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Office of the Minister of Energy and Resources

Office of the Minister of Transport

Cabinet Economic Development Committee

Finalising *Charging our future: National electric vehicle charging strategy for Aotearoa New Zealand*

Proposal

- 1 This paper seeks agreement to finalise and publicly release *Charging our future: National electric vehicle charging strategy for Aotearoa New Zealand* (the Strategy) and an associated government work programme.

Relation to government priorities

- 2 The finalisation of the Strategy and its associated work programme addresses two commitments in the first Emissions Reduction Plan (ERP):
 - 2.1 Complete a national electric vehicle (EV) charging infrastructure strategy to set out the Government's vision and policy objectives (for both the public and private sectors) around EV charging over future emissions budget periods.
 - 2.2 Continue to develop an EV-charging infrastructure work programme to coordinate policy, investment and engagement with stakeholders.
- 3 The Strategy sets out the critical enabling role EV charging infrastructure will play to help us shift away from fossil fuels and herald the transport sector's fundamental transition to a net zero emissions future.
- 4 Specifically, implementation of the Strategy and work programme will help support mass-market EV adoption, encouraged and accelerated by the Clean Vehicle Programme, and advance the ERP transport targets of increasing zero-emission vehicles to 30 percent of the light fleet and reducing emissions from freight transport by 35 percent by 2035.
- 5 Budget 2023 included \$120.034 million over three years to support EV charging infrastructure development and Strategy implementation:
 - 5.1 \$80 million for a national network of 23 cluster charging hubs
 - 5.2 \$30 million to fund charging infrastructure at community locations in rural communities with a population over 2,000 people
 - 5.3 A research programme relating to aspects of EV charging
 - 5.4 resources in Vote Transport and Vote Business, Science and Innovation to give effect to the EV Charging Strategy.

Executive Summary

- 6 In December 2022, Cabinet agreed to release *Charging our future: a draft long-term electric vehicle charging strategy for Aotearoa* as a draft strategy for public discussion (CAB-22-MIN-0599 refers). Consultation was open from 22 March 2023 to 11 May

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2023. Officials received 141 written submissions and ran six public workshops for different interest groups.

- 7 The submissions and public workshops revealed broad support for the existence of and direction outlined in the Strategy, with many commenters emphasising the importance of greater coordination between central and local government and industry players, and the urgency required in the pace of delivery. We have approved a summary of submissions and workshop feedback to be released on the Te Manatū Waka Ministry of Transport website.
- 8 Informed by those submissions, we have prepared an updated Strategy and an associated work programme, for which we are seeking Cabinet's endorsement and approval to publicly release. The proposed final Strategy is attached at Annex 1 and the proposed work programme at Annex 2.

The ERP outlines the critical role of EVs and EV charging infrastructure in the transition to net-zero emissions by 2050

- 9 Transport emissions need to fall significantly and swiftly if Aotearoa New Zealand is to achieve its 2050 net zero emissions target. Greenhouse gas emissions from the light vehicle fleet currently account for more than half of our transport emissions. EVs will therefore play an important role in the transition. They currently produce 80 percent less CO₂ than an equivalent petrol vehicle when being driven in New Zealand, given our high level of renewable electricity generation.
- 10 Recognising their important role in the transition to net zero, the ERP sets a target for zero-emissions vehicles to constitute 30 percent of the light vehicle fleet by 2035. The ERP also acknowledges the need for sufficient EV charging infrastructure to support this level of uptake and commits the Government to developing a national EV Charging Strategy and work programme.
- 11 In addition to being accessible (and visible), our national EV charging network will also need to be affordable, convenient, secure and reliable to encourage widespread adoption and use of EVs across Aotearoa New Zealand as envisioned in the ERP.
- 12 Over the long-term, our ability to meet our EV uptake and transport emissions reduction targets will depend on the simultaneous expansion and improvement of our national EV charging network, the provision of suitable network capacity, and the integration of sufficient renewable electricity generation into our electricity infrastructure to meet our total decarbonisation infrastructure requirements.

Aotearoa New Zealand's EV charging infrastructure network for light passenger vehicles has served us well to date, but now needs to be expanded

- 13 Aotearoa New Zealand's public EV charging network has grown to the point that we now have fast/rapid direct current (DC) charging stations at least every 75 kms across over 97 percent of our state highway network. The Government has supported this expansion by co-funding the installation of more than 700 publicly available chargers and more than 550 private chargers through EECA's Low Emission Transport Fund (LETF) and its predecessor, the Low Emissions Vehicle Contestable Fund (LEVCF).
- 14 Despite this useful support, New Zealand has a much higher ratio of EVs per public charging point than most other countries in the Organisation for Economic Co-operation and Development (OECD). This has not prevented rapid (and higher than anticipated) EV uptake in recent years. However, the ratio of EVs to publicly-available

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chargers point is increasing and will become a barrier to EV uptake if left unchecked. This in turn would undermine our efforts to decarbonise the transport system.

- 15 The Government has had less involvement in supporting charging at residential properties, beyond demonstrating some technologies and applications through the LETF. This has been appropriate given the relatively low number of EVs in the fleet and the Government's focus on developing the journey charging 'backbone', and the public benefit it provides.
- 16 A range of additional initiatives have also progressed across government to support the roll-out of EV charging, including measures to improve efficiency and safety.

The pace of EV growth is starting to put pressure on our charging network

- 17 So far, the growth of the public charging network has not been governed by an overall strategic direction, but rather driven largely by where industry and government have directed investment. To date, the provision of public EV charging infrastructure has largely stayed ahead of EV uptake, though network pressures like queuing are increasingly emerging.
- 18 We need to address how charging is managed in private homes to make the most effective use of our current and future electricity infrastructure and to ensure that charging is safe and reliable. This is especially pertinent given residential premises are where most EV charging occurs. This will require assessing and addressing barriers to more people accessing home charging, for example those living in medium- to high-density housing.
- 19 There is also increased activity from both the public and private sector to deploy EVs outside of the light vehicle fleet, including medium and heavy-duty EVs such as buses and trucks. There are currently 543 zero emissions heavy vehicles in the medium and heavy fleet. Budget 2023 included \$30 million in tagged contingency to develop a Clean Heavy Vehicle Grant scheme to incentivise greater uptake of medium and heavy-duty EVs. Encouragingly, there is also growing interest in electrification of maritime and aviation transport, though this is still at an early stage.
- 20 Getting ahead of this growth in demand for EV charging infrastructure will require a comprehensive and integrated approach at a national level. The Strategy supports this approach and forms part of a suite of initiatives to support vehicle fleet transition.

The EV Charging Strategy will provide strategic direction as our EV charging network expands

- 21 The Strategy signals the Government's long-term vision for Aotearoa New Zealand's EV charging infrastructure and sets priorities for how it will support its development. The Strategy:
- 21.1 ensures coordination and consistency in the planning and roll-out of our national EV charging infrastructure over the short- and long-term
 - 21.2 provides government (central and local), industry leaders, business leaders and the public with greater certainty around Aotearoa New Zealand's long-term EV charging outcomes, which could encourage co-investment in EV charging

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- 21.3 identifies and appropriately addresses any gaps in EV charging infrastructure capacity and coverage to enhance our ability to prepare for, and meet, future demand for EV charging
- 21.4 clarifies and sets expectations for actions and responsibilities across a range of key stakeholders at the national, regional and local level.

Submissions on the draft Strategy were supportive of the Strategy and made some useful additional suggestions

- 22 Officials received 141 submissions on the draft Strategy, and between 20 and 30 people attended each of six online workshops on the draft Strategy.
- 23 Submitters were generally positive about the draft Strategy’s proposed Vision, Outcomes and Focus Areas. However, submitters from different cohorts placed different emphasis on the outcomes and actions they thought should be prioritised.
- 24 There was reasonably consistent feedback urging government to move quickly on implementation of the Strategy, once final. Many submitters considered this should be done in partnership with industry.
- 25 Some common themes throughout submissions include suggestions to:
 - 25.1 Explore standardisation and interoperability in user experience in EV charging, including in payment systems
 - 25.2 Account for a range of charging needs, including commercial vehicles, cars towing trailers, and people with impaired strength or mobility
 - 25.3 Focus funding on alleviating first mover disadvantage, or funding chargers in areas that may not provide a commercial return, such as rural areas
 - 25.4 Streamline consenting and connections to make it easier for the private sector to develop the network
 - 25.5 Explore options to support residents with limited access to off-street parking, including multi-unit dwellings, including a “right-to-charge” policy.

Informed by the public discussion, we have edited the EV Charging Strategy

Targets

- 26 The draft Strategy included three targets. These were:
 - 26.1 Target 1 - there will be a journey charging hub every 150 – 200 kms on main highways by 2028
 - 26.2 Target 2 – urban areas with limited off-street parking would have a target ratio of one publicly available charger for every 20-40 EVs
 - 26.3 Target 3 - all settlements with a population of 2,000 or more will have public charging at municipal or community facilities by 2025.
- 27 Target 2 attracted significant questions and concerns from submitters, including that confirming whether this proposed ratio of EVs to chargers is in fact optimal for New Zealand would require significantly more insight into how New Zealand-based EV

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owners use and charge their vehicles. We consider these to be valid concerns and propose removing target 2 as a formal target in the Strategy. The target will instead be folded into focus area 2b in the Strategy. This approach allows for greater flexibility to develop a more robust understanding of charging needs and behaviour in urban areas before potentially seeking future Budget funding towards this objective.

- 28 Reconsideration has been given to the broadness of the aim of target 3. The focus on settlements with a population of 2,000 or more may not be sufficiently targeted to ensure equitable delivery of EV charging infrastructure to smaller communities. Further research is required to better define the aim of this target to achieve the desired policy outcome. While target 3 will no longer be set as a formal target, it is incorporated in focus area 2b in the Strategy.
- 29 Targets 2 and 3 were included in the announcements for Budget 2023, along with target 1. While targets 2 and 3 will no longer be formal targets in the Strategy, the policy intent behind the targets is included within focus area 2b in the Strategy. Budget 2023 did not include specific funding to deliver target 2. The funding announced to deliver target 3 will be allocated as intended, however, will be better targeted towards the communities it is intended to benefit.

Vision

- 30 The vision functions as a statement of the overarching goal of the Strategy. Following consultation, the vision we recommend for the final Strategy is:

Aotearoa New Zealand's EV charging infrastructure supports an equitable transition to a low-emissions transport system in which accessible, affordable, secure, and reliable charging infrastructure is available to everyone who needs it.

- 31 The vision and associated contextual statements in the Strategy have been amended from the draft version to:

- 31.1 emphasise that the transition to a low-emissions transport system should be equitable and accessible to everyone who needs to use EV charging infrastructure
- 31.2 note the vision (and the Strategy as a whole) supports the delivery of current and future ERPs.
- 31.3 address the fact that while the strategy has a primary focus on light EVs it now also sets our priority initial actions for heavy vehicle charging.

- 32 There was broad general support for the proposed vision from submitters.

Outcomes and focus areas

- 33 The vision is supported by five long-term outcomes that reflect the urgent need to decarbonise the transport system while acknowledging the need for an equitable transition. Submitters were generally supportive of the outcomes.

- 34 Focus areas sit under the outcomes to logically group the actions that will deliver the Strategy. As for the outcomes, submitters were generally supportive of the focus areas and only minor changes to the wording are proposed to clarify the intent and scope.

- 35 The diagram below shows the recommended vision, outcomes, and focus areas.

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Long-term vision				
<i>Aotearoa New Zealand's EV charging infrastructure supports an equitable transition to a low-emissions transport system in which accessible, affordable, secure, and reliable charging infrastructure is available to everyone who needs it.</i>				
To support this vision, and ensure alignment with the government's long-term strategic direction, this strategy:				
Supports the delivery of current and future Emissions Reduction Plans (ERPs) by ensuring the necessary charging infrastructure is in place to support the target of zero-emissions vehicles reaching 30 percent of the light fleet by 2035, and by aligning with wider ERP targets and objectives	Considers charging infrastructure in both public and private locations , and takes into account charging behaviour, such as residential off-street, residential on-street, journey and destination charging	Primarily focuses on charging for light EVs , while identifying initial areas for action to support heavy EV charging and considering future charging needs for other modes across the system	Supports an equitable transition by considering the needs and experiences of current and future EV users from diverse backgrounds, as well as the needs and experiences of non-EV users in the transport system	
Long-term outcomes (to support the vision)				
Outcome 1: EV charging infrastructure is integrated into our energy supply and infrastructure system in such a way that the system remains affordable, reliable, secure and safe.	Outcome 2: EV users from diverse backgrounds can use accessible, affordable, secure, and reliable EV charging infrastructure when and where they need it	Outcome 3: Aotearoa's EV charging system is underpinned by integrated and streamlined cross-sectoral planning and standards	Outcome 4: Aotearoa's EV charging market functions effectively, can adapt and evolve over time, and is attractive to users, operators and investors	Outcome 5: Our national EV charging system supports the transition to, and use of, low-emissions transport modes across the wider transport system.
Focus areas (to support each outcome)				
Focus area 1a. Minimising stress on the electricity network	Focus area 2a. Improving the equity of, and access to, home charging infrastructure for all New Zealanders Focus area 2b. Accommodating for geographic variation in charging needs and energy supply	Focus area 3a. Improving standardisation and interoperability Focus area 3b. Optimising data capture and use Focus area 3c. Consideration of planning, where appropriate	Focus area 4a. Accelerating commercial investment Focus area 4b. Enabling innovation in new technology and business models	Focus area 5a. Progressing work on heavy vehicle charging (buses and trucks) Focus area 5b. Decarbonising other modes across the system and ensuring a coordinated investment approach

Actions

- 36 Actions sit under each focus area to show how the Strategy will be delivered.
- 37 Amendments have been made to draft actions to:
- 37.1 respond to requests to clarify the meaning
 - 37.2 reflect work progressed in early-2023
 - 37.3 combine proposed actions into single actions where there was sufficient overlap
 - 37.4 create new actions to respond to feedback.
- 38 Submitters generally expressed a desire to see the Strategy implemented. As noted, the ERP commits the government to continue to develop an EV charging infrastructure work programme. The best way to respond to much of the feedback was to show the pathway to implementation.

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- 39 For these reasons, we recommend listing the actions in the final Strategy but providing further information about work underway and steps to be taken by government in the next 1-3 years in a separate work programme designed to sit alongside the Strategy.

The work programme supports the Strategy and provides supplementary details

- 40 We recommend the actions in the Strategy are incorporated in a 1-3 year government work programme and supplemented with additional details:
- 40.1 lead agencies are assigned to the delivery of each action
 - 40.2 initial steps for implementation are listed so stakeholders can see what to expect from government in the next 1-3 years.
- 41 We recommend the work programme is made public alongside the Strategy.
- 42 We intend the work programme to be a living document, to be updated from time-to-time (and at least annually) to reflect work underway.

Work has commenced in some areas following Budget funding for EV charging

- 43 Budget 2023 included \$120.034 million over three years to support EV charging infrastructure development and strategy implementation, including funding to support the achievement of Target 1 and focus area 2b.:
- 43.1 \$80 million for a national network of 23 cluster charging hubs (target 1)
 - 43.2 \$30 million to fund charging infrastructure at community locations in rural communities with a population over 2,000 people.
- 44 The budget initiative also included funding for:
- 44.1 A research programme relating to aspects of EV charging
 - 44.2 resources in Vote Transport and Vote Business, Science and Innovation to give effect to the EV Charging Strategy.
- 45 We note that while Budget 2023 provided some funding for research around heavy vehicle charging, there is no current funding that covers dedicated heavy vehicle charging infrastructure. To date, there is no public charging infrastructure that will support heavy vehicles. Additional funding will be sought in future Budget rounds.

Successfully delivering the outcomes in the Strategy will require a concerted, coordinated approach with central and local government, and the industry

- 46 Successfully achieving the long-term strategic vision and key outcomes in the EV Charging Strategy will require buy-in from a range of stakeholders across the energy, transport, and other sectors. This includes central and local government agencies, electricity distribution businesses, private charging companies, automakers and property owners.
- 47 Industry will play a crucial role in in the market-led roll-out of chargers and charging equipment, with Government intervening to address any market gaps to ensure no areas or demographics are left behind. Ensuring coordination of public and private charging options will also require strategic alignment, supported with data, across central and local government policy and planning.

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- 48 The cross-sectorial nature of EV charging means a range of Ministerial portfolios and government agencies will need to progress the future delivery and implementation of potential actions outlined under the EV Charging Strategy.
- 49 We expect to confirm post-publication implementation and governance arrangements for the Strategy and work programme in July, based on joint advice from Ministry of Business, Innovation and Employment (MBIE) and Ministry of Transport (MoT) officials.
- 50 We expect this work to be steered by an inter-agency working group with a governance group of senior officials to provide portfolio-level oversight and include the private sector as appropriate to reflect the important role industry will play in the roll-out of EV charging infrastructure. This reflects feedback received in the submissions process as well as and ongoing engagement with the charging industry. We expect to finalise these arrangements in time to announce them when the Strategy and work programme are published.
- 51 In the longer-term, further research and policy development will be necessary to determine whether a more formal mechanism (for example a standalone entity such as the UK's Office of Zero-Emission Vehicles) is more appropriate in the long-term. Budget 2023 included funding to commission research into this question.

Financial Implications

- 52 There are no financial, fiscal or economic implications arising directly from this paper. Budget 2023 included a \$120m package of funding for EV charging infrastructure, which will support the delivery of the EV Charging Strategy.

Legislative Implications

- 53 There are no legislative implications arising directly from this paper. However, the Strategy and work programme commit agencies to exploratory work that may eventually lead to regulatory changes.

Impact Analysis**Regulatory Impact Statement**

- 54 A Regulatory Impact Assessment (RIA) has not been undertaken for this paper because it does not involve introducing or changing legislation or regulation.

Population Implications

- 55 The EV Charging Strategy includes considerations for accessibility and equity of access to chargers across different population groups. For example, it includes different targets for urban and rural environments, to ensure sufficient availability and coverage of EV charging infrastructure.
- 56 Responding to feedback from submissions, it also includes consideration for disabled communities, to ensure that future EV charging infrastructure is accessible for people with a range of mobility and strength restrictions.

Use of External Resources

- 57 MartinJenkins provided consultancy services to Te Manatū Waka in 2022/23 to support policy development and the development of the strategy.

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58 Through Budget 2023, around \$5 million funding was provided to support Te Manatū Waka with the implementation of the strategy over the next three years. Around half of this funding will be used to employ full-time staff to progress implementation, monitoring, and evaluation of the strategy. The remainder of the funding is to deliver some of the strategies proposals where Te Manatū Waka is not best placed to lead, and is likely to utilise the skills of consultants. This could include:

- research into aspects of equity of access to charging including, which is likely to involve surveying and research that consultants have greater capability to deliver
- technical analysis to determine whether alternative governance arrangements for EVs is more appropriate in the long-term.

Human Rights

59 This paper does not have implications for human rights.

Consultation

60 The following departments were consulted during the development of this paper: Ministry of Business, Innovation and Employment, Ministry of Transport Energy Efficiency and Conservation Authority, Housing and Urban Development, Waka Kotahi New Zealand Transport Agency and the Ministry for the Environment.

Communications

61 Subject to Cabinet's agreement, Te Manatū Waka Ministry of Transport will publish the final Strategy and work programme on its website and inform key stakeholders.

Treaty Analysis

62 There were no direct submissions from Māori organisations on the draft Strategy, though several submitters represented or supported Māori interests. Broader engagement with Māori to inform the government's approach to reducing transport emissions, including the role of EVs and charging, has been ongoing and iterative. The Strategy has been updated post-consultation to better reflect the government's commitment to Te Tiriti o Waitangi / the Treaty of Waitangi and the need to engage and partner with Māori on an ongoing basis to implement the Strategy and work programme. We propose to broaden the Strategy's commitment to Te Tiriti beyond provision of chargers on marae to developing a wider understanding of Māori transport and charging needs and partnering to address the implementation of this Strategy and work programme will include ongoing engagement and partnership with Māori to and this will be reflected in the terms of reference for the cross-agency group overseeing its implementation.

Proactive Release

63 This paper, minutes and any associated documents will be proactively released in whole within 30 business days of final decisions being taken by Cabinet. It will be published on Te Manatū Waka Ministry of Transport's website.

Recommendations

We recommend that the Committee:

- 1 **note** that EV charging infrastructure is critical to support mass-market EV adoption, alongside other initiatives, and to help achieve our emissions reduction plan transport

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targets of increasing zero-emission vehicles to 30 percent of the light vehicle fleet and reducing emissions from freight transport by 35 percent by 2035

- 2 **note** that *Charging our future: National electric vehicle charging strategy for Aotearoa* New Zealand sets out the critical enabling role EV charging infrastructure will play in our ability to shift away from fossil fuels and herald the transport sector's fundamental transition to a net zero emissions future
- 3 **note** that our officials consulted on a draft version of the EV charging strategy over March to May, received 141 submissions, and ran six workshops
- 4 **note** that submitters were generally positive about the direction of the draft EV charging strategy and offered a range of suggested amendments to it
- 5 **note** we have edited the Strategy, prepared a work programme to detail the actions, and outlined responsible delivery agencies
- 6 **note** that, based on feedback received during the consultation on the draft version of the EV charging strategy, target 2 has been removed as a formal target in the Strategy and has instead been incorporated into focus area 2b in the Strategy
- 7 **note** that the aim of target 3 is considered too broad to effectively deliver the outcomes intended, so it has been removed as a formal target in the Strategy and has instead been incorporated into focus area 2b in the Strategy
- 8 **authorise** the Minister of Energy and Resources and the Minister of Transport to make minor changes to the Strategy and work programme if required ahead of publication
- 9 **note** that the Electricity Authority and MBIE have existing programmes of work to understand the cost of connection for new EV chargers, including whether a larger portion of these charges can be recovered as part of a network's regulatory asset base. As part of this work, officials will provide advice on including battery charging equipment within their regulated asset base.
- 10 **agree** to the final Strategy and associated work programme attached at Annexes 1 and 2 respectively
- 11 **agree** to publish the final Strategy and work programme, as well as this Cabinet paper, on Te Manatū Waka Ministry of Transport's website.

Authorised for lodgement

Hon Dr Megan Woods
Minister of Energy and Resources

Hon David Parker
Minister of Transport



Cabinet Economic Development Committee

Doc #2: Cabinet paper DEV-23-MIN-0206

Minute of Decision

This document contains information for the New Zealand Cabinet. It must be treated in confidence and handled in accordance with any security classification, or other endorsement. The information can only be released, including under the Official Information Act 1982, by persons with the appropriate authority.

Finalising Charging Our Future: National Electric Vehicle Charging Strategy for Aotearoa New Zealand

Portfolios Energy and Resources / Transport

On 30 August 2023, the Cabinet Economic Development Committee:

- 1 **noted** that electric vehicle (EV) charging infrastructure is critical to support mass-market EV adoption, alongside other initiatives, and to help achieve the government's emissions reduction plan transport targets of increasing zero-emission vehicles to 30 percent of the light vehicle fleet and reducing emissions from freight transport by 35 percent by 2035;
- 2 **noted** that *Charging our future: National electric vehicle charging strategy for Aotearoa New Zealand* (the EV charging strategy) sets out the critical enabling role EV charging infrastructure will play in New Zealand's ability to shift away from fossil fuels and herald the transport sector's fundamental transition to a net zero emissions future;
- 3 **noted** that officials consulted on a draft version of the EV charging strategy over March to May 2023, received 141 submissions, and ran six workshops;
- 4 **noted** that submitters were generally positive about the direction of the draft EV charging strategy and offered a range of suggested amendments to it;
- 5 **noted** that the EV charging strategy has been edited following consultation, a work programme has been prepared to detail the actions, and responsible delivery agencies have been outlined;
- 6 **noted** that, based on feedback received during the consultation on the draft version of the EV charging strategy, target 2 (urban areas with limited off-street parking would have a target ratio of one publicly available charger for every 20-40 EVs) has been removed as a formal target in the strategy, and has instead been incorporated into focus area 2b in the strategy;
- 7 **noted** that:
 - 7.1 the aim of target 3 (all settlements with a population of 2,000 or more will have public charging at municipal or community facilities by 2025) is considered too broad to effectively deliver the outcomes intended;
 - 7.2 target 3 has therefore been removed as a formal target in the EV charging strategy, and has instead been incorporated into focus area 2b in the strategy;

- 8 **authorised** the Minister of Energy and Resources and the Minister of Transport to make minor changes to the EV charging strategy and work programme if required ahead of publication;
- 9 **noted** that:
- 9.1 the Electricity Authority and the Ministry of Business, Innovation and Employment have existing programmes of work to understand the cost of connection for new EV chargers, including whether a larger portion of these charges can be recovered as part of a network's regulatory asset base;
- 9.2 as part of this work, officials will provide advice on including battery charging equipment within their regulated asset base;
- 10 **agreed** to the final EV charging strategy and *Government EV charging work programme (2023 – 2026)*, attached as Annexes 1 and 2 to the submission under DEV-23-SUB-0206;
- 11 **agreed** that the final EV charging strategy and work programme be published on Te Manatū Waka Ministry of Transport's website.

Janine Harvey
Committee Secretary

Present:

Hon Grant Robertson (Chair)
Hon Dr Ayesha Verrall
Hon Andrew Little
Hon David Parker
Hon Peeni Henare
Hon Kieran McAnulty
Hon Dr Duncan Webb
Hon Jo Luxton
Hon Rachel Brooking

Officials present from:

Office of the Prime Minister
Officials Committee for DEV

Charging Our Future: National electric vehicle charging strategy for Aotearoa New Zealand 2023-2035

*The long-term vision and strategic plan for Aotearoa New Zealand's electric
vehicle (EV) charging infrastructure*

[Month] 2023

This Strategy is intended to be read in conjunction with the associated *Charging Our Future: Government EV charging work programme (2023-2026)*.

Ko te pae tawhiti whaia kia tata. Ko te pae tata, whakamaua kia tina

The potential for tomorrow is determined by what we do today

**PROACTIVELY RELEASED BY
TE MANATŪ WAKA MINISTRY OF TRANSPORT**

Long-term vision

Aotearoa New Zealand's EV charging infrastructure supports an equitable transition to a low-emissions transport system in which accessible, affordable, secure, and reliable charging infrastructure is available to everyone who needs it.

This vision will guide the rapid expansion of Aotearoa New Zealand's EV charging infrastructure system from 2023 to 2035.

To support this vision, and ensure alignment with the government's long-term strategic direction, this strategy:

- **Supports the delivery of current and future Emissions Reduction Plans (ERPs)** by ensuring the necessary charging infrastructure is in place to support the target of zero-emissions vehicles reaching 30 percent of the light fleet by 2035, and by aligning with wider ERP targets and objectives
- **Considers charging infrastructure in both public and private locations**, and takes into account charging behaviour, such as residential off-street, residential on-street, journey and destination charging
- **Primarily focuses on charging for light EVs**, while identifying initial areas for action to support heavy EV charging and considering future charging needs for other modes across the system
- **Supports an equitable transition** by considering the needs and experiences of current and future EV users from diverse backgrounds, as well as the needs and experiences of non-EV users in the transport system.

Long-term outcomes

This vision is supported by five long-term outcomes that reflect the urgent need to decarbonise the transport system while acknowledging the need for an equitable transition.

- **Outcome 1:** EV charging infrastructure is integrated into our energy supply and infrastructure system in such a way that the system remains affordable, reliable, secure and safe.
- **Outcome 2:** EV users from diverse backgrounds can use accessible, affordable, secure, and reliable EV charging infrastructure when and where they need it.
- **Outcome 3:** Aotearoa's EV charging system is underpinned by integrated and streamlined cross-sectoral planning and standards.
- **Outcome 4:** Aotearoa's EV charging market functions effectively, can adapt and evolve over time, and is attractive to users, operators and investors.
- **Outcome 5:** Our national EV charging system supports the transition to, and use of, low-emissions transport modes across the wider transport system.

Target

- There will be a journey charging hub every 150 – 200 kms on main highways by 2028.

Focus areas

Each of these five long-term outcomes is supported by key focus areas, which will help to group the actions required to deliver the Strategy. Further details on the work to support each action are provided in the accompanying Work Programme.

The relationship between the vision, long-term outcomes and key focus areas is summarised by the figure below.

Long-term vision				
<i>Aotearoa New Zealand's EV charging infrastructure supports an equitable transition to a low-emissions transport system in which accessible, affordable, secure, and reliable charging infrastructure is available to everyone who needs it.</i>				
To support this vision, and ensure alignment with the government's long-term strategic direction, this strategy:				
Supports the delivery of current and future Emissions Reduction Plans (ERPs) by ensuring the necessary charging infrastructure is in place to support the target of zero-emissions vehicles reaching 30 percent of the light fleet by 2035, and by aligning with wider ERP targets and objectives	Considers charging infrastructure in both public and private locations , and takes into account charging behaviour, such as residential off-street, residential on-street, journey and destination charging	Primarily focuses on charging for light EVs, while identifying initial areas for action to support heavy EV charging and considering future charging needs for other modes across the system	Supports an equitable transition by considering the needs and experiences of current and future EV users from diverse backgrounds, as well as the needs and experiences of non-EV users in the transport system	
Long-term outcomes (to support the vision)				
Outcome 1: EV charging infrastructure is integrated into our energy supply and infrastructure system in such a way that the system remains affordable, reliable, secure and safe.	Outcome 2: EV users from diverse backgrounds can use accessible, affordable, secure, and reliable EV charging infrastructure when and where they need it	Outcome 3: Aotearoa's EV charging system is underpinned by integrated and streamlined cross-sectoral planning and standards	Outcome 4: Aotearoa's EV charging market functions effectively, can adapt and evolve over time, and is attractive to users, operators and investors	Outcome 5: Our national EV charging system supports the transition to, and use of, low-emissions transport modes across the wider transport system.
Focus areas (to support each outcome)				
Focus area 1a. Minimising stress on the electricity network	Focus area 2a. Improving the equity of, and access to, home charging infrastructure for all New Zealanders Focus area 2b. Accommodating for geographic variation in charging needs and energy supply	Focus area 3a. Improving standardisation and interoperability Focus area 3b. Optimising data capture and use Focus area 3c. Consideration of planning, where appropriate	Focus area 4a. Accelerating commercial investment Focus area 4b. Enabling innovation in new technology and business models	Focus area 5a. Progressing work on heavy vehicle charging (buses and trucks) Focus area 5b. Decarbonising other modes across the system and ensuring a coordinated investment approach
Actions (to meet each focus area)				
Government work programme: Work underway and steps to be taken in next 1-3 years (to advance each action)				

Outcome 1: EV charging infrastructure is integrated into our energy supply and infrastructure system in such a way that the system remains affordable, reliable, secure and safe

Focus area 1a. Minimising stress on the electricity network

Why is this important?

Successfully meeting the ERP target of zero-emissions vehicles making up 30 percent of the light fleet will see about 1.5 million [more] EVs on Aotearoa New Zealand's roads by 2035. The consequential increase in electricity demand from charging these EVs will place considerable pressure on our electricity infrastructure but also provides an opportunity to better manage demand through smart charging.

Relevant considerations:

- The Energy Efficiency and Conservation Authority (EECA) has identified options to improve the energy performance of private EV chargers. Options include voluntary guidelines, financial incentives, regulation of demand response capability as part of the Minimum Energy Performance Standards regime, and setting requirements for 'smart' technology capable of responding to electricity demand.
- The Electricity Authority oversees regulatory settings for distribution networks, including settings necessary to facilitate distributed energy resources such as smart EV chargers. The Authority has previously promoted the idea of a separate load control tariff for EV chargers to encourage consumers away from charging during peak demand.
- The Commerce Commission has reviewed the rules and processes governing information disclosure and price-quality regulation, including matters related to this outcome.

#	Actions to meet <i>Focus area 1a. Minimising stress on the electricity network</i>
1.a.i	Support greater availability of vehicle and electricity use data to enable more efficient network investments.
1.a.ii	Support increased transparency of electricity network capacity to encourage efficient investment in public and private charging infrastructure.
1.a.iii	Continue to provide co-funding support for EV charging projects that demonstrate or incorporate innovative solutions to manage electricity capacity constraints.
1.a.iv	Promote the benefits and support the uptake of smart chargers for EVs.

Outcome 2: EV users from diverse backgrounds can use accessible, affordable, secure, and reliable EV charging infrastructure when and where they need it

Focus area 2a. Improving equity of and access to home charging infrastructure

Why is this important?

Aotearoa New Zealand’s international and domestic climate change obligations include a strong commitment to ensure our climate transition is just and equitable. Meeting our emissions reduction goals will mean new ways of getting around, including more people using EVs, as well as wider changes to how and where we live. Done well, everyone can benefit from these changes, but we need to make sure these opportunities work for everyone. Specifically in the context of EV charging, we need to consider the equity of and access to home charging for people from a range of backgrounds, especially as living arrangements diversify.

Relevant considerations:

- The government’s Te Tiriti o Waitangi/Treaty of Waitangi obligations are relevant to EV charging infrastructure and implementation of this Strategy should include ongoing engagement and partnership with Māori to understand their transport and charging needs and ensure these are met
- Aotearoa New Zealand’s first Equitable Transition Strategy will be published in 2024. This will help guide efforts to ensure the equity and accessibility of EV charging in future.

#	Actions to meet <i>Focus area 2a. Improving equity of and access to home charging infrastructure</i>
2.a.i	Commission research into aspects of equity of access to charging including: <ul style="list-style-type: none"> • the availability of home charging for renters, and whether the government should pursue a “right to charge” policy for renters • the availability of charging infrastructure in locations with challenging topography and limited off-street parking • issues around charging being available within multi-unit developments • the need for charging infrastructure at social housing • the charging needs of low-income communities • The degree to which older wiring poses a barrier to home charging.
2.a.ii	Explore solutions to increase the provision of public charging infrastructure in locations with limited access to off-street parking. Leverage research into charging needs across demography (action 2.a.i) and geography (2.b.iii) in completing this action.
2.a.iii	Identify Māori partners with a specific interest in EV charging, and/or most appropriate entities to engage with and conduct further targeted engagement on Māori interests in EV charging.
2.a.iv	Review current policies and regulations relating to residential EV charging to ensure they remain fit for purpose.

Focus area 2b. Accommodating for geographic variation in charging needs and energy supply

Why is this important?

Work is underway to identify and address critical regional public charging coverage gaps, especially spatial mapping work undertaken by EECA to inform investment through the Low Emission Transport Fund. For example, Budget 2023 included a \$120m package to support EV charging infrastructure rollout, including funding for new journey charging hubs and to support the provision of publicly available charging in rural and remote communities. EV charging needs vary heavily with local factors, including population density, renting patterns, public transport access and supply, and parking patterns. As this Strategy is implemented further government intervention may be necessary to ensure sufficient high-quality charging provision in some locations.

Target

- We will have a journey charging hub every 150 – 200 kms on main highways by 2028. A journey charging hub is like a petrol station for EVs, offering multiple chargers at speeds high enough to get travellers back on the road as quickly as practicable. Hubs will charge many more vehicles and at faster speeds than the current national network of EV chargers that are currently spaced every 75km along our highways.
- We propose to do further research on regional requirements, including consultation with groups and individuals in regional New Zealand, to inform targets and approaches to deployment across the country.

#	Actions to meet <i>Focus area 2b. Accommodating for geographic variation in charging needs and energy supply</i>
2.b.i	Monitor the expansion of the public EV charging network in line with EV uptake forecast levels across regions to inform investment.
2.b.ii	Consider the introduction of regionally specific targets for EV charging infrastructure, including for urban areas, based on the findings of the research programme
2.b.iii	Provide additional government support (financial or otherwise) to assist the planning and installation of public charging infrastructure that specifically meets the needs of rural communities.
2.b.iv	Explore the role of existing vehicle service suppliers in improving regional/rural EV charging provision, alongside other options for charging locations.
2.b.v	Support innovative technologies that increase network resilience in rural locations.

Outcome 3: Aotearoa’s EV charging system is underpinned by integrated planning and standards across multiple sectors

Focus area 3a. Improving standardisation and interoperability

Why is this important?

A predictable, standardised system for EV charging will help improve customer experience, and promote the use of the EV charging network. Standardisation and interoperability can help improve data collection across a range of providers, thus enabling market participants to make well-informed investment decisions, so long as this data can practicably be made available.

Relevant considerations

- As the EV charging market expands, standardisation and interoperability can improve participant experience.
- EECA is exploring options to improve the energy efficiency, interoperability, and connectivity of private EV chargers, including the current use of voluntary guidelines, financial incentives to install ‘smart’ chargers and regulation using EECA’s Minimum Energy Performance Standards regime.
- Standards New Zealand published voluntary guidelines for residential and commercial EV charging in 2021, known as PAS (Publicly Available Specifications). The PAS will be updated in 2022/23 to reflect the latest technological developments and advice.

#	Actions to meet <i>Focus area 3a. Improving standardisation and interoperability</i>
3.a.i	Promote national consistency and reliability of service and a customer-centred approach to EV charging.
3.a.ii	Explore policy options to ensure chargers are efficient and safe.
3.a.iii	Support and enable data sharing where appropriate (e.g. EV charger and/or network providers) to support standardisation and interoperability.
3.a.iv	Support local authorities to implement the required public charging infrastructure.
3.a.v	Develop systems and support networks to share best-practice between local authorities, industry and central government to ensure guidance and regulations are feasible and proportionate.

Focus area 3b. Optimising data capture and use

Why is this important?

Improving data capture and sharing can help service providers better target their investments, and government better target interventions, to ensure that everyone has access to an EV charger where and when they need it. Third party applications, drawing on the data from EVRoam (a live database of Aotearoa’s EV charging infrastructure) can improve the EV charging experience by informing the consumer where nearby available chargers are located

Relevant considerations:

- Currently EVRoam collects real-time information from all monitored public chargepoints around New Zealand, and freely distributes it through apps and websites to inform EV drivers of charger location and availability.

- EECA is exploring the merits and challenges of various ‘demand flexibility’ initiatives, to make best use of our electricity infrastructure. EV chargers could be one component of a flexible demand system. A functional system will require device registration (to enable visibility and control over the electricity network), data capture, and robust cybersecurity.

#	Actions to meet <i>Focus area 3b. Optimising data capture and use</i>
3.b.i	Explore the viability of mandatory data provision for those charging stations co-funded by the Crown as part of funding agreements, including AC chargers.
3.b.ii	Review the current data capture configuration of EVRoam and consider what other information would be beneficial to users of the EV charging network.

Focus area 3c. Consideration of housing and urban development planning, where appropriate

Why is this important?

As new developments are created, it is important EV charging needs are considered at the earliest practicable stage. The planning system has an important role to play in enabling this.

Relevant considerations:

- There may be an opportunity to explore regulatory change to encourage charge-ready infrastructure or installed charge points in new builds.
- We are aware that Auckland Council is investigating mandating electricity connections to enable smart EV chargers to be installed where developers choose to provide on-site parking.

#	Actions to meet <i>Focus area 3c. Consideration of planning, where appropriate</i>
3.c.i	Explore the costs and benefits of introducing charging infrastructure requirements for new developments (residential, commercial, and industrial).
3.c.ii	Investigate potential changes to planning strategies (for local and regional councils, e.g. minimum numbers of EV parking bays in certain locations).
3.c.iii	Provide guidance material for local councils, landowners and developers (e.g. in regard to “licences to occupy” granted to charging providers to place charging on council land).

Outcome 4: Aotearoa’s EV charging market functions effectively, can adapt and evolve over time, and is attractive to users, operators and investors

Focus area 4a. Accelerating commercial investment

Why is this important?

We seek to maximise the opportunity for a market-led rollout to support our vision for our national charging network.

Relevant considerations

- EECA continues to co-invest in the public EV charging network to support commercial partners, with a focus on high-speed journey charging.
- The Electricity Authority has been assessing any significant first mover disadvantage issues facing customers connecting to distribution networks. The Authority also recently issued guidance to distributors on how to appropriately pass-through charges under the new transmission pricing methodology, including to new and expanding connections.
- The Commerce Commission can apply rules and processes for information disclosure and price-quality regulation to electricity distribution businesses (EDBs). The review of price-quality regulation for EDBs will consider any barriers to EDBs creating new connections in a timely and cost-effective manner.
- The Publicly Available Specification, *Electric vehicle (EV) chargers for commercial applications* is designed to become a single touch point document containing all relevant general EV charging information to inform investors of all requirements.

#	Actions to meet <i>Focus area 4a. Accelerating commercial investment</i>
4.a.i	Work with investors, chargepoint network operators and providers, and other key parties to support investment in public chargepoints.
4.a.ii	Enable data access and sharing where appropriate and needed to accelerate commercial investment.
4.a.iii	Ensure public funds are targeted at areas where commercial investment is unable to fully deliver, noting the need to realise the vision and ensure charging infrastructure is available to everyone who needs it.
4.a.iv	Work with EDBs and charging providers to aim to make the network connection process and pricing for firms wishing to connect new load for EV chargers to distribution networks is efficient and enabling. Investigate changes to the current system that could reduce ‘first mover disadvantage’.

Focus area 4b. Enabling innovation in new technology and business models

Why is this important?

The government and the market should enable innovative solutions to manage potential impacts from an increase in demand and permit new types of charging behaviour and technology.

Relevant considerations:

- EECA’s Low Emission Transport Fund demonstrates innovative solutions to stimulate wider replication of successful projects in the transport sector.

#	Actions to meet <i>Focus area 4b. Enabling innovation in new technology and business models</i>
4.b.i	Continue to co-fund the demonstration of innovative charging technologies and work with industry to address barriers to uptake where benefits exist.

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Outcome 5: Our national EV charging system supports the transition to, and use of, low-emissions transport modes across the wider transport system

Focus area 5a. Progressing work on heavy vehicle charging (buses and trucks)

Why is this important?

As the market for heavy EVs in New Zealand is still in its infancy, we currently do not have any public charging infrastructure to support heavy vehicle electrification. Most charging for these vehicles will be done at depot and destination, however public opportunity and journey charging will give operators further confidence to transition their fleets.

Relevant considerations:

- At the 26th UN Climate Change Conference (COP26) the Government signed a Memorandum of Understanding (MOU) committing to increasing the sales of zero emissions heavy vehicles to 30 percent by 2030, and 100 percent by 2040.
- The Government has also set aside \$30 million in Budget 2023 for EECA to implement a fund to provide grants towards the purchase of low emissions heavy vehicles, including trucks, heavy vans and non-public transport buses.
- Te Manatū Waka has developed New Zealand's first Freight and Supply Chain Strategy. Part of the work from the Strategy includes optimising the freight network to enable freight to shift to lower emission transport modes and developing better data and modelling approaches to support strategic decision-making, including in low emissions infrastructure.
- Through the Low Emission Transport Fund's support for public charging hubs, EECA is encouraging charging providers to include some larger charging spaces for light commercial vehicles, vehicles with trailers etc.

#	Actions to meet <i>Focus area 5a. Progressing work on heavy vehicle charging (buses and trucks)</i>
5.a.i	Continue to support the freight sector to trial and demonstrate emerging technologies through EECA's Low Emission Transport Fund.
5.a.ii	Where appropriate, provide for metro truck, campervan, and car and trailer charging in new light vehicle charging developments, and the ability for heavy vehicle charging to use supporting infrastructure for physically separate charging bays, where feasible. For example, providing separate truck bays at highway charging hubs, similar to existing truck stops on the same footprint as petrol stations.
5.a.iii	Work with stakeholders to identify the most immediate needs for dedicated heavy vehicle charging infrastructure and support the implementation of this infrastructure.
5.a.iv	Research into what a public journey charging network for heavy vehicles might look like (based on critical freight infrastructure networks).

Focus area 5b. Decarbonising other modes across the system and ensuring a coordinated investment approach

Why is this important?

Other transport modes will have particular charging needs, either because of their size and electricity requirements (e.g. ships and planes), or because they have specialist offroad uses and generally operate away from charging infrastructure (e.g. tractors and harvesters).

It is important that infrastructure investments now are optimised for future needs, and ensure connectivity between modes across the system, where feasible.

Relevant considerations:

- We are already seeing the electrification of smaller marine vessels such as passenger ferries. Wellington is home to East by West's first fully electric ferry (Ika Rere), and another ordered from the Wellington Electric Boat Building Company. Auckland Transport have two hybrid ferries on order, which are expected to be the biggest in the Southern Hemisphere. These ferries require shoreside infrastructure to recharge. The East by West electric ferry is currently charged from a 300kW charger at its overnight berth using the same specification as the high-power EV chargers used by ChargeNet in Taupō and the Bombay Hills.
- Though electric and hybrid planes are not widely used in Aotearoa currently, they are likely to play a role in short-haul domestic travel this decade. Sounds Air has ordered three 19-seater electric planes, and intend to convert to a fully electric fleet in future. Air New Zealand also expect to make use of electric aircraft on some shorter domestic routes by 2030. Two-seater electric planes have already taken flight in Aotearoa, and are likely to play a part in reducing emissions of pilot training.
- There are a range of other heavy vehicles, machinery and equipment that will also need to be considered in future charging infrastructure.
- Addressing 'first mover disadvantage' is being progressed under Outcome 4.

#	Actions to meet <i>Focus area 5b. Decarbonising other modes across the system and ensuring a coordinated investment approach</i>
5.b.i	Research the present and future system-wide charging needs for heavy vehicles, planes, trains, and ships, including opportunities for co-location of journey and destination charging.

Annex 1: Types of charging

Types of public charging

Journey charging (including Hub Charging)	Residential on-street charging	Destination charging
<p>Journey (or en-route) charging is used to top up midway through people’s journeys. These chargers range from fast to ultra-fast chargers. Charging normally takes 15 – 45 minutes. Typical journey charging destinations include service stations, cafes, and public rest areas. Hub charging is a communal parking area with multiple chargepoints, with the capacity to service multiple vehicles at once. Aotearoa’s public EV charging network now offers fast/rapid direct current (DC) charging stations at least every 75 kms for over 97 percent of our state highway network. In 2022, EECA provided cofunding for chargers in five of the main remaining network gaps. These chargers should be operational in 2023.</p>	<p>Charging stations installed to serve vehicles parked on-street. Residential on-street charging is particularly important for EV owners without off-street parking. Several have been installed in Wellington suburbs.</p>	<p>Charging is provided at destinations where the user may park for a number of hours. For example, at gyms, cinemas, tourist attractions, shopping centres, and supermarkets. Charging normally takes 1 – 2 hours.</p>

Types of private charging

Residential off-street home charging	Depot charging	Workplace charging
<p>Private off-street charging on driveways and in garages. This is considered the cheapest and most convenient form of EV charging. Users typically slow charge overnight (and pricing generally encourages this). In Aotearoa, 92 percent of light vehicles are parked at a residential property overnight, with 80 percent using off street parking. Unsurprisingly, EECA’s research suggests that 82 percent of charging sessions occur at home.</p>	<p>Charging at private business locations for EVs used commercially, such as buses, trucks and public sector fleets.</p>	<p>Intended primarily for employees that commute to work. This can be slow or fast charging and is typically provided at private car parks. This is also a convenient way for company employees and fleets to charge their vehicles. EECA’s research suggests that about 4 percent of charging sessions are done at workplaces.</p>

Charging Our Future

Government EV charging work programme (2023 – 2026)

This work programme is intended to be read in conjunction with the associated *Charging Our Future: National electric vehicle charging strategy for Aotearoa New Zealand 2023-2035*, which sets out the following long-term vision:

Aotearoa New Zealand's EV charging infrastructure supports an equitable transition to a low-emissions transport system in which accessible, affordable, secure, and reliable charging infrastructure is available to everyone who needs it.

This vision will guide the rapid expansion of Aotearoa New Zealand's EV charging infrastructure system from 2023 to 2035 and is supported by five long-term outcomes that reflect the urgent need to decarbonise the transport system while acknowledging the need for an equitable transition.

Each of these outcomes is in turn supported by key focus areas which capture work underway and set further actions to achieve these outcomes.

This 1-3 year government work programme sets out in detail work that is already underway and the steps that will be taken by government agencies in the next 1-3 years to advance each action.

An overview of the strategy and work programme and how they work together is set out on the next page.

Long-term vision				
<i>Aotearoa New Zealand's EV charging infrastructure supports an equitable transition to a low-emissions transport system in which accessible, affordable, secure, and reliable charging infrastructure is available to everyone who needs it.</i>				
To support this vision, and ensure alignment with the government's long-term strategic direction, this strategy:				
Supports the delivery of current and future Emissions Reduction Plans (ERPs) by ensuring the necessary charging infrastructure is in place to support the target of zero-emissions vehicles reaching 30% of the light fleet by 2035, and by aligning with wider ERP targets and objectives	Considers charging infrastructure in both public and private locations, and takes into account charging behaviour, such as residential off-street, residential on-street, journey and destination charging	Primarily focuses on charging for light EVs, while identifying initial areas for action to support heavy EV charging and considering future charging needs for other modes across the system	Supports an equitable transition by considering the needs and experiences of current and future EV users from diverse backgrounds, as well as the needs and experiences of non-EV users in the transport system	
Long-term outcomes (to support the vision)				
Outcome 1: EV charging infrastructure is integrated into our energy supply and infrastructure system in such a way that the system remains affordable, reliable, secure and safe.	Outcome 2: EV users from diverse backgrounds can use accessible, affordable, secure, and reliable EV charging infrastructure when and where they need it	Outcome 3: Aotearoa's EV charging system is underpinned by integrated and streamlined cross-sectoral planning and standards	Outcome 4: Aotearoa's EV charging market functions effectively, can adapt and evolve over time, and is attractive to users, operators and investors	Outcome 5: Our national EV charging system supports the transition to, and use of, low-emissions transport modes across the wider transport system.
Focus areas (to support each outcome)				
Focus area 1a. Minimising stress on the electricity network	Focus area 2a. Improving the equity of, and access to, home charging infrastructure for all New Zealanders Focus area 2b. Accommodating for geographic variation in charging needs and energy supply	Focus area 3a. Improving standardisation and interoperability Focus area 3b. Optimising data capture and use Focus area 3c. Consideration of planning, where appropriate	Focus area 4a. Accelerating commercial investment Focus area 4b. Enabling innovation in new technology and business models	Focus area 5a. Progressing work on heavy vehicle charging (buses and trucks) Focus area 5b. Decarbonising other modes across the system and ensuring a coordinated investment approach
Actions (to meet each focus area)				
This work programme: Work underway and steps to be taken in next 1-3 years (to advance each action)				

Outcome 1: EV charging infrastructure is integrated into our energy supply and infrastructure system in such a way that the system remains affordable, reliable, secure and safe.

#	Action in final Strategy	Lead agency or agencies	Work underway and steps to be undertaken in the next 1 – 3 years
<i>Focus area 1a. Minimising stress on the electricity network</i>			
1.a.i	<i>Support greater availability of vehicle and electricity use data to enable more efficient network investments</i>	MBIE EA	<ul style="list-style-type: none"> The Electricity Authority has consulted on access to electricity use data as part of its 'Regulatory Setting for Distribution Networks' consultation. It is currently considering submissions received and plans to announce further steps in the second half of 2023.
1.a.ii	<i>Support increased transparency of electricity network capacity to encourage efficient investment in public and private charging infrastructure</i>	EECA MBIE EA Commerce Commission	<ul style="list-style-type: none"> This links to work undertaken in action 4.a.ii. EECA is currently utilising transmission network-level data to inform charger investment planning through the Low Emissions Transport Fund. EECA's Regional Energy Transition Accelerator (RETA) programme is working with stakeholders at a regional level to identify localised opportunities and barriers faced by industry. Future RETA reports intend to incorporate electricity demand from potential future public EV charging infrastructure, in order to identify electricity infrastructure opportunities that benefit both industrial uses and EV charging. The Commerce Commission is reviewing the Information Disclosure requirements for distribution networks in its Targeted Information Disclosure Review. This work may

#	Action in final Strategy	Lead agency or agencies	Work underway and steps to be undertaken in the next 1 – 3 years
			<p>consider extending requirements to publish network capacity data. A decision on this is expected in early 2024.</p> <ul style="list-style-type: none"> • Distribution companies are currently investigating making this information available on their networks. Orion and PowerCo already publish data on their high-voltage capacity.
1.a.iii	<i>Continue to provide co-funding support for EV charging projects that demonstrate or incorporate innovative solutions to manage electricity capacity constraints.</i>	EECA	<ul style="list-style-type: none"> • EECA provides funding of this nature through the Low Emission Transport Fund. • Examples of the kind of technology captured by the action include Battery Energy Storage Systems to reduce reliance on the grid at peak times, or load management systems that actively manage electricity load when multiple vehicles are charging at the same time, in order to remain below a certain capacity level.
1.a.iv	<i>Promote the benefits and support the uptake of smart chargers for EVs</i>	EECA MBIE	<ul style="list-style-type: none"> • MBIE is currently progressing changes to the Energy Efficiency and Conservation Act 2000. These changes may allow for regulatory options to support the uptake of smart chargers for EVs. Cabinet decisions on these changes are expected in the second half of 2023. • EECA is developing a package of non-regulatory interventions to support and promote the use of smart EV chargers (i.e. that are demand response capable). This package, to be introduced in the second half of 2023, includes guidance and marketing material to help consumers understand what a smart charger is and the benefits they provide.

Outcome 2: EV users from diverse backgrounds can use accessible, affordable, secure, and reliable EV charging infrastructure when and where they need it

#	Action in final Strategy	Lead agency or agencies	Work underway and steps to be undertaken in the next 1 – 3 years
<i>Focus area 2a. Improving the equity of, and access to, home charging infrastructure for all New Zealanders</i>			
2.a.i	<p><i>Ensure policies and interventions relating to EV charging infrastructure target an equitable transition to meet the specific needs of different communities. Commission research into aspects of equity of access to charging including:</i></p> <ul style="list-style-type: none"> <i>the availability of home charging for renters, and whether the government should pursue a “right to charge” policy for renters</i> <i>the availability of charging infrastructure in locations with challenging topography and limited off-street parking</i> <i>issues around charging being available within multi-unit developments</i> <i>the need for charging infrastructure at social housing</i> <i>the charging needs of low-income communities</i> <i>the degree to which older wiring poses a barrier to home charging.</i> 	<p>MoT will lead and consult with relevant agencies as practicable , eg Kāinga Ora</p>	<ul style="list-style-type: none"> The action works in conjunction with action 2.b.iii. This action focuses on the availability of charging infrastructure across demographic groups and lifestyles. Action 2.b.iii focuses on the availability of charging across geographic locations. In the first instance, agencies will design the research programme, and establish the priority of areas they wish to explore.

#	Action in final Strategy	Lead agency or agencies	Work underway and steps to be undertaken in the next 1 – 3 years
2.a.ii	<i>Explore solutions to increase the provision of public charging infrastructure in locations with limited access to off-street parking. Leverage research into charging needs across demography (action 2.a.i) and geography (2.b.iii) in completing this action.</i>	EECA MoT MBIE	<ul style="list-style-type: none"> EECA funds charging infrastructure through the Low Emission Transport Fund Research will be commissioned in 2023/24 to provide a picture of where chargers are needed and what type of chargers are needed (see action 2.b.iii). This research could inform any future government investment approach. Research will also be commissioned into access to charging for some groups including some groups with limited access to off-street parking (see action 2.a.i).
2.a.iii	<i>Identify Māori partners with a specific interest in EV charging, and/or most appropriate entities to engage with and conduct further targeted engagement on Māori interests in EV charging.</i>	MBIE and MoT in consultation with other agencies	<ul style="list-style-type: none"> MBIE and MoT to work with other agencies to identify Māori partners with an interest in EV charging infrastructure
2.a.iv	<i>Review current policies and regulations relating to residential EV charging to ensure they remain fit for purpose</i>	MoT to convene a process with relevant agencies including MfE, MBIE (Building and Construction) and others.	<ul style="list-style-type: none"> There are multiple policies and regulations that relate to EV charging, spanning both local and central government. As a first step, MoT will convene a process to scope the work required with relevant agencies including MfE, MBIE (Building and Construction) and others.
Focus area 2b. Accommodating for geographic variation in charging needs and energy supply			
2.b.i	<i>Monitor the expansion of the public EV charging network in line with EV uptake forecast levels across regions to inform investment</i>	EECA MBIE WK	<ul style="list-style-type: none"> Under current settings, the government does not have visibility of all public chargers. Waka Kotahi currently encourages charging providers to voluntarily record their chargers in EVRoam. As a condition of receiving co-funding for EV charger projects, EECA currently requires that these chargers are recorded in EVRoam.

#	Action in final Strategy	Lead agency or agencies	Work underway and steps to be undertaken in the next 1 – 3 years
			<ul style="list-style-type: none"> • However, an increasing number of EV chargers are being installed without government co-funding, and not being recorded in EVRoam. • Agencies will explore options to further encourage, or require, all chargers connected to the electricity network to be recorded in a central repository, such as EVRoam. This will explore options for slow AC chargers, as well as fast DC chargers (both public and private). • Exploration of options to be completed in 2024.
2.b.ii	<i>Consider the introduction of regionally specific targets, including for urban areas, for EV charging infrastructure based on the findings of the research programme</i>	EECA MoT MBIE WK	<ul style="list-style-type: none"> • Budget 2023 provided funding for research into where chargers are needed and what type of chargers are needed. This may inform future government investment approaches, including for urban areas with limited off-street parking. • This research will be commissioned in 23/24.
2.b.iii	<i>Provide additional government support (financial or otherwise) to assist the planning and installation of public charging infrastructure that specifically meets the needs of rural communities</i>	EECA	<ul style="list-style-type: none"> • This includes the programme funded through Budget 2023 to invest in public charging infrastructure for small communities, with a particular focus on rural communities. • Timeframe: Programme design currently underway, with funding to commence in 2023/24.
2.b.iv	<i>Explore the role of existing vehicle service suppliers in improving regional/ rural EV charging provision, alongside other options for charging locations</i>	EECA	<ul style="list-style-type: none"> • Through the LETF, EECA is engaging with industry and local communities to identify charging solutions for rural and regional areas. This includes consideration of the role of existing service stations, greenfield journey charging sites, as well as slower destination charging solutions at community facilities, accommodation etc, with charger speed to suit the expected

#	Action in final Strategy	Lead agency or agencies	Work underway and steps to be undertaken in the next 1 – 3 years
			<p>length of stay at the location and to maximise user convenience.</p> <ul style="list-style-type: none"> • This work is underway and ongoing.
2.b.v	<i>Support innovative technologies that increase network resilience in rural locations</i>	EECA	<ul style="list-style-type: none"> • EECA will continue to co-fund charging infrastructure and other innovative technologies through the Low Emission Transport Fund. • This action should be considered as part of a package of actions relating to EECA's funding of charging technology.

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Outcome 3: Aotearoa’s EV charging system is underpinned by integrated and streamlined cross-sectoral planning and standards

#	Action in final Strategy	Lead agency or agencies	Work underway and steps to be undertaken in the next 1 – 3 years
<i>Focus area 3a. Improving standardisation and interoperability</i>			
3.a.i	<i>Promote national consistency and reliability of service and a customer-centric approach to EV charging</i>	MoT WK EECA	<ul style="list-style-type: none"> In Round 7 of the LETF, EECA has approved a project for three key charging suppliers to collaborate on a trial for roaming capability between their public EV charging networks. This is a trial enabling EV owners to use different charging networks from one account. The trial will be complete in 2024. Agencies to consider the outcomes of the trial when planning next steps. MoT to commission research into interoperable, standardised and accessible billing, including whether regulatory action is needed to support public benefits. EECA to consider any implications of the trial and/or the research for the content of relevant Publicly Available Specifications.
3.a.ii	<i>Explore policy options to ensure chargers are efficient and safe</i>	MBIE, in consultation with WorkSafe	<ul style="list-style-type: none"> MBIE is proposing incorporating reference to a number of standards related to EV charging as part of a wider update of references in the Electricity (Safety) Regulations 2010.
3.a.iii	<i>Support and enable data sharing where appropriate (e.g. EV charger and/or network providers) to support standardisation and interoperability</i>	WK MoT EECA	<ul style="list-style-type: none"> This action supports focus areas 3a and 3b and needs to be undertaken in conjunction with the actions in focus area 3b.

#	Action in final Strategy	Lead agency or agencies	Work underway and steps to be undertaken in the next 1 – 3 years
			<ul style="list-style-type: none"> Initial steps include: <ul style="list-style-type: none"> Developing a consistent understanding of the data already collected by government and industry, and the data available to government and stakeholders in the market Considering the additional data sharing that would produce a net benefit Considering the governing arrangements necessary for sharing that data.
3.a.iv	<i>Support local authorities to implement the required public charging infrastructure</i>	MoT MfE	<ul style="list-style-type: none"> This action works in accordance with actions 3.a.v, 3.c.ii, and 3.c.iii. As an initial step, central government to understand the support that would benefit local authorities. Support could include guidance under action 3.c.iii if initial exploratory work shows that would be useful. However, it could also include other forms of support.
3.a.v	<i>Develop systems and support networks to share best practice between local authorities, industry and central government to ensure guidance and regulations are feasible and proportionate</i>	MoT MfE	<ul style="list-style-type: none"> Initial steps include: <ul style="list-style-type: none"> Gauging the interest of local authorities in a forum of this nature Considering the fora established already (relating to other Transport portfolio matters or local government matters generally) and whether they would be appropriate for this work

#	Action in final Strategy	Lead agency or agencies	Work underway and steps to be undertaken in the next 1 – 3 years
<i>Focus area 3b. Optimising data capture and use</i>			
3.b.i	<i>Explore the viability of mandatory data provision for those charging stations co-funded by the Crown as part of funding agreements, including AC chargers.</i>	WK MoT EECA	<ul style="list-style-type: none"> This action works in accordance with 3.a.iii and 3.b.ii.
3.b.ii	<i>Review the current data capture configuration of EVRoam and consider what other information would be beneficial to users of the EV charging network.</i>	WK MoT EECA	<ul style="list-style-type: none"> This action works in accordance with 3.a.iii and 3.b.i.
<i>Focus area 3c. Consideration of planning, where appropriate</i>			
3.c.i	<i>Explore the costs and benefits of introducing charging infrastructure requirements for new developments (residential, commercial, and industrial)</i>	MoT and MBIE, in consultation with MBIE (B&C), HUD, MfE, Kāinga Ora	<ul style="list-style-type: none"> There are multiple policies and regulations that relate to EV charging in new developments, spanning the planning and building systems, as well as local government requirements. As a first step, MoT and MBIE will convene a process with other relevant agencies to scope the work required.
3.c.ii	<i>Investigate potential changes to planning strategies (for local and regional councils, e.g. minimum numbers of EV parking bays in certain locations)</i>	MfE	<ul style="list-style-type: none"> This action may follow the initial exploratory work to implement action 3.a.iv. Changes to planning strategies could be achieved through a number of mechanisms. In the first instance, guidance produced (under action 3.c.iii) may be sufficient. Central government could be more “hands on” and use national direction to achieve changes to planning strategies.
3.c.iii	<i>Provide guidance material for local councils, landowners and developers (e.g. in regard to “licences to occupy”)</i>	MoT MfE	<ul style="list-style-type: none"> In regard to local government, this action may follow the initial exploratory work to implement action 3.a.iv.

#	Action in final Strategy	Lead agency or agencies	Work underway and steps to be undertaken in the next 1 – 3 years
	<i>granted to charging providers to place charging on council land)</i>		<ul style="list-style-type: none"> If guidance is likely to be effective, it also avoids some of the costs of legislating to compel behaviours.

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Outcome 4: Aotearoa’s EV charging market functions effectively, can adapt and evolve over time, and is attractive to users, operators and investors

#	Action in final Strategy	Lead agency or agencies	Work underway and steps to be undertaken in the next 1 – 3 years
<i>Focus area 4a. Accelerating commercial investment</i>			
4.a.i	<i>Work with investors, chargepoint network operators and providers, and other key parties to support investment in public chargepoints</i>	EECA MoT MBIE WK	<ul style="list-style-type: none"> Formalise an interagency working group and governance group to oversee implementation of this Strategy. Incorporate a mechanism for the interagency working group to work with the private sector.
4.a.ii	<i>Enable data access and sharing where appropriate and needed to accelerate commercial investment</i>	WK MBIE EECA MoT	<ul style="list-style-type: none"> Action 1.a.ii relates to the availability of electricity network capacity data. Actions under Outcome 3 relate to the availability and use of ChargePoint data. This action involves considering any other data needed to accelerate commercial investment, and/or any combining of datasets to accelerate commercial investment. If voluntary systems for data sharing and use prove to be inadequate to provide full benefits, government can consider mandating data provision.
4.a.iii	<i>Ensure public funds are targeted at areas where commercial investment is unable to fully deliver, noting the need to realise the vision and ensure charging infrastructure is available to everyone who needs it.</i>	EECA	<ul style="list-style-type: none"> The government aims to invest where fully commercial investment is currently unviable.

#	Action in final Strategy	Lead agency or agencies	Work underway and steps to be undertaken in the next 1 – 3 years
			<ul style="list-style-type: none"> EECA will continue to co-fund charging infrastructure and other innovative technologies through the Low Emission Transport Fund.
4.a.iv	<p><i>Work with EDBs and charging providers to aim to make the network connection process and pricing for firms wishing to connect new load for EV chargers to distribution networks is efficient and enabling. Investigate changes to the current system that could reduce ‘first mover disadvantage’</i></p>	<p>MBIE EECA MoT EA Commerce Commission</p>	<ul style="list-style-type: none"> Agencies to continue meeting as a working group and a steering group to look at options. Agencies will observe Electricity Networks Aotearoa’s work with industry consortium Drive Electric to work towards facilitating more efficient connection of public EV charging sites to the electricity distribution networks The Electricity Authority is considering distribution pricing reform which will also cover the variation in distribution connection approaches for load customers, including public EV chargers. Separately, the Authority will investigate whether there are other regulatory barriers to the roll-out and adoption of EV technology as part of its work on updating the regulatory settings for distribution networks. The Commerce Commission is undertaking a review of information disclosure that can support increased transparency. This will allow the Commission to monitor the performance of distribution businesses in providing new connections.
<p>Focus area 4b. Enabling innovation in new technology and business models</p>			
4.b.i	<p><i>Continue to co-fund the demonstration of innovative charging technologies and work with industry to address barriers to uptake where benefits exist</i></p>	<p>EECA</p>	<ul style="list-style-type: none"> EECA continues to co-fund the demonstration of innovative charging technologies (such as networked and load shared chargers, induction charging, and software applications) and

#	Action in final Strategy	Lead agency or agencies	Work underway and steps to be undertaken in the next 1 – 3 years
			<p>works with industry to address barriers to uptake where benefits exist. Additional funding from Budget 2023 enables this activity to be expanded.</p> <ul style="list-style-type: none"> • This work is underway and ongoing.

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Outcome 5: Our national EV charging system supports the transition to, and use of, low- and low-emissions transport modes across the wider transport system

#	Action in final Strategy	Lead agency or agencies	Context and steps to be undertaken in the next 1 – 3 years
<i>Focus area 5a. Progressing work on heavy vehicle charging (buses and trucks)</i>			
5.a.i	<i>Continue to support the freight sector to trial and demonstrate emerging technologies through EECA's Low Emission Transport Fund</i>	EECA	<ul style="list-style-type: none"> The LETF has co-funded the demonstration of a number of freight sector technologies, including battery and hydrogen fuel cell vehicles and battery swap technology. With funding from Budget 2022, EECA will be delivering a \$15 million freight decarbonisation demonstration programme in the 2023/24 financial year.
5.a.ii	<i>Where appropriate, provide for metro truck, campervan, and car and trailer charging in new light vehicle charging developments, and the ability for heavy vehicle charging to use supporting infrastructure for physically separate charging bays, where feasible. For example, providing separate truck bays at highway charging hubs, similar to existing truck stops on the same footprint as petrol stations.</i>	EECA	<ul style="list-style-type: none"> Through the LETF's support for public charging hubs, EECA is encouraging charging providers to include some larger charging spaces for light commercial vehicles, vehicles with trailers etc.
5.a.iii	<i>Work with stakeholders to identify the most immediate needs for dedicated heavy vehicle charging infrastructure and support the implementation of this infrastructure</i>	MOT with support from MBIE, EECA and Waka Kotahi	<ul style="list-style-type: none"> Establish a forum for public and private sector to work together on heavy vehicle charging. Addressing 'first mover disadvantage' is being worked through under action 4.a.iv.

5.a.iv	<i>Research into what a public journey charging network for heavy vehicles might look like (based on critical freight infrastructure networks).</i>	MOT with support from MBIE, EECA and Waka Kotahi	<ul style="list-style-type: none"> We will determine the specific needs and timeframes for the action through the public-private forum (action 5.a.iii).
<i>Focus area 5b. Decarbonising other modes across the system and ensuring a coordinated investment approach</i>			
5.b.i	<i>Research the present and future system-wide charging needs for heavy vehicles, planes, trains, and ships, including opportunities for co-location of journey and destination charging.</i>	MOT with support from MBIE, EECA and Waka Kotahi	<ul style="list-style-type: none"> We will determine the specific needs and timeframes for the action through the public-private forum (action 5.a.iii).

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14 February 2024

OC230964

Hon Simeon Brown
Minister of Transport
cc Minister for Energy

Action required by:
Friday, 23 February 2024

INITIAL BRIEFING ON ELECTRIC VEHICLE CHARGING NETWORK AND INFRASTRUCTURE

Purpose

Seeks your feedback on the scope and direction of the cross-government work programme to progress your commitments to expand public electric vehicle (EV) charging infrastructure.


Key points

- The Government has committed to delivering a comprehensive, nationwide network of 10,000 public EV chargers by 2030.
- You have indicated your expectation that the role of government is to:
 - facilitate private investment by addressing coordination and regulatory barriers,
 - limit and direct co-funding where necessary to areas where the private sector is unlikely to invest and it is not yet economically viable, but where investment is needed to achieve a comprehensive, nationwide charging network.
- The Ministry of Business, Innovation and Employment (MBIE) is providing you with advice on regulatory work programmes that address barriers to private investment in EV charging [MBIE 2324-1792 refers].
- You have an opportunity to consider how you would like to scope this work programme and the range of options that you would like to explore, including considering funding models. This note outlines some initial scoping ideas for your feedback.
- We understand your office is scheduling a deep dive with officials to discuss your priorities for EV charging, and that you are also considering a roundtable discussion with sector stakeholders. This briefing could help inform those discussions.

Recommendations

We recommend you:

- 1 **note** advice on regulatory development work programmes relating to resource consenting, network connection costs and connection processes will be provided to you in your capacity as Minister for Energy through an MBIE/MfE *Electrify NZ* briefing [MBIE 2324-1792 refers].
- 2 **provide** feedback to officials on your priorities for the EV charging work programme, and particularly the scope options outlined in paragraph 26. Yes/No
- 3 **agree** that Ministry of Transport officials work with MBIE, the Energy Efficiency and Conservation Authority (EECA) and other relevant agencies to progress a cross-government work programme to deliver your public EV charging commitments. Yes/No


 Siobhan Routledge
 Acting Deputy Chief Executive, Policy
 14 / 02 / 2024

 Hon Simeon Brown
 Minister of Transport
 / /

- Minister's office to complete:**
- Approved
 - Declined
 - Seen by Minister
 - Not seen by Minister
 - Overtaken by events

Comments

Contacts

Name	Telephone	First contact
Siobhan Routledge, Acting Deputy Chief Executive, Policy	9(2)(a)	
Nick Paterson, Manager Environment Team	9(2)(a)	✓
Emma Wardle, Senior Adviser Environment Team	9(2)(a)	

INITIAL BRIEFING ON ELECTRIC VEHICLE CHARGING NETWORK AND INFRASTRUCTURE

Background

Rapidly growing the public charging network is key to support a growing electric vehicle (EV) fleet and as a means to decarbonise transport

- 1 *Supercharging EV Infrastructure*¹ committed to delivering a comprehensive, nationwide network of 10,000 public EV chargers by 2030. The National-ACT Coalition Agreement noted this work would include robust cost-benefit analysis to ensure maximum benefit for government investment.
- 2 You are scheduled to meet with officials to discuss the second emissions reduction plan (ERP 2) on 19 February 2024 and the Minister of Climate Change on 26 February 2024 [OC231127 forthcoming]. 9(2)(f)(iv)

There are currently around 1,000 public EV chargers in New Zealand

- 3 The existing public charging network of around 1,000 chargers can charge 1,200-1,300 vehicles simultaneously. A breakdown of charger types currently on the network is provided in **Annex One**.
- 4 The majority of these chargers have been delivered with government co-funding through the Energy Efficiency and Conservation Authority's (EECA) Low Emission Transport Fund (and the Low Emission Vehicles Contestable Fund that preceded it).
- 5 In addition, there are approximately 250 chargers in development that have been approved in recent EECA funding rounds, capable of charging about 450 EVs simultaneously.
- 6 EECA co-funding is provided through contestable funding rounds held several times each year. More detail on the design of the EECA programme is in the 26 January EECA briefing to the Minister for Energy titled *Update on EECA's public EV charging activity* [EECA 2024 BRF 001 refers].

The government has two parallel roles in delivering public EV charging

- 7 To deliver on the 10,000 charger commitment, you have indicated your expectation that the role of government is to:
 - facilitate private investment by addressing coordination and regulatory barriers,

¹https://assets.nationbuilder.com/nationalparty/pages/18364/attachments/original/1693957243/Supercharging_EV_Infrastructure.pdf?1693957243

- limit and direct co-funding where necessary to areas where the private sector is unlikely to invest and it is not yet economically viable, but where investment is needed to achieve a comprehensive, nationwide charging network.

There is a strong case for government to facilitate private investment through addressing regulatory barriers

- 8 The commercial viability of the public EV charging business model in New Zealand still faces challenges due to the relatively small number of EVs in the fleet that do not create high enough demand/utilisation for chargers. 9(2)(ba)(i) [REDACTED]
- 9 Beyond current demand for chargers, there are other barriers that prevent private investment. Addressing these barriers could improve the viability of the EV charging business model in the near-term.
- 10 Many of these measures fall within the energy portfolio. However, we will continue to work closely with the Ministry of Business, Innovation and Employment (MBIE) to maintain a joined-up approach on EV charging.

High and inconsistent connection costs pose a barrier to private investment

- 11 CPOs state that they face prohibitively high costs in connecting to electricity networks. CPOs have noted that connection costs are much higher in New Zealand than in other jurisdictions and, within New Zealand, connection costs and processes vary dramatically between Electricity Distribution Businesses (EDBs). It is not clear that these costs can be recovered from charging customers given the early stage of market development.
- 12 EDBs have wide discretion in what they charge for complex customer connections of this kind. Regulation of the distribution sector is shared between the Commerce Commission and the Electricity Authority, but these connection charges are not set or capped by regulators. Broadly speaking, the Commerce Commission regulates overall revenue, and the Electricity Authority regulates prices.
- 13 *Electrify NZ*² committed to address connection cost issues. MBIE officials are briefing you in parallel (jointly with the Ministry for the Environment (MfE)) on work to realise the aims of *Electrify NZ*. This includes measures to reduce consenting barriers (including making the connection of public EV chargers a permitted activity) and work underway across the Electricity Authority and the Commerce Commission to address challenges relating to network connection costs and processes.

Lack of network capacity is creating long lead times to connect to the grid

- 14 Network upgrades are often required to accommodate large new electricity demand. On some networks, new connections can take over a year to be operational. Additionally, some CPOs have raised concerns that they lack clarity regarding networks' capacity to accommodate new chargers in specific locations.

²https://assets.nationbuilder.com/nationalparty/pages/17865/attachments/original/1684306518/Electrify_NZ.pdf?1684306518

- 15 *Supercharging EV Infrastructure* contains a commitment to increase the visibility of network capacity information. MBIE and MfE's *Electrify NZ* briefing will also detail work underway to improve the visibility of network capacity at specific locations.

Government co-funding will continue to have a role but is best focused where the most significant market barriers exist

- 16 In 2016, the previous National Government put in place a co-funding model to help address the issue of the public EV charging business model not yet being commercially viable. Given the scale and pace of changes in the EV market over this time, it is appropriate to consider whether the design and application of the current co-funding model remains fit for purpose.
- 17 *Supercharging EV Infrastructure* set out the intention to revive the Ultra-Fast Broadband investment model to rollout EV charging infrastructure, and to transfer responsibility for government investment in EV charging infrastructure to the new National Infrastructure Agency (NIA), once established.
- 18 The Minister of Infrastructure is receiving initial advice from the Treasury on the form and functions of the NIA. It is too early to provide detailed advice on the role the NIA could play in delivery of EV charging infrastructure. However, we will continue to engage with the Treasury and provide updates as work progresses.
- 19 In the interim, we can work with MBIE to provide you with advice on any changes to the existing co-funding model. We expect this advice would include multiple options to achieve your objectives that could be implemented more or less quickly (i.e. tweaks to improve the effectiveness of the existing model through to applying the Ultra-Fast Broadband model to EV charging).
- 20 This presents an opportunity to consider the Government's preferred model for delivering the public charging network, the relative roles of different players (e.g. CPOs, EDBs, central and local government), and the best co-funding approach to implement this model. The intent would be that a market-led approach is retained, and that any public funds are targeted to areas where commercial investment is unfeasible.
- 21 Further advice on this topic will be informed by feedback shared with officials through an upcoming deep dive session scheduled by your office.

Investment in EV charging infrastructure will be subject to robust cost-benefit analysis (CBA)

- 22 The National-ACT Coalition Agreement noted the commitment to deliver a network of 10,000 chargers would include robust CBA to ensure maximum benefit for government investment.
- 23 Work is underway to scope this CBA, with the analysis to be complete by November 2024. As a first step, we are progressing necessary work to understand the link between EV charger rollout and EV uptake, and the potential impact on emissions. The scope of the analysis will be informed by decisions you and your ministerial colleagues make on the work programme and any changes to the co-funding model.

We will use your feedback to progress a cross-government work programme on public EV charging

24 Upon your agreement, we will work with MBIE, EECA and relevant agencies to progress a cross-government work programme to deliver on your public EV charging commitments. This would include advice on addressing barriers to private investment in charging, and changes to the government co-funding model.

25 Many relevant actions have been previously identified in 'Charging Our Future: National electric vehicle charging strategy for Aotearoa New Zealand 2023-2035' (the EV Charging Strategy), published in October 2023.³ Industry and key stakeholders supported the EV Charging Strategy but have indicated that an updated strategy reflecting the Government's EV charging priorities would be helpful. Our view is that the EV Charging Strategy could provide an input to the work programme but be refined to focus on priority actions.

26 In developing the work programme, we seek your feedback on its scope. Some of our starting assumptions are as follows:

26.1 The network of 10,000 public chargers by 2030 would cover the full range of public charging needs for light vehicles.

This would include ultra-rapid charging on the highway network; fast charging at journey locations; moderate charging at shopping centres, supermarkets, and community facilities; and slower AC charging in suburban locations. More information on public charger types is attached as **Annex One**.

26.2 The work programme would progress work to understand expected changes in charging needs and the market's ability to meet these needs over time.

As demand rises and the public EV charging business case develops, the need for government co-funding is expected to reduce. Rising demand will improve the commercial viability of use cases like state highway charging hubs. Meanwhile, there may continue to be little commercial case for installing or retaining chargers in remote and rural communities. Continued work is needed to understand these changes and how any public funding is prioritised over coming years.

Charging needs will also be influenced by factors such as housing trends. For example, mainstream EV adoption will increasingly require public charging that accommodates those without off-street parking who are unable to charge their vehicle at home.

26.3 The work programme would progress work on integration across, and user interface with, the charging network.

As the EV charging market expands, integration, standardisation and interoperability can enable market participants to make well-informed investment decisions, improve customer experience, and promote use of the network.

26.4 The work programme would also consider public charging needs for heavy vehicles.

³ <https://www.transport.govt.nz/assets/Uploads/EV-Charging-Strategy.pdf>

While it is expected that most heavy vehicle charging will occur at private depots, a public heavy vehicle charging network will be needed to complement this. This will enable electric trucks to complete a wide range of journeys and give operators further confidence to transition their fleets.

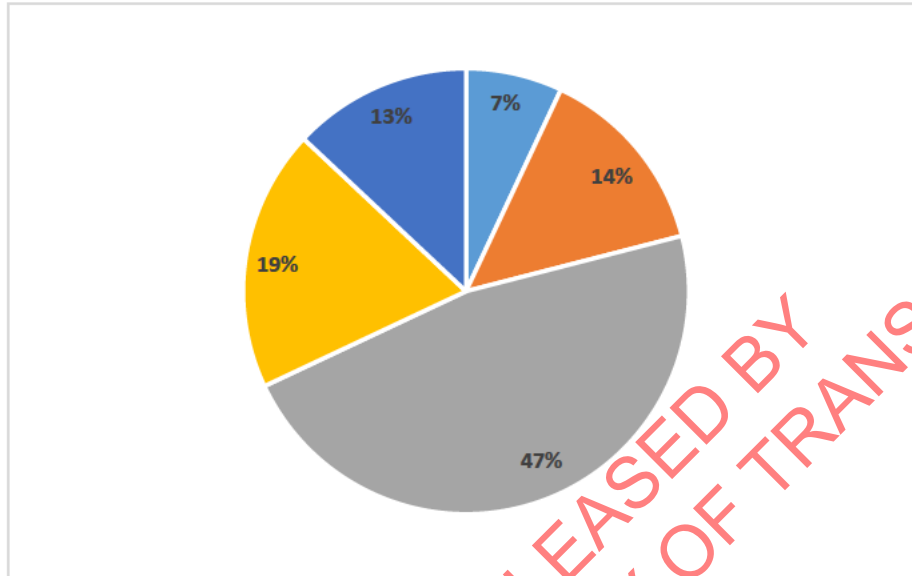
- 27 We would welcome your feedback on the scoping topics outlined above. Alternatively, you may wish to provide this feedback as part of the proposed deep dive with officials on EV charging.

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ANNEX ONE – CHARGER TYPES ON THE PUBLIC NETWORK

The public chargers on the network vary in power rating and application. The current split of public charger power ratings is illustrated below.

Approximate current distribution of public EV charger power ratings



Power rating description	Example application
Ultra rapid: 150kW+ DC	Where an EV is on a journey exceeding the range of the car and needing a full charge quickly (i.e. on a state highway, similar to a petrol station).
Rapid: 50-150kW DC	
Fast: 25-50kW DC	Where an EV will be for 30 minutes to 2 hours. Described as an opportunity charge usually in a destination location such as a shopping mall, gym or marae. Most chargers on the state highway network are 25-50kW chargers, but these are increasingly being replaced with higher power chargers.
Moderate: 22kW AC	Used in both destination locations and where an EV will be for 4 hours or more, however most EVs are not able to charge at 22 kW AC (usually a maximum of 7-11kW).
Slow: 3-11kW AC	Where an EV will be for 4 hours or more. Usually in the home but could be workplace, hotel, motel, or holiday park.

Office of the Minister of Transport

Office of the Minister for Energy


Cabinet Economic Policy Committee

Supercharging Electric Vehicle Infrastructure Work Programme

Proposal

1. The purpose of this paper is to inform Cabinet of the work programme underway across government to deliver our *Supercharging Electric Vehicle (EV) Infrastructure* commitments.

Relation to government priorities

2. *Supercharging EV Infrastructure* sets out the Government's commitment to deliver a network of 10,000 public EV chargers by 2030. Cost benefit analysis will be used to inform the design and scale of delivery of this commitment, as set out in the National-Act Coalition Agreement. This will ensure maximum benefit for government investment.
3. *Electrify NZ* sets out the Government's commitment to double the supply of affordable, clean energy and to electrify key industry sectors to become a lower emissions economy. The document commits to addressing cost barriers to connecting to the electricity network, which includes public EV charging infrastructure.
4. s 9(2)(f)(iv) 
5. The roll-out will also support increased up-take of EVs with the need for charging infrastructure being a significant barrier to their uptake.

Background

6. Range anxiety and availability of charging infrastructure currently act as barriers to EV uptake. Rapidly growing the public charging network is key to supporting a growing EV fleet and to decarbonise transport.
7. As at the end of 2023, New Zealand had one public EV charger for every 88 EVs in the fleet. Most comparable countries have ratios of one public charger to less than 40 EVs. This is partly explained by New Zealand's focus on developing a network of fast chargers. Other countries have focused on installing slow public chargers as well, but there has been little demand for slow public chargers in New Zealand as most EV owners can charge at home.
8. New Zealand's public charging network currently consists of around 1,000 chargers capable of charging 1,200-1,300 vehicles simultaneously. Most of these chargers have been delivered with government co-investment through the Energy Efficiency and

Conservation Authority's (EECA) contestable funding rounds. The government, through EECA, has committed \$28 million to public EV charging projects since government support for EV charging started in 2016. Approximately 250 additional chargers, capable of charging about 450 EVs, have been approved in recent EECA funding rounds and are in development.

9. In Budget 2023, the previous government committed \$95 million to public EV charging infrastructure, currently allocated as:
 - 9.1. \$23 million in the 2023/24 financial year;
 - 9.2. \$29 million in the 2024/25 financial year;
 - 9.3. \$43 million in the 2025/26 financial year.
10. The government contestable co-investment model was put in place in 2016 to kick-start the network and provide confidence to early adopters of EVs. The initial focus was on installing fast chargers every 75km along the state highway network.
11. Since this time, significant changes have taken place in the EV and EV charging markets. EVs now make up over 2 per cent of the light-vehicle fleet and a range of charging providers have entered the market (including fuel companies, electricity generators and distributors, and dedicated EV charge point operators).
12. While the market is rapidly evolving, the business case for public EV charging infrastructure remains challenging due to barriers such as high costs to connect to distribution networks and inconsistent processes for connecting to distribution networks, and gaining resource consents.
13. The number of chargers installed each year has increased as government co-investment has increased and more charging providers have entered the market (91 chargers installed in 2021, 124 installed in 2022 and 164 installed in 2023).
14. Future installation of public chargers will need to be at a much higher rate to meet the needs of the future EV fleet. The ability to install these chargers at the pace required will depend on the attractiveness for private investment and practical considerations such as the ability of charging providers to connect to the electricity network in a timely manner.
15. To provide a reasonable ratio of EV chargers to the forecast future number of EVs¹ (one public charger to 60 EVs), it is estimated New Zealand would need to install about 10,000 public EV chargers by 2030, as shown in Table 1 below.

¹ As forecast under the Climate Change Commission's Demonstration Path.

Table 1 – Estimated number of public EV chargers needed to be installed each year to maintain a reasonable ratio of chargers to EVs

Year	2024	2025	2026	2027	2028	2029	2030
Number of public chargers	670	520	740	1,030	1,690	2,370	3,020

16. It is timely to reconsider the way the government can best enable an accelerated rollout of public EV charging infrastructure. This includes considering measures that can improve the viability of the EV charging business case, and reviewing the co-investment model to ensure it is effective and provides maximum value from government funding.

I will be reviewing the government co-investment model for public EV charging infrastructure, informed by cost-benefit analysis

17. My intention is to transition the government co-investment model so that private investment in the public EV charging network is maximised, and the main role for government is in addressing non-financial barriers (such as red tape and regulation). However, I recognise there is likely to be an ongoing role for some government co-investment targeting projects that face the biggest barriers (e.g. are less likely to ever be commercially viable). Examples of sites that will struggle for commercial viability include those:
- 17.1. where there is limited electricity network capacity, but reasonable demand (e.g. Lewis Pass);
 - 17.2. where limited network capacity exists and there is little demand, but chargers are required for a complete network (e.g. West Coast); or
 - 17.3. areas with very seasonal demand patterns (e.g. Kaiteriteri).
18. In the interim the ratio of EV's to EV public chargers is well behind other countries, and presents a need for the Government to continue to support this growth to provide a network which can support increased electrification of transport options.

The approach to delivering public chargers will be informed by cost-benefit analysis

19. Under the National-ACT Coalition Agreement, “National’s commitment to supercharge electric vehicle infrastructure with a comprehensive, nationwide network of 10,000 public EV chargers by 2030 will specifically take into account ACT’s concern that there be robust cost benefit analysis to ensure maximum benefit for government investment”.
20. Given this commitment, cost benefit analysis (CBA) will inform the design and scale of delivery of a network of chargers so that it delivers the highest return for taxpayer funding. I will work with the Minister for Regulation to develop a CBA framework for the rollout. The intention is that CBA will occur through the implementation and commercial phases to guide decisions on factors like the location and degree of subsidy provided for chargers.

21. As noted in paragraph 17 above, there will be some charging locations that have limited or no commercial return, but that provide network benefits by increasing driver confidence about their ability to recharge. This CBA approach will ensure that these locations, that bring net-benefits, are the target of any government investment. As such, CBA will not be a one-off exercise, but used as a regular tool to inform investment decisions. To support the new funding model from 2025 onwards, officials will work with the delivery agencies to ensure their investment strategy reflects the agreed CBA framework and is used to guide the rollout.

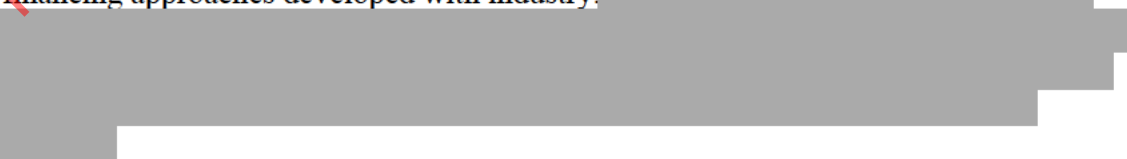
The existing co-investment model will be revised over 2024, with any changes to be implemented in 2025

22. I intend to consider a range of factors relating to a contestable co-investment process to build public EV chargers where they are most needed according to demand, including:
 - 22.1. whether the role of Government is to provide support only for costs associated with electricity connection, rather than investment in charging infrastructure;
 - 22.2. the overall scale of government co-investment;
 - 22.3. the proportion of government funding for specific projects (compared to private funding);
 - 22.4. how funding is prioritised across charger types and locations;
 - 22.5. the processes to apply for and receive funding; and
 - 22.6. how funding delivery changes over time as the market develops.
 - 22.7. how charging technology is developing; and
 - 22.8. how vehicle battery technology is developing and what charging is required to support this new technology.
23. Depending on decisions taken on the design of the funding model and the scale of changes, I expect to move to an updated funding model to be implemented in 2025.

s 9(2)(f)(iv)



We need to maintain the momentum of public EV charging roll out during the period of transition

26. While advice on the co-investment model from 2025 develops, it is important not to lose momentum in the rollout of charging infrastructure to ensure we can grow a nationwide network which supports electrification of the vehicle fleet.
27. To provide industry with a manageable transition to an updated co-investment model, I intend for EECA to continue to deliver EV charging funding support in 2024. However, I also intend to clearly signal to industry that my expectation is that the government's funding role will change, and that private investment will play a bigger role in driving the rollout of public EV charging infrastructure.
28. The intention is to continue to maximise the private sector contribution, and target government funding to projects that face the biggest barriers, provide most public benefit, and are needed for an effective nationwide network.
29. EECA has a public charging funding round designed and ready to launch, and there is a desire and expectation from industry that this will progress. I intend to open this funding round for applications this week. For this next funding round, EECA's intention is to provide co-investment equal to the electricity connection costs for the project, up to a maximum of 35 per cent of total project costs.
30. I intend for EECA to deliver an additional two public EV charging funding rounds later in 2024, which are expected to continue to reduce the level of government co-investment. I will announce the opening of these two rounds.
31. In parallel to the development of an updated funding model for 2025 onwards, I expect EECA to engage with the charging industry to identify and trial new funding and financing approaches that will best enable projects, while minimising the government's contribution. Some of the potential funding approaches that may be explored include:
 - 31.1. limiting funding support to only cover the costs associated with electricity connection and a contribution towards lines charges;
 - 31.2. setting funding contribution levels to better reflect the expected commercial viability of a site (i.e. a site in a remote area that is needed for a complete network may receive a higher level of government contribution);
 - 31.3. exploring use of loan tools that overcome upfront capital barriers but are repaid.
32. I expect the funding rounds later in 2024 will implement some of the new funding and financing approaches developed with industry.^{s 9(2)(f)(iv)}

33. The funding approach is then intended to change to the updated model in 2025, as described in the previous section. Advice on the design of the approach will be included in a report back to Cabinet in six months.

Addressing regulatory barriers

34. I intend to shift the Government's primary role from funder of public EV charging infrastructure to the facilitator that enables private investment through removing regulatory barriers.

Standards for smart charging products to help manage demand on networks from EVs

35. The Ministry for Business, Innovation and Employment (MBIE) is working on amendments to the Energy Efficiency and Conservation Act 2000 to enable regulation of efficiency and smart communication protocols to support distributed flexibility to operate effectively.² These changes would enable the regulation of smart devices, including EV chargers. A high proportion of EV charging takes place at home, and having this capability could shift demand away from network "peaks".
36. This initiative is strongly supported across industry, and in particular electricity distribution businesses have consistently called for this work to be progressed.^{s 9(2)(f)(iv)}

New consenting rules to make the installation of public EV chargers a permitted activity under the Resource Management Act 1991

37. MBIE, alongside Ministry for the Environment (MfE), is progressing work to ensure the installation of EV chargers is a permitted activity under the Resource Management Act 1991 (RMA). This change is committed to under *Supercharging EV Infrastructure* and will be progressed in conjunction with wider RMA changes set out under *Electrify NZ*. The introduction of legislation to replace the RMA is expected in mid-2025.

Improving safety and design standards for public EV chargers

38. *Supercharging EV Infrastructure* contains a commitment to set safety and design standards for EVs. MBIE is progressing work to update references to standards and certification bodies in the Electricity (Safety) Regulations 2010, including updating the AS/NZS wiring rules. The rules set out the requirements for the design, construction and verification of electrical installations. The rules are 10 years out of date and must be updated to keep pace with industry. This work is expected to be completed by the end of 2024.

Better data about network capacity for public EV charge point operators

39. *Supercharging EV Infrastructure* contains a commitment to require electricity distribution businesses (EDBs) to provide relevant geographic information system (GIS) data on potential charging point locations to providers free of charge. This information will allow potential connection seekers to filter out projects that are likely to have excessive connection costs without having to engage with the local network.

² Distributed flexibility means the modification of consumption patterns and supply from distributed energy resources (such as smart devices or batteries located near homes and businesses) in reaction to an external signal (such as a change in price) to provide a service within the energy system.

40. In February 2024, the Commerce Commission (the Commission) decided to improve network capacity visibility by changing existing Information Disclosure rules for EDBs. These require EDBs to publish annual information on the current and forecast capacity or constraints, along with GIS descriptions of the areas served. This decision was made on 29 February 2024 and EDBs must comply by August 2025.
41. Looking ahead, the Commission can undertake changes to information disclosure requirements at any time (as long as the Commission meets consultation requirements).

Supercharging EV Infrastructure builds on Electrify NZ's reforms to network regulation

42. *Electrify NZ* contains several policy commitments relating to electricity network infrastructure investment regulation and new connections to networks which will support the Government's *Supercharging EV Infrastructure* aims.
43. Below, I describe the aims of several workstreams that are already underway or recently completed across the Electricity Authority (the Authority) and the Commission that are likely to address the problems identified in *Electrify NZ*. This work will be managed and reported on under the *Electrify NZ* programme.

1 Addressing high connection costs, first-mover disadvantage, and changing cost recovery rules for new distribution network connections

- 1.1 The Electricity Authority can implement changes to the Electricity Industry Participation Code 2010 (the Code) to address these issues. The Authority is working on options for regulating connection pricing for EDBs. These include regulating to limit the type of costs that may be recovered by EDBs from new EV charging operators. Options to manage first-mover disadvantage for connections to distribution networks are also within the scope of the Authority's current work programme. This includes consideration of whether to require EDBs to offer clawback or rebates, as set out in *Electrify NZ*.
- 1.2 First-mover disadvantage occurs in networks because when connecting new load, the connection asset is often built larger than a new connector needs, to enable future load to use the asset. "Oversizing" an asset in this way is substantially cheaper than building two connection assets if future load turns up at a later time. However, this can deter new load from connecting, because the first investor connecting (the "first mover") bears the cost of the "oversizing".
- 1.3 The Authority is an independent regulator. Proposals for regulatory change and eventual decisions cannot be guaranteed to deliver the commitments in *Electrify NZ* or within timelines which align with Government's priorities. Currently, I am advised that the Authority may make relevant changes to the Code in 2025.

2 Addressing long lead times to connect to distribution networks

- 2.1 The Authority is also working to improve the efficiency of network connections through developing standardised application processes, standardised application fees, dispute resolution processes, maximum timeframes for EDBs to approve applications and addressing network capacity/constraints.

- 2.2 The Authority are also considering improving prioritisation processes to filter out more speculative applications and making the pipeline of network connections more visible to stakeholders. I am advised that the Authority expects to make decisions on Code changes in October 2024, with changes coming into effect in 2025.

3 Potential review of Part 4 of the Commerce Act 1986

- 3.1 The above two workstreams are likely to deliver the outcomes to the specific (non-RMA) initiatives set out in *Electrify NZ*. These initiatives were more focused on changes to Part 4 of the Commerce Act, which regulates monopoly businesses. Preliminary advice to me suggests that the two regulatory workstreams above could achieve the outcomes more rapidly and efficiently than changes to the Commerce Act.
- 3.2 Officials are providing me with further advice on delivering *Electrify NZ* commitments. However, I note that the Minister of Commerce and Consumer Affairs is considering a review of Part 4 of the Commerce Act. This would be an opportunity to check whether regulatory processes had delivered the outcomes set out in *Electrify NZ*, and if not, to consult on amendments to Part 4 that did deliver such outcomes.

Supercharging EV Infrastructure Cross-agency Taskforce

44. MBIE, the Ministry of Transport (MoT), and EECA meet regularly to coordinate their respective EV charging infrastructure related work programmes. These agencies also meet regularly with industry groups, and MBIE with the Electricity Networks Aotearoa (ENA), the Authority and the Commission, on this topic.
45. I have asked MBIE, MoT, and EECA to formalise their existing collaboration and establish a cross-agency *Supercharging EV Infrastructure* Taskforce. This taskforce will be co-led by MoT and MBIE and will report to me on progress delivering the government's aims.
46. There are interdependencies across *Supercharging EV Infrastructure* and *Electrify NZ*, which MBIE is leading. This cross-agency taskforce will also include the Authority and the Commission and may be further expanded to include the NIA once it is established.
47. The taskforce will continue engagement with industry and other relevant organisations to progress this work, including with local government and consumers.

Indicative work programme timeline

48. The delivery of the *Supercharging EV Infrastructure* Work Programme involves several government ministries, agencies, and independent regulators. The table below sets out the key workstreams under *Supercharging EV Infrastructure*.
49. As noted above, *Supercharging EV Infrastructure* builds on *Electrify NZ* - specifically the aspects relating to making the installation of public EV chargers a permitted activity and improving regulations relating to electricity networks. ^{s 9(2)(f)(iv)}

50. I will report back to Cabinet in six months with an update on the *Supercharging EV Infrastructure* Work Programme, including on actions taken and replacement of the existing *Charging Our Future* strategy, and to seek Cabinet’s decisions on the change in delivery model for EV charging infrastructure.

Maintain momentum of public EV charging roll out during the period of transition			
The future contestable co-investment model	<ul style="list-style-type: none"> Engagement with charging industry on alternative funding and financing approaches 	EECA	Apr-May 2024
	<ul style="list-style-type: none"> Implement new funding model 	MoT	Early 2025
2024 Funding	<ul style="list-style-type: none"> Urban infill destination EV Charging funding round open for applications 	EECA	Apr-May 2024
	<ul style="list-style-type: none"> Public charging infrastructure funding rounds open for applications 	EECA	s 9(2)(f)(iv)
Address regulatory barriers			
Amendments to EEC Act	<ul style="list-style-type: none"> Enable EECA to set standards for smart devices 	MBIE	s 9(2)(f)(iv)
New consenting rules	<ul style="list-style-type: none"> Make the installation of public EV chargers a permitted activity. Managed under the <i>Electrify NZ</i> work programme of changes to national direction 	MfE / MoT	2025
Improving safety and design standards	<ul style="list-style-type: none"> Update the AS/NZS wiring rules 	MBIE	s 9(2)(f)(iv)
Optimising data capture and use	<ul style="list-style-type: none"> Ongoing work to support and enable data access and sharing where appropriate to support commercial investment, standardisation and interoperability. 	EECA / MoT / NZTA	2024-2025
Related work			
<i>Electrify NZ</i>	<ul style="list-style-type: none"> Network regulations and new connections: lower connection costs, speed connection processes and ensure better network capacity data is available. Managed and reported on under the <i>Electrify NZ</i> work programme 	MBIE oversight: Commerce Commission, Electricity Authority and EECA	2024-2025

s 9(2)(f)(iv)

Impact Analysis

51. Impact Analysis requirements are not implicated for this paper as it is an information paper and is not seeking specific policy decisions in relation to the above work programme. Where required, a Regulatory Impact Analysis and or Climate Implications of Policy Assessment will be undertaken in the context of seeking policy decisions for the items in this paper.

Population Implications

52. There are no specific population implications from this paper.

Human Rights

53. There are no human rights implications from this paper.

Financial Implications

54. There are no financial implications from this paper. ^{s 9(2)(f)(iv)}

Legislative Implications

55. There are no legislative implications from this paper.

Use of external resources

56. External resources have not been used in the development of this paper.

Consultation

57. The following departments and agencies have been consulted: Department of the Prime Minister and Cabinet, The Treasury, Energy Efficiency and Conservation Authority, Commerce Commission, Electricity Authority.

Proactive Release

58. I intend to proactively release this Cabinet paper subject to any necessary redactions. This would be done within 30 business days following confirmation of Cabinet's decisions.


Recommendations

The Minister of Transport and the Minister for Energy recommend that the Committee:

1. **Note** that a cost-benefit analysis framework will be developed in consultation with the Minister for Regulation and the intention is that CBA will be used as a regular

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tool to inform decisions on government investment in public electric vehicle (EV) charging infrastructure;

2. **Note** that the Minister of Transport and the Minister for Energy will seek decisions from Cabinet on an updated government contestable co-investment model to be implemented in 2025, the design of which will be informed by cost benefit analysis;
3. **Note** that to maintain momentum, the Minister of Transport and the Minister for Energy will shortly announce the opening of one of three additional public EV charging funding rounds that the Energy Efficiency and Conservation Authority (EECA) intends to deliver in 2024, with each expected to continue to reduce the level of government co-investment;
4. **Note** that work is currently in progress at the Electricity Authority (the Authority), Ministry of Business, Innovation and Employment (MBIE) and Ministry for Environment that could address regulatory barriers to private investment in public EV charging infrastructure;
5. **Note** that the Commerce Commission (the Commission) has recently released decisions on information disclosure requirements that address network capacity and that it could undertake further changes at any time;
6. **Note** that MBIE and MoT will establish a cross-agency *Supercharging EV Infrastructure* Taskforce, which will include EECA, the Authority, and the Commission. The taskforce will lead engagement with key stakeholders;
7. **Note** that the actions in this Cabinet paper and the *Supercharging EV Infrastructure* policy document are our most immediate actions, and the intention is that this work programme will eventually replace the ‘*Charging Our Future*’ strategy;
8. **Invite** the Minister of Transport and the Minister for Energy to report back to Cabinet in six months with an update on the *Supercharging EV Infrastructure* Work Programme, including how it replaces the existing strategy, advice on the cost benefit analysis, and seeking decisions on future design of the rollout;
9. s 9(2)(f)(iv) 

Authorised for Lodgement

Hon Simeon Brown

Minister of Transport

Minister for Energy



Cabinet

Doc #7: CAB-24-MIN-0123

Minute of Decision

This document contains information for the New Zealand Cabinet. It must be treated in confidence and handled in accordance with any security classification, or other endorsement. The information can only be released, including under the Official Information Act 1982, by persons with the appropriate authority.

Supercharging Electric Vehicle Infrastructure Work Programme

Portfolios Energy / Transport

On 15 April 2024, following reference from the Cabinet Expenditure and Regulatory Review Committee, Cabinet:

- 1 **noted** that a cost benefit analysis framework will be developed in consultation with the Minister for Regulation, and the intention is that this framework will be used as a regular tool to inform decisions on government investment in public electric vehicle (EV) charging infrastructure;
- 2 **noted** that the Minister of Transport and the Minister for Energy will seek decisions from Cabinet on an updated government contestable co-investment model to be implemented in 2025, the design of which will be informed by cost benefit analysis;
- 3 **noted** that to maintain momentum, the Minister of Transport and the Minister for Energy will shortly announce the opening of one additional public EV charging funding round that the Energy Efficiency and Conservation Authority intends to deliver in 2024, and two subsequent funding rounds that will be subject to cost benefit analysis;
- 4 **noted** that work is currently in progress at the Electricity Authority (the Authority), Ministry of Business, Innovation and Employment (MBIE) and Ministry for Environment that could address regulatory barriers to private investment in public EV charging infrastructure;
- 5 **noted** that the Commerce Commission (the Commission) has recently released decisions on information disclosure requirements that address network capacity, and that it could undertake further changes at any time;
- 6 **noted** that MBIE and Ministry of Transport will establish a cross-agency Supercharging EV Infrastructure Taskforce, which will include EECA, the Authority, and the Commission, and lead engagement with key stakeholders;
- 7 **noted** that the actions outlined in the paper under CAB-24-SUB-0123 and the Supercharging EV Infrastructure policy document are the most immediate actions, and the intention is that this work programme will eventually replace the 'Charging Our Future' strategy;
- 8 **invited** the Minister of Transport and the Minister for Energy to report back to Cabinet by October 2024 with an update on the Supercharging EV Infrastructure Work Programme, including how it replaces the existing strategy, advice on the cost benefit analysis, and seeking decisions on future design of the rollout;

9

s 9(2)(f)(iv)



Rachel Hayward
Secretary of the Cabinet

PROACTIVELY RELEASED BY
TE MANATŪ WAKA MINISTRY OF TRANSPORT