MINISTRY OF BUSINESS, INNOVATION & EMPLOYMENT
HĪKINA WHAKATUTUKI

EECA
TE TARI TIAKI PŪNGAO
ENERGY EFFICIENCY & CONSERVATION AUTHORITY

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	9(2)(a) [redacted]		✓
Hannah Overton-Holmes	Senior Policy Advisor, Energy Use Policy	9(2)(a) [redacted]		
Will Jensen	Manager, Policy and Engagement (EECA)	9(2)(a) [redacted]		
Alex Doyle Franklin	Policy Advisor, Policy and Engagement (EECA)	9(2)(a) [redacted]		

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

Minister's office to complete:

☐ Approved ☐ Declined
☐ Noted ☐ Needs change
☐ Seen ☐ Overtaken by Events
☐ See Minister's Notes ☐ Withdrawn

Comments

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BRIEFING

Title

Date:	1 June 2023	**Priority:**	Medium
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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, 9(2)(f)(iv) [redacted] 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. 9(2)(f)(iv) [redacted]

    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 vans[2] 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

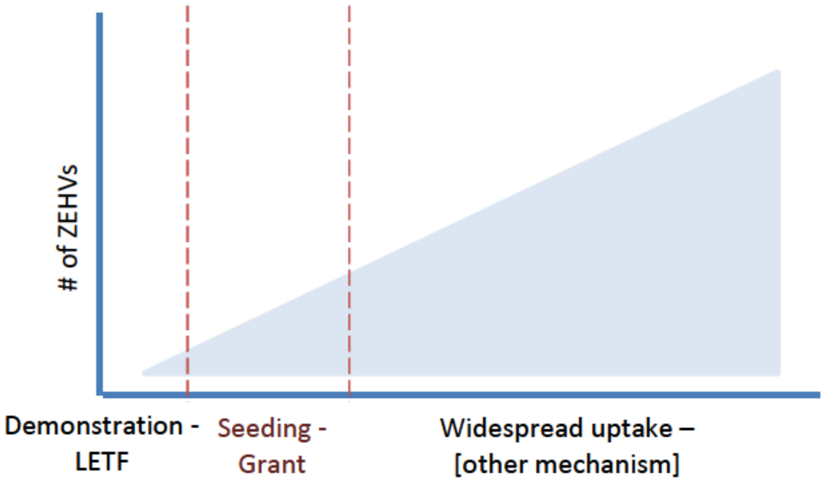
c. provide market signals to international original equipment manufacturers (OEMs), with the intent of encouraging supply of ZEHVs to New Zealand.

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. 9(2)(f)(iv) [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
• 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	• Vehicles eligible for the Clean Car Discount[3] • 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.

9(2)(f)(iv)

[redacted]

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