LEGISLATIVE COUNCIL ECONOMY AND INFRASTRUCTURE COMMITTEE

Inquiry into Electricity Supply for Electric Vehicles

Melbourne – Thursday 26 February 2026

MEMBERS

Georgie Purcell – Chair	Moira Deeming
Richard Welch – Deputy Chair	Tom McIntosh
John Berger	Evan Mulholland
Gaelle Broad	Sonja Terpstra
Katherine Copsey	

Necessary corrections to be notified to executive officer of committee

WITNESSES

Bernhard Conoplia, Chief Networks Officer, Evie Networks; and

Stuart Moffatt, General Manager, JOLT Charge.

The DEPUTY CHAIR: I declare open the Legislative Council Economy and Infrastructure Committee's public hearing for the Inquiry into Electricity Supply for Electric Vehicles. Please ensure that mobile phones have been switched to silent and that background noise is minimised.

I would like to welcome any members of the public watching via the live broadcast. I will now introduce our committee members, starting on my right.

Tom McINTOSH: Tom McIntosh, Eastern Victoria Region.

John BERGER: John Berger, Member for Southern Metropolitan.

The DEPUTY CHAIR: I am Richard Welch, Member for North-Eastern Metropolitan Region.

We have got our first witnesses in here. To the witnesses, all evidence taken is protected by parliamentary privilege as provided by the *Constitution Act 1975* and further subject to the provisions of the Legislative Council standing orders. Therefore the information you provide during the hearing is protected by law. You are protected against any action for what you say during this hearing, but if you go elsewhere and repeat the same things, those comments may not be protected by this privilege. Any deliberately false evidence or misleading of the committee may be considered a contempt of Parliament.

All evidence is being recorded. You will be provided with a proof version of the transcript following the hearings. Transcripts will ultimately be made public and posted on the committee's website.

For the Hansard record, can you please state your name and any organisation you are appearing on behalf of.

Stuart MOFFATT: Stuart Moffatt from JOLT Charge.

Bernhard CONOPLIA: Bernhard Conoplia, Evie Networks.

The DEPUTY CHAIR: Thank you. We welcome you to make your opening comments. If you could please keep it to, say, 10 to 15 minutes each, that will leave us some time for some questions afterwards. Over to you.

Stuart MOFFATT: Good morning, Mr Chair, and members of the committee – as mentioned, Stuart Moffatt representing JOLT Charge. JOLT is an Australian-owned business. We operate the world's largest advertising-funded public EV charging network. We have over 3000 public EV chargers in our network across Australia, New Zealand, Canada, the US and the UK. In Australia alone we have 130 chargers across Melbourne, Sydney, Brisbane and Adelaide, and we operate 25- to 50-kilowatt chargers – fast DC chargers. Our partners include the likes of Transport for NSW; Ausgrid; Endeavour Energy; councils in Melbourne, including Bayside, Knox, Kingston, Darebin, Manningham and Moonee Valley; and councils in Adelaide as well. We also have licences with private enterprise and also private landlords across the eastern seaboard. We believe that the timely development of public EV charging is critical in helping to remove one of the major barriers for EV adoption, drive the decarbonisation of transport and assist in achieving Victoria's net zero goals.

Our submission addressed four questions outlined in the terms of reference, and I will just briefly recap our responses to those and our position relating to those. Regarding strategies to reduce charging during peak times, we know from firsthand experience that variable pricing signals and charging speed influence driver behaviour. We have seen that firsthand – for example, a drop of 40 per cent on price drove a 117 per cent increase in use at those particular chargers. So they are very price sensitive. Time-adjusted tariffs and the ability to adjust charger power during peak demand times are known effective strategies to be able to drive people towards off-peak charging behaviour and to manage grid stress in high-demand periods.

The second question we addressed was: is public EV charging being rolled out at the required rate? Simply put, no, it is not, in our view. Public charging infrastructure in Victoria is running a little bit behind where the use of

EVs are, and the uptake, and as we have seen, the EV uptake is accelerating all the time. A report by Deloitte in 2024 assessed that Australia would need approximately 27,500 public EV chargers in the ground by 2033 to meet the projected demand. That requires installing eight new public EV chargers a day from now until 2033. The location of the chargers is also important in needing to match people's lifestyles, how to fit into the work that they do and how they go about their daily activities, so a distributed approach relating to combining off-street charging with on-street kerbside, or roadside, charging represents a probably more resilient and cost-effective model to use and to drive an outcome.

The third point we covered was the best role for electrical distribution businesses in rolling out EV charging and the setting of tariffs. The DNSPs should be incentivised, possibly even regulated, to facilitate faster, lower-cost connections for charge point operators. JOLT knows all of our capital costs in great detail and how long our assets take to install. The only unknown is how long a time it will take the DNSPs to assess a dispensation request here in Victoria and to assess that on the basis of whether it is a second point of supply or a negotiated connection request, and then on top of that the costs associated with that. We have lost a number of sites that were due to be rolled out. However, delays on the time and the capital cost caused those to be no longer commercially viable, so we were pushed in that situation to walk away from providing the charging opportunity for the public. A far more streamlined process, greater transparency regarding the capital costs and much faster or shorter statutory turnaround times would assist in driving private investment. For example, Ausgrid in New South Wales provide a second point of supply if certain criteria are met, and they are very straightforward – they relate to safety primarily – so the time and cost is known and can be managed by private enterprise.

JOLT has a different connection requirement to some other CPOs. As we operate in the 25- to 50-kilowatt charger area, we require less than 100 amps for our assets. It is considered a basic connection, so it should be relatively straightforward and not be requiring a dispensation request to be considered on each occasion. JOLT is not opposed to DNSPs having contestable business units, for tendering for commercial work against us, for example. However, obviously the recent AER decision allowing CitiPower, Powercor and United Energy a ring-fencing waiver to install 100 pole-mounted chargers could dramatically impact competition and reduce the desire for private organisations to invest in infrastructure in Victoria.

Re tariffs, I think we have covered some of those. If there is price support for tariffs during off-peak periods, that will help drive consumer behaviour.

Finally, strategies to help EV uptake – the lack of a balanced ecosystem of EV charging as a combination of slow, fast and ultra-fast public charging remains a major barrier to EV ownership and adoption, particularly for those without off-street parking. Approximately 30 per cent of the population is unable to charge at home. They will rely solely on public charging. To help address this, ideas such as mandating EV public charging targets for the state or councils and providing access to public land owned or controlled by the state, whether that is managed by council or the state directly, to install kerbside, roadside public EV charging would incentivise a coordinated approach between councils and the state to better address the public EV charging challenge.

The DEPUTY CHAIR: Thank you.

Bernhard CONOPLIA: Hi, everyone. Thank you to the committee for the chance to speak today. I will just start by saying I agree with everything Stuart said, and I will be echoing some of those statements. As a way of introduction, I am Bernhard Conoplia. I am the Chief Networks Officer of Evie Networks. We are the largest owner-operator of public fast charging in Australia. We have 300 sites around the country and 1000 bays, and 100 of our sites are here in Victoria.

Our response to the inquiry focused on items 1, 2 and 3, which were about how EV infrastructure interoperates with the grid, the rate of infrastructure deployment and the role of DNSPs and tariffs. Those topics are very close to our hearts; we deal with challenges in those areas every single day. I am happy to discuss the detail of our submission, but I thought I would use some of this opening statement to just provide a broader context as well. Up-front we would like to thank the Victorian government for some of the assistance that we have received. We have received just under $3 million to help deploy infrastructure across regional Victoria. We have put that infrastructure, with our own funding as well, into 55 towns across the state, which would not have been possible without that funding. We have also received co-funding from ARENA, which has been put to work in greater Melbourne and Geelong, as well as on the highways. As a general rule, when we receive $1 of government funding, we will invest about $3 of our own money, so there is a multiplier effect. When government works with industry to deploy key infrastructure, you get this benefit of industry investment, which does not happen in other scenarios. In particular, DNSPs are proposing that they will deploy their own infrastructure in a monopoly-led approach, and that puts at risk industry investment. We will talk more about that.

We are at the very beginning of this transition. There is a recent report, released in November, by Verdant Vision. In producing that report they consulted widely with industry, government, networks and consumer groups, and they found that in Australia we are going to need $4 billion to $5 billion of further investment in EV charging infrastructure between now and 2030. I think we would all agree that you cannot leave it to government and consumers to come up with that money, that you need industry investment, and that will only happen if there is a thriving, competitive market. In a thriving, competitive market everyone needs to be pulling in the same direction, so industry, networks, consumer groups, local government and state governments all need to be pulling in the same direction. But that is not happening today. We do not have a national strategy for EV charging. We do not have any central planning around what consumer needs for charging will be, in all of their different forms, either now or in the future.

The barriers to deploying charging infrastructure, which are primarily around getting network connections and the tariffs for those network connections, remain, and now DNSPs are starting to compete with their own customers to deploy infrastructure. I have been in EV for seven years, and I have been in the industry longer than that. In that time I have not seen the DNSPs in Victoria do anything to address the barriers towards deploying public fast charging. Connections remain unpredictable in terms of time and cost. There has been no tariff innovation for public fast charging, and there is a lack of transparent network data that would otherwise help us plan our network. Even worse, DNSP incentives are not aligned with consumers or industry; they are rewarded for the amount of capex they spend. There has been a longstanding process of lobbying for ring fencing to be relaxed, with guaranteed returns by consumers, and the recent waiver that was approved by the AER for CitiPower, Powercor and United to deploy kerbside charging of their own is the first step towards expanding the regulated asset base.

What does this mean for industry? It means that our biggest suppliers, who control the time and cost it takes for us to connect to the network and how much we pay for our electricity, become our largest competitors. That is not compatible with industry investment. What does it mean for consumers? A DNSP monopoly-led approach means that there will be poorly designed infrastructure that puts networks first, and consumer needs will be an afterthought. There will be little innovation in public charging and poor customer service, and as a result, there will be higher electricity bills for all consumers, because the infrastructure that is put out there, which will be inefficient and poorly planned, will still need to be paid for by all.

There is a better way. Public charging is good for the grid and should in theory be good for DNSPs, if they have the right incentives. The infrastructure that we deploy increases network utilisation, which is good for network efficiency – more use of existing assets. We soak up excess solar generation, and our equipment is highly controllable. We work with other DNSPs today around peak network events, so we do not contribute to those peaks; we do not add cost to the network. We just need the right planning and regulatory framework to make sure that we have a thriving competitive environment. If we have that, then everyone will win, especially consumers – all consumers will then have lower electricity bills.

A summary of our recommendations from our submission: we need a national strategy for EV charging that considers consumer needs for charging of all types now and in the future; we desperately need network pricing reform so that the current punitive tariffs are replaced with innovative tariffs that recognise the benefits of the infrastructure we are deploying; we need transparent, efficient connection processes, including network capacity, information and flexible connections to make use of latent capacity on the network; funding should be targeted towards genuine gaps and barriers that exist today; we need to strengthen ring fencing to preserve competition and protect consumers; and finally, DNSPs should be rewarded for enabling access to the network and operating efficiently. I am always very surprised in every single consultation that I have been part of that Australia is attempting to reinvent the wheel here – other countries are doing this successfully. They are years ahead of us and they have successful, proven models that have been through multiple iterations. Why are we not learning from those models? For example, the UK and the Netherlands have proven models in similar markets that leverage public and private investment.

The DEPUTY CHAIR: Thank you very much, gentlemen. We will move to some questions now. We will start with you, Mr Berger.

John BERGER: Thank you, Chair, and thank you both for your attendance this morning. I think, Bernhard, you might have been looking at my notes as I have been writing them down here, because some of the questions that I will ask you both are around that world's best practice. I am thinking: what is the national strategy, what does it look like and are we trying to reinvent the wheel, given what you are alluding to in the experiences in the Netherlands and that? Can you give the committee a bit of an insight as to what that national strategy might look like?

Bernhard CONOPLIA: I will give you the UK example. LEVI is the acronym. They have got £450 million of funding. It is in the third iteration now, so that is the total amount, and that is targeting 100,000 charge points. They have already got 27,000 committed through current stages of that program. Ten per cent of that funding goes towards centralised planning of infrastructure that flows down to local governments, so £45 million. There is a program body at a national level which provides a centre of excellence and resources that local governments can draw upon, and some of that funding goes directly to local governments. We see local governments here all desperately trying to come up with their own plans; this is a centralised body that helps them and resources them to plan the right infrastructure for those local areas, and when you plan that infrastructure properly, you know it is going to be well utilised by consumers. The 90 per cent of the funding then goes through a competitive tender process, and those who can provide the most charging and the best value for consumers will win that process. They make sure that there are multiple providers in each area so there are no issues with local monopolies, and there are protocols around open access. So it is really a competitive process that multiplies the government investment in each and every area, and they are having great success. I have spoken to people who are on that program team in the UK and they are very happy with the results. As I said, it is the third iteration, so they have taken all of the learnings from the first two iterations, and I think we should be looking at replicating that model.

John BERGER: You mentioned soaking up the solar component of the generation side of things. Given that the federal government's rebate on batteries is about to expire, where do you see the longevity in people wanting to buy batteries at the prices that they are now – they will have to significantly come down for people to do that. Do you see that as something that is going to happen?

Bernhard CONOPLIA: It is not an area of expertise other than I am about to buy one myself for my own home. I like that consumers are investing in infrastructure that will benefit the grid. I think it benefits all consumers. So I think the social equity argument around it is actually a good one in that some consumers are spending money on these assets and it takes pressure off the grid, which benefits all other consumers. As for whether people are going to buy batteries in the future, the cost of batteries is coming down all the time. I do not have all the numbers on that, but yes.

John BERGER: Stuart, you mentioned that there are 30 per cent of people who cannot charge at home. Can you just run me through why?

Stuart MOFFATT: Yes, it is. I think most literature says only 5 per cent, which is not accurate, based on everything we have seen. You have got people with no off-street parking, and what they do is generally, in inner cities particularly, they take the charging into their own hands. I have seen things such as fishing poles over the kerb – from the house out to the kerb – and there are people who have put down things on the ground that will be trip hazards. There are a number of things that will be major problems. So most of the inner-city areas will struggle without any form of off-street parking, number one. Number two, apartments: around Australia I think there are around 480,000 apartments, and simply putting three or four charging things in the base of that will not supply what people need. So with those barriers, between no off-street parking and apartments, we arrive at about the 30 per cent. It ranges by city and by area; that is circa.

John BERGER: One quick one, if I could, Chair: on the dispensation requests, can you give us an indication as to what they are and what those barriers are?

Stuart MOFFATT: So the VSIR rules took a step forward, which was great, in the right direction to allow at least for a second point of supply in certain situations to private properties. We have applied for some of those, but it is still open as a dispensation rather than an as of right if you meet certain criteria. So it still takes somewhere between three and 12 months to get a response, number one. And then you wait longer for the actual pricing to come out as well. So we have connected two sites in Melbourne to a second point of supply that was streamlined, the whole exercise, rather than running 100 metres of trenching to the main switchboard out the back of a property because we could not get the second point of supply. So it makes that a much easier and more manageable outcome.

John BERGER: Right. Thanks, Chair.

The DEPUTY CHAIR: Thank you.

Tom McINTOSH: Thank you. I have plenty of questions to ask. You have got a variety of chargers from, I think, 50 kilowatts or 25 kilowatts up to 100, 150, whatnot. What are you seeing as far as consumers' behaviour as far as what they want, whether that is by geographic location or time of day? Where are they using what style of charger? And in those different areas what does peak demand look like from a charging perspective, not the network?

Bernhard CONOPLIA: I am happy to start with that. First principle: there are many different driver segments with many different behaviours. There are many different styles of charging that encourage different types of use, and we need all of it. So we have highway chargers that will charge up to 350 kilowatts, and we have metropolitan chargers that will charge down to 25 kilowatts. So we have got the full range. What we will see on highways is people will charge for shorter durations. They will seek to move on more quickly, but they are still charging for about 25 minutes. And the average charging rate is certainly not 350 kilowatts; the average charging rate is more like 70 kilowatts. It might start fast, but it slows down. But people are still stopping for that 25-minute period.

In the inner city, there are a lot of different use cases because you have people who do not have driveways. I have been actually operating as a driver without home charging for the last nearly a year. I charge at my local EV charger, and it is when I am happy to stop at the shops. I do it about once a week, but I will leave the car for half an hour, 40 minutes, while I am doing my shopping or thereabouts. So there is a behaviour which is doing your charging while you are going about some other activity, which is a longer charging duration. Of course, there will be then charging for a few hours on the kerbside. A lot of those drivers are the same drivers just making decisions about what is convenient for them. There are professional driver segments, which make very good use of the network. They will make use of any charging that is available to them, but what I would say is that they generally prefer highly accessible faster charging, with a shorter turnaround, in a metropolitan area. There are lots of different types of charging for lots of different behaviours, and often it is the same driver segments just choosing which is more convenient for them in that moment in time. We do not draw a line between, for example, a pole where you might charge for 2 hours or longer and our charging, which is faster and which you might need for between 30 minutes and an hour. It is the same customer who needs to top up their battery in a way that is convenient, so we see that infrastructure competing or substituting itself. I say this because sometimes a very simple line is drawn. They will say, 'Oh, AC versus DC – they're completely different use cases.' They are not. This is just drivers choosing what is convenient for them in that location.

Stuart MOFFATT: Yes. Just to add to that, I fully support what Bernhard has mentioned. I think this is an ecosystem that needs to work together for the use case. Putting slow charging into a train station, for example, or residential streets to go for 8 hours on a charge and top up the battery overnight or whilst at work works for certain situations. For others going about doing their shopping on a day-to-day basis it is the 25 minutes to an hour – 'I'll go and do that' – and top up usage. As an EV driver it is a top-up process a lot more rather than a 'wait for zero and go back to full' type of thing. So we probably operate slightly differently in that way. Then on high streets, people visit for half an hour to an hour, top up charge and move on.

Tom McINTOSH: It was good to hear you talk about the $1 of government investment versus the $3 of industry investment in charging infrastructure, but are there certain types of chargers where the return on investment is faster than others and then those that do not require government support versus those that do? For me representing Eastern Victoria, I think particularly about our regional towns and our tourist towns where there might be high demand but it might only be for a percentage of the year. I am really interested in how we support all EV users but particularly when they are on holiday spending money in our local regional towns. How do we ensure that they feel comfortable to do that, and what does that mean for you as operators?

Bernhard CONOPLIA: You definitely need more co-funding in regional areas because of that seasonality. You have absolutely hit the nail on the head. It is much harder to get a return in a regional town than in the metropolitan areas because of the limited scenarios and limited driver use cases. In a metropolitan town you have got many different drivers with many different needs. In a regional town the locals will have access to off-street parking, so you are really serving the holiday traffic. It is not different to telecommunications. Telecommunications faced all the same barriers around black spots and had to fund regional areas with more investment than in metropolitan areas. It is just a balance of where the money needs to go, and we would always advocate that the funding needs to be directed towards those genuine gaps.

Tom McINTOSH: Yes. Thank you very much. Okay.

The DEPUTY CHAIR: I am sure we will have time to come back for more. Thank you, Mr McIntosh. Mrs Broad, if you are ready to go – or I can go.

Gaelle BROAD: No, you go. I will go after you. That would be great.

The DEPUTY CHAIR: Thank you. Yes, I have got a long list of questions as well across a couple of different things. Just firstly for background, with the amount of urban charging points that we have in Melbourne, how does that compare to, say, European capitals or North American capital cities? Is there a benchmark?

Stuart MOFFATT: I will start there. I am not sure specifically. It has been varying by country and where they are with their own EV journey and uptake. There are a number of international benchmarks being used at the moment that are around about 1 kilowatt being available per EV. So when you break that down, say ours –

The DEPUTY CHAIR: That is the kind of metric you use, as opposed to charging points?

Stuart MOFFATT: That is the metric, yes. It is actually about the supply to the number of vehicles in that basis, so you can use that, and it grows as we grow and move along. That is an international benchmark. It does vary a little bit – Norway is one to one, I think, and China is more one to three. And if we use the same process at the moment for Victoria, based on what we know as the number of registrations, it is about 0.37 at this point in time, so it is behind – an opportunity to catch up whilst sales of EVs pick up, but staying ahead of that.

The DEPUTY CHAIR: One thing I am curious about is, if you like, the electrical infrastructure in European cities, and I can reference London. They, in the last 40 years, put all their power underground. They do not have poles and wires. That also involves something of an upgrade in the process of doing it. Are we conveniently ignoring the fact that it is not just a case of we are not going as fast as them; they are almost a generation ahead of us in terms of the underlying infrastructure that this can plug into. I am just curious about your comments on that.

Stuart MOFFATT: I could not necessarily add to that, the nature of what investment has occurred in the DNSP networks to be able to support those types of things. I would leave that to them to be able to say we can connect to those networks when the available supply is there.

The DEPUTY CHAIR: But the ease of connection, both in terms of cost and infrastructure management, must be a material factor in what your starting point is and what you are dealing with. Here we are dealing with wires and poles, and there they are not. Is that not a consideration?

Stuart MOFFATT: It is more about the access to, say, for example, the second point of supply. It is a far more cost-effective exercise to run a few metres from a pole to either a private landlord's property, where we might have the site, or onto council or state government controlled land to be able to do that than running, as I mentioned before, from 100 metres around back to where the mains switchboard is to be able to connect to that. So to answer your question more specifically: yes, it will be cheaper and quicker to do that with some of those barriers removed.

The DEPUTY CHAIR: DNSPs have been a big topic. I am hoping we will have them come and present to this inquiry in due course. So here is your opportunity, because we want to get both sides of the story here, but almost every submission comes up against the DNSP matter. Why, in your view, is it so hard to get market data, infrastructure data, the necessary data you need from the DNSPs? What, in your view, is the obstacle here?

Bernhard CONOPLIA: I will jump in. I would like to come back to some of your other questions as well, by the way.

The DEPUTY CHAIR: Yes, please.

Stuart MOFFATT: Why is it hard to get market data? In New South Wales there are contestable works across the DNSPs, so the data is more readily available in New South Wales than in Victoria, where contestable works is a lot more limited. CitiPower and Powercor do not do any contestable works, is my understanding.

The DEPUTY CHAIR: Can you just explain that term?

Bernhard CONOPLIA: Okay. So when we go to perform a network connection in New South Wales, there are a selection of certified contractors who are able to access network data themselves, and they are able to perform the design works and the actual build works to connect to those networks. In Victoria it is a lot more limited. It is a bit fragmented, so not everyone behaves in the same way. CitiPower and Powercor do not offer any contestable works. You have to go through their own systems. With United Energy, our on-the-ground experience that the team has informed me of is that some work is contestable, but when you go through that process it can often be slower because you go to the back of the queue all the time. So a contestable works system, like New South Wales, would open up more network data. There is a long way to go. It is far from perfect in New South Wales, but it is better than in Victoria.

The DEPUTY CHAIR: And are we talking about the same suppliers ultimately, the same businesses, the same DNSPs operating in both states?

Bernhard CONOPLIA: No, they are all different DNSPs. In New South Wales you have Ausgrid and Endeavour and Essential Energy, and then you have the five DNSPs in Victoria.

The DEPUTY CHAIR: I will circle back around. I will go to Ms Broad.

Bernhard CONOPLIA: Can I answer some of your previous questions as well?

Gaelle BROAD: Yes, I am happy for that.

Bernhard CONOPLIA: You spoke about ratios of infrastructure rollout. It has been a bit easier to roll out infrastructure in New South Wales; the government had its kerbside program for charger funding. In Victoria there have been a lot more obstacles to deploying infrastructure. When we actually look at the ratio of EVs to chargers in metropolitan areas, Sydney in particular actually compares quite favourably to European cities. When you look at international data, you have got to exclude China and some of the really, really dense countries. When you look at like-for-like markets, Sydney’s ratio is not that different to London; it is really quite similar. It just shows that we are at a different stage in the market. Yes, we have less infrastructure, but we are years behind them. It has been much harder in Victoria to deploy infrastructure because of the barriers that the DNSPs put up. That is a cultural thing, and it is also how they are incentivised. They have been very focused on doing their own kerbside charging infrastructure. There are clearly some issues there. We are always offering to work with DNSPs across the country, by the way, to try and improve processes and to innovate around tariffs. I just wanted to share that comparison. There is a difference between Melbourne and Sydney.

The DEPUTY CHAIR: If I may, is there something proprietary about that data? Is that data IP for the DNSPs? Is there something commercial-in-confidence or sensitive for them?

Bernhard CONOPLIA: Not that I know of.

Stuart MOFFATT: Not that I could imagine.

Bernhard CONOPLIA: If it was in everyone’s mutual interest to get more charging on the network and if everyone was incentivised, then smoothing out those processes and making data available would help us to plan our infrastructure in a way that avoids areas where there are bottlenecks, and we could target our investment towards areas where there is latent capacity. That would be great for us and great for the DNSP.

The DEPUTY CHAIR: But things like that, where they are holding that body of information – and again, we will ask these questions of them directly – is that a dynamic thing? Is that because it is a variable, because it will change according to their own infrastructure management? What is true today in terms of capacity is not going to be true tomorrow, therefore they cannot simply just provide – is that your understanding of that as being the case?

Stuart MOFFATT: I could not answer that.

Bernhard CONOPLIA: Yes, I think you have to ask them that question.

The DEPUTY CHAIR: Okay. Thank you. Mrs Broad.

Gaelle BROAD: Thank you very much. I apologise for being a bit late, so if I do repeat anything, feel free to say, 'Refer to the previous question' and I will go and check the Hansard. You mentioned that it is harder to get a return in regional towns. I represent Northern Victoria, so can you just share a bit more of your insights into that? Do you think it is possible in regional Victoria?

Bernhard CONOPLIA: We have 55 charging stations across regional Victoria, as I mentioned in my opening, and that was co-funded with the Victorian government. We contributed just more than half of that program. It was a $6.5 million program, and we got just under $3 million from the government. They are relatively small chargers, so the network connection requirement was much smaller. They are all pretty much single chargers with two ports, requiring an 80-amp, 120-amp connection. They do run at quite low utilisation because of the seasonality. Compared to metropolitan areas it is a much tougher business case. We are happy to do it because it really opened up journeys right across Victoria for EV drivers. But yes, it is a much tougher business case.

Gaelle BROAD: At the moment you said you got a 50 per cent subsidy. If there was no subsidy, you would not be looking at anything in regional Victoria?

Stuart MOFFATT: From JOLT's perspective, we run an advertising-funded model, so we need audiences to be able to help fund that infrastructure because we provide it at no cost. That is very difficult to do at this point in regional areas for us, so the focus has been on the capital cities mainly, to be able to fund the fact that we provide it. We also provide 7 kilowatt hours a day per consumer free – at our cost, rather. There is a small connection fee, but it is at our cost. To do that would not work for us in the regional areas at this point in time.

Gaelle BROAD: What would the minimum population have to be for it to be feasible? Or what locations could it work in?

Bernhard CONOPLIA: It is a question of time. Stuart said 'at this point in time'. We are at 2 per cent of cars on the road being EVs. That is a really small market overall. Whatever you believe, whether that goes to 20 per cent, 50 per cent, 80 per cent or 100 per cent of the market over time, it is going to be a vastly different business case when those numbers grow, and it depends on where that infrastructure is as well. We can see that on major routes there is a business case, but inside small towns you would probably really need that critical mass. I do not have a number, but it has to be a reasonable –

Gaelle BROAD: No, that is all right – no magic recipe yet.

Bernhard CONOPLIA: Yes. In a town the size of Ballarat, for example, there is critical mass there, but in some of the really small towns there is not.

Gaelle BROAD: Have you outlined the costs or the charges involved for each distribution point, because I know there are connection fees with the service providers, and then is there a licence fee? What are the costs involved? How much does it cost for a site?

Stuart MOFFATT: You take the first.

Bernhard CONOPLIA: Yes, there is a wide range of costs. When we build the smaller charging stations, we could build them for as little as $100,000. These are still DC public fast charging stations, but when we need a network connection above 200 kilowatts, then you quite often get a $250,000 bill for a network connection. Those sites can end up being $500,000 quite easily. We have abandoned a number of sites in Victoria because of the high cost of network connections.

Then you have the tariffs. It is very important to also include tariffs as part of this discussion. We do have an order-in-council from 2021 that allows us to avoid demand and capacity tariffs for small- and medium-sized connections, which has been very helpful. But as soon as you go over a threshold and you become a large business – the threshold is 160 megawatt hours per annum – you are hit with demand and capacity tariffs and it becomes really, really expensive. So the running costs really undermine that business case. We need relief beyond that. We are different to traditional loads. I have given a range of –

Gaelle BROAD: Are the tariffs variable fees at the moment or ballpark?

Bernhard CONOPLIA: The way it works is when you are below that threshold, you are paying per kilowatt hour, for the most part, and when you are above that threshold, you are forced to pay based on your capacity. Our load is quite peaky, so we have a high capacity, a high peak, but it is also highly controllable. We are charged for that peak irrespective of whether there is a peak network event or not, so it does not make sense. Our load has a lot of benefits for the grid in that it is very, very controllable, but the tariffs do not reflect that. The tariffs are designed for, like, a factory. There has been no tariff innovation.

Gaelle BROAD: Thank you. Thank you, Chair.

The DEPUTY CHAIR: Mr Berger, do you have any other questions?

John BERGER: Thank you, Chair. I want to touch on what you mean by innovating around tariffs, not a technical explanation but more so anybody else who is watching this could understand what you mean by innovating around tariffs.

Bernhard CONOPLIA: CitiPower, Powercor and United have just released a new tariff for kerbside charging. That tariff promotes complementary usage of the network, in that there is different pricing for different times based on when there is going to be peak usage. We do not have access to that tariff. I have requested access to that tariff. As a result, our electricity costs are going to be a minimum 10 cents more than those charges on that tariff.

John BERGER: So you do not know what the tariff is at that particular point in time?

Bernhard CONOPLIA: We do know what the tariff is. There is a network tariff component, which charges you based on the time of day or the capacity you are using at that time. It is not variable, as such. There is a structure to it, there is a framework to that tariff. It is just that there are different tariffs that apply for different technology. We do not have access to the kerbside tariff put forward to the AER. And that is for reasons that are – well, there have not been good reasons for that.

John BERGER: Okay.

Tom McINTOSH: Can I follow on from that?

The DEPUTY CHAIR: Yes, please.

Tom McINTOSH: You are saying there is a – did you say 10 per cent or 10 cents?

Bernhard CONOPLIA: Ten cents.

Tom McINTOSH: Ten cents.

Bernhard CONOPLIA: Ten cents difference, yes.

Tom McINTOSH: Are you saying DNSPs who are doing kerbside charging have access to that tariff but you do not?

Bernhard CONOPLIA: DNSPs and others who are deploying that kerbside charging will have access to that tariff, but our charger, which might be just up the road, does not have access to that tariff because they have drawn a line between AC and DC. The reasons they gave are not supported in data. It is actually ridiculous.

Tom McINTOSH: Is it the AER that have put that in?

Bernhard CONOPLIA: The DNSPs have proposed that, and the AER essentially allows it. I see no reason why we should not have access to that tariff. In New South Wales there is a tariff that is more similar to that, an Ausgrid tariff that we work with today. During specific peak network events we reduce our charger by 50 per cent speed, and we get a low volume tariff and a very high cost during those peak network events, but we are happy with that because we can control our infrastructure very dynamically. We do have a tariff that is available for, unfortunately, only small and medium sized sites at this stage in New South Wales, and we are not allowed access to the most similar tariff that has been developed in Victoria.

Tom McINTOSH: Okay. We might inquire further on that. All right – 27,500 chargers by 2033 in Australia. You said that we need to put in eight new a day. How are we progressing at the moment, Australia-wide or in Victoria?

Stuart MOFFATT: We are a little behind that. Putting in the chargers is related both to time and cost, clearly, being able to roll those out, and available funds in the business models. But again, I think once we combine all parts of the ecosystem, be that state funded, council funding, private organisations doing AC, DC fast charging and ultra-fast charging, the combination of all of those will allow us to dissipate that, and putting it in more locations that are more accessible for everybody to be able to use that fits their use case. The CPOs have different business cases and different use cases, so we have different criteria, we have different capital costs and we have different structures. My belief in the sense of an ecosystem is that it will give us the best possible outcome to catch up on being able to deliver those things at multiple levels.

Tom McINTOSH: You talked about a $4 billion to $5 billion investment by 2030. Is there the capital out there for companies like yours – excluding where governments may fill in some gaps and whatnot – in the private market to make that investment, do you believe?

Bernhard CONOPLIA: We believe there is. Our investors have put in $100 million already at a very early stage in the market.

Tom McINTOSH: I was actually going to ask about the capital both your companies hold, but I did not know if I was prying too much or not.

Bernhard CONOPLIA: No. They have invested that money in the belief that this market will grow. They are doing it for all the right reasons, by the way. Yes, there is more capital out there for this, but we need an environment that promotes investment. Right now we do not have a national strategy, we do not have targets and no state has really addressed the barriers to deploying infrastructure, so without those things it is very hard for people to invest.

Tom McINTOSH: From all the evidence we have heard – and I suppose I noted this last hearing – it feels like shareholders who have invested in traditional service stations are just the sticks in the sand and they are not moving forward, whereas it sounds like your investors are looking at markets going forward into the future. I do have a question, but I will let others have a go first.

The DEPUTY CHAIR: No, you can go.

Tom McINTOSH: Okay. Just on the tariffs, I am interested in those because different markets around the world might be more focused on wind; here in Australia we are focused on solar as far as the cheapest generation source. Will companies like yours look at perhaps battery installation and being able to engage in the market in a way where you are holding charge kilowatts there for your consumers but are also able to interact with the market during those peak demand times, as you say, or to insulate yourself from those peak demand times and those $20,000-a-megawatt moments and whatnot?

Bernhard CONOPLIA: There are a few different layers to this. We are quite interested in batteries. We do not have any on our network right now, but the price has been coming down and I think that is something that will certainly play a part. It is not just about balancing out wholesale market pricing but also trying to overcome some of these barriers to network connections. There is a huge barrier. If I can use a battery to minimise my network connection costs, then I am going to be very interested in that. Then I see as the kind of additional benefit being able to participate in the market to avoid those network peak demands and those very high wholesale market prices.

Tom McINTOSH: I think everyone gets a bit caught up in this sort of technophobe – if we just think about it like a petrol station, a truck comes and drops it off, it goes in a tank and it gets used. I am also on the oil and gas decommissioning inquiry at the moment; we have looked at pipes all across Victoria. So we can either have it piped in in a transmission line – a distribution line – or we can have batteries and it can be stored. And the other question I will just put at the end is: in regional areas is there anything looking at also generating onsite? That is probably a little bit too complicated. But we have heard of instances in WA of generating onsite on those really, really vast highways – generate, store, charge onsite. I will leave my questions there for your comments.

Bernhard CONOPLIA: What I would say about network connection is a battery does not offset the need for a decent-sized network connection. You still need a couple of hundred kilowatts from the grid, and that is where we are seeing huge barriers today. It will help you then get a larger network connection again, and you can have more bays to charge more cars. As for generation onsite, solar panels that cover bays on top of cars do not generate –

Tom McINTOSH: I am probably thinking more regional – 100 kilowatt or something.

Bernhard CONOPLIA:Yes. I mean, our load profile matches solar generation really, really well. About 40 per cent of our load happens in the middle of the day, which is really good. And that is why it should be good for networks. But we are also already participating in markets to a certain extent. As I said before, on the network tariff basis in New South Wales, where that pricing incentive exists, which is about 28 of our sites, we curtail. We are also doing demand response at a wholesale market level. So there is already a level of participation, and yes, we would like to do more.

Tom McINTOSH: And the demand response is negotiated not with AER but AEMO?

Bernhard CONOPLIA: It is using the AEMO system, yes.

Tom McINTOSH: Great. Thank you.

The DEPUTY CHAIR: Thank you, Mr McIntosh. Ms Broad.

Gaelle BROAD: Thank you. You mentioned batteries being topped up all the time, and that is kind of a style, I guess. I know with mobile phones we are told ‘Run your battery down before you recharge; otherwise you’re limiting the life of the battery.’ How does it work with a car?

Stuart MOFFATT: There are a lot of conflicting things at the moment, to be honest, about the batteries. I drive a BYD Seal. I have an 82-kilowatt battery. I use it probably to the extent of running it. I charge it to 100 per cent. Then I top up at varying occasions depending on the next use case I am looking at. Say I have got to head down to Lorne on the weekend, I will top back up regardless of where I am at for that, or at the Seaview shops, for example, I will plug in around there and receive a charge and just top up. So it is more about, just on the go, where it fits and how it fits into the lifestyle and doing it that way. I generally do not let it go below 20 per cent, and there is varying information –

Gaelle BROAD: Is that efficient for the battery? Does it reduce the life of a car battery?

Stuart MOFFATT: They say not, but I do not think time has told us yet what will or will not happen. There is degradation of a battery over time, but it is running at something like 1 per cent a year. The battery in the BYD is warrantied to 500,000 kilometres, so it is a fair whack. Regardless, I think the car would fail before that does.

Bernhard CONOPLIA: I can add something on this. We a few years ago had a fleet of seven cars running around Brisbane with Uber drivers, and we gave them free access to public fast charging, which was, people said, bad for the batteries. After three years those cars had done over 150,000 kilometres and the battery health was above 95 per cent, so very heavy utilisation with regular top-ups, and the battery health was excellent. There were previous generations of vehicles that did not have good thermal management, but all the cars now have good thermal management, which is designed to protect those batteries. Generally what we hear is that battery health is better than expected over time.

Gaelle BROAD: I am just interested too in business risks. Are you worried about power blackouts? As I look down the track and I see coal stations being switched off and offshore wind that has not commenced, we have seen recently businesses being told that their power is going off to reduce the load. Is that factored into your businesses – any concerns?

Stuart MOFFATT: Not as a concern. Obviously there needs to be a transition process. We do not turn off coal one day and turn on electricity the next, for example. I think the transition requirement is the smooth path. We have not built into our business models any concerns relating to the blackout periods.

Bernhard CONOPLIA: We do not have any such concerns. We are happy to work with networks and with the wholesale market actively to manage pricing. But we are actually seeing in the last few months the volatility in the market is a lot less than it had been. We are actually tracking quite well over the last few months.

Gaelle BROAD: Maybe in Melbourne, not in the regions. But I am just interested, if I can ask one more, in just reducing disputes. Disputes – how often do they happen? Where do you go if there is a dispute? Repeat applications was mentioned as one thing. How do you improve that connection process? At the moment, where do you go if there is a dispute? What is the process?

Bernhard CONOPLIA: I have not run a dispute process myself. The team works directly with the connections departments. I can say that we have had a number of examples where we have challenged the cost, and I had some of these in our submission. We had one cost that came through at $75,000. When we challenged it, it got reduced to $34,000. We had a quote for a quote that was $20,000 – not for design work, but a quote to produce a quote that was 88 hours at $207 an hour. Someone was being paid $400,000 inside that DNSP to produce a quote, and they were going to spend 2½ weeks on it. There is that example. We had another one at $35,000, and it was literally switching off a substation and switching it back on. It was one day of work. There are many examples. We had a $300,000 quote for a 40-metre cable run, and there was another one, I think it was $100,000, but no transparency. They would not provide any data. We do not have power –

Gaelle BROAD: People are plucking figures out of thin air at the moment in Victoria.

Bernhard CONOPLIA: These are all real figures that I got from the team, and there is not a lot we can do.

Stuart MOFFATT: I can fully support those. We experience exactly the same scenarios. Something that was $80,000, when challenged, became $50,000 straightaway. Then the ability to have contestable works as a process to open up to others is a barrier to that as a monopoly. We just have to generally walk away from installing that site, because it has become uncommercial.

Gaelle BROAD: Thank you for your insights.

The DEPUTY CHAIR: We have got 2 minutes left. I have got just a couple of more questions that I would like to get through before we finish. Do you know, on your networks, what percentage of your clientele are commercial use?

Stuart MOFFATT: I do not have those figures available to me. I would be happy to supply them to you. Commercial use, depending on the nature, we might do that. We do not do fleet as such. Ours is more of a consumer base. We do not have a fleet scenario. We have subscriptions. They could be Uber drivers.

The DEPUTY CHAIR: Is it data you can actually extract from your database, or is it a bit of an unknown?

Stuart MOFFATT: You could probably extract some information. We just have to be careful on privacy and other things.

The DEPUTY CHAIR: I think that is going to become more and more pertinent from an economic point of view. Last question: from your point of view, what does innovation look like in your sector – not the other parts of the value chain, but in your part of the value chain, what does innovation look like?

Bernhard CONOPLIA: Well, we are operating public fast charging at scale. Where we see ourselves going next is becoming really good at predicting demand to underpin investment. We have got a lot of network data, we have got a lot of consumer data about how our network is operating and we want to really use that data to then form the next stage of our network so that we can –

The DEPUTY CHAIR: It is a bit like the 'What proportion is commercial?' question actually.

Bernhard CONOPLIA: Correct. We have that data but we are just redoing our segmentation, so there are certain things we can infer. We can let you know separately.

The DEPUTY CHAIR: In utilising that, just as we see there is a different market regional to metro, how profound would that segmentation actually become in practice – commercial to retail to recreational et cetera?

Bernhard CONOPLIA: Understanding your customers and how they use the network is very profound. Ultimately we do not want any government co-funding. We want this to be a sustainable business. We do not come asking for that, by the way. It is needed at this early stage, but as soon as possible we want this industry to be self-sustaining. For us that is about operating at scale, really understanding our customers and network as well as we can so that we can make really clear and confident investment decisions ourselves – and we do in many situations, by the way; we have a lot of charging stations that we have 100 per cent funded ourselves. But that is really what underpins our network going forward – being able to make those really clear investment decisions and also having the market growing as it needs to grow and having the efficient processes and tariffs that support that business model.

The DEPUTY CHAIR: Thank you, gentlemen. That is all we have got time for today. Thank you.

Witnesses withdrew.