Fact sheet – May 2024

Climate Change Office

Image: iStock

Electric vehicles – before you go

Trip planning

When we drive an Internal Combustion Engine (ICE) vehicle (petrol/diesel), we are used to driving that vehicle to near empty before refuelling. When driving an electric vehicle, it is best to charge when you have the opportunity; for example, when the car is parked where there is charging infrastructure. This may be where it is parked overnight, at offices during the day, or during a rest stop when driving long distances. Do not wait for a warning light to come on to think about charging. As the infrastructure network is still developing, you may not find a fast charger where you need one.

For example, on a drive from the north to the south of the state, you may schedule a rest stop at Oatlands or Launceston to use a fast charger. Consult the Plugshare app when you plan your journey.

Public charging stations

Public charging stations are located throughout Tasmania, and more are being added constantly to the network. The most up-to-date source of information about charging stations and their operational status is the Plugshare app; a free, largely crowdsourced, international resource (www.plugshare.com).

Plugshare is updated with charger location, charger type, user reviews, and offline or maintenance status.

Fast (DC) chargers are shown in orange on the map, and AC or slow/destination public chargers are shown in green. The grey icon shows a charger in use.

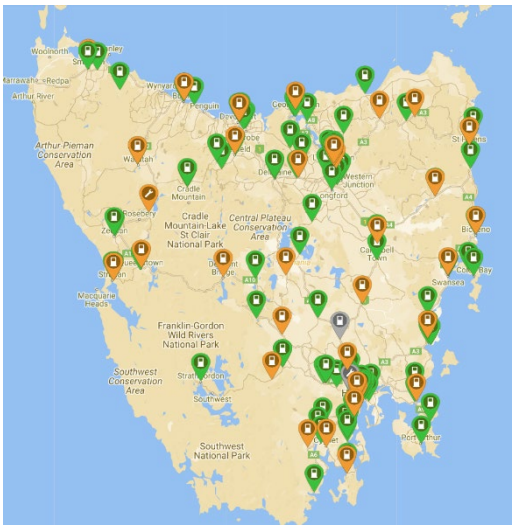

Image: Plugshare (check website for most up-to-date information)

Renewables, Climate and Future Industries Tasmania
Department of State Growth

Tasmanian Government

There are three electric vehicle charging networks: Chargefox, Evie and Tesla. Most public chargers in Tasmania are on the Chargefox network, which requires a Chargefox account or Chargefox RFID card to activate.

There is a Tesla Supercharger at Devonport, available to Tesla drivers only.

Evie network chargers require an Evie RFID card or the Evie app.

Charge port types

In Australia, there are two main types of charging port on electric vehicles (EVs) for fast DC charging. The most common type is CCS2. The CHAdeMO type is used on some Nissan and Mitsubishi vehicles. For slow AC charging, a Type 2 port is used.

A CCS2 port will accept both CCS2 and Type 2 charging plugs. A vehicle with a CHAdeMO port will have a separate Type 2 port under the same charge door.

Most Tasmanian public DC chargers have both CCS2 and CHAdeMO plug options (CCS2 is called CCS/SAE on Plugshare).

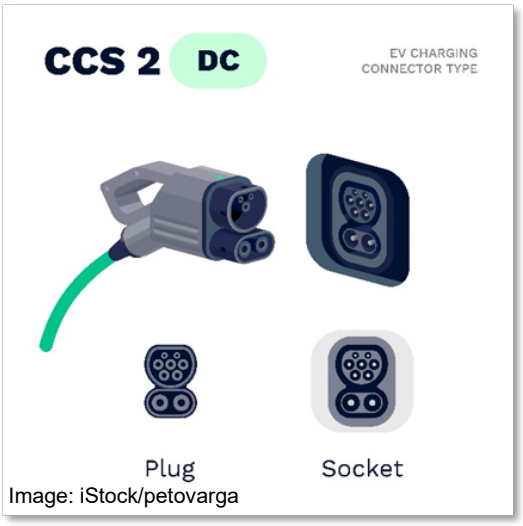

Image: iStock/petovarga

CCS2 port and plug

Image: Amped Consulting

CHAdeMO (left) and Type 2 port on a Nissan Leaf

Optimal charge states

An EV sitting below 20 per cent charge or over 80 per cent charge for long periods (over a week) may damage the battery. A regularly used EV kept topped up to 80 per cent will have the best battery state of health over time. Most vehicles can be set to limit charge to 80 per cent.

Factors affecting charge times

- **Battery heat management**: a vehicle travelling fast or for extended periods will slow down charging to protect the battery from overheating.
- **Cold weather**: cold weather may affect charge times. This is determined by the internal battery management system.
- **Charger capacity**: the charging station's power output may be affected by other vehicles charging, or the volume of vehicles charging that day.
- **Nearing capacity**: at over 60 per cent charged, the battery management system may slow down charging to protect the battery. This charging speed decreases again over 80 per cent. This is more pronounced on some vehicles than others.

Factors affecting range

- **Driving conditions**: extreme weather conditions, such as very cold or hot temperatures, can lower range, as will driving into a headwind.
- **Driving style**: aggressive acceleration, high speeds, and frequent stops can reduce range.
- **Driving mode**: different vehicles have features such as sports mode, regular mode, e-mode or one pedal driving. Using these modes will increase or decrease vehicle speed and efficiency.
- **Weight**: transporting heavy items or several people will lower the range of the vehicle.
- **Terrain**: hilly or mountainous terrain will affect range compared to travelling on flat surfaces. Travelling uphill will use more battery. When coasting downhill or braking, an EV will consume minimal battery or will gain range through regenerative braking. Regenerative braking uses kinetic energy to add charge to a battery while braking.
- **Climate control**: extensive use of air conditioning (heating or cooling) can reduce range.


Image: iStock/plahutar

Servicing

Electric vehicles require less maintenance than Internal Combustion Engine vehicles, but they do still need regular maintenance to ensure optimal performance and longevity. Specific servicing requirements may vary, but regular maintenance typically includes:

- tyre rotations and inspections
- brake system inspections
- battery health check
- cabin air filter replacement
- software updates and system checks.