REPORT ON PROCEEDINGS BEFORE

JOINT STANDING COMMITTEE ON ROAD SAFETY

ELECTRIC AND HYBRID VEHICLE BATTERIES

At Jubilee Room, Parliament House, Sydney on Tuesday 30 April 2024

The Committee met at 9:30 am

PRESENT

Mr Warren Kirby (Acting Chair)

Legislative Council	**Legislative Assembly**
The Hon. Natalie Ward	Mr Roy Butler
	Mr Matt Cross

PRESENT VIA VIDEOCONFERENCE

The Hon. Anthony D'Adam	Mr Edmond Atalla
The Hon. Mark Latham	Ms Kylie Wilkinson

* Please note:
[inaudible] is used when audio words cannot be deciphered.
[audio malfunction] is used when words are lost due to a technical malfunction.
[disorder] is used when members or witnesses speak over one another.

The ACTING CHAIR: Good morning, everybody. Before we start, I would like to acknowledge the Gadigal people, who are the traditional custodians of this land. I pay my respects to Elders of the Eora nation, past and present, and extend that respect to other Aboriginal and Torres Strait Islander people who are present or viewing the proceedings online. Welcome to the second public hearing of the Joint Standing Committee on Road Safety inquiry into electric and hybrid vehicle batteries.

I'm Warren Kirby, Deputy Chair of the Committee. I'm joined by my colleagues online, Mr Edmond Atalla; Ms Kylie Wilkinson, the member for East Hills; the Hon. Anthony D'Adam, MLC; and the Hon. Mark Latham, MLC. Here with us today are Roy Butler, the member for Barwon; Mr Matt Cross, the member for Davidson; and the Hon. Natalie Ward, MLC. I thank the witnesses who are appearing before the Committee today and the many stakeholders who have made written submissions. We appreciate your input into this inquiry.

Mr IAN PRICE, General Manager, Registered Training Organisation, Motor Traders' Association of New South Wales, sworn and examined

Mr COLLIN JENNINGS, Head of Government Relations and Advocacy, Motor Traders' Association of New South Wales, affirmed and examined

Mr ROSS DE RANGO, Head of Energy and Infrastructure, Electric Vehicle Council, before the Committee via videoconference, sworn and examined

The ACTING CHAIR: Thank you all for appearing before the Committee today to give evidence. Please note that Committee staff will be taking photos and videos during the hearing. These photos and videos will be used for social media purposes on the New South Wales Legislative Assembly social media pages. Please inform Committee staff if you object to having photos or videos taken. Can you please confirm you have been issued with the Committee's terms of reference and information about the standing orders that relate to the examination of witnesses?

IAN PRICE: Yes.

COLLIN JENNINGS: Yes.

ROSS DE RANGO: I can confirm that.

The ACTING CHAIR: Do you have any questions about this information?

IAN PRICE: No.

COLLIN JENNINGS: Not from me.

ROSS DE RANGO: No questions.

The ACTING CHAIR: Would anybody like to make an opening statement?

COLLIN JENNINGS: The Motor Traders' Association of New South Wales would like to thank the joint standing committee for the invitation to attend today's hearing. The Motor Traders' Association of New South Wales has proudly served as the voice of the motoring industry since our inception in 1910. Representing a diverse array of 28 divisions spanning the entire automotive life cycle, MTA NSW boasts a membership of 3,000 businesses who collectively employ over 30,000 workers across the State. For over six decades MTA NSW has provided industry-specific training, and since 1996 MTA NSW has operated as a not-for-profit registered training organisation. Today MTA NSW's RTO stands as the second-largest automotive training provider in New South Wales after TAFE. With a dedicated team of over 50 qualified trainers, MTA NSW's RTO serves over 2,500 students enrolled in 22 different automotive qualifications.

Recognising MTA NSW's expertise in training, the organisation has recently been appointed as the chair of the automotive jobs and skills council's strategic working advisory panel, which plays a critical role in shaping national qualifications in the automotive industry, and specifically electric vehicles. Additionally, the CEO of MTA NSW serves as a chair of the Automotive Training Board of NSW while concurrently playing a pivotal role within the New South Wales industry training advisory body. These ITABs constitute a crucial conduit of industry advice to the New South Wales Government. Under the auspices of the New South Wales Department of Education, 10 organisations have been contracted to furnish industry training and advisory services tailored to specific industry groupings. MTA NSW promotes workplace safety within the industry, offering resources and assistance to minimise worker injuries and mitigate compensation claims.

Its commitment extends to our subsidiary, Motor Trades Care, which is dedicated to enhancing workplace safety standards within the automotive industry through assessment services and education programs. Notably, MTC has entered into a service agreement with icare, marking the sole instance where icare has provided such an agreement within the industry. Electric vehicle sales continue to steadily increase, and with the increasing number of electric vehicles on New South Wales roads, there is an imperative to ensure the reliability and proficiency of the workforce tasked with the maintenance, servicing and repair of these vehicles. Governments, both Federal and State, have set ambitious targets for the number of new vehicles sold to be electric. To facilitate these goals, governments have focused their attention on incentives for purchasing, leasing and infrastructure. However, there has been an underinvestment in training the New South Wales workforce.

Training automotive technicians in EV technology is of paramount importance for the industry's transition to electrification. The adequacy of this training is crucial to ensure that technicians can effectively and safely work on EVs. It is crucial that the current workforce in New South Wales has access to safety training, especially to de-power the battery, so that technicians can repair these vehicles. New South Wales has over 45,000 licensed automotive workers, so the scale of the task in front of the industry to train this workforce cannot be underestimated. To address this issue, the industry, which is dominated by small and family-owned enterprises, has already made a significant investment through MTA NSW in training and equipment. However, without meaningful investment from governments, the industry faces an uphill battle to be trained effectively. Consumers need to have confidence that, should they determine to purchase an electric vehicle, they have access to a workforce that is proficient in servicing, maintaining and repairing their vehicles.

The ACTING CHAIR: Before we begin with questions, I inform each witness that they may take a question on notice and provide the Committee with an answer in writing. As a first question, perhaps to Mr Jennings, could you please be a bit more specific about what training and qualifications are available for technicians working in the electric and hybrid vehicle conversion space, and what is the process for obtaining these qualifications?

COLLIN JENNINGS: I might pass that to Mr Price.

IAN PRICE: Currently there exists three skill sets within the AUR framework. You are required to have a cert III in light vehicle, heavy vehicle or auto-electrician, and just recently added was the mobile plant qualification. Unless you have those qualifications, then obviously you cannot partake in those three skill sets. There is also a new qualification, AUR32721, which is a light vehicle battery electric vehicle qualification and runs alongside those qualifications I just mentioned. Like the light vehicle current qualification, it has everything in there, apart from the ICE engine requirements and is replaced with the battery electrical vehicle units.

The Hon. NATALIE WARD: Thank you, all three of you, for coming along and for your submissions. They are very helpful. I just wanted to focus a little bit on training. I think you had mentioned that in your submissions, so thank you for that. Could you expand on the training? I think you said in your submission that the funding for training is somewhat inconsistent and, going forward, there is obviously going to be huge demand for that. Could you tell the Committee a bit more about what you mean by that inconsistency in the funding for training?

COLLIN JENNINGS: Thank you very much for the question. Yes, we did mention that. Fundamentally, with the funding for training in New South Wales, the reason that it's been inconsistent—there are a couple of points. One, there currently exists no funding for the 32721 battery electric vehicle certificate III, so basically bringing apprentices online. That funding isn't available in New South Wales yet, so neither ourselves nor TAFE can deliver that. The other inconsistency in providing training is through one-off training through TNI. The money for that, that funding, ran out in December—I think it was December last year.

IAN PRICE: Correct, yes.

COLLIN JENNINGS: So that therefore requires that those small businesses are then required to pay for their own training. There was an extinguishment of the funding. Until those funding regimes commence, there is no government funding, and I think part of that goes into general funding for apprentices overall. The fee free TAFE funding in New South Wales has now been exhausted, which is leading to registered training organisations like ourselves having a situation where we need to enrol within a week the remainder of our fee-free places because, if we don't, after that week those apprentices are therefore required to pay their fee-free component, which is about $2,000. That funding won't start again until 1 July.

The Hon. NATALIE WARD: So, there's a gap there and there's some inconsistency with delivery, which is obviously imperative. We heard in the last hearing that the MTA is developing a training centre in New South Wales for electric vehicles.

COLLIN JENNINGS: Correct.

The Hon. NATALIE WARD: It seems to me like that's the industry taking an active role in what you want to be doing. Can you just help the Committee understand where that project is at and how you see that centre working for getting the industry skilled up, as we need, in addition to these other training bases?

COLLIN JENNINGS: Yes, thank you. I would say that's a good assessment—that industry has taken a lead. Industry saw very early on that there is a need to ensure that the workforce is trained to the capacity that it needs to be, because of rising sales of electric vehicles but also because of signals being sent by government on the targets that they wish to have of the number of electric vehicles on the road. For example, the number of new vehicles to be sold in New South Wales by 2032 would be 50 per cent on previous sales figures. That's about 170,000 vehicles to be sold in that year, so year on year there are more of those vehicles.

Understanding how the electric vehicle works and being able to maintain and service and especially repair those vehicles, industry saw that there was a need to do that and move quickly and be agile. Through MTA NSW, the industry invested in a centre in Girraween. We've purchased a building in Girraween, in Western Sydney, which we are in the process of fitting out. We received DA approval in December of last year. Obviously, with gaps through the lockdown, we're still in the process now—we've gone back into the process of getting engineering reports and other things, so the project is ongoing.

I think it needs to be emphasised, though, that the purchase of that building and the investment in the equipment that we've done so far has come from industry. Ninety-five per cent of our industry are small and family owned enterprises, so looking to those small businesses to continue to provide that sort of funding is difficult, especially now—hence our request to government that to bring this facility up to speed, which would be the largest of its type in New South Wales, with several classrooms plus workshops, would require some assistance from government to get that over the line. That would help to aid the transition. It'll help to skill up the workforce, so consumers have confidence, but also it provides the safety training that the industry needs to work on electric vehicles.

The Hon. NATALIE WARD: I'm going to just follow up with one about apprenticeships. You mentioned the apprenticeships, so could you just speak to that? Is there a specific apprenticeship for those that want to work on EVs? Are you running something like that, or who is doing that?

COLLIN JENNINGS: As Mr Price mentioned, there is an apprenticeship developed—a certificate III in battery electric vehicles, AUR32721. The short answer is no, we're not running that. Neither is TAFE in New South Wales, because there is no funding to provide that. There's no funding through Smart and Skilled to do that.

The Hon. NATALIE WARD: Hence my question: Is anyone running that, or is that just a matter of funding?

COLLIN JENNINGS: Not in New South Wales. The closest you get to being able to do an apprenticeship is in the ACT. We're not running it because there's no funding to do that. We're hoping that that funding may come through. But I think the point, really, with training and with the apprenticeships, is the apprenticeships take time. The longer that we wait to instigate things like apprenticeships, and the longer we take to skill up the industry, the further behind the industry and the workforce is, whilst electric vehicle sales continue to increase. There is an imperative there that we get the funding correct, that we can start that work now and that we can do things like get licensing in place in New South Wales so that we have licensed technicians that can work on vehicles for those two reasons. One, it provides safety in the workplace; two, it provides consumer confidence in electric vehicles.

The Hon. NATALIE WARD: Thank you. That's very helpful.

Mr MATT CROSS: Good morning. My question is to the Motor Traders' Association as well. Just building on the point of my colleague in relation to skills and qualifications, what jurisdiction do you think currently has best practice in Australia or overseas?

IAN PRICE: Sorry, could you just repeat that question? I didn't quite understand that.

Mr MATT CROSS: You outlined quite a number of challenges currently in New South Wales around the skills in dealing with EVs. What jurisdiction in Australia or overseas do you think has best practice?

IAN PRICE: I think the best way to answer that is between large OEMs—i.e., BMW, Jag Land Rover, all the leading brands or any brand—they have their own specific training pathways. If you're fortunate enough to work for one of those big dealerships, they have a training pathway. What is difficult is that the majority of the workforce and the business owners in New South Wales and Australia are not, so those people get left behind. Therefore, it's left to industry, ourselves and/or TAFE to fill those gaps.

Getting that to speed and to market real quick means that, like Collin referred to, we can respond to that and be part of that process in New South Wales. We're well equipped and our staff are well trained to be able to deliver and take that to market straightaway. We have been doing it for possibly 12 months now. But the restriction is, obviously, the small business and the individual being able to pay for that training and to upskill themselves. That's not only just to pay for the training; that's obviously those businesses taking them out of their business and loss of earnings, whether it's one to five days' worth of training. It's important that we understand that the support from the Government is important to bring this to market quick. We can respond; we can work with the TAFE as well, as their programs are pretty much the same as ours, to upskill these existing workers within the market to fix these vehicles and be safe.

COLLIN JENNINGS: In terms of the other part of the question in regard to if you look Australia-wide at which jurisdictions are moving, you would probably look at the ACT only because it is a smaller jurisdiction as a Territory in the way it's currently operating, and because of the density and the commitment of that Government to increase the number of EVs. So that's in terms of its responsiveness, but that has required the ACT Government to invest heavily, and I think that's one of the things. While they have, as we mentioned earlier on, invested in the infrastructure, in the incentives, the workforce part has come late. That's part of the structure of actually developing the pathways through. In a larger State like New South Wales, and especially a licensed State like New South Wales, it's a longer process. As Ian mentioned, industry has had the agility to move, but there are some bottlenecks that we need to overcome to get New South Wales to the speed where it needs to be at.

Mr MATT CROSS: In relation to your recommendations, recommendation five was that the New South Wales Government works with the MTA NSW and Fire and Rescue NSW to develop a licence certificate and process for emergency services to use to allow operators to remove the damaged vehicle from the scene of an accident or incident. So you're calling for a licence. Clearly there is a gap at the moment. Is that correct?

COLLIN JENNINGS: Correct. The reason for that recommendation really goes to incident response teams and tow truck drivers. We see that there is a gap for that part of the industry, especially independent tow truck operators, to have safety training to remove a vehicle, especially from a motor vehicle accident. The vehicle may have been involved in an accident and it hasn't ignited the battery. However, that doesn't mean that the battery may not ignite at a later point. For the tow truck operators, it's understanding how to approach a vehicle and understanding its science is really important.

The other thing too in that is that we did have very long discussions with Fire and Rescue NSW, with the Rural Fire Service and with the SES. We spent an entire day where they came to our Burwood head office and spoke with Ian and the training team. They had a look at our training equipment. One of the things that we discussed during that meeting was the idea of having a licence class for tow truck operators so that if the incident response team or tow truck operator attends an accident that requires first responders, they can show that licence—it has a specialised licence—so that Fire and Rescue and first responders can have confidence to release that vehicle to the operator. We don't have that currently, but we think that's very much an area that is under the radar and needs to be looked at, certainly for tow truck operators who may be the first person on scene. They may not necessarily be the first responder but having that safety training is really critical to make sure that that part of the industry is safe and can work around the EVs, should there be a motor vehicle accident or a fire.

Mr MATT CROSS: My final question is to the Electric Vehicle Council. Thank you for your submission. In our last hearing we spoke a lot about scooters and e-bikes in relation to batteries. In your submission you said that the New South Wales Government should increase resourcing to Fair Trading. Can you expand on the importance of Fair Trading stepping up and doing work in this area?

ROSS DE RANGO: Absolutely. Thank you for the question. The distinction here is between road registered vehicles, which are already very highly regulated. I read through the transcript from the last session. I think those themes were well explored there. Obviously, our first recommendation—I'll take as read that discussion around special hazard and the requirement for the building regulator to step in there. On the question relating to personal mobility devices—scooters, e-bikes, that kind of equipment—those are fundamentally products of a type very different to road-registered vehicles, so they don't fall under the same regulatory regime. NSW Fair Trading, in our view, is likely the most appropriate agency to engage from a product safety standpoint in the interests of consumers. In order to effectively engage and deliver the regulatory and community safety outcomes that are needed, they'll need to be appropriately resourced to do that, which was the thrust of our submission. I understand you've got NSW Fair Trading on your schedule for later today, so we'd very much encourage you to take that up with them.

Mr ROY BUTLER: Thank you all for appearing before the Committee and also for your submissions. This one could be for the EV Council or for the MTA. As an industry, is there adequate transition planning to accommodate the needs for charging skills, safety and waste needs? For the 2032 target you mentioned the

50 per cent of market share. That's something that I suppose I'm looking at and thinking that's a huge number of vehicles—130,000 vehicles. Are we on track in terms of accommodating that from a training, charging, skills and waste perspective? And is industry planning for that?

ROSS DE RANGO: I will speak to that first, if I may.

Mr ROY BUTLER: Sure.

ROSS DE RANGO: The transition from petrol and diesel vehicles to electric vehicles is huge. We have a road fleet of millions and millions of vehicles and we have a journey of decades to change them over. We have transitioned, to this point, something over 1 per cent of the total number of road-registered vehicles in our fleet, which means we've got 99 per cent yet to go. We have not yet built all the things that we are going to need as that transition occurs. We are going to need to build thousands more charging stations. We are going to need to massively scale up our ability to recycle the end-of-life batteries. There is a huge amount of work to do and billions of dollars to invest in order to bring off the entire outcome. But that's okay, because the economic prize from running this transition is worth tens of billions of dollars. Industry is very much looking to work with each other and work with government to deliver the outcome.

COLLIN JENNINGS: Following on, we agree with the EVC that in New South Wales we're at 1 per cent of six million vehicles. So there is quite a journey to go on with that. Yes, there needs to be far more investment in infrastructure. There needs to be far more investment in training. It's one thing to have the infrastructure like destination charging stations, and that's encouraging because that brings people in to purchase EVs, because they know that they can travel the State. The issue then becomes what happens if the vehicle breaks down. What happens if the vehicle stops?

What happens if the vehicle is damaged in some way and someone is in an area—they could be out past Coonamble somewhere—and they need to get that vehicle fixed? If the workforce doesn't have the understanding or the training to do that, that then becomes an inconvenience for the consumer because they then need to ship the vehicle back to someone who does and that causes an inconvenience. So there is a lot of investment that needs to go into the training, which we continually talk about, because if we're to successfully transition from a petrol diesel fleet to an electric fleet, consumers need to know that there is that underlying skills infrastructure to give them confidence to do that.

We also agree with the EVC on the end-of-life vehicles for the batteries, as well as the vehicles themselves, but that would entail the entire fleet that we need to do much better on than what we're currently doing. A lot of that conversation needs to be had with government to ensure that things like when batteries are removed from vehicles they are stored appropriately, they can be taken to a transition centre and they can be recycled effectively. I think you see that in terms of—currently, because we don't have that surety—events where vehicles are being damaged and the battery is being damaged and there aren't the skilled technicians and assessors to look at it. There is currently a situation where it is easier for insurance companies to write the vehicle off than to actually repair it, and that comes down to the workforce. That comes down to the point that we've been making for quite some time now: If you have a skilled workforce, if that vehicle is damaged it can be repaired. And if it's repaired, it's going to save a lot of people a lot of money.

Mr ROY BUTLER: Just as follow-up to that and to clarify for the Committee, is it fair to say then that we are aware there is a massive scope of work that needs to occur but, at this stage, we can't quantify what that looks like in terms of a transition plan, how many people need to be trained, how many dollars need to go into it and how many charging stations? We know there is a massive amount of work, but we can't quantify that just yet because we don't have a comprehensive transition plan.

COLLIN JENNINGS: I would say that's a reasonably fair point in terms of skills. We know how many people in New South Wales—because New South Wales is a licensed State, we can get a quantitative number, which is around about 49,000. So we know how many licensed technicians we have in this State, and that makes New South Wales reasonably unique, because it's only New South Wales and Western Australia that have a licensing regime. There are a couple of things that we need to do in terms of costing, and that's scoping out the training that is required because not all of the repair classes within that workforce will require the same quantity of training. We then need to work out how much that will cost over a period of time.

Part of that work goes to actually scoping out—in New South Wales, motor vehicle technicians are regulated under the Motor Vehicle Repairs Act, and then the regulations determine the repair classes and then determine the qualifications for those repair classes. Where we're at with that at the moment is that the regulations are currently under review. We don't know how long that review is going to take, and there are processes within that—industry is saying—that need to be far more flexible than the current regulations provide for. Rather than someone having to go back and do a complete certificate III in battery electric vehicle to acquire a licence there,

it needs flexibility. But that's an ongoing conversation. There is scoping work to do but, no, in terms of definite dollars and cents, we're still probably not at that point yet.

The ACTING CHAIR: I am mindful of time, and I think we need to wrap up this session. Thank you for appearing before the Committee today. You will each be provided with a copy of the transcript of today's proceedings for corrections. The Committee staff will also email any questions taken on notice from today and supplementary questions that may come from the Committee. We kindly ask you to return those answers within 14 days of receiving the questions. Thank you, gentlemen.

(The witnesses withdrew.)

Commissioner JEREMY FEWTRELL, AFSM, Australasian Fire and Emergency Services Authorities Council, Fire and Rescue NSW, sworn and examined

Superintendent DAN MEIJER, Supervisor, Operational Improvement, NSW Rural Fire Service, affirmed and examined

Commissioner BRENTON CHARLTON, Commissioner, VRA Rescue NSW, sworn and examined

Assistant Commissioner PETER ELLIOTT, Acting Executive Director, Finance and Corporate Services, NSW Ambulance, NSW Ministry of Health, sworn and examined

The ACTING CHAIR: I welcome our next witnesses. Thank you all for appearing before the Committee today to give evidence. Please note that the Committee staff will be taking photos and video during the hearing. The photos and video will be used for social media purposes on the New South Wales Legislative Assembly social media pages. Please inform the Committee staff if you object to having photos or video taken. Can you please confirm that you have been issued with the Committee's terms of reference and information about the standing orders that relate to the examination of witnesses?

JEREMY FEWTRELL: Yes.

DAN MEIJER: Yes.

PETER ELLIOTT: Yes.

BRENTON CHARLTON: Correct.

The ACTING CHAIR: Do you have any questions about this information?

JEREMY FEWTRELL: No.

DAN MEIJER: No.

The ACTING CHAIR: Would anyone like to make a short opening statement before we begin questions?

JEREMY FEWTRELL: Yes, I would, Chair. I'm representing Fire and Rescue NSW as the commissioner but also the Australasian Fire and Emergency Services Authorities Council [AFAC]. That's the peak body of fire and emergency services around Australia. Can I put on record first up that Fire and Rescue is not opposed in any way to electric vehicles. Others have tried to represent that we were; that's definitely not the case. It's not our job to make those sorts of judgement calls. But what we do need to do to meet our responsibilities under the fire and rescue Act is to make sure that everyone's aware of the risks and, for our policymakers and legislators such as yourselves, to make sure that everyone is aware, has their eyes open and understands the potential risks where things could go wrong.

Oftentimes you will hear a lot of representation of the upside. Unfortunately, the business that we deal in—the collective of the emergency services—is often the downside risk where things don't work as planned. The clean energy transition is the biggest challenge for fire services in our time. Just the previous evidence indicated the length of time that that transition in relation to transport is going to be occurring, so it will be a major focus for all of us over the coming years and time to come. Fire and Rescue NSW—and indeed all the agencies—are here in the interests of public safety. We're completely independent and we don't have any vested interests. The fire and rescue Act requires me to prevent and extinguish fires as quickly as practicable. Where the fires do occur, we will intervene to try and extinguish them, and that's either with our firefighters on the ground or it will be

assisted by the fire safety measures that we may have required to be installed in premises as a result of our assessment of the risk in those buildings.

We are in the business of dealing with the consequences when things don't work. A lot of the conversations will talk about the normal day to day operation. But unfortunately, at times, things malfunction either due to inherent faults in the equipment or some other accident or consequence of human activity or intervention. Where those things happen, there's then often a significant reaction, particularly with lithium-ion batteries. I'll keep my comments to the context of electric vehicles in particular today, but the chemistry of a lithium-ion battery is used in electric vehicles. Indeed, any of the battery chemistries—and there's a range of different chemistries—means that when something goes wrong, it goes catastrophically wrong in a very, very short time. Our submission today is based on our research and study of the incidents both in Australia and elsewhere, and the initial research that we've been undertaking, and it will be further informed by the additional research that we'll undertake in coming times.

The battery fires that we face are different to other types of fires. The ability for fire services to extinguish a car fire—currently an internal combustion engine is able to be dealt with very quickly. If we had a car fire in an internal combustion engine I would expect our crews to arrive and, within a matter of a few short minutes, definitely have it knocked down and then totally extinguished probably in the order of 10 to 20 minutes. That is not the case in an electric vehicle fire due to the nature of the batteries and the thermal runaway that can occur when something goes wrong in that battery. For your benefit, and to try to put it in simple terms, when thermal runaway occurs, it's a self propagating fire and there's no intervention we can do to stop that. The battery starts to heat. Each of the cells decompose. They liberate so much heat that it triggers the other cells around it, and it keeps going until the battery has fully consumed itself. While we put water on or try to cool it with water, invariably it's not able to stop that. What ends up happening is that the battery will continue to burn until it has fully consumed the battery. Where we do put the batteries out, there's also a considerable risk of reignition. We've seen several cases of that occurring, and it's certainly one of the high risks.

In terms of putting electric vehicles into our current building stock, Fire and Rescue and the AFAC agencies have a position that we've put forward, which is really taking a precautionary approach. We're asking people to put due consideration and to consider fully the hazards associated with batteries, particularly EV batteries, were they to fail, and to consider the impacts on the building and the occupants of the building. We're in the interest of public safety and looking at the worst extent that can happen and wanting to design in, particularly for new buildings, to make sure they're well prepared for an electric vehicle industry that will stay for many years ahead. We're also looking at working with the other agencies and focusing on the safety of our firefighters. We've developed training packages with TAFE, and that has been rolled out and made available to all emergency services. We continue to monitor and adjust our operational doctrine and guidance to our firefighters so that they can work safely at the scene.

The final point I'll make—and it's one that hasn't been mentioned in any of the other submissions—is around the area where electric vehicles have collisions and the damage that occurs. Where lithium-ion batteries or any battery chemistry receives a mechanical shock, it can be one of the triggers for the disintegration of the battery and thermal runaway to occur. We have very limited experience of electric vehicles having been involved in significant collisions. We've heard before that it's only 1 per cent of vehicles on the road—the electric vehicles. That will obviously increase as the number of electric vehicles grows.

The complications for rescuers are that when we need to extricate someone from a car, we use hydraulic rescue tools to cut, push and spread parts of the car away from the casualty, to create the space to get them out safely. Some of the complications that come from electric vehicles and the configuration of the batteries will limit the scope for rescuers to use their tools in the same way that we do now. We'll be restricted, potentially, in options, particularly for ramming and pushing parts of the car away from the casualties. We will continue to adjust and refine our techniques and work with the manufacturers. The ANCAP information sheets that are available now to rescuers are certainly good assistance in that space.

For all vehicle rescues, whether it's an internal combustion engine vehicle or an electric vehicle, we have a firefighter staffing a line of hose in case there is a fire. There is an inherent risk of ignition in any vehicle that has received significant damage through a road crash. Currently, though, for internal combustion engines, that firefighter will be able to have an immediate, significant impact on that fire, to keep the casualty and the rescuers safe. The challenge that we will face with electric vehicles involved in collisions where the batteries subsequently ignite is due to the intensity of the fire. The impact of the firefighter with that line of hose will not be as great. It will be a significant challenge for the rescuers and the paramedics to make sure they get out safely but also try to get the casualty out as quickly as possible. One of the potential impacts is where we've spent many years developing very patient centred rescue techniques to keep the casualty safe, immobilise them and move them only as much as possible, and get the car away from around them. What may happen where batteries start igniting as a

result of the crash is that it becomes a very crude extrication technique of dragging the casualty out in a very undesirable manner. Thank you.

DAN MEIJER: I am appearing for the NSW Rural Fire Service on behalf of Commissioner Rogers. The RFS is pleased to assist the Committee in this inquiry as it shares the Committee's interest in the emerging risk to the community, including firefighters and all emergency first responders, from incidents involving lithium-ion batteries both in EVs and in other applications. As the Committee will have noted in the New South Wales Government's submission, the RFS has been very proactive in developing procedures and training for its firefighters around the potential for incidents involving battery fires. The RFS has collaborated very closely with other fire services around Australia, but in particular Fire and Rescue NSW, to ensure that all relevant services remain abreast of developments in this area and can share lessons and resources between us. With an increasing number of lithium ion battery applications in the community, the RFS recognises the benefits of regulation, research and development, and the sharing of knowledge between government, the fire service industry and consumers, in order to ensure a consistent approach towards managing the potential risks of these devices. Thank you.

PETER ELLIOTT: Good morning. I'm appearing on behalf of NSW Health and NSW Ambulance. NSW Ambulance is the emergency ambulance services arm of NSW Health. Thank you for the invitation and the opportunity for NSW Ambulance and NSW Health to contribute to the Joint Standing Committee today. NSW Ambulance is in its 130th year of providing ambulance services to the people of New South Wales. Cloaked in this history is the symbolism and culture that underpins our corporate vision of excellence in care. My part of this history is 30 years of employment with NSW Ambulance. In this time, I've had the opportunity to be part of NSW Ambulance as it has matured and grown. It proudly has 6,500 operational and corporate staff supporting excellence in care for our patients across New South Wales 24 hours a day, seven days a week.

NSW Ambulance is one of the largest unique ambulance services in the world, requiring our large workforce and subsequent fleet to cover large geographical areas, which include metropolitan, regional, rural and remote areas of New South Wales. NSW Ambulance's current fleet size exceeds 1,800 vehicles, consisting of operational vehicles, rescue vehicles, training and support vehicles, including 67 hybrid vehicles. Additionally, nine plug-in hybrid vehicles were rolled out at the end of the financial year. There are currently no electric vehicles in the NSW Ambulance fleet. NSW Ambulance also has 11 workshops across New South Wales for general vehicle maintenance and employs 58 staff to manage the fleet. Hybrid and plug-in hybrid technology maintenance is outsourced to manufacturers, recommended dealerships or service providers.

NSW Ambulance staff responding to incidents are exposed to multiple hazards and risks. These risks are evaluated on a case by case basis to ensure staff safety. NSW Ambulance provides training and education for frontline emergency services staff in a range of scene safety related causes. NSW Health and NSW Ambulance will work in collaboration with other emergency services colleagues to ensure that we have a safe workplace for our personnel. Thank you. I welcome any questions from the Committee.

BRENTON CHARLTON: Thank you, Chair, and thanks to the Committee for the opportunity to contribute. Thanks, Jeremy, for a very comprehensive brief. You've limited what I have to say right now, but that's fine. VRA Rescue, by way of background, is the third largest provider of general land rescue services in New South Wales. Essentially, we are a 100 per cent volunteer organisation—well, 90 per cent—with a small salaried staff of around 10 people. Our wonderful volunteers, 1,300 of them, provide 24/7, 365 services to regional, rural and country New South Wales—a tremendous effort. Just by way of some background, this year, so far, it's around 10,000 operational hours—what's that, around 400 days? Rescue taskings are roughly around 1,800 operational activations and 30 per cent of those are road crash related, for context. We've got around 200-plus vehicles, vessels and boats spread across around 40 locations, and we work on a $6 million per annum budget, so we're fairly lean in comparison to other organisations.

From our perspective, our focus and remit are 100 per cent on the rescue side of the house. This opportunity to be here, gather some learnings and contribute—for us to be able to understand how all types of EVs impact our tactics, techniques and procedures of actually carrying out the rescue—is significantly important to us as volunteers. How we can improve on technology, equipment—and also, from a policy perspective, how we can bring together a multi-agency composite team framework, particularly in country New South Wales and regional New South Wales where the tyranny of distance and resources have a large impact on how we operate. That's for all the services at the table. From the perspective of the VRA, thanks for the opportunity to contribute today at this Committee.

The ACTING CHAIR: Thank you all for those submissions. We will now move on to questions from the Committee. Before we begin questions, I wish to inform you that you may wish to take a question on notice and provide the Committee with an answer in writing. I will kick things off with a little bit of personal indulgence.

What is the best practice for managing electric and hybrid vehicle batteries during and after a flood event and are there any impacts on emergency vehicles related to that?

JEREMY FEWTRELL: I'm happy to provide some comment on that. Any battery that's been submerged in water, and we see examples of floodwater, would need to be isolated and checked by appropriate technicians. We would consider it a battery at risk and would encourage people to isolate it, or certainly advise our staff to not be using or working in or around that and to isolate the area where the battery or the vehicle is, because of the risk of ignition. I know in other jurisdictions and overseas they've experienced electric vehicles igniting in the days and weeks following major flooding events. So the best thing we could do at the moment is try and isolate the battery—disconnect it so the vehicle couldn't be driven—and then leave it for vehicle recovery and technicians to assess the vehicle later.

Mr MATT CROSS: Thank you all for coming today. As we heard from the last witnesses from the Motor Traders' Association, one of their recommendations was around the New South Wales Government working with them, and Fire and Rescue NSW, to develop a licence certificate and process for emergency services. I just want to get your viewpoint on that. Is that something you would welcome?

JEREMY FEWTRELL: It's a bit of a gap at the moment in terms of service providers—so your tow truck operators—being willing to accept and remove vehicles from the roadway. What's been happening in a lot of cases where electric vehicles needed to be moved, it's actually Transport for NSW tow trucks that have been removing them because they're not trying to worry about all the other subsequent issues that private operators might be around insurance obligations, implications from moving it if the vehicle was to catch fire on their truck, and also then where do they put it and the complications for them if they effectively get stuck with this vehicle.

Mr MATT CROSS: In the New South Wales Government submission, they gave a case study where the London Fire Brigade launched a #ChargeSafe campaign. Clearly, we're talking about e-bikes and e-scooter fires. The ACCC recently gave a report that said it would lead a targeted safety and education campaign on battery safety with assistance from government and fire agencies. My question is, one, have you been able to contribute to that targeted safety campaign and if so, or if not, is this something that you would recommend to government?

JEREMY FEWTRELL: We've certainly been having lots of discussions with Fair Trading and other government agencies. From my perspective, there are three main areas of focus for us in dealing with lithium-ion batteries in general and EVs as a subset of that. The first one is the protection of the community. A key part of that is, obviously, the public's awareness, education campaigns, policy settings and then protection of our firefighters and then protection of our infrastructure. We're in the process of doing initial work around community education campaigns, working with other arms of government, and Transport for NSW as part of that, and trying to get that as joined up as possible and getting the alignment between all the agencies. So it's a work in progress.

Mr MATT CROSS: We've got Fair Trading coming a bit later. Is this something that Fair Trading will need to play a very important role in?

JEREMY FEWTRELL: Yes. They've got, obviously, a legislated responsibility around product safety—so, yes, a key player. Fire and Rescue's got a very long history of working fairly closely with Fair Trading identifying product faults and issues and so we're very used to going down that pathway together.

The ACTING CHAIR: Your submission states that Fire and Rescue NSW's duality of approach to addressing electric and hybrid vehicles "creates significant challenges for developers seeking to design buildings to support the uptake of electric vehicles". In your view, how can this tension be resolved?

JEREMY FEWTRELL: I think that was a comment from the Electric Vehicle Council about our position and the AFAC position in general. We've been very clear. We wanted to be very up-front. Indeed, Fire and Rescue were one of the first ones to start putting out public information and to provide guidance to the community in general and then to others that are working in the construction industry. We have had ongoing conversations with the Australian Building Codes Board looking at our respective positions and seeing where that can go, but the information Fire and Rescue's put out, I think, is quite clear. If you're looking to have a charger in your domestic garage, we're encouraging people to put a smoke alarm in there so that they get the earliest possible warning that there is a problem if something was to go wrong. As I said before, the reason for that is things deteriorate so rapidly that we're talking seconds to take action rather than minutes, so that early warning's critical.

For those that are working in a more significant development—larger class two-type buildings, so blocks of units with underground car parks—that's where we recommend a range of additional measures. We suggest and strongly recommend that the special hazards provisions of the NCC are utilised. That means that the full range of risks are considered and the impacts that a fire could have on the building—and it's not just the fire but also the significant amounts of toxic gases that are released, particularly in underground car park settings. Any fire in an underground car park or basement is incredibly challenging for firefighters. The heat is always much greater. It's

bottled up. There's significant risk to the safety of firefighters. The spread to other material in there is much greater as well.

Because of that, and then with the additional factors of the very intense and rapid fire development that electric vehicle batteries demonstrate, that's why we are recommending that other provisions are considered, like smoke extraction, being able to have infrared cameras if possible so that we can have some situational knowledge and awareness before entering, and also the ability to capture the water. There is significant chemical contamination that comes out of these batteries. Any firefighting water would be contaminated. Again, to futureproof things, we think it would be a wise move to have that.

The Hon. MARK LATHAM: Thanks to the witnesses. It's a New South Wales Government policy to convert the government-owned fleet to electric vehicles. Fire and Rescue NSW, are you converting to electric vehicles? If so, do you have safety concerns, given the material that you outlined earlier?

JEREMY FEWTRELL: There's a small proportion of our minor fleet that are either hybrid or plug-in electric vehicles. I can give you the exact numbers on notice. In terms of our firefighting fleet, at this stage we're making capability assessments and watching the market closely. There's nothing that I believe is at a maturity to be able to bring it into service. We will continue to watch that. Our colleagues in ACT Fire and Rescue have taken delivery of one electric powered fire engine and also one other supporting truck. I know all the agencies across the sector are watching how that goes.

The main areas of concern I guess in relation to the transition of the firefighting fleet to be electric vehicles is the cost—an electric fire truck is about three times the cost, currently, of a standard fire truck—and then also issues on performance and range. The current electric fire truck that's in service in Canberra, it's my understanding that, when it attends an incident where it's going to have to pump water, that's actually powered by a diesel generator—so not yet mature enough, I think. There's a lot of development happening, as there is across all the vehicle sector, and we'll continue to monitor. As options become reliable and mature enough, we'd consider bringing them in.

Mr ROY BUTLER: Thank you, gentlemen, for appearing today and for the information you provided. I've got lots of questions. I could probably use the whole next half-hour but I'm sure the Acting Chair would pull me up. I'm particularly interested in regional New South Wales where, in a lot of cases, there are long roads a long way from assistance. The first people who come across an accident with an EV, for example, may not be a trained emergency service agency or person. Following on from Mr Cross's question, do you see scope or need for public training and public information for dealing with this? Because it's an unknown thing for a lot of people. If we're going to go to 50 per cent of the market by 2032, that's a lot of EVs out there and by statistics that means a lot more accidents. In regional New South Wales, whilst your best efforts will be to get there, it might be that an average punter is driving along and comes across that vehicle. Can you speak to what should be done there and what you'd recommend?

DAN MEIJER: For the Rural Fire Service, obviously, we are particularly focused in regional areas and completely understand your concerns about the tyranny of distance. I'd suggest that in all of our operations and public relations material we're very much focused on community resilience and ensuring that members of the community are educated about all fire hazards, whether that's bushfire hazards, domestic or, now, the emerging challenge of EVs. I'd agree with you and suggest that, yes, the more education there is for the community on what they can do to not only keep themselves safe when operating an EV, charging or installing that sort of infrastructure but also if they come across it, then the better it will be for the entire community.

Over previous years, RFS and fire rescue have collaborated closely with all of the RMS traffic commanders across New South Wales, including in regional areas, to ensure that we are able to brief all of those officers so that if they do come across, as you said, an RMS vehicle being the first on scene they're aware of the hazards to ensure public safety but also the likelihood of a prolonged incident so that they can manage the road situation that way. But, yes, it would be consistent with RFS current practices that we educate the community as fully as possible for their own resilience before having to rely on any of the emergency services.

Mr ROY BUTLER: A question for any of you, and this is pretty broad but I guess you're in a safe place to give us an answer: Do you believe your agencies are adequately resourced in terms of training and equipment for the number of EVs that we're anticipating by 2032?

PETER ELLIOTT: I'll answer that on behalf of NSW Ambulance. I think it's an evolving space. It's very much one that's picked up a significant pace with the introduction of, firstly, the hybrid, then the plug-in hybrid and now the EV. We certainly are looking for resources, and following the vehicle manufacturers about where this is going in terms of design. Each one has a different design, so it actually is quite difficult to make sure

that we keep pace with the rollout that is occurring and also both the training and instruction to our own staff along with what your previous question was about, the community awareness.

BRENTON CHARLTON: On behalf of the VRA, from our perspective as this starts to unwind and we see more vehicles on the road—I read through some of the previous submissions and transcripts and there was a piece that struck me that was from Encap. It was particularly around:

> We are yet to see the full spectrum of what can occur in the course of collisions, accordingly, there is a degree of uncertainty as to what risks are likely to be posed.

That's a fairly powerful statement from our perspective, meaning that at the present time we're not 100 per cent sure on how these vehicles are going to be impacted when they're in serious collisions, whether it's in metropolitan New South Wales or country New South Wales—it doesn't really matter.

Your question was around costing and funding. From our perspective, of the VRA, there will be a significant costing in relation to upskilling us, particularly around as the tactics change how are we going to search for and identify that we have a problem with the battery inside the vehicle. Does it mean FLIR or thermal or other pieces of technology? With the ANCAP-type rating and MDTs, mobile data terminals, that's another on-cost of the cost of doing business to protect the community. From our perspective, there would probably need to be a budget uplift around that and then the increased training capacity on that for regional and rural New South Wales.

Mr ROY BUTLER: One last one to Commissioner Fewtrell in relation to a position statement that I understand came out yesterday in regard to your support for the AFAC requirements for not charging in buildings unless there is a sprinkler system: What implications does that have for average domestic dwellings where people want to charge a vehicle, in a garage or something like that, especially from an insurance perspective?

JEREMY FEWTRELL: That's the differentiation between those different categories of buildings. Our position is proportionate to the fact that an electric vehicle car owner, when they charge their vehicle at home in their domestic garage, doesn't need a sprinkler system. But other larger developments, which would almost be regularly or on the verge of needing a sprinkler system under other provisions of the building code, we would recommend that's where those considerations get picked up.

Mr ROY BUTLER: Just to clarify, for domestic dwellings—a normal garage in suburbia—you recommend a fire alarm, but you have no other recommendation in terms of suppression systems or anything like that?

JEREMY FEWTRELL: Correct.

The ACTING CHAIR: For NSW Ambulance and the Ministry of Health: Do we know the short-term and long-term effects associated with the exposure to chemicals and toxic gases from electric and hybrid vehicle battery fires?

PETER ELLIOTT: There are health effects for any chemical exposure. I think my colleague, Commissioner Fewtrell, would be able to provide the information specifically regarding the exposures. To be able to actually provide a succinct answer, depending on the type of chemical, if I could take the question on notice and come back to you, given the range of chemicals that potentially are involved here.

JEREMY FEWTRELL: Fire and Rescue has been working with a strong focus over the last several years to really reduce the impact of exposure to toxic chemicals that are found in smoke, and it's even more so the case with electric batteries. We've got a research program called SARET, Safety of Alternative and Renewable Energy Technologies, and that's one of the pieces that we were looking at in the first phase of SARET, particularly looking at it in terms of the impact that it has on personal protective equipment and clothing that firefighters will use. That's something that, across the sector internationally, fire agencies and others are just starting to look at.

The general position is that we would not want people being exposed to the smoke or the vapours that come out. Not only is there a range of dangerous chemicals in there but it's also a flammable vapour, so it can be ignited and then you get a vapour explosion. It's obviously serious impacts and immediate health and safety. Again, it's an area where the nitty-gritty detail of that is still to be further developed and understood through research, but it's certainly an area of focus for us and other fire services around the world. In short, though, we don't want people getting exposed to the vapours that come out of a lithium-ion battery or any type of battery like that, and we'll be protecting people from that.

The ACTING CHAIR: Just to follow up on Mr Butler's question in regard to funding, and you touched on it just there, are the emergency services sufficiently supplied with PPE? Going towards that 50 per cent target, are there changes in PPE requirements that you're aware of? Is that something that's being researched?

JEREMY FEWTRELL: The protective clothing that firefighters wear is to an international standard. It's designed to cover a whole range of fire and other related hazards that firefighters would encounter. The clothing that we've currently got is suitable for what we're dealing with at the moment. I think where the impacts are yet to be fully understood is the extent that exposure to fires involving lithium batteries and the full range of chemistries that they have—we've yet to fully understand the impact that has on the durability and the lifetime of the PPC.

We had an incident earlier this month involving a lithium polymer battery. It was at a bus manufacturer. It hadn't yet been installed in the vehicle, but it was in the process of being constructed. But we've had a large number of firefighting boots that have had to be condemned as a result of exposure to the run-off and the effluent that came out of that battery. The boots protected the firefighters—they did their job—but the costs will come from replacement costs that we might not have had to do otherwise. We're looking at that and seeking advice from others working in that area as well.

BRENTON CHARLTON: From our perspective, whilst it may be minimal fires that we have, there's also that decontamination process around the PPE and PPC itself—around getting it clean again, rather than volunteers taking it back to their homes to wash in their family dryers or washing machines. There is that sort of on-cost for doing business around that.

The ACTING CHAIR: Are there mechanisms in place for that, particularly with large volunteer forces? Is there a way for them to drop that gear before heading home?

BRENTON CHARLTON: From our perspective, it's an unfortunate circumstance that where some locations will have industrial cleaners and dryers, others will not. Others will take it home, unfortunately, and do it within the confines of the domestic house, which is probably not ideal. I think every one of our locations should be aiming towards getting a minimum industrial type of arrangement set up for cleaning, not only for the contaminants from EVs or from the toxic smoke but also from other bodily fluids and matter, and so forth, that you encounter as part of a rescue operation.

DAN MEIJER: From the Rural Fire Service perspective, Chair, we've implemented an asbestos decontamination program for some years for volunteers across New South Wales. When attending a house fire or any fire where asbestos contamination is likely or is proven, the PPC is removed, cleared away from the area, shipped for industrial decontamination and then returned. Other PPC is issued in the meantime. The service has chosen to duplicate that process for exposure to smoke and other potential toxins from an EV fire.

JEREMY FEWTRELL: Chair, Fire and Rescue has a world leading laundry service. We've had a number of other international fire services come to look at that, as well as others from around Australia. As well as decontaminating the gear at the scene as the firefighters leave the zone where they're firefighting, the gear is bagged up. Appropriate markings are put on the containers, identifying the contamination, and then it's transited to the laundry facility in Western Sydney. At the fire station, there's a cache of clean uniforms for the firefighters to then pick up, so they have a continuous supply of clean PPC readily available for them.

PETER ELLIOTT: NSW Ambulance trains its operational paramedics in dynamic risk assessment. Picking up the general sentiment here, it's about recognising when an exposure to risk is potential and taking steps to avoid exposure. Of course, in emergency situations they come across those types of events. It's about the training and awareness, particularly with the electric vehicles as they become more popular as part of our general community, to recognise the EVs and what the potential risks are and the steps to take.

The Hon. NATALIE WARD: Thank you all very much for your service. It's incredibly important that we hear from you about the challenges you're facing. We're a committee that's here to make recommendations, and we're here to hear about the challenges. I'm a total layperson in this, so thank you for your explanations about some of the differences in the batteries in a layperson's understanding, because it really informs us a lot better about some of the recommendations we should make. Can I invite each of you to perhaps tell us what you think is the biggest risk and challenge faced by you and your organisation, and what we should be addressing in terms of priorities? We're hearing a lot of things from a lot of witnesses, but perhaps you could help us distil down what for you is the thing that we should be addressing. I understand that there's training. There's a whole lot of challenges for your people and your volunteers and your frontline services. Can we hear from you about what each of those is? I might invite you to start, Commissioner.

JEREMY FEWTRELL: There are a few things. First of all, we spoke before about the material and guidance provided to staff around the operating procedures. That will be a continual focus, and it's a rapidly evolving area at the moment. That will continue to be the case for a long time to come—so maintaining the ability to provide regular updates to our doctrine and guide our operational procedures so that firefighters can do that safely. The range of different battery chemistries is a concern or a complicating factor. To give you an example,

we've spoken a lot about lithium-ion batteries, and they're the bulk of the batteries that are out there, whether they're in personal mobility devices or vehicles. But there's a range of alternative chemistries being developed, and the way that they're dealt with can be significantly different.

The fire that we had in the bus factory earlier this month was a lithium polymer battery, not to be extinguished with water. There was no signage, no indication at the premises, and it was late on a Saturday evening that crews attended that. There were no staff from the facility available. They're flying blind—so ensuring that there's guidance to emergency responders about the nature of the battery and the hazards, whether it's in a facility such as a manufacturing facility or maybe even in a vehicle, which would be more complicated.

My concern is that lithium polymer battery was going to be going into a bus. The buses that have them will have six of those batteries on board. A battery fire like we saw but in the vehicle, when it's completed—if it were in a tunnel, the tunnel operator is in the control centre and sees the fire. Their procedure, and rightly so, is to rapidly deploy the deluge systems. For an ordinary fire, that would be suitable. In this case, it would have made a much greater complication. So it's very hard to tackle that one. There are things for us to be aware of there. The duration of the fire—it's going to take longer to put out.

The Hon. NATALIE WARD: That's very helpful. It's entirely up to you, but if you'd like to take on notice or put some recommendations to us on those specifics, that would be very helpful.

JEREMY FEWTRELL: One other quick one—it's a bit of a hole in the whole policy framework. Those EV batteries, if they're transported as finished products—they might be going from the battery manufacturer to a vehicle manufacturer. While they're in transit, they're classed as dangerous goods and they've got to be handled that way. There are restrictions on where those batteries and that truck carrying those batteries can travel. Once they're in the finished product, there's no dangerous goods rating on them at all. But, as I said, a bus could potentially have six batteries and be going through tunnels and various other parts of transport infrastructure where it wouldn't be able to go if it was on the back of a truck getting delivered. So there's a little hole that needs to be addressed there. I'm not sure how that gets done, but that's what we'll flag with you as a policymaker.

The Hon. NATALIE WARD: Thank you. That's very helpful.

DAN MEIJER: For the Rural Fire Service, a couple of our biggest risks are, as Commissioner Fewtrell alluded to, the evolving nature of this technology. It is moving at a rapid pace. Industry is moving at a rapid pace and so is—obviously, in a beneficial way—consumer take-up. That requires us to keep very abreast of new developments in a way that—we're not necessarily aware of our gaps in knowledge. That's why I can point back to Commissioner Fewtrell's evidence on the SARET research program that Fire and Rescue has incorporated into their work. RFS has formally committed, with resources and funding, to that program to partner with Fire and Rescue. We absolutely commend the support of that program, for the benefit of all fire and emergency services, so that we can learn more and gather more data so we understand the risk better. Only once we understand the risk can we adequately develop ways of mitigating that risk—everything from our firefighting techniques to whether or not the PPC is going to be adequate—so I suggest the biggest risk for us is to keep ahead of that.

For the Rural Fire Service in particular, as Mr Butler alluded to, the tyranny of distance—and we have 70,000 members in the service across 2,000-plus brigades through New South Wales, largely in regional and rural areas. Part of the challenge for us is to provide the equipment and training to our volunteer firefighters, who are focused on doing the best possible job for their community, so it's imposed on us to provide them with a higher standard of training. The service is doing great work in that space. Our operational doctrine has been developed. Our processes and protocols have been updated to deal with EVs. Our training programs now include EVs. Our firefighters' pocketbook app that every member carries includes EV response data. But we still need to do more to ensure that we get the best possible training for those people to protect their communities.

Finally, I think one of the biggest challenges that we are now becoming aware of is the opportunity for greater regulation in the space, not only of EVs but of batteries in the community generally, whether for light EVs—RFS has done a lot of work on looking at battery electric storage systems linked to solar systems and domestic premises, and how that may affect the behaviour of a house fire in terms of the fire load that may occur if the house catches fire, whether that is from an internal ignition, such as a kitchen fire, or the impact of a bushfire on the outside of the house. For many years we've been very aware of the danger for firefighters if you have LPG gas cylinders stored on the outside of your house because you're not on the mains. Well, a lot of premises are now dealing with having a battery on the outside of their premises, so we need to ensure that our firefighters understand exactly how that works and how to keep themselves and their communities safe.

Particularly, we need greater regulation around the second-hand market or the second life of batteries and, as we've alluded to before in this hearing, the disposal of those—whether that's the training and the expertise of second or third responders such as tow trucks but also wreckers' yards, automotive industry and, for fire

services, a better understanding across industry of the disposal of these and who does take them. And, as Commissioner Fewtrell alluded to, the chemical make-up of fire water that is run-off—a lot of work is required of that, so we would welcome the greatest level of support for research programs but also for fire services in our training and development.

PETER ELLIOTT: Thank you, ma'am, for the question. New South Wales paramedics obviously require the training to recognise the types of incidents involving EVs, and also charging infrastructure and buildings for electrical shock incidents. But it's not only the NSW Ambulance paramedics; it's also our NSW Health staff and corporate staff that are driving around in a fleet of vehicles, by name on the side of these vehicles, with the corporate markings. They will stop and assist someone on the side of the road if there is an accident. So there is a range of training that is required. As I said previously, it's about understanding and awareness of EV vehicles and the charging infrastructure and also responding to some other instance they may come across, purely because of the chemicals and different other things that have been mentioned here today. Like my colleagues, NSW Ambulance would very much like to be part of the research—and, to date, have been—in regard to the training programs and how we actually raise that awareness.

BRENTON CHARLTON: Thank you, ma'am, for the question. Sometimes it's good to be last because most things have been said, so I can just focus on what I need to. I think, from our perspective—and it's been mentioned not only today but also in the previous session around that TAFE course—now is the time to take that wonderful TAFE course from being online and go out to the regions, particularly regional, rural and country New South Wales, and form a multi-agency composite team to train. Because the areas where we operate, you might get one person that comes from the SES, you might get two from us, you might get four from the out—you never know what you're going to get. So for us to better prepare our communities, if we could take that offline, use the principles and focus on the rescue, the actual doing of the business, the rescue component—because, again, there are a lot of unknowns on how our tactics, techniques and procedures will operate and how the vehicle's being impacted. To date, as said before, there's been very few, but as time goes on there may be more, so we need to better prepare our communities.

Around that multi-agency piece is specialised EV training, inter-agency workshops and joint drills—all multi-agency because we're all going to be turning up across New South Wales. A potential recommendation would even be the use of simulation or augmented reality or VR, virtual reality, to reduce training costs. The HoloLenses and programs—they're wonderful, some of the things you can do there around that. Continuous education and updates across the emergency services community, or the rescue community in particular—well, that is my focus. That can be achieved through the State Rescue Board to ensure that there's continuous updating of trends and new information around EVs and, in particular, rescue.

One thing we probably we need to think about is—hope it never happens, but we need to prepare ourselves, our volunteers and our rescue op roads across New South Wales for the point in time we have to do a tactical disengagement, meaning if someone's trapped and it does high order, you might not be able to do anything. That would be a tragic, horrible thing to take part of, so that mental health piece needs to be built into what we do around that because—anyway, it's horrible, right, to even think about it.

What we probably need, too, is to get the manufacturers to buy in as well. Instead of the government kicking the can, how about you come down and kick the can as well? Help us with vehicles or information and funds to enable some of this training and joint collaboration, because you are part of the system. From our perspective, that would be fantastic. It would be remiss of me not to also say a modest uplift in relation to where we come from—our budget—to ensure that we can meet the need in country New South Wales, because right now we would not be able to invest in some of that capability. We've done some elementary math. It would cost us about $5 million. That's about 85 per cent of my budget.

The Hon. NATALIE WARD: That's really helpful, thank you. I invite you, if you have something further to add or you want to encapsulate that, to take it on notice, but no obligation. That suffices to give us some direction.

The ACTING CHAIR: Just a final one, gentlemen. We have heard during the proceedings that there is an expectation that hydrogen will be a pretty important part of the mix of vehicles on roads along with electric vehicles. Has there been any consideration or work done through any of the emergency services on the ramifications of that?

JEREMY FEWTRELL: Fire and Rescue NSW led a major project for AFAC—all the Australian fire agencies—a couple of years ago looking at the development and introduction of hydrogen-powered vehicles. So there's a lot of that base-level understanding and documentation there available for the agencies. It's important to remember, too, that hydrogen vehicles will still be electric vehicles in the sense that they'll have the battery packs there as well so it's a dual risk factor or dual elements to consider.

The ACTING CHAIR: Thank you for appearing at today's Committee. You will each be provided with a copy of the transcript of today's proceedings for corrections. The Committee staff will also email any questions taken on notice from today and any supplementary questions that may arise from the Committee. We kindly ask that you return these answers within 14 days of receiving the questions.

(The witnesses withdrew.)

Mr JASON DARNEY, Executive Director, Education and Skills North, TAFE NSW, before the Committee via videoconference, affirmed and examined

The ACTING CHAIR: I welcome our next witness. Thank you for appearing before the Committee today to give evidence. Please note that Committee staff will be taking photos and videos during the hearing, which is possibly not as applicable to you. These photos will be used for the social media purposes of the New South Wales Legislative Assembly social media pages. Please inform the Committee staff if you object to having photos or video taken. Can you please confirm that you've been issued with the Committee's terms of reference and information about the standing orders that relate to the examination of witnesses?

JASON DARNEY: I can confirm.

The ACTING CHAIR: Do you have any questions about this information?

JASON DARNEY: No questions at this stage.

The ACTING CHAIR: Would you like to make a short opening statement before we begin questions?

JASON DARNEY: Just to say thanks very much for allowing TAFE NSW to be a part of this process. We're really quite excited about the engagement and the strategy that we've put in place across the electric vehicle area, which we've been working in for the last 12 years in providing some training across 5,600 enrolments in this space, whether that be full qualifications or micro-credentials. From my perspective, I'm really excited about highlighting the way that we work in collaboration with the industry as well as collaboration with our government agency partners such as Fire and Rescue, Transport for NSW and Training Services NSW.

The ACTING CHAIR: We'll now move on to questions from the Committee. Before we begin the questions, I wish to inform you that you may wish to take questions on notice and provide the Committee with an answer in writing. What technical education and training on electric and hybrid vehicles, including light electric vehicles, is currently available through TAFE NSW?

JASON DARNEY: Thank you very much for that question. TAFE NSW has been delivering training, as I said, for 10 years, from 2012 or 2013. I think our first enrolments were in our qualification within the Certificate III in Motor Mechanics. We have been delivering training in that space across the unit of "Depower and reinitialise power supply in hybrid and electric vehicles". So, roughly, we're going to have about 5,600 enrolments all-up in that space, and predominantly about 4,200 of those are in that. What that unit allows us to do is to make safe for our people who work in that space to be able to work on those cars, similar to what they would work on in an internal combustion engine. They depower it and then they reinitialise it when they've completed. We also run some programs such as the unit of competency "Inspect and maintain battery electric vehicles". It's delivered to both mechanics, auto-electricians and auto body repairers. We are delivering programs, as well as those, in Certificate III in Automotive Electric Vehicle Technology: Battery Electric Vehicle Inspection and Servicing Skill Set, "Depower and reinitialise battery electric vehicles" in that skill set and several other electric vehicle units of competence that I'll talk about as we move through the questions.

The Hon. NATALIE WARD: Thank you very much for your attendance and for assisting the Committee and for all of your hard work—it's very useful. I wanted to follow up on the training and the gaps that there seems to be in the various training courses. I'm not going to try and quote the number. It seems that in that framework there are a couple of types of skills training, but at the moment that apprenticeship is a bit of a gap. Could you talk to us about that and the potential need for funding that gap if you feel that's appropriate?

JASON DARNEY: That's a great question. I'll talk on behalf of TAFE NSW if I may. There are some components there that are outside of TAFE's perspective or area, but we certainly are speaking to industry. The first thing is the unit of competence that I've been talking about, which is depowering and reinitialising the power supply. It's a unit within the course that isn't embedded as a core qualification. It's a qualification or a unit that is actually added to that training package. And there's a reason for that in that there are a number of people who are

doing that qualification that won't have the capability and capacity to be signed off on that. We're still working with industry to determine what that needs and how we can meet that requirement. There's also a certificate III—

The Hon. NATALIE WARD: Sorry to interrupt you, but can I just ask you to clarify which specific qualification you are talking about, because we've heard about a couple of them this morning. I may have missed it—you may have said so—but which one are you referring to specifically?

JASON DARNEY: That's the certificate III in mechanical. That's the qualification that, at this stage, gives the licence for an individual to work in New South Wales as a mechanic. That's an elective unit that we bring in. We work in collaboration with a number of major partners: Volvo, Ford and VW. Their cohorts who come to TAFE NSW will actually have that as part of their core delivery. Some other areas that we're delivering—they'll have that as part of their core delivery but not everywhere because they won't have access to be working in or on hybrid cars or EV cars and, as such, they won't actually be able to be signed off. That's the first thing.

The second thing is that we do have a course which is the AUR32721, which is Certificate III in Automotive Electric Vehicle Technology. That course, at this stage, isn't linked to an automotive tradespersons certificate in New South Wales. Therefore graduates of this course are unable to apply for a licence and cannot legally carry out repairs on road-registered vehicles in New South Wales. What's happening in that space, also, is the Certificate III in Automotive Electric Vehicle Technology has not had a vocational training order completed or established and therefore cannot be undertaken as an apprenticeship in New South Wales.

The Hon. NATALIE WARD: When you say that, you're very polite and diplomatic. Does that mean it's not funded at the moment? If I can cut to the chase, for the Committee's benefit, of what kind of recommendations we would be looking at. Is that something that is a funding issue or is there no demand for it?

JASON DARNEY: There are two things. The Automotive Training Board and the industry training board would need to create a vocational training order for that to be an apprenticeship program. It doesn't have a vocational training order. That's the bottom line for that course and, as such, we wouldn't be able to deliver that under the apprenticeship process. The second thing is that it would require the Motor Dealers and Repairers Act 2013 and the regulation of 2014 to actually have that course linked in to allow for those individuals to be given a licence to deliver or to work as a mechanic in New South Wales. So there are two things there.

The Hon. NATALIE WARD: And that's New South Wales legislation?

JASON DARNEY: That's New South Wales, correct. That's my understanding.

Mr MATT CROSS: Just continuing questioning from my colleague, what you are saying is that legislative change would be required. Is that correct?

JASON DARNEY: That's not my call. But, certainly from my perspective, it hasn't got a vocational training order. That's the first thing. The course would have to have a vocational training order. Secondly, we would need to ensure that that course, the certificate III, is eligible to be licensed in New South Wales.

Mr MATT CROSS: We heard earlier today from the Motor Traders' Association around a lot of the work they do with training. One of the recommendations they had was that government works with industry to develop a long term funding agreement. Would that involve working closely with TAFE or coming from the TAFE budget?

JASON DARNEY: Sorry, can I just ask you to repeat that? I'm not quite sure whether I understood exactly.

Mr MATT CROSS: Yes, I'll read the entire recommendation from the Motor Traders' Association. It says:

> That the NSW Government works with industry to develop a long term funding agreement for the training of the automotive industry for electric vehicles.

Would that long term funding agreement be working very closely with TAFE or be partly funded through the TAFE budget?

JASON DARNEY: Thank you. Sorry for asking you to reread that. From my perspective, we are delivering courses as part of the training program as it's related to the industry requirements. We speak regularly with industry about what programs we deliver. At the moment, the courses that we deliver and the units within those are articulated by or in partnership with industry, so that's an ongoing basis. If it's an apprenticeship program, we continue to provide that through State Government funding. If it was a vocational training ordered program, it would be part of our core business. If it's outside of that, then we would look to deliver that through a range of mechanisms. Many of the programs that we're delivering at the moment are programs that the State Government

has committed to and has funded outside of industry. Many of the micro credentials and other programs have been funded in this space, so it's not user paid. It's programs that are being delivered and funded through government.

Mr MATT CROSS: Given that battery electric sales are now upwards of around 7 per cent of all new vehicle sales in New South Wales, up from only 3.2 per cent in 2022, how will that impact your delivery of skills and training, given that extreme growth trend of battery sales?

JASON DARNEY: Again, we've been delivering in this space since 2012-13. At a number of the locations, many of the mechanics that are working in this space have that basic understanding of meeting the requirements of safely working on a hybrid or electric vehicle. We will continue to explore opportunities working with industry. I would like to give an example of that. In the bus trailer program, we've been working with Heavy Vehicle Industry Australia, HVIA, which is the peak industry body.

We've been consulting with them about what they would like to see. As a result of that consultation, we're actually looking to embed the unit competency "Depower and reinitialise battery electric vehicles" into the Certificate III in Automotive Manufacturing Technical Operations – Bus, Truck and Trailer qualification. We are working very closely with our manufacturing partners to make sure that what we're delivering is attuned to their needs and requirements. Certainly that's the same in the bus space, where we're looking to develop some programs specifically around Foton and the hybrid buses using hydrogen as a power source.

Mr MATT CROSS: Do you work closely with other jurisdictions that have a similar government agency to what TAFE is in New South Wales, particularly in relation to electric vehicles?

JASON DARNEY: Are you saying in other States and Territories?

Mr MATT CROSS: Correct. Does TAFE work with its equivalents in other jurisdictions, particularly around this area? I'd hate to think that each State is always reinventing the wheel.

JASON DARNEY: TAFE NSW is part of the TAFE Directors association. Particularly around our micro credentials, we are looking to see how we can work with other TAFEs in other parts of Australia to maximise the potential of the wisdom and the knowledge in that space. Ultimately, what we would look to do is work very closely with our partners in government. Fire and Rescue have been critically important in the EV space for us working through that. Transport for NSW has been another critical partner, a critical friend, in that space. Training Services has been very forthcoming in terms of ensuring that those micro credentials that are looking to support industry and looking to support—when we talk about industry, it's not just the manufacturing. It's about the users of it and that they are actually in a position to do that safely.

Mr MATT CROSS: I have a final question. In relation to the New South Wales Government's submission to the Committee, clearly the New South Wales Government is a very large body that involves many agencies. Was TAFE able to contribute to that submission, or was it asked to make additions to that submission?

JASON DARNEY: I'm not familiar with that, so I'll have to take that on notice and come back to you.

Mr ROY BUTLER: Thank you, Mr Darney, for being here today. My question is in relation to the cert III course. Specifically what I'm interested in is this: Does that course cover home converted vehicles which are for road use after engineering? Does it also cover light electric vehicles? Or are we only, through that course, training people to deal with factory electric vehicles and hybrids?

JASON DARNEY: I will have to take that on notice. I'm sorry, I'm not familiar specifically with the qualifications. But, certainly in terms of the courses that we are talking about, they are about depowering and reinitialising. That's the basic form and function of any EV, and then it's part of the internal combustion engine. If you can source that process in a safe manner, that then makes that car safe. But in terms of the special requirements that you're asking about, I'll have to come back to you.

The ACTING CHAIR: In relation to the cert III that is not connected to attaining the licence for a mechanic, am I right in assuming that that course is more of a general nature in handling electric vehicles and processes around them?

JASON DARNEY: I think, in basic terms, yes. It's not necessarily what is the certificate III in [inaudible] that we tend to run. It's specifically focused in on some of the aspects of the electric vehicle. There are some differences between those two qualifications, so there would need to be work about what those two qualifications—if they were in the market, how does that actually work effectively? And what could we do to ensure that it's meeting the requirements of the Motor Traders' Association and the Act, et cetera.

The ACTING CHAIR: Further to that, if it is broader in its scope of dealing with EVs, is there, or should there be, involvement with first responders to also attain that certificate?

JASON DARNEY: We work really closely with Fire and Rescue. We've actually developed a number of programs—lithium battery training, we've developed a range of micro-skills in that space for first responders. Fire and Rescue, through their specific unit, they've been amazing to support us. The programs that we've actually identified and are running are part of their mandatory suite of training courses now. We're also delivering that to New South Wales Police, NSW Ambulance, New South Wales Rural Fire Service, SES volunteers and tertiary responders such as motorway contractors and tow truck operators.

The course content in that area for first responders are around understanding the key features and types of electric vehicles, identifying the electric vehicle at the incident, identifying and mitigating hazards, undertaking safe rescue operations, undertaking firefighting operations—particularly when the electrical vehicle is compromised—and conducting a vehicle handover to recovery partners. We certainly are developing some specific programs that support the broader community or industry partners. That program's happened and it's my understanding that we've had about 950 firefighters who have actually gone through that program already out of—I think they've got about 7,000, or just under. So we're actually doing a fair bit of training in that space for those agency staff.

The ACTING CHAIR: You noted that it was mandatory for Fire and Rescue. Does that mean it's not mandatory for the others? In particular, I'm thinking in terms of the tow truck drivers, people like that who are likely to be some of the first responders.

JASON DARNEY: I'm aware of, and TAFE NSW has worked with, Fire and Rescue. It's mandatory in that space. I'm not aware of other agencies making it mandatory. Certainly, from my perspective, we're providing the training and happy to work with any of the agencies that look to make it part of their core business.

The ACTING CHAIR: We are getting close to time and, given that we have satisfied everybody, I think we can wrap that up. Thank you very much for appearing at the Committee today. You'll be provided with a copy of the transcript of today's proceedings for corrections. The Committee staff will also email any questions taken on notice from today and any supplementary questions that come from the Committee. We kindly ask you to return these answers within 14 days of receiving the questions.

JASON DARNEY: Certainly will. Really appreciate your time.

The ACTING CHAIR: The Committee will now take a short break and return at 11.45.

(The witness withdrew.)

Mr JOHN TANSEY, PSM, Executive Director, Policy and Delivery, NSW Fair Trading, affirmed and examined

The ACTING CHAIR: I welcome our next witness. Thank you for appearing before the Committee today to give evidence. It's much appreciated. Please note the Committee staff will be taking photos and videos during the hearing. The photos and videos will be used for social media on the New South Wales Legislative Assembly's social media pages. Please inform the Committee staff if you object to having photos and videos taken. Can you please confirm that you have been issued with the Committee's terms of reference and information about the standing orders that relate to the examination of witnesses?

JOHN TANSEY: Yes, I have. Thank you.

The ACTING CHAIR: Do you have any questions about this information?

JOHN TANSEY: No.

The ACTING CHAIR: Would you like to make a short opening statement before we begin questions?

JOHN TANSEY: No.

The ACTING CHAIR: We will move on to questions from the Committee. Before we begin the questions, I wish to inform you that you may wish to take a question on notice and provide the Committee with an answer in writing. I'll begin. How does NSW Fair Trading collaborate with other government agencies to ensure the safety of light electric and hybrid vehicles?

JOHN TANSEY: We collaborate with government partners, both across New South Wales government and States and Territories, on a range of electrical safety issues. I would emphasise at the outset that our particular responsibilities that are enlivened in this space mostly relate to consumer electrical safety and the way people buy

and sell and safely use electrical items. Particularly for us, it's more down the light vehicle end of the consumer goods spectrum: e-bikes, e-scooters, e-skateboards, hoverboards. We don't have a particular regulatory role or set of responsibilities related to vehicles as they relate to transport. Where those consumer safety—in particular, consumer electrical safety—responsibilities are enlivened, we work with our colleagues across government, across industry and other community stakeholders and, as I said, all levels of the Federation, so local government, States and Territories and the Commonwealth.

Mr MATT CROSS: Thank you for coming today. Can I start by saying I'm a big fan of all the work that Fair Trading does. There's a lot going on behind the scenes and I just want to say it's one of the agencies that I'm most impressed with. In relation to, particularly, e-bikes and e-scooters, are their current gaps in the regulatory frameworks in New South Wales?

JOHN TANSEY: I don't think I would say that there are outright gaps at the moment. It's certainly the case, and I think it's part of our evolving experience, that some of the activities and some of the issues around these light transport vehicles are relatively new, so some of the issues and some of the risks that are emerging are relatively new to us. I would say that, particularly in comparison to other devices where batteries, and particularly lithium-ion batteries, have been part of their use and make-up for longer term—for example, in power tools and other household appliances, these kinds of batteries have been used and part of manufacturing and part of safety standards for a long time. But, as we all see in our daily life as people whizz past us, the extent of use and the use across the community now of these light transport devices seems to be increasing every day.

At the moment, where these things are used and sold as consumer goods, essentially, Fair Trading has powers—variously under general consumer laws but also our specific consumer safety laws—that allow us to take regulatory action against these devices, proportionate to the risk of the devices. The emerging questions are whether these devices are coming to be used or be manufactured and sold in a way that changes our perception, as a community, of their safe use and any risks, and whether or not that might require a different regulatory response over time. But, at the moment, we have powers to take action against these devices if there are risks or other consumer protection issues.

Mr MATT CROSS: How hard is it to take actions when a lot of these batteries are being imported from overseas?

JOHN TANSEY: If you look at them, particularly under the Gas and Electricity (Consumer Safety) Act— which is, as the title suggests, really targeting electricity and gas appliance and installation safety for consumers— it has powers in it that attach to the supplier or manufacturer. You're correct, of course, that some of these things will come from overseas. But where we may not be able to pursue, for example, a manufacturer in a foreign country, if they're supplied into New South Wales or sold in New South Wales we can follow the supply chain to that point. We have powers to interdict them on the shelves of a store, or at a point of supply otherwise, if we have concerns about a particular device.

Mr MATT CROSS: The New South Wales Government put in a submission to the inquiry. Did Fair Trading contribute to the submission, or was it asked to contribute?

JOHN TANSEY: Yes, we did. Sorry, I haven't looked at it in recent days, but there were elements in there around some aspects of the consumer safety regime but also looking at one of the other current areas where it pops up for us. It's not directly related to the consumer devices I am talking to, but we are responsible for motor dealer and repairer regulation as well. We're actively doing a piece of work, which I think was reflected in the government submission, looking at whether or not people operating them—and I'm talking heavier vehicles and road vehicles—are currently adequately trained. Specifically, from our point of view, is the licensing framework now recognising the proliferation of electrical vehicles, and do we need to reform that part of the law over time to make sure that—you can imagine people will come to be specialist dealers and/or repairers in electrical vehicles only, perhaps, and we need to look at how the licensing framework evolves to keep pace with that technology and specific skills and capabilities.

Mr MATT CROSS: I am really glad you were able to contribute because I know Fair Trading has so much important work that should be included in the submission. The submission has an international case study of New York City and states:

> In September 2023, a new law came into effect prohibiting the sale, lease, or rental of e-bikes and e-scooters (or their batteries) that do not meet industry standards.

Is that something that Fair Trading is monitoring and potentially could happen if the batteries in e-bikes and e-scooters don't meet industry standards?

JOHN TANSEY: I can't say I am actively monitoring New York as an even bigger, more dense metropolis than our own. But, broadly, monitoring and developing a necessary response to the issue of lithium

ion batteries, as I said, particularly in the lighter-end vehicles, is absolutely something that we're keeping an eye on and actively involved in now, both working with our colleagues at the ACCC, at the national level, and also with colleagues here in New South Wales, around battery fire safety.

Mr MATT CROSS: I'm glad you mentioned the ACCC. So you have had correspondence or meetings with the ACCC in relation to, in particular, e-bikes and e-scooters?

JOHN TANSEY: We've engaged with colleagues at the ACCC over time. There would be somebody in our agency, pretty much every day of the week probably, talking to colleagues at the ACCC and other States and Territories, whether it's about general product safety or specific issues around this electricity. The significant report that the ACCC did last year, we took an interest in and contributed to. We're participating in the formal national electricity taskforce that was established out of that ACCC report to look at potential changes to improve and harmonise electrical safety regulation in the consumer space around the country.

The Hon. NATALIE WARD: Thank you very much for coming along, Mr Tansey, and for your contribution to the Government's submission and for your assistance with the Committee today. It's a big task you have. We've heard from some of the other witnesses about the evolving technology. There is a lot of changes going on in this space internationally. Whilst I appreciate your purview is New South Wales, I was pleased to hear that you're doing some work nationally because it seems there are some gaps, and that's what I'm interested in addressing. Part of our task is to make recommendations about steps going forward. Given that evolving technology and given, already, lack of a national code to deal with existing technology, can you speak to the sort of work that you're doing proactively? Because the concern, potentially, is that we deal with one EV area, and the technology is evolving so quickly that we're being quite reactive to that. Is there some proactive work going on to address that, and what are the priorities, from your perspective, to address those gaps?

JOHN TANSEY: If I can try and take that in stages. At the national level, as I already referred to, Treasury and Finance and the ACCC are leading the national electricity taskforce that came out of the ACCC report into lithium-ion batteries. That's particularly directed at looking at the specific aspects of electrical safety regulation. I think the general thesis in the ACCC report was that they did not see this as a very generalist consumer issue. I think they identified themselves as having the greatest range of capabilities and responsibilities in general consumer and fair-trading protection. Their report identified that there were aspects around these devices that needed more specialist expertise, in electrical safety in particular, and in our federated system that's a responsibility that falls to the States and Territories. It's been in that sense that we're working with them at looking if this needs specific action focused on electrical safety rather than general consumer protection. Yes, that sits with the States and Territories—absolutely I agree with that.

And then is there sufficient interoperability or harmonisation or consistency—whichever word you want to use—of our respective electrical safety laws to make an effective national net? We are absolutely contributing to that work, which will continue through to the middle of the year and then report back, essentially, to Treasurers through the Council on Federal Financial Relations. I think you're looking at that as an electrical safety regulation issue, potentially with some economic impact as well. We're contributing at that level. That's very much around black-letter law powers and regulatory powers, and then all the operational powers that come from those.

Closer to home we're part of—and I think my colleague from the EPA is appearing later this afternoon—the battery safety group that they've set up in recent times. That's the EPA, ourselves, Transport and Fire and Rescue looking at that. That's very much looking closer to home at the way people are using devices and vehicles and consumer goods all day every day, and where the emerging concern about the lithium-ion battery power source, particularly, is emerging. We're contributing to that, and that is looking at our collaborative whole of government response and awareness of issues, emerging issues, and our capability to coordinate and respond to those. That's looking at education and information. It's looking at, you would say, the life cycle of batteries from their production to their use in consumer goods to when they're disposed of and enter the waste stream. But I'll leave Tony Chappel to talk a little bit more about that.

We are monitoring that. We do have colleagues within Fair Trading whose core role is looking at electrical safety. It's not that lithium-ion batteries are the only issue they're looking at, but we monitor that situation and it's already part of our established operational mode when we're doing inspections or sweeps of stores, or set out to do dedicated campaigns looking at these e-devices and their batteries that we're monitoring. Where we find any non-compliance, we're able to take action to be the interdict, or impound or remove goods from sale now.

The Hon. NATALIE WARD: Forgive me if you've covered this, but it sounds like you are being proactive, which is great, and you're regulating the stores, as you said. But we all know that there's plenty of consumers that can click on Amazon and import something, and who knows what that technology is. Is that part of your remit, to deal with that as well? Obviously we need a coordinated approach here.

JOHN TANSEY: There's a couple of elements where I would say that, yes, that's part of our remit. One of the key things that we focus on is trying to assist and inform consumers to know what they're dealing with and to safeguard themselves in the first instance. Trying to provide information to them so that they're aware of safe use and operation of devices is critical, and I think it's particularly pertinent to some of the incidents we're seeing with e-bikes and e-scooters. There can be operator error—not the fault of the device, but we as fallible humans—in how we use these things in our everyday life that crystallise the risk.

We are absolutely looking at that, but we also need to look for any need where our regulatory disposition needs to change, if the nature of incidents change—I'm aware of the way these batteries are used in everyday life today, but who knows whether or not tomorrow they might change. As I answered in earlier questions, obviously our particular regulatory powers tend to stop at the State borders, but then the strength of our regime is we can take action within the jurisdiction. Sorry, Ms Ward, going back to your question, yes, we'll look at how things are brought in; yes, we'll look at the risk of imports; and, yes, a lot of our information will be helping people to understand the risk of buying overseas. There can be relatively less certainty and it can be a lot harder to pursue normal consumer rights if the point of sale is overseas and basically outside of your reach. So, we help people to understand that. A very strong focus is on safe sale and safe use within New South Wales and, as I said, particularly helping people to understand some of the risks they can bring to light themselves if they don't use these things safely.

The Hon. NATALIE WARD: I appreciate your and all of your team's work on that. Obviously you can't control everybody, but it is very easy as a layperson to click on Amazon and buy some hoverboards for your kids, and they arrive by post and there's no interaction. When you're talking about educating those consumers—I'm happy for you to take it on notice about what work Fair Trading is doing to look at that, because that may or may not reach those consumers. There may not be an interface between them and—I don't mean to blacklist Amazon—whoever they're buying through. It's very easy to click and collect and suddenly these things arrive and they may not even be aware of the dangers let alone the potential for—and e-bikes are the same and we're seeing those dangers arising more.

JOHN TANSEY: I would say, obviously, we all know online buying and selling is nothing new in our lives now. It's been around for years and decades.

The Hon. NATALIE WARD: I wouldn't know; I would never indulge.

JOHN TANSEY: Not only in relation to these devices but generally with consumer goods and sales now, yes, we do a lot of work informing people about some of the safety tips and some of the risks of buying online. Yes, we work with some of those major platforms and generally have cooperative relations with them in enlisting their assistance. For example, if we find an online trader or particular goods that are on sale online on a platform, we can and do work with those platforms to help them understand that those products are not safe. If they're not safe to a point where they are not lawfully able to be sold in New South Wales, we work with them to have those things removed. So we have, not just in this domain but in other consumer goods, capacity to work with all those platforms to do that. I would also always say to consumers that if they have poor experiences, if they have concerns, they can and should contact Fair Trading directly to find out what other assistance we can give them. If they've bought a product, they're worried about its safety and they want to understand more, or they believe they know it's unsafe or defective, we absolutely will assist them to try and get that product removed, returned and replaced, or otherwise refunded with a safe product if that's the outcome they're after.

The Hon. NATALIE WARD: Can I invite you to take on notice what steps you are taking?

JOHN TANSEY: Sure.

The Hon. NATALIE WARD: At what point does the intervention occur and where does that pop up? Because I literally just went "Amazon, e-bike" and it pops up. I get no warning, I get nothing else and I can put that in my basket and off I go. I can get electric bikes sent to me while we're sitting here. I am just wondering at what point we get that intervention. I appreciate that's a very huge and difficult task, but if you could perhaps assist us to understand what steps are being taken, we can perhaps look at recommendations around assisting you and others out there to be safe. Because if I'm a mum sitting here clicking away, it comes up with, "Where do we send it?"

JOHN TANSEY: I'm happy to come back with further information about how we inform people so they know what they're dealing with online. I think the other thing, as I said, is—however that is then purchased—if we believe there's a case and have the evidence that it is not a safe and compliant product, we can absolutely work with consumers to protect them and get consumer redress.

The Hon. NATALIE WARD: If you could help us understand the specifics of how you do that it would be very helpful.

JOHN TANSEY: Yes, sure.

Mr ROY BUTLER: Mr Cross and Ms Ward have stolen my thunder a little bit. By way of background, the reason for this line of questioning is because the evidence we've been presented is that the bulk of fires that we've seen with lithium batteries occur in lower quality personal mobility devices such as e-scooters and e-bikes as opposed to electric vehicles. I guess that's why we're going down this road. I'm interested in the safety standards that you require for these devices and, I suppose, how you enforce those. I do have a follow-up question for you but, in the first instance, what are the standards that you enforce and how do you enforce them?

JOHN TANSEY: Under the electrical consumer safety Act there are graded levels of safety requirements and then standards that attach to them. Under that Act, all products sold in New South Wales must meet—I'll look at my notes for the standard—AS/NZS 3820, which is the essential safety requirements for electrical equipment. In order for an item to be lawfully able to be sold in New South Wales it must, at a minimum, meet that standard. That's what would currently apply to these items that we're talking about, particularly when we're talking about e-scooters, e-bikes et cetera.

Then, across the whole gamut of electrical items that are out there, if a product is deemed to be of a different or higher risk, greater levels of prescription can be applied to the safety checking and approval of that item. And then where there might be, whether it's the Australian and New Zealand standard or another international standard, they can be required to comply with, or proactively demonstrate compliance with, that different standard—especially where it's more specific to the item. So where there is an Australian standard or an international standard specific to a device, you can more directly track the safety.

In relation to these devices—where they're required to comply with that general safety requirement—in our inspection compliance activity, as we're going out through retailers or other suppliers of these goods, we can take action to question and satisfy ourselves whether or not goods meet that standard. If we're satisfied we don't and can prove that, then we can take action to either remove them from sale, cause a recall to be done or what have you. But for most of these devices that currently applies at that general safety requirement level.

Mr ROY BUTLER: Has NSW Fair Trading successfully prosecuted or penalised suppliers of personal mobility devices where fires have occurred?

JOHN TANSEY: I might take that on notice. I think the answer is no, in terms of prosecutions, but I would like the opportunity to take it on notice and just verify my facts. I'm aware that most of the actions we've taken against these items over recent times have actually been to intervene in the marketplace, identify them where we believe they're unsafe, remove them from sale and then cause the retailers to either no longer provide the particular items we've identified and, in a number of cases, successfully work with that supplier to get the items returned—up to hundreds in at least one case—and replaced with a safe item. Quite often our focus will, rather, be on getting an unsafe item off the shelves and out of the supply chain, and on making sure that any out there are also recalled and removed and replaced with a safe item. But I'll take on notice if there's been any other prosecutions or fines et cetera.

The ACTING CHAIR: I'm a little mindful of time, so we'll wrap up at this stage. Thank you for appearing at the Committee today. Your input has been much appreciated. You'll be provided with a copy of the transcript of today's proceedings for corrections. The Committee staff will also email any questions taken on notice from today and any supplementary questions from the Committee. We kindly ask that you return the answers within 14 days of receiving the questions.

(The witness withdrew.)

Mr TONY CHAPPEL, Chief Executive Officer, NSW Environment Protection Authority, sworn and examined

The ACTING CHAIR: I would like to welcome our next witness. Thank you for appearing before the Committee today to give evidence. Please note the Committee staff will be taking photos and videos during the hearing. The photos and videos will be used for social media purposes on the New South Wales Legislative Assembly's social media pages. Please inform the Committee staff if you object to having photos or video taken. Can you please confirm that you've been issued with the Committee's terms of reference and information about the standing orders that relate to the examination of witnesses?

TONY CHAPPEL: Yes, I have. Thank you, Chair.

The ACTING CHAIR: Do you have any questions about this information?

TONY CHAPPEL: No.

The ACTING CHAIR: Would you like to make a short opening statement before we begin the questions?

TONY CHAPPEL: Firstly, I'd like to acknowledge the traditional custodians of the land on which we're meeting, the Gadigal people of the Eora nation, and extend my respect to their Elders past and present. The NSW Environment Protection Authority is committed to addressing climate change and crucial to that is ensuring our State achieves net zero emissions. Batteries of all kinds will play an important role in this decarbonisation journey, particularly in the transport industry with the transition to electric and hybrid vehicles. But the EPA also recognises the potential harm that batteries can cause, both to human and environmental health, and is thus committed to ensuring that there are appropriate safeguards in place. These safeguards need to apply to the whole life cycle of a battery from design and manufacturing to use, collection, transportation, repair, re-use, resource recovery and, where necessary, safe disposal.

Since 2003 the New South Wales Government has been providing household problem-waste services of various kinds, including for the collection of batteries. During that time, we've seen a significant increase in the use of lithium-ion batteries and, more recently, an increase in the number of fires attributed to these batteries. The risk of fires is a significant concern to the EPA and an area where we are working closely with Fire and Rescue NSW, other government agencies and industry stakeholders to examine solutions. Currently, the EPA's household problem-waste services focus on batteries generated in a home context and do not extend to include the collection of electric car batteries. Electric vehicle batteries are generally serviced at vehicle repair facilities and are best managed from these locations when they reach end of life. Ideally, product stewardship of EV batteries would sit with obligations at producers and retailers, and the car industry would seem best placed to manage the end-of-life options for these batteries.

When it comes to e-bikes and e-scooters, the EPA has been advised by Fire and Rescue that fires caused by these products are particularly prevalent. The prevalence of fires can potentially be attributed to the minimal regulation and quality control that we observe for both e-bikes and e-scooters. These products can and often do end up in homes when they reach their end of life, and the EPA's household problem-waste services do manage them through household chemical clean-out events and community recycling centres. However, there's certainly more that can be done to minimise and mitigate the risk of fires from these types of batteries.

The EPA is exploring a range of options, including how different government departments can better collaborate on education campaigns to address the safe management of these batteries and end-of-life e-bike and e-scooter batteries. Ideally, these would include a wide range of measures to be delivered by the producers and retailers of these products, including design standards to improve quality; safe and convenient collection, handling, storage and processing; disposal options for faulty, damaged or illegally dumped batteries; as well as, of course, consumer education. Funding and support to progress these measures will be critical to bringing producers and retailers on board with this work.

In summary, the decarbonisation of New South Wales is a complex task but one that is critical. The New South Wales EPA is committed to ensuring, as our State works to meet our net zero aspirations, batteries can play an important role in emissions reduction. At the heart of our work is protecting both the community and environment, so we're focusing on ensuring that there are proper safeguards and regulations in place to ensure the risk from damaged batteries is minimised.

The ACTING CHAIR: We will now move on to questions from the Committee. Before we begin questions, I'd like to inform you that you may wish to take questions on notice and provide the Committee with an answer in writing. I'll begin. We heard a little bit earlier from Fire and Rescue about some of the concerns regarding contaminated water in the mitigation of electric vehicle fire or small vehicle fire. How can the environmental impact of electric and hybrid vehicle battery fires such as this contaminated water run-off be managed in urban and regional areas?

TONY CHAPPEL: I'll give an answer but perhaps take the full detail on notice so I can give you a complete answer, but we have pretty extensive arrangements for managing fire water run-off in a variety of sensitive contexts. Towns like the Blue Mountains that sit within very sensitive national parks, other parts of Sydney that adjoin national parks—we regularly work with Fire and Rescue to make sure the fire water is contained and then appropriately treated and disposed of. I know that thermal runaway events often require extensive effort to extinguish. I imagine the challenge is simply a magnified version of what we are already dealing with in a variety of contexts, but I'll take on notice any other specifics, if that's all right, Chair.

The ACTING CHAIR: Yes.

Mr MATT CROSS: Thank you, Mr Chappel, for coming today and thank you also to the EPA for putting a submission in. It's very valuable for the Committee. In the submission I note that—and it comes across as common sense, but I'll repeat it anyway—batteries of any kind and products containing batteries should not be put in kerbside council collection bins. I understand the EPA has partnered with local councils to collect batteries at all community recycling centres. How is that going?

TONY CHAPPEL: It's perhaps making a difference but not the level of difference we need to make. The proliferation of batteries expands significantly year on year. They're in things like pregnancy tests now, children's shoes—when you see kids running around with their shoes lighting up, there is an embedded battery there. For a lot of these products, you can't take the battery out and it's not safe to remove it. Any of these batteries—if they're compressed when there are garbage trucks that collect them and they've been put in the red bin inappropriately— potentially can create a fire risk and, as we've just alluded, that fire can be hard to extinguish. We're seeing far too many of those fires. The waste industry is at the front line of dealing with a lot of those day by day because people —without, I think, any bad will—put them into the red bin or even the yellow bin, mistakenly thinking that's the safe or appropriate place for them to go.

Through community recycling centres and chemical clean-out events, the EPA works with councils to try and highlight the range of products—and batteries are one, but they're a particular challenge, because of the fire risk when they're damaged, to take in a safe way to a safe disposal area where they can be dealt with. It is fair to say that the infrastructure to do that will need to expand as we use more batteries. The other issue which, of course, we don't deal with through those services is batteries that are damaged or modified by people at home and then create a fire risk in the home. We can't touch that side through the collection, but it is quite striking the number of multi-cell batteries that end up either on what we call a MRF—which is a mixed recycling facility where people are separating the waste and it goes into different streams, and it can cause a real problem there—or just in the back of a garbage truck.

Mr MATT CROSS: It says the EPA has partnered with local councils. Is that every single council in New South Wales?

TONY CHAPPEL: I know our aim is to cover every council. I don't think we quite cover every council, but I'll take that on notice and give you an accurate answer.

Mr MATT CROSS: If you're able to, in that question on notice, list all the councils you are partnered with, I think it would be helpful to the Committee to know where the gaps are. My final question is in relation to illegal dumping. Are you seeing an increase in relation to illegal dumping when it comes to batteries either from e-scooters and e-bikes?

TONY CHAPPEL: Not so much from scooters, but certainly batteries in things like vapes. I mean, you just have to walk down George Street and you'll probably see one. Again, these embedded batteries are prolific and a real challenge. I'll take on notice if we've seen any uptick in scooters and e-bike dumping.

Mr ROY BUTLER: Thanks, Mr Chappel, for being here today. I acknowledge the EPA's regulatory role in regards to waste transfer stations and tips, contaminants and all those sorts of things. Across regional New South Wales there are hundreds of waste transfer stations. We've moved on from pushing it into the ground and pushing dirt over it; now we sort it a bit. We do have e-waste in those waste transfer stations but there's no guidance at the e-waste station. There's a separate place where, generally, lead acid batteries or chemical containers are collected but there's no guidance at the e-waste station that that should also include lithium batteries. I don't know how, but there needs to be some way of educating regional New South Wales—at least putting signage at those waste transfer stations. I'm wondering how the EPA is going to ensure that there is compliance with that moving forward, with the proliferation of batteries, as you've alluded to.

TONY CHAPPEL: I think it's also going to be a question of resourcing for some of these councils or the operators of these stations, because it is a relatively new challenge. I know we've had e-bikes for a few years now, but a number of these programs were really designed for lead acid batteries. The infrastructure for collection and then transport and removal sometimes will need to be updated. There are some councils that are already quite sophisticated in how they engage with lithium-ion batteries, but I think there is a new program of work that's required. I'm happy to get the particulars of what our current thinking is on what that infrastructure need might look like and come back to you on notice.

Mr ROY BUTLER: That'd be great. Thank you very much.

The Hon. NATALIE WARD: Thank you, Mr Chappel, for coming along today and for your assistance and provision of a submission. You're a regular appearer at our inquiries so we're grateful to see you again and for the work that you do. We've heard this morning from Fire and Rescue and frontline services about the evolving technology and, appreciating what you've just said, there seem to be a lot of these embedded batteries also out

there. With all of that—and we've heard about this emerging technology—can you talk about how the EPA is addressing that and working with Fire and Rescue? I'm a layperson but I'm sure there are different disposal processes and challenges presented by each of those. Can you speak about what is being undertaken? Given that we have a job to make some recommendations, can you help us with your thoughts on what might be the way forward and what you see as some of the challenges that we need to be addressing?

TONY CHAPPEL: Thank you for the question. There are a number of elements that you've touched on. There is some quite promising chemistry, which is much less prone to damage leading to fire risks, that's now available through a few niche suppliers in terms of home batteries.

The Hon. NATALIE WARD: That's the first good news we've heard all day.

TONY CHAPPEL: Perhaps on notice I'll come back with the—it still uses lithium but it's a different version of chemistry and different to what you find in a power wall or those other products. Obviously, it's not yet in e-bikes or e-scooters but I do think there's room, probably, for policy nudges to help bring that kind of chemistry in to how we think about electric transportation and mobility. In terms of the work we're doing with other agencies, it probably has three main elements.

One is around education. Within the resources available, we've already partnered with Fire and Rescue and done a number of social media campaigns to try and remind people that the first fundamental point for disposal is "Do not put batteries in your red bin or yellow bin, or any bin; you need to use your council specialist waste collection service." There's more that we can do on education. Education goes also to how people use these things and reminding them not to try to tinker with it or get the wrong charger. Some of these cheaper batteries—I understand that when you put another manufacturer's charger into it you can damage it and actually create serious fire risks and so on. Education is a major focus. In policy terms there's what I alluded to before with Mr Butler's question—the infrastructure and supporting architecture for collection and safe disposal. That's a major focus that we're doing some work on—and not just for batteries, but including for batteries—as we think about material flows and waste and recycling.

The third area, which I think is perhaps the most prospective in terms of solutions, is looking at how an enhanced producer responsibility scheme might operate. It's where the producers and retailers of these products have an obligation—and it's built in to the cost—to support the recovery and safe return of these products when they're either at end of life or damaged. That's something that, ideally, would be national and I think there are lighter- and heavier touch versions of that. We've seen other producer responsibility schemes, like the Return and Earn scheme, that have been very successful at a State level and are now being copied by other States. We're certainly keen, as a State agency, to progress that. We are in conversation with the Commonwealth but there's a national process—it's not called COAG anymore—that's working forwards probably slower than we would like. I think that's a challenge. The thinking for us is how do we help enable more rapid progress at the national level, or something that can be replicated nationally, if the national outcome is not on the table.

The Hon. NATALIE WARD: The Committee has heard about the lack of a coordinated national approach code and that will only, I assume, get more complicated as more technologies evolve. We are the recipient of those, whether through Amazon, eBay or regulated retailers here. I would've thought that that is probably an ongoing and large task for the EPA and your colleagues because it's continuing to emerge.

TONY CHAPPEL: It is. We have a battery stewardship scheme, which is a voluntary scheme and came out of the lead acid battery world, but it would be relatively straightforward, for example, to require retailers to be members of a scheme like that or an accredited scheme. That would give us an ability to have some quality control in terms of the take-back requirements and so on. Those solutions are always best nationally delivered when it's a retail product. There are ways to progress it because it does seem like, whether it's because of our population density or other reasons, we're feeling this problem a bit more acutely than some of my colleagues in other States are yet. I suspect we're a postcard with their future on it. Some of the other States don't feel perhaps quite the same urgency and don't see the risk in quite the same way we do—as starkly.

The Hon. NATALIE WARD: I guess part of that could be almost an incentive scheme for responsible—if we're looking at recommendations and thinking outside the square, potentially some retailers could be seen as best practice retailers and we'll buy from them because they incentivise the return and proper disposal of these items. Is that something that you might consider? I know that's a very big picture and it's probably outside your remit.

TONY CHAPPEL: Yes, it is. My only counsel on that would be that some of the best e-bike retailers already run versions of take-back schemes, as I understand it. They obviously charge a premium for that, so there'll always be a market for the best practice, but I think our challenge is the bottom end of the market. We want to raise that standard so that everyone has some basic rules about responsibility for these things and how they can

be taken back. I'd be very supportive of that approach. My experience would say that it's more likely to be effective if it was a mandatory scheme—that retailers had to be accredited to if they were going to sell in our jurisdiction.

The Hon. NATALIE WARD: Presumably that's only a small portion of the market. While we're here, I can get my fat tyre bike with suspension for $699 on Amazon that can be delivered—obviously not a retailer where I go into the store. Then, looking at pickups, I can schedule a pickup of my old e-bike for easy removal regardless of where I am but I have to pay for that as well. I would've thought that the cost incentive for people—you're buying it cheaply online because it's cheaper than your responsible Australian regulated retail store and you probably don't want to fork out, in cost of living times, for someone to take it away properly. We face all of those challenges. In our recommendations that would be something we need to consider so that we can find a way that's cost-effective, but also easy for you to implement, so that we can engender that proper disposal and purchasing in the first place. Is that something you'd agree with?

TONY CHAPPEL: Yes, I think that's right. The container deposit scheme is not the template, but it's a useful example. Every provider, whether they're an importer or a local producer, is covered by it. The cost, because of the scale, is minimised. The infrastructure is delivered and the consumer sees the benefit of that through lower litter and more recycling. But also, if they choose to, they can get that deposit back themselves. Some sort of program of stewardship like that, that is universal for the people making or retailing these products, is probably our view of the best way to solve those issues.

The ACTING CHAIR: We heard earlier about some concerns in planning controls, particularly with more dense buildings and underground car parks, removal of contaminated water and removal of toxic smoke. Has the EPA been working with the department of planning on changes to building codes to factor in potential EV fires in underground car parks?

TONY CHAPPEL: I'll have to take that on notice. I know we've been engaging with our planning colleagues on a whole raft of waste recycling and other collection and management issues for the apartment design standards and the pattern books. I think our understanding is that, generally, the four-wheel electric vehicle catching fire in the car park is much less of an issue than bikes that have been tinkered with or plugged in at home. But I'll take it on notice for you, Chair, and come back with an answer.

The ACTING CHAIR: Thank you for appearing at the Committee today. Your input has been incredibly valuable. You'll be provided with a copy of the transcript of today's proceedings for corrections. The Committee staff will also email any questions taken on notice by you today and any supplementary questions from the Committee. We kindly ask that you return the answers within 14 days of receiving the questions.

(The witness withdrew.)

Mr TONY SMITH, Assistant Commissioner, Customs, Australian Border Force, before the Committee via videoconference, affirmed and examined

The ACTING CHAIR: I welcome our next witness. Thank you for appearing before the Committee today to give evidence. Please note the Committee staff will be taking photos and videos during the hearing. The photos and videos will be used for social media purposes on the New South Wales Legislative Assembly social media pages. Please inform the Committee staff if you object to having photos or videos taken. Can you please confirm that you have been issued with the Committee's terms of reference and information about standing orders that relate to the examination of witnesses?

TONY SMITH: Yes, thank you, Chair, I have.

The ACTING CHAIR: Do you have any questions about this information?

TONY SMITH: No, I don't.

The ACTING CHAIR: Would you like to make a short opening statement before we begin questions?

TONY SMITH: Thank you, Chair, I will take that opportunity. Thank you again for inviting me to the Committee today. As Australia's customs service, the Australian Border Force works with many Commonwealth and State and Territory agencies to enforce import prohibitions on a range of goods. Over the course of the 2023-24 financial year, there were approximately 91 million air and sea cargo consignments that crossed the Australian border. To physically examine this many goods would slow trade significantly, which is why our

interventions are either driven through intelligence or through the risk indicators built into our systems when goods are lodged for importation.

One of the roles of the ABF at the border is to protect the community against harm. When harm is considered, import prohibitions may be put in place to restrict certain goods from entering the country. In order for this to occur, the relevant government policy lead considers the impacts, seeks regulatory change by means of an import prohibition and seeks the ABF's support to administer that control at the border. The ABF does not initiate import prohibitions without the direction from policy leads, noting that subject matter experts exist within these policy agencies to guide prohibition in a way that delivers on the intent.

The ABF's remit does not extend to ensuring that products conform to domestic standards or performance levels where no import prohibition exists. I understand that the ABF is the only Commonwealth agency attending this hearing today, and I wish to use these opening remarks to share with the Committee that my input will be limited to the current legislative framework that supports the importation of goods in line with the terms of reference of this inquiry. From a border enforcement perspective, should an import prohibition be considered by the relevant policy agency, the ABF would require specific details that distinguish these goods from other like items in order to avoid a wide-reaching restriction that would likely have significant trade implications.

The ACTING CHAIR: We will now move on to questions from the Committee. Before we begin the questions, I'd like to inform you that you may wish to take questions on notice and provide the Committee with an answer in writing.

TONY SMITH: Thank you, Chair.

The ACTING CHAIR: If I may begin, which government agencies oversee regulations and policies relating to the importation of e-bikes and e-scooters? You alluded to a number of agencies, but which are they?

TONY SMITH: My understanding, from the intent of the inquiry, is that the Department of Infrastructure, Transport, Regional Development, Communications and the Arts, which I refer to as the department of infrastructure, is the primary regulator for road vehicles.

The Hon. NATALIE WARD: Thank you, Assistant Commissioner, for your assistance with the Committee today. I understand the enormity of your task, and I hear you that you can only work within the policy settings that you have. But can you help us to understand? Given that our task is not only to try and understand this but also to make recommendations for the future, we do need to look at what is possible. We've heard a lot of evidence about the fire risks and the risks of what I can, as a layperson, call inferior products or less regulated products being imported from overseas. Can you speak to what measures are in place at the moment to regulate those imports of e-bikes, e-scooters and hoverboards, for example? What is in place at the moment so that we can consider potential recommendations for what should be in place? Feel free and brave to make some recommendations or point to some gaps for us to consider. At the moment, what is regulating what can be brought in and brought out, and where are the gaps?

TONY SMITH: To answer your question in respect to road-going vehicles, which will include e-bikes and e-scooters et cetera, as I mentioned the domestic vehicle standards are managed through the Department of Infrastructure, Transport, Regional Development, Communication and the Arts. The facilitation process for these goods includes the ABF confirming that imported vehicles have the appropriate import approval. These import approvals are generally provided by importers' customs brokers during the lodgement of import declarations. In the event that it is not provided at this time, the ABF would not release goods out of customs control until such time as they are provided. To go back to the point in terms of what current mechanisms are in place, to this inquiry, there are no import restrictions or import measures in place to restrict e-bikes coming through the border. Our process from the ABF is to confirm that the import vehicles have the appropriate import approval, and that appropriate import approval is managed through the department of infrastructure.

The Hon. NATALIE WARD: So you just see that they've, essentially—and I'm not having a go—ticked the box, and you sign off on that? You don't have any powers of inspection or opening them or anything else like you do, perhaps, with other prohibited substances? I am an avid watcher of your Border Force program, and they're scanning the things and they look inside. So you're not looking to do that within the packaging to any extent; you're just looking at the paperwork to say, "Has it been signed off for their import of this product?" Is that correct?

TONY SMITH: From a regulation perspective, if I drove back to my earlier comments in the opening remarks, like I said, approximately 91 million goods come in through air and sea cargo. So we use intelligence and we use information and profiles to be able to target our interventions. In the realm of what we're talking about here with vehicle standards or importing road-going vehicles, if we have intelligence or information or certain descriptions in the import—a description that actually leads us to the point of wanting to intervene or needing to

intervene—we'll take that approach and intervene. We wouldn't tick the box in terms of saying, "Import approvals are in place so therefore it's free to go." We will apply our lens of profiling, targeting and intelligence against that and if there's something to suggest that goods aren't conforming to the import approvals or are suspected of any other illicit activity, that's when we would target and intervene with those goods.

The Hon. NATALIE WARD: That's very helpful and I'm very appreciative that you do take those extra steps. It's obviously an enormous task and you have a lot else to deal with. I can literally, as we're sitting here, click on Amazon and buy my fat bike tyre with hydraulics. I don't know where it's from or who's sending it to me, but it looks good and it's the cheapest one on there at $699. I can get that sent through, but you're saying that there would be some regulatory power at some point to say that transaction, that particular bike or that importer doesn't have that ability before it's shipped, or at some point in shipping?

TONY SMITH: That's correct. It would be at some point in shipping. Where the import application has been put through to the system, it would have to have been provided with a range of documents to support it. As I've mentioned with the importing of road-going vehicles, they would generally work through a customs broker. The broker's role is to ensure that all of the appropriate paperwork and due diligence is undertaken and that that is lodged into the systems. If goods are under customs control and under the power of the Customs Act 1901, whilst the process of importation is underway, it is the ABF that would look across the intelligence that supports any targeting of those goods, would look at whether it conforms to the standards that are required from an input policy perspective, and then release the goods. If there is any suspicion that the goods that are being imported don't align with what the documents are saying, or the import permits are not in place, the goods remain under customs control until such time as we are comfortable that the goods can be imported.

The Hon. NATALIE WARD: Have you got a big stockpile there of hoverboards and e-bikes that you have stopped?

TONY SMITH: I don't believe that we do have a big stockpile. From an importation perspective, the regulatory processes in place at the moment from the actual policy side of business is in line. There is no major backlog in terms of those goods coming through the border.

Mr ROY BUTLER: Thank you, Assistant Commissioner, for being here today. Assistant Commissioner, we've heard throughout this inquiry, and in the submissions, that the bulk of the risk that we're seeing is not coming from ADR-compliant road-going vehicles. The bulk of the risk seems to be coming from lower quality batteries attached to these personal mobility devices and the like. Given that this is a proliferation that's worldwide, do you have any examples of international jurisdictions that maybe are a bit ahead of us in Australia in the way they're managing this, where they've put some more controls in place to weed out those lower quality batteries that are higher fire risk?

TONY SMITH: No, thank you. I appreciate the question and it does come back to our role in terms of the border. In terms of the opening remarks that I make, we are, in effect, a marshal at the border, so we would represent the Commonwealth, State and Territory interests in terms of what would be prohibited at the border. I go back to the point that the policy owners, in terms of regulation, would advise the Australian Border Force where there are concerns in line with what you've just described—where there are safety issues in relation to consumer goods. That would be the policy experts that would drive us to the point of saying that an import prohibition needs to be in place. We would rely on those agencies—in this sense, the department of infrastructure or with the Australian Competition and Consumer Commission—to provide that level of information and go through the policy setting to tell us whether we should be putting those things in place. I don't have details that would guide us in terms of consumer product safety issues in relation to batteries. That is undertaken globally because that would be a role that would sit within those policy owners to drive forward.

Mr ROY BUTLER: Just to clarify, it's not Border Force who would be looking at those international jurisdictions and considering what other practices other countries are using to mitigate risk. That's policymakers who would be looking at that.

TONY SMITH: That's correct. It would be the risk that surrounds the actual goods and merchandise themselves—because, as you can imagine, there are hundreds of millions of goods that have come through the border—so we will rely on those agencies that will regulate those products to ensure that they inform us if there are any risks or concerns, and then we would administer that policy at setting at the border. Certainly, from a customs perspective—and Australian Border Force being Australia's customs agency—we are united with our customs administrations around the world and where issues are raised globally that other administrations are sensing, they would then share those insights and understandings. But I'm not privy to anything globally at this point from a customs perspective that has raised those sorts of issues with us.

The ACTING CHAIR: Are you aware of any fires that have taken place in containers on the docks, given we're talking about 90 million coming in? Have there been incidents that have happened on the docks that you are aware of?

TONY SMITH: Not that I'm aware of. I'm happy to take that on notice to check from the ABF's perspective. Docks, I can comment in relation to the premises that are administered by the Australian Border Force. As you could appreciate, from a dock's perspective or in the port environment, that is only a small piece of the environments that are under customs control and I'm not privy to any information to suggest that there have been any fires in any of the premises administered by the Australian Border Force. But, more broadly from a port perspective, I can't comment in terms of what's possibly occurred in those environments. From an Australian Border Force perspective, from a safety perspective of our own workforce, we've certainly got our measures in place should those sorts of incidents occur, but, again, I'm not privy to any information that that's happened.

The ACTING CHAIR: Thank you, because that's where I was going with the follow-up question: Is sufficient training being undertaken by Border Force to protect workers who may open a container and come across a smoke cloud?

TONY SMITH: Just to elaborate on that point, when opening containers, as you can appreciate, we're looking at a metal box. The reason that we are opening up containers or looking into consignments is that we have a level of concern about what could be inside them. We always approach every examination with a view to uncovering something that we're not expecting and certainly we have business contingency plans in place to be able to manage that should there be a fire in this instance.

The ACTING CHAIR: Along the same line, in your opinion, do the receival ports—the places, whether that's by sea or air—have adequate equipment, in the case of an incident occurring, to be able to mitigate the risk to surrounding goods and staff?

TONY SMITH: Chair, I think I understand your question in terms of port of embarkation. Is that the point of the question?

The ACTING CHAIR: Yes. When goods arrive, is there enough gear—right off topic, but just about every building these days has a defibrillator just in case. Do you have equipment that's readily available for workers to be able to combat a fire or does that have to be brought in by fire and safety crews?

TONY SMITH: I understand, yes. Thanks, Chair. I suggest that it depends on the level of hazard that takes place. Certainly, we've got first response measures across our facilities in terms of dealing with immediate incidents. We would then engage with emergency services at the right point depending on the level of hazard that takes place. But our processes and our response processes are practiced and documented and certainly are there to support our workforce in times of possible danger.

The ACTING CHAIR: Bearing in mind that you're an enforcement agency, what are the main challenges in enforcing importation policies on e-bikes and e-scooters?

TONY SMITH: Prohibition in itself, depending on the goods that are being prohibited at the border—you're right in identifying there is a level of complexity involved in identifying specific prohibitions. When it comes to things like the purpose of this inquiry—and I'll take for granted the focus here being in terms of lithium-ion batteries that would be included in these goods. Import bans of these types cannot necessarily focus purely on lithium-ion batteries that can be attributed to e-bikes or e-scooters. From a prohibition at the border perspective, identifying unsafe batteries or at-risk batteries would require subject matter expertise which means that ABF's role would be identifying whether there is a lithium-ion battery in a good and then having to refer those goods to subject matter experts to determine the safety of those goods.

We would not be able to administer a prohibition on lithium-ion batteries purely for e-scooters or e-bikes, noting that there are so many goods that come through the border with these types of batteries in place. Taking it more broadly, when a policy agency advises us in terms of prohibitions at the border, and it moves through legislative reform to enable that to occur, we have to be extremely specific in terms of identifying what is being prohibited: whether it is a component of a good, a volume of a component within a good or the goods themselves in whole—for example, weapons, knives, firearms et cetera. It depends on the actual commodity. But certainly, looking at the focus of this inquiry, a difficulty would be around the ability of identifying purely lithium-ion batteries that are attributed to e-scooters and e-bikes. Hopefully that answers your question.

The ACTING CHAIR: Just around the enforcement, what are the challenges that you face? I can imagine out of 90 million imports, how do you identify that Ms Ward's fat-tyred suspension bike that she's about to buy has come in from the backyard of someone in the middle of Kenya versus an authorised selling facility?

TONY SMITH: We have to work on the amount of detail that we're provided as the enforcement agency at the border. Noting that we would not want to stop trade and we won't want to slow trade down, we really do lean back onto the policy agencies to be able to advise us to the level of detail that allows us to keep facilitation of trade moving through the border as quickly as possible for legitimate trade, and allowing us to focus on when illicit activity has been identified. If there are elements of risks that can be identified through pre-arrival notification—looking through documents, looking through lists of suppliers or importers that are known to be importing unsafe goods—that enables us to be able to target those goods ahead of the border and make sure that we're putting our effort towards addressing those risks. We have to use a layered approach in terms of identifying as much detail as we can around prohibition and then putting that into our system and into our workforce to make sure that we're targeting the right goods at the right time.

The ACTING CHAIR: In your opinion, is that system working well? Just listening to it, it sounds like you're talking about multiple agencies across multiple different product lines. I imagine that the sheer complexity of that opens itself to errors being made. In your opinion, is there a way to improve that system, or streamline that?

TONY SMITH: I think it would be fair to say there's always a way of improvement, mainly on the fact that technology and information-sharing is increasing and improving every day. From a customs administration perspective—certainly not just confined to Australia but globally—we're all looking at the ways that we can improve data ingestion so that we can have a look at more information to be able to refine our targeting approach down to our focus point. And also looking at technology that could assist us as well. There'd be advancements in AI, advancements in other forms of screening technology and in information flow. Working with industry, working with our Commonwealth and State partners and overseas partners as well means that we're feeding this system as much information and as much detail as we can to make sure that our strike rate when we are examining—that we are actually identifying illicit goods—is as effective as possible.

It goes back to the point that from the Australian Border Force's perspective, like any other customs administration globally, we have this balance that we have to manage between facilitation and enforcement. If we were just simply to take an enforcement line on everything, then we would slow trade down. Our role in managing the border is to allow facilitation of legitimate trade to move through for trade growth or in terms of revenue—for so many reasons. We are constantly improving the way that we target and we are constantly improving the way that we ingest information to make sure that our workforce and our systems are focusing on the greatest effort and the greatest impact.

The ACTING CHAIR: What we're trying to do here as a Committee is put together recommendations for the whole system, so if there's anything that springs to mind regarding a noticeable gap—I appreciate the constant pursuit of excellence, and that's great to hear. But specifically in a New South Wales context around lithium-ion batteries, if there's something that could or should be implemented to make your job easier on the front line, it would be appreciated if you could offer something like that up.

TONY SMITH: I think I can, to a degree, and I think that one of the earlier remarks that I made links me to a degree because we have not been approached in terms of developing or administering an import prohibition for these goods moving forward. Therefore, I'd suggest that the level of detail that we would require is a bit unknown at this point. If I talk about it, generally or more broadly, in terms of any prohibition and where gaps exist, when regulating agencies can identify a potential risk that could be managed partially at the border, in terms of addressing that threat, then as much detail as possible to be able to drive down to exactly what the issue is that can be managed at the border. If you had to look through the lens of lithium ion batteries for e-bikes or e-scooters, if a control was to be put in place we would look for as much information that meant that we didn't have to examine every single e-bike or every e-scooter that came through, because it would slow business down completely. We would be looking for as much detail that can drive us to what would be safety risks and standards that aren't being met, and then supported by legislation for an import prohibition.

I think one of the key things that we really do emphasise, in terms of any prohibition, is that the border can't be the only point where things like this are managed. We stress the fact that, like in any commodity that needs to be prohibited at the border, we have to reduce demand or we need to educate our community in terms of understanding what is in danger and what is not in danger. We're coming at this from multiple angles, education being one, and you could look through the lens of e-bikes and e-scooters in making sure that importers understand the risks associated with buying goods that aren't authentic and that could run risk. And then also making sure that at the border we're contributing by identifying those goods as easy as possible. Unfortunately, I can't give detail of gaps that exist within e-bikes and e-scooter risks because we haven't been approached and I have no subject matter expertise in that field. But I can talk about goods in general in terms of what we need to administer to customs control.

Mr ROY BUTLER: Just a point of clarification: I don't think any of us want to see trade slow down. Specifically based on the evidence that we've had over several hearings, the concern was about some very low-quality batteries on particular devices. This isn't broadscale, "Don't bring in e-bikes or personal mobility devices." It's just the ones that are the higher risk. I can't speak on behalf of the Committee, but that's all that I understood that we were concerned about.

TONY SMITH: I think that answers some of the question in itself in the sense that when a policy agency can identify a narrow gap where a risk exists, and legislation can be passed to ban that as an import prohibition, we can administer that at the border because it would give us, like you say, the target in terms of what we need to be focusing on as opposed to a broad spectrum.

The ACTING CHAIR: In your opinion, should that be done at a Federal level rather than a State level? For example, New South Wales identifies a particular manufacturer of an e-scooter that is prone to thermal runaway and then people start bringing it in in Western Australia or South Australia. Does it make sense that that would be a Federal prohibition?

TONY SMITH: I think the best way to answer that is that for the Australian Border Force to administer an import ban effectively at the border a Commonwealth response does enable us to support that. I think that we do run risk of global trade infringements when we apply a border prohibition when a State or Territory still hasn't regulated that as a prohibited good because, theoretically, a State could still legally import a good but then at the border it's been prohibited and banned. So then you have that conflict between State and Commonwealth in terms of regulating the border. There are issues in terms of managing that. Again, broadly speaking for any prohibition, for us to administer at the border it is much more effective to be a Commonwealth-administered ban as opposed to State and Territory, but we would need to work in partnership with States and Territories to ensure it's effective.

The ACTING CHAIR: Thank you for taking the time today. I really appreciate your input into this. You'll be provided with a copy of the transcript of today's proceedings for corrections. The Committee staff will also email any questions taken on notice and supplementary questions from the Committee. We kindly ask that you return the answers within 14 days of receiving the questions. That concludes our public hearing for today. I'd like to place on record my thanks to all the witnesses who have appeared. In addition, I would like to thank the Committee members, Committee staff, Hansard and staff of the Department of Parliamentary Services for their assistance in conducting the hearing.

(The witness withdrew.)

The Committee adjourned at 13:05.