

Charge Up Electric Vehicle Charging Grants Program

Project Guide for Public DC Charging



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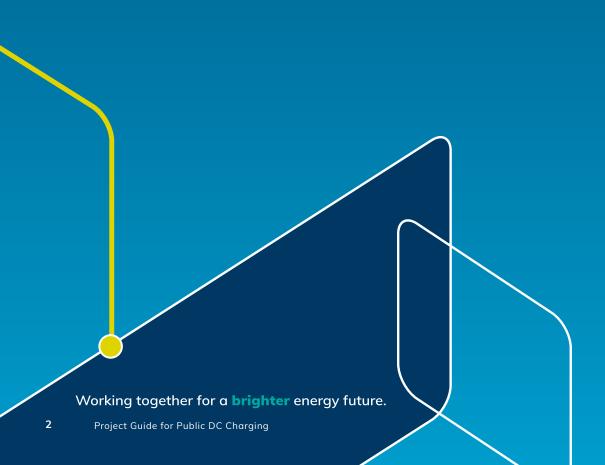
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Introduction

The Western Australian (WA)
Government has launched Round 3
of the Charge Up Electric Vehicle (EV)
Charging Grants (Charge Up grants)
to help drive EV uptake.

Who is eligible?

- small to medium enterprises;
- local government authorities; and
- not-for-profits.

See further information on eligibility below.

What can you get with Charge Up grants?

Charge Up grants provides up to 50 per cent cofunding for eligible applicants to purchase and install EV charging infrastructure for sites in WA.



1. Purchase and installation of up to four EV AC and/or DC chargers per site.



2. Up to five sites per applicant.



 Installation costs including a two-year maintenance plan (mandatory for public chargers). Funding caps apply.



4. Two-year software subscription.



5. Network upgrades. Funding caps apply.

Applications close at 5pm on 30 June 2025 or when available funding is fully committed. You can apply via the Charge Up grants website www.wa.gov.au/chargeup





Purpose of this guide

This document provides guidance for organisations who are considering applying for **Charge Up grants Round 3** with the intent of installing fast (DC) chargers at a publicly accessible site for use by EV drivers.

This Guide will help to understand:

- whether you are eligible for Charge Up grants funding;
- what **funding** you can get from the Charge Up program;
- whether a public DC charger(s) is suitable for your organisation and site(s);
- what you should consider when designing your project – tips and a real-life case study to help choose the best charger(s) and design for your site(s); and
- how you can **apply** for Charge Up grants funding.

Is this the right Project Guide for me?

There are three project guides covering the most common types of EV charging.

- Public DC Charging Faster charging at publicly accessible locations for EV drivers who need to charge enroute.
- **2. Destination Charging** Slower charging for EV drivers spending more than one hour at a location to shop, eat, sleep etc.
- Workplace Charging Charging at workplaces predominantly for fleet and/or employee EV purposes, but can also include visitors and members of the public.

What is Public DC Charging?

Public DC Charging describes EV chargers at sites that are completely accessible (24/7) to members of the public. Public chargers are generally used by EV drivers enroute to another location needing a quick charge (approximately 10 to 60 minutes) and therefore requiring faster DC chargers (24kW-350kW), rather than AC chargers (7-22kW).

This type of charging is particularly ideal for publicly available sites:

- where there are limited or no chargers

 often on key routes or in towns linking regional and remote locations (i.e. roadhouses or petrol stations); and
- where there is high demand and/or limited parking – in the Greater Perth area, regional and remote cities, and popular tourist towns (i.e. public car park at tourist site).

Please use the guide which is most relevant for you. If you are intending to install a DC charger(s), you are encouraged to contact the Charge Up grants team – chargeup@demirs.wa.gov.au – for advice before you submit an application. For additional information see the Charge Up grants website.



Application steps



1. Is your organisation eligible?

- Local Government Authorities as established under the Local Government Act 1995.
- **Not-for-profits** registered with the <u>Australian Charities and Not-for-profits</u> Commission.
- **Small to medium enterprises (SME)** with less than 200 employees and not part of a large corporation (aggregate turnover more than \$250 million), including:
 - franchises that are an SME; and
 - landowners and charge point operators (CPOs) if a substantial proportion of site occupants with access to the charger are eligible organisations and also for a CPO if you require the grant funding to ensure commercial viability.

For further information on eligibility, including who is not eligible, see the <u>Round 3</u> <u>Funding Guidelines</u> (Funding Guidelines).



2. Is your site eligible?

Your site is eligible if:

- it is located in Western Australia; and
- your organisation occupies and owns the land or has permission from the landowner prior to application; or
- for installations in a shared carpark if a majority of site occupants with access to the charger(s) are eligible organisations for installations in a shared carpark.

For further information on site eligibility see the Funding Guidelines.



3. What is funded?

Up to 50 per cent of funding for the purchase, installation and maintenance of EV chargers and software costs, including the cost of network upgrades (if required).



3a. EV charging hardware

- **Type of chargers**: eligible EV charging hardware on the Round 3 Approved List of Software and Hardware (Approved List).
- **Number of chargers**: up to four EV chargers per site, with up to five sites per applicant.
- Charger size: 7kW to 350kW charging capacity.





3b. Installation and maintenance

- **Installation funding capped** in the <u>Greater Perth</u> area at \$5,000 per site (up to 150kW charger) and \$10,000 per site (over 150kW).
- **Installation funding capped** in regional and remote areas at \$10,000 per site (up to 150kW) and \$20,000 per site (over 150kW).
- Mandatory two-year maintenance plan for all public chargers.



3c. Software

- Mandatory two-year software subscription from an approved software supplier and platform on the <u>Approved List</u>. See below to understand why software is important and the benefits.
- Tip: select your software before selecting your charger(s) as some chargers may not be compatible.



3d. Network upgrade

- Funding for network upgrades is capped at up to \$150,000 per site (Western Power) and up to \$225,000 per site (Horizon Power).
- Note: Network costs include costs relating to stand alone power systems payable to Western Power, Horizon Power or Boundary Power.
- Network upgrades can be more likely for DC chargers where sites do not have enough power to cater for the additional load.
- See further information below on how you could design your site to try to avoid network upgrades.



4. Consider your project design

• See tailored guidance below to help your organisation understand what to consider when designing your project, including what charger(s) is best suited for your site, how to best reduce the costs for installation and network upgrades, etc.



5. Get quote(s)

Hardware and software quotes

- You will need to obtain hardware and software quotes from an approved software supplier, installer and/or electrical contractor.
- See further information in the <u>Commercial Quote Requirements</u> on how many quotes you should obtain and what they should include.

Network Upgrade quote (if required)

If your installer or electrical contractor identifies that your network connection needs an upgrade, follow the steps below.

1. Request that your installer or electrical contractor obtains an official quote from your network operator (make sure they mention Charge Up grants).

Tip: To avoid incurring unnecessary quote fees, contact the Charge Up grants team to undertake a preliminary assessment to indicate the likely success of your application.

- 2. The network provider will then engage an engineer to determine the scope of works and costs.
- 3. Once you have an official quote contact the Charge Up grants team via chargeup@demirs.wa.gov.au to re-open your application to submit the quote.



6. Apply

- Submit your application(s) (maximum five per applicant) via <u>SmartyGrants</u> before
 5pm on 30 June 2025.
- Tip: Preview the application form on SmartyGrants well in advance of the closing date to understand what information you are required to provide.
- Immediately after submitting your application, you will receive an email confirming receipt.
- This email does not mean you have received approval.

NOTE: Chargers installed prior to receiving notification of a successful application are not eligible for co-funding.





7. Receive outcome

- Receive an email notifying you of the outcome of your application.
- Most applications will be assessed by EPWA, and notification provided within about 20 business days, with relevant information and next steps.
- CPOs and applications seeking grant funding over \$75,000 may take longer as they will also be assessed by the Grants Program Steering Committee.



8. If successful, install chargers

- If successful, you must proceed with installation within 18 months (for DC chargers only) from the approval date at the location specified in your application.
- Once installed, you will:
 - be reimbursed after you have met the grant requirements and lodged a Reimbursement Form;
 - subscribe to a maintenance program for the chargers for at least two years
 - ensure the chargers remain installed for at least five years; and
 - (if requested) provide additional information and data on charger use (from software).
- See the Round 3 <u>Funding Guidelines</u> for further information on the terms and conditions.



Consider your project design

The below information is to help applicants looking to install public DC chargers to understand:

- whether a public DC charger(s) is right for your site;
- what to consider when choosing a charger(s);
- what to consider when installing your hardware and choosing your software;
- how to choose your site; and
- how to design your site to minimise costs, maximise accessibility and plan for the future.

For more specific guidance on your unique situation, it is recommended that you seek the expertise of your installer or electrical contractor.

When should you consider a Public DC Charger?

Simply put, DC chargers are generally used by the public who want a quick, convenient charge before continuing on with their journey.

This type of charging is particularly ideal for sites:

- Where there are limited or no chargers

 on key routes or enroute towns linking regional and remote locations (i.e. roadhouses or petrol stations).
- Where there is high demand and/or limited parking (particularly for locations in the Greater Perth area), regional/remote towns and popular tourist locations.

Where drivers are happy to stay longer than an hour, a slower AC charger might be more appropriate. See the Destination Charging Project Guide at www.wa.gov.au/chargeup for more information.





What charger(s) should I install and how much could it cost?

While chargers with a larger capacity will generally provide a faster charge (subject to the vehicle being able to receive this level of charge), they will also be more expensive to install as demonstrated. For **further information on the different DC charger sizes**, including approximate costs, capability and duration, what type of site might be best suited, and the advantages and disadvantages, see **Table 1 below**.

Table 1. DC Charger Sizes and Costs

Charging Capability (kW/hr)	24-40kW	50 to 150kW	Up to 350kW
Cost of charger Purchase only EV driver dwell time	Wall: \$15,000 – \$25,000 Pedestal: \$25,000 -\$40,000 Up to 60 minutes	Up to 90kW: \$35,000- \$60,000 Up to 150kW: \$65,000-	Up to 250kW: \$110,000 -\$150,000 Up to 350kW: \$300,000+
		\$85,000 20–40 minutes	10–20 minutes
Site characteristics	Some amenities and/or attractions:	Some amenities and/or attractions:	Minimal to no amenities (i.e. toilets):
	 journey enablement between regional tourist towns; locations within regional towns; metropolitan locations with medium to high demand; and metro kerbside with high turnover. 	 journey enablement to regional tourist towns; locations in remote or regional town centres; and high demand metropolitan locations (including kerbside charging). 	 journey enablement to remote/regional cities and towns; locations in regional and remote towns/tourist locations; and very high demand sites in metropolitan locations.
Benefits of charger	Best value DC installations.	Good balance of small footprint and power capacity.	Fastest - deal for very high demand and/or remote travel.
Downsides of charger	Too slow for regional remote travellers.	Higher power chargers deliver the same energy in short time, lowering site congestion.	Most light passenger EVs currently do not have charging capacity above 250kW.
			Substantially more expensive to purchase.
			Most likely to require expensive network upgrades.





What else should I consider when deciding the size and number of charger(s)?

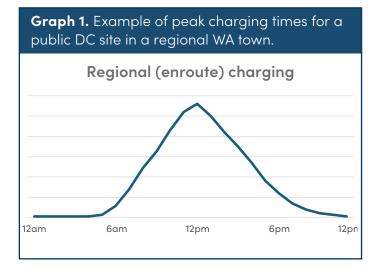
To help you decide what is the best configuration of charger(s) for your site, consider the following:

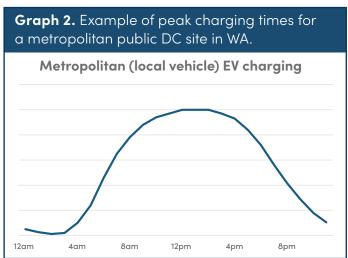
- Power limitations To avoid expensive network upgrades make sure you consider your site(s) power limitations and, where possible, choose charger(s) that do not go beyond this capacity to avoid expensive network upgrades.
- **Space limitations** The amount and type (offstreet or kerbside) of parking space available will limit the type of charger(s) you can install. Where parking is restricted a larger charger with dual ports will take up less space.

It is recommended that you ask your installer or electrical contractor to provide advice on any site limitations, potential solutions and costs when obtaining quotes. For further information on these matters see the <u>Commercial Quote Requirements</u>

• How long are people likely to spend at your site: Sites with features that encourage EV drivers to stay 30 minutes or more might be better suited to a greater number of lower speed DC chargers to avoid queuing. You can also consider the use of idle fees to encourage drivers to move along.

- How busy is your site and when is this: To avoid EV drivers having to queue make sure you plan for demand during your busiest times of the day and year, now and in the future. Demand for DC fast charging generally increases during the day and often during holiday periods as EV drivers are travelling.
 - Regional charging can often have a peak in the middle of the day, as people leave home with a full charge, drive for a few hours and then get a quick charge before continuing on their way.
 - Local charging is more evenly spread, with highest demand during daylight hours.
- EV driver experience: It is recommended that there are at least two plugs per installation (2x single port chargers or 1x dual port charger) to reduce wait times. Where possible, a dual port charger is preferable as it is usually more cost effective.
- Reliability: Consider installing a backup charger (DC or AC) as a last resort should your DC charger have a fault. This is particularly important in regional and remote locations where there are no alternative chargers nearby.





The design process

Choosing your site

If you have multiple options for placement of your public DC charger(s) consider the following criteria. It is recommended that you use the list below as part of a discussion with your installer or electrical contractor.



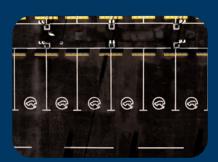
Power

Avoid expensive network upgrades where possible, by:

- 1. asking your installer or electrical contractor to advise how much spare electrical capacity is at your site (by inspecting your switchboard); and
- 2. choosing charger(s) sized within the available capacity at your site (see above for further advice) or consider another site.

NOTE: Network upgrades can involve costs exceeding \$100,000.

If you cannot avoid network upgrades, see application step 5 above for next steps.



Parking

Where possible, choose a site with existing parking (or design parking at your site):

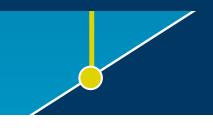
- with plenty of room for the charging equipment, both at the front and back of the parking space, for ease of accessibility (see below);
- close to the switchboard to avoid costly installation fees installation costs grow as the length of connection increases; and
- with enough space to expand parking as charger demand increases.



Versatility

Choose a versatile site with enough space so that you can:

- plan for further chargers as demand increases;
- manage queuing during peak periods;
- design pull-through bays so that drivers who are towing don't have to unhitch to charge; and
- position chargers to service at least one parking bay for a single port charger and at least two parking bays for a dual port charger.





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Amenities

Where possible, choose a site close to existing amenities (e.g. food services, toilets, etc.) as drivers may be charging for 30 minutes or more.

Designing your site

Once you have selected your site, it is recommended that you consider the following to help improve the EV driver charging experience.



Accessibility

A fully accessible site for wheelchair users will also benefit seniors, or other users of mobility aids and people using prams.

You can do this by:

- complying with all Australian standards for parking accessibility;
- prioritising wide, flat parking spaces so charger(s) can be installed at the same level as the EV charging space and access aisles;
- providing access aisles and gaps between hard objects (i.e. kerbs or bumpstops) preferably at least 1100mm wide, so a wheelchair or walker can easily access the charger;
- making sure cables and other obstructions do not block any access ways when vehicles are plugged in; and
- positioning chargers with their charging ports on the same side as access aisles;
- locating your charger(s) close to the entrance and/or amenities at your site;
- making sure your chargers are visible (see below) for those with low vision; and
- provide a safe walkway to the other services at the location.



Visibility

Design your site so that it is visible, safe, and secure by:

- make sure your charger(s) is easy to spot from the road and find within the site. Wayfinding signs or painted arrows can help direct drivers;
- parking spaces should be well lit and preferably in a public or secure area for safety, security, ease of use and vandalism deterrence; and
- provide a safe walkway to the other services at the location.



Reliability

Design your site so that your charger(s) are as reliable as possible by:

- clearly marking so other vehicles do not occupy the space (i.e. through bay painting and/or a sign);
- mechanically protect your charger(s) from accidental damage i.e. bollards without compromising accessibility;
- protecting your charger(s) from vandalism by making it visible (see above advice) and installing CCTV;
- providing strong internet connectivity (required) so that your EV software can reliably operate and as an added entertainment option for drivers while they wait;
- extending your two-year software and maintenance plans so your charger continues to be reliable and well maintained; and
- protecting your charger(s) and users from weather events if possible (e.g. shade cover).





Installing your charger and choosing your software

After you have chosen your charger(s) and decided on site design, the information below will help you understand what is involved when installing your EV chargers and choosing your software and supplier, including how long it could take and how much it may cost.

What installation works are co-funded?

Charge Up grants co-funds up to 50 per cent of the installation costs for up to four EV chargers per site at up to five sites per applicant. Funding caps apply depending on the size and location of your charger, see information above.

The table below outlines what Charge Up grants will and will not fund.

Eligible for funding	Not eligible
Civil works such as trenching and laying plinths.	Equipment that is installed for the provision of future EV charging infrastructure.
Electrical works such as cabling and switchboard upgrades.	Additional cables and cable holders.
Purchase and installation of energy management systems (if required).	Optional costs such as bay painting and installing bollards.
Commissioning of hardware and/or software.	Feasibility studies, business case development or council approval costs (if required).
Credit card reader.	Grant application costs.
Maintenance plan for a two-year period (mandatory for public chargers).	

What should you consider when arranging installation of the charger?

Take the time to work through the following considerations with your installer or electrical contractor for a safe and efficient installation:

- DC chargers are heavy and require concrete footings and specialist lifting equipment to be installed. This will be managed by your installer or electrical contractor.
- Some installations require trenches and overhead work that can be dangerous for pedestrians. Please consider:
 - pedestrian access and diversion;
 - vehicle movements; and
 - appropriate safety precautions and regulations.
- For highway sites, be careful of vehicle movements, as cars coming off the highway can be moving quickly and cause damage to workers and equipment.

How long will it take to install?

The amount of time it takes to source and install your charger(s) will depend on the size and number of charger(s) and whether your site requires significant excavation or concrete works.

Sites that do not require network upgrades or construction work can expect the following times:

- DC chargers are about the size of a fridge and are usually ground mounted (some below 40kW are wall mounted) next to the parking space.
 - A typical DC charging site will take around one week to construct.
 - Approved suppliers have committed to making DC chargers (on the Approved List) available in Australia in no more than nine months.
- (If you are installing a back-up AC) AC chargers – are about the size of a shoebox and are wall or pedestal mounted next to the parking space.
 - AC chargers will take around one to two days to construct.
 - Approved suppliers have committed to making AC chargers (on the Approved List) available in Australia in no more than three months.

If you require a network upgrade and/or significant construction works the process will take a lot longer, with network upgrades often taking 12 to 15 months to complete.

How much could it cost?

The cost varies depending on the software platform and supplier, and the number of chargers and charging ports. For example, purchasing a software subscription for one (1) dual port charger, at \$500 per annum per port, will involve a total cost of \$2,000 for the mandatory two-year subscription.







Choosing your software

To receive grant funding, you must take out a two-year subscription for an approved EV charging software platform from a supplier on the Approved Software List.

Why is software required?

Software is mandatory for the following reasons:

- To ensure that charging is mostly occurring during the day (9am-5pm), rather than the evening peak (5pm-9pm). See the <u>webpage</u> here to understand why daytime charging is important.
- The software installed will play an important role in data capture, allowing the impact of Charge Up grants to be assessed.

Software can also offer a range of other benefits including:

- Making the charger location, availability and costs visible to drivers.
- Managing billing (if you would like EV drivers to pay, you need software).
- Understanding when and how EV chargers are being used.
- Managing energy use and charger performance.
- Detecting maintenance issues.

How much could it cost?

The cost of installation varies depending on the software platform and supplier, and the number of chargers and charging ports. For example, a public software subscription at \$250 per annum per port, will involve a total cost of \$2,000 for a mandatory two-year subscription for two chargers with two ports.

Choosing a supplier

If you have multiple chargers, it is worth spending some effort understanding offers from the various suppliers as different suppliers will provide alternative features, in different fee structures, maintenance notifications, power management and the charger ecosystem they exist within.

The <u>Approved List</u> provides high level information on software prices, variable costs and charger products that work with eligible software platform available from approved suppliers.



Case Study

Public DC Charging – EPM

Organisation: EPM is a precision machining

and engineering business.

Site: EPM workshop, Kewdale, Perth **Charger(s):** One 80kW DC charger

Users: members of the public, visitors,

employees and fleet

Charge Up grant: \$32,500

<u>Total Project Cost</u>: \$72,000

Why EPM chose to install a charger

EPM decided to install a public charger to be at the forefront of the transition to EVs, having already introduced EVs into its fleet and planning to introduce more over time. The business also wanted to provide a public charger that all EV drivers could access to support WA's decarbonisation efforts more broadly.

How EPM designed its project

EPM engaged one of its electricians experienced in installations throughout the design process, which was vital to ensuring it avoided expensive network upgrades and capital works.

EPM started the design process by getting its electrician to check how much electrical capacity was available in the switchboard to confirm the upper limits for charging capacity, to avoid expensive network upgrades. As a machine shop, EPM already had a large electricity connection, and it was confirmed that there was more than enough capacity to support a charger with up to 200kW capacity.

Choosing the site for installation was straightforward, with a parking area available at the front of the building with space for a charger and a simple cable run back to the switchboard.

Choosing the charger: After working out the site and electrical capacity, a charger was selected based on advice from EPM's electrician and checking costs against the total project budget of

\$100,000. The electrician estimated the installation cost for a generic DC charger (\$20,000) to work out the remaining budget (\$80,000). EPM settled on an 80kW Sinexcel charger, that included two charge cables and was suitable for an outdoor installation.

Installation and cost

As a result, the total cost of the project (\$72,000) ended up being \$28,000 less than budgeted, with about half of the cost (\$32,500) being covered by the Charge Up grant funding.

Cost Item	Estimated Cost	Actual Cost (approx.)
Charger	\$80,000	\$54,000
Installation (incl. maintenance plan)	\$20,000	\$17,000
Software	Included in charger	\$1,000
Total	\$100,000	\$72,000
Grant	-	\$32,500



Image of EPM workshop, Kewdale, Perth. Provided by EPM September 2024.



Benefits of public charging

EPM engaged a local Supplier on the Approved List to purchase a two-year Software Subscription, as required by Charge Up grants. This subscription provides a platform via an app to charge public usage, managing all pricing and fee collection. In addition, the app helps promote the charger by making its location available to users.

Pricing

As the chargers are available 24/7, the public must pay a higher price tariff for charging during the peak period (5–9pm) compared to that for off-peak periods (daytime and night). This encourages drivers to take advantage of EPM's 100kW solar system when energy is most abundant. To understand further why the Charge Up grants encourages daytime charging access the webpage here.

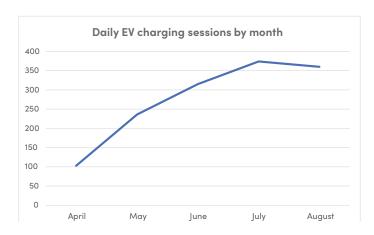


Image of EV outside of the EPM workshop, Kewdale, Perth. Provided by EPM September 2024.

Promotion

Use of the software subscription and the <u>Plugshare app</u> has helped the business to successfully promote the charger, with up to 10 visitors each day. This has resulted in nearly 400 charging sessions being completed from April to July 2024 following installation of the charger (as per graph 3 below).

Graph 3: Daily EV charging sessions (by month) since public DC charger installed at EPM's site. Source: EPM, 2024.



Source: EPM, 2024

Project Outcome

As a result of this successful promotion coupled with tariffs, EPM has been able to donate 10 cents from every kW to local charities each quarter and help WA's broader decarbonisation efforts, while recover the costs of its charger investment over time.

Glossary

Note these terms are for the purpose of this Project Guide.

AC: Alternating current, which needs to be converted to DC power by EVs.

AC chargers: Dedicated AC chargers that have a charging capacity of 7kW to 22kW. Also known as AC fast charging and/or level/type 2 EV charger.

Accessibility: The ease of access and convenience that EV users have to EV chargers.

Charging capacity: the amount of power (in kW) a charger can send into an EV. Also known as charger rate.

Charge port: A physical connector on the EV charger that connects to an EV's charging cable to provide an electrical charge to the EV battery.

Charge point operator: A commercial organisation responsible for the ownership or operation of an EV charger.

DC: Direct current, which can go straight into charging an EV.

DC chargers: Dedicated DC chargers have a charging capacity of 25kW to 350kW. DC chargers are also known as fast or super-fast level/type 3 chargers.

Dual port charger: An EV charger with two charge ports that are capable of charging two vehicles simultaneously.

Electric vehicle (EV): A passenger battery electric vehicle or plug-in hybrid electric vehicle.

EPWA: Energy Policy WA, part of the Government of Western Australia's Department of Energy, Mines, Industry Regulation and Safety.

EV charger: A unit of fuelling infrastructure that supplies electric energy for the recharging of electric vehicles.

EV charging software: Cloud-based software that an EV charger can use to enable use of the smart features available within the charger. kW: Refers to 1,000 (kilo)watts and is used as a unit of measurement to express the output of power such as for EV electric motors or EV chargers.

Single port charger: An EV charger with one charge port capable of charging a single vehicle.

Site: The precise location of proposed chargers identified by the nearest exact address and a name.

WA: Western Australia.





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