



## **Drive Electric Submission: Emissions Reduction Plan Discussion**

**Document 24 November 2021**

### **Executive Summary**

Drive Electric is a not-for-profit advocacy organisation supporting the uptake and mainstreaming of e-mobility in New Zealand, a key part of decarbonising transport.

Drive Electric represents a member base comprising new car OEMs, used car importers and distributors, infrastructure organisations (electricity generators, distributors and retailers, electric vehicle service equipment suppliers), e-bike/scooters, heavy vehicle importers, finance, fleet leasing and insurance companies, along with electric vehicle users.

Drive Electric has advocated for a comprehensive plan to decarbonise transport for the past two years. The Emissions Reduction Plan (ERP) has the opportunity to be that plan. However, the draft ERP document, while containing some advanced thinking, does not present the plan in a holistic way.

A plan is necessary to provide certainty to business and consumers that a future transport system will be affordable, convenient, safe and sustainable. Until that vision is articulated, and the change enabled, we will not make the progress we need to at pace or scale.

Further, we must rethink how business and government works together on developing and implementing this plan. It is time to try new ways of partnership and collaboration; built on one another's unique contributions.

Our submission and inputs relate specifically to accelerating the uptake of e-mobility, but we recognise that decarbonising transport is much wider than that. E-mobility is an important component to a zero emissions transport system, but is still just a component.

An affordable, convenient, safe and sustainable transport system is one that enables active and public transport, embraces changes to the ways we design and live in cities, and encourages new ideas and technologies, like Mobility-as-a-Service (Maas).

New Zealanders need to understand that the future of transport will look different than it does today. This will happen regardless of whether we put in place an Emissions Reduction Plan, because the world is changing around us. We must



position ourselves ready to take advantage of this change, and then communicate and engage New Zealanders.

This is very true when it comes to the shift towards e-mobility. Many leading markets and car manufacturers have committed to effectively phasing out fossil fuel powered light vehicles. This will happen from 2030. If we do not prepare ourselves, we risk becoming the dumping ground for the world's dirtiest right hand drive vehicles, instead of a quick adopter of better, cleaner technologies.

EVs are a technology that are now proven, are increasingly price competitive, and will be the future of the automotive industry. In New Zealand's fight against climate change, e-mobility is a low-hanging fruit, especially given our supply of renewable energy.

We also don't need to 'reinvent the wheel'. One of the largest RHD markets, the United Kingdom, has been transitioning towards this outcome for many years creating an "Office of Low Emission Vehicles" in 2014. This office has advanced numerous initiatives that New Zealand could learn from.

The time to embrace e-mobility was yesterday. It's time to play catch-up.

### **How to read this submission**

Our submission focuses on answering the consultation questions directly relevant to our mandate, in the sections on transport and energy.

### **Transport**

**52. Do you support the target to reduce VKT by cars and light vehicles by 20 per cent by 2035 through providing better travel options, particularly in our largest cities, and associated actions?**

Yes.

Our focus as a not-for-profit is accelerating the uptake of e-mobility and decarbonising transport. We completely agree that this needs to happen in the context of increased active and public transport in New Zealand, alongside other innovations, including mobility as a service, and changes to how we plan our towns/cities and how we work. New Zealanders need access to safe, affordable, convenient and sustainable travel choices.

**53. Do you support the target to make 30 per cent of the light vehicle fleet zero-emissions vehicles by 2035, and the associated actions?**

Yes.



There are 3.5 million passenger vehicles in New Zealand. We have one of the highest car ownership rates in the world and one of the oldest light vehicle fleets, with an average age of close to 15 years compared to Australia's average of 10 years; the EU's average of 11 years; and the UK's 8 years.

The New Zealand light vehicle fleet, including light commercial vans and trucks, makes up 80 per cent of our transport emissions.<sup>1</sup>

The number one priority in substantially and rapidly cutting New Zealand's emissions lies in electrifying our light vehicle fleet. Moving to zero emissions vehicles, as the cliché goes, is the low hanging fruit in the fight against climate change.

This will require more than 1 million new and used EVs to be brought into New Zealand over the next 13 years.

New Zealand receives less than 0.17 per cent of the world's car production annually, so securing new and used inventory is extremely possible. The domestic OEM industry can think differently, and look to Europe (particularly the UK) for new and used supply. There are new makers in China and India that have cheaper alternatives coming onto the market. Further car share programmes will remove privately owned cars from the fleet and improve the utilisation.

As we renew the fleet, we also have the opportunity to think more carefully about safety, and the sort of vehicles we import into New Zealand.

**54. Do you support the target to reduce emissions from freight transport by 25 per cent by 2035, and the associated actions?**

No, we believe the target should be more ambitious.

We note that the Sustainable Business Council's Low Carbon Freight Pathway, reflected in the CCC's final advice, has shown that we can be much more ambitious. They recommend a goal of halving emissions by 2030 and net zero for the sector by 2050.

Furthermore, reducing emissions for freight transport will require a considered view on how raw materials, manufactured goods and imported products move to and around our country, and the interconnections between transport modes.

We support the SBC's Low Carbon Freight Group's work, and encourage the development of a National Freight and Supply Chain Strategy as a matter of priority.

**55. Do you support the target to reduce the emissions intensity of transport fuel by 15 per cent by 2035, and the associated actions?**

Yes.

It will take considerable time to fully transition the fleet to zero emissions. As per this consultation, the target is 30 per cent of the light fleet by 2035.

As such, anything that can be done to affordably and effectively reduce the emissions coming from the fossil fuel fleet should be pursued. That said, this should be designed purely as a transitional measure and in no way slow down the transition to zero emissions cars.

Unintended environmental consequences derived from developing alternative fuels should be considered (e.g. around land use). We recommend therefore that the domestic production of biofuels is placed within a broader bioeconomy strategy for Aotearoa.

**56. The Climate Change Commission has recommended setting a time limit on light vehicles with internal combustion engines entering, being manufactured, or assembled in Aotearoa as early as 2030. Do you support this change, and if so, when and how do you think it should take effect?**

We support the phase-out date for the import of fossil fuel vehicles, between 2030 and 2032.

There are at least 31 countries and U.S. states with fossil fuel car bans in place.<sup>2</sup> This includes Norway and South Korea, by 2025. In 2020, 70 per cent of new vehicle sales in Norway were EV. Slovenia, Iceland, the Netherlands, Ireland, India, Denmark, Sweden, Israel, Germany and the United Kingdom all have 2030 deadlines. Japan has a 2035 deadline. The UK, Indian and Japanese deadlines are the most relevant to New Zealand, as they are RHD markets.

If New Zealand lags behind these markets without a concrete ban in force, we risk becoming a dumping ground for their second hand vehicles. This would undermine New Zealand's efforts to decarbonise, and lock-in the proportion of fossil fuel powered vehicles in the fleet for much longer. It makes sense therefore to tie an ICE-phase out closely to these markets- so being seen as a fast follower.

Concept Consulting has useful analysis on implementing an ICE ban. We see an

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ICE-ban as a complementary policy which needs to sit alongside a comprehensive suite of measures, including emissions standards, consumer incentives and coordinated infrastructure investment. As such, we should tie the ban to the pathway of the Clean Vehicle Standards, with a specific future focus on Europe.

We would recommend signalling a phase-out date for new petrol vehicles between

<sup>2</sup> <https://www.chargedfuture.com/countries-and-states-with-gas-car-bans/> <sup>3</sup> [https://www.concept.co.nz/uploads/1/2/8/3/128396759/ev\\_study\\_rept\\_1\\_v1.0\\_\\_1\\_.pdf](https://www.concept.co.nz/uploads/1/2/8/3/128396759/ev_study_rept_1_v1.0__1_.pdf)



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2030 and 2032, and confirming that in law in 2024/2025. This extra couple of years would give the standards and incentives time to start to shift the fleet; allow for advances in technology; obtain supply; and inform/educate New Zealanders about the future direction.

On the demand side, an ICE phase-out is easy to communicate to consumers, which will increase the perception that petrol-powered vehicles are becoming socially unacceptable. This is also a matter of fairness. By signalling to New Zealanders that fossil fuel vehicles are being phased out, they can factor this into their decision-making about their next car purchase. After all, cars are often one of the most significant assets New Zealanders own.

On the supply side, as New Zealand is a taker of automotive technology, members who are importers tell us not to underestimate the power of strong government policy in support of e-mobility.

Some may argue because we are such a small market that we will be overlooked, our experience tells us the reverse is true. If we set clear direction around EVs, because of our market size the global car manufacturers will have little trouble meeting demand. In many brands, New Zealand receives new models, just weeks after they are released globally.

It's also worth noting that the global car industry is changing rapidly. For example:

- GM has announced that by 2025 they will introduce 30 new EV models and by 2035 they will only retail electric vehicles.
- By mid-2026, Ford says 100 percent of its passenger vehicle range in Europe will be zero-emissions capable, all-electric or plug-in hybrid, before finally going full-electric in 2030. Ford's commercial vehicles will also be zero-emissions capable by 2024.
- Volkswagen predicts more than 70% of the Volkswagen brand's European sales will be EVs by 2030, up from a previous target of 35%. In the U.S. and China, it expects half of its sales to be EVs by that time frame.
- Volvo has committed to selling only EVs by 2030.
- China is the world's largest EV market. SAIC Motor, China's top automaker, are producing EVs for as little as \$4,500 USD.
- The Hyundai Motor Group aims to produce 1 million EVs globally, by 2025.
- Tesla has the highest market capitalisation of any car manufacturer.

**57. Are there any other views you wish to share in relation to transport? Co-benefits of a new transport system**

The Emissions Reduction plan, co-benefits are important considerations when

looking at alternative forms of transport. New Zealand's average fleet age is very old. There are a lot of unsafe cars on our roads. Fossil fuel vehicles demonstrably degrade air quality and health outcomes. Roads are congested. We spend billions of dollars annually on importing fossil fuels. This is more than a debate about emissions



from transport, it's a debate about what sort of transport system we want in New Zealand.

### Scrappage schemes

There is good progress underway on incentivising the uptake of low and zero emissions vehicles through the Clean Vehicle Standards and the Clean Vehicle Discount. We have one of the highest car ownership rates in the world and one of the oldest light vehicle fleets, with an average age of close to 15 years compared to Australia's average of 10 years; the EU's average of 11 years; and the UK's 8 years.

We need to look at policies that support getting older, high-emitting cars off the road. The OECD has conducted analysis on the components of effective 'scrappage schemes'. Successful schemes should be designed to capture CO<sub>2</sub>, fuel economy, NO<sub>x</sub> and safety benefits. The scheme must target older vehicles that are still currently in use.<sup>4</sup>

We also note the Motor Trade Association has a proposal with the Ministry of Transport, which we believe is a good basis for exploring what could work in New Zealand.

### National charging infrastructure plan - private and public

#### *Public charging*

Today the number-one questions for EV-curious drivers are about adequate charging infrastructure, including charging times. Consumer concerns are shifting from upfront price and range anxiety.

Therefore, investment in charging infrastructure must lead the transition to light Electric Vehicles to give buyers the confidence that they can charge their vehicles, as easily (if not more easily) as they can fill their petrol tanks at a petrol station. This is a critical component to how we rethink transport in New Zealand.

We recommend that the delivery of a national EV infrastructure plan be accelerated with a view to commencing implementation by mid-2022 at the latest. The key objective of any plan is to enable the roll out of an effective charging system that builds confidence in EVs and meets consumer demands.

When it comes to the provision of public charging infrastructure, the government has a role to set the national direction, ensure competition, ensure collaboration within the ecosystem, and kick-start investment. Long-term, however, we would expect that the private sector should be delivering most EV charging infrastructure and services in New Zealand, unless there are market failures.



To start this, the first EV infrastructure plans needs to articulate further what are the roles and responsibilities of the government, local government and the private sector in delivering charging over the next five years, and then into the future. It also needs to outline how this collaboration will occur.

The plan also needs to consider what other barriers, besides cost, that exist to deliver public charging infrastructure, and detail what these are and how they will be overcome. These barriers could include:

- Policy and regulatory settings (including access to the grid, competition settings).
- Capability and capacity to install the charging and resolve other operational, communications, and technological challenges.
- Adequate access to land for charging stations (and access to electricity for charging stations).
- Capacity of the grid and managing demand.

It is also essential that charging infrastructure is rolled out in an integrated way with urban planning and development, commercial developments and future public transport investment.

We also recommend that a similar, and integrated, strategy be developed for encouraging the uptake of private charging in homes and kerbside, and integrated with this one. This could include co-investment and mandating installation in certain buildings etc.

### *Private charging*

Research by Drive Electric suggests that an estimated 80 per cent of EV charging will be done at home. New homes and offices should be required to install smart electric vehicle chargers.

The UK has just mandated that new homes and buildings such as supermarkets and workplaces, as well as those undergoing major renovation, will be required to install electric vehicle charge points from next year.<sup>5</sup>

Drive Electric recommends that the Building Code be updated to require every new home with a dedicated parking space to install a Smart EV charger with a universal socket for all makes of electric vehicles. It is significantly more cost effective to install charge points in new builds. Drive Electric analysis suggests that an EV charger installed in a new home will add an approximate cost of \$2,000. However, if an EV charger is retrofitted this cost more than doubles.

By mandating the installation of chargers in new builds, this will potentially save hundreds of millions of dollars by 2050. Existing residential buildings undergoing



“major renovation” should also be required to make the parking spaces EV-ready, with cabling routes installed to support charge points at each parking space.

New non-residential buildings and older such buildings undergoing major renovations should be required to install at least one EV charger and the cabling routes to support charge points at one in five parking spaces. Large existing non-residential buildings with more than 10 parking spaces are required to install at least one EV charger.

To ensure the Code is sufficiently future-proofed, all EV chargers should have a minimum output power of 7 kW and must be “Smart” devices, using an open communications standard enabling demand response capability.

Smart devices will help to ensure that EVs don’t overload the electricity network at times of peak demand and that network stability is maintained. Further, we recommend that the Commission consider recommending procurement standards to ensure that new EV chargers coming into New Zealand are smart. These standards should be designed so they avoid the risk of tech-lock-in, to enable new technologies to enter the market as they become available.

### Role of ETS

We are also wary of relying on price signals alone, through the ETS, to drive the acceleration of the uptake of e-mobility. Robust carbon pricing mechanisms, in theory, are the most efficient way to price in emissions reductions.

However, when it comes to e-mobility, many New Zealanders' purchase decisions are driven by the up-front cost of electric vehicles, rather than the total cost of ownership. EVs, on the whole, are still more expensive than their ICE equivalents. The ETS price impacts the price of petrol, which is an ownership cost. This will mean that EVs remain expensive to purchase, and the petrol price will increase.

Exacerbating this is the fact that New Zealanders hang onto their vehicles for around 15 years. An ICE bought today, is an ICE on the roads in 2036 requiring petrol. It is unlikely that most consumers are considering the future price of petrol, when buying a car today.

Further, consumer perception of petrol price movement is relatively inelastic and studies have shown that even if petrol prices increase this does not radically change driving behaviour. Increasing fuel prices, without supporting the uptake of affordable

transport alternatives (including active/public transport and mobility as a service) will mean people are just paying more for their petrol, and not necessarily moving into



electric vehicles. This has a further social equity impact. An extra \$20 at the petrol

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<https://www.stuff.co.nz/business/opinion-analysis/300414114/how-high-does-the-carbon-price-have-to-reach-before-it-changes-behaviour>



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pump will not necessarily motivate a consumer to spend an additional \$10K for an EV, even if the TCO is lower.

We need policy to simulate EV uptake now, and overcome the barriers, such as upfront price. We can't wait for dramatic increases in petrol to shift the market, as this will occur too late and have disproportionate impacts on low income persons / families.

### Role of public and private sector fleets - including using the tax system

Public and private sector fleets are going to have to make a major contribution to generate a second hand market of EVs in New Zealand. We can't expect to import these vehicles from Japan, as is the case now, in the short term.

The public sector could use procurement as a way to help drive the acceleration of EVs into the market. The public sector procures around 4,000 - 5,000 new vehicles per year. It is better positioned to consider a range of factors, such as total-cost-of-ownership and leadership, when procuring EVs over ICEs (relative to the private sector). The Carbon Neutral Government Programme mandates are a good start, but need to scale up quickly and overcome hurdles.

Further, the public sector can also adopt procurement rules that encourage EV-uptake in the private sector, such as weighting requirements towards electric for the providers of services such as taxis, couriers and freight.

With respect to the private sector, NZTA data shows almost 60 per cent of new vehicles entering the market are for the private sector, every year. The average fleet holds those vehicles for three to five years. Between now and 2035 there could be three to five stock turns. This will promote a significant second hand market of EVs, the faster we start.

Policies specifically designed to make the transition in fleets more attractive should be considered, including FBT issues and depreciation.

Presently, FBT is applied on the capital purchase of a vehicle, and not its fuel or running costs. This creates a distortion. As such, this distortion encourages fleets to buy cheaper vehicles with higher running costs (e.g. ICEs), relative to more expensive, but lower running cost EVs. The solution could be an EV FBT percentage adjustment, which reflects typical capital cost differentials between ICEs and EVs. This relative reduction in FBT levied on EVs should be progressively reduced as their capital costs fall. This should not reduce total tax revenue collected, as the purchaser

of the vehicle is most likely going to purchase the cheaper ICE over the more

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expensive EV anyway. Why not collect the FBT at the ICE-rate and incentivise the purchase of the EV? Drive Electric has more detail.<sup>7</sup>

Alternatively a full exemption on FBT for EVs could be explored.

The second distortion comes from a legacy issue surrounding utes. Vehicles that are mainly designed to carry goods or goods and passengers equally, have sign-writing, and are theoretically not for private travel, are perceived to be exempt from FBT. This has helped encourage the uptake of utes. This is a perverse outcome, which is in effect, a subsidy on high-emissions vehicles for business. Whilst this may be unpopular in some parts of society, it seems appropriate to remove this exemption. Concept Consulting has more information.<sup>8</sup>

The other issue is depreciation. Depreciation could be accelerated on cars in business fleets to encourage them to turn-over the cars more quickly, thereby adding supply to the second hand market.

### Role of e-bikes and e-scooters

We encourage the Committee to consider whether this Bill, or similar policy, should be extended to include e-bikes and e-scooters.

E-bike imports are already close to 50,000 per year, according to importers. Given the right conditions (e.g. Copenhagen) it's possible for cycling/active transport modes to make up half or more of commuter trips in urban environments.

E-bikes can play a significant role in reducing VKTs, especially as a replacement for a second or third car in a household. There are two key barriers to e-bike uptake: infrastructure and cost.

- Infrastructure: Separating cyclists from cars is paramount. The real test of whether cycling is a viable mode of transport is whether parents feel safe cycling with their kids from A to B. New Zealand has not reached that threshold in almost all areas.
- Upfront cost: An e-bike can cost between \$2k and \$5k (or more). This is cheaper than a vehicle, but still costly upfront. There are examples in other countries of incentivising the uptake of E-bikes. This [link](#) shows details of all such schemes in Europe. We would encourage MoT to consider whether a version of the Clean Car Discount can be extended to e-bikes.

### Role of Mobility-as-a-Service

<https://driveelectric.org.nz/media-release-fbt-switch-scheme-for-electric-vehicles-entering-corporate-fleets-would-drive-more-corporate-demand/>

<sup>8</sup> [https://www.concept.co.nz/uploads/1/2/8/3/128396759/ev\\_study\\_rept\\_1\\_v1.0\\_\\_1\\_.pdf](https://www.concept.co.nz/uploads/1/2/8/3/128396759/ev_study_rept_1_v1.0__1_.pdf) PO Box 3899

A future transport system should provide New Zealanders affordable, convenient, safe and sustainable choices. The Government should look to enable Electric Mobility-as-a-Service, as an alternative to car ownership. Examples already exist in New Zealand through services like Mevo and Zilch.

New Zealand has over \$30 billion dollars invested in its vehicle fleet (depreciating), and car utilisation is less than five per cent. MaaS can play an important role to decrease our dependence on cars and release additional capital into the economy. MaaS also promotes adoption of other mobility options such as walking, cycling and public transport.

MaaS can also play an important role in delivering a just transition. There are opportunities to enable or support NFPs/social enterprises to deliver technology platforms to educate people in low-mid socio-economic areas on alternative forms of transport and provide them access to MaaS EVs, e-bikes and e-scooter fleets.

Any Government support for MaaS should only be for businesses that have zero emission fleets as the capital investment is significantly more than an ICE MaaS model, and contributes to New Zealand's emissions.

## **B. Energy**

**58. In your view, what are the key priorities, challenges and opportunities that an energy strategy must address to enable a successful and equitable transition of the energy system?**

Our members include electricity generators and network/grid operators. The consensus is that over time we will be able to produce enough renewable electricity to power the accelerated uptake of EVs.

However, there will need to be improvements and adjustments made to distribution and transmission networks. Digital management, in particular, will play a key role in managing new demand from EVs.

When network systems are modernised, they will need to enable the flow of data, including data flows across the electricity supply chain, and between local government and infrastructure providers, as these will be critical for industry to be able to support the uptake of EVs, and provide information to revise policies and

investments.

We also need to ensure EV chargers are 'smart' and can provide information back to the grid.

Networks should increase the uptake of demand response so EV batteries can effectively be used to delay network investments.



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As part of plans to coordinate the uptake of EVs, network owners and charging infrastructure providers should closely collaborate.

The legislation replacing the RMA should ensure that new renewable power plants can be built and distribution networks increased, as demand for electricity increases.

Upgrades to distribution and transmission networks will likely be required. Transpower's "Transforming our Transport System", has useful insights on this question.<sup>9</sup>

#### **59. What areas require clear signalling to set a pathway for transition?**

Electrification of transport will place a stronger dependency on reliability and availability of energy systems. This has a flow on effect from intermittency of some renewables (i.e. solar and wind) so the proposed reductions in emissions from the energy system must be balanced to ensure reliability in the system to support higher dependency for transport.

Enabling this stronger dependency, it will require both increased investment in network monitoring (to see where the EVs are and where the dependency lifts) and greater coordination across all market participants.

Support towards greater transparency of emissions from transport electrification (i.e. energy system mix) as an input into vehicle charging.

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<https://www.transpower.co.nz/about-us/transmission-tomorrow/electrification-roadmap#Vehicle%20emissions>

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