consider it is challenging to justify providing government financial support for widespread uptake of the technology.

Including non-ZEHVs into the CHVG would reduce the impact of the initiative

39. As most, if not all, known vehicles utilising the dual fuel technology are in the 'very heavy truck' category (above 39 tonnes GCM), EECA's modelling assumes dual fuel heavy vehicles supported through the CHVG would exclusively include trucks above 39 tonnes GCM. The analysis also assume funding would only support the costs of converting the vehicle.
40. Figure 1 sets out three possible uptake scenarios:
 - **Zero-emissions scenario:** No dual fuel vehicles, current proposed approach
 - **Low dual fuel uptake:** 50 grants for very heavy dual fuel vehicles are supported, reducing the targeted 20 very heavy zero emissions trucks to 15
 - **Moderate dual fuel uptake:** 100 grants for very heavy dual fuel vehicles are supported, reducing the targeted 20 very heavy zero emissions trucks to 10

Figure 1: Comparison of the total number of vehicles supported through the CHVG under various scenarios of very heavy dual fuel vehicle grant uptake¹³



41. As shown in Figure 1 above, incorporating dual fuel vehicles into the CHVG would likely lead to an increase in the total number of vehicles supported through the scheme. This is due to the lower capital investment to support the cost of dual fuel conversions, as opposed to supporting the full purchase cost of ZEHVs.

42. For example, a \$1m investment could support the purchase of **five** 39 tonne GCM ZEHVs at \$200,000 per vehicle, or could retrofit **fifty** 39 tonne GCM ICE trucks with dual fuel technology at \$20,000 per vehicle.

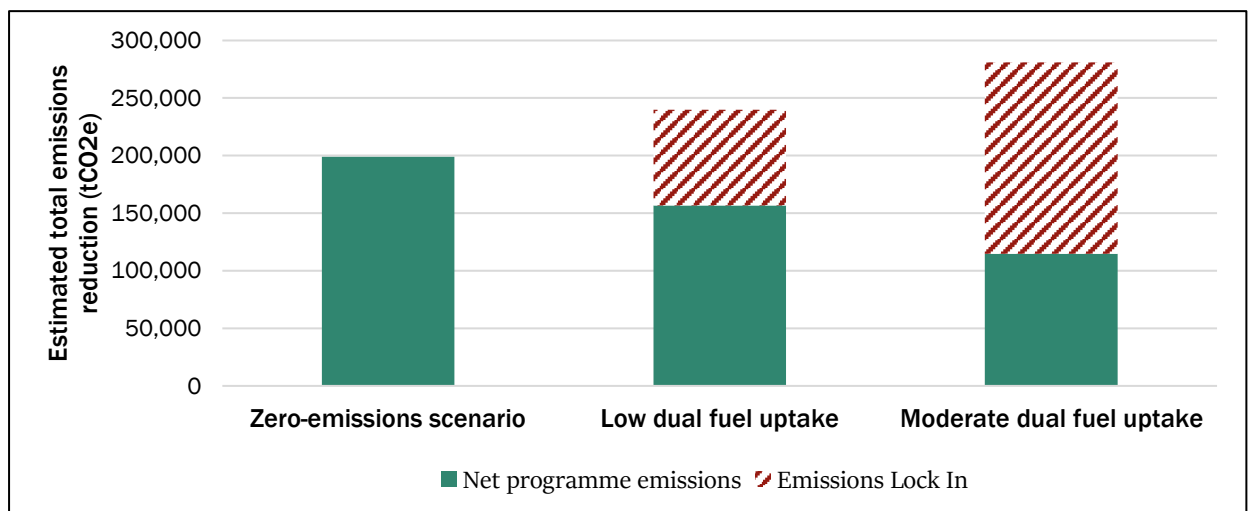
Incorporating dual fuel vehicles would reduce the emission reductions achieved through the programme

43. However, an important consideration is how the emissions lock-in associated with diesel consumed by dual fuel vehicles impacts the net emissions reductions achieved through the CHVG. As shown in Figure 2 below, funding dual fuel vehicles through the CHVG could (relative to the zero emissions scenario):

- result in an estimated emissions lock in of between 83,000 - 166,000 tonnes CO₂e emitted over the lifetime of the vehicles.
- reduce the estimated net programmes emissions reductions by around 42 percent, from an estimated 190,000 tonnes CO₂e to 110,000 tonnes CO₂e.

¹³ This assumes that funding for retrofit conversions of dual fuel technology would only cover 25% of the conversion costs, based on the estimated \$80,000 cost to convert an ICE truck to a dual fuel truck.

Figure 2: Comparison of emissions reduced by the Clean Heavy Vehicle Grant



44. It should also be noted that the 40:60 ratio of hydrogen to diesel fuel use assumed through this modelling is likely over-estimating the proportion of hydrogen dual fuel vehicles consume. This assumption is based on HW Richardson’s estimation that their vehicles will consume **up to 40%** hydrogen for their total fuel use, which is yet to be verified. As this is the best case figure, EECA expects the real world ratio of hydrogen to diesel fuel use to be lower, meaning that the scenarios above are likely over-estimating the emission reductions provided by the dual fuel vehicles (and underrepresenting the emissions lock-in).

45. There is also a risk that including hybrid vehicles could reduce decarbonisation ambition, as fleet operators may choose to purchase a hybrid vehicle delaying the transition to a zero emissions option. This could in turn affect New Zealand’s COP27 MOU commitment to increase ZEHV sales to 30% by 2030.

The Marginal Abatement Cost is more attractive when CHVG is limited to zero emissions vehicles

46. The programme’s MAC could increase by around 77 percent if the CHVG supported dual fuel vehicles:

- Zero emissions scenario: \$155
- Low dual fuel uptake: \$200
- Moderate dual fuel uptake: \$275

Expanding the programme to incorporate hybrid vehicle does not align with the overarching objectives

47. Retrofitting dual fuel technology into either newly imported ICE trucks or existing second-hand ICE fleets would reduce the achievement of the objectives to send market signals to international OEMs and advance the establishment of supply of ZEHVs to NZ. This is because fewer ZEHVs would be supported through the initiative, which would be displaced by the purchase of ICE vehicles (domestically

retrofitted). This is most relevant for the ZEHV sales among the ‘very heavy truck’ category, where the majority of dual fuel conversions are expected to displace.

However, incorporating hybrid vehicles may support other government objectives

48. The **Hydrogen Roadmap** will set the government’s objectives for hydrogen and its potential to reduce emissions, and consider the steps that should be taken to harness the hydrogen opportunity to support the transition to a net zero emissions economy. The draft roadmap highlights the grant as one of the recently announced actions the government is taking to support hydrogen uptake in nationally strategic uses, along with the **Regional Hydrogen Transition consumption rebate initiative**.
49. MBIE’s Just Transitions Partnerships team notes that including dual fuel hydrogen-diesel in the CHVG would be beneficial to the government’s hydrogen programme and that dual fuel vehicles could play an important role in driving demand for domestic hydrogen, and the development of supply chains and refuelling networks. At this stage, it is unclear whether supporting dual-fuel vehicles through the CHVG will provide a material difference towards supporting hydrogen uptake.
50. The **Regional Hydrogen Transition initiative will support** early consumers of green hydrogen in New Zealand by bridging the price gap between hydrogen and fossil fuel alternatives, using long-term contracts to provide certainty of a future markets to encourage investment. Some operators of hydrogen fuel cell heavy vehicles (FCEVs) may become eligible for this rebate as well as the grant. If the CHVG included funding for dual fuel vehicles, this may increase uptake of the regional hydrogen initiative, but may also increase the MAC for the Crown.

The programme would benefit from more detailed design if hybrid vehicles are to be included

51. Introducing hybrid vehicles into the scheme creates complexities to the programme design that EECA considers it would be unable to resolve by the proposed launch date of 1 October 2023. This is primarily due to the uncertainty around the process for verifying emissions, particularly for hydrogen dual fuel vehicles where the technology is still being demonstrated.
52. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]. This would require a significant amount of information and understanding of the particular dual fuel technology being used.
53. It would also take time to set a criteria around what level of emissions reduction of dual fuel vehicles would be eligible for the grant (i.e. proportion of hydrogen/diesel fuel use) and how to monitor this.
54. If Ministers would like to include dual fuel vehicles in scope of the scheme, EECA will provide further advice on the eligibility criteria and appropriate funding levels in a subsequent briefing.

Options for including dual fuel and hybrid vehicles into the grant scheme

55. Following your consideration of the analysis above, we have provided three options around inclusion of non-ZEHVs in the CHVG.

Option A: Launch the CHVG on 1 October 2023 with the scope limited to ZEHVs

- The most impactful grant scheme would be limited to ZEHVs due to the policy considerations outlined above. This option would also provide certainty to industry on the scope of the Grant from the outset, whereas incorporating hybrid vehicles at a later date (option B) may confuse the market.
- Should you choose this option, Officials can provide further advice on the most appropriate funding sources available to support hybrid vehicles, noting that Te Manatū Waka are continuing to assess whether a Clean Truck Discount would be suitable.

Option B (*preferred*): Launch the CHVG on 1 October 2023 with the initial scope limited to ZEHVs and signal possible future incorporation of hybrid vehicles

- This approach would be appropriate if you would like to reconsider the inclusion of hybrid vehicles once further information is obtained to assess whether dual fuel vehicles have adequately surpassed demonstration, and have solved uncertainties around their fuel verification.
- Under this option, as part of the six month review of the CHVG, officials would advise on the adjustments required to incorporate hybrid vehicles into the scheme, including specific eligibility criteria, funding levels, and how the inclusion may support demand for domestic hydrogen production and development of supply chains and refuelling networks.

Option C (*not preferred*): Defer the launch of the CHVG until hybrid vehicles can be incorporated from the outset (likely April 2024)

- Officials do not recommend this approach, however if you are clear in the expectation that the CHVG should be targeted towards *low emissions heavy vehicles* rather than the proposed *zero emissions heavy vehicles* then you may see merit in delaying the launch to allow the time required for officials to undertake detailed programme design to support the incorporation of hybrid vehicles from the outset.

Next steps

56. EECA will support your office(s) to announce the launch of the CHVG. We recommend you forward this briefing to the Minister of Transport for their information.

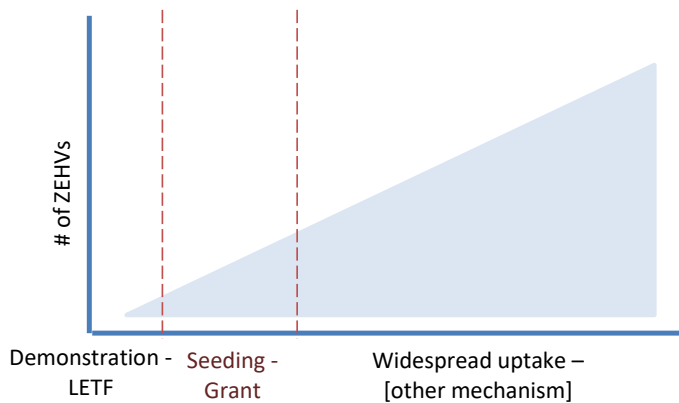
Appendix One: Complementary heavy freight programmes and policy measures

- There are a range of other policy measures and programmes which are expected to work in parallel with the CHVG in support of the uptake of ZEHVs in New Zealand. In addition, the government must adopt a second Emission Reduction Plan by the end of next year (2024), and this may outline additional or stronger policies to reduce heavy vehicle CO2 emissions.
- A single entity receiving co-funding through the Grant could be eligible for co-funding through all of the programmes below as they target different aspects of the freight decarbonisation journey. The complementing initiatives include:

EECA's Low Emissions Transport Fund (LETF)

- In June we sought your approval of the objectives of the grant and provided context on how the different mechanisms of the LETF and CHVG will operate in parallel to support heavy freight sector decarbonisation (refer EECA BRF 011, MBIE 2223-3959). Where the LETF supports early adopters to overcome the price and availability barriers associated with a new technology's demonstration phase, eligibility through the grant will be limited to ZEHVs with technology that has been comprehensively proven. The CHVG will offer the next phase of support for vehicles which have surpassed this demonstration and are likely ineligible for further LETF support, despite still having significant upfront costs.
- Many of the companies EECA has worked with through the LETF have advised that they are willing to add additional vehicles into their fleets but are unable to make the business case stack up due to the upfront capital cost. Vehicle manufacturers have also advised that they are willing to provide more zero emission trucks to New Zealand but require larger orders of vehicles to justify supplying right hand drive vehicles to New Zealand.
- As shown in the diagram below, the grant will support seeding of ZEHVs in the market while the uptake is relatively low and before we see widespread uptake.

Diagram 1: Positioning of Clean Heavy Vehicles Grant



**Note this diagram is for illustrative purposes only and provides a high-level visual representation of the positioning of a Clean Heavy Vehicles Grant. It is not intended to provide a quantitative analysis.*

EECA's Freight Decarbonisation Round

- Through Budget 2022, EECA received \$15 million to provide co-funding for freight decarbonisation projects. This will be administered through one or more dedicated contestable rounds of the existing Low Emission Transport Fund. Market analysis is underway with the first tranche of reports to be available from October 2023 and market engagement ongoing, aiming to prepare a programme for early 2024.

MBIE's Regional Hydrogen Transition initiative

- The \$100m Regional Hydrogen Transition initiative, announced at Budget 23, will fund long-term contracts (10 years) with consumers, supporting firms engaged in the productive use of green hydrogen for either chemical synthesis or as a fuel to bridge the price gap between fossil fuels. Examples of consumers may include trucking companies [REDACTED] chemical producers, airlines or shipping companies. MBIE anticipates conducting a competitive auction for participants in early 2024.

To: Hon Simeon Brown
MINISTER FOR ENERGY

Title of briefing	Information on EECA's freight transport programmes		
Date	30/01/2024		
EECA reference number	EECA 2024 BRF 002	Response required by:	13 February 2024
EECA priority	Routine		
Consultation	Ministry of Business, Innovation and Employment (MBIE), Ministry of Transport (MOT), New Zealand Transport Agency (NZTA)		
Attachments	Appendix One: Details on the Low Emissions Heavy Vehicle Fund (LEHVF)		

EECA contacts

Position	Name	Mobile Number	Work Number	1 st Contact
Chief Executive	Dr Marcos Pelenur	██████████	+64 4 495 8257	✓
Responsible manager	Will Jensen	██████████	+64 4 470 2441	
Principal author	Alex Doyle Franklin	██████████	+64 4 470 2425	

Purpose

- To provide information about existing initiatives to address market barriers to freight decarbonisation, to support a discussion about alignment with Government priorities on 1 February 2024.

Key messages

- EECA has supported freight and transport companies to trial zero emissions heavy vehicles (ZEHVs) in New Zealand. This has demonstrated such vehicles can operate successfully, productively, and safely on New Zealand roads.

- Uptake of these vehicles has begun in New Zealand, but much more slowly than seen for light vehicles. EECA has engaged closely with freight and heavy vehicle companies to understand what the barriers to faster uptake are, and the most appropriate approach to facilitating the freight sector's transition to ZEHVs, with the momentum and pace required to align with our international counterparts and meet domestic ambitions.
- Based on this engagement, we have designed two programmes to address different barriers to ZEHV uptake. These are the \$30 million Low Emissions Heavy Transport Fund (introduced in Budget 2023) to address upfront cost barriers, and the \$15 million Freight Decarbonisation Fund (introduced in Budget 2022) to address other barriers, including heavy vehicle charging infrastructure.
- We wish to discuss these programmes and your priorities for freight decarbonisation at our next meeting with you on 1 February 2024. If you wish to rescope aspects, we can re-design for rapid market introduction.

Recommended actions

- a. **Note** EECA has undertaken industry engagement with freight and heavy vehicle companies to better understand market barriers to freight decarbonisation, reflected in the design of new programmes funded through Budget 2022 and Budget 2023.
- b. **Discuss** your priorities around freight decarbonisation, and how these programmes can best address them.



Dr Marcos Pelenur
CHIEF EXECUTIVE
30 / 01 / 24

Hon Simeon Brown
MINISTER FOR ENERGY
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Background

Freight and heavy transport are early in their decarbonisation journey

2. Road transport is New Zealand's biggest source of energy-related carbon emissions. Despite representing a small proportion of the fleet (6%), heavy vehicles make up around a quarter (24.4%) of New Zealand's total transport emissions. This is due to heavy vehicles frequently travelling long distances and transporting very heavy loads.
3. There are currently only 562 zero emissions heavy vehicles (ZEHVs) in New Zealand's fleet of around 188,000 heavy vehicles – in 2023, 136 ZEHVs entered the fleet, of which 99 were buses¹.

We have made international commitments to reduce emissions from heavy vehicles

4. Decarbonising heavy transport can contribute to New Zealand's climate change targets. New Zealand has committed to a global memorandum of understanding with 32 other countries (including Australia, United States, United Kingdom, Canada), as well as subnational governments, vehicle manufacturers and fleets, to increase sales of new ZEHVs to 30% of total sales by 2030 and 100% by 2040.
5. The first Emissions Reduction Plan includes commitments to:
 - a. reduce emissions from freight transport by 35% by 2035 (based on 2019 levels); and
 - b. provide funding to support the freight sector to purchase zero- and low-emissions trucks.

We have engaged with industry to better understand market barriers to freight decarbonisation

6. Since 2017, EECA has provided co-funding to support the demonstration of ZEHVs and enabling technologies through the Low Emission Transport Fund (LETF) and its predecessor, the Low Emissions Vehicle Contestable Fund (LEVCF).
7. While low emission light passenger vehicles, particularly EVs, are now a viable market alternative for many consumers, heavy vehicle decarbonisation technologies are not as widely available and demand a significant price premium. Most ZEHVs have surpassed the demonstration phase, meaning heavy vehicle fleet electrification projects are mostly ineligible for LETF support. There are still significant barriers preventing widespread uptake of ZEHVs.
8. EECA has recently undertaken industry engagement with freight and heavy vehicle companies. Some of the main barriers that these businesses have identified are:
 - **Upfront capital cost is the primary barrier to uptake of ZEHVs** - ZEHVs have high upfront capital costs compared to internal combustion engine (ICE) vehicles, due to the high costs of the vehicles in early commercialisation and any infrastructure needed to support recharging/refuelling. Freight operators make purchasing decisions in part based on the Total

¹ See <https://www.transport.govt.nz/statistics-and-insights/fleet-statistics/monthly-mv-fleet/>

Cost of Ownership (TCO), which includes upfront purchase prices and operating costs. Even though operating costs of ZEHVs are expected to be lower than ICE equivalents, this high upfront capital cost means that the TCO for ZEHVs is currently still significantly higher. While prices are expected to come down over time, this creates a challenge for operators in the current environment to make a business case for ZEHV adoption.

- **Additional barriers are impacting ZEHV uptake** - other than TCO, including accessing adequate electricity supply for vehicle charging and ‘first mover disadvantage’ costs with network upgrades, adhering to current vehicle dimension and mass rules, and access to the current limited global supply of ZEHVs.
- **Energy security considerations** – fleets with heavy ICE vehicles are exposed to diesel supply disruptions, exacerbated by supply chain issues and impacts on the diesel market due to geopolitical tensions.
- **Constraints on supply of ZEHVs and associated technologies** – including variability in timing for the supply of ZEHVs, with an approximate 6 - 12 month lead time on international orders. There are also different minimum factory orders required to support dedicated construction of right-hand drive vehicles and delivery to New Zealand, ranging from single units to 20 vehicles.
- **General uncertainty about transition risks** – our engagement suggests businesses across the freight sector are unsure about their options/technology choices and are not always equipped with the expertise to anticipate future costs associated with these decisions. This is particularly present when considering fleet optimisation and transition to alternative transport modes (i.e. to rail/sea freight). This suggests there is an information provision and coordination role for government to play in sharing expertise on solutions and facilitating industry collaboration.

There is a role for Government to support and coordinate the next stage of freight transition

9. As the freight sector (land, air and sea) has evolved, the opportunities, challenges and potential solutions that businesses have approached EECA about have become more complex. Rather than just testing a specific technology in a certain application, the opportunities are often large, covering multiple modes and involving a number of stakeholders. An example of this is the decarbonisation and efficiency improvements that could be tested at multimodal ports. For this reason, we see a coordinated ‘wraparound’ approach to industry support is necessary, as described below.
10. Industry body, Transporting New Zealand, has commented to EECA and publicly that they anticipate challenging economic conditions to continue for transport companies in 2024/2025, and that this barrier could see transport companies suspend or delay decarbonisation investment.

New programmes present an opportunity to address these barriers

11. The Freight Decarbonisation Fund (FDF) and the Low Emissions Heavy Vehicle Fund (LEHVF) have been designed to work alongside the existing LETF. EECA will work with businesses to understand barriers they face and identify opportunities for support, utilising the three programmes as

necessary to ensure the right outcome is achieved. The programmes are distinct based on their investment focus:

- **Low Emissions Transport Fund (LETF)** (existing programme) - Supports the demonstration and adoption of low emission transport technology, innovation and infrastructure to overcome the price and availability barriers associated with a new technology's demonstration.
- **Freight Decarbonisation Fund (FDF)** (new initiative) - Designed to target opportunities in complex freight ecosystems, addressing gaps where industry would benefit from Government support and facilitation across the sector. Budget 2022 committed \$15 million for this programme across three years (2023/24-2025/26). The four key focus areas of the FDF will include:
 - **Wraparound support for businesses with ZEHVs** - supporting fleet optimisation studies and transition plans, identifying and supporting charging infrastructure requirements and enabling technologies. This will identify opportunities for businesses to optimise freight movement, encourage the use of smart apps to better manage freight logistics and reduce empty truck movements.
 - **Public and shared heavy vehicle charging hubs** - including public urban hubs, shared regional/local charging sites between transport companies and major transport hubs/truck stops along key freight linehaul locations.
 - **Shared/multi-modal and port solutions** - coordinating and facilitating key industry players to undertake feasibility studies to gain a better understanding of opportunities and encourage collaboration in areas such as port shore power, connection to rail and truck charging.
 - **Manufacturer minimum order pilots** - coordinating importers and manufacturers with fleet businesses to enable cutting edge freight technologies to enter our market which otherwise would face barriers due to minimum factory order requirements.
- **Low Emissions Heavy Vehicle Fund (LEHVF)** - Designed to provide grant funding towards ZEHVs with comprehensively proven technology. The programme aims to encourage early adoption of ZEHVs and assist businesses to better understand the realities of incorporating these vehicles into their fleet operations (including infrastructure needs, fleet route optimisation and battery size versus payload considerations). Budget 2023 committed \$30 million for this programme across three years (2023/24-2025/26). Further details on the current design of the LEHVF is outlined in Appendix One.

Next steps

12. We wish to discuss these programmes and your priorities around freight decarbonisation at our meeting with you on 1 February 2024.
13. Whilst both the FDF and LEHVF are ready to launch to market, if you wish to rescope aspects, we can re-design for rapid market introduction.

Appendix One: Details on the Low Emissions Heavy Vehicle Fund (LEHVF)

14. The \$30 million Low Emissions Heavy Vehicle Fund (introduced through Budget 2023 as the Clean Heavy Vehicles Grant) stimulates the uptake of ZEHVs, supporting 'first movers' by addressing the purchase price barrier to the adoption of ZEHVs in New Zealand.
15. Supporting businesses to purchase a ZEHV will allow them to experience first-hand what it's like to incorporate a ZEHV into their fleet and better understand the barriers that may exist, which can potentially be addressed through the Freight Decarbonisation Fund (FDF).

Programme design is complete and the LEHVF is ready to launch to market

16. Alongside the Ministry of Transport (MOT) and the New Zealand Transport Agency (NZTA), EECA has worked closely with the trucking and freight industry to ensure the design of the programme both reflects the most appropriate Government intervention to decrease barriers to the uptake of ZEHVs and encourage manufacturers to bring their vehicles to our market.
17. The design of the LEHVF had been guided by the following high-level programme objectives:
 - Continue to build the transport sector's confidence to invest in the adoption of zero-emission trucks, non-public transport buses and heavy vans beyond demonstration, by supporting integration of zero emissions vehicles into their fleets;
 - Gather insights into other operational barriers to widespread uptake and commercialisation, such as charging and refuelling requirements and behaviour change amongst operators;
 - Provide market signals to international original equipment manufacturers (OEMs), with the intent of encouraging supply of ZEHVs to New Zealand.

The programme will target zero emission heavy vehicles over 3.5 tonnes

18. The LEHVF was designed to fund new zero on-road emissions heavy vehicles (i.e. battery electric vehicles and hydrogen fuel cell vehicles), at the point of first registration in New Zealand. Funding will only be available to vehicles over 3.5 tonnes.
19. EECA assessed whether additional safety conditions for ZEHVs should be required (beyond minimum requirements for heavy vehicles set out in the Land Transport Rules). Manufacturers have told us that most (if not all) new battery electric ZEHVs are equipped with the more common safety features of Lane Keep Assist, Emergency Engine Breaking and Electronic Stability Control. At this stage however, most NZ-based retrofitters would struggle to meet these requirements. Therefore, at the launch of the programme, we will require non-retrofitted vehicles to have the three additional safety requirements (as above) and signal to retrofitters they will be expected to meet those by the end of 2024.

Funding will vary according to vehicle size, reflecting the higher price point of heavier vehicles

20. Table 1 below sets out the funding we intend to offer for different heavy vehicle categories. The rebate will cover 25 percent of the purchase price with a capped maximum that increases with the vehicle size, reflecting the variation of pricing across ZEHVs.

Table 1: Proposed grant levels for new vehicles under the CHVG.

Size (Gross Vehicle Mass (GVM ²)) of vehicle	Grant Offered	Pricing of products in this segment (BEV/FCEV)
Heavy Vans (over 3.5 to 6 tonne GVM)	25% of purchase price, capped at \$10,000+GST	\$90k - \$120k (vans)
Trucks and non-PT buses (over 6 to 18 tonne GVM)	25% of purchase price, capped at \$50,000+GST	\$150k - \$250k (small trucks)
Heavy Trucks (over 18 tonne GVM and up to 39 tonne GCM)	25% of purchase price, capped at \$100,000+GST	Many hundreds of thousands of dollars, up to ~\$1M
Very Heavy Trucks (over 18 tonne GVM and above 39 tonne GCM ³)	25% of purchase price, capped at \$200,000+GST	Many hundreds of thousands of dollars, up to ~\$1M

21. Funding tiers were informed by workshops, a review of product pricing and a literature review of international programmes (work led by MOT). The 25 percent limit is intended to prevent over-subsidisation if vehicle purchase price drops significantly. Due to the high-upfront purchase price of ZEHVs, officials expect that initially, most vehicles eligible for the grant will receive the full rebate offered for each category.
22. The programme has also been designed to support domestic retrofit of second-hand vehicles, to allow entities who have recently purchased ICE vehicles the choice to abate their emissions through conversion to a zero-emission technology. Funding will be limited to supporting 25% of the capital cost of converting second-hand vehicles to a ZEHV with caps, and will only be available to vehicles less than two years old when the programme launches.
23. To support market flexibility, EECA has developed a targeted scenario of investment for the programme rather than a cap for each vehicle category. This would see approximately 615 heavy vehicles supported through the LEHVF – predominantly in the 6 to 18 tonne vehicle category. For context, there are currently just 562 ZEHVs in New Zealand’s fleet of around 188,000 heavy vehicles – in 2023, 136 ZEHVs entered the fleet, of which 99 were buses.⁴

² Gross Vehicle Mass is the maximum allowable weight of the vehicle (including empty weight, payload, driver, and any fuel).

³ Gross Combined Weight (GCW) is the sum of the GLWs (gross laden weights) that make up a combination vehicle. GLW is the greatest of:

- Any weight specified (following the latest modification, if applicable) as a vehicle’s GLW by the vehicle’s manufacturer
- Any weight specified as the GLW of a particular vehicle (or a a vehicle of its kind) by Waka Kotahi
- The weight of a vehicle together with any load it is carrying, including any equipment and accessories.

⁴ See <https://www.transport.govt.nz/statistics-and-insights/fleet-statistics/monthly-mv-fleet/>

To	Hon Simeon Brown MINISTER FOR ENERGY		
Title	Approach for introducing the Low Emission Heavy Vehicle Fund (LEHVF) to market		
Date	17/05/2024		
EECA reference number	EECA 2024 BRF 007	Response required by:	31 May 2024
EECA priority	Routine		

EECA contacts

Position	Name	Mobile Number	Work Number	1 st Contact
Chief Executive	Dr Marcos Pelenur			✓
Principal author (EECA)	Alex Doyle Franklin	██████████	04 470 2425	

Purpose

- To provide information on the remaining steps to launch the Low Emission Heavy Vehicle Fund (LEHVF) to market.

Recommended actions

- Note EECA will immediately engage with the interagency working group (MoT, MBIE, NZTA, the Treasury) and industry to finalise programme design for the LEHVF, ahead of programme launch in early August.



Murray Bell
GROUP MANAGER, POLICY AND
REGULATION
17 / 05 / 2024

Hon Simeon Brown
MINISTER FOR ENERGY
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The Low Emission Heavy Vehicle Fund (LEHVF)

2. The \$30 million LEHVF has been designed to overcome market barriers to accelerate the uptake of Zero Emission Heavy Vehicles (ZEHVs) in New Zealand. The initiative was introduced through Budget 2023 as the Clean Heavy Vehicles Grant (CHVG). We previously modified the name to allow operational flexibility to incorporate low emissions hybrid vehicles into the programme.
3. In previous advice to you, we provided an overview of the programme design conducted throughout 2023 (refer EECA 2024 BRF 002). This was supported by the Ministry of Business, Innovation and Employment (MBIE), the Ministry of Transport (MoT) and the New Zealand Transport Agency (NZTA), and involved engagement with industry (including suppliers, lease companies and prospective customers) to better understand the market barriers to freight decarbonisation.
4. Design of the LEHVF has been guided by the following high-level programme objectives:
 - Overcome barriers to the transport industry investing in low-emission trucks beyond demonstration, and support integration of low emission vehicles into their fleets;
 - Provide market signals to international original equipment manufacturers (OEMs), to accelerate the supply of ZEHVs to New Zealand;
 - Gather insights into other operational barriers to widespread uptake and commercialisation, such as charging and refuelling requirements and behaviour change amongst operators.
5. The design is administratively simple, with the amount of funding available varying by vehicle size and available to fleet operators at the point of first registration in New Zealand. We have designed the programme to be technology agnostic, to stimulate investment in a broad range of low emissions technologies, including hydrogen and battery electric options.

Timeline for programme launch

6. As the majority of programme design is complete, we expect to be ready to launch the programme by early August, as per the schedule set out in the table below.

Week beginning	Key milestone
20 May	Finalise design details, working with interagency group (including MoT, MBIE, NZTA and the Treasury) to leverage expertise and ensure alignment with NZTA's heavy vehicle programme.
3 June	Engage with industry to test fully designed programme.
17 June	Finalise operational details, incorporating feedback from interagency and market engagement.
1 July	Procurement processes and communication planning.
Mid July	Engage with your Office on official programme launch.
29 July	Launch programme, subject to your availability.

7. Our immediate focus will be engaging with an interagency working group and engaging with industry to inform final operational programme adjustments required to the original 2023 design.

This is to ensure the programme is targeted to generate the highest value for the Government's investment.

8. Specifically, we will be testing any unintended consequences or concerns around possible changes including:
 - i) Excluding vans by narrowing the eligible vehicles to covering trucks over 6 tonnes gross vehicle mass (GVM) which are more exposed to key barriers to uptake, including high upfront capital costs, and supply chain constraints.
 - ii) Expanding the criteria to include hybrid vehicles with proven technology, to make the programme more accessible for operators who are interested in incorporating low emissions technologies into their fleet, but feel particularly risk adverse due to challenging economic conditions across the freight sector.
9. We will re-analyse the expected impact of the programme, to inform our value for money assessment and a robust framework by which to evaluate the scheme's impact. We expect the programme will generate moderate emissions reductions, with the key success indicator being the diffusion of low emissions transport technologies across different sectors to accelerate uptake of ZEHVs, and positioning New Zealand favourably towards achieving our International COP27 MOU commitment to increase zero emissions heavy vehicle sales to 30% by 2030.

Next steps

10. EECA will undergo the final stages of programme design, including analysing the estimated impact of the programme to inform value for money assessment.
11. We will work with your Office to announce the launch of the programme.

To	Hon Simeon Brown MINISTER FOR ENERGY		
Title	Final details on the Low Emissions Heavy Vehicle Fund (LEHVF)		
Date	21 June 2024		
EECA reference number	EECA 2024 BRF 008	Response required by:	5 July 2024
EECA priority	Routine		

EECA contacts

Position	Name	Mobile Number	Work Number	1 st Contact
Chief Executive	Dr Marcos Pelenur			✓
Principal author (EECA)	Alex Doyle Franklin		04 470 2425	

Purpose

1. To provide you advice on the final design details of the Low Emissions Heavy Vehicle Fund (LEHVF) and seek your approval to progress to the launch stage.

Key messages

- The Low Emissions Heavy Vehicle Fund (LEHVF) (first introduced through Budget 2023 as the Clean Heavy Vehicles Grant (CHVG)) has been designed to address the high upfront cost barrier to the uptake of zero emissions heavy vehicles (ZEHVs) and encourage manufacturers to bring their vehicles to our market.
- We have reviewed the details of the programme originating from the 2023 design, and have identified opportunities for some minor adjustments to better target the programme and generate the highest value for the Government’s investment. These proposed changes are excluding heavy vans and reducing the maximum funding available per vehicle.
- Additionally, your approval is sought on including hybrid vehicles with proven technology (plug-in diesel electric hybrid and hydrogen diesel dual fuel) into the programme. Expanding support to include transitional hybrid vehicles adds another technology option for operators, making the programme

more accessible. We also believe it meets your expectation to increase the number of vehicles supported through the programme as quickly as possible, as domestic hybrid conversions are not exposed as strongly to supply chain constraints of international markets which limits supply of ZEHVs. However, there are risks associated with bringing hybrids into the LEHVF. Most notably, it complicates the ability to accurately estimate the programme's abatement, which may have implications on future emissions reporting. Should you agree to include hybrid vehicles, funding levels have been appropriately right-sized to support the costs of this conversion process without disincentivising investment in zero emissions technologies.

- The LEHVF will be reviewed after six months to assess its performance against the fund's objectives. Following which, EECA will brief you on any recommended programme adjustments (if required) in March 2025. Timelines for programme changes will be well communicated with industry to ensure they can adequately prepare. In the meantime, you will receive quarterly reporting on progress of the LEHVF through EECA's Fortnightly Reports.

Recommended actions

- Agree** to update the design of the LEHVF as developed and detailed in this paper to better target the programme and generate the highest value for the Government's investment. This includes:

 - **Excluding heavy vans** under 5.9 tonnes gross vehicle mass (GVM) to target funding to trucks which are less prevalent and more exposed to key barriers to uptake.

Agree / Disagree

 - **Reducing the maximum funding available per vehicle** to ensure investment better aligns with emission reductions the vehicles generate. The rebate will cover 25 percent of the purchase price with a capped maximum, which increases as vehicle size increases, reflecting the variation of pricing across ZEHVs and hybrid vehicles.

Agree / Disagree
- Note** we advise that including hybrids will support your expectations for the programme to maximise the number of low emissions heavy vehicles are supported, and the pace in which they are introduced to our roads.
- Agree** to include hybrid vehicles with proven technology into the LEHVF, with funding levels considerably lower than zero emissions alternatives to align with their smaller emissions reductions impact (up to 40% of a ZEHV).

Agree / Disagree
- Note** that based on the programme settings outlined in recommendation (a) and (c), EECA considers the LEHVF will meet the programme objectives and, subject to your approval of changes, can be available in the market from August 2024.
- Note** should you wish to announce the launch of the LEHVF, EECA will support your office.



Marcos Pelenur
CEO, EECA
21 / 06 / 2024

Hon Simeon Brown
MINISTER FOR ENERGY
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Background

2. The \$30 million LEHVF has been designed to overcome the primary market barrier of high upfront capital costs associated with Zero Emission Heavy Vehicles (ZEHVs) in order to accelerate their uptake in New Zealand. Additional barriers faced by the freight industry, including the constraints on vehicle supply to New Zealand (due to remote location and right-hand drive requirements), have been considered during the design.
3. Challenges with heavy vehicle charging/refuelling infrastructure will be considered by the interagency Supercharging EV Infrastructure Taskforce as the forward work programme is developed. In the short-term, EECA is currently planning to support the demonstration of some public heavy EV charging hubs (either fully public or shared between several companies) as part of its 2024/25 Low Emission Transport Fund (LETF) activity. The viability of public hydrogen refuelling infrastructure is being trialled in a government supported project with Hiringa Energy Limited, involving four North Island refuelling stations, of which three are now operational.
4. In previous advice to you, we provided an overview of the LEHVF programme design conducted throughout 2023 (refer EECA 2024 BRF 002) which was guided by the following high-level programme objectives:
 - Continue to build the transport sector’s confidence to invest in the adoption of zero-emission trucks, non-public transport buses and heavy vans beyond demonstration, by supporting integration of zero emissions vehicles into their fleets;
 - Gather insights into other operational barriers to widespread uptake and commercialisation, such as charging and refuelling requirements and behaviour change amongst operators;
 - Provide market signals to international original equipment manufacturers (OEMs), with the intent of encouraging supply of ZEHVs to New Zealand.
5. The table below sets out the scope of the LEHVF, subject to your approval of programme adjustments sought through this paper.

Table One: Scope of the LEHVF

In scope	Out of Scope
<ul style="list-style-type: none"> • Zero emissions on-road trucks and non-public transport buses (over 5.9 tonnes) • Both battery-electric (BEV) and hydrogen FCEV heavy vehicles • Retrofitted second hand heavy vehicles • New import retrofitted heavy vehicles • Hybrid vehicles with proven technology meeting a minimum of 30% emissions reductions (plug-in diesel electric hybrid and hydrogen diesel dual fuel) 	<ul style="list-style-type: none"> • Vehicles under 5.9 tonnes • Vehicles intended to use biofuel • Charging or hydrogen refuelling infrastructure • Public transport buses • Off-road vehicles or heavy equipment • Trailers with e-axles

6. In a letter to you on 14 May 2024 from leading heavy vehicle importers (endorsed by the Motor Industry Association), Industry referenced that following the announcement of the programme in 2023, many leading manufacturers have prioritised the New Zealand market for zero emissions trucks, suggesting there will be high demand for the programme.

7. Following the Budget 2024 announcement that the programme would progress, we have reviewed the initial design to ensure it is still fit for purpose in the current market and is appropriately targeted to generate the highest value for the Government's investment.

Updates to the previous design of the LEHVF

8. We have identified opportunities for minor adjustments to the initial design to better target the programme and generate the highest value for the Government's investment. These include:
 - **Excluding heavy vans** to target funding to trucks which are less prevalent and more exposed to key barriers to uptake.
 - **Reducing the maximum funding available per vehicle** to ensure investment better aligns with emission reductions the vehicles generate.
9. The following section provides further details on these proposed changes. These settings will be carefully monitored on an ongoing basis over the course of the programme, with advice on any required updates provided to you following the programme's six month review.

Targeting investment to heavier vehicles which are more exposed to market barriers

10. Our initial design process saw heavy vans (between 3.5 to 6 tonne GVM) eligible for grant funding. This was considered appropriate at the time due to the synergies with the Clean Car Discount (which funded vehicles up to 3.5 tonne in size). After reviewing this approach, we see value in narrowing the eligibility to remove vehicles under 5.9 tonnes GVM, reflecting their greater market availability and lower cost relative to ICE equivalents. This will better target grant funding towards heavier vehicles which are less prevalent across the New Zealand market, and more exposed to the barriers of high upfront capital costs and supply chain constraints.
11. We have set the lower weight limit to 5.9 tonnes (rather than 6 tonnes) as manufacturers make 5.9t trucks and 8.5t trucks which are functionally the same vehicle with different carrying capacities, but operators often choose the lower rated vehicle to allow for drivers with class 1 licences to drive them. On average, 1,000 trucks registered in New Zealand annually are between 5.9-6 tonnes. For comparison, there are also about 1,000 sales of 6-12 tonne vehicles per year.

Risks associated with this change

12. As industry is aware of details of the previous design, it is likely that some manufacturers with lighter heavy vehicles (including Ford and Mercedes) will be dissatisfied with the removal of vans from the scope and may look to raise these concerns with you. We do not believe this risk warrants a change in approach and can support you in responding to any queries.

Reducing the maximum funding available per vehicle

13. Table two below sets out the proposed grant levels for new vehicles under the LEHVF. The rebate will cover up to a maximum of 25 percent of the purchase price (limited to the cab chassis¹) with a capped maximum that increases with the vehicle size, reflecting the variation of pricing across ZEHVs. As part of our review process, we have reduced the cap of maximum funding available for each vehicle class so funding is relative to the emissions generated from that vehicle class, while still providing sufficient support to overcome the high upfront capital cost barrier.

Table Two: Grant levels for new vehicles under the LEHVF

Size (Gross Vehicle Mass (GVM ²)) of vehicle	Previous grant offering	New grant offering	Pricing of products in this segment (BEV/FCEV)
Trucks and non-PT buses (over 5.9 tonne to 18 tonne GVM)	25% of purchase price, capped at \$50,000+GST	25% of purchase price, capped at \$35,000+GST	\$150k - \$250k (small trucks)
Heavy Trucks (over 18 tonne GVM and up to 39 tonne GCM)	25% of purchase price, capped at \$100,000+GST	25% of purchase price, capped at \$90,000+GST	\$300k - \$600k
Very Heavy Trucks (over 18 tonne GVM and above 39 tonne GCM ³)	25% of purchase price, capped at \$200,000+GST	25% of purchase price, capped at \$200,000+GST	Many hundreds of thousands of dollars, up to ~\$1M

14. Domestic retrofitted second-hand vehicles are also eligible for the LEHVF, allowing entities who have recently purchased ICE vehicles the choice to abate their emissions through conversion to a zero-emission technology. As set out in Table three below, the LEHVF will provide 25 percent of the conversion cost, capped at 25 percent of the total rebate available for each vehicle category.

15. Additional criteria will also apply to retrofitted second hand vehicles, this includes:

- **Vehicle age:** only entities with second-hand vehicles less than two years old when the grant launches (on or before 1 August 2024) will be eligible for grant funding.

¹ Limiting to the cost of the cab chassis reflects variation in costings for body building requirements, and mitigates the risk of distorting the market as some vehicle suppliers/manufacturers provide this service, while other vehicle purposes seek external body builders.

² Gross Vehicle Mass is the maximum allowable weight of the vehicle (including empty weight, payload, driver, and any fuel).

³ Gross Combined Weight (GCW) is the sum of the GLWs (gross laden weights) that make up a combination vehicle. GLW is the greatest of:

- Any weight specified (following the latest modification, if applicable) as a vehicle's GLW by the vehicle's manufacturer
- Any weight specified as the GLW of a particular vehicle (or a a vehicle of its kind) by Waka Kotahi
- The weight of a vehicle together with any load it is carrying, including any equipment and accessories.

- **Safety conditions:** second-hand vehicles will need to meet the minimum safety standards required of new ZEHVs supported through the scheme or will need to be brought up to safety standards during the conversion process.

Table Three: Grant levels for retrofitted vehicles under the CHVG.

Size (GVM) of retrofitted vehicle	Grant available
Trucks and non-PT buses (over 5.9 tonne to 18 tonne GVM)	25% of conversion cost, capped at \$8,750+GST
Heavy Trucks (over 18 tonne GVM and up to 39 tonne GCM)	25% of conversion cost, capped at \$22,500+GST
Very Heavy Trucks (over 18 tonne GVM and above 39 tonne GCM)	25% of conversion cost, capped at \$50,000+GST

Expanding the scope to include low emissions hybrid heavy vehicles

- When designing the programme in 2023, we advised that hybrid vehicles (plug-in diesel electric hybrid and hydrogen diesel dual fuel) should be excluded from the programme. This was based on the then insufficient evidence that dual-fuel technology (which is the most readily available hybrid technology amongst heavy vehicles) had adequately surpassed the demonstration phase, and the greater emissions reductions the programme was expected to generate if targeted to zero emissions vehicles.
- We have reviewed this position and see value in expanding the scope of the programme to include hybrid vehicles based on the following considerations:
 - **Insight from a recent domestic trial of heavy dual fuel vehicles will be sufficient to resolve our outstanding concerns around the technology.** Most significantly, this includes the ability to verify a dual fuel vehicles emissions profile. We have engaged with the transport company (HW Richardson) who have recently trialled this technology with support from EECA's LETF to understand the operational insight they have gained.
 - **Expanding support to include transitional hybrid vehicles adds another technology option for operators, making the programme more accessible.** Particularly for operators who are interested in incorporating low emissions technologies into their fleet but are uncertain of the impact on their operations.
- Should you agree with this approach, the LEHVF will be launched as a low emissions programme, including vehicles which fit the following definition: *'A hybrid vehicle is defined as one partly powered by petrol or diesel and partly powered from an external source of electricity or hydrogen'*. Hybrid vehicles supported will be required to refuel with a low emissions source to meet at least 30% of their vehicle needs. The six month programme review will also consider the appropriateness of continuing to include hybrid vehicles.
- Non-plug in hybrid diesel electric heavy vehicles will be excluded, as the technology has a modest emissions impact and only generates a maximum of 20% fuel reduction. We do not see a risk in

their exclusion as the market is not significant⁴, they are not exposed to the same cost barrier as ZEHVs, and their operation does not require behavioural changes as there is no input of a low emissions energy sources for refuelling. As the majority of hybrid technologies require a conversion from an ICE vehicle, grant levels have been right sized to support the costs of this conversion process.

20. Table four below sets out proposed grant levels to support hybrid conversions. This is based on the current pricing of very heavy vehicle conversions to dual fuel technology sitting at \$150,000. The rebate will cover up to a maximum of 25 percent of the cost to convert a new ICE to hybrid technology, with a capped maximum that increases with the vehicle size, reflecting the variation of pricing of this process. We expect the majority of conversions to be across the very heavy category, but grant tiers have been developed for medium and heavy vehicle trucks following the same approach.

Table Four: Grant levels for converting new ICEs to hybrid vehicles (diesel plug in electric and diesel hydrogen dual fuel).

Size (Gross Vehicle Mass (GVM ⁵)) of vehicle	Grant Offered
Trucks and non-PT buses (over 5.9 to 18 tonne GVM)	25% of conversion cost, capped at \$6,000+GST
Heavy Trucks (over 18 tonne GVM and up to 39 tonne GCM)	25% of conversion cost, capped at \$17,000+GST
Very Heavy Trucks (over 18 tonne GVM and above 39 tonne GCM ⁶)	25% of conversion cost, capped at \$37,500+GST

There are risks associated with incorporating hybrid vehicles

█ [REDACTED]

█ [REDACTED]

█ [REDACTED]

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█ [REDACTED]

█ [REDACTED]

- [REDACTED]
- [REDACTED]

Procurement approach

24. This following section sets out the procurement approach and estimated impact of the programme, responding to your queries around how applications will be assessed and how many trucks EECA expects to support.

Eligible vehicles will be represented on a public facing whitelist

25. EECA will open an Invitation to Register (ITR) process to develop a ‘whitelist’ of vehicles that are eligible for a rebate. The list will represent vehicles that are available, or vehicle importers/suppliers⁷ will make available, to the New Zealand market. Contracts will be signed between EECA and vehicle importers/suppliers, after which EECA will publish the ‘whitelist’ on its website and update it as more qualifying vehicles enter the New Zealand market. This will provide certainty for vehicle purchasers on which vehicles are covered by the LEHVF. The procurement approach for retrofitted vehicles (hybrids and second-hand ICEs being retrofitted) will be finalised following your consideration of this briefing. We will update you once complete.
26. Vehicle importers/suppliers will receive grant funding at the point of first vehicle registration in New Zealand. In recognition of the long lead times and supply chain impacts on ZEHV deliveries, funding will be committed (and set aside for a maximum of 18 months) to vehicle importers/suppliers at the point of factory orders being placed. This will provide the funding certainty required to support international orders and will be subject to agreed delivery timelines.

Funding caps will accommodate participation of heavier vehicles

27. To ensure equitable access to the initiative and accommodate future vehicle entry, the programme will include caps on the total amount of grant funding available for recipients, irrespective of vehicle type/classification. For the first year (FY 2024/25), the following caps will apply:
- End customers can receive up to \$1m in grant funding.
 - Vehicle importers/suppliers are limited to processing \$4m worth of grants.

⁷ Vehicle importers/suppliers includes OEMs, nominated New Zealand based vehicle distributors and qualifying New Zealand based zero-emission vehicle converters.

28. These caps were developed following engagement with key industry stakeholders. The maximum cap for vehicle importers/suppliers is set at a level to enable the minimum viable factory order size required to support supply of ZEHVs to New Zealand.
29. We will publish a timetable at the launch of the programme, outlining the timing for advising industry and public of any future changes to programme settings. Current thinking is that the 6-month programme review will take place in February 2025, following which you will be briefed on any adjustments required for the second phase of the programme in March 2025. Subject to your approval, changes will be communicated publicly in April 2025 and will take effect from 1 July 2025. Being upfront on this process will also send clear signals to industry that the programme will be subject to changes throughout the course of the next few years, reflecting the priority of the Government is to ensure funding is appropriately targeted and maximising value for money.

We estimate between 400-500 trucks will be supported by the programme

30. To support market flexibility, rather than capping the amount of grant funding available to each vehicle classification, we have developed a targeted scenario. This has informed our estimated impact of the programme. The target scenario reflects uncertainty in how the ZEHV market will evolve over the next three years and allows flexibility to support the deployment of funding across available technologies. Table five below outlines two targeted scenarios, comparing the impacts of including hybrid vehicles in the programme.

Table Five: Estimated impact of the Low Emissions Heavy Vehicle Fund (LEHVF).

		Hybrid included	Hybrid excluded
Number of vehicles supported	Very heavy trucks	140	60
	Heavy trucks	60	60
	Trucks and non-PT buses	300	300
	Total	500	420
Total government co-investment		27,750,000	27,750,000
Total private co-investment		83,250,000	83,250,000
Estimated lifetime abatement (tCO_{2e})		366,622	322,783
Estimated marginal abatement cost		116	131

31. As shown in Table five, including hybrid vehicles will likely result in a greater number of vehicles supported through the programme (500 versus 420 without hybrids), resulting in a higher overall estimated lifetime abatement. This assumes that hybrid vehicles will consume a minimum ratio of 30% hydrogen for the entire vehicle's lifetime, which we will not have visibility of beyond the first year (as referenced in paragraph 22).
32. The programme's actual emissions reductions will deviate from estimates based on the exact make up of end customers who access the grants, changes in transport route and behavioural patterns and the realised proportion of vehicles funded from each vehicle category. Data on actual emissions reductions will be collected from fleet operators after 12 months of operating their new vehicle.

Next steps

33. Subject to your approval of these changes, we will finalise programme design in preparation for market launch in early August.
34. Note that at your request, the LEHVF has been included in the draft consultation document for the second emissions reduction plan.
35. We will work with your Office to announce the launch of the programme.

1. Excerpts from 14 June 2024 Fortnightly EECA 2024 MR 011 (page 2):

Low Emissions Heavy Vehicle implementation update

We are making good progress on finalising the design of the Low Emissions Heavy Vehicles Fund (LEHVF) ahead of its launch in early August.

On 21 June we will provide advice to you on the final design of the programme, including the procurement approach and estimated impact of the programme (responding to your feedback on the initial policy settings paper – EECA 2024 BRF 007 refers).

You are meeting with industry (including New Zealand Automobile Association, Motor Trade Association) on 20 June to discuss government support for low emissions heavy vehicles. It is likely industry will be interested in discussing the LEHVF with you. [REDACTED]

[REDACTED]

[REDACTED]

Redacted under s9(2)(f)(iv)

2. Excerpts from 27 June 2024 Fortnightly EECA 2024 MR012 (page 2):

Launch of LEHVF

EECA is making good progress through the final design stages of the LEHVF. This is in response to direction received in our meeting with you earlier this week (26 June) to launch the programme as a zero emissions initiative, with some funding earmarked for innovation to support emerging hydrogen/diesel hybrid technology.

We will begin engaging with your Office to plan a launch event in August.

3. Excerpts from 12 July 2024 Fortnightly EECA 2024 MR013 (page 2):

Low Emissions Heavy Vehicle Fund (LEHVF) launch plan

Following your approval on final aspects of programme design for the LEHVF (EECA 2024 BRF 008 refers), we are now moving at pace to implement the processes to accommodate the final scope, tracking well towards programme launch in August.

We will begin engaging with your Office to plan a launch event in August.

4. Excerpts from 09 August 2024 Fortnightly EECA 2024 MR015 (page 2):

Low Emissions Heavy Vehicles Fund (LEHVF) – further update on plans for announcement

On 1 August, we will begin the Invitation to Register (ITR) process to develop a ‘whitelist’ of vehicles that meet the criteria of the LEHVF. This will be published on EECA’s website and on GETS. To maximise industry engagement with this process, we will be hosting a webinar on Tuesday 6 August, targeting relevant stakeholders identified through previous market engagement, and with advice (under embargo) from National Road Carriers and Transporting New Zealand.

There is a chance of media pickup on EECA’s promotion of the programme during the ITR process, but this is low risk. Carrying out these necessary procurement steps in advance on the formal launch will mean that grants are available from the date of your formal launch.

We are working with your Office to finalise plans for the launch of the programme in early September.

5. Excerpts from 06 September 2024 Fortnightly EECA 2024 MR017 (page 2):

Low Emissions Heavy Vehicle Fund (LEHVF) progress and safety requirements

We recommend market launch at your earliest convenience

As industry have been involved in our procurement activity over the past few weeks (noting ITR opened on 1 August), we would recommend launching the programme as soon as possible. A number of fleet operators have reported that they are awaiting official launch to order low emission vehicles.

Information on the programme’s safety requirements

When designing the programme last year, we received advice from the Ministry of Transport (MoT) and New Zealand Transport Agency (NZTA) to incorporate three safety features beyond the minimum requirements for heavy vehicles set out in the Land Transport Rules: electronic stability control (ESC), lane departure warning system (LDWS), automatic emergency braking (AEB). This was on the basis that heavy vehicles are widely equipped with these features, and it allows the Government to send signals to the market given regulations are common across other jurisdictions.

When considering this, we consulted widely with manufacturers to determine whether requiring these features would impact the successful operation of the LEHVF. Manufacturers responded that these features were a standard offering in most (if not all) heavy vehicles, and therefore they were included as a requirement.

[Redacted content]

Redacted under s9(2)(f)(iv)

6. Excerpts from 04 October 2024 Fortnightly EECA 2024 MR019 (page 2):

Low Emissions Heavy Vehicle Fund

Since our last update, we have entered contracts with an additional five vehicle suppliers, increasing the vehicles eligible for grant funding as represented on our whitelist to 23 (some vehicles are available through multiple suppliers). We have also received the first customer applications for grant funding, which will see six light battery electric trucks (7.8 tonne) on the road from the end of November. We will now move to providing you with quarterly updates on the Fund's progress.