

TRANSCRIPT

STANDING COMMITTEE ON THE ECONOMY AND INFRASTRUCTURE

Inquiry into electric vehicles

Melbourne — 13 February 2018

Members

Mr Bernie Finn — Chair

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Mr Shaun Leane

Mr Craig Ondarchie

Mr Luke O'Sullivan

Participating members

Mr Cesar Melhem

Mr Gordon Rich-Phillips

Witnesses

Mr Ashley Wells, Policy Director, and

Mr Rhys Griffiths, Motorcycle Manager, Federal Chamber of Automotive Industries.

The CHAIR — The committee today is hearing evidence in relation to the inquiry into electric vehicles. The evidence is being recorded and also being broadcast live on the Parliament's website. Welcome to the public hearings of the Economy and Infrastructure Committee. 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.

I would ask you to state your name and organisation and the suburb or town in which you are based for the record — that would be marvellous — then to give a presentation of 5 or 10 minutes, and then we will open it up for questions. Over to you, thank you very much.

Mr WELLS — Thank you very much, Chair. My name is Ashley Wells. I am the policy director at the Federal Chamber of Automotive Industries based in Canberra. The Federal Chamber of Automotive Industries welcomes the opportunity to present today. We are the peak industry organisation representing manufacturers and importers of passenger motor vehicles, light commercial vehicles, motorcycles and ATVs in the Australian marketplace.

I will make a very brief opening statement and really open it up to questions. I think that is probably the best way of facilitating this today. I would like to make the point though that electric vehicles are coming off a very low base in Australia, and while they offer fantastic opportunities into the future, we really do need to look at it in the broader context of a vehicle emissions regime in this country. Electric vehicle uptake internationally has been directly corroborated with the introduction of emissions targets in other markets around the world. Australia has no such target at the moment, and the FCAI has been working with the federal government very closely to bring about a sensible and realistic vehicle emissions target. That work is ongoing and continues through the offices of Minister Josh Frydenberg and Minister Paul Fletcher, the minister for urban infrastructure federally.

The FCAI supports the introduction of a mandated CO₂ target, acknowledging that there is a gap that remains between Australia and other markets around the world. We believe though that this needs to be part of an integrated approach or that an integrated approach needs to be taken which brings together vehicle technology, emerging drive train technology such as electric, hydrogen and other forms of technology should they emerge in the future, as well as looking at things such as fuel quality, infrastructure and various price signals. To that mix I would also suggest that the issue of incentives to encourage the uptake of electric vehicles in this country is something that needs to be looked at across all levels of government. That is certainly something that we have raised through the ministerial forum on vehicle emissions.

Notwithstanding that, we do believe that electric vehicle uptake is likely to remain a niche sector of the automotive industry in this country for some considerable time. In 2016 an international consulting company by the name of IHS Markit undertook some modelling work for the federal government on the uptake of electric vehicles. Their assessment was that by 2030 we would be looking at around 2 per cent uptake in the new vehicle fleet. That is for a range of reasons, but primarily it has to do with factors such as — as the previous speaker talked about — infrastructure and the lack thereof, and the price difference. There generally tends to be a price difference between electric vehicles and a similarly equipped petrol or diesel variant, and we anticipate that that price difference is likely to continue for some time. Part of that reason is because of the battery technology in question.

We talk about lithium as being a dominant rare metal in relation to batteries, but there are more rare metals which will continue to restrict supply. Based on what we are aware of the prevalence or lack of availability of precious metals such as cobalt, which come from source markets such as the Democratic Republic of Congo, which do not exactly have the best human rights records, will continue to be an ongoing restriction. That is not to say that technology will not overcome some of those restrictions. Like everything so far, we fully expect that there will be alternative technologies that will come and alternative battery technologies that will come.

It is really important also to recognise the importance of consumer choice in this environment: 2017 saw nearly 1.2 million new vehicles sold. For the first time SUVs and light commercial vehicles were the largest single section of the new car market. Passenger motor vehicles fell away quite considerably. There is a utility difference between a passenger motor vehicle and an SUV or a light commercial. There is also a capacity difference, and that also goes to the nature of the technology that is being deployed in relation to these vehicles.

A comment was made before about the Mitsubishi Outlander plug-in hybrid. That is a great example of a vehicle that has a lot of capability. When it comes to towing though — and this relates to all electric vehicles and the nature of electric storage — you end up with capacity constraints because the mass that you can tow is necessarily reduced in order to deliver a defined range. With the plug-in hybrid Outlander, its towing capability has been reduced to a little over 1200 kilos, in my understanding, so you are looking to a small or a medium-sized caravan as opposed to the diesel variant, which can take up to 2500 kilos. So there is quite a difference that will need to be overcome, and that goes directly into consumer preference.

I might pause it there. I hope I have thrown enough issues out there to explore. I am happy to take questions.

The CHAIR — Thank you very much indeed. Yes, you have raised a number of issues that clearly need to be dealt with. The first question I have is, given what we have heard earlier this morning, the great level of enthusiasm for electric vehicles — and we have heard that this is happening, it is on the way; you know, everything is going really well on that front — are we actually getting ahead of ourselves?

Mr WELLS — It is a good question. We represent all the brands, and all the brands are introducing different technologies. We have a very, very low penetration rate in Australia, as I indicated in my opening remarks. I do not have the 2017 numbers, but in 2016 we sold 230, I think it was, pure electric vehicles in Australia out of a 1.15 million new car market. So we have got a very, very long way to go. Having said that, the majority of the brands are working on various drive train technologies that will see variants of electric vehicles such as plug-in hybrids, EVs and even potentially hydrogen fuel cells — although that is I think a lot further down the track than the uptake of pure EVs. So we have got a very long way to go.

There is a chart which I can find during the break which will demonstrate that around about 2021, 2022–23, there will be a larger number of pure electric vehicle models being introduced internationally. As a recent newcomer to becoming an import-only business or industry, it can be reasonably assumed that with the right environment those vehicles would also make their way to the Australian market. That really gets to the point of how do you encourage consumers to make that shift? How do you encourage consumers to go down an EV path as opposed to an internal combustion engine path? There are a number of steps that need to be taken, we believe, to facilitate that, and part of that relates to complementary measures that are being introduced to support the emerging infrastructure that a lot of private providers are introducing and also the state of Queensland is introducing along their solar highway, and there is a similar counterpart in Western Australia from Perth down to, I think, Bunbury. So there are steps being taken, but to have a step change requires a considerable amount of more effort.

At a state and local government level we have identified that there are some fairly simple things that can be done. I will just read from a submission that the FCAI made to the ministerial forum on CO₂ vehicle standards, and I can supply that to the secretariat following the conclusion of this. Things such as transit lane access and free charging of EVs through whatever infrastructure might be available. Introducing building standards to include EV recharging in the bottom of basements or in car parks would be a really useful step. There is also government fleet purchasing — obviously the previous speaker was speaking extensively about that — and, in CBD environments, offering discounted or free parking that might be available.

At a state level we believe that there are a number of financial and non-financial incentives that can be offered. They range from registration discounts across all states and stamp duty discounts, such as has been introduced in the ACT. Non-financial incentives could include measures such as home EV charging infrastructure on a ‘buy as you save’ basis potentially. Again I would raise the issue of building standards, transit lane access and toll road exemptions.

The CHAIR — Good luck on that one. We might have to get Scott Charlton on that one, I think.

Mr WELLS — If we want a step change, I think that there needs to be some fairly creative thinking done as well. Obviously there are federal government measures that can be taken as well, and that is obviously where the majority of our focus has been. We have been talking to government around things like import duty relief, luxury car tax relief and providing GST discounts, for example, but really you need all of those different elements working in concert with one another to be able to provide a realistic, I guess, alternative to an internal combustion engine equivalent.

It also goes down to general cost. If you look at a Nissan Pulsar, for example — I do not believe it is sold in the Australian market anymore, but the Nissan Leaf is a comparatively sized vehicle — in the Australian market you are looking at about a \$25 000 cost difference. If you are in the market for a Pulsar or for a Corolla, you are not going to be looking at a Leaf. It is just not going to happen. You might have the ambition to be doing that, but your price signal is saying, ‘No, that’s not going to happen’. Until we can find whatever mechanism it may be — and I have listed a handful there — we are not convinced that direct incentives to the consumer to offset the cost difference to the vehicle itself is the right way to go. It is fairly short lived, but providing a more systemic and wideranging level of incentive might start to shift some of that consumer preference.

The CHAIR — Instead of using the word ‘incentive’, might you use the word ‘subsidy’?

Mr WELLS — We could do, yes. I am avoiding using the word ‘subsidy’ in the context of the purchase price of the vehicle because, again, I do not know that any treasury around the country would support such a move, and it would be fairly short lived, as we have seen in countries such as the Netherlands, where there was a direct subsidy provided to the purchase of hybrid and plug-in hybrid vehicles. Again I use the example of the Mitsubishi Outlander. In December 2014, I believe it was, there were 900-odd Outlanders sold in the Netherlands. Those figures could be a bit rubbery; they are based on long-distant memory. That subsidy ended come 1 January, and they shifted very few vehicles of the same variety. So there is a direct correlation between EV uptake or plug-in hybrid uptake and cost.

The CHAIR — One of the areas that we have been looking at is the impact this change or revolution in people’s driving habits, or purchasing habits, would have on the traditional industry — the motor vehicle industry, the mechanics out there who are in their many, many thousands. If there was a widespread uptake of electric vehicles, what impact would that have on industries as we currently know them?

Mr WELLS — I think you would need to look at it as a continuum. If you go back 40 years it was a very different industry again, and I think again in 40 years time it will be a very different industry to what we know today. As it relates to EVs, there are certain requirements that need to be met in terms of safety and qualifications. These are highly, highly electrified vehicles. They have high voltage running through them, and if you approach the vehicle in the wrong way, it can lead to some very unfortunate outcomes for the individual concerned. I think the broader point to make though is that the automotive industry is full of change and it is ongoing change. Smash repairs are one area where there has been profound change over the last 20 years. Advanced technologies, crash avoidance technologies, autonomous emergency braking, lane keep assist, lane departure warnings, eyes in the windscreen —

Mr LEANE — Reverse park assist.

Mr WELLS — Reverse park assist, reverse warning, parallel park assist — all of those points are meaning that there are less bingles. There are fewer bingles on more modern cars. That is not to say they do not happen. They do, of course, but they are fewer and further between. So that is forcing change within that industry. The electric vehicle uptake or hydrogen fuel cell uptake will drive further change again, and the consequence of that or the cost of doing business is that you need to upgrade, and that means upgrading not just in workshop design, not just in technologies, but also in training.

The CHAIR — Do you think it will have an impact on the employment numbers in these traditional industries?

Mr WELLS — Well, the MTAA have provided advice in the past that there is about 25 000 skilled shortages, so I suspect that there might be a bit of washout with that, but beyond that I am not sufficiently up to speed with the workforce needs, no.

Ms DUNN — Thank you, gentlemen, for your presentation. You have been fairly clear, and I think all of us on the committee understand the price point is probably the most significant barrier of all. Therefore, looking into the future, I guess probably playing into that is the pricing of petrol and how that interplays as well. Should there be significant increases in that, do you see that that perhaps might change consumers, along with some other incentives along the way in terms of changing their purchasing habits?

Mr WELLS — Absolutely. It is no secret that Australia actually has very cheap petrol compared to the rest of the world. This is from an old presentation that we did for the federal department of industry back in

November last year. I did an international fuel price check on 20 November: in the US it was 75 cents per litre, so we are talking US dollars; Canada was \$1.06; the UK was \$1.60; New Zealand was \$1.53; and Australia was \$1.04. Internationally we have fairly cheap fuel prices. That does drive a lot of behaviour, and it is why you see across Europe a lot more manual transmissions and much smaller cars. Australia consumer preference has a very, very strong preference for light commercial vehicles, SUVs and automatic transmissions, which tend to, although not always, consume more fuel. So yes, I think that certainly needs to be a factor.

One of the reasons that we do have the price of fuel where it is is that unfortunately Australia has quite dirty fuel. I know that the refineries have been looking at ways to improve the quality of the fuel, but certainly at the moment it sits outside of comparable countries in Europe, the United States and Canada and so on. We have a sulphur content in our fuel. Our 91 RON is around about a maximum of 150 parts per million sulphur. It might not sound like very much, but, to put it into comparison, in Europe it is 10 parts per million. Sulphur has a very corrosive effect on the operation of advanced engine technology, and it means that you are not going to get the vehicle emissions measurements or requirements that are being required.

Ms DUNN — Yes, push them down.

Mr WELLS — It also means that as those standards are becoming more stringent in those other markets, then investment in alternative technologies such as electrification, such as hydrogen, become — well, there is a tipping point where it becomes more worthwhile to start exploring some of those.

Ms DUNN — Okay, thank you.

Mr LEANE — You mentioned being an import-only market. I want to flesh out two things from that. One is that there have been other jurisdictions around the world, or markets around the world, much bigger than Victoria's, as in China and a lot of places in Europe, that have set targets that they want to completely phase out combustion engines. So when it comes to the market, I would imagine the car builders are looking towards that — well, they have to look towards that — because that is where they are going to have to supply an EV option. I suppose, in reverse to the Chair's question, rather than getting ahead of ourselves, are we behind the world? The market is going to change and the car builders overseas are not going to take us into account and say, 'Oh, we need to make sure we make combustion engines for Victoria because they haven't got the infrastructure as far as the charging points and they have sat on their hands'. Is that a reality we could face?

Mr WELLS — It is a really good question. Globally there are around about 90 million cars manufactured each year. Australia is about 1.5 per cent of global production, so Victoria is somewhere south of that. We are a technology-taker effectively in this country, notwithstanding we have some fantastic suppliers and we have some fantastic capability in this country through the likes of what GM, Toyota and Ford are maintaining in terms of their R and D activities. Notwithstanding that, fact is fact, and we are 1.5 per cent of global production as a market.

The flip side to that is we are also probably the most competitive new car market in the world, which means we are getting cutting-edge technology because it is a fairly cutthroat market. We have got 67 brands selling vehicles into the Australian market, and they are all competing for 1.5 million sales — well, less than that, probably around 1.2 million new car sales. You are looking at, on average, around about 15 000 cars, at best, per brand. We know that there are 20-odd brands that are selling fewer than 1000 cars a year in Australia, so it is a pretty cutthroat industry, but it means that everything that is coming into the country tends to be cutting-edge because it is trying to outdo the competition.

But to answer your threshold question, yes, we are a technology-taker. We can sit back and wait. I do not believe, though, that that is the best option. I think if you are trying to project outwards and saying, 'Okay, what is the landscape going to look like in 40 years time?', you would be trying to see what are the international trends looking like and where can we seek to drive a consumer shift, because ultimately that is what this boils down to. We have such a competitive new car market in this country that consumer is king and consumer preference is what will win the day. Now until you get to a point where you are shifting that consumer sentiment, which means effectively that you are moving out of SUVs and light commercials, for the purpose of this discussion — and I am not advocating that that is what should happen — you are having to push them out or provide a system whereby they move out of that part of the market and into other light vehicles which can be more easily electrified. I think that is basically the point.

That is a challenge for government. I do not know too many governments that would say, 'We're going to penalise the consumer for the choice that they make'. It is a brave move, but that is the nature of the market today. Fifty-three or 54 per cent of all new vehicles sold last year were either a light commercial or an SUV.

Mr LEANE — Yes. The second part of the import-only question is about the opportunity for a space Victoria and Australia can have in being part of manufacturing, even if it is in the component part of electric vehicles where there can be a boost in manufacturing in our jurisdictions — that is, getting involved in this evolving industry, I suppose.

Mr WELLS — Yes. There are certainly opportunities that we have got not necessarily in the EV space but in the connected and autonomous vehicles space, which is often spoken about in the same breath as electric vehicles, although they are quite different systems. We have some fantastic companies doing great things in this country. Cohda Wireless is one that I always talk about. They are based over in Adelaide. Cohda are in 70 per cent of all global trials of connected and autonomous vehicles. They are effectively a software company, but they have developed a lighter technology that is proving to be very, very suited to passenger motor vehicles, so much so that in 2014 at the Detroit international motor show Mary Barra, the global CEO of General Motors, announced that one of their tier 1 suppliers would be providing the first connected and autonomous vehicle technology to go into a General Motors Cadillac — so their tier 1 car or their luxury car. The technology is from Cohda. The way the automotive industry works is that if you introduce it into your prestige model it is going to filter down over time. There is a good example of the sorts of activities where Australia can really provide some very strong value add.

Again, we have ample supplies of lithium in Australia, as I understand it. Cobalt is a different issue, but as battery technology does evolve there is potentially an opportunity there. I am no expert in that space, and I do not know what the sums would look like for it to add up to start manufacturing batteries, but there are plenty of opportunities there that can be explored. I think going to your point about the supply industry and the component industry, change is well and truly afoot. If those companies have not already adapted, well, they will be out of business shortly if they have not already adapted, but I am sure those that have adapted would be looking at these opportunities.

Mr LEANE — And that is a space where government can assist?

Mr WELLS — Yes, I believe so.

Mr LEANE — That is a space where government can financially, physically and in other ways support these industries to get up and going and employ people.

Mr O'SULLIVAN — Thank you, gentlemen, for coming in. From the evidence we have heard this morning, we are almost to the point where it is inevitable that in 50, 60 years time or whenever it will be electric cars will almost be 100 per cent or very close to it. Is that something that is probably accurate?

Mr WELLS — I would say that there is a very long way for the internal combustion engine to go. There has been 150 years of development in that engine, and the technology that is going into that is continuing to improve. That is not to say that it is going to remain the dominant source, but it is a very, very efficient generator. That has been the challenge for electric vehicles up until now. The technology and R and D that is continuing to go into the internal combustion engine suggests that it will be around for some time yet. That is not to say it is going to be pure internal combustion engine; I suspect that there is going to be a lot of hybridisation taking place. In fact one of the charts that I have got somewhere here in my mess shows that plug-in hybrid EVs will start to really become mainstream around 2022–23. Where to from there? It really depends on a range of externalities that we might not even have profile to at the moment.

Certainly in the modelling that was conducted by IHS Markit that I referred to before, their forecast was 2 per cent uptake in Australia. I will provide a bit of background. As part of their undertaking for the federal department of infrastructure, they looked at a number of car brands by jurisdiction. They looked at the car brand R and D pipelines in Europe, in Asia and in North America. The EV pipeline for each of them was very small. The retail market, the forecast for Japan, was around about 3.5 per cent. Japan I think in most people's minds would be the source market where there would be much higher levels of EV penetration, so for it to be at 3.5 per cent is fairly telling. That is not to say that IHS Markit's analysis is necessarily correct, but they have got a lot of history in this game and they were talking to the drive train engineers, as I understand it.

I believe in the evangelism, if I can put it in those terms. But it is evangelism, and I think a bit of a realistic understanding of the nature of how motor vehicles are manufactured and the R and D that goes into the manufacture of those motor vehicles is needed. But can that be changed? Yes, it can be. How is that changed? It is changed through shifting consumer sentiment and changing government policies — government policies that encourage consumers away from the vehicles that we have been talking about and support the uptake of EVs or alternative drive train technologies. That is a tried and true mechanism to push uptake.

Mr O'SULLIVAN — From the way I look at it, if you have got a country like Norway, which is going to mandate electric vehicles not all that far in the future — a small country, dense population, communities close together — you could understand how that could work in a condensed country. But you get to a country like Australia, which is a very big country — you get out into the rural areas and it is quite long distances and so forth — it is not a level playing field. It is not in the same ballpark in terms of adaptability from one to the other.

Mr WELLS — That is exactly right.

Mr O'SULLIVAN — I am glad to hear you say that the internal combustion engine has still got a long way to run in terms of its progression, whether it is a hybrid or a standalone.

Mr WELLS — There are two points there, I think. The first view is that, yes, it is all about fit for purpose. If you are in rural or regional Australia, an EV is going to be a far less attractive proposition. Particularly if you are living on a property, you are not going to get the range that you require and you are not going to get the off-road capability. It is not to say that it will not happen; it will, but it is not the priority at the moment. And you are probably not going to have the generalised utility that say a diesel light commercial is going to provide you, with the torque, the time capability and so on.

I think the other point that needs to be made is that in a country like Norway there are very high levels of government support to encourage consumers to switch. Going to the question before about various jurisdictions making certain mandated calls, Sweden has made a call to phase out internal combustion engines, until you read the asterisk. It is same for London and the same for Paris. Actually when you unpack what they have said, a large amount of that is actually about hybridisation, which still involves the internal combustion engine. There are going to be zones within those cities that are going to be mandated as EV only, but that is still a long way down the track. Again there is a price differential, and that price differential will continue. Over time, yes, there will be shifts and change, but that price differential is a significant stumbling block.

Mr O'SULLIVAN — One further point I just wanted to raise or ask a question about is: what do the big oil companies think about this? Are they playing ball in terms of their research and development in relation to EVs, or are they sort of wanting to stick with what they are doing in terms of their oil production and refining?

Mr WELLS — I would not want to talk on their behalf. I make a couple of observations that at the retail level, like any business, they are probably going to be adapting. I read online only last week that BP in the United Kingdom are pushing EV charging stations in their service station forecourts. In an active marketplace the market will dictate where they go, and I think that is the way that that is probably best responded to as well.

Just on that question though, I think there is a broader issue and it goes to the issue of range that you were talking about as well. At the moment we are seeing isolated examples of EV recharging infrastructure being introduced, and there are a number of spots around the country where that is being done. It is going to take a quite a bit. If you are talking about a whole fleet becoming electric vehicles or a significant proportion of the fleet becoming electrified, what you are talking about then is a manifold increase in the infrastructure that is going to be required. So it is fine, I live in Canberra and travel to Goulburn; sitting in the forecourt at the train station there are a handful of Tesla charging stations, and that is great. Let us work on the basis that in 2030 or 2040, four out of five light vehicles that are sold are going to be electrified. That infrastructure is not going to be sufficient to be able to service those, so there needs to be a scale-up.

It is a bit of a chicken-and-egg argument — which comes first? — but I think that is a factor that needs to be put into consideration for any planning by government, whether it be local, state or federal.

The CHAIR — Thank you very much for coming in today. We do appreciate your contribution to our deliberations, and you will be receiving a transcript in the next week or two. You would like to talk, Mr Griffiths?

Mr GRIFFITHS — Yes. Rhys Griffiths from the federal chamber. I represent the motorcycle side of our business, and I think it is quite in proportion to the conversation that motorcyclists are a very small part of the transport network in Australia. Having said that, there are electric motorcycles out there. At the moment where motorcycles are at is they are starting at the very bottom end. Electric pushbikes and electrification of very small scooters are certainly infiltrating, and you will see electric pushbikes around the place. I think the point that we from the industry would like to make is that the delineation between electrified small pushbikes and electrified small scooters is now becoming a very blurry line, and where one requires a licence to ride a moped, a registered motorcycle, as opposed to an electric pushbike is becoming an area of some contention.

I think it is incumbent upon all of us to try and make this delineation and understand where it is at, and then you also bring into the question the age that someone can actually start to ride an electric moped versus an electrified pushbike et cetera. From the mainstream motorcycle point of view, electrification at this stage is not really being undertaken. There is a little bit of development in the racing side of the business. You have probably seen some of that, but filtering down just to general motorcycles the internal combustion engine is by far and away king and looks like remaining so in the indefinite future.

I would just like to actually say that electric motorcycles are there. Probably, as I said, the bottom end is where the market is at at the moment. That will obviously filter through but probably quite a way behind the motor vehicle industry. Thank you.

The CHAIR — Thank you, Mr Griffiths, and thank you, Mr Wells. We thank you both indeed for joining us today.

Witnesses withdrew.