

EVetiquette: the essential guide

As we move (slowly) into an EV-centric world, Bryce Gatton looks into some certified EVetiquette conundrums.

When it comes to new social settings (and technologies), sets of commonly accepted norms evolve to smooth the inevitable friction of how to share that space. The same applies to the new paradigm of EV charging ... as it presumably would once have done in relation to feeding and watering horses at the local hostelry.

In this article I will explore how EV driving and charging changes the norms of ICE driving, look at some of the evolving EVetiquette surrounding these, plus make some suggestions for some evolving EV issues that may soon need addressing.

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Figure 1: A Tritium DC charger display—note the 80% or maximum button.

What do we do if DC fast-charger sites become clogged and waiting lines develop, slowing trip times and creating general frustration with EV tech?

Background:

DC chargers provide quick charging solutions (soon to be around 10 to 15 minutes for an 80% charge in the next generation of EVs), but they will always be in 'short' supply as, unlike petrol stations, around 90% of EV charging takes place elsewhere. That 'elsewhere' being AC chargers at home, in the workplace, car parks etc. Whilst AC charging is slower, charging time becomes irrelevant when charging overnight, during work hours or whilst shopping.

To be economic for DC charging networks to develop and make a fair income, it would seem reasonable that there will always be fewer DC charging sites than petrol stations. The key to EV charging is that the petrol station model will die with the ICE (internal combustion engine) age and EV charging

will becoming regarded as just like charging a mobile phone. DC chargers should be therefore be left to long-distance drivers, plus those who do not have readily available AC charging options...and the odd person who forgot to charge their EV overnight.

EVetiquette:

1. In short: only use DC fast-chargers if you really need to.
2. Charge to 80% only if at all possible. (To protect the battery, DC charging speeds ramp down significantly after reaching 80%. This results in the DC charging time from 80 to 100% being roughly equivalent to the 0 to 80% time!). See Figure 1 for an example of a DC charger control panel and note the 80%/maximum charge button.
3. If charging is not time-critical, (for instance, for flat dwelling EV owners) charge at less busy times. By the way: it is likely as DC charging networks evolve that their pricing will reflect peak and off-peak times.

I really need to use a charger, but it is already taken. Is it fair if I unplug it for a while to get enough charge to get me out of trouble?

Background:

Without knowledge of the owner's intentions, or knowing the correct disconnection procedure for a particular EV, you can cause ill feeling with the EV owner and/or damage the vehicle charging socket by attempting to disconnect a charging lead without permission.

EVetiquette:

Don't unplug another's car unless you have permission. If really urgent, find a power point (see also Issue 5) and use the

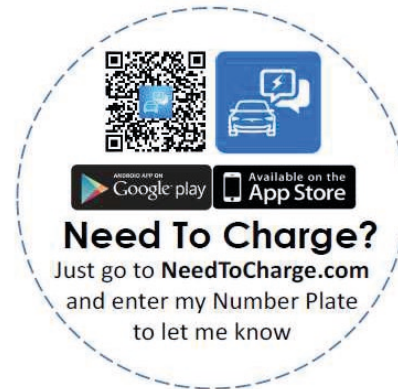


Figure 2: sample solutions to notifying others to you EV charging intentions.

emergency EVSE that comes with the car.

On the other side of the coin, do your best to help others in these early days where there are limited public EVSEs. If you are using a public DC or AC charger, you have a number of options to alert other users of your charging intentions:

1. Leave a note on your car. This may be as simple as 'I am at the café across the road'

or 'if you need this charger urgently, call 04XX YYY ZZZ'

2. Place a swing-tag on the charging lead. (Available from bit.ly/EV-SWT, see Figure 2 for examples)
3. For more private communication, you could download and use the NeedToCharge app (needtocharge.com)

Is it okay to park in an 'EV Only' parking spot and not use the EVSE provided?

Background:

Often EV only parking spots are labelled 'EVs Only' without any reference to only parking there when charging (although this is changing). These spots are often empty, and in rather convenient places as they are close to the main buildings where there is easy access to an electrical switchboard.

EVetiquette:

In short: No! These spots are for EVs to charge. You are in fact being no better than an ICE vehicle parking in that charging spot if you are not charging. (By the way: ICE vehicles parked in an EV charging spot is called 'ICEing').

Also, as ICEing is a common complaint by EV owners when they do want to charge, if you regularly see ICE vehicles parked in particular EV charging spots, contact your local council and make your voice heard about how these spots should be properly enforced with parking fines in the same way as they do with disabled parking

Background:

Electricity supply regulations generally require that power from an address not be provided outside of the property boundary. In addition to being an electrical hazard (think potential damage to leads, water getting into connections, etc), electrical leads across footpaths are a trip hazard.

EVetiquette:

If you really must run a lead out to the kerb for charging, check the legality first, plus it should only be for an emergency. To protect the lead and the public, you must either use a proper lead guard or string the lead above head height using stands. In addition, use only IP56 or above rated connections (see Figure 4).

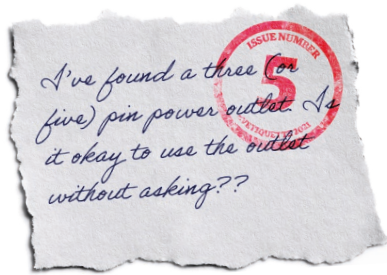
IS IT OK TO RUN A LEAD ACROSS THE FOOTPATH TO CHARGE MY CAR??



Figure 3: A power lead safety cover (the lead fits in under the yellow section) eliminates the public trip hazard for when you need to run cables across public walkways.

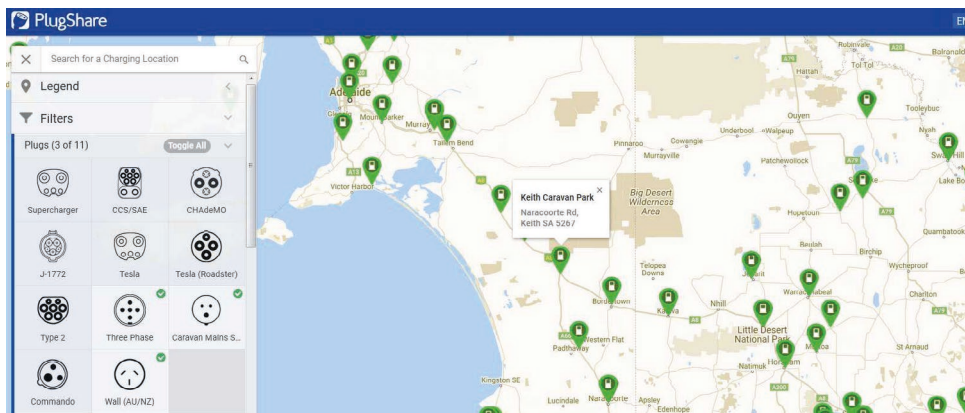


Figure 4: IP56 electrical power lead plug and socket.



Background:

Power outlets are ubiquitous in our modern world. Many public buildings, parks and the like have them scattered around and readily accessible. The same goes for many businesses. However, EVs draw significant amounts of current and can create noticeable increases in electricity charges for even one charge, depending on the type of electricity tariff the installation is on. Owners of street-accessible outlets may feel rightly

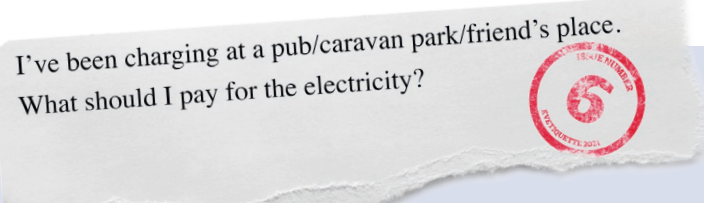


annoyed to find an EV parked and charging on their property if they were not asked first.

EVetiquette:

If looking for a power outlet in a region where there are yet to be any public EVSEs,

preferably use one that has already been nominated for EV use. Plugshare (plugshare.com, see image above) is the best source of this information. Where the outlet you've found is not listed, make sure you ask the owner BEFORE plugging into it!



Background:

Electricity is not free. A two hour charge at 22kW could be worth between \$3 and \$23 (or more) depending on the electricity tariff. However many places do not worry about the cost of a one-off charge and see it as a friendly gesture, plus a chance to get a few EV questions answered whilst you wait.

EVetiquette:

Always ask! Many people feel uncomfortable about asking for money, but if you do offer to pay it will make them happier to allow subsequent EVs to charge. That helps everyone else in the long run—the last thing we need is people deciding to lock up their outlets in case another 'freeloading EV' turns up.



Background:

Electricity costs vary widely, as does the charging rate you may use to charge the EV. Like Issue 6 above, the cost can be very little, or a significant amount. However, freeloading off others is a good way to lose friends and give EVs in general a bad name!

EVetiquette:

A commonly accepted payment for an overnight stay at a caravan park is to add around \$10 to the site or cabin price. If wanting to be more accurate, there is a simple formula you can use:

kilowatts being drawn by EVSE x hours x kWh cost (in dollars)

For example: a portable EVSE draws 2.4kW and is plugged in for eight hours during an afternoon BBQ visit to a friend. Their electricity kWh cost at that time is 33c/kWh. So, the payment would be 2.4 x 8 x 0.33 = \$6.33.

Figure 7: A multi-rate portable EVSE in use (1.4kW to 22kW capable unit).

Should my business install a Tesla AC EVSE or a generic Type 2 one?



Background:

Tesla often offers free AC EVSEs to businesses, with the business covering the installation costs. Whilst the Tesla AC EVSE (seen here on the right) now uses the same connector as all other new EVs brought to Australia, some Tesla AC EVSEs are configured to only charge Teslas. (By the way, the standard AC charger plug/socket in Australia is the Type 2 connector).

EVetiquette:

Installing a generic Type 2 EVSE (at far right) will cover all types of EV rather than being

limited to one brand of EV—especially if it is a 'BYO lead' type. If installing a Tesla EVSE, make sure the unit provided will charge both Teslas and non-Teslas alike.



* Should I let other people drive my EV so they can find out what the "EV grin" is all about??



Background:

As EV adoption is still at miniscule levels in Australia compared to many other countries, most people you meet have little knowledge about them and have almost certainly never been in one. As an early adopter, you will often be asked what they are like and meet people keen to experience one for themselves. However you may feel uncomfortable about letting others drive your baby, plus some insurance policies have a

much higher excess (or not cover the car at all) if it is not driven by the nominated driver(s).

EVetiquette:

Be prepared for the question! If you are uncomfortable with others using your car, or the policy stipulates nominated drivers only, offer to take them for a drive as a passenger. Even if you are happy to let others drive your EV, make sure you have checked your policy beforehand to see if there are any potential problems (such as a minimum age for other drivers). In addition, explain to them what differences first-time EV drivers may experience. (Examples include the effect of regenerative braking on driving style, plus the instant and more powerful acceleration offered by an electric motor).

Optional Cover		
Description		Included
Hire Car All Insured Events		Yes
Choice Of Repairer		No
Unbraked Trailer Cover		No
Excess		
Basic Excess		
Windscreens/Glass Claims		Amount
All Other Claims		\$845
Additional Excess		
Unlisted Driver Excess - Drivers aged 25 and over		Amount
Unlisted Driver Excess - Drivers aged under 25		\$700.00
You Assist-Roadside Callouts		
First Two Callouts		Amount
Any Additional Callouts		\$0
Drivers		\$150

How can I spread EV happiness to the world? ♥



Background:

In these days of misinformation, disinformation and outright lies and division being spread by those whose job it should be to stop it, perhaps it is time to spread positive messages to all of those around us! But how?

EVetiquette:

Start the 'EV Wave'. A common way to acknowledge thanks on the road, or in the outback to simply connect and say "hi" to someone coming the other way on a dirt track, is to give the uplifted multi-finger wave from the steering wheel.

Perhaps it is time for EV owners to do this to our EV driving brethren—a wave to say 'hi', acknowledge the positiveness of their choice and spread some 'EV Love' to those of us who are, here in Australia, still very early adopters of a technology whose time has well and truly come. 🙌