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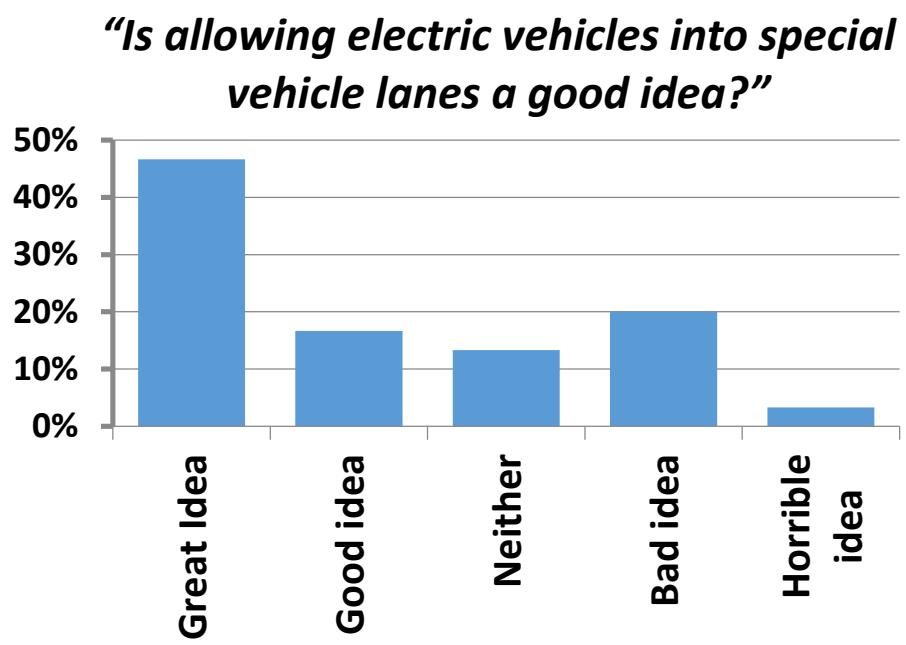
Accelerating the uptake of electric vehicles in New Zealand

SUBMISSION ON ENABLING LANE PRIVELEDGES FOR LOW EMISSION VEHICLES IN NEW ZEALAND

DATE:	27 January 2017
SUBMISSION TO:	This is a joint submission to 1. Parliamentary Select Committee considering amendments to the Energy Innovation Bill 2. Ministry of Transport for their consideration of amendments to Land Transport Rules.
SUBMITTERS:	Henrik Moller and Dima Ivanov prepared this submission on behalf of the *Flip The Fleet* project team. This project is a 'citizen science' collaboration of several Electric vehicle (EV) and Plug-in Hybrid (PHEV) owners in New Zealand that are dedicated to accelerating the uptake of Low emission Vehicles (LEV) in New Zealand (www.flipthefleet.org). The main activity of this group is sharing data on their vehicle's financial, environmental and social benefits so that the debate about transition to more sustainable transport can be better informed. Around 40 LEV owners are testing our beta 'EV Dashboard' software by uploading data at the end of every month from their vehicle's dashboards and battery, and from their home charging stations.
BASIS OF THIS SUBMISSION:	Monthly scientific data collection is augmented by a '1-click surveys' where EV owners are invited to respond to a proposition or statement framed as a survey question on a Likert scale (1-5). If they wish, they can provide a commentary on why they agree or disagree with the proposition (see www.flipthefleet.org/discussion for how the surveys are conducted and summaries of the results received). The 1-click survey was sent to 39 LEV owners who are testing *Flip The Fleet*'s software on 13 Jan 2017. It their invited response to the following statement: "*The Ministry of Transport is considering enabling road controlling authorities to allow electric vehicles access to special vehicle lanes (read more* at http://www.transport.govt.nz/ourwork/climatechange/electric-vehicles/special-vehicle-lanes). *I think this is a…* 1. *Great idea* 2. *Good idea* 3. *Neither a good or a bad* 4. *Bad idea* 5. *Horrible idea."* The responses were anonymous. Our software shows that at least 22 of the survey participants visited the MoT website before responding, so we believe they were well acquainted with your proposal.
HOW LEV OWNERS SCORED THE PROPOSITION:	Thirty people scored the survey question by 27 January 2017, and 16 of them provided reasons. Two late responses are included here, so the figures and pastiche of comments presented below differs slightly from the interim report posted at www.flipthefleet.org/Discussion. Nineteen respondents (63%) think lane privileges are a 'great' or 'good' idea, compared to 7 (23%) who think they are a 'bad' or 'horrible' idea. A statistical test (Chi-squared) shows that there is less than a 5% chance of the difference arising simply by chance (sampling error). Therefore we can be reasonable confident that the majority of LEV owners favour lane privileges for LEVs. The distribution of responses is shown in the graph below.

	
WHAT WERE LEV OWNERS' REASONS FOR THEIR SCORES?	Although a majority of our panel support LEV lane privileges, there were also strongly held concerns about the proposal. Below we group direct quotes from the commentaries for all opinions without favouring any side of the debate, or asserting a consensus. You will note diametrically opposed opinions within many of the groupings of ideas below. What strikes us most is that the LEV owners' majority support is predominantly NOT based on self-interest of wanting a quick commute home after a hard day's work. Sure, some respondents consider it only fair and just that LEV owners get some reward, but most of the reasons given for supporting the policy reflect general concern for promoting EV uptake and transition to more sustainable transport. For many respondents, support for lane privileges was qualified by (or even surpassed by) a need to prioritise public and shared transport above LEVs, even though LEVs should be prioritised above single drivers of internal combustion vehicles. Improved visibility of LEVs to give people confidence in their utility (even to show they are already amongst us) was a common reason for support in allowing them into restricted lanes. **The goal is important:** "It's very important NZ and all other countries move to electric vehicles very soon. Climate change is a much bigger issue than a few EV's entering bus lanes .... and [any privileges would] only last till 2% of the fleet is electric." • "Govt has agreed in Paris to act on climate change. Changing to clean transport will make a big contribution but the govt does not offer any significant incentives for people to move to EVs" **Effective incentive:** "Nothing will incentivise some people more to switch to an EV than seeing one zip past them in the inside bus lane while they are stuck in a queue!" • "I think that giving a very convenient driving privilege would make ICE

	drivers really think about the EV option" • "If I saw one belting past me in traffic I would certainly reconsider the type of car I would buy next" • "Norway, a similar country to NZ in land area and population, has over 100,000 EVs. This could be NZ. Use of priority lanes, parking and charging has been the main motivator to many to purchase an Electric Vehicle" **Constantly reinforced message:** "They'll get increasing reminders of the issue on every commute to reinforce the message" **Increased LEV visibility:** "Drafting EVs out into a separate lane will raise their profile" • "ICE people will begin to twig that they are already here in reasonable and increasing numbers" • **"**I bet most NZers won't yet recognise EVs as they drive past, but this will bring them into peoples' attention" • "It would also make EVs on the road very visible to other drivers (and envied)" **Starting valuable conversations:** "The strategy will help trigger conversations and consideration about switching to EVs amongst the general public, not just amongst the car enthusiasts and environmentally conscious people- its these other people that will be hardest to encourage over to EVs" • "The lanes would also act to advertise that an EV future is coming... another way to get people talking about an EV future" **The start of something bigger:** "It will help set a new tone – where public support for EV uptake is recognised and accepted, and this might open the door for more proactive strategies like exemptions from tolls and parking fees, feebates, financial subsidies– it's getting the first exemptions accepted that will be the hardest, and allowing EV access to bus lanes is an inexpensive and low impost way to start". **But not enough on its own: "**It's a good idea, but not a great idea, as many commutes won't be near to these lanes and many lanes will not be long enough to make a significant difference to commute times – not enough to encourage environmentally 'neutral' people to consider buying electric." **Low cost?** "Low cost to the taxpayer" • "Need considerable investment & education to overcome practical problems" **Good for business: "**Companies saving transport times will invest in EVs JUST for a fast fleet" • "Couriers, taxis and business using small EV trucks & vans would get particular help" • "Encouraging fleets turbo charges EV uptake by public" **Don't hinder public transport:** "Public transport needs to be prioritised above EVs, especially in the cities, and EVs need to be prioritised above ICE vehicles" • "The impact on other users is minimal" • "Additional vehicles in bus lanes will slow down buses" • "EVs consume virtually no power waiting in traffic so don't prioritise them where it could have a detrimental effect on the commute time of larger diesel buses" • "Need to state privileges will be removed when EVs get to be a large percentage of the road fleet" **Prioritise public transport: "**We need to differentiate between prioritisation over polluting ICE vehicles and negative impacts on public transport" • **"**Would not be great if it compromises bus or other public transport vehicles" • "Significant hindering of public transport would probably not be a problem for

	several years, but it will be important that the legislation allows reversibility (i.e. renewed prohibition) if, where and when the problem arises" • "Authorisation for EVs to use the lanes must be on an individual rather than blanket basis so that some lanes are reserved for buses only, while others are shared by EV and buses" **Little impact on special lane users:** "The impact on other users is minimal. Two months ago I drove next to a bus lane for 18km and never passed a bus (and one didn't pass me). Much of the day this would be the case" **Safety risk for pedestrians:** "Increased danger from stepping in front of quietly approaching EVs" **It's fair to reward EV owners:** • "Use of transit lanes helps compensate for added expense of buying EV" • "ICE owners transfer costs of dirty transport to the public, whereas EV owners pay extra privately up front to avoid transferring those costs to everyone else" • "I think it's fair that EV owners get some personal benefits" • "People who have purchased EVs have educated themselves and made a personal financial commitment based on their personal values, which is focussed on the greater good rather than choosing the best value for money, rather than waiting for govt action. Those individuals should be rewarded in some way for their personal contribution to NZs program to reduce CO2 emissions. Access to special transit lanes is recognition of that" **Equity cuts both ways:** "Not everyone can afford an EV" • "Those that make a concerted effort to carpool or take the bus should be rewarded by being able to use low volume lanes" **Well-targeted**: "Special vehicle lanes are concentrated in congested areas where noise and exhaust pollution are worst – the very places we most want to incentivise people to switch to EVs". **Shows govt is serious about EVs:** "Not a lot else on the table to incentivise CVs" • **"**in-your-face promotion of EVs important" • "Natural EV owner bias aside, this would be an action that shows the govt is serious about increasing the uptake of EVs, which would be nice!" **Local context important:** "Good to enable it, whether it makes sense in each local context has to be determined" •"It's an AKL issue and it is irrelevant to me" **Priority is to discourage single commuters:** "I would accept couriers and businesses that go EV in preference to allowing single commuters in EVs into special lanes" • "There is no incentive in this policy to have more than one person in the EV" • "I counted on a motorway priority lane over 80% of cars with just the driver. This is far worse than an occasional Electric Vehicle using the lanes!" **PHEVs:** "PHEVs could be running petrol or have low proportion of travel in EV driving mode" **Sunset clauses:** "If we are going to use this strategy, it should be right away while the EVs are still relatively uncommon i.e. now when the rewards are greatest and risks lowest – but stay flexible and make it easy to reverse when EVs rule the roads"

	Backlash? "Could fuel negative sentiment towards EVs" • "Any delays to buses due to EV, especially with one person, can have big audience and generate negative views" **Hard to police?** "There may also be a practical problem that it will encourage cheating by ICEs" • "Investment in increased enforcement will be needed at the start"
STRENGTH OF INFERENCES FROM THIS SURVEY	Sample size is small (30 responses) and we are not yet sure how representative the *Flip The Fleet* software test panel is of all EV owners – so don't pay too much attention to exact percentage measures of responses. Nevertheless, a statistical test demonstrates that a majority of LEV owners do in fact support the proposal. The results we present here are more useful for showing the types of issues the government and Road Controlling Authorities should consider and manage.
TAKE-HOME MESSAGES	A majority of LEV owners support lane privileges but many prioritise public and shared transport. Most consider it will be an effective method of incentivising LEV uptake and make LEVs more visible, and that this message will be regularly reinforced. Opinions diverged about whether LEV lane privileges will significantly affect public transport, at least in the short term. Respondents urged that suitability of any lane privileges should be assessed according to local context, be flexible and targeted, and ultimately be reversible if they create significant problems. While some claim the intervention is of relatively low cost to taxpayers and ratepayers, others have warned of the cost of managing practical problems, a need for education, and a need to manage increased risk to pedestrians. Many emphasised that lane privileges is only one strategy amongst many more needed to accelerate LEV uptake in New Zealand.
REQUEST TO BE HEARD	Some of our *Flip the Fleet* participants live in the Wellington area and may be willing to speak in person to this submission. Please put us on the schedule to be heard in the meantime. We will confirm then whether we can provide a spokesperson.
THANKS!	Many thanks for considering our submission and running such a public consultation process.

Kind regards,

Henrik Moller
Director
Ecosystems Consultants Limited, Dunedin
M: +64-(0)27-226-8688
E: ecosyst@ihug.co.nz
W: www.ecosystemsconsultants.co.nz

Dima Ivanov
Director
PowerStats Limited, Auckland
M: +64-(0)21-927-346
E: dima@powerstats.co
W: www.powerstats.co