



Drive Electric (CPO) submission on Commerce Commission 2023 Draft IM Decision

19 July 2023

Introduction

1. This is the submission of Drive Electric's Charge Point Operator (CPO) subgroup on the Commerce Commission Draft Input Methodology (IM) Decision that was published on 14 June 2023. Drive Electric is appreciative of the opportunity to provide feedback to the Commission on this consultation. We are providing this submission representing CPOs as customers of EDBs. Private sector investment into public charging networks is being seriously hampered because of the costs and processes associated with network connections. This puts at risk New Zealand's objectives to decarbonise transport.
2. New Zealand is on the cusp of a complete transformation in our transport system, moving from being fossil fuel-powered to being powered by electricity. This change is already occurring and will rapidly accelerate over the next ten years. New Zealand needs a network of public charging stations to underpin this change. At present there is a significant barrier to establishing public charging stations which is the cost and processes associated with network connections. In short, the users of e-mobility in New Zealand (eventually all New Zealanders) need a regulatory system for network businesses that enables Charge Point Operators (CPOs) to invest in and deploy charging infrastructure to meet current and future market demand.
3. The purpose of this submission is twofold:
 - a. to help ensure the Commerce Commission (Commission) appreciates the scope and importance of public EV charging in meeting the decarbonisation goals the New Zealand has set for itself; and
 - b. to set out the issues that CPOs are experiencing with network connections and the provisions that the Commission should consider including in the final IM review decision.
4. Specifically, we want the Commission to reconsider the provisions relating to network connections that are part of topic papers 'CPP and in period adjustments' and 'Financing and incentivising efficient expenditure'.
5. Drive Electric's subgroup recognises the IMs are only one component of the regulatory framework for network businesses. We point to other factors that are relevant, such as the Commission ID review, the Electricity Authority's (EA) consultation on distribution pricing as

well as the forthcoming National EV Charging Strategy¹, which has recently been consulted on by the Ministry of Transport. We ask that the Commission also consider how the IM decisions will interact with this broader regulatory environment.

6. For us 2023 is a very important year to get the right building blocks in place to provide users of EVs with charging infrastructure across New Zealand. Drive Electric sees this submission as a unique opportunity to provide both the Commission (and then the EA) with direct input from consumer-facing operators who provide the New Zealand public with EV charging services.

Who is Drive Electric

7. Drive Electric is an apolitical, not-for-profit organisation. We engage with government, media, industry and individuals to continually promote the benefits of making e-mobility mainstream and encourage accelerated electric vehicle uptake across the country. Our board, member network and research partners are at the forefront of the electric vehicle movement. We are proud to instigate change and impart expertise in the key conversations bringing New Zealand closer to a fully electric future.
8. Drive Electric represents a member base comprising new car OEMs and retailers, 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. We have more than 70 members from across the e-mobility ecosystem.
9. Drive Electric has established a subgroup of Charge Point Operators (CPOs) to specifically focus on the barriers to investment in public charging infrastructure in New Zealand. This group comprises Tesla, Meridian, Jolt, ChargeNet, Z Energy (Z) and BP. All these businesses provide a range of charging services to New Zealanders and have significant private capital to deploy in further building out New Zealand's charging network.

Government Strategy on Public EV charging

10. The Government has recognised the need for a coordinated and strategic approach to rapidly scale up public charging in New Zealand. In March, the Ministry of Transport released a Discussion Document 'Charging our Future'², which intends to establish a National EV Charging Strategy. We understand that this will be finalised in the coming months.
11. This strategy sets a vision for: "Aotearoa New Zealand to have world-class EV charging infrastructure that is accessible, affordable, convenient, and reliable." The discussion document also proposed national targets:
 - Journey charging hubs every 150 – 200 kms on main highways.

¹ <https://www.beehive.govt.nz/release/government-future-proofs-ev-charging>

²

https://consult.transport.govt.nz/policy/charging-our-future/supporting_documents/Charging%20our%20Future%20%20draft%20strategy.pdf

- A public charger for every 20-40 EVs in urban areas; and
 - Public charging at community facilities for all settlements with 2000 or more people.
12. In Budget 2023, the Government allocated \$120 million to expand EV charging infrastructure in support of its strategic direction. If the regulatory settings are right, private capital will invest many times more than this to establish New Zealand's charging network.
 13. Outcome 4 of the draft strategy is that Aotearoa's EV charging market functions effectively, can adapt and evolve over time, and is attractive to users, operators, and investors. Regulatory settings need to be considered in this light to enable investment in and deployment of charging infrastructure.

Public EV charging

14. New Zealand is at the beginning of the biggest transformation of transport in over a century. Driven by technological advancements and requirements to decarbonise, over the coming decade the transport system will shift away from being powered by fossil fuels over the coming decades.
15. It is rapidly becoming clear that electric vehicles will replace petrol and diesel combustion engine vehicles in most use cases. International jurisdictions are setting dates for the end of new fossil fuel vehicles.³ The Glasgow Declaration, of which New Zealand is a signatory, set a global agreement for phasing out petrol and diesel vehicles by 2035 in leading markets.⁴ Automakers are committing to dates by which they will only produce electric vehicles, some already only make EVs (e.g. Tesla and BYD).
16. The scale of this transition cannot be underestimated. New Zealand currently has more than 4 million passenger cars in its fleet, the vast majority of which are fueled by petrol and diesel. Within two decades, Drive Electric estimates most of these cars will be electric. The Government itself has set a target in the first Emissions Reduction Plan to have 30% of the light fleet electric by 2035 (Transport Target 2).⁵
17. EV uptake is accelerating beyond government expectations. In June 2020, 2.3% of light vehicles registered in New Zealand for the first time were plug-in vehicles. Just three years later, the average monthly market share of EVs is 12.6%.⁶ The Climate Change Commission's analysis suggests that by 2030 67% of cars entering the New Zealand market will be EVs.⁷

³ https://en.wikipedia.org/wiki/Phase-out_of_fossil_fuel_vehicles

⁴ <https://www.gov.uk/government/publications/cop26-declaration-zero-emission-cars-and-vans/cop26-declaration-on-accelerating-the-transition-to-100-zero-emission-cars-and-vans>

⁵ <https://environment.govt.nz/publications/aotearoa-new-zealands-first-emissions-reduction-plan/transport/>

⁶ <https://www.mia.org.nz/Sales-Data>

⁷ <https://www.climatecommission.govt.nz/our-work/advice-to-government-topic/advice-for-preparation-of-emissions-reduction-plans/2023-draft-advice-to-inform-the-strategic-direction-of-the-governments-second-emissions-reduction-plan-april-2023/full-report>

18. This is not just a transport issue, it's an energy issue. The transition to electric vehicles depends on the availability of renewable electricity and the infrastructure to enable users to charge their vehicles.
19. Public charging infrastructure is an essential part of this transition. Public charging gives users the confidence to adopt EV technology, and alongside the sticker price of EVs, is probably the greatest enabler of uptake. This is part psychological and part necessity. As conventional car owners have today with petrol stations, to switch to this new technology EV drivers need confidence that they can charge their vehicles on long-distance travel and when away from home.
20. Also, there are many users who simply cannot charge at home and will need to depend on public facilities. The Climate Change Commission's 2023 Draft Advice to inform the strategic direction of the Government's second emissions reduction plan (draft advice) says around 15% of households lack a dedicated car park, and these people will need public facilities.⁸
21. Compared to other comparable countries, New Zealand is desperately behind in the rollout of this infrastructure. The chart below from the International Energy Agency demonstrates this.⁹

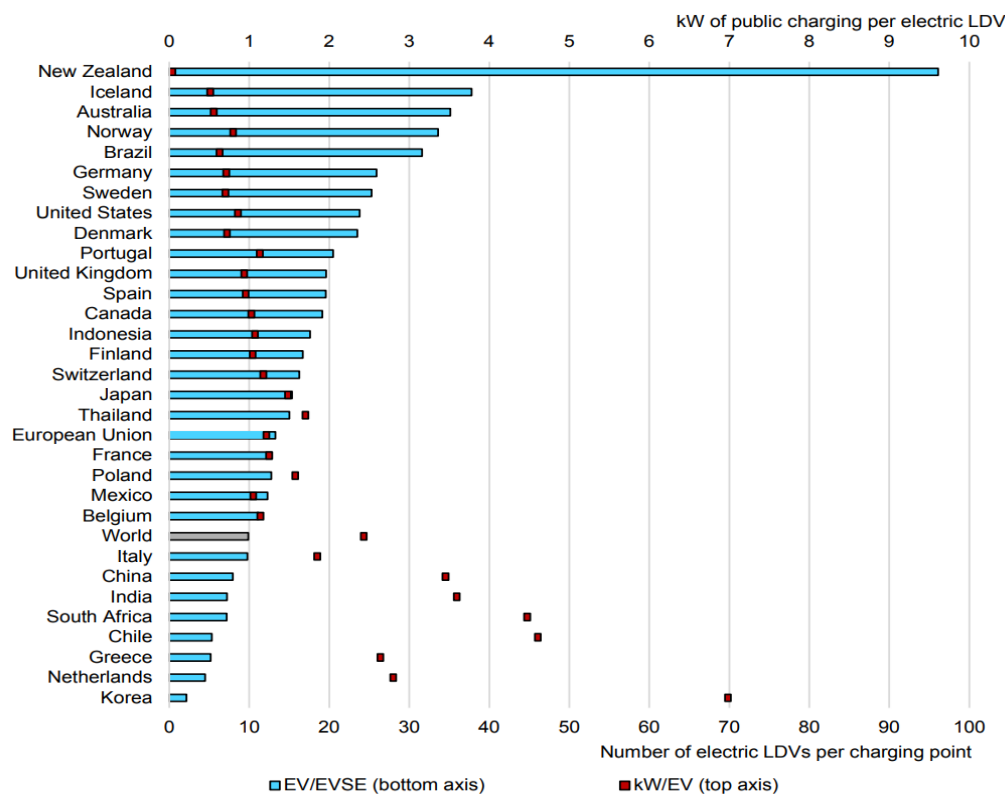
⁸

<https://www.climatecommission.govt.nz/our-work/advice-to-government-topic/advice-for-preparation-of-emissions-reduction-plans/2023-draft-advice-to-inform-the-strategic-direction-of-the-governments-second-emissions-reduction-plan-april-2023/full-report/>

⁹ <https://iea.blob.core.windows.net/assets/dacf14d2-eabc-498a-8263-9f97fd5dc327/GEVO2023.pdf>

Number of EV per public charging point and kW per EV, 2022

Figure 1.16 Number of electric light-duty vehicles per public charging point and kW per electric light-duty vehicle, 2022

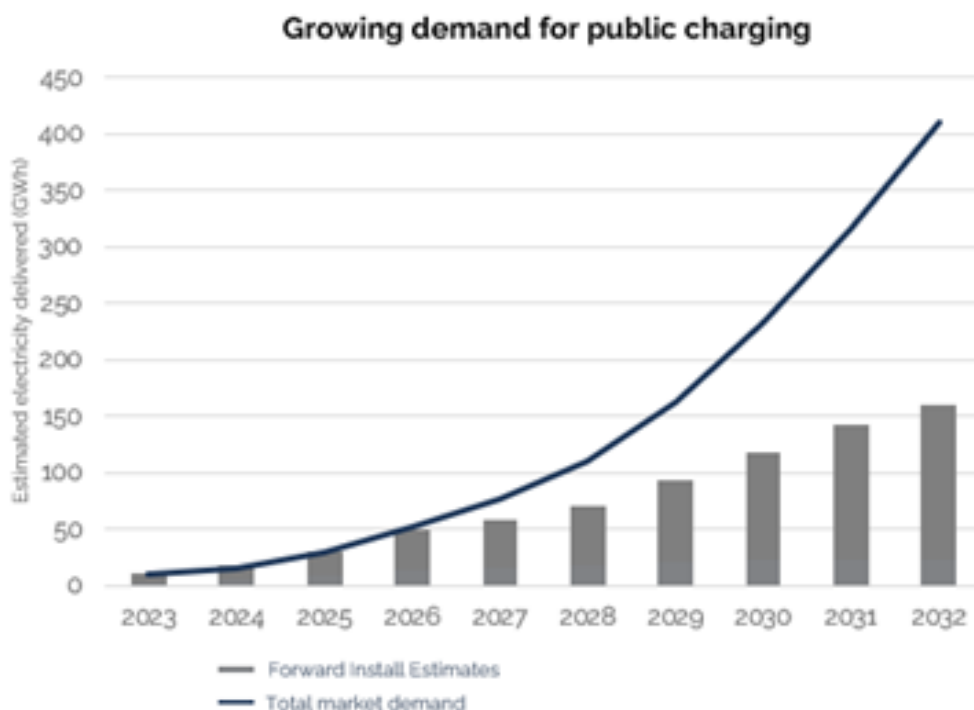


IEA. CC BY 4.0.

22. Using Climate Change Commission data, ChargeNet, a public charging operator, undertook analysis which suggests that demand for public charging will increase from an estimated ~10GWh in 2023 to 690GWh in 2035. It is likely that up to \$400m will need to be invested in the public charging network over the next 3-5 years.¹⁰ ChargeNet’s modelling shows it’s going to be challenging to overcome the shortfall.
23. A substantial gap between the electricity needed by public EV charging stations, and the number of charging stations to deliver that electricity, could emerge within two to three years (chart below).

¹⁰ This is an estimate from one public charging operator. We are not aware that market analysis of this sort has been done. We have recommended in our response to the National EV Charging Strategy that this sort of demand and investment analysis would be useful.

Demand for charging (GWh) and charger installations - ChargeNet estimates



24. The emerging infrastructure deficit is already impacting user experience. Research from EECA shows that 42% of EV drivers feel there is a lack of public chargers within New Zealand. Queues are stopping 55% of drivers from using public chargers more often.¹¹
25. This shortage in public charging infrastructure has been confirmed in the Climate Change Commission’s draft advice released in 2023.¹² It has specifically recommended (recommendation 17) that the government must rapidly resolve the barriers to scaling up vehicle charging infrastructure.
26. Public charging businesses, including Jolt, ChargeNet, Z, BP, Tesla, and Meridian, have private capital to invest in public charging in New Zealand. All of these businesses report that they have significant investment pipelines that are constrained. The cost of connecting to the network, ongoing charges, and associated processes, and the differences between 29 EDBs, all contribute to these investment constraints.
27. We acknowledge that it is fair and reasonable for an access seeker to contribute to the cost of connecting to the network. However, at present the level of these contributions makes charging investments uneconomic. For example, one CPO reports for 100 Amp connections their average connection cost is 65% of the total project cost. Another CPO reports that costs for connections (the same 500 KVA transformer) can vary up to 400%.

¹¹ <https://www.eeca.govt.nz/assets/EECA-Resources/Research-papers-guides/EECA-Public-Charging-Research-March-2023.pdf>

¹² <https://www.climatecommission.govt.nz/our-work/advice-to-government-topic/advice-for-preparation-of-emissions-reduction-plans/2023-draft-advice-to-inform-the-strategic-direction-of-the-governments-second-emissions-reduction-plan-april-2023/full-report>

28. Charging providers say that the consequences of the current situation may be significant, and could include:
- Inability to meet consumer demand for charging.
 - Regional disparities / postcode lottery (i.e., charging being installed where it's cost effective, rather than where the most demand is).
 - Dampening consumer demand in EVs (given limited availability); and
 - Difficulty in securing a steady stream and sufficient depth of private investment (capital redirected to more favourable markets or investment opportunities).

Our interest in the IM review

29. We recognise that the needs of electrification are putting increasing pressure on network businesses as demand for connections grows and have sought to overcome the network connection issues through direct engagement with both individual EDBs and with the Electricity Network Association. These organisations have all said to us that they are constrained by their regulatory environment.
30. Because public EV charging has become such an important component of the market, and network connections are the vital link, we believe that the EDB regulatory environment needs to facilitate supportive network connection arrangements particularly in pursuit of decarbonisation. This submission on the IM draft decision is our first step in this regard and we are asking for specific provisions to be included in the final IM Review decision.¹³
31. The provisions that we seek are targeted at three of the issues that CPOs are currently facing:
- the costs of connecting to the distribution networks and the ongoing lines charges;
 - the processes (and time) associated with those connections; and
 - the divergence in cost and process between EDBs
32. The provisions that we would like the Commission to consider for inclusion in the final IM review decision are set out below. Some of the provisions are noted as overlapping with the Commission ID review process and/or the EA distribution pricing review but are included here for completeness.¹⁴

¹³ We also consider that an access regime for connecting charging stations to distribution networks has now become an essential input to transport electrification. We consider that if networks are to adapt to the accelerating intensification of demand, there will need to be changes in regulation, business practices, and resourcing for most distributors. Both the Commission and EA have direct regulatory control, or direct oversight of the components of distribution networks access arrangements for CPOs:

- Regulatory policy settings – especially incentives on EDBs to support transport electrification
- Risk management – uncertainty about the impacts of EVs on regulated EDBs
- Costing and pricing – the connection costs and use of system charges

¹⁴ For example, CPOs note that EDBs each seem to have different ways of allocating network costs over time and have a range of approaches for customers' contributions to connection costs. They are concerned that these practices could drive underinvestment in power supply for charging stations that will result in expensive rework when demand grows into the future. This situation will be compounded by the mobility of EVs which will generate peaky offtakes in networks that are designed for 'traditional' demand profiles.

Recommended provisions

33. A well-formed regulatory policy position on EDB risk management as it impacts network connections, capital contributions and other growth charges. We are aware that two options have been considered to de-risk EDBs connection and growth capex:
 - a. Lowering (or removing) the IRIS incentive rate for connections – this weakens the reward for outperforming forecasts (including through efficiency gains) but also reduces the cost recovery risk should connections outpace forecast. This would soften what we see as a key driver for EDB capital contribution policies.
 - b. Include a connection cost reopener – that is, the Commission could provide for connection allowances to be reopened if connection demand is stronger than forecast. This is a more administrative and ‘by exception’ way to address cost recovery risk.¹⁵
34. We propose that another EDB risk management provision be included that would improve EDB financeability for supporting transport electrification. Our understanding is that capital recovery is indexed to inflation over the long term which means that EDBs need to wait for the ‘long term’ to arrive so they can recover the investment costs. This structure does not incentivise EDBs to respond to today’s connection demands for EV charging and other growth drivers.¹⁶
35. In addition to the CPP wash-up mechanism that we comment on in footnote 15, we observe that the draft decision includes a reopener provision for major connection capex such as industrial heating that was not forecast by the EDB, but we would like to see this reopener extended to specifically include public charging connection forecasts.
36. The 2023 IM review decisions will impact how EDBs respond to the need for consistent policies and processes regarding connection charges and system growth. Rather than constraining EDB policy setting, a more permissive set of IMs in this regard will enable EDBs to adapt their connection processes and timelines and enable a more standardised approach as demand unfolds over time. Demand for public charging will evolve across the country in different ways and EDBs will need flexibility to respond as needed. A tightly constrained one-size-fits-all approach to connections and system growth is unlikely to be successful.
37. Better information on EDB networks will assist charge point access seekers find the best locations to connect. While the availability of improved information may better fit within the

¹⁵ We note that the Commission has included a wash-up mechanism for new connections that only applies under a CPP regime. EDBs tell us that this is a step in the right direction for CPOs, but it misses an opportunity by restricting it to use under a CPP – it should apply under the DPP as well.

¹⁶ We understand that currently the price pathways set by the Commerce Commission are by nature backward looking – using past costs as a determinant for future expenditure, and penalising spending beyond this forecast level. A specific aspect of the proposed IMs review which further constrains cash flow of regulated networks is the continued indexation of an EDB’s Regulated Asset Base (RAB). EDBs have told us that they have long highlighted the challenge of the Commission’s approach to back-ending recovery cash flows for investments made over 40-50 years (a practice called “indexation”). The current approach of indexing the regulated asset base to inflation back-ends cash flow. Changing this approach would have the impact of bringing the timing of available funding forward – but would result in the same overall recovery (i.e., would be NPV neutral).

Commission's current ID review, it is important that it is acknowledged as a component of the wider regulation of EDBs under the IMs. Two information types that can significantly assist access seekers would be:

- a. Geographic information – that is, understanding where transformers and cables are located, and their key attributes can help CPOs as access seekers find locations that won't require costly cable runs. The most helpful approach is for EDBs to make GIS data available.
 - b. Capacity information – that is, understanding where network capacity is limited can help access seekers find locations that won't trigger upgrades and system growth charges. The most helpful approach is for distributors to make network 'heat maps' available, though more limited information can also assist. Importantly this information must be made available at a very specific level for it to be useful for CPOs.
38. A more contestable connection environment that allows contractors that are not EDB nominated to build network connections. This will likely deliver both more cost-efficient outcomes for consumers and deliver services that meet consumer preferences.
 39. We note that the Commission is to decide on IM changes in 2023 that will apply for the next seven years. We are deeply concerned that network access for CPOs could be locked into an EDB regulatory environment that does not enable customer decarbonisation outcomes and will likely be administratively difficult, and therefore costly, to change within that seven-year period. This could fundamentally impact the ability for private sector players to invest in the network, without ongoing and significant public subsidies.
 40. We would also hope that, before making any final decisions on the IM Review, the Commission would carefully consider the outcomes of the current Electricity Authority consultation on distribution pricing and especially the issues that emerge from stakeholder submissions concerning connection charges and system growth contributions.

Outcomes and conclusion

41. The outcomes that we are seeking are:
 - a. A regulatory environment that enables private sector charging investment
 - b. More consistency in EDBs approach (cost and processes) to network investment
 - c. Better customer (EV driver) experience

We believe that the 2023 IM Review is an important opportunity for the Commission to contribute to the outcomes by considering the provisions that we propose in a positive light. As above, we are conscious that there are other regulatory stakeholders who will also contribute to these outcomes.

42. We trust that this submission has raised the Commission's awareness of the challenges that the CPOs face in meeting demand for EV charging today and the serious risks in being unable to meet future demand. We feel compelled to point out that without a supportive

regulatory environment many of the factors that contribute to the risks of not meeting demand simply cannot be managed.

43. Drive Electric welcomes the opportunity to meet with the Commission to discuss our submission in more detail. If there is any further information that would be helpful to the Commission's inquiry, please do not hesitate to contact us.