

Department of Energy, Mines, Industry Regulation and Safety Energy Policy WA

### Charge Up Electric Vehicle Charging Grants Program

05

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### Project Guide for Workplace Charging

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#### Department of Energy, Mines, Industry Regulation and Safety

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Working together for a **brighter** energy future.

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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 application portal.



### Purpose of this guide

This document provides guidance to organisations considering an application for **Charge Up grants Round 3** with the intent of installing chargers at a workplace for use by fleet vehicles and employees.

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 workplace 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 Project Guide for me?

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

- 1. **Workplace Charging:** Charging at workplaces predominantly for fleet and/or employee EVs, but can also be for public EV drivers.
- 2. **Destination Charging:** Slower charging for EV drivers spending more than an hour at a location to shop, eat, sleep, etc.
- Public DC Charging: Faster charging at publicly accessible locations for EV drivers travelling enroute who need to charge in under one hour.

### What is Workplace Charging?

Charging at a workplace occurs when an organisation charges its own fleet vehicles or allows employees to charge their EVs while they are at work. For the purposes of Charge Up grants, you can also allow visitors to your organisation or members of the public to charge at your site if you wish.

While Charge Up grants funds AC and DC chargers ranging from 7 to 350kW capacity, faster DC chargers are not recommended for all users. See the **table below** outlining what type of charger is generally recommended for workplace charging user types and why.

Charger	Usage	User type
AC chargers (7-22kW)	Where EVs are predominantly parked for extended periods, suited to slower charging.	<ul> <li>Employee EVs</li> <li>Overnight fleet vehicle charging</li> <li>Fleet with higher duty cycle (more use/kilometres travelled).</li> <li>Higher usage of visitor EVs.</li> </ul>
DC chargers (up to 50kW)	Where EVs are parked for shorter periods of time requiring a quicker charge.	<ul> <li>Fleet with higher duty cycle (more use/kilometres travelled).</li> <li>Higher usage of visitor EVs.</li> </ul>

**For further information** on what size charger and how many chargers are best suited to your project see below.

Please use the project guide that is most relevant for you. If you are still unclear on the guide that is right for you please contact the Charge Up grants team – chargeup@demirs. wa.gov.au – for advice before you submit an application. Further information is also available on 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> <u>Commission</u>.
- **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, for CPOs only, if you require the grant funding to ensure continued commercial viability.

For further information on eligibility, including parties that are not eligible for grant funding, see the <u>Round 3 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; and
- for installations in a shared carpark if a majority of site occupants with access to the charger(s) are eligible organisations.

For further information on site eligibility see the Funding Guidelines.



### 3. What is funded?

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



### 3a. EV chargers

- **Type of chargers:** eligible EV charging hardware on the Round 3 Approved List of Software and Hardware (<u>Approved List</u>).
- 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 may need to occur if there is not enough power at a site to cater for the additional electrical load of the charger(s).
- 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 and how to best reduce the costs for installation and network upgrades, etc.



### 5. Get quote(s)

#### **EV Charging 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 information should be included.

#### 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 <u>chargeup@demirs.wa.gov.au</u> 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 180 days (for AC chargers) or 18 months (for DC chargers) 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 (mandatory for public chargers only)
  - 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 Charge Up grants terms and conditions.



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## Consider your project design

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

- whether a workplace charger(s) is appropriate 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.



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

### What to consider when choosing charger size

When deciding the size of charger that is best for your workplace, you will need to weigh up the duty cycle and dwell time of your vehicles. To help determine this consider the following:

- the operational needs of your fleet vehicles think about how many kilometres your fleet would travel during an average and peak day;
- **the battery capacity of the vehicle** think about how far the vehicle can travel on a charge and how this relates to its duty cycle;
- **types of vehicles** larger vehicles like light commercial vehicles and trucks will generally have bigger batteries, so faster chargers are worth considering for these vehicles;
- how long a vehicle spends at site consider whether slower overnight recharging is an option; and
- **public charging** weigh up the pros and cons of making your charger(s) publicly available, i.e. increased revenue versus competing demand for the charger(s) and requirements for public charging (e.g. site must be accessible 24/7).

See examples below of what situations might be best suited for different charger sizes in table 1:

Type of chargers	When to install different charger types		
AC chargers	Where EVs are parked for extended periods of time		
(7–22kW) only	• Employee EVs parked for most of the day in the workplace car park.		
	• Lower use fleet vehicles with a predictable duty cycle that do not need to be charged more than once a day (e.g. vehicles that are parked overnight on site).		
DC chargers only Where EVs are parked for shorter periods of time			
(24–350kW)	• Fleet vehicles with a higher duty cycle that may need to recharge more than once per day and will need to recharge quickly (e.g. during loading/unloading or a driver's rest break).		
	<ul> <li>Higher use visitor EVs accessing the chargers.</li> </ul>		
Mix of AC and	For a mix of fleet vehicles with different duty cycles		
<b>DC</b> chargers (7–350kW)	<ul> <li>Having at least one DC charger will provide some redundancy in case of events like:</li> </ul>		
	– outage of an AC charger;		
	- forgetting to recharge a vehicle; and		
	- occasional high-use times for the fleet.		
	<ul> <li>Having at least one back-up AC charger in case of potential outage of the main charger(s) and to plan for increased demand.</li> </ul>		

### What else to consider when choosing size and number of chargers

You will also need to weigh up the following to further determine the size and number of charger(s):

- **Power limitations** To avoid expensive network upgrades make sure you consider the power limitations at your site(s) and, where possible, choose charger(s) within this capacity.
- **Space limitations** The amount and type (offstreet or kerbside) of parking area 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.
- **Reliability** A charging site that is unreliable will cause operational issues. Consider having at least two plugs per installation so that there is always one charging port in case there is a fault.
- Alternate public charging options Consider the location of your nearest public fast chargers as a back-up charging option if your site has an unexpected outage (e.g. power outage).

• Tip: Installing three single phase chargers rather than one three phase charger will cost a similar amount to install but allow more EV drivers to charge at the same time.

**For further information** on what size and number of charger(s) might be best suited for your site, including approximate costs, advantages and disadvantages, **see Table 2 below**.

**For help specific to your site**, it is recommended that you ask your installer or electrical contractor to advise on any site restrictions, potential solutions and costs when obtaining quotes. For further information on these matters see the <u>Commercial</u> <u>Quote Requirements</u>





### Table 2. Number and Size of Charger(s)

Example of charger	Single-phase or three-phase dedicated AC	Three-phase dedicated AC	DC fast charging (Level 3)	DC super-fast charging (Level 3)
Charging capability (kW/hr)	Up to 7.4 kW	Up to 22 kW	Up to 150 kW	Up to 350 kW
Cost of charger only (approx.)	\$1,000–\$3,000 Wall mounted	\$2,000-\$10,000	Up to 24 kW: \$20,000-\$50,000 Up to 90kW: \$40,000-\$60,000 Up to 150kW: \$60,000-\$80,000	\$90,000 -\$300,000+ -
User dwell time (approx)	Overnight (fleet) Full workday (employees)	2–4 hours	20–60 minutes	10–20 minutes
Site/user characteristics	<ul> <li>Overnight charging for fleet vehicles.</li> <li>Recharging of lower duty fleet vehicles (e.g. pool vehicles that are mostly parked).</li> <li>Recharging employee vehicles that are parked at site.</li> </ul>	<ul> <li>Visitors wanting a quick top up.</li> <li>Recharging employee vehicles.</li> <li>Recharging fleet vehicles with a moderate duty cycle.</li> </ul>	<ul> <li>Fleet requiring a relatively quick recharge due to operational requirements.</li> <li>Provides a relatively quick backup option (e.g. in case a vehicle is not recharged overnight).</li> </ul>	<ul> <li>Fleet requiring a very fast recharge due to operational requirements.</li> <li>Potentially most suitable recharging option for light commercial vehicles and trucks.</li> <li>Provide a quick back-up option (e.g. in case a vehicle is not recharged overnight).</li> </ul>
Benefits of charger	Suitable for all EVs and usually more cost-effective.	Provides a balance between slow overnight charging and faster DC charging.	Best value DC installation. Faster than AC.	Fastest recharging available under Charge Up grants program allowing the greatest operational flexibility.
Downsides of charger	Slowest charger.	Some EVs limit AC charging at 7kW/11kW.	More costly to purchase and likely higher installation costs.	Most costly to purchase and likely highest installation costs.

### The design process

### Choosing your site

If you have multiple options for placement of your EV charger(s) consider the following criteria. It is recommended that you use the list 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;
- close to the switchboard to avoid costly installation fees, which 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:

- so that you can 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;
- so you can install more chargers if you decide to grow your fleet and/ or as more employees purchase EVs;
- so you can plan for other vehicles types (i.e. light commercial vehicles and trucks), which require more parking space; and
- so that, where your site is publicly accessible, you can plan for any likely increases in future demand.





### **Designing your site**

Once you have selected your site, it is recommended that you consider the following to help improve the charger user experience.



### Accessibility

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

This can be achieved by:

- complying with all Australian standards for parking accessibility and any additional workplace requirements;
- 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;
- 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 for all users.

- Where your chargers are only available to employees ensure that the:
  - parking space is well-lit; and
  - chargers are easy to locate within the site, i.e. with wayfinding signs or painted arrows.
- Where the chargers are also publicly available ensure:
  - parking spaces are also well lit for safety, security, ease of use and vandalism deterrence; and
  - the charger(s) are easy for drivers to sight from the road.



#### Reliability

#### Design your site so that your charger(s) is as reliable as possible.

Where charger(s) are not publicly available:

- ensure that only employees can access your site within and outside of operating hours, i.e. access via a swipe card;
- mechanically protect your charger(s) from accidental damage (i.e. use of bumpstops) without compromising accessibility;
- provide for strong internet connectivity (required) so that your EV software can operate reliably; and
- extend your two-year software and maintenance plans so the charger continues to operate reliably and is well maintained.

In addition, for publicly accessible chargers:

- protect your charger(s) from vandalism by making it visible (see above) and installing CCTV; and
- ensure access ways and parking bays are clearly marked and/or reserved so other vehicles do not occupy the space (i.e. through bay painting and/or a sign).



# 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 the level of cost involved.

### What installation works are co-funded?

Charge Up grants co-funds up to 50 per cent of the purchase and installation costs for up to four EV chargers per site and 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 as part of these installations.

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 like signs, barriers, etc.
- For high traffic sites, be careful of vehicle movements as cars coming off the highway could be moving quickly and potentially 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:

- 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 for construction works.
  - Approved suppliers have committed to making AC chargers (on the Approved List) available in Australia in no more than three months.
- 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 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 of installation will largely depend on whether you have been able to avoid extensive construction works and/or network upgrades, which can involve additional costs of around \$50,000 to \$100,000 for network upgrades alone.

Where you have been able to be cost effective and choose charger(s) that are best suited to your site, you can expect that installation costs should only increase slightly where you have larger and/ or more charger(s). For example, a suitable site with adequate existing electrical capacity and existing parking spaces could involve a cost of about \$20,000 to purchase and install three AC chargers or one 25kW DC charger.



### **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 to 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 make your charger accessible to the public you can charge for access, but you need software to do it).
- Understanding when and how the chargers are being used.

- Managing energy use and charger performance.
- Detecting maintenance issues.

### 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 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 and different fee structures.

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



### Workplace Charging Case Studies MSWA – fleet charging

**Organisation:** MSWA is a NFP health provider to people in WA living with a neurological condition.

**Site:** MSWA buildings in Albany, Belmont, Butler, Bunbury and Wilson.

**Chargers:** One 22kW dual port EV charger for each of the five sites.

**Users**: Fleet

Total Charge Up grants: \$28,200

Total Project Costs: \$54,800

### Why MSWA chose to install EV chargers

MSWA chose to install EV chargers as the organisation has a large footprint of 18 facilities throughout metropolitan and regional WA. This footprint is continuing to expand alongside an increasing client base, requiring more travel by MSWA staff.

As a result, the organisation made a commitment to environmental sustainability, including gradually converting a portion of its fleet to EVs when it was viable to do so. MSWA recognised the importance of sufficient charging infrastructure to support this transition, with the Charge Up grants providing this opportunity.

Image of MSWA Belmont, where an EV charger was installed. Image supplied by MSWA in September 2024.

### How MSWA designed its project

With a large footprint, MSWA already had a facilities management team familiar with the process of obtaining quotes from contractors and organising installations. The facilities management team found the process of designing a project relatively straightforward, using existing systems, processes and staff. This included engaging electrical contractors to determine the most cost-effective charger and site design, obtain quotes, organise installations, and keep project documentation for a smooth acquittal.





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### Installation and Cost

The team applied this process, successfully installing one dual port 22kW AC charger at each of its five sites – Albany, Belmont, Bunbury, Butler and Wilson – after being awarded grant funding in Round 1 of Charge Up grants. See in the table below the rounded costs for purchasing and installing EV chargers and software across the five sites, and associated grant funding received.

Sites	Charger (\$)	Installation (\$)	Software (\$)	Total (\$)	Grant (\$)
1.MSWA Albany	\$6,000 (post)	\$7,100	\$400	\$13,500	\$6,900
2.MSWA Belmont	\$5,000 (wall)	\$3,800	\$700	\$9,500	\$4,900
3.MSWA Bunbury	\$6,000 (post)	\$4,700	\$400	\$11,100	\$5,700
4.MSWA Butler	\$6,000 (post)	\$5,300	\$700	\$12,000	\$6,200
5.MSWA Wilson	\$5,000 (wall)	\$3,000	\$700	\$8,700	\$4,500
Total				\$54,800	\$28,200

### Outcome

MSWA has continued to improve EV processes over time, implementing a swipe card system that prevents non-staff use of the chargers and provides a way of tracking energy use. To avoid charging at off-peak times, MSWA implemented an organisational procedure requiring EV charging to cease by 5pm.

Following the success of its Round 1 application, the facilities management team applied this experience to design projects for Round 2, with an additional four sites being approved for installation. These additional chargers will support the purchase of more EVs by MSWA, adding to the seven EVs ordered since early 2024.

### City of Bayswater – fleet charging

**Organisation:** The City of Bayswater is an LGA consisting of four town centres, with its closest boundary being 4km north east of the Perth Central Business District

**Site:** Paddy Walker City Depot in Bayswater and the Rangers and Security Station in Morley.

**Chargers:** Two 22kW single port EV chargers at each of the sites.

**Users:** Fleet

Total Charge Up grants: \$6,500 Total Project Costs: \$12,800

### Why the City chose to install EV chargers

The City of Bayswater chose to install EV chargers for its fleet as it is committed to reducing and mitigating the effects of climate change at a local level, including for its own operations. To help meet this target the City has been transitioning its fleet to hybrid vehicles since 2018 and started integrating EVs into its fleet shortly thereafter.

To help support an aim to further increase the number of EVs in its fleet, the City recognised the need for sufficient charging infrastructure, taking advantage of the Charge Up grants to make this next step.

### How the City designed its project

The City chose to initially install chargers at its City Depot to support fleet EVs already at the site. To determine what size charger(s) could be installed, the City consulted with electrical contractors to identify the available electrical capacity at the site. Following this a 22kW AC charger was selected based on ease of use, number of vehicles, vehicle types and provider recommendations.

The City followed the same process when looking to install EV charger(s) at its Security and Rangers Station, selecting one 22kW AC charger to support two existing operational fleet EVs at the site.



Image of EV outside of the Rangers and Security Station, Bayswater.

### Installation and Cost

After following this process, the City successfully received funding in Round 1 of Charge Up grants to install one single port 22kW AC charger at its Depot, and in Round 2 to install another 22kW AC charger at its Rangers Station.

See in the table below the rounded costs for purchasing and installing EV chargers and software, and funding received for each project.

Sites	Total (\$)	Grant (\$)
City Depot	\$6,900	\$3,600
Rangers Station	\$5,900	\$2,900
Total	\$12,800	\$6,500

### Outcome

As of 2024, the City of Bayswater's fleet of 35 vehicles consists of six EVs (three of these being plug-in hybrids), 23 hybrid vehicles and six internal combustion engine (ICE) vehicles. Following installation of the chargers, the infrastructure has been used by staff driving the EVs for operational purposes and as pool cars.

The City has taken advantage of off-peak charging to reduce the load on the electrical grid during peak demand times. The City expects use of the chargers to increase as its fleet evolves and grid capacity improves. The City will continue to transition to EVs when it is viable to do so.



### Shire of Katanning – Employee EV charging

**Organisation:** Shire of Katanning is an LGA in the Upper Great Southern District about 290km south-east of Perth.

**Site:** Shire Administration Building carpark, Katanning

Charger(s): Two dual port 22kW AC chargers

Users: employees and visitors

Total Charge Up grants: \$25,000

Total Project Costs: \$12,700



Images of charger and person EV charging at the Shire of Katanning Council Building. Images supplied by the Shire of Katanning in September 2024.

## Why the Council chose to install EV chargers

The Council wanted to install and operate its own EV chargers to better guarantee reliability, giving employees, residents and visitors the confidence to transition to EVs. The Council is also intending to replace its light fleet vehicles with EVs in the near future, requiring charging infrastructure to begin this transition. With executive backing, the Council decided to make the best use of the low-cost opportunity the Charge Up grants provided.

### How the Council designed its project

Prior to the Charge Up grants round, the Council had already identified that the car park attached to the council building was the ideal site to install charger(s) for employees and other visitors, as it was in the centre of town and close to businesses and amenities.

With this priority established, the Council engaged contractors on the <u>Approved List</u> to firstly identify the most cost-effective installation location for the chargers, close to the main switchboard. After working out installation costs, it was a straightforward process to identify that two AC chargers could be funded within the remaining project budget.

### Installation and Cost

The Council continued to engage with contractors to successfully install two dual port 22kW AC chargers, after being awarded grant funding in Round 1 of Charge Up grants. See in the table below the rounded costs for purchasing and installing EV chargers and software, and funding received.

Cost Item	Actual Cost (approx.)
Charger	\$12,000
Installation (incl. maintenance plan)	\$12,200
Software	\$800
Total	\$25,000
Grant	\$12,700

### Outcome

The Council promotes the chargers through its website and signage at the site. This signage is also used to communicate preferred usage times, encouraging drivers to charge at off-peak times during the day to take advantage of a solar system installed at the site. The Council hopes that the ability to charge during the day while working, visiting or running errands will encourage drivers to transition to EVs.

### 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.

**Duty cycle:** This refers to how you use your vehicle. Considering how often the vehicle is in use, how far it travels before returning to base, how critical to operations it is, whether it is parked in a depot overnight, what load(s) it carries, etc.

**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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