Connecting EV chargers to existing electrified infrastructure

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ChargePost

ChargePost is a Victorian company which supplies and operates high-quality UK manufactured AC kerbside EVSE. We provide solutions for DNSP, LGA and other entities including government and private enterprise. ChargePost works under guidance from CityEV which is a major supplier of EVSE primarily in Europe and expanding into other markets including India, USA and Australia.

World-leading Kerbside EVSE

Many of the functions and features on CityEV EVSE have evolved over 10 years in the highly contested UK kerbside market. The EVSE was specifically designed to be deployed on existing electrified infrastructure adjacent parking spaces. In the UK this was primarily on lamp columns but also includes commuter car parks, hospitals and workplaces. This equipment had to be safe, accessible, reliable, easy to use and, most importantly, have a form factor which would not impede on the streetscape.

The UK Proliferation of Kerbside AC EVSE

As at the end of February 2025 there were approximately 75,000 publicly accessible charge points in the UK. 70% of these were AC charging between 3.6kW to 22kW. Kerbside charging is a crucial and well-utilised part of the charging infrastructure as up to 30% of residents don't have access to off-street parking. There are currently tenders and project pipeline for 30,000 more charge points. The UK will likely surpass 100,000 charge points by mid-2026, possibly even sooner. Even with this planned increase the public are still calling for more - especially in outer regions.

Customised Kerbside Solutions for Australia

ChargePost has developed customised on-pole and in-pole solutions to facilitate kerbside charging in Australia. In collaboration with CityEV, DNSP, LGA, Metering companies and other industry experts we believe we have created fully compliant equipment which will best meet stakeholder needs in Australia. Our EVSE is smart and able to facilitate multiple EMSP in addition to accepting tap and charge payments which consumers have overwhelmingly endorsed in the UK.

Kerbside Charging Requirements

Kerbside charging can only occur when there is sufficient energy availability in the local grid and parking spaces for vehicles to charge safely. To avoid expensive and disruptive civil works it is preferable to deploy EVSE on existing electrified assets. These are owned almost exclusively by the distributors. Assets adjacent to current or potential parking spaces mostly consist of power poles and lamp columns. Many of these energised assets have the additional benefit of providing lighting at night.

DNSP-led AC Kerbside Rollout

Distributors are well positioned to lead the roll-out of AC kerbside EVSE because not only do they own most of the existing infrastructure they also have access to ongoing funding to maintain it through the Regulated Asset Base and/or Cost Allocation Methodology. Any potential expansion of the RAB would mean that every energy account holder in the distribution area will bear the cost, but this increase is likely to be small. Public EV charging that is managed by the DNSP should also perform a service to the grid and benefit all users. Facilitating daytime charging either near home or work, balancing local phases and modulating loads are all achievable outcomes.

Demands of the Grid

DNSP are understandably cautious and concerned about EVCI. One vehicle charging for two or three hours could consume more energy than a household might in a whole day. Several vehicles in the

same day could become a significant problem. Isolated sites by themselves may make sense to CPO but might also present as a challenge to DNSP to maintain grid stability.

Smart EVSE such as publicly accessible kerbside charge points can modulate to best use the available energy in a local grid. Peak demand events can be responded to quickly using DRM settings and/or Dynamic Operating Envelopes. ChargePost EVSE in the UK can communicate directly with transformers, further stabilising the local grid at micro levels. We note this may qualify for additional funding support through the Demand Management Innovation Allowance Mechanism.

Ringfencing

ChargePost is a proponent which provides and operates EVCI and as such ringfencing issues are something we have had to learn about. As members of the Electric Vehicle Council and Smart Energy Council we are acutely aware of the industry sensitivities surrounding ringfencing. As a CPO we can confirm there are concerns surrounding DNSP-led solutions but we hold a very broad and pragmatic view of the industry and how can work collectively to solve the infrastructure problem.

We believe power poles and lamp columns adjacent to publicly accessible parking spaces should be deployed or retrofitted with equipment that facilitates electric vehicle charging. We know that AC charging takes place inside the vehicle through the on-board converter which sends DC for storage in the battery pack. We understand that our equipment controls the energy between the supply and the customer cable connected to the vehicle. We consider this to be part of the distribution service and seek to assist DNSP by providing the highest quality equipment possible to upgrade the usefulness of poles and columns.

In the case of functional separation we see no issue with staff working from the regulated entity on EVCI related issues. Our experience in NSW has been overwhelmingly positive. Ausgrid are able to provide all kerbside proponents, including ChargePost, with clearly mapped processes to evaluate the network viability of proposed installations. Our interactions with EVCI team members has been most supportive and engagement with procurement processes by RESP such as PlusES has been exemplary in its separation of interests between the regulated and unregulated entities. We do not see any reason why functional separation is necessary for CPU and believe it will hinder their efforts to provide solutions to this very important infrastructure problem.

Proposed Operating Models

CPU deserve credit for conceptualising the proposed one-to-many solution and ChargePost can see the benefit of this model for EMSP and consumers. Consumer outcomes will be achieved by enabling EMSP to compete for transaction revenue and customers should be able to decide their preferred payment pathway.

Positive outcomes could include but not be limited to:

- EMSP customers being able to use existing charging network cards (RFID)
- EMSP customers being able to use existing charging network apps (OCPI/API)
- EMSP customers being able to use credit cards or tap and charge (NFC)
- EMSP customers being able to plug and charge (PKI/MAC)

We welcome the opportunity to discuss our submission further.

Please contact Blaise Northey, Managing Director at [redacted] for further information.

Kind regards,

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