

18 October 2018

Electricity Price Review
Secretariat, Ministry of Business, Innovation and Employment
15 Stout Street
PO Box 1473
Wellington 6140

RE: SUBMISSION – ELECTRICITY PRICING REVIEW

Introduction

1. This submission is made by Drive Electric Incorporated (DE). DE 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) and electric vehicle users, and is an advocacy organisation for the uptake and mainstreaming of electric vehicles (EVs) in New Zealand, as well as seeing NZ become more energy independent.
2. DE has brought together feedback from our board members who represent all aspects of the converging EV industry, to inform our submission to the Ministry.
3. DE considers that a well-functioning electricity market that relies heavily on renewable resources is one of the country's greatest advantages as the country moves to a low emission economy. The transport sector represents 19.1% of emissions and therefore the benefits of electrification are significant because of our largely renewable electricity system.
4. DE's members' recognise that the adoption of EVs (in its widest sense, so both Plug-in Hybrid EVs (PHEVs) and Battery EVs (BEVs)) represents the greatest opportunity to reduce transport emissions. In any review there should be significant consideration for how we continue to remove barriers to driving electric.

Electricity Market

5. The World Energy Council uses the Energy Trilemma to analyse the challenges and opportunities for different countries' energy sectors. The trilemma assesses the interaction of three factors – security (how markets meet current and future demand); equity (accessibility and affordability); and Sustainability (how clean the energy sources are and the efficiencies available). New Zealand is 8th out of 130 countries reviewed, the only non-European country to ranked in the global top ten.
6. As a result, the country's highly competitive retail market is delivering an array of retail offerings tailored for different customer preferences. Customers enjoy range of choice including non-traditional service models like spot price exposure, time of use pricing, and overnight EV rates. Many retailers also provide customers with billing and consumption information and tools. All of this is great news for EV users and those considering investing in EVs.
7. Given the large renewable quotient of electricity in our market and its efficiency and reliability, we believe EVs provide the transformative opportunity for the electricity sector

as it moves to diversify the use of its clean energy and help New Zealand reach its zero emissions goals.

8. At the time of submitting to the Electricity Pricing Review there are around 10,000 electric vehicles registered in the country. DE believes the economic case for EVs is already compelling and will only become more so with time.
9. A well-functioning electricity market that provides reliable, sustainable and affordable energy is imperative in accelerating the uptake of EVs and realising the benefits the electrification of transport can bring.

Distribution pricing reform is critical

10. Distribution pricing reform is increasingly urgent and should be progressed as a priority. Retail offerings for EV owners will only be as good as the underlying costs, of which lines costs are a significant part.
11. Efficient price structures should encourage people to use energy at off-peak times when the system is not constrained. This is relevant for EV owners as vehicle charging is largely a discretionary energy demand and customers should be able to access incentives from both distributors and retailers consistently across the country.
12. According to Concept Consulting *Driving Change*, New Zealand could expect 37 percent higher emissions from the light vehicle fleet in 2050 under a continuation of non-cost-reflective distribution prices.
13. The Electricity Authority has been working on distribution pricing reform since 2009. It is encouraging an industry-led approach with distributors asked to publish pricing reform “roadmaps” and next steps every six months. Some distributors have published detailed roadmaps and appear to be making progress. Others are not.
14. DE suggests distribution pricing reform should be completed to align with, or start soon after, the next Commerce Commission reset of distribution prices commencing in 2020.

LFC regulations slow EV uptake

15. The Electricity (Low Fixed Charge Tariff Option for Domestic Consumers) Regulations 2004 have had a range of unintended consequences, specifically in relation to EVs they:
 - create cross-subsidisation in favour of those that use less power, benefitting those that instead use fossil fuels and penalising high-use households including those that charge EVs at home; and
 - therefore, impede the uptake of the EVs, which are one of the best options currently available to reduce emissions in New Zealand.
16. The Regulations should be removed to address the issue of fairness to all consumers, particularly those who choose to invest in EVs.

Level playing field for EV charger installs

17. DE believes demand for EV charging infrastructure will increase with EV numbers and that the electricity market will deliver extensions to the charging infrastructure at an efficient speed and cost to consumers.
18. The EECA Low Emission Vehicles Contestable Fund is helping to make business cases and ensure burgeoning EV uptake is not held back by a lack of infrastructure.
19. We believe there should be a level playing field for EV charger installs and that all players should reflect the true costs of providing EV chargers to the public.

New technology and a coordinated approach

20. As more of NZ consumer and commercial transport fleet become electric, the need to consider the aggregate impact of coincidental EV charging on the peak demands on distribution networks become material.
21. A possible approach to enable the adoption of emerging technologies like EVs, whilst minimising customer bill shock and without compromising carbon goals, is 'managed-charging' pricing which only applies to a household's EV demand.
22. This would involve consumers agreeing to another party (e.g. retailer, load aggregator, or network company) managing their EV charging, in return for discounted network and/or energy pricing for such managed EV load. This approach recognises the distinct nature of EV load, with its storage characteristics, and would deliver materially better outcomes of smoothed coordinated charging of New Zealand's EV fleet and lowering the cost of EV charging to consumers, but in a way which has reduced risk of causing bill-shocks for consumers.
Managed-charging would be similar in some ways to the approaches taken to manage hot water cylinders, with consumers being rewarded with cheaper electricity for hot water load being managed at times of peak network demand.
23. Luckily, the technology coming within EVs and dedicated EV-chargers, and broader internet-based communications technology, not only provides the means to enable these smarter ways of charging our EV fleet, but to do so in a much more sophisticated way than the relatively crude ripple control that is currently used for hot water management.
24. Thus vehicle-specific management is feasible, with the ability to recognise a variety of factors – such as how empty different EV batteries are, where along a low-voltage network (of approximately 50-100 houses) EVs are located, or consumer requirements for when they need to next drive their EV – in order to coordinate which EVs should be charged, and when, in order to meet consumer requirements without imposing excessive supply costs.
25. However, to take advantage of such technology requires EV-owners to receive price signals or rewards which are of sufficient size to encourage them to take-up such managed-charging options.

Summary

DE's members recognise that the adoption of EVs represents the greatest opportunity to reduce transport emissions in NZ, and ties to our reason for being.

The electricity market plays a significant role in enabling the growth of electrified transport and is recognised as world class.

A well-functioning electricity market that provides reliable, sustainable and affordable energy is imperative in accelerating the uptake of EVs and realising the benefits the electrification of transport can bring.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Mark Gilbert', with a large, stylized initial 'M'.

Mark Gilbert
Chairman
DRIVE ELECTRIC INCORPORATED