



Tesla Owners Club of Australia Incorporated - A05705

Tasmanian Climate Change Office
Department of Premier and Cabinet
GPO Box 123
Hobart Tasmania 7001

12 November 2018

Dear Sir/Madam,

SUPPORTING A STATEWIDE ELECTRIC VEHICLE CHARGING NETWORK

This submission is made on behalf of The Tesla Owners Club of Australia (TOCA).

TOCA is a not for profit organisation incorporated under ACT law in 2016. It is a growing nationwide club with approximately 430 members located across all of Australia, including Tasmania. TOCA has a strong relationship with Tesla and is part of the official owners club program. Whilst focused on ownership and support of Tesla products the club's objects and purpose include promoting the wider adoption of electric vehicles in general. For further details please see (www.teslaowners.org.au).

The club provides a forum for discussion of matters of interest to prospective and current owners of Tesla vehicles, a charging adaptor loan program, periodic social events in each state, and provides a platform for raising issues of importance to our members with Tesla or other organisations.

TOCA has recently been a key partner in rolling out the Round Australia Electric Highway (RAEH). The RAEH provides 3 phase charging locations for electric vehicles at an average spacing of 300kms around the perimeter and through the centre of mainland Australia. TOCA also made a submission to the Senate Select Committee on Electric Vehicles, which can be read here:

<https://www.aph.gov.au/DocumentStore.ashx?id=cc510433-c994-4315-acf5-ef6655d73eba&subId=613675>

In this submission we provide a response to each of the fourteen questions presented in the summary paper.

(Q1) Should the Tasmanian Government support the installation of both destination (slower charge) and Inter-regional DC fast chargers?

The cost to install destination chargers is significantly less than DC fast chargers. Except in particular circumstances, perhaps to assist a charity or encourage uptake in the government electric fleet, it is suggested that support should focus on DC fast chargers.



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(Q2) What factors should be considered in determining what type of charger should be installed where?

DC fast chargers are more important, and effective, when installed along major inter-regional travel routes rather than in city centres.

Within city centres or at locations where people will typically spend many hours (e.g hotels or tourist destinations) it is generally a waste to have a fast charger that would finish charging in under an hour.

(Q3) Which locations (for example high-population areas or less-populated regional areas) should the Tasmanian Government consider as the highest priority for installing electric vehicle charging stations?

It is suggested the Tasmanian Government should focus on opening up inter-regional travel between towns/cities ahead of provision within urban areas where there is generally greater opportunity for people to charge at homes, work or businesses that they are visiting.

By providing higher powered charging facilities on longer routes it makes a day trip in an electric vehicle feasible rather than requiring an overnight stop to charge.

(Q4) Which amenities are important to have nearby electric vehicle charging stations to facilitate a positive and convenient user-experience?

- Aim for a location that follows good CPTED (Crime Prevention Through Environmental Design) principles including good lighting, visibility, passive surveillance etc.
- Accessible toilet facilities including facilities for baby changing
- Somewhere to buy drinks/snacks 24/7
- A variety of cafes/restaurants within walking distance during normal operating hours.
- Charging stations (destination charging) at overnight accommodation locations.

(Q5) What type of operation and maintenance issues should be considered to ensure a positive and convenient user experience?

The single most important operation and maintenance issue is ensuring that the charging spots are only occupied by electric vehicles that are charging. Depending upon the location of the chargers "ICE-ing" (the occupation of an electric vehicle charging spot by an Internal Combustion Engine powered vehicle) can be a very real issue. At times even some electric vehicle owners have been known to occupy the "VIP" spots whilst not charging.



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Very clear signage that is backed by the ability to impose fines or even tow vehicles is necessary. “NO PARKING – Electric vehicle charging excepted” signs are more effective than just a sign saying “Electric Vehicle charging” or similar. This will require active enforcement by the property owner or local authority depending upon the designation of the parking area. If this isn’t done at busy locations then the investment in the charging infrastructure has been wasted.

(Q6) What is the preferred payment mechanism(s) for electric vehicle charging station from a user perspective and an operator perspective?

The simplest user mechanism would be payment by credit/debit card at the charger or a smartphone app which can be set up immediately when needed. This avoids having to sign up with a scheme in advance and remember a special proximity card or similar. This is particularly important for tourists from outside the state.

(Q7) Should charging stations offer an online booking system?

Whilst attractive in concept, it would either entail significant administration and enforcement effort or be ineffective in use if the spots could still be used by other vehicles or a booked vehicle overstay their allotted time. This is probably only practical for destination chargers at a hotel or similar where someone could book a charging spot with their room and the hotel keeps the spot reserved for that guest.

(Q8) What are the expectations of users with regards to reliability and availability of installed charging stations and how could these expectations be met?

A high level of reliability and availability is expected, particularly in the near future where alternatives may not be available within range. Advanced notice should be provided of any planned outages so that people can plan accordingly. It is important that there is a clear means to report any defective charging equipment and that arrangements are in place for repairs or replacement, ideally the same day.

(Q9) How important is providing multiple chargers at each site to cover for availability and possible equipment failure?

At least two chargers should be provided at any location initially. This will need to grow over time and ideally planning for additional chargers would occur at the time of the original installation.

(Q10) What funding delivery model would work best to stimulate potential suppliers to install electric vehicle charging infrastructure in Tasmania and why?



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For DC fast chargers it is suggested that a grant could be made available for sites meeting specific criteria regarding accessibility, readiness of electrical infrastructure and meeting a need on an inter-regional route.

(Q11) What level of funding (eg a percentage contribution to upfront costs) would be reasonable for potential partner organisations/businesses to make towards the installation of electric vehicle charging infrastructure and why?

For destination charging the equipment costs are not excessive, and some companies, such as Tesla have historically provided Electric Vehicle Service Equipment (EVSE) for free and in some cases even contributed towards installation costs. There are over twenty locations in Tasmania already which have Tesla destination chargers installed.

For businesses such as hotels, restaurants or tourist attractions a destination charger can be seen as a marketing asset that will attract people to that business who will typically stay for a number of hours, if not overnight. It is suggested that minimal to no subsidy by the government should be required for most destination chargers.

The cost of equipment, but more importantly the electricity upgrade and connection costs, associated with DC fast chargers can be substantial. The most effective location for these chargers is therefore often driven by the capacity of the electricity network and early engagement with the electricity authority is recommended. The contribution which would be made by the partner organisation will depend upon the complexity of the installation and the fees which are able to be charged to recover their upfront outlay.

(Q12) Who should be responsible for ongoing costs and maintenance?

For destination chargers the business or property owner where the EVSE has been installed.

For DC fast chargers this is more likely to be a charging network provider or potentially the electricity authority if a suitable arrangement can be found.

(Q13) Should fees for charging at a station be based on commercial pricing or be subsidised to some extent?

One of the benefits of EV ownership is that the cost to “fill up” is typically a half to a third of the price of fuelling a comparable vehicle for the same distance. Whilst it is nice to get cheap or free charging the vast majority of EV owners will be happy to pay the fair price for charging.

Charging fees should reflect the cost of electricity, with potentially a small overhead charge. As businesses will generally be paying less per kWh than a domestic customer it is likely that a charging cost similar to filling up at home would be appropriate (circa \$20-\$30) and still



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cover the cost of ongoing operation of the chargers. Excessive charging fees will deter use, and potentially uptake of electric vehicles.

(Q14) What should the Tasmanian Government consider in raising community awareness of the statewide electric vehicle charging network?

- Conspicuous and clear signage/markings at charging locations to raise awareness
- Local press publicity of charger opening ceremonies, particularly for fast chargers
- Including information with rates notices, electricity bills and registration renewals
- Use of social media posts such as facebook, Instagram or twitter including reposting by relevant organisations (e.g tourist bodies, car clubs, environmental groups etc)
- Encouraging articles in online and printed automotive and tourist press through provision of press information packs
- Timely addition of new charging locations to charging apps such as plugshare and google maps.
- Easy access to information on existing and planned locations for the public and other relevant parties (e.g. persons involved in the sale of electric vehicles)
- Government electric vehicles with conspicuous branding
- Emphasising the savings in emissions (CO₂, particulates and others) given the largely renewable nature of Tasmania's electricity supply.

Should you wish to discuss any part of our submission then please do not hesitate the undersigned via email secretary@teslaowners.org.au.

Yours sincerely,

James Hayward
Secretary
On behalf of the Tesla Owners Club of Australia