11 May, 2023

NZ Automobile Association submission on:

Charging Our Future

SUBMISSION TO:	Te Manatū Waka - Ministry of Transport
REGARDING:	Charging Our Future
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ADDRESS:	Te Manatū Waka PO Box 3175 Wellington 6140 Email: info@transport.govt.nz
SUBMISSION AUTHORISED BY:	Simon Douglas Chief Policy and Advocacy Officer New Zealand Automobile Association Incorporated (NZAA) PO Box 1, Wellington, 6140
SUBMISSION AUTHOR:	Terry Collins
AUTHOR E-MAIL:	TJCollins@aa.co.nz
AUTHOR PHONE:	(04) 931 9986

Executive summary

The New Zealand Automobile Association (AA) welcomes the opportunity to provide comment on the discussion paper, Charging Our Future.

The AA has for the past two years been calling for greater investment in both public and private electric vehicle charging infrastructure. These calls have been made on an annual basis as part of our submissions on the annual EECA levy funding proposal.

The AA supports large scale investment in public and private Electric Vehicle (EV) smart chargers that are subject to regulated standards and supported by time-of-use pricing and demand response capability. Such an initiative could be co-funded by electricity suppliers with a contribution from the householder. This model has been successfully used by EECA in its Warm-Up New Zealand home insulation programme.

The AA believes that greater investment in public and private electric vehicle charging infrastructure will accelerate the uptake of low/zero emission transport options. We believe additional investment funding should come for these initiatives from a mixture of sources including appropriated funds, Electricity Industry Levy, and hypothecated Emission Trading Scheme revenue.

Consultation Questions

Q: Institutional arrangements for implementation

The AA believes that the EECA has the necessary skills and experience, subject to sufficient additional funding, to implement the Charging Our Future strategy. EECA has previously administered the Warm-Up New Zealand insulation scheme that had a multi-year budget of over $350 million. Their experience dealing with commercial entities to install products in-situ makes them an ideal agency for this role. They have relevant experience in funding the installation of over 1250 EV chargers through the Low Emission Transport Fund. Combined with this is their ability to set, by regulation, minimum energy performance standards for the chargers. It seems unnecessary to duplicate their role in another agency.

Q: Is the draft vision a useful guide to the strategy?

The vison is a useful guide, and the AA agrees that the initial focus should be on charging infrastructure for light EVs. The Clean Car Programme (CCP) has to date been successful in encouraging greater uptake of EVs. Focusing the EV charging strategy on light EVs complements the CCP policies and ensures that the uptake of EVs is matched by the charging infrastructure required to support the CCP.

Q Do you agree with the proposed outcomes and are any more important than others?

The AA agrees with the proposed outcomes and consider the first two outcomes the most important, i.e.:

Outcome 1: Aotearoa's EV charging system is underpinned by affordable, reliable, secure and safe power supply and infrastructure.

Outcome 2: All EV users can safely access and use EV charging when and where needed.

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Minimising stress on the electricity network

The AA supports regulating the smartness of EV chargers so that the full benefits of load management and time-of-use pricing be attained. The opportunity to do this early is important and issues like safety, cyber security, communications, time-of-use variability and energy efficiency should be addressed. The AA wants to ensure the costs and benefits of smart EV chargers are equally shared across both electricity providers and consumers. The AA is concerned the cost to upgrade the physical network will be passed on to consumers through an increase in line charges while the benefits of managing peak electricity demand will accrue to the electricity providers. It's important that line companies pay an integral role in understanding the uptake and location of EV chargers so that network upgrades and improvements are targeted and cost effective.

Outcome 2: All EV users can safely access and use EV charging when and where needed.

Improving the equity of, and access to, safe residential / home charging

With 85% of EVs expected to be home-charged, the AA proposes that there should be significantly greater investment in the Low Emission Transport Fund to fund both public and community EV charging infrastructure. Any future programme plan should investigate the development of a scheme to co-fund private smart EV charging installations. These domestic charging points could be co-funded by electricity suppliers with a contribution from the householder. This model has been successfully used by EECA in its Warm-Up New Zealand home insulation programme.

Like insulation, a domestic EV charger would be a legacy asset for a home because it would remain installed even when a home changes ownership

The AA favours the participation of the electricity suppliers in this, so that they know where chargers are located and can therefore forward plan demand profiles, the size of transformers, and facilitate a two-way smart grid where the householder is potentially a buyer and seller of electricity. This could further encourage and increase the uptake and utility of renewable electricity. *Concept Consulting* calculate that large-scale smart charging could avoid $1.7bn in peak and generation investment (ref: https://www.concept.co.nz/updates.html).

Accommodating for geographic variation in charging needs and energy supply

The AA supports a target of having "journey charging hubs" every 150-200km on all highways, not just so called "main highways" by 2028. These hubs should be solely funded by private organisations where a commercial business case exists. Public funding should only be applied where the charger would be in a remote or less commercially viable location.

The AA also supports installing EV public chargers in all settlements with a population of 2000 by 2025. An issue of concern for the AA is locating off-street public chargers in urban areas. Currently those locations are identified as Auckland and Wellington. However, with the reengineering of roads to allow for cycle ways and priority bus lanes, the removal of public car parks conflicts with the strategy's vision of providing convenient locations that meet the needs of residents. Therefore, consideration should be given to fewer, but larger, hub-type charging stations in locations with limited off-street parking.

The National Policy Statement on Urban Development (NPSUD) prevents councils in Auckland, Wellington, Tauranga, Christchurch, and Hamilton from imposing height restrictions of less than six-storeys. It also removes the need for developers to provide car parks. Further, for other urban areas with more than 10,000 people, district plans no longer need to include minimum car parking requirements, other than for accessible carparks.

This densification of housing without carparks will create a much greater need for community EV charging stations. Although it is envisaged that these large-scale apartment complexes will be serviced by good public transport, there will still be a need for private vehicles, and to meet our carbon reduction targets, these vehicles need to be electric.

One major challenge to implementing a network of charging stations is the provision of adequate charging stations in locations with seasonal demand. Summer holiday locations see some popular beach towns jump from winter populations of 4000 to summer populations of 50,000. Over winter, some locations with ski fields become extremely busy, but demand drops off completely in summer. There appears to be a need to address portable EV charging infrastructure for better utilisation and to meet the demands of EV owners staying away from their normal residential charge facilities. The strategy states it will investigate this issue, but the AA believes action is needed very soon to address this issue.

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

The AA agrees with the focus areas of outcome 3.

The AA welcomes government intervention to set regulated standards and protocols for smart charging EVs in New Zealand. The failure to do so early will be a lost opportunity to cost-effectively manage over-investment in the electricity network. Waiting will ultimately be more costly to consumers and slow the uptake of EVs. Data sharing to facilitate interoperability is encouraged and the requirement to broadcast location, type and in-use status of public EV chargers should be mandated.

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

The AA supports incentives to accelerate the commercial investment in EV chargers. Any investment should be based on a mix of private sector developers funding commercially viable locations and public/private investors focusing on locations that, due to their remoteness or other features, are not as commercially viable when built. Public money should only be spent to fill gaps that would exist in the roading network due to the lack of private investment.

Currently, the AA thinks still-developing technologies (e.g. battery swap schemes, induction charging, etc.) have enough private entrepreneurial investment for the development stage they are at. Also, investment in charging solutions for the heavy vehicle sector, aviation, ferries, and shipping is attracting significant private capital. The AA wants to see the bulk of any public money spent on EV chargers for the light vehicle fleet because it's crucial that the public become confident in EVs as quickly as possible and confidence in the charging network is a key component in this – it will mean that people know there are chargers in all locations (not just commercially viable ones). Doing this will complement the Clean Car Programme. Combining the increased uptake of EVs with a greater number of EV chargers will best serve the objective of reducing emissions from the light vehicle fleet.

Other comments:

Timing of investment is critical

The time for action is now. A December 2021 report from *Concept Consulting* (ref: https://www.concept.co.nz/updates.html), funded by a group of energy providers and automotive interests (including the AA Research Foundation), estimated that approximately 85% of EV charging will occur at home, but there is also a need for significant public and community charging infrastructure. This infrastructure requires large-scale public funding to overcome the "chicken and egg" situation that arises with new technologies. Public charger investment needs to be leading, not lagging EV uptake. With uncertainty over the uptake rate of EVs, private investors tend to under-invest rather than over-invest. *Concept Consulting's* analysis around the outcomes from under- or over-investment calculated that bringing forward investment two years too early would cost $165m. Delaying the investment and impeding EV uptake by two years would increase transport costs by $4.2bn (25 times as much!). This shows the importance of government investing to help now to stimulate action at the right time.

We encourage the use of hypothecated revenue from the Emissions Trading Scheme (ETS) allocated to the Climate Emergency Response Fund to be used to increase the funding of the Low Emission Transport Fund. Transport emissions are recognised as low-hanging fruit in the Emissions Reduction Plan. Currently the government is collecting about $950m a year in ETS revenue from transport. Therefore, the AA believes the Low Emissions Transport Fund should be significantly expanded with ETS funds to provide greater public EV charging infrastructure and commence a home EV charger installation scheme modelled on the Warm-Up New Zealand programme.

Funding for any public investment should come via ETS funds, appropriated funds and the Electricity Industry Levy. EVs, their chargers, and the infrastructure that supports them, are electrical devices and so the Electricity Levy clearly applies to them.

Funding should not come via the Petroleum or Engine Fuel Monitoring Levy as this applies to the sale of petrol. Petrol is also subject to Fuel Excise Duty and along with Road User Charges (RUC) provides funding to the National Transport Fund, which is used for building and maintaining our national roading network. Currently, EVs are exempt from paying RUC and until this changes, it is more appropriate that ETS funds and the Electricity Levy be applied to the EV charging programme.

About the New Zealand Automobile Association

The NZAA is an incorporated society with over 1.8 million Members, representing a large proportion of New Zealand road users. The AA was founded in 1903 as an automobile users' advocacy group, but today our work reflects the wide range of interests of our large membership, many of whom are cyclists and public transport users as well as private motorists.

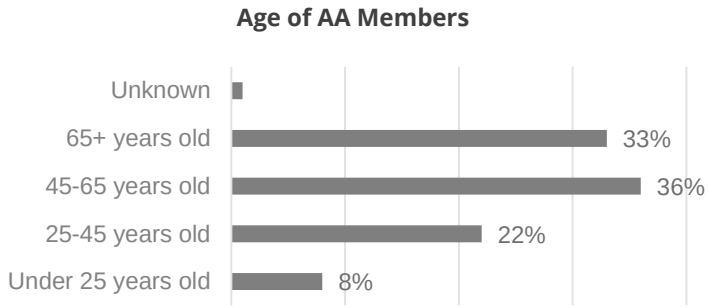
Across New Zealand, the motoring public regularly come into contact with the AA through our breakdown officers, 36 AA Centres and other AA businesses. Meanwhile, 18 volunteer AA District Councils around New Zealand meet each month to discuss local transport issues. And based in Wellington and Auckland, our professional policy and research team regularly surveys our Members on transport issues, and Members frequently contact us unsolicited to share their views. Via the AA Research Foundation, we commission original research into current issues in transport and mobility. Collectively, these networks, combined with our professional resource, help to guide our advocacy work and enable the NZAA to develop a comprehensive view on mobility issues.

Motorists pay over $4 billion in taxes each year through fuel excise, road user charges, registration fees, ACC levies, and GST. Much of this money is reinvested by the Government in our transport system, funding road building and maintenance, public transport services, road safety work including advertising, and Police enforcement activity. On behalf of AA Members, we advocate for sound and transparent use of this money in ways that improve transport networks, enhance safety and keep costs fair and reasonable.

Our advocacy takes the form of meetings with local and central government politicians and officials, publication of research and policy papers, contributing to media on topical issues, and submissions to select committees and local government hearings.

Total Membership	1.8+ million members Just over 1 million are personal members Over 0.7 million are business-based memberships
% of licenced drivers	At least 29% of licensed drivers are AA Members
Gender split	54% Female 46% Male

Age range & Membership retention



52% of AA Members have been with us for over 10 years.