

Electric Vehicle Charging Infrastructure Policy

July 2024

What are electric vehicles?

Electric vehicles (EVs) are cars or other vehicles that are propelled by motors that are powered by electricity, unlike conventional internal combustion engine vehicles that use liquid fuels.

The following provides a brief description of each of the vehicle categories:

















Conventional Vehicle: Also referred to as an Internal Combustion Engine (ICE) vehicle, is the standard vehicle type widely known and used since the invention of the motor vehicle. The fuel source for most ICE vehicles is petrol, diesel or gas, with some able to utilise renewable fuels such as ethanol. It is not an EV.

Non-plug-in hybrid EVs (HEVs): Instead of using an external plug to charge the vehicle, the electricity generated by the HEV's braking system is used to recharge the battery. This is called 'regenerative braking'.

Plug-in hybrid electric vehicles (PHEVs): These vehicles are powered by a combination of fuel and electricity. They can be charged with electricity using a plug but also contain an internal combustion engine that uses liquid fuel.

Battery electric vehicles (BEVs): These vehicles are fully-electric, meaning they are solely powered by electricity and do not have a petrol, diesel or LPG engine, fuel tank or exhaust pipe. BEVs are also known as 'plug-in' EVs as they use an external electrical charging outlet to charge the battery.

Fuel cell electric vehicles (FCEVs): These vehicles use a fuel cell instead of a battery, or in combination with a battery or super capacitor, to power their electric motors. FCEVs are typically fuelled by hydrogen.

		Energy Sources	Consumption	Emissions
Conventional				
Hybrid				
Plug-In Hybrid				
All-Electric				

Electric vehicles in Australia

Electric vehicle uptake in Australia is currently lower than other developed countries but EV uptake is growing at a rapid rate despite price parity with conventional vehicles still being some time away.

About 2% of new vehicle sales in 2021 were electric vehicles, increasing to 8.4% in June 2023. Currently, about 2.9% of vehicles registered in the City of Maribyrnong are electric vehicles, with only 0.5% of these BEVs. Various EV ownership projections forecast that the percentage of EV ownership will increase in the coming years.

The benefits of EVs include reduced running and maintenance costs, enhanced energy security, reduced air pollution (with associated health benefits) and an improved driving experience.

Emerging Trends and Factors

Several trends have been identified that will be important to consider in the development of a public charging network including:

- Greater variety and range of EV vehicle types on the market, including the emergence of a second hand market for used vehicles.
- Extended range of EV Vehicles
- More vehicles capable of 'Ultra Fast' charging
- Emergence of Vehicle to Grid (V2G), Vehicle to Home (V2H) and Vehicle to Load (V2L) capabilities which is enabling greater flexibility with how stored energy is used, enhanced resilience and grid stability.

*Source: Source: Maribyrnong EV Charging Electrical Scoping Study – Final Report
December 2023*

Introduction

Maribyrnong City Council (MCC) has a commitment to prioritising sustainable transport and supports the transition to zero emissions vehicles. As well as improving cycling infrastructure and pedestrian pathways, Council will facilitate and support EV charging infrastructure projects to encourage the uptake in EV ownership across the municipality. (*Source: Maribyrnong City Council, Climate Emergency Strategy 2020-2024*).

Electric vehicle ownership is rising rapidly in Australia with national sales of new EVs rising from 2% in 2021 to 8.4% in June 2023. In the City of Maribyrnong, estimates show that EV ownership is expected to rise to around 15,000 vehicles by 2035 (one in 5 vehicles), or as high as 33,500 (1 in 2 vehicles) under a more optimistic projection*.

Access to charging infrastructure is one of the key considerations in people's decision to purchase an EV. Many residents in Maribyrnong do not have access to off street parking, and there are many apartments where the strata rules for parking will make it challenging to install EV charging. It is estimated that as high as 50% of dwellings could have challenges charging EVs on or near the premises*. This means that in many cases, residents seeking to own an EV will be reliant on the public charging network. (**Source: Maribyrnong EV Charging Electrical Scoping Study - December 2023*)

Implementation of EV charging infrastructure is a fundamental step towards the wide-scale uptake of EVs. Benefits include:

- reduced dependency on petroleum
- reduced emissions and improved air quality
- future proofing transport/mobility
- data insights and utilisation
- lower running costs
- lower noise pollution

Policy Objectives

Key objectives of this policy are to:

- Encourage and facilitate the coordinated roll-out of a variety of EV charging infrastructure across Maribyrnong ensuring convenient access to public EV charging options for all residents and visitors.
- Inform local residents, businesses and investors about Council's role and how to seek further guidance.
- Facilitate consistent and timely responses to community and stakeholder enquiries.

Related Strategies & Policies

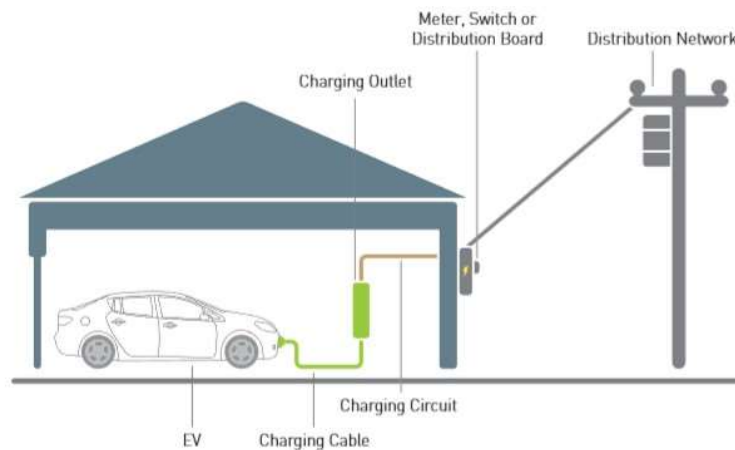
- Climate Emergency Strategy 2020-2025
- Smart City for Smart Communities: Smart City Strategic Framework – 2022
- Zero Carbon Maribyrnong

- Air Quality Improvement Plan
- Maribyrnong Planning Scheme
- City Design Manual
- Local Laws (Parking)
- Asset Management Policy
- Procurement Policy 2019
- Fleet Vehicle Policy
- Maribyrnong Parking Management Policy
- Bicycle Strategy 2020

EV Charging Infrastructure

The most simplistic description of EV charging infrastructure is a place an EV can park and charge its battery while not in use. Different people have different needs for EV chargers depending on their circumstances, as indicated in figure 2 below. There are also different scenarios where EV charging infrastructure can be installed. All scenarios require a different approach.

Figure 1: Basic Description of EV Infrastructure



Source: *Creating a Market: Victorian Electric Vehicle Trial Mid-Term Report: Transport.Vic.Gov.Au*

Figure 2: Types of People looking to charge Electric Vehicles



Source: Institute for Sensible Transport

Private Residence – Private Use

In most instances, installation of EV charging infrastructure within a private residence, exclusively for private use, will not require approval from Council. Residents should ensure any installation meets relevant Australian Standards for electrical works and safety.

Installation of EV charging infrastructure may, in some instances, have implications on heritage streetscapes. Residents should seek further advice from Council's City Planning Department if the residence is subject to heritage or other requirements and proposed infrastructure will be viewed from the street.

Currently, there are no legal options for residents without off-street parking to charge their EVs at home. Residents are not permitted to run an electrical cable across or under the footpath to charge their vehicle as it is a tripping and safety hazard.

Council understands this is a complex issue and is monitoring developments and exploring possible solutions that could be suitable for our municipality that balance the needs of the community. Where and when the opportunity arises, Council will work with private sector providers to trial paid on-street charging in residential areas with constrained private charging access. This will need to be cost neutral to Council and avoid negative impacts on the public domain including footpaths and planting.

Council has a commitment to supporting a transition to electric vehicles. One of 6 key priority areas in Council's Climate Emergency Strategy 2020-2025 states:

"Prioritise zero emissions and sustainable transport, support transition to electric vehicles and phase out fossil fuel powered vehicles"

Council encourages the community to transition to a zero carbon transport municipality.

Private Residence - Under Lease

Installation of EV charging infrastructure at a residence under lease would be subject to the terms and conditions of the lease, and again, in most instances, would not require Council approval. As above, advice from Council should be sought if the site has heritage or other controls.

Existing Commercial/Industrial Premises – Private and Public Use

Council encourages the installation of EV charging infrastructure at existing commercial/industrial premises, both for private and public use (as determined by the responsible person/entity). In most instances, Council approval will not be required to progress such installations. However, installers are required to ensure industry standards are met.

New Developments – Commercial/Industrial/Residential

The National Construction Code (NCC) requires more new buildings to be EV-ready. An EV-ready building has electrical infrastructure in place to facilitate the installation of EV charging units. According to Energy Victoria, “(commencing in Victoria on 1 May 2024) there must be space for switchboards and EV charging infrastructure in new builds for:

- 100% of parking car spaces in apartment buildings
- 10% of spaces in offices and retail
- 20% of spaces in other commercial buildings.

Having more buildings EV-ready will make it easier for business and residents in the future to EV charging units.

Council Owned Land

On behalf of the community, Council owns, maintains and manages a wide array of public land (e.g. kerbsides, parks, sporting facilities, on-street/ off-street car parking facilities). Council encourages proposals to install EV infrastructure on Council owned or managed land. In such instances, proposals would be subject to:

- Suitability of the site for hosting a public EV charger including an assessment of:
 - the proposal's community/commercial benefit;
 - the site's proximity to amenity that can be utilised while the car is charging (public parks, shops, community spaces)
 - potential future uses for the site that might be impacted by the proposal;
 - project costs (both financial and non-financial);
 - any other associated risks.
- Adherence to all Council requirements, including the City Design Manual, and procurement requirements (if relevant).
- Comparison to other EV charging options, with the goal being to have a variety of charging speed options available across the municipality.

Council does not have an allocated budget for investing in, or subsidising, EV charging infrastructure, and expects the private sector to lead investment opportunities.

However, Council is investigating options for the market to provide public EV charging through mechanisms such as Expressions of Interest and other procurement initiatives.

Council will also consider changing parking restrictions and/or allowing EV charging infrastructure on public land (including on street) where the location meets the below criteria.

Council expects all proposals for EV charging infrastructure on public land would ensure:

- Consultation with energy provider, utilities, and site specific stakeholders (including regular users, neighbouring residents and businesses)
- Public accessibility of the EV charging infrastructure
- Consideration of all-abilities access to the infrastructure
- Full life-cycle responsibility for infrastructure, from installation, operation, maintenance and removal
- Adherence to best-practice service standards, relating to reliability, safety, customer service, etc.

Enforcement of public EV charger parking restrictions

Public EV chargers will be sign-posted with the appropriate signage that enables the spaces to be enforced by Council's Local Laws officers. This approach ensures that the chargers are used for their intended purpose, and that there is good turnover for the spaces to allow the next user to access the charger.

Council will not provide nor enforce signage which dedicates public (on-street) parking spaces to individual occupants.

EV Infrastructure Opportunities

Council Fleet

Council is currently exploring options for modernising their vehicle fleet, which may include increasing EV numbers. To support EV fleet vehicles Council will integrate EV charging infrastructure into new and existing Council buildings as they are renewed and subject to budget.

Council Buildings

Council will install EV charging infrastructure at Council owned buildings and facilities to service Council fleet requirements. Where appropriate, the public will also have access to this infrastructure.

Any new Council buildings or significant refurbishments should factor in EV Charging to the design and ensure the facilities are future proofed for the transition to dominant use of electric vehicles.

EV Infrastructure Information Sharing

There are a number of online EV charging site databases enabling the public to be informed where EV charging infrastructure is available. Council will work with EV infrastructure owners to enable broad knowledge of infrastructure.

Policy Duration

Due to the ever-evolving nature of EVs and changes in technology, this policy is scheduled to be reviewed after four years to ensure any sector/industry changes are addressed. If there are changes to the sector that impact on the efficacy of this policy, then the review can be brought forward to address the change.

Further Information

For further information about this policy please contact Maribyrnong City Council on 9680 0200.