

TRANSCRIPT

STANDING COMMITTEE ON THE ECONOMY AND INFRASTRUCTURE

Inquiry into electric vehicles

Melbourne — 8 November 2017

Members

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Ms Samantha Dunn

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Witness

Mr Scott Ferraro, Head of Implementation, ClimateWorks Australia.

The CHAIR — Welcome to the public hearings of the Standing Committee on the Economy and Infrastructure. The committee is hearing evidence today in relation to the inquiry into electric vehicles, and the evidence is being recorded. All evidence taken at this hearing is protected by parliamentary privilege, therefore you are protected against any action for what you say here today. But if you go outside and repeat the same things, those comments may not be protected by this privilege. If I could ask you to begin by stating your name, your organisation, the position you hold and the suburb that you are based in and to begin with a statement of 5–10 minutes and then we will open up for questions.

Mr FERRARO — Fantastic. Thanks for having me here. I am Scott Ferraro, the head of implementation at ClimateWorks Australia. We are based in the city, just around the corner from you, and I live in Albert Park. In terms of an opening statement, electric vehicles for us started with the work we did a number of years ago, in 2014, looking at how Australia can achieve net zero emissions and live up to its commitments under the Paris agreement. When we did this analysis with the Australian National University, the CSIRO and the Centre of Policy Studies at Victoria University, we looked at cost-effective emission-reduction opportunities across the whole economy, and we appreciated the significant role that electric vehicles play in helping Australia get to net zero emissions.

We have since repeated this work for the Victorian government, so the Department of Environment, Land, Water and Planning, looking at how Victoria can achieve net zero emissions and, again, the significant role that electric vehicles provide in that space. My focus is going to be on the emission-reduction opportunities, but then on some of the policies that can be implemented to help achieve EV uptake.

In Victoria the transport sector as a whole accounts for about 22 per cent of Victoria's emissions. At the national level we see that transport sector emissions are set to grow into the future, and we would expect this trend to be the same for Victoria into the future as well.

Passenger transport, which is where I am going to focus — I am going to leave out freight and public transport in what I am talking about here — accounts for about 10 per cent of Victoria's total emissions at present, which is about 12 megatons of CO₂.

The analysis we have done shows that electrification of passenger vehicles, along with decarbonising the electricity grid — reducing emissions from the electricity grid — can help reduce Victoria's emissions by up to 4 megatons of CO₂ in 2030. This is about a 30 per cent reduction on emissions in the passenger segment from today.

Electric vehicles are critical in ensuring that Victoria can meet its net zero emissions target. As I am sure you would appreciate, an electric vehicle run on renewable electricity has zero CO₂ emissions incorporated with it. Given that there are over 300 000 households in Victoria which have solar PV installations, we would expect that EVs deployed in Victoria would also come along with solar PV at a pretty high rate as well.

There are a lot of questions that get raised around the emissions performance of an electric vehicle based on Victoria's grid today, which has an emissions intensity of about 1.06 tonnes of CO₂ per kilowatt hour, which is pretty high in terms of the Australian context as well. But based on some analysis we have done looking at a like-for-like vehicle — so comparing a Nissan Leaf with a Toyota Corolla, or a Tesla with a similar large-type vehicle — we anticipate at the moment EVs actually providing emission savings based on conventional vehicles if powered solely from the grid. That is based on today's numbers.

At the moment in Victoria we have got about 12 per cent renewable energy within the grid. Under the recently legislated VRET we are looking to get to 40 per cent by about 2025. We would estimate that an EV in this scenario would be somewhere in the range of 30 to 60 per cent less emission than today's average vehicle.

One thing you have got to consider is that in Australia the performance and the emissions performance of our light vehicle fleet is relatively poor in comparison to a global scale. We average about 180 grams of CO₂ per kilometre per new vehicle purchased, which is well above the OECD average. That is because there is a lack of any regulation on CO₂ emissions for vehicles within Australia.

This lack of regulation and lack of incentives for EVs is seeing the uptake rate in Australia be relatively low compared to global standards. We did some work last year where we looked at uptake rates in Australia, and there were about 1369 electric vehicles sold in Australia, which is about 0.1 per cent of annual sales.

In Victoria there were about 1000 electric vehicles sold between 2011 and 2016, which is the highest number of vehicles of any state, but in terms of per capita uptake, it is significantly lower than the ACT, which does have some incentives in place at the moment.

We did some work with the RACV to undertake a survey of about 500 Victorians in terms of their perceptions of electric vehicles. What we found is that 50 per cent of respondents said that they would consider buying an electric vehicle today. This was backed up by a recent survey by EastLink of 15 000 Victorians, where they found that about a third of all respondents would consider buying an electric vehicle today, so there is public interest and public demand. The big barriers that we find are in relation to up-front cost and model availability as well as charging infrastructure availability.

Even though EVs have lower operating costs in general compared to an internal combustion engine, they do have higher up-front costs at the moment, but this is anticipated to come down as battery technology prices reduce. We are expecting price parity to be reached in the 2020s — in the early or mid-2020s. When asking those same survey respondents if there was a vehicle that was at price parity, over 70 per cent of respondents said, 'Yes, I would consider buying an EV as well'.

In Australia the number of models available at less than \$60 000 was only three last year, so we have got really low penetration of EVs at that broad uptake rate. Of those models, one of them was a van — like a commercial van — and one of them they actually ran out of stock halfway through the year as well, so availability of models is another big issue.

There is a significant range of policy options. At the federal level, the light vehicle CO₂ emissions standard, which is currently being considered by the Ministerial Forum on Vehicle Emissions, chaired by ministers Fletcher and Frydenberg, is a proven approach that can help drive uptake of electric vehicles. There are considerations in that for EVs in particular as well as luxury car tax exemptions, but we are focused more on fringe benefit tax exemptions as well, which can really help uptake in fleets.

At the state level there are a number of complementary measures you can do to that. Stamp duty exemption is one of those for electric vehicles and zero-emission vehicles. The ACT has a stamp duty exemption program in place. For a \$60 000 electric vehicle you would get a discount of around about \$2000 on an EV in the ACT. Correspondingly we see the ratio of EVs sold in the ACT being about double that of Victoria at the moment.

Obviously registration discounts are another opportunity, so Victoria has got a \$100 discount for hybrids and EVs at the moment. What the international research shows us is that consumers value stamp duty exemptions. When you get the discount at the point of purchase versus over the life of the vehicle, they value that more. Consumers value stamp duty exemption more than they value registration discounts in their decision-making.

On the recharging side of things, Victoria has about 134 public charging stations at the moment, which is about 2.2 stations per 100 000 residents, so not very high penetration from a global perspective. It is the greatest amount of charging infrastructure deployed in Australia at the moment. What we know is that recharging will likely happen either at work or at home. The majority of recharging is actually done in those two places, but public charging infrastructure helps overcome the psychological barrier consumers have. Again there are a range of opportunities here for state government intervention. Coordination is one of the key things — coordinating across departments in terms of infrastructure deployment and rollout.

There are opportunities for funds to help local businesses in terms of the deployment of charging infrastructure. This is where we see one of the bigger growth areas for business development opportunities — on the deployment front. There are opportunities on the manufacturing front, which I am sure you will hear from other people more qualified on this, but deployment is one big area. Obviously there are opportunities for EV-charging infrastructure to be installed in any new developments. There could be changes under the state planning scheme for allowances of this. And then in the city itself you could have exemptions from the congestion levy on parking spaces that have EV-charging infrastructure in place. Those last two are relatively cost-effective measures for government to take.

The final point I guess is on the fleet side of things. Fleet purchases make up about 50 per cent of all new vehicle purchases in Australia at the moment — so a huge opportunity for leverage. Government have got a significant role to play in terms of their own fleet as well as encouraging fleet deployment.

We did some work for the office of the commissioner for environmental sustainability a couple of years ago looking at the Victorian government fleet and how you can improve the efficiency and also increase EV uptake in the government fleet. That report is publicly available so we will share that with our submission to you. But looking at the fleet vehicles that report under the environmental management system program, which are departmental fleets, there are around about 3000 vehicles under control of VicFleet in that program, and they have emissions of around about 16 000 tonnes of CO₂ a year. Average emissions were sort of in line with average new vehicle emissions within Australia as well, so while you are average for Australia, globally it is still not a very good position to be in. Our analysis showed that uptake of EVs could significantly reduce emissions from the Victorian government fleet, and I guess the flow-on benefit you have here is that by increasing demand for EVs it sends a signal to the manufacturers, and that enables them to either bring more models to market or bring models to market earlier, which then provides more model availability, especially those below that \$60 000 cost, for consumers to then purchase in Victoria. Fleets turn over vehicles around about every three to five years, so you have a quicker flow-on effect to the second-hand market, making second-hand vehicles available.

The state government could set targets for EV uptake in its own fleets, and it could also participate in an aggregated purchasing program with other state governments and also with local government as well to then send that signal to manufacturers.

The CHAIR — We might just jump in there because we are running out of time for questions. We had a councillor in here a little earlier this morning saying that he would like to see electric buses servicing his municipality. What is the practicality of doing that — of having electric buses servicing the areas that are now serviced by conventional buses?

Mr FERRARO — In terms of what we have seen, the ACT is actually currently going through a pilot program bringing in electric buses, and internationally we have seen a lot of electric bus deployment. Obviously the practicality of that, considering the charging infrastructure for the buses and scheduling that with their routes — so you have got to consider the range that a bus can achieve, and that is the main thing — is just a logistics question. What we see is that —

The CHAIR — We would have to actually buy the buses too, wouldn't we?

Mr FERRARO — Yes. You would have to purchase the buses, but you have to purchase new buses already. The ACT, instead of purchasing diesel buses, just purchased electric buses. The cost savings you get from running an electric bus over a diesel bus are relatively large, and so they actually provide a net benefit on that purchase. So you might have a higher capital cost, which is the story with EVs at the moment, but a lower operating cost, and so then if it is a government procurement, you might be in a better position than a private purchaser to be able to do that.

Mr LEANE — I was going to ask you about how the state government could promote the rollout of electric vehicles, but I think you have covered it pretty well. I am not too sure if this is a question you can answer. Something I did think about during your submission — you mentioned that you cannot purchase an EV under \$60 000. Is that —

Mr FERRARO — No. There were three models available last year under \$60 000.

Mr LEANE — Right. And do you know the price range of those three models?

Mr FERRARO — The cheapest one is probably in the \$50 000 sort of range.

Mr LEANE — Right. Around \$50 000. You can purchase combustion engine vehicles, brand-new ones that have been imported, that are quite cheap in comparison. Is there a reason why the EVs are so expensive? Is it just because there is the lack of demand? Why do you see that they are at that price range?

Mr FERRARO — There are a couple of things. The cost difference at the moment is largely to do with the scale of production and the battery technology at the moment. The batteries are relatively high cost at the moment, but the projections on their cost show they are set to come down. It is going to be similar to what we have seen in solar, and as batteries are used in EVs globally but also for the energy supply system as well, the amount of demand is going to go up so cost per production is going to go down.

I am not sure if you are getting manufacturers in to talk about this, but it is probably a strategy from some of the manufacturers that they are bringing in some of the higher end models just because that is where they are seeing the sales and they can justify a lower volume at that pricepoint. But we are seeing in the next three to five years a lot more of those cost-competitive models coming onto the market. We used to have the Nissan Leaf and the Mitsubishi i-MiEV in Australia, which were at that lower pricepoint. They are not being sold in Australia at the moment. The Nissan Leaf, version 2, is set to come back in Australia. And then you are seeing Tesla releasing one of their new models, their Model 3, which is going to be at a more competitive pricepoint. Renault has got a Zoe. We have got a lot more models coming in.

The challenge for Australia is timing — when will they get here? They are prioritising other markets, where these models are being incentivised and the uptake rates are greater. That all makes sense from a commercial perspective.

Mr LEANE — It is interesting, the research you mentioned in your submission and some of the work that EastLink and RACV did as well, which is that people will probably go towards an electric vehicle if they are a very similar price.

Mr FERRARO — There has been a bit of research done out of the University of Queensland, which looked at what happens to someone's perception of an electric vehicle before they have driven one versus once they have driven one. Once someone has driven an EV, they are much, much more likely to purchase an EV than if they have not driven one. So part of the challenge is that in terms of raising consumer awareness you have got to get people in the car, so they can experience it, see what it is like. If their friend has got one, they can then relate to it as well.

Mr LEANE — Then I suppose they need to relate to their fuel cost per week being one of the highest costs that they have and balance that with the original purchase.

Mr FERRARO — One of the things that I think gets missed in this debate a fair bit is that fuel costs are the highest energy cost for a household. We focus a lot on electricity costs and how we can bring down electricity costs, while there is no action to address fuel costs for consumers at all. So this is one area where you can do that, and then charging is sometimes perceived as a barrier, like it is inconvenient — 'I've got to wait for my car to charge'. If you can charge your car overnight at your house, you do not have to go to a petrol station ever again. People typically drive on average 40 kilometres a day. That is the average commute for an Australian. EVs have ranges well above that, so most people will be charging their car at night at home, hopping in it, driving off to work. They can plug it in there, drive home, plug it in. They are never going to have to go to a petrol station again, so there are convenience opportunities.

Ms HARTLAND — I was interested in your comment about stamp duty versus rego. Has there actually been a study done of that about attitudes?

Mr FERRARO — Yes.

Ms HARTLAND — Would you be able to supply that to the committee?

Mr FERRARO — Sure, so the International Council on Clean Transportation has done a lot of that work.

Ms HARTLAND — That would be great. Has anybody done any work on how many jobs this would create, especially with the downturn or the demolition of the automotive sector? Moreland council was talking about the truck that they are bringing on. If every council has got 200–300 vehicles that could be converted, what kind of jobs — has anybody done that kind of work to see how many local jobs would be created?

Mr FERRARO — They have not yet. I understand the Electric Vehicle Council, which you might have heard from earlier today, is possibly looking at something along those lines. So no-one has done the numbers as yet.

Ms HARTLAND — Also, the issue of 50 per cent of all cars being for fleet, are you talking about commercial fleet or government fleet?

Mr FERRARO — Both — private versus business purchases, so government and commercial.

Ms HARTLAND — So if the demand could come from the fleet purchases, that would be a real trigger point for getting a lot more vehicles on the road?

Mr FERRARO — Yes.

Ms HARTLAND — All right, thank you.

The CHAIR — Thank you very much indeed for joining us today. You will receive a transcript in the next two or three weeks. If you would be kind enough to have a look at that and just check that or give it a bit of a proofread as it were and just let us know if there is anything that needs correcting, that would be great. Thank you very much indeed once again for coming in.

Mr FERRARO — Thank you.

Witness withdrew.