

Verdant Vision Pty Ltd

13 June 2025

Email:

Australian Energy Regulator by email: <u>AERringfencing@aer.gov.au</u>

Submission to the consultation on CPU's ring-fencing waiver application for providing (owning) kerbside EV charging infrastructure

As the Managing Director of Verdant Vision, a net-zero expert consultancy including EVs and public charging, I welcome this opportunity to provide input into the consultation on CPU's ring-fencing waiver application for providing [owning] kerbside EV charging infrastructure. There is no doubt that Australian consumers need more public charging in our dense inner-city neighbourhoods without off-street parking, and kerbside charging has a vitally important role to play in this segment. A key question is how to ensure we provide a complete, competitive public charging ecosystem to support community electrification goals.

Our team provides specialist advice in the energy and climate transition to assure resilient technical innovation, economic efficiency and positive experiences for people. We have a combined 40+ years of global experience in industry development, deployment, and operation of successful EVs and public charging of all kinds. Relevant to this consultation, I have 15 years of direct, executive-level experience in Australia's public charging market. I am the former Head of Engineering for the NRMA National Charging Network, the former Head of Planning and Technology for Evie Networks, and a formed Board Member of the Australian Electric Vehicle Council. Earlier in my career I was also a core engineering team member at Tesla.

We have a major concern that granting DNSP ownership of public charging assets, kerbside or otherwise, would not be in the best interests of the contestable public charging market, and especially not consumers.

The only real advantages that DNSPs would bring to the table are those conveyed from the privilege of being large, regulated, distribution monopolies. And the only barriers they would remove from public charging are those that DNSPs otherwise impose on all other participants. **Please see our detailed explanations overleaf.**

Some more kerbside charging endpoint retailers might be enticed by the DNSP inside track as a shortcut to more lower-cost connections to more charging customers, but this would be anti-competitive within an otherwise contestable segment, and also would not be cost-reflective per the recoveries mandatorily imposed on all other public charging providers.

The above is precisely why the ring-fencing guidelines exist – to prohibit such inequitable exploitations.

Limited trials, such as this proposed by CPU, can be undertaken without needing to grant them ownership of assets, and there are dozens of CPOs investing in thousands of kerbside assets ready to collaborate with them.

For the ongoing CPO market design and operation and scale-up, we need to preserve charging contestability to ensure we provide a complete, competitive public charging ecosystem for our community electrification goals.

If you have any questions about this submission, please do not hesitate to contact Dr Andrew Simpson at <u>verdantvision@gmail.com</u> or 0424 016 248.

Sincerely,

Dr Andrew Simpson, Managing Director, Verdant Vision Pty Ltd

Some key Questions and Answers around the DNSP kerbside charging asset proposal(s)

Are DNSPs proposing to own and offer a complete kerbside charging asset solution?

No, because DNSPs do not have jurisdiction to host or invest in a complete public charging installation, especially the parking and adjoining civil spaces, even though all other public charging market participants (kerbside or otherwise) must reconcile these aspects. Their proposed operating model doesn't seem to properly acknowledge this reality. (Meanwhile it is well understood that DNSPs cannot serve as eMSPs and they do otherwise acknowledge this in their proposals.)

Are the DNSPs proposing anything materially new or different by way of the physical assets?

No, the only differences are commercial and regulatory. Examples of the proposed DNSP solution already exist in market via their unregulated proxy entities e.g. such as the large kerbside rollout presently underway by PLUS ES in NSW and SA. The very fact that PLUS ES are willing and able to proceed with this large investment is precisely why DNSPs do not need and should not receive a waiver. The DNSPs would only be gaining the right to directly own this charging hardware, rather than their unregulated entities who already can and are already doing so.

Do DNSPs have relevant experience in owning and operating similar end-user devices?

No, a public charging endpoint is nothing like the poles, wires and transformers that make up the traditional DNSP regulated asset base. A public charger is an end-user appliance subjected to all of the operational vagaries, challenges and risks from wear-and-tear and end-user error, much like a council parking vending machine or a commercial food/beverage vending machine. Whereas typical DNSP assets have no intentional interactions with end users at all.

Would DNSP ownership of kerbside chargers foster more hardware innovation?

No, it would actually restrict it, because the DNSP is only limited to what it can fit on its pole, and their solution is demonstrably simpler and less integrated than rest of market. By law the DNSP is forbidden from owning or optimising the civil and other electrical aspects. Further, this proposal would only serve to tilt the playing field against other proponents who are otherwise willing and able to risk their capital to innovate more fully across the civil and electrical realms.

Are the DNSPs proposing anything materially new or different by way of asset management?

No, the only advantages they offer in asset management are those conveyed under the privilege of being large, regulated monopoly electricity distributors, with their large capital, capacity and capabilities as funded by all electricity consumers. In terms of dynamic load management and network orchestration, the DNSPs have claimed they are already using their best endeavours to enable and exploit the same dynamic functions and tariffs with other equivalent customers and loads. (So let's hope they really are.)

Is their proposed solution cost reflective?

No, because it would effectively circumvent many of the distribution network costs that DNSPs mandatorily recover from all other CPOs. It also neglects all the other civil asset costs and operational challenges that must be reconciled by all other public charging proponents.

Would the DNSPs enable any new market participation from eMSPs?

No, all of the claimed contestability and roaming opportunities in the eMSP layer can already be accessed and exploited by existing and new competitive players, via OCPI based on all CPO assets, and limited only by commercial appetites. There are no guarantees that DNSPs can resolve any competitive tensions, and despite their theoretical claims there is no empirical evidence that DNSPs would actually provide greater endpoint competition or lower prices. For avoidance of doubt, the only apparent cost reductions that would be provided by DNSP ownership would come from circumventing a variety of otherwise mandatory public charging costs in network recovery and civil aspects, as well as by exploiting their privileged monopoly position. Some more kerbside charging endpoint retailers might be enticed by the DNSP inside track as a shortcut to more lower-cost connections to more charging customers, but this would be anti-competitive within an otherwise contestable segment, and also would not be cost-reflective per the recoveries mandatorily imposed on all other public charging providers.

What specific market barriers would be overcome by DNSP ownership of kerbside chargers?

None, apart from circumventing only those barriers imposed by DNSPs on all other participants: namely the connection rules, processes and costs, FAA fees as applicable, and network tariffs. <u>This recent LinkedIn post by</u> <u>Ross De Rango (plus comments)</u> helps to illustrate the DNSP barriers being faced by all other kerbside charging proponents in Victoria for example. Meanwhile in the kerbside realm, DNSPs have insufficient jurisdiction and further would be unable to resolve the greatest kerbside market barrier, which is finite parking allocation, maintenance, enforcement and cost recovery.

Would their solution foster more competition in kerbside charging and broader public charging?

No, it would undermine it. The DNSPs would be cross-subsidising the ownership, operation and maintenance of kerbside charging hardware via the privileges conveyed from being large, regulated, monopoly electricity distributors (paid for by all electricity consumers). Furthermore, they would otherwise be neglecting all the other routine (especially civil) costs that all other kerbside charging providers are exposed to and have to reconcile, and thereby would further benefit from effective cross-subsidisation from all LGA ratepayers as well. Most concerningly, their proposal would entrench an intractable split-incentive problem with the LGAs. Under their DNSP regulated model of guaranteed cost recovery and guaranteed returns on capital assets, they would have an inherent incentive to try to pursue better service by just deploying more privileged infrastructure that everyone else would pay for (hmmm, deja vu). But there are only finite kerbside spaces in market, and other types of nearby municipal and commercial parking that serve too, and LGAs would otherwise be left to resolve the far greater kerbside dilemma in parking allocation, maintenance, enforcement and cost recovery. <u>I made a recent LinkedIn post</u> summarising these anti-competitive concerns across both the electrical and civil realms.

Can DNSPs otherwise help to promote more kerbside charging and broader public charging?

Yes! They can stick to their core job and do it better. This particular question has already been asked and answered many times through many formal public consultation processes, and anyone who tries to suggest otherwise is disingenuously playing politics. See the <u>Energy Security Board's 2022 Consultation on EV Smart</u> <u>Charging (incl. Public Charging)</u>, and this same feedback has borne out again in the recent <u>NSW Parliamentary</u> <u>Inquiry</u> as well. Specific opportunities have been repeatedly and consistently identified by many CPOs in the areas of improving network transparency (around pinpointing available capacity), streamlining connection processes (to avoid wildly uncertain timelines and costs), and more innovation and cost-reflectivity in network tariffs (to avoid crippling, ongoing fixed costs for CPOs as well as to harness dynamic/orchestration opportunities). It's manifestly clear what they should prioritise.

The bottom line

When you strip it all back, the DNSPs are offering nothing materially new or different in terms of the physical kerbside parking/charging solution, and their proposed solution is also the least integrated or innovative (esp. in the civil realm) as it is fundamentally constrained by limits in DNSP jurisdiction.

DNSP ownership would not help to solve the greatest challenge for all CPOs, which is the risking of capital on competing asset configurations at competing locations with uncertain future utilisations, given that public parking and charging are both inherently contestable. DNSPs ownership also could not and would not solve the greater LGA challenge in kerbside charging, which is the allocation, maintenance, enforcement and cost recovery of finite public parking spaces.

The only real advantages that DNSPs would bring to the table are those conveyed from the privilege of being large, regulated, distribution monopolies. And the only barriers they would remove from public charging are those that DNSPs otherwise impose on all other participants.

Some more kerbside charging endpoint retailers might be enticed by the DNSP inside track as a shortcut to more lower-cost connections to more charging customers, but this would be anti-competitive within an otherwise contestable segment, and also would not be cost-reflective per the recoveries mandatorily imposed on all other public charging providers.

The above is precisely why the ring-fencing guidelines exist - to prohibit such inequitable exploitations.

Also please note these conclusions being reached about DNSP ownership of kerbside charging assets are readily scalable to all other public charging segments too. This is done quite purposefully, because as a matter of principle, our competitive energy market designs (and any distortions for exceptional market failure) should be considered in this general way.

For your consideration, please note we have proposed overleaf one potential alternative model for a CPO intervention that would assist the entirety of the contestable public charging market in an equitable way.

Further relevant information and public debate

As attachments to my written submission, I have enclosed two recent, relevant LinkedIn posts and debates.

This post from June 2025 on the state of play in ownership of kerbside charging assets in Australia today.

<u>This post from May 2025</u> about how all DNSP proposals seem to neglect all LGA considerations, and fail to reconcile access arrangements and costs for limited civil infrastructure (i.e. public spaces for parking/charging).

If you have any questions about this submission, please do not hesitate to contact Dr Andrew Simpson at

How might we otherwise promote the optimal integration of DNSP-CPO assets for all end users in a complete, competitive, public charging market?

Dr Andrew Simpson, 13 June 2025

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We can probably all agree upon the underlying technical ideal that optimal integration of CPO assets with DNSP assets, both in connection and operation, would be good for everyone, especially end customers.

The premise of the DNSP waiver request is that a specific market intervention will help to achieve this, by ineffect encouraging the CPO assets in kerbside charging to become DNSP (fully integrated) assets instead. But as we have shown above this would not be best for the complete, contestable public charging market.

Could we provide an alternative intervention for all types of public charging? To help resolve the standoff?

Referring to the <u>CPU connection policy</u> (and others), we see that negotiated connections (>100A/60kW) for CPOs generally incur upfront connection charges / capital contributions based on the following components:

$$CC = ICCS + ICSN - IR + SF$$

- 1. Direct capex for the new customer/connection (Incremental Cost Customer Specific)
- 2. plus further capex for allocation of shared, upstream capacity (Incremental Cost Shared Network)
- 3. less upfront rebate for network (tariff) cost recovery over the operating life (Incremental Revenue)
- 4. plus a Security Fee if applicable that is not relevant to the discussion here

Note that such methods generally don't apply to smaller (<100A/60kW) basic connections, though they readily could be extended to these smaller public charging sites too as the underlying principles are the same.

When a CPO invests capex in a new or upgraded connection, these assets reside within the DNSP regulated asset base, and not on the CPO balance sheet (unlike their public chargers and other site electrical/civil assets). Further, the upfront revenue rebate reduces the apparent upfront cost of the new connection assets. The CPO then largely pays in practice for the connection assets over the life of the connection through (demand) tariffs, though many prior submissions by CPOs have outlined how these tariffs are an operational challenge for them. Further, incentives on offer via DNSP tariff structures/windows often misalign with CPO dynamic load profiles.

In my practical experience, DNSPs have often argued this paradigm is overall favourable to the CPOs, as it effectively allows them to "*pay for their connection upgrades later on*". Whereas CPOs have consistently identified how these outcomes are unintuitive and unfavourable with perversity arising in many ways:

- CPOs invest capital into assets that don't remain on their balance sheets;
- CPOs aren't exposed to the true costs of new connections (nor the true value of avoiding them);
- CPOs need to future-proof their sites and connections for anticipated demand and volume growth in future years, though this growth trajectory is uncertain and may extend out for many years;
- CPOs find that typical C&I demand tariffs are unintuitive and not fit-for-purpose given their atypical load profiles, especially in early years of lowest site utilisation and lowest empirical impacts, and create great challenges in reconciling and communicating these costs passed-through to customers.

We contend that CPOs would much rather be fully-incentivized to hunt down the lowest-cost connections upfront, and then be fully-incentivised to intuitively exploit their dynamic load profiles over the operating life.

In simple, conceptual terms, this could be achieved by three specific measures if applied to all CPOs:

- 1. Network transparency measures to help identify lowest-cost capacity (including dynamic connections)
- 2. Eliminating the upfront IR rebate, and recalibrating ICSN contributions to be staged over site growth, such that upfront connection and upstream allocation is truly cost reflective (for proper incentive)
- 3. More innovation and cost-reflectivity in network tariffs for CPOs (to specifically capture their actual, empirical impacts to network peaks over time, rather than presumed impacts as per present tariffs)

Such a package of interventions for CPOs would promote the optimal integration of CPO assets of all kinds with DNSP assets, both in connection and operation, and be good for everyone, especially end customers.

The DNSPs have initially argued for specific market intervention in kerbside charging, for sake of overall public charging. But this would not be scalable given particular kerbside aspects relative to broader public charging.

If we are going to intervene to enable a complete, competitive, public charging marketplace (which I support), then we should design an intervention that assists for the entirety of the contestable public charging market.

This would further help to align the CPO and DNSP industries in their cultural and risk perspectives, and promote social licence for continuing and scaling of taxpayer-assisted investments into CPO solutions for all.

The broader outcomes from such measures would include greater productivity for consumer retail businesses of all kinds (commercial and municipal hosts, not just CPOs, eMSPs or energy retailers), as well as better service delivery and greater cost efficiencies for all energy consumers (not just the EV charging users).

If you have any questions about this submission, please do not hesitate to contact Dr Andrew Simpson at