

Climate Change Commission Submission

28 March 2021

1. Drive Electric

Drive Electric is a not-for-profit advocacy organisation supporting the uptake and mainstreaming of electric vehicles (EVs) 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), finance and insurance companies, along with electric vehicle users.

This submission is in response to the Climate Change Commission's draft advice to the Government. It predominantly focuses on the contents of Chapter 6.1.1 (Transport), but extends into 6.1.2 (Heat, Industry and Power).

Finally, thank you to the Climate Change Commission for preparing this draft analysis, and your willing and open approach to constructive engagement. We wish you well for finalising your advice.

2. Headlines from our members

We surveyed the Drive Electric membership on the Climate Change Commission's draft advice, with a particular focus on chapter 6.1.1 (Transport) and those recommendations.

Question	Mean Response (1=disagree, 5=agree)	Mode (1=disagree, 5=agree)
The Climate Change Commission advice is that to meet New Zealand's domestic net-zero 2050 emissions targets (as set out in the Zero Carbon Act), Aotearoa would need to almost completely decarbonise land transport by 2050. To what extent do you agree?	4.66	5
The Climate Change Commission's advice is that to meet the proposed emissions budgets contained, Aotearoa would need to phase out imports of light internal combustion engine vehicles sometime by 2035, potentially as early as 2030. To what extent do you agree?	4.77	5
Overall, when taken together, are you confident that the policies are relevant, usable and realistic? (This question specifically referenced chapter 6.1.1 accelerating the uptake of EVs, and showed the recommendations of: time critical necessary action 2, and necessary action 3).	4.05	4
Are you confident that industry can successfully play their part in implementing these policies? (This question specifically referenced chapter 6.1.1 accelerating the uptake of EVs, and showed the recommendations of: time critical necessary action 2, and necessary action 3).	4.27	4

3. Executive Summary

NB: Can also be read as an overall response to:

- **Consultation Question 14: Do you support the package of recommendations and actions for the transport sector? Is there anything we should change, and why?**
- **Consultation question 15: Heat, industry and power sectors Do you support the package of recommendations and actions for the heat, industry and power sectors? Is there anything we should change, and why?**

New Zealand's transport emissions comprise 21 per cent of our total emissions. We must move quickly to reduce them substantially, particularly if we are to meet our Paris climate change commitments by 2030. This is even more true if we revise our Nationally



Determined Contribution upwards at the forthcoming COP. Drive Electric is strongly supportive of the need to almost completely decarbonise land transport by 2050. Compared to other sectors, re-imagining transport is the low-hanging fruit when it comes to decarbonisation. It will also bring a number of important co-benefits.

Transpower analysis shows that the economics of electrification are on the “cusp of being overwhelming”. They estimate that electrification of transport could result in \$1.6 billion of annual economic benefits and 6.1 MtCo₂-equivalent of annual emissions reductions by 2035.¹ New Zealand’s high proportion of renewable energy makes EV-uptake even more desirable from an economic and environmental perspective, relative to most other countries.

We acknowledge that co-benefits of decarbonisation are not factored into the Climate Change Commission draft advice. However, when it comes to the Government considering 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 fundamentally a debate about what sort of transport system we want in New Zealand.

We believe that accelerating the transition to EVs is only one part, but an important one, of the story when it comes to decarbonising transport by 2050. There needs to be a massive uptake in active and public transport, as well as the provision of mobility as a service, changes to urban development, and the way we work. Less travel and mode shift are essential. This is also part of the answer to social equity issues that could emerge from policies associated with accelerating EV uptake. We must have affordable, convenient, safe and sustainable transport choices available for all New Zealanders.

When it comes to decarbonising transport, the technology is available and proven. Specifically on EVs, many of the major manufacturers have made significant commitments and investments in EV, and production numbers are increasing exponentially. We stress that while EVs are only part of the transport solution, the global transition in electrification is well and truly underway.

As such, we do agree with the Commission that Aotearoa would need to phase out the import of light internal combustion vehicles sometime by 2035, potentially as early as 2030. We support 2030. Such a ban is an important act of leadership. It sets expectations on the demand side and the supply side, and signals intent on wider climate leadership.

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

That said, an end-date to importing fossil fuel cars will not be sufficient alone. It will require a range of policies tied together in a coordinated roadmap, with industry. Ad hoc policy will not suffice. New Zealand will also need to see an increase in renewable energy and improvements to our transmission, distribution and charging infrastructure.

Taken together, we are cautiously confident that the suite of transport policies recommended in the CCC's report are relevant, usable and realistic. Our caution is less about the policies themselves, which we support, but more about the commitment of the Government to lead and implement them rapidly, with bipartisan support and in partnership with industry. In the context of policy certainty, we are confident that industry can support the transition in transport.

Some will argue that the market will deliver a transition to EVs, without intervention by the government. In order to meet the proposed emissions budgets, we cannot wait for the market to deliver this transition away from fossil fuelled vehicles. On its own, this transition to EVs may not start to accelerate until the end of this decade, and in that time emissions will only have accumulated. Waiting could also result in perverse outcomes in the interim years, including New Zealand becoming the dumping ground for second hand petrol vehicles from other right hand drive markets that are decarbonising. The longer we delay the transition, the greater number of fossil fuel vehicles are entering the fleet, and will still be on our roads for the next 15-20 years.

We are also wary of relying on price signals alone, through the ETS, to drive the acceleration of the uptake of EVs. Robust pricing mechanisms, in principle, are the most efficient way to price in emissions reductions. However, when it comes to decarbonising transport, price will be too slow for New Zealand to take full economic and environmental advantage of a rapid EV uptake. It will also be too blunt as a mechanism. Increasing fuel prices, without supporting the uptake of affordable transport alternatives (including active/public transport and mobility as a service) will exacerbate inequality.

Transport is provided by both the public and private sectors. Therefore this transition needs coordination between central government, local government and industry. We strongly encourage a bipartisan coordinated national strategy for decarbonising transport, including the accelerated uptake of EVs. This transition will span decades, and multiple political cycles. The suppliers and customers of transport need certainty to play their part. Conversely, delays in setting a direction and outlining policies to support the uptake of EVs will temper the uptake of electric light vehicles.

4. Responses to Chapter 6.1.1 (Transport)

4.1 Necessary action 2: As explained in table below



CCC: Develop an integrated national transport network to reduce travel by private vehicles and increase walking, cycling, low emissions public and shared transport.

Recommendations a) - e)

Drive Electric: We agree.

Our focus as a not-for-profit is accelerating the uptake of Electric Vehicles 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.

We particularly agree with the call to strengthen the Government Policy Statement on Land Transport. The most recent version, released in 2020, did not contain enough ambition for decarbonising transport, nor did it set out a comprehensive plan on how to do so.

4.1 Time-critical necessary action 2: Accelerate light electric vehicle uptake

CCC: To meet our proposed emissions budgets and be on track for 2050, at least 50% of all light vehicles (cars, SUVs, vans and utes) and motorbike imports should be electric by 2027 (both battery EV and plug-in hybrid EV).

Drive Electric: Analysis prepared for us by Dr Paul Winton of the 1.5 Project² shows that we need at least 250,000 EVs on the roads by 2025, and for this uptake to continue at pace, in order for us to meet New Zealand's legislated climate targets.

What is clear, is that we need to be heading in the direction of electrifying our light fleet substantially and quickly, to meet decarbonisation objectives.³

Conversely, if we do not put in place settings to encourage the uptake of EVs, we can be certain that we will come nowhere close to meeting this ambition.

a) CCC: Place a time limit on light vehicles with internal combustion engines entering, being manufactured, or assembled in Aotearoa, other than in specified exceptional circumstances. The limit should be no later than 2035 and, if possible, as early as 2030.

Drive Electric: We support the 2030 phase-out date for the import of fossil fuel vehicles.

² <https://1point5.org.nz/wp-content/uploads/2020/05/1point5-Project-Summary.pdf>

³ <https://driveelectric.org.nz/wp-content/uploads/2020/08/DE-policy-discussion.pdf>

There are at least 31 countries and U.S. states with fossil fuel car bans in place.⁴ 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 further lags behind these markets with a concrete ban, 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 to these markets.

Concept Consulting has useful analysis on implementing an ICE ban.⁵ We see an ICE-ban as a complementary policy which needs to sit alongside a comprehensive suite of measures, including emissions standards, purchase incentives and coordinated infrastructure investment.

On the demand side, an ICE-ban 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.

On the supply side, as New Zealand is a taker of automotive technology, members who are OEMS/ importers tell us not to underestimate the power of signalling to global car producers our future direction. When our local industry participants go to their offshore head offices and place their orders, they need to communicate a clear national direction on EVs. The reality is, it is the countries with strong regulations and direction in place that are securing the supply of EVs.

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 and supportive policy, because of our market size the global car manufacturers will have little trouble meeting demand. In many brands, New Zealand receives new models, just four weeks after they are released globally.

It's also worth noting that the global car industry is changing rapidly, supply is coming on stream. For example:

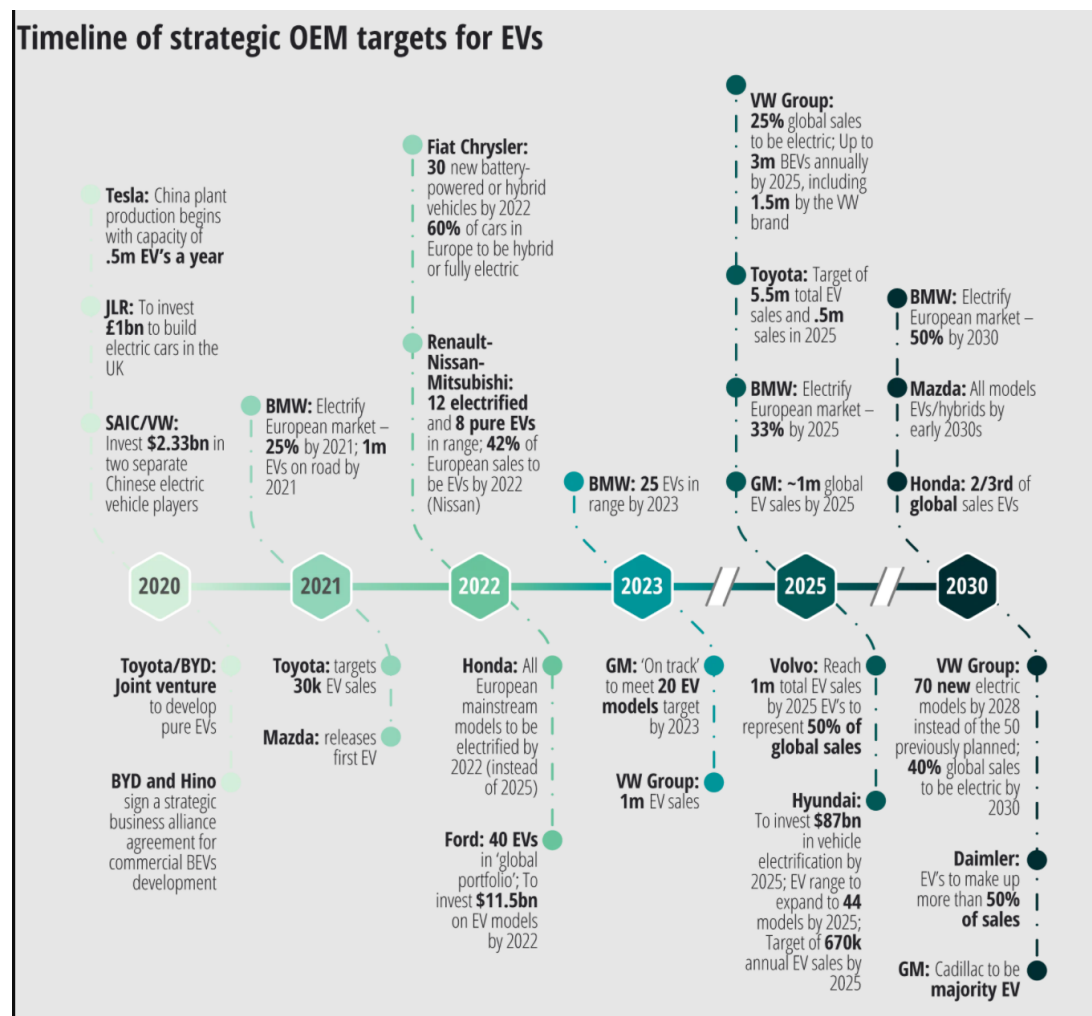
- GM has announced that by 2025 they will introduce 30 new EV models and by 2035 they will only retail electric vehicles.
- By mid-2026, Ford says 100 percent of its passenger vehicle range in Europe will be zero-emissions capable, all-electric or plug-in hybrid, before finally going full-electric in 2030. Ford's commercial vehicles will also be zero-emissions capable by 2024.

⁴ <https://www.chargedfuture.com/countries-and-states-with-gas-car-bans/>

⁵ https://www.concept.co.nz/uploads/1/2/8/3/128396759/ev_study_rept_1_v1.0__1_.pdf

- 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. Several Chinese marques are already sold in New Zealand, including Great Wall Motors, MG, LDV, and Haval. BYD has announced its arrival in mid-2021, arriving with a range of competitively priced and quality EVs. (The source of future new and used cars from New Zealand may shift over time.)
- The Hyundai Motor Group aims to produce 1 million EVs globally, by 2025.
- Tesla has the highest market capitalisation of any car manufacturer.

The table from Deloitte (July 2020) provides more⁶:



Deloitte's global EV forecast is for a compound annual growth rate of 29 per cent achieved over the next ten years: Total EV sales growing from 2.5 million in 2020 to 11.2

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<https://www2.deloitte.com/us/en/insights/focus/future-of-mobility/electric-vehicle-trends-2030.html>



million in 2025, then reaching 31.1 million by 2030. EVs would secure approximately 32 per cent of the total market share for new car sales.⁷ Again, the point is, we need to be an attractive market for this supply by having clear and consistent policy settings.

b) CCC: Improve the efficiency of the light vehicle fleet and stop Aotearoa receiving inefficient vehicles by introducing an emissions target for light vehicles new to Aotearoa of 105 grams CO2 per kilometre by 2028.

Drive Electric: We support this, but note that it should be 2025 as per the Government's policy announcement on this matter. We note that emissions standards on their own are not enough, and other measures including a well designed incentive will be necessary to accelerate the uptake of EVs.

The standards being proposed for 2025 have already been met in other comparable markets, like the EU and Japan. These may be ambitious, but their very point is to lower emissions in the type and range of vehicles being imported into New Zealand.

It is possible that using regulation to adjust these standards, rather than strict legislation, may be a useful tool. This would enable the standards to be adjusted, in response to changes in context (e.g. technology).

c) Develop a charging infrastructure plan for the rapid uptake of EVs to ensure greater coverage, multiple points of access and rapid charging, and continue to support the practical roll out of charging infrastructure.

Drive Electric: We support this. Investment in charging infrastructure must lead the transition to give buyers the confidence that they can charge their vehicles. It is essential that charging infrastructure is planned in an integrated way with urban development and future public transport investment.

Research by Drive Electric suggests that an estimated 80 per cent of EV charging will be done at home. We have identified a gap in the CCC's draft advice, with respect to the provision of at home and office charging infrastructure. New homes and offices should be required to install smart electric vehicle chargers.

Additionally installing EV chargers should be made a permitted activity rather than a discretionary activity under District/City Plans.

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

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<https://www2.deloitte.com/us/en/insights/focus/future-of-mobility/electric-vehicle-trends-2030.html>



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 be 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.

4.2 Necessary action 3: Accelerate light electric vehicle uptake

- a) CCC: *As part of a policy package introduce a fiscal incentive, such as a feebate or subsidy, to reduce the upfront cost of EVs until such time as there is price parity with ICEs.*

Drive Electric: We agree with this. Price parity may arrive as early as 2025 in some markets and models, but take longer in others. However, we can’t wait for this to occur, as we need to get new EVs coming into the market now. Ironically, the public discourse about incentives without providing clarity, is possibly delaying the uptake of EVs. Some consumers will be waiting for that ‘discount’ to be made available.

Concept Consulting analysis shows that altering the purchase price of EVs and ICEs will be more cost-effective, and less regressive, than altering running costs (e.g. RUCs or carbon taxes).⁸ The analysis supports the argument that both an incentive and an emissions standard will work best in conjunction. The incentive will encourage uptake by consumers, while the emissions standard will provide assurances that an average emissions will reach a certain standard over time.

There are equity issues associated with the design of consumer incentives. Depending on design, they can be considered, in effect, a subsidy to middle and higher income households. It is important therefore that a sensible cap is introduced so it applies predominantly to non-luxury vehicles, and the incentive may only need to exist until EVs

⁸ https://www.concept.co.nz/uploads/1/2/8/3/128396759/ev_study_rept_1_v1.0__1_.pdf

naturally reach price parity with ICE vehicles. Finally, while this may not be the perception, this subsidy is in fact passed on, when the vehicle is sold on the secondhand market.

It's also important to consider whether incentives need to be designed differently for new and used vehicles.⁹

As the CCC analysis shows, lifetime ownership of EVs is already cheaper than the equivalent petrol vehicle. However, the largest barrier is consumer behaviour, because of the disincentives perceived through higher upfront purchase prices. This needs to be overcome through a demand side incentive.

b) CCC: As part of an equitable transition, evaluate and support interventions such as leasing, hire and sharing schemes to remove barriers and address some of the upfront capital costs of EVs

Drive Electric: We agree with this, and note there are already some existing players in the market. There may be opportunities for social enterprise to play a role, and deliver solutions in low-income communities. (See answer to f) below.)

c) CCC: Investigate ways to bulk procure and ensure the supply of EVs into Aotearoa and work with the private sector to do so.

Drive Electric: 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 Public Service initiative is useful in this regard, but needs to scale up quickly. 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.¹⁰

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. This could be worth modelling in the final CCC report.

Policies specifically designed to make the transition in fleets more attractive should be considered. See d) and e) below.

⁹ As above

¹⁰ As above

d) CCC: Evaluate how to use the tax system to incentivise EV uptake and discourage the purchase and continued operation of ICE vehicles.

Drive Electric: We agree. Specifically the role of FBT needs to be reconsidered.

Most new vehicles are purchased by companies. 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 expensive EV anyway. Why not collect the FBT at the ICE-rate and incentivise the purchase of the EV?

Drive Electric has previously proposed an FBT switch scheme.¹¹

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 exempt from FBT. This has encouraged 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.¹²

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.

e) CCC: Work with the private sector to roll out EV battery refurbishment, collection and recycling systems to support sustainable electrification of light vehicle fleet.

Drive Electric: We support this. Batteries do have a second life and prospects for recycling are improving rapidly.

We note that the Battery Industry Group is already designing a product stewardship scheme and an innovative battery tracing scheme.¹³ There are also examples of second life battery applications in the market, such as the programme being developed by Counties Power.¹⁴

¹¹

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

¹² https://www.concept.co.nz/uploads/1/2/8/3/128396759/ev_study_rept_1_v1.0__1_.pdf

¹³ <https://big.org.nz/>

¹⁴ <https://www.countiespower.com/news/id/262>

It's also worth considering research that suggests technological advancements will drive down the amount of lithium required to make an EV battery by half over the next decade.¹⁵ The amount of cobalt required will drop by more than three-quarters and nickel by around a fifth. This same research suggests that by 2035 over a fifth of the lithium and nickel, and 65% of the cobalt, needed to make a new battery could come from recycling in the EU.

Questions are sometimes asked about the social and environmental impact of mining associated with the production of EV batteries. There are improvements to be made. The main OEM brands are members of the Global Battery Alliance, who oversee the manufacturing of batteries along the total value chain with the purpose of improving sustainability performance.¹⁶

It is also worth keeping the scale of this mining in perspective. "Oil consumption for passenger cars in the EU27 + UK is equivalent to 1.3 billion barrels of oil which, if we imagine placing them on top of each other, would become a tower of one million kilometers in height, or close to three times the distance between the Earth and the Moon. On the other hand, the total battery demand for primary raw materials would account for around 1.1 Mt in 2030 (1.3 Mt in 2035), or a single cube 71 meters large."¹⁷

- f) CCC: *Evaluate the role of other pricing mechanisms beyond the NZ ETS, such as road pricing, can play in supporting the change to a low emissions and equitable transport system*

Drive Electric: We agree.

We believe the current exemption on EVs paying Road User Charges (RUCs) should be extended. These should stay in place until at least more effective policies are implemented to support the uptake of EVs. To remove this exemption now would be to send the wrong signals to the market. Eventually, RUCs could be re-introduced on EVs, as they become an increasing part of New Zealand's fleet. This may be required to fund future roads and other forms of transport.

On pricing mechanisms more broadly, we are nervous about market pricing mechanisms being used as the *sole* driver behind the uptake of electric vehicles, to meet the emissions budgets, particularly those which would result in the rapidly increasing cost of petrol. Increasing fuel prices, an important component of the cost of living for so many, without providing New Zealanders access to alternative affordable transport options could result in increased inequality and social disharmony. Politically, we don't believe this will be palatable for any Government.

¹⁵

<https://www.transportenvironment.org/publications/batteries-vs-oil-comparison-raw-material-needs>

¹⁶ <https://www.weforum.org/global-battery-alliance/home>

¹⁷

https://www.transportenvironment.org/sites/te/files/publications/2021_02_Battery_raw_materials_report_final.pdf

Alternatively, if the pricing mechanism is set to adjust prices upwards too slowly it will not drive decarbonisation at the desired rate. This is why coordinated intervention, in partnership with industry, is required to accelerate the uptake of EVs and decarbonise transport more broadly.

That said, the interplay between the NZ ETS and direct interventions to encourage the uptake of EVs should be carefully considered. If the changes to the vehicle market are being driven by direct intervention, rather than in response to the price signals provided by the ETS, then this could result in distortions in the emissions market. This needs to be explored to ensure the ETS integrity is protected.

g) CCC: In setting these policies the Government needs to mitigate impacts for low-income households and people with disabilities

Drive Electric: We completely agree. This is a critical piece of the transition. There is a risk that if we don't provide access to convenient, affordable, sustainable and safe transport for low-income households, that some New Zealanders will be incentivised to hold onto their older and high emitting vehicles.

Holding onto these vehicles, in itself, will also be a problem for equity. Over time petrol prices will rise and maintenance will become more expensive. This is not an argument, not to act. It is an argument that an EV transition is only one part of the transition in transport.

On EVs, part of the answer here is to quickly incentivise the uptake of EVs into the market, so affordable options come onto the domestic second hand market. This is particularly important in the private and public sector fleets.

As above, the other part of the answer is overall improvements to active and public transport, investing in mobility as a service, and making changes to how we work and live. We need to travel less and shift to different modes of transport.

Finally, there are some innovative schemes being looked at, by social enterprise, about car sharing options in low-income communities. These should be scoped and explored further, as these could provide self-funding, affordable alternatives to car ownership.

5. Response to Chapter 6.1.2 (Heat, industry and power)

5.1 Time-critical necessary action 3: Target 60% renewable energy no later than 2035

CCC: Setting a target for renewable energy enables the Government to signal the required emissions reductions across the full energy system. Within that context, the 100% renewable electricity target should be treated as aspirational and considered in the

broader context of the energy system that includes electricity, process and building heat and transport.

Drive Electric: We agree.

We support the concept that the 100 per cent electricity target is aspirational, and that by pursuing it in isolation it may not be the most economic way to decarbonise the economy.

The most important point to make is that the mass electrification of transport does not lead to increased energy emissions, by increasing demand for non-renewable sources.

a) Develop a long-term national energy strategy that provides clear objectives and a predictable pathway away from fossil fuels and towards low emissions fuels, and the infrastructure to support delivery.

Drive Electric: We agree. See response 4.d) above and 5.2 d) below.

b) Under the framework of the national energy strategy, set a renewable energy target to increase renewable energy to at least 60% by 31 December 2035.

Drive Electric: We agree.

We note that by accelerating the uptake of electric vehicles, this should increase the demand side for renewable energy.

5.2 Necessary Action 5: Maximise the use of electricity as a low emissions fuel

d) CCC: Assess whether electricity distributors are equipped, resourced and incentivised to innovate and support the adoption on their networks of new technologies, platforms and business models, including the successful integration of EVs

Drive Electric: 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.

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.¹⁸

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