

Workplace charging



Workplace charging can increase the availability and convenience of charging to employees with EVs. Evidence shows that employees who work at companies that have a workplace charging program are six times more likely to drive an EV than the average worker and can improve employee retention.¹ EV chargers may also help attract higher quality employees and supports sustainability targets of the business.

While many employees work business hours, workplace charging represents an opportunity to utilise cheap and abundant renewable energy. Shifting loads to within solar production hours keeps energy prices down, supports the grid and accelerates shutdown timelines for coal-fired generation whilst minimising use of other thermal generation.

For most workplaces, EVs will be operated much the same as fossil fuel vehicles, with drivers only needing to charge every few days or briefly top up every day or two

There are many types of workplaces in Australia and many types of EV charging solutions that could service them. Installing EV chargers and electrical infrastructure is similar to most capital works. There are challenges surrounding who owns what and where. Some workplaces will not be well suited to on-site EV charging and therefore will need to work with other bodies (eg. governments, carpark operators, neighbouring businesses) if EV drivers are to be enabled to charge at work.

	Building with carpark on same title	Building with carpark on different title	Building with no carpark
Owned	Easy	Difficult	Very Difficult
Leased	Difficult	Very Difficult	Almost impossible

This document provides a simple example for a building that comes with the EV readiness provisions of the NCC 2025 public comment draft. In practice, there may be additional steps, this is not an exhaustive list. There are several FAQs at the end discussing some nuance.

¹ [WPCC_2016 Annual Progress Report.pdf \(energy.gov\)](#)

Example

Class 7b building – typically warehouses, storage buildings or buildings for the display of goods (or produce) for wholesale. A summary of the NCC building classifications can be found [here](#).



A distribution centre (class 7b) with 100 car-parking spaces which carries out some deliveries.

9 cars do between 10-50kms per day



4 vans do between 50-200kms per day.



Being a new building, it has been constructed following draft NCC2025, thereby as per J9D4, it is supplied with:

EV distribution boards (DBEVs) installed such that a cable run from the DBEV to the EV car spaces will be longer than 50m OR busduct dedicated to EV charging installed such that the EV car spaces are within 10m of the busduct OR a combination of the two

a charging control system including the ability to manage and schedule charging of EVs in response to total building demand

has capacity for each circuit to support an EV charger able to deliver 12kWh from 9am to 5pm daily

is sized to support the future installation of a 7kW (32A) type 2 EV charger in 5% of parking spaces (5) and 15% of parking spaces that must have a 7kW (32A) EV charging equipment installed (15)

if a DBEV, contains spaces of at least 36mm width of DIN rail per outgoing circuit for individual sub-circuit electricity metering to record electricity use of electric vehicle charging equipment.

This infrastructure already being in place makes the job easier and cheaper. In any case, the following steps may also need to be followed.

1

Needs and Goals



The distribution centre owner (owner) seeks to understand the current and future EV transport needs of the company, as well as existing/future capacity of onsite generation and storage. Employees are surveyed to understand likely adoption rates year to year, trip lengths, ability to charge at home etc.

The work vehicles doing routes part of the day can charge on site during the day if chargers are available or at night (10pm-6am) if necessary. Charging during network peak times (5pm-9pm) can be avoided for the benefit of the energy system and reduced cost for the site in both cost of energy and reduced need of electrical upgrade.

Employee vehicles parked on site during the day can charge if chargers are available.

The owner understands that they may want to install more chargers than the NCC minimum and that there may be cost efficiencies in installing infrastructure such as cable tray for 100% of future needs,

Ideal location/s for chargers are selected, with the understanding that these may change as discussions with solution providers progress.

2

Cost recovery



The owner considers whether any cost recovery is required if vehicles have some private use or will be provided for free and whether visitors will be able to use the chargers.

The owner decides they would like to have the option of recovering costs in future but will start with free charging for employees. The parking at the workplace is limited in terms of access to employees, so the charging equipment will not be publicly accessible.

Note 1: for some companies, the cost of setting up and running a cost recovery process may not be worth the funds recovered. Cost recovery may be a solution provided by a Charge Point Operator (CPO) and is covered more in the FAQs below.

Note 2: An entity does not need to be an electricity retailer to sell energy for a vehicle² and separate metering is not required.

² [Report template \(aer.gov.au\)](https://www.aer.gov.au)

[National Energy Retail Law \(South Australia\) Act 2011 \(legislation.sa.gov.au\)](https://www.legislation.sa.gov.au)



3

Competitive tender



The owner gets quotes from 3 reputable solution providers that can do a consultation, engage with networks, design a solution (some of which will need to be accessible), supply layouts/schematics, supply hardware, organise installation and handle ongoing running of the system and maintenance.

The companies consider the distribution centre's vehicle usage behaviour and the size of the vehicles/batteries. They also consider the requirement for additional chargers above the minimum. They each design a solution, supply documentation and a quote.

Some EV charging providers are listed on the EVC website [Charging - Electric Vehicle Council](#).

4

Procurement



The quotes provided vary on price and extent of the service. The owner decides on a solution provider that communicated well, met their needs and was reasonably priced.

The works are scheduled, and the owner's employees plan to work around the installation. Contracts are signed including maintenance and warranty terms.

5

Support the installation



The owner's employees facilitate the installation by providing access, space and documentation for the civil works, infrastructure upgrade, signage/painting, bollards/wheelstops etc.

After commissioning and hand over, payment is provided within terms.

6

Administration

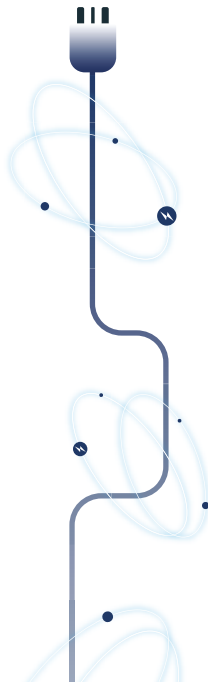


The designated charger manager begins their duties.

An onsite charging workshop is attended by employees where the operation of the charging system is explained and demonstrated.

Copies of waiver are distributed that the employer will not be held responsible for any damage that occurs to vehicles whilst parked at charging stations. Documents around charging etiquette and use policies were also distributed. Signed waivers are collected and an EV register is incorporated into the existing vehicle register.

The operational phase commences. Energy use, cost and utilisation is tracked, which could be used in future decisions around further electrification.



FAQs

1. How to manage FBT considerations

Fringe benefit tax liabilities are handled differently depending on whether the employee charges the vehicle at home or at work.

Fringe benefit tax liabilities may not be incurred if the car is a zero or low emissions vehicle, and luxury car tax (LCT) has never been payable. Although the private use of an eligible electric car and cost of fuel including electricity to charge it may be exempt from FBT, the benefit is still reportable. Details [here](#).

Charging at work:

- Where an employee charges their private electric vehicle at work for no charge, the provision of the electricity is a [property benefit](#) and would need to be valued accordingly. A private electric vehicle is not one that's owned, leased or otherwise made available by the employer.
- Where an employee charges their private electric vehicle at work for a cost, and the employer pays, or reimburses the employee for, that cost, the employer has provided an [expense payment benefit](#) to the employee.
- Where a car benefit is provided, and an employee uses an electric vehicle for private purposes or the vehicle is taken to be available for their private use, an employer needs to:
 - work out if the electric vehicle FBT exemption applies
 - if the benefit is not exempt, work out the taxable value of the benefit and include it in working out your FBT liability
 - work out if any benefits arising from the payment of any associated car expenses or provision of any associated items are exempt from FBT
 - work out the taxable value of the car benefit for reportable fringe benefits purposes and report any reportable fringe benefits amount.

For more information, refer to [Electric cars exemption](#) information on the Tax Office's website and associated linked content.

The ATO has a guide for employers [here](#).

If you are unsure of the FBT implications, you can contact your tax professional or the Tax Office for [tailored technical advice](#).

2. Employees making unreasonable use of the workplace charging equipment.

If energy is being transported for personal use to an unacceptable level, cost recovery systems may need to be implemented. Fees can help offset capital and operational costs associated with workplace charging and may also increase the perception of fairness.

It is recommended that workplace charging fees, if implemented to manage congestion or unreasonable use, be slightly higher than home electricity prices to ensure workers are not incentivised to charge at work if they can charge at home. If an employer still wants to pay for an employee's commute, they may be better served by paying it as a bonus or the equivalent of a 'fuel card' with a set amount of charging credit.

With several residential EV electricity retail plans available (AGL, Amber, Engie, Origin, Ovo, Powershop), charging at home can be very cheap to \$0/kWh. Workplace charging that is slightly more expensive will still be relatively cheap.

3. How to provide charging infrastructure on leased sites

Mode 3 equipment may need to be installed in a way that will most likely be useful to subsequent lessees. Some businesses may be sufficiently supplied by a low number of Mode 4 chargers in a location that will be out of the way for most tenants.

Tenancy providers may be more supportive of allowing/contributing to charging infrastructure installation when it is framed as a property improvement.

4. How to manage station sharing

When there are not enough chargers to service all of the company and/or private vehicles on site, a policy should be developed that considers;

- How far employees are commuting, the vehicle type, battery pack size, state of charge.
- Whether company or private vehicles get priority.
- Who manages the charging change overs and who enforces the policy.
- Assignment of charging buddies to each station to manage the charging.
- Whether a reservation system is required, or just a calendar.
- Allocating a time limit to chargers. Also, some charging station software allow a higher fee to be charged after a period of charging or idle fees.

- If the charging can be self-managed by employees, eg. first in best dressed.

See [Other Resources](#) section below.

5. What about electricity retail plans?

If in exchange for cheaper rates, your company is on a tariff with demand/capacity charges (kVA), most EV charging systems can be programmed to ramp down charging when the whole site consumption is approaching a set point, sometimes known as a load management system or dynamic load control.

If loads at your workplace are relatively flexible, perhaps there is some onsite solar and/or storage, it may be of benefit to consider a time-of-use (TOU) tariff. This will incentivize consumption in the middle of the day and night and away from peak periods approaching dinner time. This may be beneficial for charging EVs and getting work done at low cost.

To help meet sustainability goals, incorporating green energy into the retail plan ensures your vehicles and operations run off an equivalent amount of renewable energy.

6. Who looks after maintenance?

An employee should be designated to give a visual inspection relatively frequently, looking for nicks in cables and the like.

Generally, maintenance and warranty will be handled for a period by the party contracted to install the system. After that, maintenance contracts should include both a response time, time for a given repair, and an overall uptime requirement. Actual maintenance costs will vary.

7. How do I educate my employees on how to use and benefit from EVs?

There are several resources available in Australia, for example;

- EVC [Lifecycle Emissions Calculator - Electric Vehicle Council](#)
- EVC [EV-Charging-At-Home-Guide.pdf \(electricvehiclecouncil.com.au\)](#)
- EVC [Frequently Asked Questions - Electric Vehicle Council](#)

8. Are there any incentives in place for workplace charging infrastructure?

Yes, in WA - [Apply for the Charge Up Workplace EV grant program \(climateaction.wa.gov.au\)](https://climateaction.wa.gov.au).

In NSW, although not specifically for workplaces, chargers installed as a part of the destination charging grant scheme, could be used by employees - [Electric vehicle destination charging grants | NSW Climate and Energy Action](#).

9. How to install EV charging in carparks you don't own.

When a workplace has employees parking in an adjacent or nearby carpark that the workplace does not own and you want EV charging installed there, it can be difficult. The difficulty may depend on what kind of body owns the carpark; Local government – in consultation with your charging solution supplier, it may be possible to purchase a property use licence and have the charging solution supplier operate the site.

Tenancy provider - in consultation with your charging solution supplier, it may be possible to broker a profit-sharing agreement.

A different business - in consultation with your charging solution supplier, talk to the neighbouring business about their ambitions for EV charging. It may be possible to do the two installations at once and have separate operational oversight once complete.

10. How to manage balance between supporting employees transport needs but not encouraging more vehicles

Where employees can use public transport (PT) to get to work, employers should encourage this through financial support. This could take the form of reimbursing employees for work related PT fare receipts produced, using an expenses app or similar.

11. How many chargers should you install per EV owner?

This will depend on some of the factors mentioned above such as; how often are employees coming in, how far do they drive, what kind of vehicle, what size battery, do the vehicles get any use during work hours, available space, budget etc. There

will be merit in an easily expandable installation. Work with your charging solution supplier to find the starting point.

12. What is the best way to on-sell energy for vehicles

There are several ways to recoup costs for electricity that's gone to charging a vehicle. You can use the amount of energy recorded by the EVSE or the amount of time recorded by the system that the car was plugged in. It's possible to charge an annual access fee and not track usage or plug-in time at all. The best way will be the simplest way that works for both the users and the business owners.

13. How much does a system generally cost?

The cost of the infrastructure backbone varies greatly depending on the site and existing electrical infrastructure.

At the time of writing, a.c. chargers range in cost between \$695 and -22 000 +GST depending on capacity, features and application. Full details of chargers [here](#).

Operational software can cost between \$100 - \$1200 per annum depending on features, full details are also [here](#).

14. What uses are there for the data harvested by the EV charging system?

Once operating, your EV charging system will harvest interesting data points such as up time, usage (kWh), what time energy was consumed, plug-in time etc.

This can be used in future to guide optimisation, future expansion, demand side management opportunities, future behind the meter consumer energy resources opportunities (vehicle to grid) and more.

IF YOU HAVE FURTHER QUESTIONS ABOUT THE TOPICS IN THIS DOCUMENT,
WE ENCOURAGE YOU TO REACH OUT TO SUPPLIERS.



Other resources

[Sample Charging etiquette booklet](#)

[1527-03 - Workplace Charging.pdf \(boston.gov\)](#) See appendix B

[Sample EV charging station use policy](#)

[1527-03 - Workplace Charging.pdf \(boston.gov\)](#) See appendix C

[Sample Workplace charging policy](#)

[Sample Workplace Charging Policy \(energy.gov\)](#)

