

# Drive electric NSW EV ready buildings



## Residential strata quick reference guide

Making a building EV ready refers to the process of retrofitting an existing building with the electrical infrastructure needed to connect electric vehicle supply equipment (EVSE) to allow electric vehicle (EV) charging at home.

It involves identifying a building's maximum electricity demand, the number of charging points that may be installed (now and in the future), the likely costs and funding sources, and any approvals that need to be granted.

Note: The owners' corporation (OC) and strata committee are responsible for developing an EV charging strategy, selecting the best option for their building, and ensuring the appropriate approvals are in place.

This guide summarises what considerations need to be made when connecting EVSE, which are outlined in detail on [www.energysaver.nsw.gov.au/electricvehicles](http://www.energysaver.nsw.gov.au/electricvehicles).

If you have any further questions email [electric.vehicles@environment.nsw.gov.au](mailto:electric.vehicles@environment.nsw.gov.au).



# Basic glossary

## **Connection**

The connection of the EVSE to the EV charging infrastructure.

## **Electrical capacity**

The maximum power or electricity that can be delivered through a connection point, such as the incoming connection to a building or a dwelling, without a circuit breaker or fuse acting to cut the supply in order to protect the installation from fire. Power is calculated from the current which is measured in Amps and may be single phase or three phase.

## **Electrical supply upgrade**

An upgrade to the electrical supply to the building, including main distribution panels, for which costs vary markedly. In every case a separate quote is required from the distributed network service provider (DNSP).

## **Energy management system (EMS)**

A computer-aided tool used by power system operators to monitor, control, and carry out optimal energy management. See also *load control*.

## **EV charging station**

EV supply equipment owned and installed on common property by the owners' corporation for shared use; includes all supporting EV charging infrastructure.

## **EV charging infrastructure**

The connection from the main distribution board to a sub-board, distribution box or any other device the owners' corporation has installed to facilitate the connection of EVSE to the common property electricity supply of the building. It includes load control, billing feeds and cable trays on common property to lots. EV charging infrastructure is normally common property and is owned by the owners' corporation (OC).

## **EV operator**

A company or organisation that provides EV charging services, including responding to

quotes, installation, maintenance and billing; many provide a 'turnkey' solution.

## **EV supply equipment (EVSE)**

A device used to connect an EV into the building electricity system for the purpose of charging the EV; normally owned and supplied by an EV owner.

## **Load control**

An approach or mechanism to ensure the peak electrical supply to the building is not exceeded, such as time shifting to off-peak, threshold control and demand management system (DMS). Includes energy management systems (EMS).

## **Owner**

For the purpose of this document refers to apartment owners.

## **Peak demand**

The maximum power in a period that is or has been delivered through a connection point. This is usually measured in kVA (kilo-volt-amps). Peak demand has a significant impact on commercial energy bills. Additionally, if peak demand exceeds electrical capacity, various protection mechanism like circuit breakers or fuses activate which will cut the energy supply.

## **Sustainability infrastructure**

NSW strata legislation requires that changes to common property – in this case changing the electrical services and/or infrastructure in your building – require specific steps to be taken as noted in [Section 108 of the Strata Schemes Management Act \(SSMA 2015\)](#).

You need to read this along with the [Strata Schemes Management Amendment \(Sustainability Infrastructure\) Bill 2020](#).

This categorises the installation of EV charging infrastructure as a sustainability infrastructure upgrade and replaces the special resolution previously required under section 108 of the SSMA 2015.

## Approach considerations when connecting EV supply equipment

There is no single approach, but the following considerations can help you select the right strategy for your building.

	Individual approach – no existing EV charging infrastructure	Individual approach – use existing circuits and meter	Shared common property car spaces approach	Modular approach	Whole of building
<b>When is it appropriate?</b>	Charging left to owners, and no distribution box or meter is adjacent to car spaces.	Charging left to owners, and distribution boxes and meter are adjacent to the car space.	OC is willing to assign shared common property car spaces for EV charging.	OC wants a planned collective approach for EV charging that is developed in stages.	OC wants to retrofit the building to be ready for all owners having EVs.
<b>How does it work?</b>	EVSE is in individual lots.  Owner installs and owns EV charging infrastructure and EVSE.	Owner installs and owns EVSE and uses existing electrical circuits.  Owner may have to pay for interlock switches to share existing circuits.	OC assigns some common property car spaces for shared EV charging.  Requires a scheduling system to manage resident use of the EV charging station.	EVSE is in individual lots.  EV charging infrastructure consists of modular EV readiness box(es). Each box supports charging for 6 EVs.	EVSE is in individual lots.  EV charging infrastructure is installed with the capability to service at least one existing resident car space per apartment.  Some common property car spaces may be assigned for shared EV charging.
<b>EV supply equipment (EVSE)</b>	Owned by resident and installed in their individual lot.	Owned by resident and installed in their individual lot.	Installed in common property car spaces, called an EV charging station and owned by the OC.	Owned by resident and installed in their individual lot.	Owned by resident and installed in their individual lot. Could include EVSE in common property car spaces and owned by the OC.

	Individual approach – no existing EV charging infrastructure	Individual approach – use existing circuits and meter	Shared common property car spaces approach	Modular approach	Whole of building
<b>Charging level and speed</b>	Level 1: 2.4-3.7 kW.  Level 2: up to 32 Amp/7.4 kW.	Level 1: 2.4-3.7 kW.  Level 2: up to 32 Amp/7.4 kW.	Level 2: up to 22 kW (3 phase).  Level 3: ‘fairly fast’ low level (50 kW dependant on the building’s electrical capacity).	Level 2: 16 Amp/3.7 kW.	Level 2: up to 32 Amp/7.4 kW.  Level 2: up to 22 kW (3 phase).  Level 3: ‘fairly fast’ low level (50kW dependant on the building’s electrical capacity).
<b>Recommended load control</b>	None, off peak timer or CT.	None, off peak timer or CT.	None, 24/7 operation.	Off peak timer.	DMS.
<b>Payment and usage billing options</b>	Agreement struck between OC and owner.  May require connection to the residents’ meter.	Existing meter.	Managed by OC or outsourced.	Billing feed from readiness box.  Managed by OC.	Billing feed from system.  Managed by OC or outsourced.
<b>Funding – capital cost</b>	Owner pays.	Owner pays.	OC pays. May recover costs via access fee.	OC pays. May recover cost over time from users. Owner pays for connection and EVSE.	OC pays. May recover cost over time from users. Owner pays for connection and EVSE.

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<b>Cost estimate including installation</b>  Note: Installation costs vary significantly between buildings	\$2,000 to \$20,000 including EVSE.	\$2,000 to \$10,000 including EVSE.	\$20,000 to \$50,000 including EVSE.	\$5,000 to \$7,000 per box for the EV charging infrastructure.  \$2,000 to \$3,000 per connection, including EVSE.	\$75,000 to \$200,000 for the EV charging infrastructure.  \$2,000 to \$3,000 per connection, including EVSE.
<b>Approvals requirement</b>	Owner requests sustainability infrastructure resolution and by-law.	Owner requests sustainability infrastructure resolution and by-law.	OC requests sustainability infrastructure resolution and by-law.	SC, on behalf of the OC, requests sustainability infrastructure resolution and by-law for EV charging Infrastructure.  Owner requests sustainability infrastructure resolution and by-law to connect to EV charging infrastructure.	SC, on behalf of the OC, requests sustainability infrastructure resolution and by-law for EV charging infrastructure.  Owner requests sustainability infrastructure resolution and by-law to connect to EV charging infrastructure.
<b>Recommended example motion and by-law</b>	EV charging – single lot.	EV charging – single lot.	EV charging – OC installation and management.	OC Network by-law.	OC Network by-law.
<b>Installation and maintenance</b>	Generally, an independent electrician.	By an independent electrician.	By a turnkey supplier.	By an independent electrician.	By a turnkey supplier.

# Drive electric NSW



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