REPORT ON PROCEEDINGS BEFORE

LEGISLATIVE ASSEMBLY COMMITTEE ON TRANSPORT AND INFRASTRUCTURE

INFRASTRUCTURE FOR ELECTRIC AND ALTERNATIVE ENERGY SOURCE VEHICLES IN NSW

At Macquarie Room, Parliament House, Sydney, on Tuesday 1 July 2025

The Committee met at 10:00.

PRESENT

Ms Lynda Voltz (Chair)

Mr Nathan Hagarty (Deputy Chair)
Mr Warren Kirby
Mr Ray Williams

The CHAIR: Good morning, everybody. Before we start, I would like to acknowledge the traditional custodians of the land on which we meet. I also pay my respects to Elders past and present, and extend that respect to other Aboriginal and Torres Strait Islander people who are either present or viewing proceedings online. Welcome to the second public hearing of the inquiry of the Legislative Assembly Committee on Transport and Infrastructure into infrastructure for electric and alternative energy source vehicles in New South Wales. I'm Lynda Voltz, the Committee Chair. I'm joined by my colleagues Nathan Hagarty, the member for Leppington; Warren Kirby, the member for Riverstone; and Ray Williams, the member for Kellyville. Judy Hannan, the member for Wollondilly, may be joining us online at some stage. We want to 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. I declare the hearing open.

Mr PETER WARRINGTON, Manager, Transport Policy, City Access and Transport, City of Sydney, affirmed and examined

Mr SEBASTIAN SMYTH, Executive Manager, City Access and Transport, City of Sydney, affirmed and examined

Ms JULIA LIPTON, Manager, Sustainability Programs, City of Sydney, affirmed and examined

The CHAIR: I welcome our first witnesses. Please note that Committee staff will be taking photos and videos during the hearing. The photos and videos may be used on the New South Wales Legislative Assembly social media pages. Please inform the Committee staff if you object to having the photos and videos taken. Can you please confirm that you've been issued with the Committee's terms of reference and information about standing orders that relate to the examination of witnesses?

PETER WARRINGTON: Yes, we have.

The CHAIR: Do you have any questions about that information?

PETER WARRINGTON: No.

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

PETER WARRINGTON: Thank you, Chair. Thank you for establishing this inquiry and thank you for inviting us today to give evidence. The City of Sydney declared a climate emergency in 2019. We adopted a goal for net zero emissions by 2035. We aim for 70 per cent emissions reduction by 2030 from our 2006 baseline, and we've already reduced emissions in our area by more than 41 per cent from that baseline. Transport emissions will represent a growing proportion of carbon emissions as other sectors decarbonise relatively quickly, those other sectors being building, construction, waste et cetera.

The city's approach to reducing transport emissions focuses on creating a city for walking, cycling and public transport. This is the best way to maximise access, minimise transport emissions and create positive environmental, economic and social outcomes. With this in mind, we developed a transport electrification strategy and action plan. It adopts a fleet-by-fleet approach as the needs and opportunities for each fleet are different. We do that in a prioritised way. We're interested in public transport electrification—which obviously means buses, because of all the work that's being done in metropolitan passenger rail—taxis, loading and service fleets, our own car share fleet that we facilitate, and obviously private vehicles as well.

It's an integrated strategy with four key elements and a comprehensive action plan with 21 actions. Reflecting the distribution of responsibilities for transport, many of the actions are advocacy actions to either the New South Wales Government or the Australian Government. We've made progress on many of the actions and welcome the actions by the Australian and New South Wales governments that align with them, such as introducing national fuel standards or providing funding for a variety of vehicle charging programs, including the network of fast chargers across regional New South Wales.

In terms of electric vehicle (EV) charging, our approach is for most charging to occur off street. This will protect our public domain, because in our crowded area many footpaths are already not wide enough to create a truly inclusive walking environment. We note that there was a time when petrol pumps were located on public roads and footpaths. We don't do that anymore because it was inappropriate to scale for the growing demand. We're thinking about the scale for the future. What system are we building when every vehicle is electric? Obviously, that vehicle charging must be from 100 per cent renewable electricity.

With our high density of homes and jobs, off-street charging is crucial. The large stock of strata apartments with off-street parking can be a key resource to unlock the charging potential for residents of these buildings. Our submission made specific recommendations for New South Wales government action to assist this, namely the recommendation to establish a best practice pathway. Julia can assist the Committee on specific questions relating to that strata apartment opportunity. In commercial properties such as shopping centres, petrol stations, car parks, there are thousands of parking spaces in the private domain that are connected to power distribution networks and can already be safely accessed. These provide ideal locations for the private sector to scale public off-street EV charging services.

The city itself is trialling a small number of pole-based public chargers, primarily in areas where there is minimal off-street parking. These supplement the very large number—we have more than 200—of off-street, publicly accessible chargers already in our area. We note that many of the chargers in our trial are being funded by New South Wales government grants—the kerbside charging grant—and we welcome and appreciate that. Our key theme in the submission, though, is that there has been sufficient investment, via New South Wales

government grants, in that safety net level of public charging across at least metropolitan Sydney. This includes rapid charging options as well as lower impact, slower charging options.

Moving forward, we recommend that the New South Wales Government now move to create the framework for a scalable, mature public charging system for the future that enables the electrification of those key fleets, such as buses and taxis, as soon as possible. That public charging system should leverage car parks, service stations, and obviously for buses that means depots. The Government needs to grapple with issues relating to the commercial nature of the future system. We note the witnesses who came yesterday from the electricity sector and the charging industry, and obviously reflect on those points that they all made. But the Government must also consider what level of initial or even ongoing government support, if any, is appropriate to establish that system. It must consider how fossil fuel retailers should transition their service stations, ideally with no further financial support or provision of public land to do so.

The CHAIR: We will start with questions from the member for Leppington.

Mr NATHAN HAGARTY: I'll start with an easy one today. Can you walk us through this framework? Given the City of Sydney has had high-rise for a while, and a lot of other communities are now grappling with high-rise, this idea of having chargers inside premises—and not everyone may own an EV—how would you have a fair and equitable way to ensure that people are charged properly?

PETER WARRINGTON: I might talk, just very quickly, about the high-level framework. The city started work on the electrification of transport piece in the late 2000s. It was very clear to us that with the climate emergency, the reducing costs and increasing availability of electric vehicles, the transition was going to come fairly quickly, so we needed to get ahead of that curve, if you like. I think everyone would see that the curve is now accelerating fairly quickly.

Because of our geography, the intensity of our development, our relatively small area, the geometry of our road network—we have very limited space between buildings, and we need that for more productive uses such as walking, cycling, outdoor dining et cetera—we were very keen to develop any strategy for electrification of vehicles within that broader plan for the city. We understand that the Sydney city centre particularly, but also our local government area, is crucial to New South Wales' economic performance, and social connectedness—it's a place for everyone in Australia, and a global city. So we're trying to get the smart ways to maintain access while we get economic outcomes, environmental outcomes and social outcomes. The number one principle, if you like, we thought, was let's focus on the fleets rather than that. Buses have peculiar opportunities and challenges. Taxis too. We have a massive loading and servicing charge that we understand the importance of.

Transitioning that is different to taxis, which is different to point to point, which is different to long-distance trucks. We try to put a fleet hierarchy around that to get the emissions but also the other amenity gains in a prioritised order. We made the decision fairly quickly that with the available stock of off-street parking, the ability to use that, which is currently used for parking, really was the best place for charging wherever that could be made possible. In terms of existing apartment buildings and the new ones that have come—and obviously the planning reforms in New South Wales mean that there are going to be apartments across all of metro Sydney and probably regional areas—I might throw to Ms Lipton to talk about that specific issue.

SEBASTIAN SMYTH: But with a transition that's fundamentally in the private domain, whether it be commercial or residential buildings, the city influences the provision of charging infrastructure or being EV charging ready through planning controls. We don't go in there with our money, our diggers and our cabling and do it. It's fundamentally, we set the conditions to enable that.

JULIA LIPTON: The key distinction there is new buildings versus existing. In the new buildings, the planning controls will facilitate EV charging as much as possible in line with New South Wales Government regulations. That's where it's relatively—

Mr RAY WILLIAMS: It's hard to hear, Madam Chair.

The CHAIR: Yes.

Mr NATHAN HAGARTY: Just move the microphone closer.

JULIA LIPTON: The distinction between new buildings and existing—it's relatively easy to get it in new buildings with the planning controls and facilitating at construction. For the City of Sydney, 80 per cent of our residents live in existing buildings that have limitations as to how they can upgrade the infrastructure, both electrical as well as the actual plug-in pieces. This is where there's a number of—we do two things. As Sebastian said, there's the facilitation of feasibility studies—it's limited provision of feasibility studies—so that the city supports each building where we can, so that a building can explore how they can upgrade and if it is feasible.

That's looking at the space requirements, the electrical wiring and the metering system that they have in order to upgrade to EV charging in a safe and equitable way.

The challenge with that is strata governance, so getting the collective or majority of owners in an owners' corporation to make a decision. There are various barriers, both perceived and real, in this regard. The first thing is the space limitations. A lot of buildings don't have the space for the actual infrastructure. The wiring is old. There are also the perceived safety issues, which have been exacerbated by some of the unregulated battery-operated transport modes. It's not so much EV vehicles per se. They're similar on ICE vehicles. But those perceived risks, as well as the perceived or potential for increased insurance premiums, can hinder owners' corporations making active decisions to retrofit their buildings for EV charging. This is where we see a risk where existing buildings might be left behind on new buildings in upgrading that infrastructure.

Mr NATHAN HAGARTY: I have a second question. We originally intended to have Blue Mountains City Council here to discuss the idea of tourism, but Sydney has a lot of tourist attractions as well. Have you done any work around making tourist attractions more attractive by having EV chargers on site? Has there been any research in terms of the visitor economy, anything there?

SEBASTIAN SMYTH: Already the City of Sydney already has one of the highest densities of publicly accessible off-street EV charging, in building basements et cetera. Also, we are privileged to be at the core of metropolitan Sydney's public transport network. As with all access—whether it be to go to work or to go to culture as a local, or to be an overseas or interstate or even regional tourist—public transport is the easiest choice for most. So we haven't done that research. The benefits of EV charging to tourism are far less evident here than in Mudgee or the Blue Mountains, Coonabarabran et cetera. When people are doing a road trip, that's where motels, in their existing car parking spaces—with a bit of support from government to work out whether they need trickle-, medium- or high-speed charging—can really support that. We, as I said, already have a lot of charging. If someone really needs it, they can get it.

PETER WARRINGTON: From the outside, it may be confusing for people, but there are many forums, if you like, and collaborative forums between the different local governments, not just in Sydney but across New South Wales. Everyone's doing slightly different versions of the same thing, and that makes sense. The plan for the City of Sydney is the plan for the City of Sydney. We hope that other places, like Parramatta, that are probably more like us than the Blue Mountains might learn from that. We certainly engage and collaborate with them and, where we can, we leverage off each other's insights and our information.

The thing you're describing—Echo Point makes absolute sense to me because people will drive. A significant proportion will come by car, park their car for two or three hours and it probably makes sense to charge, if that can happen. We understand that. We probably wouldn't be doing that in our area because, as Sebastian said, our focus is to get people there in ways other than a private car, and we're lucky to be able to do that. But if you think going forward about a bunch of LGA or regional plans that make sense based on what that region is and how it operates and how people move around it, that's how we think about it.

SEBASTIAN SMYTH: And if you're limping into Sydney undercharged—that is, the inner city—there's a huge density of charging opportunities that are not the same in Coonabarabran or Mudgee.

PETER WARRINGTON: I mentioned that sort of underpinning of the main-road fast chargers and the New South Wales system of fast chargers on the main highways. I think that's a fantastic initiative. I think that really sets us up for that type of system so that the likelihood that you are ever going to need to charge exactly at a point in time, we think, will be pretty rare going forward.

Mr RAY WILLIAMS: Thank you so much for attending the Committee hearing. You spoke of planning controls, and I want to actually come back to that, but there is just something that came to me. I understand that recently the City of Sydney council have announced that—I think it's from 1 January next year—they will discontinue the permitted use of gas on behalf of businesses across City of Sydney, for whatever reasons. That's a different argument to where we are, but I just wondered: Has the City of Sydney council engaged at high-level discussions with your service providers of electricity? You spoke before, Mr Smyth, of not digging holes in the ground and providing that infrastructure. Does the City of Sydney council have the capacity for that increased high-level influx of electricity on behalf of those businesses if that gas is discontinued?

SEBASTIAN SMYTH: I defer to either of my colleagues at any time. The foundation of our submission is the electrification of transport in the city strategy and action plan. That is supported by a fairly in-depth piece of technical work to look at that exact thing. If we go from 3 per cent of the fleet being EVs to 30 per cent to 90 per cent, are we going to run out of electrons, we say jokingly. What they did is they looked at power management—the demand throughout the day and week. Of course, it's something we're conscious of, but overarching—and Pete, I'll get some support on that—there were fairly high levels of confidence. Again, the

experiences they have in Norway, where they've managed the same sort of transition—it seems, at first thought, to be a major challenge. It's something we're very relaxed about because grid management et cetera will take care of that, and increasing penetration of green power into the grid.

The bigger challenge is the localised access to sufficient distribution capacity. These are examples: Pyrmont might not have enough capacity in the local area for six buildings to suddenly come on line. We not only looked at electrification of transport; we looked at electrification of the whole building ecosystem, so it's of the water heaters et cetera.

PETER WARRINGTON: In terms of the decision of council in terms of gas versus electricity, in terms of any engagement with electricity providers, we wouldn't be across that. We'd have to take that on notice.

Mr RAY WILLIAMS: Sorry, I missed that.

PETER WARRINGTON: We are the transport team and Julia is from the sustainability team. So in terms of the—do you want to say anything?

JULIA LIPTON: In regard to that decision that was made by council recently to—it's gas within the dwelling of new builds only. There was a submission by Ausgrid that said—that confirmed, in fact—that there was enough capacity within the network to accommodate that decision.

Mr RAY WILLIAMS: That leads me in to my next question in relation to planning controls. If there is to be an increase in EV charging in your area, has the City of Sydney council implemented any substantive changes to their local environmental plans when approving short-term high-rise or office block development across the city to mandate those particular chargers being in place? Ultimately, if you want to move to a renewable future, I think the first step would be taken through those planning controls. Have you adopted any of those mandatory controls into your Local Environment Plans (LEP)?

PETER WARRINGTON: Yes. It's our planning team that does that, so we can certainly get more detailed advice back to you, but my understanding is our new LEP was adopted at the last council meeting. The electric vehicle and the electrification planning controls for that have been under development for quite a few years to make sure that they're as progressive but also as practical as they can be. My understanding is that that was adopted by council this—

Mr RAY WILLIAMS: So in future development applicationswe can expect to see mandated conditions in there for a specified amount of EV chargers?

PETER WARRINGTON: No, it's about making the building EV ready, which means that it's built in a way so that it's very easy, once the—

The CHAIR: The retrofit.

PETER WARRINGTON: No, it's for new builds only.

The CHAIR: No, I mean for the new build, so you can retrofit later on if you want to put them in.

SEBASTIAN SMYTH: To install.

PETER WARRINGTON: Yes, I would probably call it "add on", in that sense, basically. But, yes, it might be that one building decides to just have a big amount of low-impact chargers, and some other building—for whatever reason—decides they want two fast chargers that are shared. So we haven't gone down and mandated that level of, "This is how you're going to do it." It's about making sure that, when you decide when the building's built and you're going to do it, that it's much easier than the current building stock.

Mr RAY WILLIAMS: In regard to those buildings that are already substantially situated across Sydney, which have ample parking spaces within them, is there an appetite within the private holders of those particular dwellings—and perhaps some government buildings—to potentially retrofit for charging? Has council done any work in relation to seeking out that type of commitment from those people, or is there an appetite for the introduction of further EV chargers?

JULIA LIPTON: I would probably say that it's not consistent. In some buildings, there is a lot of appetite for retrofitting—even where the cost is quite significant—to ensure that their building is futureproof. They tend to be probably in more wealthy buildings with the capability and capacity to do that. There is definitely strong interest across the board to do it, it's just those barriers that I noted before that sometimes make it unfeasible both financially and physically given the design of the building—not having thought about EV charging, in that case.

The City of Sydney definitely does promote the full electrification of buildings, including EV charging to existing buildings particularly, noting that the new buildings are relatively easy and can be solved through planning controls. We don't mandate it, necessarily, but we build that infrastructure in place. We definitely are promoting it, facilitating it and supporting it where we can—not paying for the actual capital upgrade itself, but understanding the awareness and processes to how you might do that.

The thing that we would be asking the New South Wales Government to consider is to create a best-practice pathway to make that clearer across the board. Because of the various different scenarios and types of buildings, the safety precautions and the different messaging coming from different entities as to what is the good way or the not so good way, it would be really great to have the New South Wales Government put forward a consistent pathway across New South Wales so each council doesn't have to do it themselves, and we create clarity for the market to respond.

Mr WARREN KIRBY: I just want to run through some numbers. Do you know in the City of Sydney, on a population-wide basis, how many of your residents don't have vehicles?

JULIA LIPTON: It's a high proportion. I don't know exactly.

PETER WARRINGTON: It's done on a household basis, by the census of households. It's between 35 and 40. The last census was COVID. We were all a bit like, "Did it spike up a bit because of the factors of COVID?" But it has been increasing over time. More than one in three households don't own a car, which we think is fabulous because in our area the walking, cycling, public transport, car sharing et cetera lets them maintain access without having to own and park their own car.

Mr WARREN KIRBY: And average household car ownership? I ask these questions because I come from an electorate that has two-thirds of the population have two or more cars. There's a difference between how you deal with high average car ownership per household versus 35, 40 per cent.

PETER WARRINGTON: As I mentioned, just in terms of the different emphases across the local government areas, we absolutely understand that the City of Sydney is pretty unique compared to Riverstone or Gulargambone or anywhere else. What I would say is probably as your area grows and if that metro extension, for instance, goes from Tallawong to that, you'll have TODs and you'll have higher density things as well. So we think there are some lessons there. We have a lot of zero-car households. We have a lot of one-car households. We have some two and even some two-plus where the housing stock or the parking—maybe in some of our southern areas, where it's a bit less dense of that. What that average number is, I couldn't tell you off the top of my head, but I recognise that there's a distribution.

SEBASTIAN SMYTH: In addition to ownership levels, there's also the VKT—the vehicle kilometres travelled per household. We recognise that in the City of Sydney, where everything is close, even if you choose to drive rather than walking, cycling or using public transport, the trips are fairly short. They might take a long time, but they're fairly short. In the outer parts of Sydney and in the regions, those distances are long. My recollection is that is where the tantalising option of almost free fuel with an EV, generated at home and charged at home, can be meaningful in terms of reducing proportion of wealth allocated to transport. So different opportunities.

Mr WARREN KIRBY: I recognise that. In a practical implementation of off-street parking and in-unit parking, I mean, we're already seeing—well, we are seeing emergence of high density around Tallawong station, in particular. There's nowhere near enough parking in the areas that have densified for the average car ownership, and that doesn't seem to be making a difference. It's just creating a greater problem. When you talk about planning controls for new builds and being adequate, is that adequate based on the numbers that you're seeing, or do you think, more broadly, the planning control for the amount of parking spaces being made available—specifically those with EV charging—is appropriate for other areas of New South Wales?

SEBASTIAN SMYTH: Parking policies is Pete's passion and is an extremely complex issue, probably for another Legislative Assembly—you will never have enough. We never have enough, especially as densification has, but it all works out fine.

PETER WARRINGTON: I won't touch on the planning controls, but obviously every person who gets an EV going forward, who sees someone else charging where they park overnight, is probably going to say, "Well, I want to do that too," all other things being equal, because why wouldn't you? Like your phone, you plug it in at night, you go to bed, and it's done in the morning. You don't really need to; most people don't. We're thinking in our area the average household would probably need to—if they did a zero to full charge, it'd be once every two weeks. So we don't need—we're a lower driving area.

I think the question you're really asking is what happens in your area. What fills that gap if you don't have the off-street parking et cetera? We haven't done that work for Baulkham Hills council or Blacktown council but I'm sure, with state government support, they probably can. I imagine it's getting the fast charging options out there. You've got to try to integrate it with people's activities and where they're driving and where they're parking, whether it's at the Bunnings or the pool, or having the service station model out there especially quickly. We're looking at building our charging capability in three or four portfolios of charging, including off-street private, off-street public, some commercial public that is off street like a service station model, or integration into the commercial car parks or shopping centre car parks. Out there it will be exactly the same things because they're the only ways that you can do it. It's really just that the mix will be different in every area and the opportunities are different. Does your council need support doing that? I'm not sure.

The CHAIR: With the idea of putting chargers in poles as part of the poles and wires, I'm assuming that doesn't require council's consent?

PETER WARRINGTON: No, it does. Technically, it needs a Roads Act approval. I think it's section 138. We've got a trial. It's a small trial of a small amount of low-impact public domain chargers. We've got 18, and we've applied for more under the kerbside charging grants. We're hoping to get more, so we might end up with 20 or 30 that supplement all of the other charging things we've talked about. We've had a pretty productive relationship with Ausgrid, which uses a few charging providers like EVX. The nice thing about the grant that's currently there is that the New South Wales Government is only supporting proposals that have local government support. We work in that partnership way. If you examine the legislation, there's also a legislative backing to that. But we've preferred to work in our trial in collaboration with Ausgrid and their approved providers in locations that we think make sense to our community.

The CHAIR: They can only put them in the poles if they have council consent.

PETER WARRINGTON: That's a legal question.

The CHAIR: That's the question I'm asking.

PETER WARRINGTON: My understanding is that there was a workshop for local government with the New South Wales Government on this very issue last week. A slide went up from the New South Wales Government that said you technically need a Roads Act approval. That's a good enough position for me. But, like I said, we're trying to think about building a collaborative trial, and it's working well because we've got the chargers in the places where we're happy to have them.

The CHAIR: Yes, I understand that. We've run out of time. As has been the case with every witness, we could go for another hour or two. Thank you for appearing before the Committee today. You will 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—I think there were one or two—and any supplementary questions from the Committee. You'll have 14 days to answer them and can always apply for an extension.

(The witnesses withdrew.)

(Short adjournment)

Dr VINCENT OGU, Program Manager, Southern Sydney Regional Organisation of Councils, affirmed and examined

Mr MARK NUTTING, Strategic Planning Manager, Southern Sydney Regional Organisation of Councils, affirmed and examined

Ms NARELLE MARTIN, Strategy Officer, Riverina and Murray Joint Organisation, before the Committee via videoconference, affirmed and examined

Ms YVONNE LINGUA, Executive Officer, Riverina and Murray Joint Organisation, before the Committee via videoconference, affirmed and examined

Mr GEORGE COWAN, General Manager, Narrandera Shire Council, and Chair, RAMJO Energy Sub-Committee, Riverina and Murray Joint Organisation, before the Committee via videoconference, affirmed and examined

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

MARK NUTTING: Yes.

VINCENT OGU: Yes.

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

MARK NUTTING: No.

VINCENT OGU: No.

The CHAIR: Would you like to make a short opening statement? We will start with witnesses in the room.

VINCENT OGU: Thank you. The Southern Sydney Regional Organisation of Councils, or SSROC, welcomes the opportunity to provide a submission on the inquiry into infrastructure for electric and alternative energy source vehicles in New South Wales and to attend this public hearing. SSROC is an association of 12 local councils in the area south of Sydney Harbour, covering central, inner west, eastern and southern Sydney. Together, our member councils cover a population of over 1.9 million, one-third of the population of Sydney, including Australia's most densely populated suburbs.

SSROC and its member councils have a strong interest in electric vehicle charging infrastructure and, in 2023, developed a *Regional Approach to Electric Vehicle Charging Infrastructure* report. In 2024 SSROC developed model objectives and clauses for an EV development control plan, or DCP. It can be a guide for metro Sydney. SSROC's report identified and explored EV charging infrastructure ownership models and risks for local councils, design considerations for EV charging infrastructure, and regional interoperability of EV charging infrastructure.

Three scenarios of ownership were identified in the report: council EV charging infrastructure ownership; enablement; and non-proactive. Council ownership is possible with a future transition to one or more private charging companies once demand has been established. Enablement is where there is no ownership of EV charging infrastructure. Rather, council takes steps to engage with relevant key players, including private operators and state agencies to develop relevant tools and instruments to enable EV infrastructure in its area. Non-proactive is where council has no active involvement in EV charging infrastructure and only limited control in the process, for example, only traffic committee approval of private provider proposals.

The New South Wales Government needs to better engage with local governments, particularly around the awareness of council processes and limitations associated with council approvals for EV charging infrastructure. It is important to recognise that a one-size-fits-all approach to EV infrastructure would not work for councils. The State Government needs to recognise this when designing grants that aim to support local government in promoting EV infrastructure in their areas. SSROC would welcome providing the Committee with the full report for their perusal.

SSROC welcomes the development of New South Wales electric vehicle public charging master plan that identifies optimal and priority zones that are ideal for public EV fast-charging stations across metropolitan

and regional New South Wales. It is helpful that the plan has information on the current and planned future network of public EV fast chargers in New South Wales. The State Government needs to be more involved for better access to information on current and planned grid capacity/resource. There is a role for private car park owners in meeting the EV charging infrastructure needs in metropolitan Sydney. The New South Wales Government would need to consider an approach to promote more EV charging infrastructure in private parks, such as shopping centres.

There is a major gap in the way EV charging is funded in metro Sydney. The New South Wales kerbside charging grants are allocated directly to charge point operators—CPOs—to install chargers. Funding should be more flexible and adaptable to provide the flexibility required for councils in metro Sydney and regional New South Wales to meet their unique circumstances. Councils could potentially play key roles to ensure that the rollout of charging infrastructure is strategic, efficient and equitable. For example, multi-unit dwellings and strata pose unique challenges, including retrofitting EV infrastructure, that need to be addressed. Funding and delivery models should be approached carefully. Councils are not energy suppliers. The managing of EV infrastructure introduces unfamiliar technical, legal and financial responsibilities for councils. Councils ought to be consulted in the design of grants to ensure alignment with local capacity and policy objectives.

The State Environmental Planning Policy (Transport and Infrastructure) Amendment (Electric Vehicles) 2023 confers new development rights and responsibilities for business corporations and residents using EV charging infrastructure, and this could be at the expense of the wider community interests, neighbours and the effective functioning of the public domain. The need for changes to section 2.124B are presented in a letter by SSROC president, Mayor Faker, to the Minister for planning in November 2024. A copy is available. The purpose was to make the State Environmental Planning Policy (SEPP) implementable in ways that align with the intent of the instrument, while also avoiding unintended consequences for councils and the community.

The distribution network service provider-led model has implications for existing market participants. SSROC strongly recommends that the Government collaborate fully with councils and with the broader EV sector to ensure that any solutions that it chooses to progress will be delivered as efficiently and effectively as possible. The efficient and effective delivery of EV charging infrastructure cannot be achieved if councils and the EV sector are left to respond to a well-intentioned but ill-conceived rollout of a particular type of infrastructure. There are concerns that the proposed Distribution Network Service Provider (DNSP) subsidiary model appears to be a place-based regional monopoly, where people without access to charging on private property are largely a captive market. Regulation would be required to ensure that their advantage is not used to exploit customers or disadvantage competitors. A balanced approach is necessary so the DNSP-led proposal does not eclipse potential New South Wales Government initiatives to fund strategic grants to support CPOs and councils and complement efforts to adequately meet the demand for more EV charging in Sydney. Thank you.

The CHAIR: Would you like to table the letter you mentioned as part of your submission?

VINCENT OGU: Yes.

The CHAIR: We'll consider it. Is that fine for publication?

VINCENT OGU: Yes.

The CHAIR: Now we'll go to the Riverina and Murray Joint Organisation. Would you like to make a short opening statement?

YVONNE LINGUA: Yes. Thank you, Chair and members of the Committee. The Riverina and Murray Joint Organisation, or RAMJO, appreciates the opportunity to appear before you today and contribute to this important inquiry. RAMJO represents 11 member councils across a vast region of southern New South Wales, covering more than 72,000 square kilometres and home to a population of over 150,000 people. As a joint organisation with local government entity status, our focus is on driving strategic regional outcomes through collaboration, advocacy and capacity building across local government. We are here today because this transition towards electric and alternative energy transport is shaping the future liveability, sustainability and economic resilience of our regional communities. RAMJO and our member councils are strong supporters of renewable energy and the decarbonisation of transport, with many of our member councils already exploring fleet transitions, investing in energy efficiency and other infrastructure upgrades, and working to educate the communities. We are seeing a real interest, but we're also seeing real constraints, which we'll explore further today.

The key message we bring is this: Regional success with this transition depends on equity, investment and coordination. From group capacity and the placement of charging infrastructure to workforce development and the equal range limitations, rural and regional councils face distinct barriers that must be recognised and addressed. In many of our communities, basic energy reliability and availability remain a challenge, with some

towns facing regular brownouts and constrained electricity supply that already limit business investment and economic growth, and that is projected to do so in the future if not adequately addressed.

If there is not enough energy, electricity capacity or reliability, there is simply no opportunity to install or operate EV chargers. This becomes not just an infrastructure issue but a public safety and economic development concern for our region and other regions across the State. Further, we have to give consideration to what happens during emergencies. In the event of blackouts caused by storms, fires or floods, electric vehicle infrastructure must be supported by emergency backup systems to ensure critical transport and response services are not compromised. This is particularly urgent in regional areas where backup supply and redundancy are limited or non-existent. We do acknowledge and appreciate the efforts already underway, including this inquiry and hearing by the New South Wales Government to support regional EV uptake. We urge that these be scaled and strategically aligned with local capacity, industry needs and regional economic planning.

The CHAIR: We will now go to questions, and I will start on my left with the Deputy Chair, and member for Leppington.

Mr NATHAN HAGARTY: Thank you both for coming in. We've heard evidence already from councils or on behalf of councils that suggests you can get some inconsistency from one LGA to the next, at that level. I guess using JOs or ROCs is a way to perhaps address some of those issues. I just wanted to get from you both, as metro and regional joint organisations, some of the benefits of doing this at scale through the JOs as opposed to the individual council level and, in terms of current policy and frameworks, what's working, what isn't, and what we could improve.

VINCENT OGU: I think there are a lot of advantages of working through the ROCs and the JOs. One of the things we do very well is the ability to liaise, work with councils, reach some consensus and understanding. The ROCs within Sydney as well do collaborate with one another. We do collaborate with WSROC and NSROC and the Parks, so it is easier, and sometimes we involve the various professions. Like, when we were developing the SSROC EV infrastructure regional approach plan, we had the people from Transport, we had people from sustainability managers, we had strategic managers and we had people from property management. Sections of council were coming together to workshop and reach some agreements on what they think would work.

Mr NATHAN HAGARTY: And in the regions?

YVONNE LINGUA: I will just echo those sentiments. Just on the back of the question around what are the benefits of engaging with the regional joint organisation, I think just the efficiency and the ability to scale up a lot more quickly and effectively. A number of regional councils, even some of the big ones, are already very much constrained in their ability. Where the JOs can come in and step in and offer some value there, we know that is very helpful to our member councils. For us it's helpful but also at a State agency level.

Another benefit as well is in working with the joint organisations and the ROCs. We do facilitate a whole-of-government approach because a lot of our programs—we work across the net zero space with DCCEEW. We're working at a State and Federal level across disaster resilience. We're constantly having those conversations. We often bring to the table conversations that we're having with these agencies that sometimes aren't heard by certain members of other agencies. We really facilitate that cross-pollination. Those are just some of the benefits.

Mr NATHAN HAGARTY: In terms of current policy settings and the way that grants are structured, are there any impediments to JOs and ROCs or any areas where current government policy levers could be improved to encourage JOs and ROCs or even councils to use their JOs and ROCs to roll this out?

YVONNE LINGUA: I think recognising the JOs and the role that the JOs are playing—and we're very slowly seeing that shift over time, but that has really been more so a recent development. We've done a lot of work across our network to really highlight what the JOs can do. I think having a State commitment—and we're working with the Premier's Department at the moment to try and get that to happen—would be certainly very beneficial, and then have that communicated to all of the agencies that, for certain programs, that is an effective way to move forward.

With regard to challenges with grants and applying for funding, we used the word "equity" before. This is consistent across a number of programs. Obviously, just being able to recognise the nuanced differences between urban and regional councils and their ability to be able to gather the information to put through an application, staffing constraints, all of these sorts of things—we speak about this a lot, but I think that really deeply needs to be considered and how that affects competitive funding grants as well. We've made some progress in the disaster resilience space. It has been slow, but I think we're heading in a positive direction. But we'd love to see that replicated across housing, across net zero and certainly in the electrification space.

NARELLE MARTIN: I just wanted to pick up on two things, one of which is that—in terms of grant structure, one of the issues is whether or not JOs are actually eligible to apply for grants. That can happen. It doesn't always. That's something that would be worth considering. Then the other is that, if matching funding is being sought, that can be an enormous constraint, because quite a number of councils in RAMJO, for example—and I know there are others—can be very tightly financially constrained. The matching grant requirement can actually be a major disincentive. That's just two comments. I don't know if Mr Cowan wants to add on in relation to that.

The CHAIR: Mr Cowan? No? Mr Ogu, did you want to add something?

VINCENT OGU: Yes, and I'm happy for my colleague to also add something. I think that relates back to what I mentioned earlier in terms of one size not fitting all and having about three scenarios where councils fall in relation to EV charging infrastructure. While some are willing to own EV and others are willing to work with CPOs, others are a little bit more reluctant. That's why we've been emphasising that, before grants are rolled out, there could be a better way of engaging with councils to understand what could actually work so as to know how to better design those grants. Initially, when the New South Wales kerbside grant was open, a number of councils from SSROC did not apply. Some councils have got different policies in their area, so it may not be a good fit for what they have determined for their area. I know it could be a little bit complex, but engaging with councils to understand what would work would be very good.

MARK NUTTING: I was just going to comment about, perhaps, the benefits of engaging ROCs. Just building on what Vincent has said, I think ROCs can look at what is good practice, and also look at the diversity of needs in our area of councils and try to work out what is a priority for working on good practice, and disseminating that and winning councils over to that good practice. It's kind of building knowledge from the ground up.

Mr RAY WILLIAMS: Thanks, everybody, for your participation in the Committee—a great overview of many of your local government areas. Mr Ogu has just touched on the basis of my question, which is that from my personal perception of the information from witnesses thus far before this Committee, there is no way that a New South Wales Government approach could be a one size fits all. The services of your councils through SSROC and the outer urban areas are much different to what happens here in the City of Sydney. It is certainly very different to what happens out in the rural and regional areas. But I think the main objective from everybody is that there should be an increase in charging for electric vehicles. It's about how we get there.

Currently, I believe that the Government's approach is that unless incentives to encourage further investment into charging stations are supported by local government, those grants are not forthcoming. Mr Ogu also pointed out in his opening statement that councils are not energy providers. What I can gain from that is that councils don't want to be held responsible for the financial impact of putting chargers in place. I get that, and I also get that the ring-fencing regulation, at this point in time, protects consumers across the board from having to pay for the implementation of new equipment and new electric vehicle chargers.

Whilst distribution network service providers like Ausgrid believe that their position is that they can do it best and foremost and cheaper, although that's not supported by data, I come back to this question to all of local government: Have you adopted anything into your planning controls in regard to any new buildings? I know that would be more prevalent in areas closer to Sydney and major hubs. Have you adopted any changes into your local environmental plans to mandate how many chargers would be provided in a 10-, 12-, 15- or 30-storey apartment or office block et cetera? Have you taken that approach—to use a little bit of stick—back to the developers? If so, what has been their feedback? I'd also be interested to hear your feedback.

VINCENT OGU: I may defer to my colleague Mark, who led the EV DCP work, to respond.

MARK NUTTING: We had developed a model DCP, which has clauses and objectives, and we developed that collaboratively with our councils. SSROC doesn't have the power to implement that; it's up to each individual council to do that. We designed it so that it could be adapted by each council if they needed to. But we saw that there was strong merit in actually having a common framework that would promote EV charging on private premises, particularly residential, that the costs of doing that retrofitting would be large and that getting ahead of that in new developments made very good sense. There was strong support for the model clauses. We understand that a number of our councils have taken that up and are implementing that. Therefore, that's been, I think, a useful process which the councils appreciated was something that we were doing to serve their needs.

VINCENT OGU: We've also received requests from many councils for that EV DCP.

MARK NUTTING: I will just add one more thing. The logic of doing that on private land is that you reduce the pressure on public charging. Whilst you need to have charging in public spaces, the amount that you need becomes less if people can gain ready access, particularly in multi-unit apartments, to their own charging

facilities and you can do that in a safe way. So we worked with the Electric Vehicle Council of Australia to help come up with these model rules.

Mr RAY WILLIAMS: I think that corresponds to the current situation where 95 per cent of charging for electric vehicles happens in the actual home as opposed to in other areas. I'd be happy to hear from any of the regional councils, if you have any views in regard to how you progress that. But at the same time, are you suggesting that the broader impact of those costs should be to the burden of the majority of people who don't have electric vehicles? And I'm one of the people who have an electric vehicle, by the way, so I'm happy to put my hand up.

The CHAIR: Any comment from RAMJO? George?

GEORGE COWAN: Madam Chair, I might just make a couple of comments, if I may. In terms of most of the member councils for RAMJO, we are relatively small communities and 99 per cent of our developments are single-storey dwellings. We don't have a lot of multistorey developments. In fact, in Narrandera shire there's none. So we're, at this point in time, well short of that point. I think it's great that the Sydney councils are taking that up. That's obviously a priority for them. Our focus really has been on fixing the power supply and getting the reliability of the power. I'm absolutely certain that if a decent majority of the residents of Narrandera plugged their car in at night to charge it, there'd be no power left to cook dinner. Our communities don't have that reliability at this point. The benefits of us working through RAMJO are really obvious when we look at the achievements that have been made in this space.

I just go back four or five years and, to be honest with you, in the council chamber I would not have used the words "net zero" or "renewable energy". That would be a bad thing to do. We've nursed our councils through all of that negative thinking. Most of them are embracing renewable energy. Most of them have made really significant gains in fixing their own businesses in terms of energy consumption. In Narrandera, we've been very fortunate in that we've got NRMA and Tesla, who have both installed car charging stations, and we're working with at least one of the heavy transport companies to try to see if we can get our toe into that business as well. I don't know whether you know the Riverina very well, but Narrandera is the junction of the Sturt Highway, which has significant freight from Sydney to Adelaide. It's also the junction of the Newell Highway, which has Brisbane to Melbourne freight. So we have thousands of heavy vehicles that go through our patch every day, and we're trying to make sure that we've got some capacity for those vehicles to move into this electric market.

The CHAIR: George, can I just jump in there as well? Are the regional councils looking at all at the use of electric vehicles as a storage facility where they're feeding back in at night? That is, taking the electricity off the grid during high wind and solar times and putting it back in at night. Is that something that the councils are conscious of or have had any work done in your region?

GEORGE COWAN: My council has not got to that point. We're still introducing hybrids into our fleets rather than electric vehicles. But, in our submission, Madam Chair, we did highlight the fact that we had a demonstration day recently, or six months ago now, for electric vehicles and electric equipment. That was really well received. I would expect a very slow take-up of those opportunities to continue, but we're not yet at a point where we are having to make decisions around having battery storage to charge those vehicles overnight.

Mr WARREN KIRBY: I'm just curious. Has there been any consideration given to regional councils in particular being CPOs in and of themselves? Rather than negotiating with CPOs on where the best places are to be, have they considered putting in their own charge point and being the charge point operator in that local area and potentially gaining the revenue from that?

Mr NATHAN HAGARTY: Or revenue sharing.

Mr WARREN KIRBY: Yes, or revenue sharing.

GEORGE COWAN: I'm not aware of any councils in my area that are doing that. We've had the benefit of, firstly, NRMA and then, secondly, Tesla coming in to install. To be honest, we pushed the opportunities. The New South Wales Government had a grant program 18 months or two years ago. We pushed that pretty hard to our business community, and there was very little take-up at that point in time. So I'm not aware of any councils that are doing that. However, having said that, we have negotiated a reasonable lease arrangement for the facilities that have come in, so there is a small income available to the council as a result.

VINCENT OGU: No, it's not something SSROC as an entity has considered or adopted a position on. But I know that a few other councils have applied in collaboration with some CPOs, but whether they have considered being a CPO themselves, it's not something that we are aware of.

Mr WARREN KIRBY: What would be the barriers—sorry. Yvonne?

YVONNE LINGUA: Thank you very much. With the issue of some of our member councils taking on the role of CPOs, we have worked with DCCEEW and we have disseminated some of that information with our member councils. My assessment of that has been that there is a little bit of interest there, but the underlying issue is still that capacity issue from within the grid and the actual supply. That's a theme I'm certainly hearing from my colleagues that just keeps reappearing and is really evident in our submission. That's really the biggest barrier. The regional JOs are working together to kind of put that information together and kind of develop a framework that we can then share across our networks to try and help the councils that do want to take that further and take that up in the future. But, yes, just reiterating that those electricity capacity issues are really the main challenge for us in our region.

Mr WARREN KIRBY: That kind of leads me on to the next point. If the most significant barrier to implementing this kind of charge facility in some areas is the supply of electricity in and of itself, what are the other barriers that you see? Particularly, as you were saying in Narrandera, when it comes to a significant amount of heavy vehicle movements to a junction, what would be the biggest barrier, over and above supply, to providing charging points to help if those fleets electrified?

GEORGE COWAN: That's a very, very good question. The technology that we're looking at in the trucking industry at the moment is different to the technology for vehicles, for cars. I won't mention their name, but the trucking company that we're discussing this issue with out of Melbourne, they have a technology that actually replaces the battery. The battery in the truck is used to, for example, go from Melbourne to Narrandera. At Narrandera, they swap it out and put a new battery in. So you need a facility here to charge those batteries and then have the capacity to put them in the truck. The barrier that I see there is that it's quite expensive to do that, and you need to be able to make some sort of start. At the moment, there's no volume in terms of the electric trucks that are on the highway—there's a very small number—so it would be very difficult for a company to make a commercial operation out of that at the moment.

VINCENT OGU: I think, apart from that, the other matters we have considered during our workshopping process had to do with design considerations for the EV charging infrastructure and where are they going to be located. But other issues, such as the line marking, maintenance, ongoing maintenance of those lots—so councils would want those things to be pretty clarified. Councils have also expressed concerns about private use of public land in relation to kerbside EV installation that was envisaged in the SEPP. So those, we have raised issues about them; our president has written to the Minister. We are also happy to share a copy of that letter to this Committee.

The CHAIR: Thank you. If you could table that one as well, that would be helpful. Can I ask a follow-up question on the approval? You mentioned that for, I assume, the poles infrastructure, you only need the approval of the traffic committee. I think we had City of Sydney council saying you needed a road Act. What was the document they said?

Mr RAY WILLIAMS: It was 138 possibly—don't quote me.

The CHAIR: A 138? I assume that's the same process; it's all to do with the road traffic committee. It's not actually going before the council for approval of a CPO in a telegraph pole by the electricity grid. Is that correct?

VINCENT OGU: I can't speak very specifically on that. But my mention of the traffic committee was just an example of a role that councils can play. But the Roads Act (the Act), yes, is one that we identified. For example, there were some discussions we had about whether in fact the SEPP 2023 was in alignment or contrary to the Act. So there were sort of unresolved issues for councils there.

The CHAIR: George, I'm not sure if, as a general manager, you had a view on the approval process for charge points in utility-owned poles?

GEORGE COWAN: No, and I haven't given that a great deal of thought. Although, following our EV demonstration day in Griffith last year, Essential Energy did come forward with their proposal, which is based around having EV chargers on appropriate poles in the street. But, no, I don't know about how you would do that. With the NRMA and Tesla installations, we've put them through the DA process. But whether that would be required for something on a pole, I don't know. I'd have to speak to my planning staff.

Mr RAY WILLIAMS: To Mr Cowan's question as to whether any of us had visited Narrandera—absolutely. If you visit Narrandera for no other reason, make sure you visit possibly the most wonderful public pool complex that you could find in this country, known as Lake Talbot. It is absolutely sensational and it's huge. I don't know whether it's still open to almost midnight through the summer periods, but it brings the community together, building wonderful social capital. It's also the birthplace of our former governor, the Hon. Marie Bashir.

The CHAIR: If it helps the member for Kellyville, I've swum there—so there you go.

Mr RAY WILLIAMS: It's a great part of regional and rural New South Wales, absolutely.

GEORGE COWAN: You're very kind.

The CHAIR: Unfortunately, we've run out of time. I'm sure we could do this for some time, and we could certainly do a tourism advert for the whole of the Riverina, Murray and the corner country, particularly the Griffith restaurant with the stairs. Thank you for appearing before the Committee today. You will 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. You'll have 14 days to answer those and, if you need to, you can apply for an extension on that. Thank you so much for coming today both in the room and online.

(The witnesses withdrew.)

Mr NEIL ROBERTS, Director, Policy, Technical and Safety, National Electrical and Communications Association, affirmed and examined

Mr KENT JOHNS, Manager, Government Relations and Regulatory Affairs, National Electrical and Communications Association, sworn and examined

The CHAIR: I welcome our next witnesses. Please note that Committee staff will be taking photos and videos during the hearing. The photos and videos may be used on the New South Wales Legislative Assembly 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?

KENT JOHNS: I can confirm that.

NEIL ROBERTS: Yes.

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

KENT JOHNS: No, thank you.

NEIL ROBERTS: No.

The CHAIR: Would you like to make a short opening statement?

KENT JOHNS: Yes, please. Chair and committee members, thank you for the invitation to appear today on behalf of the National Electrical and Communications Association, representing thousands of electrical contractors across New South Wales and the country. Our members are delivering the infrastructure that will support the transition to electric vehicles. We support this ambition and welcome the opportunity to contribute to the rollout. However, there are serious structural and governance concerns that must be addressed. We are increasingly concerned that distribution network service providers are using their monopoly position to expand into the contestable EV charging market through their affiliated commercial entities. These arrangements often involve shared staff, vehicles, branding and data systems.

There is little to no transparency and even less structural separation. This undermines fair competition, ignores ring-fencing principles and excludes qualified independent contractors and small businesses from meaningful participation. Contractors are reporting to us inflated and inconsistent connection charges, delays and restricted access to information. Meanwhile, affiliated businesses of the DNSPs often appear to receive smoother, faster approvals. The effect is a captured market that undermines competition, lowers quality and raises costs. The Australian Energy Regulator, while well intentioned, does not have the legislative authority, enforcement powers or resourcing to properly monitor and address these breaches. The ring-fencing guidelines contain too many exemptions, are weakly enforced and have not kept pace with the growing commercial activities of these monopolistic DNSPs. The existing framework is no longer fit for purpose.

There is also a risk to households. We are deeply concerned about the prospect of EV charging infrastructure being added to the regulated asset base. If this occurs, every electricity customer in New South Wales would be paying for that infrastructure, including households that will never own an electric vehicle. This will shift the cost burden from EV users to the general public and guarantees a regulated profit for DNSPs at the expense of all energy consumers. Eventually, it will all flow into the coffers of these monopolies and guarantee their further super profits.

This approach is not in the public interest. It undermines equity, distorts pricing signals and places pressure on those least able to pay. We must also acknowledge the lost opportunities. New South Wales has innovative, high-quality manufacturers producing EV charging equipment that is safe, state of the art, standards compliant, locally serviceable and built for local conditions. These businesses are creating jobs in New South Wales and investing in regional capacity. But they are being overlooked in favour of lower-cost imported products with limited serviceability or economic return.

Finally, DNSP employees, whose wages are funded and guaranteed by all energy consumers, should be focused on core network responsibilities such as maintaining poles and wires, connecting new homes and responding to outages. Their time and resources should not be diverted into commercial projects that compete with the private sector. In the interests of consumers and small businesses in New South Wales, NECA is respectfully recommending that we ensure that the planning for the location and mix of public electric vehicle charging infrastructure genuinely reflects the needs of the population and respects the agencies of local communities to contribute to that outcome, and that the New South Wales Government advocate for stronger ring-

fencing rules and enforcement, clear limits on what can be included in the regulated asset base, and greater oversight of these DNSP monopolies.

Mr NATHAN HAGARTY: I think we have a pretty clear view on your view of ring fencing. You basically suggested that it's no longer fit for purpose, and one of your recommendations is that ring fencing be strengthened. Can we get some examples of where it's currently not working, how it would be strengthened and how transparency could be improved?

NEIL ROBERTS: I might field that one. Some time ago we wrote to the Australian Energy Regulator (AER) and said that with the area of the ring-fencing guideline that they're responsible for—which is section 4.2—the initial principle is fine. It basically says if you are working in the delivery or the marketing of direct DNSP work, then you cannot also be involved in contestable markets or alternative work. That principle stands. The first exemption below that basically says if a worker is an individual and has access to electricity information but is not in a position to discriminate against a competitor, then that's a valid exemption.

The exemption is unrelated to the objective. It basically provides a free pass for workers to be shared with these other entities, without an effective reason to do so. My position is that there is no effective barrier to achieve that initial objective in section 4.2. I'm not necessarily opposed to exemptions if they make sense, but one of the other ones is if the work is in a regional area, then that's a valid exemption. But if that's the only exemption you're relying on, you're potentially squashing local businesses out of those regional areas. The DNSPs have a pretty broad range of tools to just walk past the objective of the guideline itself.

Mr NATHAN HAGARTY: What about waivers? We heard about waivers yesterday. I think "regulatory sandbox" was the term used. Do you think that is being used appropriately?

NEIL ROBERTS: We opposed the one that PLUS ES got, because our understanding of a regulatory sandbox is that it is there to test particular aspects of new technologies or arrangements. When we looked at that sandbox approach, they were proposing to roll out 1,000 units in New South Wales and South Australia. The sandboxing arrangement was to go for a period of five years. That's a fairly serious commercial undertaking, which has a potential to push out competitors who would wish to participate in those markets. If you've got a sandboxing arrangement, you could legitimately test that out for six months, 12 months or even 18 months. You're not going to get any clearer data after that time, and why do you need 1,000 units to achieve that outcome?

To the other part of your question about transparency, one of the things we wrote to the AER about is the staff-sharing reports that the DNSPs are required to publish every quarter. They don't actually contain any reasonable or transparent information. The best one, to tell you the truth, is Endeavour Energy. It at least identifies that it has shared X amount of staff in this category within this three months. But you've got other examples, in particular the Queensland and the South Australian distributors, who just say, "All of our technical staff are shared all of the time", and that's the only information that exists on those reports. There is no identification of the quantity. There is no justification of why they've been released from doing work on their network to compete in these competitive markets. If we come back to New South Wales, Ausgrid appears to be going down a similar path in identifying staff being shared for electric vehicle charging infrastructure on an ad hoc basis. Once again, that provides no information. It doesn't tell us how many hours are being diverted from the primary purpose of the DNSP into these contestable markets to compete against our members.

KENT JOHNS: Chair, Mr Hagarty asked yesterday, because a lot of our members are monitoring this inquiry, about specific examples, and one would be a DNSP doing private work, not in the EV space but in the private contracting space. For two weeks, 13 of that DNSP staff and their equipment were working on private work. That is in direct competition with our organisation. We write to the AER; we rarely get a response apart from a thank you. Based on the workload that the DNSPs have in maintaining our current infrastructure and the fact that they're guaranteed profits by doing this work for the consumers and taxpayers of New South Wales, why are they focusing on private work when they can't even get their own work correct at the best of times? There's a specific example of 13 employees and millions of dollars worth of infrastructure or equipment being utilised for private gain for their affiliated companies.

Mr NATHAN HAGARTY: I'll change tack. In terms of training and upskilling and transitioning employees, how is that going and what more could both the State and Federal governments do to ensure that the workforce is skilled and ready for what is a pretty significant transition?

KENT JOHNS: The investment that the State Government is making is actually quite substantial, but, to be blunt, if TAFE was running at 100 per cent and the industry-led training organisations were running at 100 per cent, we would still fall short of the 35,000 electricians that we need nationally by 2030. But the Government is well aware of it. It has identified the issue and it is providing as much funding as it can. I think we have to engage better and get greater female participation. The current rate of female participants in the electrical

trade is under 5 per cent. I know within our training organisation, we're between 15 and 20 per cent of our apprentice intake being now female. We need to be able to harness at least half of the population that go into there, because we are finding that women especially find the electrical trade exciting because it is actually developing the country towards net zero and it's a greener, more technically based trade, and I think that's where the real opportunities are.

I think there are opportunities, though, for reskilling, especially with some of the older coal-fired power station areas. I think we really have to look at how we reskill and upskill many of the highly skilled employees up there into the electrical trades as well and get them skilled up. We've just spoken to a lot of our members up in the Hunter region, and they've identified that when the coal-fired power station is finally decommissioned, it will impact their businesses and they see that there are more opportunities maybe within the new energy zones. There are opportunities there. The dilemma is training these people up. A bit more investment into the actual capital works to get more training colleges up and running, I think, will be vitally important, but that is the dilemma we've got. If I could add one more thing—maybe mature age apprenticeships gap funding. We're finding a lot of people are trying to transition back into apprenticeships, who are over the age of 22. It's difficult to place those apprentices because of the differential between their salaries. There is an opportunity there that we can fix it up. Do you want to add anything further?

NEIL ROBERTS: I was just going to add to that—the completion rates as well.

KENT JOHNS: Yes.

NEIL ROBERTS: One of the problems we've been harping on about for a while is the completion rates through TAFE or in the general delivery of our trade is down around 55 per cent. We have a model which produces up around 90 per cent. That's because we support apprentices and engage with them very often to make sure that they're progressing and that their workplaces are doing the right thing.

KENT JOHNS: Investing in mentoring services and guiding the students through is extremely important, and I think that's one area that can be improved. We have specific field officers for every one of our apprentices, because we normally find that the reason they don't complete their apprenticeship is not necessarily because they don't like the trade; it's because something happens at home. It's pastoral care—for want of a better word—to keep these kids and young adults going through the system, because we find that, once we've kept them for six months, we keep them forever. That's also a better return on investment for the government because, with fee-free TAFE, which we very much appreciate, an apprentice at NECA costs you half as much to train as an apprentice out in the general education system.

The CHAIR: I will go to Mr Williams, but probably limit you to one question, unfortunately.

Mr RAY WILLIAMS: I will try and put it all together in a great big question, Madam Chair. Thanks, guys, for attending the Committee. I note the many members that you represent who are highly involved in the implementation of new technology on behalf of the electric vehicle industry and the electrical industry right across New South Wales. I noted some comments in Mr Johns' opening statement, which I want to come to with my question. But, just for the record, when we're talking about distribution network service providers, for the benefit of this Committee and the broader public who may be listening, we're talking about Ausgrid, Essential Energy and Endeavour Energy, primarily, in those DNSPs, as the acronym would provide.

Within that context, Ausgrid has made a statement within a L.E.K. report. I've spoken to this extensively yesterday, and I've tabled that report for the benefit of the Committee this morning. They made a comment that they, as distribution network service providers, are in a position to provide a quicker rollout of EV chargers; that they can do it cheaper than anybody else; and that the current regulatory framework that's been put in place by the New South Wales Government to protect consumers from having to add to the costs of that provision at a time when we're seeing increased costs of living, I think, is a good protection and a good regulation. Ausgrid would prefer to see those regulations released and have a monopoly say in how that goes forward.

I'm interested in two parts: I'm interested in your views as to the current situation where you've raised that companies like Ausgrid, Essential or Endeavour are using their power to leverage outcomes at the moment within the current regulatory framework, which we see as being beneficial to being maintained; but also any comments that you may like to provide in regard to what would be the onset of concerns for the broader public if that regulatory framework were weakened and the likes of Ausgrid gained a monopoly.

KENT JOHNS: Do you want to comment on the L.E.K. report to start with?

NEIL ROBERTS: With the L.E.K. report, I saw the comments made yesterday. I had a look at that, too. I couldn't find any evidence base in the document itself for the conclusion that Ausgrid made that DNSPs could roll it out faster. When we've had that discussion with our members, they think it's preposterous, to tell you

the truth. Some of our members are organisations like BSA Limited—a very substantial company that does rollouts of Foxtel and metering and those types of things. The idle statement that they can do it better simply because they can achieve economies of scale—there are other organisations that do this all the time. We don't accept that premise from the DNSPs that they are bigger so they can deliver it quicker. What we are concerned about is that, under the current framework, organisations like PLUS ES and Ausconnex do give that easy path to approvals and to information. Even though that is supposed to be segregated under the ring-fencing rules, it's not effectively policed.

KENT JOHNS: We also see the behaviour of organisations out there. We know how they behave. They utilise every advantage they can possibly have. We're also aware, within our association, that a lot of our members would not make a submission to this inquiry because they are worried about the ramifications to their business. To say that they are good-faith actors would be stretching the mark. To say that they put something incorrect into one of their reports wouldn't surprise me. I think what we also have to look at is that the current regulations and ring fencing aren't working. They're utilising every loophole that's possible there.

As I said, we have our members who are local subcontractors—anything from a guy in a van and an apprentice all the way up to BSA, for example, which is a huge organisation—and all have the capability and capacity to deliver these programs. If they have to compete with taxpayer-funded organisations who are guaranteed a profit, then you're not going to get that competitive stress that you need. For the technology that's coming out and for them to ask for a waiver because of a technology test, the private sector is already doing our own technology. We're already making our own investments. We don't need the Government to support us to do that. We're willing to bring out the best technology with the smartest minds in the electrotech industry.

Mr Williams, I understand what you're saying where you say this regulatory framework is okay at the moment, but it's just not working. If you were to free them up and have no regulatory framework, you would kill an industry. We have even seen that—and possibly some of you might have realised that when there was industrial disputation with Ausgrid, the bearers of most of those costs were actually our members who were accredited service providers, providing those services and connecting up new homes and doing those works. They were losing $10,000 to $20,000 every time Ausgrid pulled the pin. Ausgrid never paid them back. In fact, on occasions they asked them to reapply and pay another application fee. Their attitude towards our members has never been positive. That's why we have to stand up here as the association and maybe speak more strongly than we normally would, because our members can't have that voice because they're worried about what might happen to their businesses later.

Mr RAY WILLIAMS: Was that due to largely the industrial relations from the ETU?

The CHAIR: Sorry, Mr Williams, I'll have to cut you off there to give Mr Kirby a chance to ask a question.

Mr WARREN KIRBY: I'm going to go a bit beyond the DNSPs towards your experience. What locations would you prioritise for charge stations and battery hubs and that sort of thing, particularly in regional and rural New South Wales?

NEIL ROBERTS: I've got an opinion on that, but I don't think it's in our lane to dictate that. We would rather see that agency with the local communities and the councils. As some of the testimony yesterday indicated, the private sector is quite willing to engage and consult with those councils and identify those opportunities. From my own point of view, regional areas need journey-enabling charging stations and then with a scattering of other solutions.

Mr WARREN KIRBY: In that case, are there workforce or infrastructure limitations that might come into play?

NEIL ROBERTS: For the private sector?

Mr WARREN KIRBY: Yes, for the private sector—for charge point operators putting in this infrastructure. Ultimately, what we're trying to do is facilitate the implementation of this. We heard from councils about brownouts and things like that.

NEIL ROBERTS: To be honest, we represent contractors as opposed to charge point operators, but in the previous session we heard that Tesla and NRMA have put in fast-charging facilities in that regional council. They put in maintenance strategies and serviceability strategies around that as well. There was testimony yesterday from EVX as well that they have a 24-hour turnaround goal. I've seen their technology. Basically, part of their innovation with that technology is that there's only one component in their charger that can't be sourced from a local electrical wholesaler. So they are able to build a network of local electricians who can service their

equipment. There are ways and means and different business models, but I don't think, to compare, the DNSPs having a monopoly on the ability to service the infrastructure.

KENT JOHNS: In discussions we've had with our members, there are varied views. Some believe the emphasis in the regional areas should be in the council car parks, the local parks, the motels, to drive that tourist economy, rather than turning up out the front of a coffee shop and doing a fast charge and driving away. There is that motivation there. We're not experts on the economics of small towns, but I did note the mayor, I think it was, previously said every house is a single-storey house. On-street charging, I don't think, in some of the regional areas will draw much attention, but you need to be able to charge during the travel period and also have them in the locations that they're going to—the caravan park, the park by the river—so that you're attracting people to your town.

But the number of tradesmen and contractors—as long as we're using very high-quality equipment and not the cheapest you can buy off the shelf, then our contractors are more than adequately equipped to service and maintain this type of equipment, and install it. To say that there's a lack of electrical contractors in New South Wales, as a general question, yes, there is—we need more electricians—but there are electricians that are highly qualified that will be able to maintain, install and ensure that those EV chargers are there. We don't need anyone else to do it.

The CHAIR: There is an impression now that we're actually getting a range of different economies for EV chargers. If you're out of Western Sydney, it's off-road charging—people with houses, standalone dwellings. In the city, nobody really has off-street parking. On the east coast of Australia, regional tourism is hugely important. Then when you start getting into these remote areas like the Newell Highway and the Oxley and places where freight is coming through and your grey nomads as well, where councils are really constrained and there may not be the financial incentive or the electrical capacity built into the system to do it, how do you accommodate that? I'm just wondering if you have a view. It's not, maybe, the regulatory framework. Is it the mix of regulatory framework for the different economies we're dealing with that could be something we need to play closer attention to?

KENT JOHNS: That is an excellent observation. There is a different mix of what is needed, but what we have to ensure is that we're getting the value for money. Rather than just putting 1,000 chargers up on poles when they're not going to be utilised in the regional areas is exactly, I think, the point you're trying to make as well. I think we can easily address that. I think the market will also drive it a fair bit. EV uptake is increasing and we see that as promising. It means more work for our members, as long as we don't get hit by a monopoly. But the regulatory framework should be flexible enough for the market to drive it.

We're seeing examples again—and I know I'm harping on it, but the DNSPs are blocking out poles and saying our members can't put their equipment on it, "We've already booked it out." Then we say, "Well, what about the pole just up here?" They go, "No, that one's booked out too." "What about the rest of the street?" "That's booked out for the associated entities." They're the examples that we're seeing. That's what we want to get rid of—is that competition, so our market can go out and then get there. There are some excellent suppliers of equipment that are manufacturing and putting things together in New South Wales that just want to get out into that market and provide it.

I do find rural and regional areas see the benefit of the installations of these equipment, so people like Mr Hagarty and Mr Williams will drive their EVs up there and spend their money. The rollout will occur and the government support that's there is great. But with the grants that are there, under your procurement policies, I think the Government would be better to focus those procurement policies, as they're stated, towards local supply. If we are to do that, then it's our members that will come out on top and the industry will flourish and will grow. But your observation is totally correct.

The CHAIR: I know we're running into lunch, but do you mind another couple of minutes?

KENT JOHNS: Happy to.

The CHAIR: I think the two members on my left are both trying to get a look-in. I'll go to Nathan first.

Mr NATHAN HAGARTY: You spoke about cheaper equipment and that kind of thing. It's raised a thought. The Federal Government blocked Huawei 10 years ago from rolling out 5G. Given these devices are connected to the internet and collect a lot of data, are there some sovereign risk issues about using cheaper equipment from jurisdictions elsewhere that Australia might not have a friendly relationship with?

KENT JOHNS: I'd probably refer to Neil. But they do use advanced communication protocols, so there is a possibility—and I'm no expert on this. Neil, you can correct me if I'm wrong.

NEIL ROBERTS: I'm barely ahead of you, I think. Cybersecurity is definitely something that gets talked about, not only for EV chargers but also for CER equipment in people's houses. Potentially, yes. But any supplier, local or overseas, needs to be compliant with the protocols that secure that reasonable outcome and maintain proper use of information. But, to answer your question, is there a risk? Potentially, but I'm not the expert on that.

KENT JOHNS: But there is a lot of communication between the vehicle, the user, the protocols and the actual grid as well. You make a great point. It's something that the Government should be mindful of.

NEIL ROBERTS: Taking it back a step though, the other risk that we did mention in our paper was about what happens if there is industrial action and the networks are the monopoly provider. We saw developments last year crippled for months and months on end, and many of our members extremely stressed by the financial impost on them. I see a sovereign risk there. My suggestion would be that if you've got more players in the market, at least then you've got diversity, and if one network goes down—just like you can choose your petrol station now. If one is closed, you can go up the road. If the DNSPs have monopoly outcomes, then that's going to be much harder.

The CHAIR: And a short question from the member, because Hansard obviously wants to get to lunch.

Mr RAY WILLIAMS: I'm sure they do and I'm not going to hold them up from eating any longer. I actually didn't have another question, but I did pick up in some of your commentary, which I think is very important, where you have suggested that to allow a monopoly position by distribution network service providers like Ausgrid et cetera to control this industry would very much restrict investment, innovation and new technology. I just cite, on behalf of my area of the Hills and also the neighbouring council area of Blacktown—have embraced some great technology known as JOLT. The only affiliation I have is that they have been able to provide chargers where the first seven kilowatts happens for absolutely nothing—for free.

You can imagine the amount of people that are seeking those chargers, and there are three in very close proximity. That has come at no cost whatsoever to anybody. They do that through an advertising scheme with their particular councils. You'd hate to see something like that diminished, and the future opportunities for technology, by allowing DNSPs to have that monopoly. It's not so much a question but a comment from myself, but I welcome your thoughts on that if you'd like to make a final comment.

KENT JOHNS: I think the one emphasis that I want to place today is that not only do they want to relax the ring fencing; what should be happening is a strict definition of ring fencing. They should only be a supplier of last resort. The taxpayer and energy consumer is paying their wages. There is no reason that they should be using that monopolistic position to enter into a market that doesn't have a guaranteed profit, which is already well serviced by very well qualified small and medium enterprises that are doing a great job with great technology. The emphasis here from us is that a lot of our members will not speak up because they're concerned, but they're excited that this Committee is actually taking this up. They see that what the Government is doing here—and you, Mr Williams, as well—is actually shining a light on a problem that's been around for years. It's focusing on EV, but it also happens with powerline construction and connection.

NEIL ROBERTS: Connection assets.

KENT JOHNS: It impacts the housing market. It's going to become a massive problem with community batteries coming in, where they'll want to possibly retard private investment in batteries. For shining a light on it today, I have to congratulate everyone on this Committee, because there are a lot of electricians and sparkies out there that are cheering you on.

The CHAIR: On that note, I think we'll go to lunch so that Hansard can have a break. Thank you very much for coming in. 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. You'll have 14 days to answer them. If you need an extension, feel free to ask.

(The witnesses withdrew.)

(Luncheon adjournment)

Mr JAMES MIRANDA, Policy and Research Officer, Electrical Trades Union, NSW and ACT Branch, affirmed and examined

Mr DANIEL PERIC, Research and Policy Official, Transport Workers' Union of NSW, affirmed and examined

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

DANIEL PERIC: Yes.

JAMES MIRANDA: Yes.

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

DANIEL PERIC: No.

JAMES MIRANDA: No.

The CHAIR: Would you like to make a short opening statement? If so, Mr Miranda, we'll start with you.

JAMES MIRANDA: I want to thank the Committee for the invitation to speak here today on behalf of the Electrical Trades Union (ETU). The ETU would like to use our appearance to draw the Committee's attention on two bread-and-butter issues for our union. That is electrical safety and training, which will have serious implications for the rollout of EV infrastructure, no matter how it's conducted. New South Wales is the only eastern state without standalone electrical safety legislation or a dedicated regulator. Attempts to conduct a mass rollout of electric vehicle charging infrastructure without serious reform to improve the electrical safety standards in New South Wales will put the lives of workers and the public at risk. If we expect communities to endorse rolling out EV chargers in their homes, streets and public places—much less use them—we need to uplift our regulatory standards by legislating an electrical safety act and creating a standalone electrical safety regulator.

There has been a "short-term" skills shortage for electricians in Australia for about three decades, and we're on track to be over 32,000 electricians short of demand by 2030, according to Jobs and Skills Australia. There is no point in subsidising a new mass electrification initiative if we can't be sure that we'll have the skilled workforce to deliver it. EV infrastructure initiatives can be part of the solution if we apply apprenticeship ratios to contractors responsible for installing and maintaining any government-supported installations.

We have outlined in our submission that we support efforts to deliver widespread access to public charging infrastructure, especially by expanding the footprint of publicly owned and operated chargers at State and council owned facilities. Every time a new electric vehicle charging station is connected to the grid in New South Wales, chances are that the distribution worker making that connection is a member of the ETU. Our union is a longstanding advocate for a rapid and fair transition to net zero underpinned by the creation of thousands more well-paid and highly skilled electrical jobs for our membership of over 15,000 electrical workers, and growing, in New South Wales and the Australian Capital Territory.

DANIEL PERIC: Good afternoon. I would like to thank the Committee for the opportunity to speak here today on behalf of the Transport Workers' Union. The Transport Workers' Union (TWU) shares the enthusiasm of industry in looking towards the decarbonisation of the future. However, there are many challenges associated with this, and the TWU believes that the roadblocks ahead must be navigated through a whole-industry approach. Charging and refuelling infrastructure must be placed strategically across key freight corridors. However, there are crucial factors that cannot be overlooked, such as usage volume predictions, land use for heavy vehicle spaces and the ability to generate the required energy for the infrastructure in question. The current capacity of regional road infrastructure to support heavier battery-electric trucks must also be considered.

The transition of workers—the individuals in the cabin of these vehicles—must be considered a priority in the road to decarbonisation. Electric and hydrogen vehicles possess unique hazards by virtue of their nature and components, requiring specialised training for workers in the industry. To ensure the best safety outcomes and consistency in the workforce's knowledge and skills, uniform training standards for each respective vehicle type must be established. That is to avoid differences in training and education offered between operators or training providers. I welcome all questions the Committee may have in relation to the TWU's submission and will aim to answer to the best of my ability.

Mr NATHAN HAGARTY: This question is for the ETU but feel free to chime in if it applies, Mr Peric— you did sort of touch on safety. You made the point, Mr Miranda, about the fact that New South Wales has no standalone regulations and no regulator. Given everything these days is connected or electrified—we're talking about EVs here, which are pretty much just very complex computers and electrical devices on wheels now rather than old combustion engines—have you approached the Government about that, and where is that at? If every State in Australia has it, would it not make sense to have a national one as well?

JAMES MIRANDA: It's not uniform nationwide but, for example, Victoria and Queensland are probably the gold standard. They have standalone electrical safety legislation, and they have standalone regulators. Tasmania, the ACT and the NT have standalone legislation, but not necessarily a standalone regulator. South Australia and WA have specialist regulators for a range of specialist trades, but not necessarily standalone legislation. So there is a mixture. But New South Wales—again, we're one of the big three eastern states, and we're the only one that doesn't meet a high bar. We end up with a patchwork of regulators that are responsible for different elements of the electrical industry, and they're not very good at coordinating on their shared roles.

We've got Fair Trading that's responsible for licences and compliance certificates and Independent Pricing and Regulatory Tribunal (IPART) that's responsible for oversight of supply authorities. The department of resources looks after electrical safety in mines. SafeWork obviously has a role in workplaces. The NSW Environment Protection Authority has now been given a role overseeing the disposal of batteries. It's just this whole big complex mix, when it doesn't need to be that way. We've had several discussions with the Government about this. It was raised with the Premier prior to the State election. It is currently part of NSW Labor platform, as of the most recent conference. So it is something that we've been engaging with the Government on. They're open to further discussions, but we're just yet to see those first steps to really set something in place.

Mr NATHAN HAGARTY: Has there been any discussion with the Feds about perhaps some uniformity across all those jurisdictions?

JAMES MIRANDA: Yes. The Federal Government took to the last election a promise to establish a national electrical licence. We understand that there's some early work that's underway within Treasury on what that might look like, but I imagine that ETU branches across the country, especially from States with stronger regulation, would push back quite significantly to something that just established a national licence without bringing everyone up to a sort of common solid standard of electrical safety regulation. It was tried by the Morrison Government previously—sorry, it might have been before the Morrison Government, but Scott Morrison was involved. It was attempted and it fell flat because there wasn't any genuine attempt to bring States along with it. So, yes, there is work happening federally. We're yet to see how it lands. But for it to be successful, we would say that it has to bring everyone up, including New South Wales.

Mr NATHAN HAGARTY: Do you have anything to add?

DANIEL PERIC: Not on that specifically, no.

Mr NATHAN HAGARTY: Continuing on from that, I guess the people that are most at risk when it comes to this are the workers.

JAMES MIRANDA: Yes.

Mr NATHAN HAGARTY: We've asked this question of the previous witnesses, but in terms of training and upskilling as we transition to electric and everything becomes connected, do you have any recommendations for governments—State, Federal and even local—around how we re-skill, upskill and get those apprentices and trades that we need over the next five years or so?

JAMES MIRANDA: I mentioned in my opening statement the projected shortfall of electricians nationally by 2030. There's a lot of just meeting housing demand, new infrastructure, as well as all of the renewable energy and electrification initiatives—between 32,000 and 42,000 electricians by the end of the decade, depending on how ambitious the policy settings are. There have been some efforts by the New South Wales Government and the Federal Government to promote apprenticeships and get more people involved. We found that requiring apprenticeship ratios on industry participants is the best way to get that training rate boosted up.

New South Wales Government has a 20 per cent trade workforce to apprenticeship ratio requirement on renewable energy projects. Federal Government has a 10 per cent requirement on Commonwealth construction projects. We apply a "one apprentice to every four tradesperson" requirement on many of our construction sector enterprise agreements as well. So things like that, getting more people actively involved in building a culture of training in the industry, is how we get long-term change and make sure it sticks. We also raise group training organisations as a really important part of that, giving apprentices, one, the job security—if they fall out of

apprenticeship with one employer, the ability to be able to place somewhere else—and also the ability to get rotated around industries and get varied skills.

The CHAIR: Mr Peric, obviously this is new technology. There's hydrogen, there are the different types—hydrogen, electrical. What do you see as the parameters within the transport industry for training, particularly with these interfaces that are coming in now?

DANIEL PERIC: First and foremost, I'll just support what James here said. We at the TWU absolutely want to see more electrical trade apprenticeships, because we cover the people driving the trucks but we also need people who are going to work on these electric vehicles and be able to service them. But when it comes to the provision of training for transport workers specifically, the TWU is very happy and more than willing to work with the New South Wales Government on long-term training initiatives, particularly given that we want to see uniform training standards for each vehicle type.

So if we're talking about battery electric vehicles of a certain class, we want to make sure there are certain training regulations and specific coursework that will be crafted for that. We don't want to see a gap in the industry where we have in-house training provided by transport operators to their workers that's going to differ to what is offered by a different transport operator, and then you have a lack of consistency in skills and knowledge in the industry. We feel that the best safety outcomes could be assured by creating uniform training standards. I think the best way to achieve that at this point in time, because it's so early, is to promote long-term consultation between not only the TWU and, say, the New South Wales Government but also energy providers and big road transport operators to figure out how we really distribute that to workers long term.

Mr RAY WILLIAMS: I have questions for both witnesses, but I might start with Mr Miranda. In your opening statement you referred to the need for improved safety and training on behalf of your members that you represent. I wonder how that relates to the safety on behalf of the general public and the driving public of my shire of the Hills council, where, through your continued industrial relations action over the past two years in your quest for massive increases in wage rises—

The CHAIR: Sorry, this has got nothing to do with the—

Mr RAY WILLIAMS: Well, it does relate.

Mr NATHAN HAGARTY: Point of order—

Mr RAY WILLIAMS: It does specifically relate because it relates to safety.

The CHAIR: Can we get back to the infrastructure that we're looking at now?

Mr RAY WILLIAMS: That's my concern. If we are looking at safety on behalf of people who may be installing EVs, will you be applying the same approach to not connecting up homes and not approving safety upgrades on rural roads in my shire? I think there are up to 20 outstanding issues, for two years, because of the power you exerted over your contractors to stop those particular upgrades to infrastructure connections happening. How do you explain the safety and commitment on behalf of my public compared to your members, or is that somewhat different?

JAMES MIRANDA: I think what you're talking about—correct me if I'm wrong—is our industrial action across the power sector last year at companies like Endeavour Energy, which I believe covers your seat. We had strict safety commitments that applied to all protected industrial action as part of that industrial campaign, which was tested multiple times in the courts and the Fair Work Commission. And, every time, it was found that our safety commitment was sufficient to guarantee that no-one's safety or lives would be put at risk. All of our striking members had agreed that, if there were urgent safety issues or emergencies, they would cancel any industrial action and be back out on the job right away.

Mr RAY WILLIAMS: That never happened, mate. That's a joke. Absolute joke. It's not true.

The CHAIR: Order!

JAMES MIRANDA: That was tested multiple times in the courts and our industrial action was upheld as posing no risk to the safety of the community. You've suggested that there were items that were delayed for over two years as a result of industrial action. We were striking for around nine months at Endeavour Energy.

Mr RAY WILLIAMS: Only nine months—I'm happy to correct the record.

JAMES MIRANDA: If there are things that have been dragged out for that long, I would contend that there are bigger issues at Endeavour Energy.

Mr RAY WILLIAMS: I had a primary school, mate, that had a diesel generator operating its power for over a year.

The CHAIR: All right, that's enough, Ray.

JAMES MIRANDA: If I may, as well—

The CHAIR: No, I'm moving on to Mr Kirby. I will warn the member for Kellyville that he can either ask questions that are relevant to the inquiry we're undertaking now—

Mr RAY WILLIAMS: It relates to safety, Madam Chair.

The CHAIR: —or, every time he asks questions that aren't related to the inquiry, I will move on to the next member. So I'll go to Mr Kirby now.

Mr WARREN KIRBY: My question is for Mr Peric. What are the insights that you can share with us from the long-haul EV trials that have been conducted so far?

DANIEL PERIC: That's a great question. I'll just focus on urban for a short period here, because most of the trials that have been conducted in the industry—whether we're talking buses, trucks, vans and things of that nature—are urban. There have been long-haul trials, but there have been so few that we can't draw any reasonable conclusions onto the long-term viability. What kind of infrastructure is truly going to be needed long term? For long-haul EV, we're looking at regional New South Wales as well. We're looking at our major freight links such as the Hume Highway and Pacific Motorway.

When you combine these different roads—our major highways and regional—we're looking at, from what I know, upwards of $600 million worth of upgrades that are going to be necessary to, one, install the required infrastructure to support these long-haul freight transportations, as well as futureproofing it, because at the moment, our road infrastructure, particularly in the regions, aren't fit for purpose. They can't support these heavier battery electric trucks because we're talking about trucks with very specific access requirements. I suppose, to answer your question without rambling on too much, from what we see so far, we can't draw a reasonable conclusion on what the long-term viability is. But we do believe that, with further trials, we could see more meaningful results. The TWU has always encouraged further trials into both the electric trucks and hydrogen-based vehicles, whether it be short term or long haul.

Mr WARREN KIRBY: It is definitely key. One of the things that seems to be emerging through this inquiry is a distinct difference between inner metropolitan Sydney, outer Western Sydney and regional areas. It has been noted a couple of times that it's not simply the charging infrastructure but also the road infrastructure and things like that. Even though the trials are limited, what are the barriers that have come up? I understand the point on long-term viability, but have you got any insights into the very clear barriers that could prevent that long-term viability?

DANIEL PERIC: Definitely. If we take a look at urban freight operations, a lot of them tend to be depot based, so you'll have trucks operating out of a depot. They go do their work and they will return to their depot. I understand this may not be the most realistic picture, but when you look at it from that perspective, what comes to my mind at least is to say, "Well, you could have your charging infrastructure in the depot." I'm just assuming all the financing is fine, because that would be a massive capital investment on any operator's part.

But when it comes to long-haul and interstate freight, that's A to B based. That is based from departure, all the way to destination. That's not depot based. The issue there is that for interstate and long haul, we're going to need this supporting infrastructure on our roads. It's not just a matter of saying we can primarily rely on charging infrastructure in, say, a depot or one single spot, because it's from destination to departure. You're talking about two different animals in the context of long haul and urban. When we're trying to find solutions for urban freight and how we support it from an infrastructure perspective, we can't treat regional freight the same way. Particularly with regional freight, we need to have not just a focus on the infrastructure itself but actually making our road network capable of, one, supporting the infrastructure, from both a physical material and power grid level, but also a matter of making sure the roads themselves can support the heavier vehicles. Those are the biggest challenges, along with capital investment.

Mr WARREN KIRBY: What data do you think is needed to support policy development on electric and alternative sources? We've also heard evidence to suggest that maybe that A to B destination might be better suited to hydrogen vehicles as opposed to electric vehicles. What is the data that you think you would need to be able to support policy development?

DANIEL PERIC: I think the first thing we'd probably want to look at—at least from my perspective—is the actual logistics involved with financing all of this: What are the incentives going to be for energy providers

and manufacturers, who are actually going to be able to establish the infrastructure? I think that's what we need to look at before we can determine what the viability is for road transport operators and transport workers. It's a bit of a chicken-and-egg problem, and I'm sure everyone in this room has probably heard this at some point. But we have an issue where energy providers or, I suppose, manufacturers don't necessarily want to invest in all of the infrastructure, because the vehicles aren't necessarily there.

Even though we're seeing an uptick in growth in interest and uptake of these vehicles, the number of electric vehicles in the road transport industry is still quite low compared to your typical diesels and whatnot and much less so for hydrogen. The other issue is that because the infrastructure is not there, the road transport operators are hesitant to take up these trucks en masse, hence why we're seeing so many trials. I think the challenge here and what we need to look at first is the financing and how it's going to be provided. Once the industry has confidence in the infrastructure that's out there and the capability to support the vehicles, I think the uptake will be more feasible. That's probably what I'd say in that regard.

If we're talking about pure data, I think it's probably best to reach out to energy providers. I think it's best to reach out to energy providers and have everyone at the table. I don't think this can be something that is going to be looked at in consultation A with X, Y and Z and consultation B with the rest later on. I think everybody who's going to be at the table needs to be at the table: energy providers; manufacturers; the New South Wales Government; the ETU, who are training our apprentices; and the Transport Workers' Union, who can funnel all of this to transport workers who are eventually going to be in the cabin of these vehicles—ideally, en masse. I would say we get everyone at the table, and we need to figure out what the costings are and what the logistics are behind rolling all of this out long term.

Mr WARREN KIRBY: Can I ask a bit more around the practicality of the long haul, which we seem to see quite a bit more of in regional and rural New South Wales? From a TWU perspective, would charging points be better off at truck stops? Would they be better off close to accommodation? My understanding is it takes quite a bit longer to charge a truck than it does to charge a lot of the consumer vehicles or smaller vehicles. I can't see somebody who wants to keep the wheels turning wanting to sit around at a truck stop for four, five or six hours.

DANIEL PERIC: Absolutely not.

Mr WARREN KIRBY: Do you have an opinion on that?

DANIEL PERIC: On that last point—and we see this internationally—for a car who is on a road trip on a motorway and who finds their electric vehicle charging point, they'll have to stop, and they might have to wait 15 or 30 minutes for the person in front of them, because they're all taken up. Then they get on with their business and charge. That's a matter of inconvenience for a car. But for a truck driver, that's a matter of livelihood, because the economic imperative for a truck driver is to be in the cabin of their vehicle on the go, on the move. They literally cannot afford to sit around and wait. You're correct: It does take longer to fast charge a truck than it would, say, a vehicle.

In regard to where we place this infrastructure in the regions, I'm sure everyone in this room has heard the term "range anxiety" when it comes to electric vehicles. It's the lack of confidence about whether I can get from A to B on a longer trip on this electric vehicle's charge. If there was enough confidence in the truck's capability to reach its destination without range anxiety, then the question of where we place this infrastructure should be more: Do we have the land required to forecast how many trucks may be using this charging infrastructure at once? We need to have enough charging ports and then the grid needs to be able to support it, because these vehicles are more demanding in how much power they're going to use. We also need to have enough land to make sure that these trucks can have a reasonable distance between themselves and can manoeuvre easily out of the bay.

Truck stops would be a great candidate. But of course that creates some complications, because, if we're talking about heavy vehicle rest areas, they're going to end up being mixed use, where they're treated as a rest facility and then a charging facility. We're talking about ones that exist already. This is land that has already been carved out and purposed for these areas. I think the best thing to do, long term, is to establish new charging points. I'm sure some rest areas, given the land mass is appropriate, could be retrofitted with such technology in an ideal scenario. But the best method would be to identify land and create new venues for charging infrastructure in the regions, rather than solely rely on existing rest stops per se.

The CHAIR: I want to follow up on a couple of the points there. One in particular was the capacity of the grid, and you both may have a view on this. We've heard evidence that when bus companies or truck companies are converting to electric, if the substation needs an upgrade, they have to wear the cost of that, although there may be other companies that get the benefit of that later on. In terms of substations, as opposed to the ring fencing

around the pole, what would your view be on how best to get that grid upgrade so that the benefits are shared, at least across industries or communities, when you have to upgrade the substation? Maybe Mr Miranda would have a view on this.

JAMES MIRANDA: Yes. I think there's definitely a role for the Government to step in. A lot of these questions would be a lot easier to deal with if we still had the DNSPs in public hands. It's a lot easier to wade through these questions and provide that additional funding without worrying about lining the pockets of private shareholders when you do it. I think you need to have the State Government step in and invest in that new stuff. A lot of these bus depots are already state government owned, so whether it's just pooling in money from a few different pots instead of having the depot owners solely responsible, that's probably the way forward. I don't know how you would structure it so that people who get the later benefit pay, unless you're asking the power company to take a hit and trust that they'll get revenue down the line. I'm just not sure how something like that would work.

The CHAIR: Daniel, do you have any views on this? It may not have been something you've put your mind to.

DANIEL PERIC: I can give a loose view. I would share the sentiment of Mr Miranda in saying that it's definitely a matter of co-funding. No single party is going to be willing to weather the full cost of this, particularly given the shaky forecasting for later benefits. I would say the New South Wales Government, and perhaps federally too in certain areas, does have the role of helping to fund this, but I would suggest that we don't rely on one single party to do so.

The CHAIR: You can always feel free to take these questions on notice if you'd like to give it more thought. The other thing I was going to ask you, Daniel, was about the relationship with the Federal Government. Obviously a lot of the truck stops are on Federal highways. I made this point with the last witnesses. There are kind of like four economies we're dealing with. There are the remote and regional areas where you get a lot of heavier freight coming through, like the Riverina and the Murray up along the Newell Highway, with the grey nomads as well, and then you have your tourism up and down the east coast, you have your inner city where there's no off-street parking, and then you have your outer western Sydney where we're getting the big uptick because there is off-street parking.

With the long-haul freight in particular, are you talking to the Federal Government about its investment in these Federal highways, because that is the likely spot, particularly that Queensland to Melbourne route across the back of New South Wales, about how to get the infrastructure in there? Some of these rest stops, and James may know better than me, don't even have power capacity because there are no power poles.

DANIEL PERIC: You're correct in that last statement. We do speak with the New South Wales Government to a degree. With the Federal Government, we have had communications with it. As far as I'm aware, because I'm purely the New South Wales branch, that is more of a national branch matter. But I can say that to my understanding most discussions we've had on Federal highways with the Federal Government are to do with heavy vehicle rest stops in general, which, as we know, don't seem to have the capacity to support the charging infrastructure in question—at least not yet. When it comes to discussions on the electric vehicle infrastructure specifically, I don't think we've had too much ground with the Federal Government as of yet.

Mr NATHAN HAGARTY: While we're on the topic of the Federal Government, I'm not aware if there are incentives but there were certainly incentives around EV vehicles for fleet and fringe benefit tax incentives and that kind of thing. Has there been anything in that transport space to encourage the take-up of EV or hydrogen-fuelled trucks and transport, and should there be?

DANIEL PERIC: Should there be? One hundred per cent. I think I'll have to take the rest of that question on notice, though, because I believe there are incentives but, I have to be honest, I don't have that information 100 per cent at the moment. I'm happy to take it on notice and give you a detailed response.

Mr NATHAN HAGARTY: Switching back to training and that shortfall we spoke about in terms of the trades, we know that the previous Government took hundreds of millions of dollars out of the TAFE system, and it also set up, I think it was called, Smart and Skilled where TAFE essentially operated in a contestable market with private RTOs. Would taking TAFE out of that area and also increasing its funding open up opportunities for you guys to train up and skill and try and close that gap in terms of trades and other areas where we desperately need workers?

JAMES MIRANDA: Yes, absolutely. TAFE, as you mentioned, has had serious capacity constraints placed on it over the last decade or so. We now hear a very common situation of apprentices starting their apprenticeship but being stuck on first-year wages for extra periods because they haven't been able to start a TAFE place or being unable to finish their apprenticeship on time because they couldn't get into all of the units that they needed. The most common elective that electrical apprentices at TAFE are enrolled in is learning how to hook

landlines up to a house. There hasn't been the investment in the new technology and equipment in order to offer, especially, renewable energy electives more broadly.

There isn't currently a nationally recognised unit of competency for training with installing EV chargers. That's something that we're open to exploring through those sorts of national avenues. New South Wales TAFE has a microskills course, which is okay. Victoria, again, has the model here. Their licensing requirements include requirements to do upskill training, and they've developed their own Victoria-specific unit of competency on installing EV chargers. That is formalising the training more, making it a lot more in depth and then requiring people who are already qualified as well as new apprentices to get that upskilling and knowledge of the new technologies coming through.

Mr RAY WILLIAMS: I have a question to the TWU. Has the TWU undertaken any research into the proposed relaxing of weights over steering and drive axles on behalf of heavy vehicles that will probably be necessary with the increased load from the inclusion of batteries into those heavy vehicles? On top of that, given it has already been raised in relation to long-haul vehicles, if they do have to stop for excessive amounts of time, how will that be dealt with in terms of the permitted driving times over—I think it is currently a maximum of 12 hours for truck drivers? How is industry going to deal with those particular changes, and whether or not you've done a body of work in relation to that as yet?

DANIEL PERIC: We've certainly spoken to road transport operators and peak industry bodies such as NatRoad, for example—I think they were going to join us today—to discuss what, I suppose, the complications and long-term challenges are going to be regarding that. I believe, last year, the New South Wales Government finished some work regarding a Heavy Vehicle Access Policy, which would serve to incentivise and encourage the use of what we'll call modern, high-productivity vehicles, referring to low- and zero-emissions trucks and things of that nature which will require new axle loads and things like that. But the biggest issue or the challenge in this regard for industry, I think, is what I mentioned earlier regarding the actual capacity of the road infrastructure to handle these heavier trucks altogether. I may have mentioned this earlier: I believe the current estimated figure for what it's going to cost to actually bring our regional and major interstate links up to scratch to support this, let alone futureproof it, is upwards of $600 million.

It's no easy undertaking. It certainly isn't something that's going to happen overnight, and this is why I sit here and I say that we are enthusiastic about the future of decarbonisation but, at the moment, it's difficult to say what the long-term viability is. We need to see more trials be conducted on-road, and we also need to see what all the parties at the table have to say regarding what commitments need to be made to bring these roads up to scratch, because that's the primary issue. We can't have these trucks on the roads if the roads aren't ready to support them, because trucks—we all know they're just heavy vehicles to begin with. It's in the name. But these battery electric trucks are significantly heavier than what we see on the road now, and a lot of the failing infrastructure in the region just won't cut it.

The CHAIR: Sorry, what was the figure you quoted?

DANIEL PERIC: I believe it's over $600 million. That's the estimated level of funding that's going to be required to bring regional roads and our major interstate links up to scratch to support heavier electric vehicles, and I'm not certain that that figure includes the futureproofing of it because we've already seen battery electric vehicle technology evolve very quickly, despite it being, I'll say, a growing market. I'd say it's still in its infancy, but it's quick to grow. At the end of the day, it's going to cost a lot of money.

Mr RAY WILLIAMS: I think it's a good point. I can see a possible outcome where government may propose to reduce the payload for vehicles to offset that increased weight of batteries. But the end product of that is that the consumer will ultimately pay from increased transportation costs at the end of the day. I also come back to the fact that, if we are relaxing standards on especially vehicle steering—which have been in place for a decade and are virtually signed in blood—that can't be reduced and that impacts on that particular vehicle throughout the life of the vehicle, whether it's loaded or it's not loaded. I have some reservations in relation to that, having a heavy vehicle background.

DANIEL PERIC: We don't necessarily want to see any negative safety implications come out of any of this. Being the Transport Workers Union, we represent the workers, of course. But on that point about lowering the load capacity for transport operators, I don't think the transport operators are going to be too happy about that. I don't see that as a feasible fix because it seems like it would be a compromise in a sense. You have this shiny new high productivity vehicle that is purposed to, in an ideal world, save transport operators a ton of money but then, if you say to them, "Well, you can only carry so much of a load, not even to full capacity of your vehicle", I don't think they're really going to be too happy about that. But, of course, I can only speak in the best interests of transport workers. But I believe those are just objectively the challenges that are going to come about from transport operators to the New South Wales Government if that was to ever be suggested.

Mr WARREN KIRBY: Mr Miranda, thinking about electrical safety, at the moment we're rolling out chargers all over the place. It has been noted that some of those have differing levels of manufacturing integrity, shall we say. Do you have any concerns or opinions on safety over time? Many of these charge points are out in the sun and out in the elements. Do we know of any longevity concerns? It's pushing a lot of current or voltage through.

JAMES MIRANDA: This is a massive thing for us. We have a significant membership at the supply authorities—energy distributors—and they're often the frontline first responders when something does go wrong with an installation like this to come and isolate the power so that other first responders can do their jobs. It's core business for us making sure that these are safe. That ties into what I was saying before about getting a standalone regulator and electrical safety act. I think New South Wales and South Australia are the only States that aren't part of—there's a national Electrical Equipment Safety System framework that has been set up. Again, we're one of the few States that are not part of that. That would play a role in pre-verifying this equipment before it comes in and keeping track of these installations and the equipment used in them.

The other thing is making sure that they're properly inspected before they're brought on line. Currently, the IPART minimum legal requirements for asset inspections don't require the DNSPs to conduct testing on new installations under 400 amps. That would be most public chargers, except for the tippy top of your fast chargers. They don't require DNSPs to directly check that defects are rectified when a contractor claims that a defect has been fixed. Endeavour Energy has already reduced their asset inspection framework to the minimum requirement. They have very few asset inspectors and they inspect very few installations themselves. Ausgrid is in the process of scaling down to that minimum requirement at the moment. We have serious concerns that you're basically getting these companies that are a lot more accountable than your small business who's been contracted to do these odd jobs—they have much more well established safety frameworks. Pulling them away from that, and not having that level of oversight and asset inspection or something through an electrical safety regulator to come in and replace them there, we have serious concerns about quality assurance.

Mr WARREN KIRBY: Who are the safety inspectors?

JAMES MIRANDA: At the moment, it's just a requirement that the contractor that installs them and brings them on line fills out a certificate saying, "I've done everything in compliance with the Australian standards." Then they send it off and it gets sort of checked.

Mr WARREN KIRBY: I'm perhaps talking about more ongoing harm.

JAMES MIRANDA: Yes, ongoing.

Mr WARREN KIRBY: I know firsthand it's not uncommon to go to a charging station and find a couple of them just simply don't work or maybe the whole station is out. Who is in charge of inspecting?

JAMES MIRANDA: The charge point operators themselves—almost none of them will hire electricians themselves who do this. They'll have what they call a list of accredited providers. It's a network of usually small businesses and contractors that they've entered into agreements with, that they've supposedly verified are able to do the job safely and have the appropriate licences. When something pops up in an area, they'll contact the nearest contractor and ask them to go out. It's very arm's length. It's only if there's a serious emergency fault where you'll have the field crews from Ausgrid or Endeavour sent out to cut the power off, but at the moment there's no real ongoing inspection regime for these things.

You could make an argument that, I guess, Fair Trading should be doing some inspections to make sure that there's licensing compliance, but I think you can count on one hand the amount of sanctions they've placed on electrical licences in the last few years. So they're not doing it. SafeWork has played an active role in enforcing compliance with solar and home batteries, so they could step in. But we would say that a standalone regulator, like they have in Victoria and Queensland, should be taking on that role, stepping in and doing audits, spot inspections and making sure the ongoing maintenance is up to scratch.

Mr WARREN KIRBY: If we're talking about a regulator for the infrastructure required for EVs, would it be reasonable if that regulator was also responsible for EVs in and of themselves—like, systemically—given, as Nathan pointed out earlier, essentially they're an electrical device that just happens to be on wheels? We also noted from one of the people who provided evidence yesterday that in a short period of time the vehicles themselves will be the biggest provider of energy in New South Wales. Should they be included as part of that regulatory framework or be kept separate?

JAMES MIRANDA: I'll take that on notice. I will say with the frameworks that we have now, WHS regulations in New South Wales exempt any power system that propels a motor vehicle from being considered an electrical installation. Under current WHS laws now, even electric buses that we have on state roads aren't

technically considered electrical installations, just by virtue of the fact that they're on four wheels. We've consistently advocated that that's a loophole that needs to get fixed. I'll take on notice questions about whether a future regulator should explicitly cover motor vehicles.

The CHAIR: Just following on a bit from that, we had evidence earlier with Narrandera where you get the brownouts and we have had submissions that in Europe it's very common for the vehicles to be used—really, the batteries—as a storage facility. They're off the grid during the day while there's a lot of solar or a lot of wind around and putting back into the grid at night, but the grid isn't actually built to have a capacity to interface on this level at the moment. Does the union have a view on the capacity of the grid and the interface, and how that should be rolled out, particularly in regional areas where there obviously appears to be a lack of energy and it could provide an alternative storage facility for the grid?

JAMES MIRANDA: My understanding is there is a lot of work going on with the Federal Government in coordination between the state energy Ministers on accelerating the timeline for vehicle to grid becoming a reality. I can take on notice exactly where that's up to and what that's looking like at this stage. But even before you get to that point—something we highlighted in our submission is that the location of these chargers can start putting that in place early on. If you have chargers in places where people are during the day—workplaces, shopping centres, even sporting fields—people are going to be plugging in and you incentivise the behaviour for people to plug their car in and charge it slowly throughout the day. Even if you're not then putting that energy back on the grid at night, you're still getting some grid benefit there, especially as opposed to everyone coming home at the end of the working day and plugging their car in at home at the same time as the grid is already under a significant amount of stress and solar has stopped producing energy.

The CHAIR: Daniel, I've got one question—and it does follow on from what Ray was asking you—about road user charges. At the moment you have the fuel tax. That is paying for a lot of road upgrades, particularly through councils. There have been attempts to put in charging on electric vehicles over time. What is the union's view on what the correct model should be in terms of—obviously fuel tax is a heavy burden, particularly on heavier vehicles but, with hydrogen, with electrical, with carbon-based fuels, does the union have a preferred model on how you accommodate all these types of fuel sources and the fact that whatever you do impacts on what goes into local councils for road upgrades?

DANIEL PERIC: I think I'll largely have to take that one on notice.

The CHAIR: It is a very complicated one.

DANIEL PERIC: If you happen to at all be referring to any taxes that might be put onto heavy vehicle drivers themselves, we are of the view that they're probably paying a little bit too much tax to begin with, given how much the registration of their vehicles costs to begin with in addition to the on-road tolling and whatnot. But I will take that on notice, because I'd like to give you a detailed answer.

The CHAIR: Because if there is this uptake in hydrogen and electric vehicles, particularly heavy vehicles, that there isn't a tax on, then there is a much heavier burden on those that are relying on the traditional petrol and diesel fuels. They would be providing a subsidy that other road users aren't providing. How do you get that balance right?

DANIEL PERIC: That's a very complicated issue. But I'd like to give you the best answer I can so—

The CHAIR: Sure, take it on notice. That's fine.

Mr RAY WILLIAMS: Could they perhaps take one more on notice, Madam Chair?

The CHAIR: Yes.

Mr RAY WILLIAMS: Is there any data that you're aware of that indicates that the installers of electric vehicle chargers have undertaken that in an inappropriate way? Those accredited installers are the same installers that might be installing solar equipment on roofs. I think my area has the largest uptake of rooftop solar. I'm yet to hear of any complaints in relation to installers. I imagine there probably would be. But I'm wondering, in terms of electrical chargers, whether or not there are any safety concerns or inappropriate installations that you're aware of that would support your argument around a safety regulator. I'm happy to for you to take that away and provide it back to the Committee.

JAMES MIRANDA: Yes, I can take on notice specific examples of noncompliant installations. But I think our point more broadly is that there is no-one actively looking at the moment to make sure that they're compliant in the first place.

Mr RAY WILLIAMS: But they're putting their job on the line, aren't they, by signing off on that approval?

JAMES MIRANDA: Yes, and I think you'll find in the solar industry that there are lots of people putting their jobs on the line signing off, and that every time SafeWork does a blitz, they find more and more instances of noncompliance and people not doing the right thing.

Mr RAY WILLIAMS: One would hope their licences and their accreditation would be removed from them.

JAMES MIRANDA: One would hope so too. But, again, because you've got that patchwork—you've got SafeWork issuing fines for noncompliance but they're not in charge of the licensing outcome, so you don't necessarily guarantee that you're going to have people's licences taken away even when SafeWork has found them to have done something wrong. That's why we need a standalone, independent regulator that is specialised in this and is willing to go out and do that ongoing, practical, proactive enforcement.

Mr RAY WILLIAMS: Or just ask Fair Trading to do some work, because they're used to not doing anything. Ultimately we could get them to do something.

JAMES MIRANDA: Even if they were to lift their fingers, there's no-one with electrical qualifications or specialisations at Fair Trading in those inspectorates.

Mr RAY WILLIAMS: Yes, not a lot happens there.

JAMES MIRANDA: A lot of the times it is very general and the generalist people that they send out don't know what they're looking at.

The CHAIR: Thank you for appearing before 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 from the Committee. You'll have 14 days to answer them. If you need an extension, feel free to ask for one.

(The witnesses withdrew.)

Dr ADELE LAUSBERG, Chief Advocacy Officer, Heavy Vehicle Industry Australia, affirmed and examined

Mr SIMON O'HARA, Chief Executive Officer, Road Freight NSW, before the Committee via videoconference, sworn and examined

The CHAIR: I welcome our next witnesses. Please note that the Committee staff will be taking photos and videos during the hearing. The photos and videos may be used 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've been issued with the Committee's terms of reference and information about the standing orders that relate to examination of witnesses?

ADELE LAUSBERG: Yes.

SIMON O'HARA: Yes.

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

ADELE LAUSBERG: No.

SIMON O'HARA: No.

The CHAIR: Mr O'Hara, I note that you're appearing from outside New South Wales and therefore may not be covered by the New South Wales law of privilege. Any defamatory statements made may, therefore, not be privileged, for your information. I'm sure you're not going to make any defamatory statements, but just in case. Witnesses before the Committee in New South Wales are covered by privilege.

SIMON O'HARA: Thank you, Chair.

The CHAIR: Would either of you like to make a short opening statement?

ADELE LAUSBERG: I have a short one—just a bit of context on Heavy Vehicle Industry Australia. We represent the interests of the industry involved in the design, manufacture, importation, sale and service of on-road heavy vehicles over 3.5 tonnes—essentially all manner of trucks and trailers that you see on Australia's roads. We're one of the few remaining local manufacturing industries, and we estimate that more than 90 per cent of Australia's trailers are made right here in Australia. Our members are interested in assisting the transition to net zero, and many are already striving to reduce emissions across the industry.

We have members developing dedicated heavy vehicle charging stations, building electric trucks—some of which have been built here in Australia—and developing technology to reduce emissions in the existing fleet. For those of you who have heard of the Brisbane Truck Show—I know it's not in this State—that's run by us. We held one most recently in May, and we had a record attendance of over 50,000 people. This one might be of interest: We run TruckShowX, which we'll be holding in the Hunter Valley next year. This event brings together stakeholders from across the net zero heavy vehicle ecosystem, so that includes electric. We would welcome Committee members, if there is any interest, to attend this event next year.

The CHAIR: I'm sure they would be. They're all disappointed they missed out on Brisbane. Mr O'Hara, would you like to make an opening statement?

SIMON O'HARA: Thank you, Chair. I'm the CEO of Road Freight NSW. We're a peak body that represents New South Wales freight operators and have done so since 1893. Since 1893, we've seen a number of transitions. Our members started with horse and cart. They moved on to internal combustion engines, and now we're looking at electric, hydrogen and other types of engines that will power the heavy vehicle industry. We cover a range of operators including containers, oversize overmass, dangerous goods, line haul and a range of other last mile delivery operators, including express. From our perspective, we welcome today's inquiry and the opportunity to appear here. We, like the Heavy Vehicle Industry Association, will be running a conference in the Hunter Valley, at or about the same time as them, at the same locale, so we'd also welcome your attendance.

What I would do is point you to our recommendations particularly. We think that a good way to kick this conversation off, particularly with the heavy vehicle industry, is to look at a summit. Following on from the submissions made to this inquiry, we also look at practical aspects relating to mass, weight, axles and also the significant transition that would need to take place in terms of cost and bang for your buck if you were an operator looking to purchase EVs. What we would say as a preliminary point is that we were a part of the announcement for the initial about $90 million for the Western Sydney rest area, which will assist truckies to be able to find adequate rest. We would see this as a great point to start that investment in terms of charging facilities, within that particular rest area. Thank you.

The CHAIR: Thank you very much. I know that rest area is very popular. I will go to the member for Leppington for questions.

Mr NATHAN HAGARTY: I'll start with Heavy Vehicle Industry Australia. We've heard plenty about EVs and a little bit about hydrogen but nothing about low-carbon liquid fuels. Can you get us up to speed on low-carbon liquid fuels and where they are being used around here?

ADELE LAUSBERG: I'll do my best, because I'm not an expert in this. But we're all rapidly becoming experts in things that we weren't previously.

Mr NATHAN HAGARTY: Energy policies.

ADELE LAUSBERG: We definitely see low-carbon liquid fuels (LCLF), which is the catch-all term that the Federal Government is using—we've adopted the LCLF terminology, so I'll use that moving forward, to save time. We do see that as part of the transition and for some types of vehicles potentially what they have to use, because we heard a bit in the previous section about payload, and the payload penalty is very real. That is a problem that the sector faces with heavier batteries. Hydrogen comes with its own payload penalty, whereas low-carbon liquid fuels, they are essentially a drop-in fuel that we can sub in for existing diesel and other fuels.

There are a few different ones. I won't break down each of them. I can always do that on notice later. But I think in the next session there'll be some experts who can talk more to that. But essentially they are an immediate solution. They're something that people can use tomorrow, provided they have the right engine that will adopt it. But some of these fuels can just be dropped in, so we think it's really important. The problem is we haven't got a local industry developing low-carbon liquid fuels, so they are very expensive at the moment. We're talking, minimum, double the cost of existing fuel, so they're not a live option for most operators. I'm sure Simon can speak a bit more to that. That's one of the problems we're facing, but that doesn't stop manufacturers using them.

When Volvo sends out a new truck completed out of its Wacol facility in Queensland, it sends it out with what's called Hydrotreated Vegetable Oil (HVO), which is one of those low-carbon liquid fuels. So it is out there in the market, it's just that our industry is not really there. We actually offshore our tallow to go to Singapore to be developed into a low carbon liquid fuel, whereas if we developed a local production facility and we developed a market that would help bring the cost down—albeit there are all sorts of other problems with developing a local industry, but if we're just talking about optimism here—doing that here in Australia would be a massive help for decarbonising those really heavy vehicles.

The CHAIR: Mr O'Hara, have you got anything to add on that?

SIMON O'HARA: No, I think Adele has adequately answered that aspect of the question.

Mr NATHAN HAGARTY: There was commentary in here, and I won't misquote you, that essentially New South Wales is falling behind compared to other jurisdictions—sorry, out of step with the rest of the nation. There you go; I don't want to misquote you. Can you just speak to that a bit more? How is New South Wales falling behind, which jurisdictions are doing it well, and why are they doing it well?

ADELE LAUSBERG: I'd say the whole country is kind of out of step with each other, is part of the problem. We have a very heavy regulatory environment in which each state has a different trial for a different weight on the steer axle mass for electric and hydrogen vehicles. If you're driving in South Australia where they have a trial and you cross the border into Victoria, the roads essentially—they don't know that the truck is what it is. They just accept it. But the regulations say, "You're not legally allowed to drive that on our roads here," and that's the out of step bit. New South Wales also has a trial, whereas what we've seen in Victoria is they've announced a network which is they will allow, once you apply, a certain type of vehicle—say, an electric truck by Volvo—to travel on those roads. And there's no caveats. It's not a trial. That's the out of step bit that we are specifically often talking about.

That certainty to make those investments in the vehicles—because operators aren't going to want to purchase heavier vehicles unless they have that certainty that it can continue to be used on New South Wales roads, whereas a trial doesn't give you that certainty. There can be that sort of, wink wink, nudge nudge, "it'll probably continue", but they don't have that guarantee, so then you see less uptake of the vehicles. That's really the out of step thing that we're seeing. Queensland is doing a lot of work as well where they're creating a special map of access for these heavier vehicles. We would love to see New South Wales have a permanent map for access so that we know with certainty that Simon's members can purchase the trucks that my members make, drive them on the roads with less emissions, and then we start chipping away at the enormous task ahead of us.

Mr NATHAN HAGARTY: Is there a need for the Feds to perhaps step in here and try to encourage some uniformity?

ADELE LAUSBERG: It's a fantastic question. The Feds are developing a net zero transport road map. We've been waiting patiently for the first go of that to come out. We're hoping that'll be in quarter three or four this year. That would be a really good help and, yes, be a big one. The other venue that could be used very effectively is the Infrastructure and Transport Ministers' Meetings. That's called ITMM. That's where all the transport Ministers get together and talk about this stuff. That's the other avenue that we think could help hasten these things and get agreement on access across the country.

Mr RAY WILLIAMS: Here we are trying to get consensus with councils and everything across New South Wales, and I well remember my involvement with the various States in Australia trying to get consensus for a written-off heavy vehicle register. I played the long game in relation to that. We finally got that approved in New South Wales whilst we waited and waited for other States to come on board. Normally, like with everything that happens, it usually happens first in New South Wales. So I certainly commiserate with you and don't necessarily agree that the Federal Government will make any inroads into improving that. But I do think there needs to be national standards across the board.

As I've raised before, having a background in the heavy vehicle industry, I have significant reservations on the relaxing of laws in relation to weight over axle, which have stood the test of time for many decades, and on what those ramifications may mean. Either one of you may want to weigh in on that. I note that Heavy Vehicle Industry Australia proposed in its submission a public-private co-investment in charging infrastructure on strategic routes. I'd also love to hear your comments on how you think that could operate.

ADELE LAUSBERG: I'll take that one first if you like. Just taking a small step back on the public-private charging routes, one thing that's been really interesting is that the Federal Government—so the Department of Climate Change, Energy, the Environment and Water, DCCEEW—has put out some minimum standards for charging stations. Those came out and they were, I've got to say, largely focused on cars. They talk about larger vehicles, without specifying heavy vehicles. That goes, again, to the surety that investors from the private sector would need to create these sorts of charging stations. There are no guidelines for what that looks like for heavy vehicles. I think the previous witnesses talked a little bit about this as well. Most of the charging stations are for cars.

We had Volvo drive a truck from Brisbane down to Canberra, and they often had to pull up across bays to try and charge because they're just not suited for trucks. Now, we acknowledge that it won't be every charging station that needs to cater for a truck, and we have some members who are developing specific heavy vehicle charging stations, starting in Victoria. But again, just that lack of certainty about how many vehicles are going to be using the roads there makes it tricky, which is why we see public-private needing to be the first sort of step. Private on its own—it's not going to move as quickly because there isn't that certainty from the regulatory side and the policy side. If we see some of those things shored up, we think that would help. Starting with that public-private would be very handy.

Mr RAY WILLIAMS: I just wondered if there was any further commentary in relation to the relaxing of registrations by road freight. Do you have any comments in relation to that, Mr O'Hara?

SIMON O'HARA: From our perspective, and particularly our members' perspective, what we need to do—and I speak generally here—is we need to incentivise trucking operators to be able to make investments into this new form of heavy vehicle freight transport. What that means, effectively, is that not only do we need to look at the actual cost of these heavy vehicles but we also need to look at whether it's feasible, but also how we can look at other incentives, whether it be concessions to registration, as you mentioned. What we heard loud and clear from our members is that we're supportive of the path and the move towards decarbonisation. But, as part of that, it needs to not only have a degree of certainty—and that certainty involves having those chargers every 100 kilometres—but it also means that some of the cost of these vehicles is sometimes double the cost of vehicles using internal combustion engines.

So whatever we can look at in terms of making it easier for road freight operators to operate—and that might mean, for instance, that we align with European standards for width, moving away from 2.5 to 2.55, which allows a degree of certainty but also flexibility. The point that I would make quite clearly here is that our operators sometimes struggle to make these investments because there's a 2 to 3 per cent margin by which they're operating, and at the moment that's probably less. What you're seeing is certainly a degree of contraction within the industry. What that means is that we have to make this as attractive as possible for road freight operators to be able to look at purchasing that next generation of heavy vehicle tractor.

Mr RAY WILLIAMS: We had a presentation yesterday by a member representing Hyundai. They went through in relation to the technical advancements and how close we are to hydrogen being implemented, especially into heavy vehicles. The Committee looks forward to actually going to visit their facility in the course of our work. For myself personally, I'm just wondering whether or not industry is holding back and wondering whether

or not electric is going to be there for the long haul when, and if, that hydrogen technology is going to stack up, and when they are already looking at implementing stations for refuelling and that type of thing, which ultimately could happen in your normal service stations that are along your long-haul routes.

It does really make me sit back and question, are we jumping the gun? Are we trying to force industry into something? Ultimately, industry will know far better than what government will, or certainly better than what I will, as to how they should spend their dollars and whether that's going to get an outcome for them, or whether or not they just should sit back and wait if we're not too far away from that implementation of hydrogen. It is something which, I must confess, I've been a great supporter of for many, many years, but I wasn't aware until this Committee of how far advanced that technology currently is.

SIMON O'HARA: Mr Williams, our members are committed to the decarbonised economy. Members like BlueScope have made significant investments in not only EVs but also contracting with companies that run EVs. But additionally, as you know, hydrogen is one of the spokes in their wheel in terms of embracing this new transition. What I would add is that incremental approaches that come with certainty for our smaller operators would be what they would be looking for in terms of embracing this particular technology.

I had the opportunity recently of being at the Brisbane Truck Show, which was another excellent event. I would note that our event in the Hunter Valley is in conjunction with TruckShowX. I had the opportunity of climbing into the Windrose cab, which is a Chinese electric vehicle, whose price point is pretty competitive in terms of the existing internal combustion engine. So there are certainly opportunities but it turns on, again, the infrastructure to be able to charge. And, as we've mentioned within our submission, there's a topographical aspect to Greater Sydney that needs to be taken into account for heavy vehicles. The last thing we want is heavy vehicles to have not quite enough charge to get up those numerous hills.

ADELE LAUSBERG: I think I'll jump in as well because it's a really good point. I think the result we're probably going—well, I'm not going to predict because I would definitely be in a different business if I knew the answers to some of those questions. But what we're seeing is a blend at the moment. A lot of those lighter trucks—the battery electric—make sense. There are some case studies that you can see. You can go out to Team Global Express. They've got a great depot of the future where that stacks up. They've got back-to-base charging. On the longer haul stuff, battery electric isn't stacking up at the moment. Maybe one day it will, and maybe we'll be here in ten years and it'll be a very different story.

But hydrogen is making a case for some of those harder-to-abate segments of the market. That's the way we're seeing it, and we say we're technology agnostic: We're not backing any one over the other. But it is interesting to see that it's not the same switch as cars are seeming to be. It's just very different segments of the market. Then that really heavy long haul, or some of the mining equipment where we may have to look at the low-carbon liquid fuels that we were talking about before—we see there might be a place for all of these things. So it's a really good point that hydrogen does have some great leaps and bounds that it has made over the last few years, even. But, at the moment, yes, we're kind of backing everything as a combination to solve this problem.

SIMON O'HARA: From our members' perspective, last mile is certainly something that is currently being used and being rolled out in terms of deliveries, whether it be through the supermarket supply chain or elsewhere. But what we would foresee would be container operators, for instance, to be one of those segments that might roll out EVs earlier than, say, long haul, because the container operators do traditionally and consistently shorter runs, say, from Port Botany to Western Sydney.

Mr RAY WILLIAMS: That might be covered by the intermodals that we've currently invested in at this point in time.

SIMON O'HARA: Yes.

Mr WARREN KIRBY: Thank you for coming today. To switch to training, do we know how many RTOs are currently equipped to deliver either training for battery electric or hydrogen?

ADELE LAUSBERG: I'd have to take that on notice. I don't know the figure, so I don't want to misquote. Simon might know.

SIMON O'HARA: I don't, to be honest. I would have to take that question on notice and could come back to you after I contact the peak body for training providers.

Mr WARREN KIRBY: Would it be safe to assume it's quite low?

SIMON O'HARA: It would be safe to assume that, yes.

Mr WARREN KIRBY: If it is quite low, what support do you think would be needed to expand the capacity? One way or another, we're changing into a different technology. I can't imagine an existing truck

mechanic is going to have the skill set right now to be able to deal with a hydrogen vehicle, let alone an electric vehicle.

ADELE LAUSBERG: We recently hired someone to look at skills and training and specifically also to look at this, because it's a very good question. In the transition, this is a big part of it, because at the moment there aren't many people—technicians—who can work on the vehicles. There are some, but that's still developing. We have seen the Canberra Institute of Technology (CIT) has developed an electric vehicle centre of excellence. They got some funding from the Canberra Government and the Federal Government. That was set up only a few months ago, but they've actually recently sent out a regional road show, which can train technicians to work on electric vehicles, because there is an element of needing that expertise. But you also need to understand how a vehicle works, because it's a complex bit of machinery, as you can appreciate.

Part of what CIT is doing with this centre of excellence is they will help disseminate this knowledge to other registered training organisations (RTO) and TAFEs as well. But that is, again, quite new. We are still facing the issue of how we get consistency across the country. As we've spoken about before, that can be very difficult, with lots of different topics. This is another one of those topics that's difficult. We're seeing states take different approaches to the training, whether that's upskilling and what that looks like. Again, that's probably one for ITMM, the Infrastructure and Transport Ministers' Meeting, to have a discussion about. It's probably also one for the skills and training Ministers to have a discussion about. It's still such a nascent part of the transition that is needing some development.

Mr WARREN KIRBY: Mr O'Hara, did you have anything to add to that?

SIMON O'HARA: No, I don't. We as an industry struggle at the moment to be able to get enough truckies and diesel mechanics to fill the roles that are currently available. I would suggest that this will add to that aspect of shortages. I would reinforce the point made by Adele, and that would be that this may be something that ITMM may wish to discuss and also talk to the Federal government agencies, and maybe there's an aspect here of engagement with, for instance, the Ministers who deal with skills and education.

Mr WARREN KIRBY: Back to road infrastructure for a minute, it has been noted a few times that with the actual weights and additional weights on the vehicles and all that sort of stuff, this is problematic for the roads. Should there be strategic routes that are EV permissible or at least recommended? Is that a good idea to go down? Should there be some kind of regulatory reform when it comes to certainly electric vehicles and even hydrogen, in terms of where they can go?

ADELE LAUSBERG: It's a tricky one. Simon can probably speak a bit more to this, but restricting vehicles to certain routes would make some operations probably unviable if they're only accessible for electric, depending on where they were. But I think more what would be probably the thing is just talking about road improvement and empowering councils, because councils do have control of some roads. This is where it gets really complicated, in that there are certain bridges that are actually controlled by local government. They don't necessarily have the same skills and knowledge about what can access that.

It's very complicated. Someone has a specific route they do. It has been optimised. They might already be reducing their emissions, because they've created that route because it has a double payload you can pick up and then take back. If you then came in and changed that, that would probably be unviable, I would imagine. Again, I don't want to speak for Simon's members. From our perspective, I think the way you would go about it is it would be important to do a lot of data and heat mapping on routes that are used a lot for certain types of vehicles, and then work out on fixing those roads so that they're more fit for purpose. Again, this is a complicated one. I'm happy to do a bit more thinking on this and take it on notice. But my initial gut feeling is that I would be cautious about that as an option.

Mr WARREN KIRBY: Based on that, is it safe to assume that there isn't heat mapping done? You're saying you would have to do it. That data is not—

ADELE LAUSBERG: There's some data on this, but it can be patchy and held by different groups. The data in that sector, as you're probably starting to learn, is quite segregated.

Mr WARREN KIRBY: Fragmented.

ADELE LAUSBERG: Fragmented—thank you. We're finding that even getting that data on one page can be quite tricky. Even with your question about how many RTOs there are, neither of us had an answer on that because it's not something that we can quickly pull up and find out. These things are hard to find out, and HVIA has long been calling for more consistency in data. That's another side of it, which I didn't want to go into too much, but you've brought it up because it is a really good question. There are some good datasets out there but,

again, with things like registration, the consistent data across the country is patchy and it's difficult to align it. These are all really good questions that you're asking.

SIMON O'HARA: If I might add to that, from our perspective, about seven or eight years ago we entered into some heat mapping with Transport Certification Australia (TCA) for our members to see, for instance, how some of the dangerous goods move throughout New South Wales. We found that incredibly useful. Some of our members were initially reluctant, for privacy considerations, but we worked together with Transport for NSW to see these heat maps in action. It really gave an understanding to not just Transport for NSW and TCA but also our members. I think there's a body of work that could be conducted in terms of being able to see exactly how and what is moved throughout New South Wales.

In terms of the question about permits, having dealt with oversize overmass permits for close on 10 years with our operators, permits for EVs or particularly designated routes may be problematic. I would have reluctance around permits, for instance, as I'm not sure that it's that effective. In terms of designated routes, maybe that's an incremental first cab off the rank, so to speak, in terms of getting it moving. But our operators would seek to see that move pretty quickly to the rest of the State, because our operators move through a variety of road jurisdictions. That means that, for instance, in the past we've had operators who run oversize overmass loads who have the right to use certain roads but can't drive out of their driveway onto a council road. From our perspective, we wouldn't want to see any further hindrance to their ability to be able to conduct their business. But it's certainly open to an incremental approach in terms of, say, highways like the Hume and whatnot.

The CHAIR: I'd like to ask a question again on road infrastructure. The last set of witnesses put a figure of $600 million onto upgrading roads for electric vehicles and the extra weight, which I know sounds like a lot of money but, from a government point of view, actually doesn't sound like a lot of money for road upgrading. There are two ways you go on this. It's a 40-tonne limit, whereas if it's an electric vehicle, you allow a 42-tonne limit, and that gets you your two-tonne for the battery charge on certain roads. Obviously, that doesn't work on some bridges, particularly bridges in more remote and rural communities. Have you looked at an actual costing on what the road upgrade would need to be for the difference between 40 and 42 tonnes?

ADELE LAUSBERG: I don't have those figures. That probably sounds like a project for a group called Austroads. Roads is in their name. I confess, I don't know. I haven't heard that $600 million figure before today, so I'd have to talk to my chief technical officer, if I'm honest.

The CHAIR: Yes. Could you take it on notice, if there is an answer? It did sound a bit low to me.

ADELE LAUSBERG: I would agree with that. The Queensland Government just put $100 million into fixing just some of its regional roads. That's one-sixth of that, and that's just for regional roads. I think the figure would be in the billions; that would be my guess.

The CHAIR: I was wondering if we had that figure wrong on some level.

Mr RAY WILLIAMS: That's for regional roads in Queensland on major transport routes, not regional roads across Queensland?

ADELE LAUSBERG: I'm not 100 per cent sure. I'd have to go check.

Mr RAY WILLIAMS: That'd be great.

ADELE LAUSBERG: It was just announced in its budget. There were a few budgets in one day that I was analysing.

Mr RAY WILLIAMS: If you could provide that, that'd be terrific.

ADELE LAUSBERG: I can have a check.

The CHAIR: These state governments should coordinate it better and roll them out! Mr O'Hara, did you want to add to that?

SIMON O'HARA: I would suggest the investment would be significant given the amount of roads we do have, and it may also be a question, in addition to Austroads, for Roads Australia as well. It might have some good indications of costs on that front.

Mr NATHAN HAGARTY: In your submission, Mr O'Hara, you encourage battery swap and shared charging stations. You mention the one at Moorebank. I assume that's at the intermodal.

SIMON O'HARA: Yes.

Mr NATHAN HAGARTY: Is that just a trial? Is that just a demo or is it actually in operation? Do you think a couple of interested members of a committee would potentially be able to go down and take a look at that if an invitation was made?

SIMON O'HARA: I certainly think that an invitation could and should be forthcoming to the members of the Committee to have a look and to examine that to ensure they get a better understanding of what is going on and how it is going on. From our perspective, it's a good first start, and I don't want to speak out of school but I'm sure that BlueScope would also welcome the Committee members down. I think you might've also perhaps been down that way of late, but we would certainly, on behalf of our member, like to welcome you to BlueScope as well because it is doing a range of things down there involving hydrogen and EV, and its putting its money where its mouth is.

The CHAIR: BlueScope is doing the Port Kembla hydrogen. Is that correct?

SIMON O'HARA: That's correct.

The CHAIR: We're doing that one, so I think we may have to split this day up into two.

Mr NATHAN HAGARTY: We have another day of excursion. We have to get our excursion notes signed again.

The CHAIR: It's a moving feast. In closing, do you have anything else you'd like the Committee to know or anything that you think we haven't heard that you'd like to add?

ADELE LAUSBERG: Probably the one thing I would want to add is the importance—and I know it's to be expected—of an incentive package. It's something that we've seen in California. That's what it had to kickstart its transition. We are seeing it in Europe. We saw a jump in Q1 of this year of 11 per cent of truck sales in some markets.[1] The Netherlands had a huge increase, and when you dig a little deeper, it had an incentives package behind that.

We had briefly—I think it closes tomorrow—a fleet incentive package which captured light trucks, so just those light commercial trucks, but it didn't go beyond that. We thought that was a really great step, but not many people knew about it. I found out about it pretty late in the piece. We think things like that are really important, and it was really great to see New South Wales leading the way. Federally, we haven't got an incentives program announced, so we are pushing hard for that, but we would say any State that moved in that respect would probably help kickstart the transition for the heavier vehicles. It would be remiss of me not to call for that here in a public forum.

Mr NATHAN HAGARTY: Could we get you to table some information about that California scheme or some of the other ones?

ADELE LAUSBERG: Yes. I'm happy to.

The CHAIR: Mr O'Hara, have you got any final comments for the Committee?

SIMON O'HARA: I do. The first thing I'd note is that technology is moving incredibly fast, and you'll note that, particularly with relation to the Chinese developments with BYD, what was once seen as a long period to charge up your EV is now rapidly changing. That's the first point I'd make. The second point I'd make is that we would invite you—and you're most welcome to come out with some of our operators to see how they operate day to day and what some of those challenges might be in terms of EVs and how they could get it right. You're most welcome to travel with some of our members on, for instance, a container run or something of that nature.

In terms of incentives, my third point would be that the industry does need incentives, and that wouldn't just be limited to the larger operators. It would be, for instance, for some of our smaller to medium operators. The industry is made up predominantly of small to medium operators so, from our perspective, as much as government can do in terms of incentivising the freight industry, which is predominantly made up of small to medium operators, would be welcome. That's something that we would certainly support, if there was a package that could be rolled out for our road freight operators. I would lastly just note that charging areas may not just be limited to, for instance, service stations, but rest areas are incredibly important and might form the backbone of how, potentially, we could look at charging for the future for the heavy vehicle industry.

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[1] The Committee received correspondence from Dr Lausberg, providing clarification on this statement, which is published on the Committee webpage.

The CHAIR: Thank you very much for appearing before the Committee today. You will 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. You will have 14 days to answer them. If you need an extension, please feel free to apply for one to the Committee. Thank you so much, Simon and Adele, particularly Simon, coming in from overseas. I hope we haven't got you up in the wee hours of the morning.

SIMON O'HARA: Thank you very much. I really appreciate your forbearance.

(The witnesses withdrew.)

Mr TODD LOYDELL, Head of Government Affairs, Ampol, before the Committee via videoconference, affirmed and examined

Mr PATRICK LUXTON, General Manager Energy Value Chain, Ampol, affirmed and examined

Mr JOSH HOEVENAARS, Business Development Manager - bp pulse, bp Australia, before the Committee via videoconference, affirmed and examined

Mr DAVID STUART, Head of External Affairs, bp Australia, before the Committee via videoconference, affirmed and examined

The CHAIR: I welcome our next witnesses. Please note that Committee staff will be taking photos and videos during the hearing. The photos and videos may be used on the New South Wales Legislative Assembly social media pages. Please inform 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?

PATRICK LUXTON: Yes, I have.

TODD LOYDELL: I have, Chair.

The CHAIR: Do you have any questions about this information? No? Okay. Mr Stuart, I note that you're appearing from outside New South Wales and, therefore, may not be covered by the New South Wales law of privilege. Any defamatory statements made may, therefore, not be privileged. I'm assuming you're not going to defame anyone but, just in case you were planning to because you had privilege, don't.

DAVID STUART: Understood, Chair, thank you. It is probably fair to say that that applies to my colleague Mr Josh Hoevenaars, who is also located in Melbourne.

The CHAIR: Sorry, yes. I didn't realise. That does apply to you as well, Josh. The rest of you, defame your life away. No, I'm joking. Don't do that. Would anyone like to make a short opening statement? We'll start in the room. Thank you, Mr Luxton.

PATRICK LUXTON: Thank you, Chair and Committee members, for the opportunity to appear today. I work for Ampol. I am responsible for the delivery and operation of Ampol's EV public charging network. In May 2021 we launched in Australia our Future Energy and Decarbonisation Strategies. This was underpinned by our ambition to reach net zero operational emissions across our Australian operations by 2040. Since then, we've learnt critical lessons that are shaping the role we need to play in the energy transition. We are now focusing on two areas where Ampol has, what we believe, the strongest pathway to scale and also an opportunity to create value for our customers—these being EV charging businesses and renewable fuels. We also recognise the need to continue to evolve to meet our customers' changing needs.

We are investing in a public charging network and continue to develop charging offers for our business customers as their requirements continue to evolve. We are progressing the development of a domestic renewable fuels manufacturing plant and supply chain, including the proposed Brisbane renewable fuels project, which is projected to produce approximately 700 million litres of sustainable aviation fuel and renewable diesel by 2029. As outlined in our submission, we believe there is valuable opportunity for more consistency of processes and application of regulations as the industry continues to evolve and scale up. This applies across all stakeholders, regulators, DNSPs, councils, landlords, developers and the infrastructure operators alike. It will create greater efficiency, but also make it easier for all the members of the sector as we are seeking to deliver this new infrastructure, which is necessary to support the transition. I look forward to discussing these opportunities in more detail today. Thank you.

The CHAIR: Thank you, Mr Luxton. Mr Stuart or Mr Hoevenaars, would you like to make an opening statement?

JOSH HOEVENAARS: Thank you, Chair. I'll make an opening statement. Chair and Committee members, thanks for the opportunity to appear today. I work as a business development manager for bp's public EV charging business, bp pulse, which launched in Australia and New Zealand in November 2022. Since then, we've deployed 234 fast-charging bays across Australia, 84 of which are in New South Wales. Over this time, we've served over 35,000 customers in New South Wales and over 150,000 charging sessions. You will note from our submission we strongly believe the current DNSP ring-fencing provision should remain because charge point operators are delivering in Australia's EV infrastructure at pace and often ahead of demand. This is often constrained and delayed by the provision and cost of power operators.

We believe that the creation of consistent guidelines for power connections for EV charging would be helpful for all participants across the industry to address this challenge and optimally deploy a charging structure across the country. Lastly, we encourage the Committee to note the role of low-carbon liquid fuels to decarbonise transport, enhance energy security and drive economic development whilst leveraging existing liquid fuels infrastructure. We look forward to discussing those matters further.

The CHAIR: Thank you very much. We'll now move to questions. I'll start with the member to my left, the member for Leppington, Mr Hagarty.

Mr NATHAN HAGARTY: Firstly, I thank both organisations for having the foresight to use effectively what is your petrol network to roll out an EV network. I have to commend you on that. Many an MBA is littered with examples like Kodak, which failed to move with the times. We've heard some pretty robust feedback about DNSPs entering the market, specifically around poles. We've also heard some evidence about potentially DNSPs charging exorbitant fees just to merely get an application, and taking an extended period of time to connect someone or even to look at a connection. I know there's been some media with AmpCharge and about the slowness to get substations in through you guys to roll out your network, but I just want to get some feedback about whether you think the DNSPs are doing as much as they could to see the rollout of these ultra-fast chargers, not just in both your businesses, but just generally in the sector.

PATRICK LUXTON: It sounds like you've already had some good feedback today on those elements. I won't touch on all of it. I will call out what I think we could highlight by saying that when you're dealing with multiple organisations—say, more than one DNSP—then the application of how they choose to assess regulations can be different. Imagine that, as you're doing that multiple times—a first time and a first time—you're getting a wide, varied response and different approaches. Any ability to get some consistency around how that's dealt with would be good. Any ability to speed that process up, I think, would be greatly valued. There's certainly an element too in terms of visibility.

You mentioned the applications. One of the challenges is you have to make an inquiry to find out how much capacity is there, which is understandable. However, I think Essential Energy has provided a bit of a network map that says, "Here is some space where there is extra capacity." That is extremely helpful, because it can help you in terms of navigating. There are lots of different places you can put charging infrastructure. If you know where there is less constraint, then that is a good place to start. The other part I would add is that the cost of an upgrade or improvement to the grid at certain points can be so material it can negate the economic viability of a site. Again, if we can have greater visibility and transparency of the data in terms of that network and where the capacity is, I think that would go a long way to helping in terms of some of those things.

JOSH HOEVENAARS: We're seeing similar challenges. One of the major challenges for us in deploying a high-powered charging network is the provision of power. We could probably summarise that into two areas, as mentioned: high cost and long time frames. There are a bunch of points that sit behind those. To the point raised just then, obviously it's a major element for us to consider as we focus on building a commercially sustainable business model for EV charging. We know that only 1 and a half vehicles out of every 100 on the road are electric at the moment, so it's important for all charge point operators but also for us here at bp pulse to make the right decisions on investment cases and right locations, and to have the data available and the consistent guidelines across the industry to ensure that all operators, whether DNSP charge point operators or other industry participants, are able to understand what those guidelines are and hold each other to account. It is very important.

In terms of some anecdotes from our 2 and a half to three years in operation, this has been something we've seen across the industry. We're now moving to more sites which are high powered and often require 500 kVA or one MVA substations. These are upgrades that cost, on average, close to half a million dollars. But what is quite difficult is the variability in cost. Depending on where the location is, the cost can be many times greater than that. Having early information, as Patrick mentioned, about where power availability is helps us make better investment decisions and, most importantly, match them against where customers are hoping to charge. We've spent a lot of time—in our case over 100 years—providing fuel to customers for the purposes of driving vehicles and staying on the move. We hope to do the same with electricity. We want to make sure that we can install these chargers in places that customers need them but also have the resources through electrical connections to ensure that they're good investment cases as well.

Mr NATHAN HAGARTY: You made the point about investment cases and making sound business decisions. This might be commercially sensitive, but what I'm trying to establish here is how much of a factor is the cost that the DNSPs charge you guys in making those decisions? I've heard some pretty crazy numbers in terms of how much it actually costs to get one of those ultra-fast chargers in. In some cases I'm hearing seven figures. How much of that is the DNSPs and getting the substations in and the variability between sites which you spoke on earlier?

JOSH HOEVENAARS: I'm happy to answer that.

Mr NATHAN HAGARTY: You go first, Josh.

JOSH HOEVENAARS: Given I just mentioned a similar topic before, I'm happy to jump in. A good rule of thumb we use is roughly a third of the cost is spent on power connections. If I reference close to half a million for a high-powered charging site with, say, six or eight bays, then you can multiply that by three, roughly—rule of thumb. It changes quite a lot, but that gives you some suggestion of the size of investment required.

PATRICK LUXTON: Yes, just building on that, you are right in your statement that some of those upgrades can have incredible material costs, and hence we may choose not to do that site once we establish that.

Mr NATHAN HAGARTY: Essentially, a return on investment would have to be a pretty long-term thing, given sometimes a charge might be five bucks, 20 bucks or 30 bucks. Are there any issues there around compatibility and the fact that these sorts of charging plugs are changing over time? I think there have been some issues in the UK where they've had to go back and retrofit some of the plugs, but are we now at a point where we've got a standard platform and standard plugs? If there is a 10-year or 15-year decision to put in some ultra-fast chargers at a location, are you confident that, in 10 or 15 years, cars will be still using a similar platform and the same plugs, and that kind of thing?

PATRICK LUXTON: Yes, I hope no-one changes the standard on us now. The most common charging standard is Combined Charging System 2 (CCS2). That's, in Australia, 98 per cent or 99 per cent of the cars. That seems to be very widely globally adopted. Probably the different one that will come that is something that we'll deal with in the future will be if and when we get to megawatt charging. But that's a few years away yet, at scale or in terms of commonplace. I may regret saying this, but at the moment we believe we have a standard. Happy to pass over to Josh.

JOSH HOEVENAARS: Yes, saying the same thing, looking at the same industry. Some additional insights—globally, the North Americans, particularly in the US, are using the North American Charging Standard, or NACS. I think most industry pundits would suggest that won't have an impact in markets that have already adopted CCS2, as Patrick mentioned. Probably the other one is just to mention CHAdeMO, which was at one point the dominant one, certainly from Japanese manufactured vehicles and for a period here for the early EVs in Australia, many of which were Japanese. That's now being phased out. In examples like the Nissan Leaf, I believe the new version of the Nissan Leaf is moving towards CCS2, so that's helpful. We have performed some changeovers in terms of charging plugs. It is a cost incurred but it can be done.

Mr RAY WILLIAMS: On that comment, please don't eliminate your CHAdeMOs too quick, while I've got my current vehicle. I'm happy to declare a conflict in relation to that. There's been a consistent theme throughout this inquiry of concern in relation to changing the regulatory framework from what is known as ring fencing. I know Mr Hoevenaars has already made a comment on this. I've continued to raise a comment that has been made public by Ausgrid that they believe that distribution network service providers can provide chargers quicker and more efficiently and, ultimately, that they believe that if the relaxing of the regulations that we currently see allows them to have a monopoly hold over the industry then that is going to be better for the industry.

I think that's something that I personally disagree with, given that the initial basis for what the regulation was imposed for was to protect the consumers. But if I look at it now from the aspect of major international companies like bp and Ampol—which have presented today, which we greatly appreciate—the current regulatory framework has encouraged your investment into many thousands of chargers right across this country at the moment. If the relaxing of that regulation were to occur, is that going to restrict your further investment into this particular sector?

PATRICK LUXTON: Our preference would be that they focus on efficiently creating connections, and so focus on managing the grid and the role that they currently play. Our concern would be there'd be a very wide asymmetry of information availability and then an uneven competitive landscape if they were to enter that market. I'm sure Josh can add to that.

JOSH HOEVENAARS: Yes, we support the current ring-fencing provisions in place. It's hard to talk about the future, but what we can say is speaking to our experience thus far in the last three years. As I mentioned earlier, one of the biggest factors that has delayed our deployment of capital and of EV chargers has been the provision of power, and specifically the set-up of grid connections. We're happy to share that we have shifted capital deployment back, and in some cases capital has been handed back to our central group because of the delays of power upgrades across our planned charging investments. So we're keeping a close eye on this, and I concur with Patrick's comment. Our request would be that focus would be in the provision of the existing infrastructure and power to industries that require it, because we would certainly like to invest more, and would have invested more in the time frame to date had those grid connections been made available quicker.

Mr RAY WILLIAMS: So the larger distribution network service providers should perhaps stay in their lane and do what they're responsible for, and that's the provision of electricity to the likes of you. We've also heard from councils that represent rural and regional areas. They've maintained those same issues in relation to the overall provision of power. Can I raise another question in relation to hydrogen and where you think hydrogen plays a role in the long haul heavy vehicle industry. You're perfectly established at this point in time, and I know you currently deal with hydrogen on a global basis. What do you see the future is in this country for hydrogen?

PATRICK LUXTON: I might take that one first. We've invested the best part of, I think, three years and a substantial amount of money looking at hydrogen as a transport fuel. I think our conclusion at the moment for Australia is that it's not a near-term proposition; it may well have a role to play longer term. There are a few different reasons for that. One, Australia doesn't have an underlying industrial, large-scale hydrogen sector, unlike in, say, America, Europe, Korea and Japan, where there was already a very large industrial sector which had large-scale production of hydrogen. That just makes it easier to tap into a supply. You can test it for different things. There's a long way to go with the technology, we believe, particularly from a transport perspective. And so between the lack of industrial-scale supply and then the very, very formative technology in the transport side, those two things combined make it a pretty challenging proposition—and I say in the near term, because things can obviously change and that could well come into play. That's Ampol's perspective, anyway.

Mr RAY WILLIAMS: I'm happy to throw that out to anybody else on the panel.

JOSH HOEVENAARS: That is a good summary. Perhaps to add a bit of a future forecast flavour to it, we included some data in our submission from bp's Energy Outlook, which is released annually—a projection of future energy demand across different energy vectors. Obviously it's not a crystal ball entirely, but a view on how things could eventuate across a number of different circumstances, different scenarios. There are some charts that you can have a look at there. But we do predict, particularly in the medium and heavy-duty vehicles, that across energy use by fuel, low-carbon hydrogen will have an impact, particularly by 2050, making up a proportion between 5 per cent and 15 per cent, depending on which scenario we view. So, there will be an impact, but certainly if we look at electrification generally and the use of electricity to power vehicles, that has a larger impact, from these projections.

DAVID STUART: Can I jump in there, Josh, just to add a point to Mr Williams' question. I think, in the Australian context, as we look through the value chain as well, we tend to think of hydrogen through that green hydrogen lens where we're taking renewable energy and converting it through electrolysis. And I think if there's one characteristic that we observe in the National Electricity Market (NEM), it is that it's, fundamentally, green electrons short at this point in time; there just aren't enough green electrons. When those green electrons come into the NEM, they are fundamentally going to be used in electricity, probably not so much in the near term for producing hydrogen to then put into mobility. It's one of the reasons why we see this future—back to the opening point for heavy haulage—where hydrogen, in time, will play a role. In the meantime—and by that, we think 15 or 20 years—the role of things like renewable diesel, where you can get a decarbonisation benefit that lowers the emissions of trucking, is probably a more feasible pathway with both the technology maturity, the feedstock strengths in Australia and, indeed, just the cost curve of abatement that, fundamentally, emitters are looking for.

Mr NATHAN HAGARTY: I was basically going to supplement that with saying we heard from a previous witness on low-carbon liquid fuels, but you've sort of touched on that as a potential transition.

Mr WARREN KIRBY: I want to expand on that, because I was recently at a site that had low-carbon fuel. I was kind of quite shocked that a waste truck was using refined cooking oil. According to them, no modifications to the vehicle were required whatsoever. It was just a refinement of the fuel, and it was completely carbon neutral because it had already been used to cook up somebody's fish and chips, or whatever it was used for. Is that work that you're entering into, on top of or beside electric vehicles?

PATRICK LUXTON: Looking at our renewable fuels plant, there's a range of feedstocks. The challenge with used cooking oil is it's just a very, very small amount. When you look at the billions of litres that is used for transport fuels, used cooking oil is a drop in the ocean. That is the challenge, so you are left looking for other feedstocks—crop oils, tallow and other things like that—which can all be processed in the same way as used cooking oil to make renewable diesel. That's the basis of our facility that we're looking at in Brisbane, for production up there.

The CHAIR: The source of the tallow that you use, where would that be coming from?

PATRICK LUXTON: Local farms. At the moment—

The CHAIR: Is the carbon footprint factored in? Because it's a by-product of—

PATRICK LUXTON: That's right. I won't profess to understand all the science here, but there is a whole detailed scientific modelling of the total carbon intensity of a fuel, and different feedstocks have different carbon intensities. Generally speaking, we can say that using animal fats, used cooking oils and crop oils will have a lower carbon intensity than a straight mineral fuel.

Mr WARREN KIRBY: I want to go in a slightly different direction. When I pull up at a service station to fill up a car, I'm still conscious that I can't have my mobile in my hand, and certainly not be on a call. I would have thought electric charging stations and fuel stations are natural enemies of each other. What internal regulatory work have you done to ensure the safety of both the location of the charging stations and the pumps, but also of the workforce?

PATRICK LUXTON: That's a very good point. There are very clear regulations around how close things like electric chargers can be to—it could be gas bottles, it could be a fuel installation or it might be the fill point where the tanker comes to fill up—

Mr WARREN KIRBY: Sorry, are they government regulations or internal regulations?

PATRICK LUXTON: Government, yes, so well covered. It was a good learning process, in terms of applying that in a different setting. But, again, this is one of the areas where we're certainly very comfortable to bring our risk-based approach and a lot of engineers to apply to the task, so that's very well understood now. When you go to one of our forecourts, the electric chargers will be in a suitably safe position.

Mr WARREN KIRBY: Does anyone online want to add to that?

JOSH HOEVENAARS: Yes, I'm happy to add a little bit. I will reference bp, which has been installing EV chargers on service stations since around 2018. BP bought a company in the UK called Chargemaster, which it eventually rebranded to bp pulse, and that saw bp enter the charging industry. One of the main land channels we use is on service stations. For us, it's certainly national regulations and safety standards. Also, we're looking to play a role in terms of building the knowledge base around safety and operations with the contractors that we work with, based on a lot of the knowledge that's been developed over that time period since 2018. A lot of industry standards have a number of different things to employ as well. Golden rules of safety would be something that I would cite that's been used across the oil and gas industry for a number of years and is well applied across the installation and operation of chargers, and whenever operational team members are at site as well.

Mr WARREN KIRBY: Part of the reason I asked this question is that, while industry leaders like yourself would be very stringent about the safety concerns, when we're talking about rural and regional infrastructure, where some of the service station operators are single operators, or certainly a lot smaller scale than bp or Ampol, are those learnings that you're having about both physical infrastructure and workforce being shared through industry? Is there a body or association that you're able to share that with, or is that reliant on you sharing that information with government or the government regulation? How does that work? Could that be improved?

PATRICK LUXTON : That's a very good question. I might answer the last bit first. I think there's always an opportunity to share more, and share more widely. I would say that, bearing in mind we've had to do a lot of learning ourselves, we're probably now at the point where we should be thinking about, and need to think about, what are the possible industry bodies where we could more broadly share. I'd say that there's not an obvious or direct forum currently. We certainly spend a lot of time with electrical contractors. I would suspect the same for bp. We are comfortable in saying we will have upskilled a lot of contractors, and those contractors do a lot of other work for other people. So I think there's a natural learning process going on as well. I don't know if Josh wants to add to that.

JOSH HOEVENAARS: Yes. I wanted to mention the EV Council, who I believe you had some representatives from yesterday. They are the peak body for the EV charging industry and play a role and have working groups around charging operations and standards. So that's one to mention. The other to mention, whilst agreeing there's always room to improve the accessibility and sharing of safety information, is that this is something that has been done in the oil and gas industry for a long time. It is not seen as a competitive advantage at all. Sharing between industry participants is something that we would encourage. Certainly, if more information is required in terms of what's currently happening—I'm not across all of the detail—that's something we can take on notice as well.

The CHAIR: One of the suggestions earlier was that there be a dedicated safety regulator. I assume you'd have pretty rigid standards, so you wouldn't have a problem with the institution of something like a dedicated safety regulator. Although then there is the question of national standards, of course.

PATRICK LUXTON : Yes. I'm always cautious, given there is already a lot of regulation and a lot of standards, of overlaying more of that. Obviously we will never step back from safe operations, so we welcome

that aspect. But we're grappling with many layers of jurisdictions and different regulators, so that's my only caution around that.

The CHAIR: I think the suggestion there was that there were about three different agencies dealing with it and to bring it into one dedicated area. Of course, it is government, so anything could happen.

PATRICK LUXTON : I'll definitely give that some more thought.

The CHAIR: I want to go to a different question. It goes to something I've asked other people, in that it's becoming apparent that there are different elements to the market. A lot of the models you're talking about are consistent with City of Sydney council—and, I assume, any council within 20 kilometres of the CBD—where they don't want on-street parking charging. They want dedicated charging bays, they want operators, they want them in shopping centres—that kind of thing. We've had evidence that as you go further out, people have off-street parking, so they tend to charge in their house. But then, once you get out into the regional areas, you've got this problem where there may be an agnostic view about the future potential for long-haul freight—whether it's hydrogen, whether it's low-carbon fuels or whether electric is going to work in a country as vast as Australia. You also want to encourage the pick-up of electric vehicles in those communities.

Whether big operators are going to come in to build the infrastructure, if it's 500,000 per charging bay, in those kinds of small country towns that may have—towns like Parkes and Forbes rely very heavily on tourism for things like the Elvis festival or when there's something happening at the radar, but a lot of the time they don't have a lot coming through. Then the east coast, where there's a lot of tourism going on and travel up and down between Queensland, New South Wales and Victoria. In terms of the projections of where you're building, I'm assuming a lot of the facilities you're building at the moment are centred around those inner-city types of centres or areas where electric vehicles are coming on line and there's a projection that passenger vehicles, once they hit that 30,000 and under mark, will be picked up at a much greater rate. How do you project for that? What's the alternative model for those areas where operators like yourselves won't come into? What do you think is the model the Government should be looking at to ensure the infrastructure is there?

PATRICK LUXTON : The way we've seen it evolving to date is as you described: certainly inner-city suburban uptake and then stretching out over time. I think it will play out generally in that way. Naturally, accessibility will be more prevalent in the metropolitan areas ahead of the regional areas. Most of our focus to date has been in that space to meet the demand and the needs in the metropolitan areas, but we see over time that we'll definitely build out a network that expands out into the regions. In terms of how best to do that, I think this is where the Government can provide support.

From our perspective, demand-side support is better than infrastructure grants. The reason we say that is mainly because these are pretty long-term investments. The assets should easily last 10, 15 years. What we're looking for is knowing that the customer base is coming, and is going to keep coming. The grants on the infrastructure side can be difficult in that regard, because they don't solve that problem of ongoing use. More generally, something on the demand side that then helps people potentially into, say, an electric vehicle is a positive thing. The infrastructure has a lot of different investors. Infrastructure will follow. That would be our perspective.

The CHAIR: What about somewhere like Cobar, for example, where you're between Broken Hill and the Warrumbungles—I forget the town up there—which is a kind of Adelaide truck route that goes around the back? What about those kinds of towns, where the infrastructure will be very difficult because of the grids?

PATRICK LUXTON : Also, I would differentiate between passenger, light commercial and heavy vehicles. I think the pathway for electrification for passenger and light vehicles is reasonably clear, and it's now just a case of timing and how long that transition plays out. The heavy vehicles, we've talked about—there's likely to be some electrification but probably not in regional areas, for heavy vehicles. We've talked about renewable diesel as a very viable alternative. One of the benefits of renewable diesel is it drops into existing infrastructure, the end users don't need to change their vehicles and you can blend it as much as you want or need, or as demand determines. So you can start, if you like, at 5 per cent, 10 per cent and you can go right through to 100 per cent. Particularly when we think about Australia, with long distances and quite remote areas, I think that's a really interesting proposition. We touched on hydrogen earlier as well as a possible solution.

The CHAIR: We've got the ring fencing, which obviously we apply to stop monopolies and it being anti-competitive. But for a user of last resort somewhere in a remote town, that may be your last option. Government may have to step into some parts of the market. It's the old Adam Smith thing: Let the market decide. But in some areas, even Adam Smith argued that the Government had to come in on utilities.

PATRICK LUXTON : I think it will be a timing thing. Eventually it would work its way through as the market keeps evolving and as technology keeps evolving. If the government felt it wanted that to occur earlier, then absolutely the Government would need to think of a way to intervene.

TODD LOYDELL: One of the ways that we have thought about what that might look like in the future is how governments might regulate, either requiring companies like Ampol and bp to make investments in those areas or provide grants et cetera. If you look at the rollout of mobile phones, it was analogue mobile phone coverage first followed by the switch to digital coverage that happened. There were a number of different ways that governments looked at filling in those more regional areas with black spot programs and things. You might find that there are a range of different ways of doing it, but they should all be focused on solving something that the market can't solve.

If it's seen that there's a requirement to make sure that there's a level of charging availability, even across very remote areas, there are ways to do that without disrupting the natural rollout across the market to begin with. But, certainly, the smaller population towns will find it more difficult to come up with the right mix of demand for that to happen. Some government intervention could bring forward that time, but it will happen eventually anyway. There may be benefits. Right now, we are rolling out charging where it's not necessarily making money back for us. We're doing it slightly in advance of where the market is. We're doing it in locations where we think we will get a commercial return earliest, but our early investments certainly weren't with a view to being commercially profitable right away.

The CHAIR: We've got time for one last quick one, if anyone wants to get in.

Mr RAY WILLIAMS: I'm done, Madam Chair.

The CHAIR: Is there anything we haven't asked that you'd like to make a final statement on that you think we should include in the inquiry?

PATRICK LUXTON : I would probably add a couple of comments back to the DNSPs, but positively this time. There's a great opportunity—and we've started some work with Ausgrid in New South Wales—around dynamic connections. Because of the nature of the grid and the peakiness of it, we think there is an excellent opportunity to better utilise some of that downtime. But that will require a range of advancements in what the DNSPs are allowed to do, the communication protocols and the tariff structures. There's a lot that will need to evolve there, but there is a large latent capacity that can be tapped that we think will be very important for the effective use of the power that's available today. One other point I'd add—I picked it up from the earlier piece—is that in July we'll open our first truck charging facility at Eastern Creek on the M4, and then we're following up with some more early next year in Wyong. So there'll be some opportunities to charge some trucks.

Mr NATHAN HAGARTY: This excursion is getting longer and longer, isn't it?

The CHAIR: Josh, is there anything you'd like to add?

JOSH HOEVENAARS: Yes. I thought I'd just add a couple more points on the previous topic of regional charging. From our perspective, we've seen the benefits of the funding for infrastructure. Both Ampol and bp are in a privileged position—that we have an existing, quite large network, for bp, of over 1,000 locations across Australia with the bp brand, in some of which we can more easily install EV chargers, and many of which are on key regional transport routes. So we see ourselves playing a role there. Around 40 per cent of our sites at the moment are in non-urban areas or in regional areas, and we intend to keep a similar proportion. It's certainly been aided by the fast-charging program that the New South Wales Government has enacted across three rounds for us. We think that's an important component, of the overall ecosystem, to continue. Particularly with a focus on fast and ultra fast charging, there is a real need to remove, whether perceived or real, range anxiety from drivers who may be moving towards EV but don't quite have the confidence yet.

The CHAIR: That's very informative. Thanks for giving us your time 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 from the Committee. You'll have 14 days to answer them. If you need extra time, feel free to apply for an extension. It's been very informative, and it's been great to have experts in here giving us all the details.

(The witnesses withdrew.)

The Committee adjourned at 15:30.