



## **AEVA POLICY RECOMMENDATIONS: PUBLIC CHARGING INFRASTRUCTURE APPROVED BY THE BOARD: 12 SEPTEMBER 2024**

### *Policy statements*

**[1]** AEVA recommends that state, territory and local governments seek advice from AEVA on how to develop a well-planned regime of local charging infrastructure which meets the needs of EV drivers, including drivers with disabilities.

**[2]** AEVA recommends that any charging infrastructure which is supported by state or federal funding should be subject to “idle fees” and that any rules on the misuse of EV charging spots are enforced.

**[3]** AEVA opposes ‘free charging’ business models, particularly for DC fast chargers, including inducements offered by car dealerships or automotive clubs. Free charging results in excessive occupation by thrifty EV drivers, and devalues the amenity of the infrastructure.

**[4]** AEVA recommends that, where governments provide financial assistance to install charging infrastructure, contractual agreements should mandate specific reliability guarantees.

**[5]** AEVA recommends that providers of EV DC chargers continue to enable the CHAdeMO standard in some small proportion of their chargers, in support of many older and imported used EVs.

**[6]** AEVA recommends that governments commence a dialogue with providers of EV DC chargers concerning flexible payment mechanisms, open charging data and the visibility of fees.

### *Commentary*

The need for accessible, reliable and convenient EV fast charging infrastructure is substantial, but won’t need to match the current ubiquity of petrol filling stations. This is because the bulk of EV charging will happen at home or at work on lower powered AC charging, and, with the exception of some use cases, only occasionally will the need for a convenient DC charge arise.

Public charging should ideally comprise a mixture of 50 kW+ DC charging, and slower AC charging (typically 11kW or less). The slower ‘destination charging’ may be installed at a modest cost by motels, entertainment venues, businesses, retailers, pubs and shopping centres. Different charging speeds suit different destinations and expected ‘dwell times’.

It is essential that governments that are planning on installing charging infrastructure select the most appropriate charger types, and determine the necessary redundancy for different

locations. In some locations, several DC fast chargers with redundancy is most appropriate, such as in small towns between major centres. Where power supplies are constrained in small centres it is preferable to install lower power (20kW) DC chargers on existing or new 32A 3 phase supply rather than 11 or 22kW AC chargers. This allows a reasonable charging speed as all EVs can charge at 20kW DC, but most are limited to 6-11 kW AC. Other locations may benefit from a larger number of relatively slow AC charging points, such as in recreational centres, libraries, civic centres and parks. 'Park and Ride' and other long-stay car parks are ideal locations for abundant low-powered AC charging. Local governments or retailers may also plan to develop car parks with solar roofs to supplement their EV charging facilities.

Some charging networks have partnered with luxury car brands to offer car buyers several years (in some cases up to six years) of free, unlimited charging. These free charging plans have the potential to create unnecessary congestion at busy charging sites by local drivers preferentially charging there instead of at home (where possible). These plans should be discontinued for new customers. AEVA considers credits such as a limited number of kilowatt hours or a limited dollar value acceptable as recipients of these deals should create an incentive to conserve their free credit. In AEVA's view, idle fees should never be included within these free charging plans.

Where there is no off-street parking available for each residence, kerb-style charging (e.g. lamp posts or pedestals with a charge socket) could be introduced, as proposed by ConnectedKerb<sup>1</sup>. Similarly, lamp posts around shopping centres, cafés and other commercial precincts which offer street parking could be similarly retro-fitted. Some charging providers such as Jolt<sup>2</sup> offer charging at moderate speed directly from pre-existing substations adjacent to parking lots. Jolt offers drivers the first 7 kWh (enough for about 50 km of city driving) free, but subsequent charging is billed at a higher rate. The bulk of its revenue model is centred on digital advertising screens placed around the substation.

For highway touring, EV drivers must have confidence that reliable charging will be available at regular intervals along major intercity routes and country towns. Since EV uptake is now growing rapidly through the mid-2020s, there is a clear need for substantial banks of EV chargers at regular intervals on Australia's highways. Suppliers of fast chargers on these busy routes should be able to make these investments and receive an economic return through charging fees.

Where governments provide financial assistance to install charging infrastructure, such agreements should require on-going reliability guarantees. Chargers left out-of-order for extended times are a cause of considerable frustration among EV drivers and could erode public confidence in EVs.

AEVA welcomes moves by Tesla to open up its 'Supercharger' network to non-Tesla vehicles. Tesla has an excellent reputation for the reliability of their chargers and the addition of Tesla as a further supplier of reliable charging would be a valuable broadening of competition. AEVA accepts that non-Tesla EV owners are charged a higher rate per kWh for

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<sup>1</sup> <https://connectedkerb.com/>

<sup>2</sup> <https://jolt.com.au/>

electricity than Tesla owners. In the future, AEVA would like to see all existing Tesla charging stations opened to non-Tesla vehicles.

The CHAdeMO DC charging standard used by Japanese manufacturers such as Mitsubishi and Nissan is becoming less prevalent over time. New models from other Japanese brands such as Toyota, Lexus and Subaru have been introduced into Australia with CCS2 charging ports. AEVA accepts that providing a small number of CHAdeMO plugs (e.g. one plug per station) reduces overall station utilisation, and that CHAdeMO's demise is inevitable.

However, there remains a need to include at least one CHAdeMO plug at new stations for the next few years at least. A significant number of affordable, used EVs will continue to be imported from Japan under the parallel importation scheme.

The needs of EV drivers with respect to public charging infrastructure are summarised as follows:

- Chargers must be accessible 24 hours a day, be well signposted, with fees clearly visible
- EV drivers with disabilities should have no difficulty accessing and using chargers. In the absence of an Australian standard for charger accessibility, the RAA guidelines should be used instead
- Chargers should be located near accessible amenities, such as toilets and food outlets
- Chargers should be able to cater for a wide range of EVs, including cars, vehicles towing trailers, motorbikes and e-bikes, whether personally-owned or hired
- Payment should be available using a credit or debit card as a priority, with company-specific apps or RFID cards a reliable alternative
- Charging for longer than 30 minutes at the fastest DC chargers (150 kW+) should be discouraged through fee structures such as idle fees
- Access to charger information in real time allows users to better plan their trips using tools like A Better Route Planner
- Faults, damage and interruptions must be easy to report, 24 hours a day
- Maintenance and technical support must be prompt, reliable, and effective. Charging station hosts should expect contractual requirements for service up-time of at least 98%.