



Government of Western Australia
Energy Policy WA

Licence Exemptions - Electric Vehicle Charging Stations

Extension of exemptions – 2021 to 2024

Information Paper

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1. Introduction

1.1. Purpose and scope

Purpose

The Electricity Industry Exemption Order 2005 (the Exemption Order) presently includes provision for electricity retail and distribution licence exemptions for persons who operate or construct an electric vehicle charging station and/or sell electricity at a charging station in Western Australia¹. These exemptions expire on 30 June 2021.

As a part of a one-year extension of these exemption arrangements from 1 July 2020, Energy Policy WA committed to carrying out a review of the future regulation of electric vehicle charging stations². This paper incorporates Energy Policy WA's action item in the State Government's *State Electric Vehicle Strategy for Western Australia*³ (Electric Vehicle Strategy) to undertake a process to evaluate future regulation of electric vehicle charging infrastructure. A more comprehensive review of consumer protections associated with public charging stations will be considered in coming years as the uptake of electric vehicles increases.

This paper outlines the rationale for Energy Policy WA's proposal that a further three-year extension to these licence exemptions should be granted to 30 June 2024, on the basis that the electric vehicle industry remains at an early stage of development in Western Australia. This extension will provide stakeholders with regulatory certainty while an alternative governance arrangement is considered to provide additional consumer protections for recipients of these services.

Energy Policy WA intends to work with consumer and industry stakeholder throughout the extension period to consider the potential for a new Alternative Electricity Services (AES) Code for electric vehicle charging stations. This Code would form part of the registration framework proposed as an outcome of the Retail Electricity Licensing and Exemptions Review⁴ (Retail Licensing Review) conducted by Energy Policy WA. This paper provides an overview of the electric vehicle industry and current regulatory arrangements in Western Australia and an indication of the additional consumer protections that Energy Policy WA considers to be necessary for consumers using charging station services.

Scope

The scope of the existing licence exemptions and this paper are the regulatory arrangements for the distribution and sale of electricity at electric vehicle charging stations in a variety of scenarios involving public places, such as along a highway or in a car park⁵.

¹ [Electricity Industry Exemption Order 2005](#), clause 19.

² Energy Policy WA, *Licence Exemption – Electric Vehicle Charging Stations - Information Paper*, p.3.

<https://www.wa.gov.au/government/announcements/electric-vehicle-charging-stations-licence-exemptions>

³ Department of Water and Environmental Regulation, 2020, *State Electric Vehicle Strategy*

https://www.wa.gov.au/sites/default/files/2020-11/State_Electric_Vehicle_Strategy_for_Western_Australia_0.pdf

⁴ <https://www.wa.gov.au/organisation/energy-policy-wa/review-of-licensing-and-exemption-regulatory-framework>

⁵ This includes a car park that may be privately owned and operating for profit by providing parking services while also charging and discharging batteries in electric vehicles.

In Western Australia, electric vehicle charging stations are considered to involve the distribution of electricity, meaning that any form of regulation must consider matters pertaining to the distribution and retailing of electricity. This interpretation sets Western Australia's regulatory approach apart from other Australian jurisdictions where electric vehicle charging stations are not considered to involve the distribution of electricity.

The Exemption Order does not apply to the regulation of charging stations located at homes and businesses where the electricity used to supply an electric vehicle is part of the general electricity supply for the home or business. In this situation, the charging point is simply another device within the premise⁶.

As indicated in Section 3.1 of this paper technical and safety matters related to the installation and operation of electric vehicle charging stations are governed by separate legislation and are therefore outside of the scope of this paper.

1.2. Learnings from other review processes

This paper is informed by:

- The Distributed Energy Resources Roadmap (DER Roadmap)⁷, a five-year plan to guide the integration of distributed energy resources, such as electric vehicles, into the Western Australian electricity sector and ensure the benefits are shared across all members of the community.
- Energy Policy WA's Retail Licensing Review, which reviewed the regulatory framework for electricity retail licensing and exemptions. The objective of the Review was to identify a preferred regulatory framework that facilitates businesses providing AES while ensuring consumers of those services have adequate consumer protections⁸. The Review was completed in January 2021 and actions are underway to implement the proposed new registration framework.
- The State Government's Electric Vehicle Strategy, which was developed to prepare for the transition to low and zero-emission electric vehicles and maximise the benefits of the transition to the State.
- Australian Energy Market Commission (AEMC) reports⁹ and working groups, which consider how customers, new business models and networks can derive value from electric vehicles.

⁶ This is distinct from an electric vehicle charging station located in the common use area of an apartment or strata dwelling where the service may otherwise require licence exemptions to operate as discussed further in this paper.

⁷ Energy Transformation Taskforce, *Distributed Energy Resources Roadmap* (2020).
<https://www.wa.gov.au/government/publications/der-roadmap>.

⁸ Energy Policy WA, *Final Report - Tailoring customer protections for alternative electricity services – a registration framework* (2020). <https://www.wa.gov.au/government/announcements/new-customer-protections-alternative-electricity-services>

⁹ For example, the AEMC's *2020 Retail Energy Competition Review*.
<https://www.aemc.gov.au/market-reviews-advice/2020-retail-energy-competition-review>.

1.3. Next steps

The timeline for implementation of the proposed extension of the licence exemption arrangements, subject to endorsement by the Minister for Energy, and other proposed actions is detailed below:

Milestone	Indicative Timing
Information Paper on extension of the licence exemptions	April 2021
Minister for Energy endorsement of extension of licence exemptions	April 2021
Drafting of regulatory amendments to extend licence exemptions and consideration by Governor in Executive Council	May - June 2021
Extension of licence exemptions takes effect	1 July 2021
Commence further review and consultation on the regulation of electric vehicle charging stations	2023
Development and stakeholder consideration of potential AES Code for electric vehicle charging station services	2023-24

2. Market overview

The continued development of the electric vehicle industry in Western Australia provides an opportunity for the economy to reduce greenhouse emissions, improve efficiencies in the transportation and energy sectors, and support growth in the minerals sector as it supplies critical inputs for electric vehicle manufacturing such as nickel, lithium and copper.

2.1. Electric vehicle uptake

As the uptake of electric vehicles impacts the demand for electric vehicle charging stations the data detailed below is provided to assist an understanding of the potential market for charging station services in Western Australia over the short to medium-term.

In 2019, electric vehicle sales in Australia increased by 200% with the sale of 6,718 vehicles accounting for 0.6% of all new car sales¹⁰, taking the total electric vehicle fleet registered for use on Australian roads to 14,253 at 31 January 2020¹¹. In the first half of 2020, over 3,000 electric vehicles were sold nationally¹².

Forecasts for electric vehicle uptake are largely driven by their purchase price premium over internal-combustion engine vehicles. The Commonwealth Scientific and Industrial Research Organisation (CSIRO) has suggested that purchase price parity for short-range electric vehicles could be reached in 2030¹³.

In Western Australia, around 1,600 light electric vehicles were registered as at 31 December 2020, with about two-thirds of these vehicles being battery-electric and one-third hybrid-electric¹⁴.

The Australian Energy Market Operator (AEMO) has forecast that the uptake of electric vehicles in Western Australia will increase markedly in 2024-25 to around 3,400 vehicles, with the number of vehicles broadly doubling each year thereafter to 2028-29¹⁵. These estimates indicate that while the number of electric vehicles will continue to steadily increase, the total fleet will remain at less than 1% of all licensed vehicles in Western Australia over the coming decade. This level of uptake could however exceed expectations, including as a result of any changes to State or Federal Government policies and incentives.

Outside of the small use passenger market, other electric vehicle trials are being undertaken. In the northern Perth suburb of Joondalup the Central Area Transit (CAT) is to include a trial of electric bus vehicles from early 2022¹⁶. Transperth and Volvo's existing 900 bus supply agreement will see four electric buses delivered in 2021¹⁷.

¹⁰ Electric Vehicle Council, *State of Electric Vehicles* (August 2020), p. 13, <https://electricvehiclecouncil.com.au/reports/state-of-electric-vehicles-2020/>

¹¹ <https://www.abs.gov.au/articles/electric-vehicle-registrations-almost-double>

¹² Electric Vehicle Council, *State of Electric Vehicles* (August 2020), p. 13, <https://electricvehiclecouncil.com.au/reports/state-of-electric-vehicles-2020/>

¹³ Graham PW and Havas L, *Projections for Small-scale Embedded Technologies* (June 2020), CSIRO, pp. 37-38. Based on the moderate scenario.

¹⁴ Department of Transport figures.

¹⁵ AEMO 2020 Wholesale Electricity Market Statement of Opportunities p. 52, per the expected scenario, available at www.aemo.com.au.

¹⁶ <https://www.mediastatements.wa.gov.au/Pages/McGowan/2020/07/Electric-bus-trial-for-Joondalup-CAT-route.aspx>

¹⁷ Electric Vehicle Council – *State of Electric Vehicles* (August 2020), p. 34, <https://electricvehiclecouncil.com.au/reports/state-of-electric-vehicles-2020/>

In another trial, mining company BHP and car manufacturer Toyota have partnered to test the performance of an electric vehicle at BHP's Nickel West operations in Western Australia's Goldfields region¹⁸. Homewares retailer IKEA is converting its delivery vehicles to electric as part of a global commitment to move to 100% electric fleets by 2025¹⁹. Other companies are increasingly looking to make similar commitments.

2.2. Charging infrastructure

In its August 2020 report, *State of Electric Vehicles*, the Electric Vehicle Council reported that Australia had 2,307 public charging stations, including 357 fast charge stations at 157 locations across Australia. Fast-charge stations can charge an electric vehicle from zero to 100% charge in approximately 30 minutes²⁰.

In Western Australia there are around 200 public charging stations. The majority of these are slow-charge (referred to as level two or medium speed). Less than 10% of public stations in Western Australia are fast-charge stations²¹.

The Royal Automobile Club of Western Australia (RAC) Electric Highway offers fast charging at 11 locations across Perth and the south-west of the State. The stations were funded by RAC members and are now owned and operated by the relevant local government.

2.3. State Electric Vehicle Strategy

In November 2020, the Western Australian Government released the 'State Electric Vehicle Strategy for Western Australia'²² to prepare for the transition to low and zero-emission electric vehicles and maximise the benefits to the State.

The Electric Vehicle Strategy outlines electric vehicle support measures including up to \$20 million for a public charging infrastructure network and a minimum 25% procurement target for eligible government fleet vehicles.

The Western Australian Electric Vehicles Working Group will assist in implementing the Strategy. The Group is chaired by Department of Water and Environmental Regulation and comprises representation from Synergy, the RAC, Western Power, Energy Policy WA and the Department of Transport.

¹⁸ <https://www.bhp.com/media-and-insights/news-releases/2021/01/bhp-and-toyota-partner-for-light-electric-vehicle-trial/>

¹⁹ <https://thedriven.io/2020/09/30/ikea-charges-ahead-with-ev-chargers-for-customers-and-staff/>

²⁰ Electric Vehicle Council – *State of Electric Vehicles* (August 2020), p. 7, <https://electricvehiclecouncil.com.au/reports/state-of-electric-vehicles-2020/>

²¹ Ibid p. 38.

²² Department of Water and Environmental Regulation, 2020, State Electric Vehicle Strategy https://www.wa.gov.au/sites/default/files/2020-11/State_Electric_Vehicle_Strategy_for_Western_Australia_0.pdf

2.4. Customer Interface

Charging behaviour

Research commissioned by the Western Australian Electric Vehicles Working Group estimates that between 10% and 20% of Western Australian charging events occur at public charging stations, with the remainder occurring at homes overnight or at workplaces during the day²³. In May 2018, it was found that approximately 30% of electric vehicle drivers do not have access to chargers at home or in the workplace and instead rely on public charging stations²⁴.

Business models

There are a variety of business models being developed in the electric vehicle charging industry. Business models differ largely in the manner of charging for electricity services, such as on a cost recovery basis, for profit or as a complimentary service that may be used to attract customers or increase patronage of nearby businesses.

Customers at public charging stations usually pay fixed and variable charges and transact by card, use of an app or cash. Station operators may require customers to be members of their network to utilise charging services. Users must transact using the ChargeFox app²⁵ to charge using Western Australia's RAC Electric Vehicle Highway. Other public stations may not have a transaction terminal and instead charge customers as part of a related transaction, such as for paid parking services.

Bidirectional functionality

Charge and discharge stations do not currently exist as a publicly available service in Australia, and only one vehicle type on the market in Western Australia includes this capability.

Bidirectional charging allows customers to not only charge a battery, but to also use the batteries to provide electricity back into the power grid, which can help balance momentary spikes in electricity demand. This 'vehicle-to-grid' feature is likely to have increasing importance over time as electricity generation shifts towards supplies being made by distributed energy resources.

The benefits of discharging from an electric vehicle to the grid are beginning to be assessed in Australia under trial conditions. In the Australian Capital Territory, for example, the Realising Electric Vehicle-to-Grid Services project will assess the benefit of 51 Nissan Leaf vehicles providing frequency control ancillary services²⁶. Bidirectional charging provides an opportunity to coordinate other embedded generation and loads with innovative energy management systems at a local level.

²³ Braul T et al, Electric Vehicle Infrastructure Strategic Planning (2018), pp. 7 and 20, <https://research-repository.uwa.edu.au/en/publications/electric-vehicle-infrastructure-strategic-planning>

²⁴ Energeia, *Electric Vehicle Market Study* (May 2018), p. 4, <https://arena.gov.au/knowledge-bank/australian-electric-vehicle-market-study/>

²⁵ RAC, *RAC Electric Highway*, <https://rac.com.au/>

²⁶ Australian Renewable Energy Agency, *Realising Electric Vehicle-to-Grid Services*. <https://arena.gov.au/projects/realising-electric-vehicle-to-grid-services/>

Western Power and Horizon Power facilitate vehicle-to-grid discharge subject to connection requirements²⁷, however Energy Policy WA is not aware of any commercial vehicle-to-grid products being available at public charging stations in Western Australia.

While bidirectional chargers are becoming more available in Australia, widespread adoption is not expected in the short term.

Charging station scenarios

Electric vehicle charging stations can be located and used in a variety of situations, as illustrated in Figure 1. While home chargers have been included in the figure below for completeness, they are outside the scope of this paper.

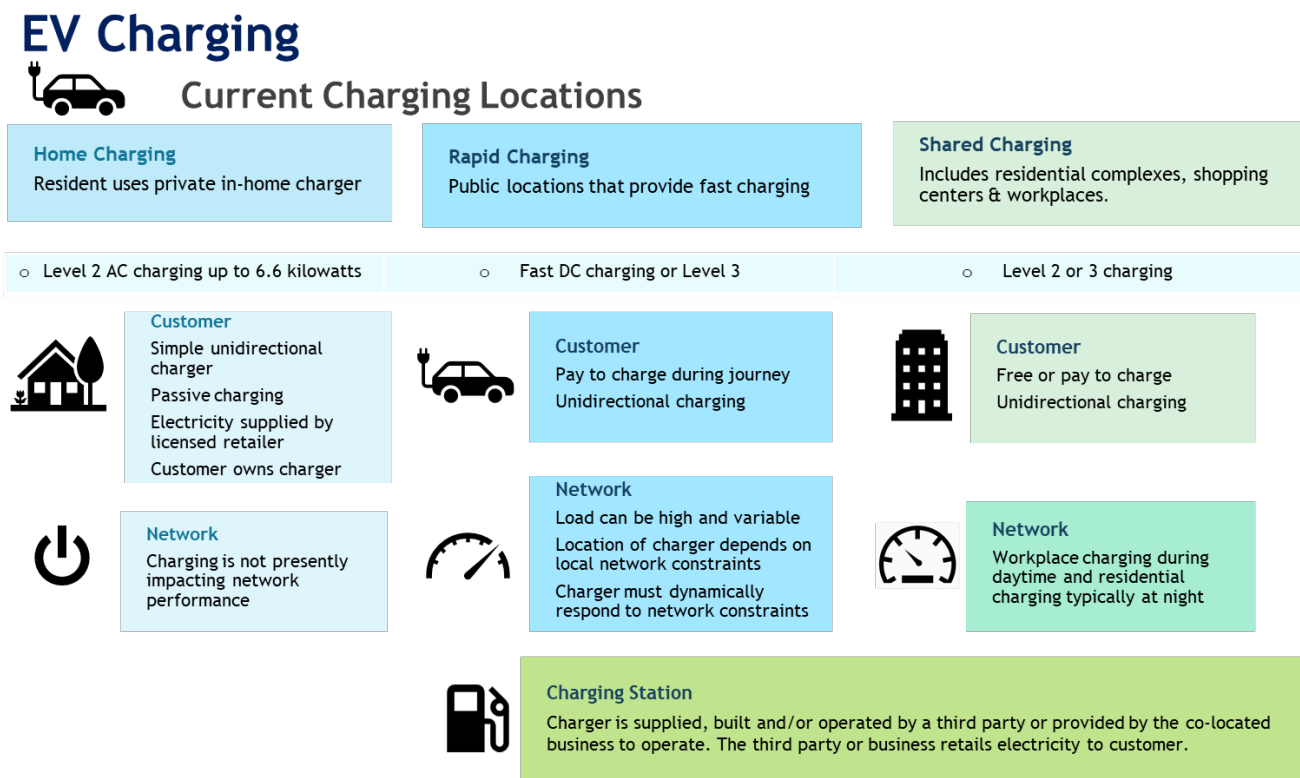


Figure 1 Electric vehicle charging station scenarios – compiled by Energy Policy WA.

²⁷ Western Power, <https://westernpower.com.au/connections/solar-batteries-electric-vehicles/electric-vehicle-to-grid-system/>;
 Horizon Power, <https://horizonpower.com.au/solar/technical-requirements/>

There are also a number of ways in which the charger interacts with customers, the electricity network and the electricity market, as illustrated in Figure 2.

EV Charging



Present and Future Charging Types

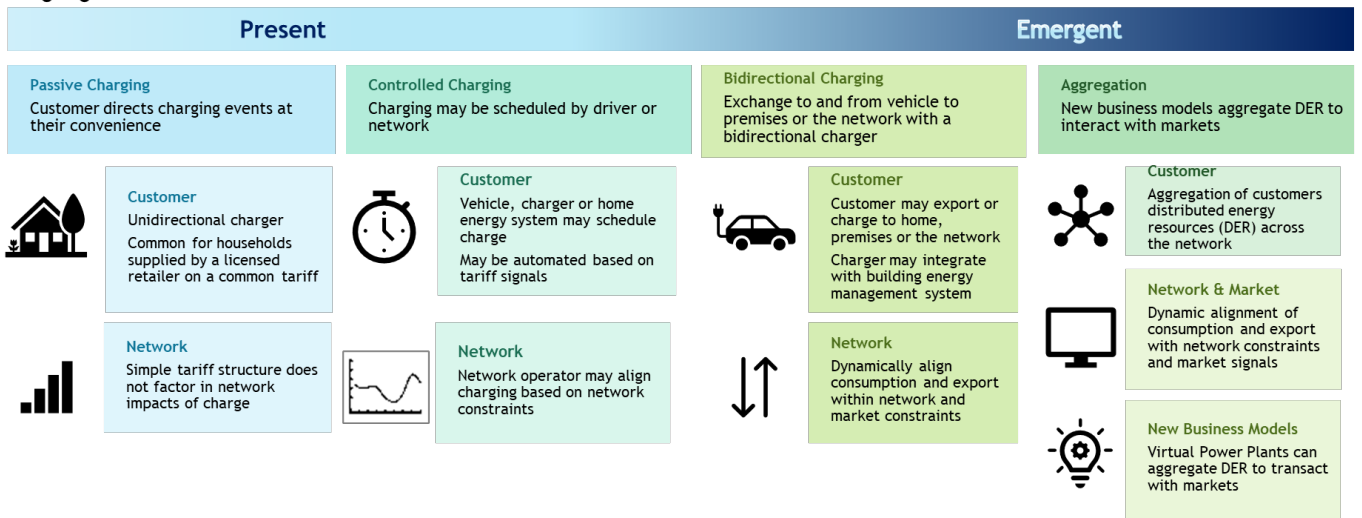


Figure 2 Description of available and future charging types and their interaction with customers, the electricity network and electricity market – compiled by Energy Policy WA.

Findings

- While uptake is increasing, the number of battery and plug-in hybrid vehicles registered in Western Australia is expected to remain low to 2024-25.
- The type of business models adopted by electric vehicle charging station operators indicate an early development stage.
- Bidirectional charging in Australia is constrained by the availability of capable electric vehicles and chargers.

3. Regulatory frameworks

3.1. Western Australian framework

Electricity Industry Act

The *Electricity Industry Act 2004* (the Electricity Industry Act) requires a person who constructs or operates an electricity distribution system or sells electricity to hold a distribution or retail licence respectively, or an exemption from the requirement to hold a licence.

In Western Australia, an electric vehicle charging station is considered to contain a distribution system, as well as having a retailing function. This means that a charging station operator must either hold a distribution licence or be exempt from the requirement to hold a licence, as well as holding a retail licence or exemption.

The Governor, by Order, may grant a licence exemption following a public interest test. The test considers matters such as the interests of customers and licensees, economic impacts and environmental considerations. The Governor may attach conditions to an exemption that a person must satisfy to remain exempt.

Electricity Industry Exemption Order

The Exemption Order²⁸ provides exemptions from the requirement to be licensed for a range of activities including self-supply at remote mine sites, operations under various State Government agreements and electricity on-supply at residential and commercial properties. The Electricity Industry Act does not establish a formal compliance or reporting framework for electricity licence exemptions.

The Exemption Order provides an electricity distribution licence exemption for a person who constructs or operates a distribution system in an electric vehicle charging station, and a retail licence exemption for a person who sells electricity at an electric vehicle charging station. The exemptions were implemented in 2012 and have been progressively extended. The exemptions will expire on 30 June 2021²⁹. The Exemption Order does not impose conditions on charging station operators, such as requiring them to provide consumer protections, nor does it contemplate emerging business models such as vehicle-to-grid discharge from an electric vehicle.

Energy Policy WA administers the licence exemption arrangements and provides advice to Government on proposed new licence exemptions or the renewal of existing exemptions.

Other regulatory requirements

In addition to the requirements under the licensing and exemption framework, charging stations are subject to technical and safety requirements. The technical requirements for a charging station connecting to an electricity network sit outside the licence and exemption framework. A network operator, such as Western Power or Horizon Power, imposes obligations on charging station operators that connect to its network. For charging stations located in embedded networks, the owner of the network will have in place its own technical requirements.

Electrical safety requirements are regulated under various instruments overseen by the Building and Energy Division of the Department of Mines, Industry Regulation and Safety.

²⁸ [Electricity Industry Exemption Order 2005](#)

²⁹ *Ibid*, clause 19.

The Australian Consumer Law (ACL) also provides consumer protections in some circumstances, including protection against misleading or deceptive conduct, unconscionable conduct and unfair practices.³⁰

Regulatory compliance

Energy Policy WA and the Consumer Protection branch of the Department of Mines, Industry Regulation and Safety have not received any complaints from persons that have transacted with a charging station in Western Australia since the licence exemptions commenced in 2012.

3.2. Other frameworks

National Energy Customer Framework

The National Energy Customer Framework (NECF) is a suite of legal instruments that regulate the sale and supply of electricity and gas to retail customers. The main NECF instruments are the National Energy Retail Law (NERL), the National Energy Retail Rules and the National Energy Retail Regulations.

The NECF applies in Australian Capital Territory, New South Wales, Queensland, Tasmania and South Australia.

Under the NERL, a person selling electricity or gas to a small customer³¹ must hold a retailer authorisation. However, a person engaging in certain activities may be eligible for a retail exemption.

The Australian Energy Regulator (AER) administers retailer authorisations and exemptions from the requirement to hold a retail authorisation. The Retail Exempt Selling Guideline sets out the AER's approach to retail exemptions³².

Regulation of electric vehicle charging stations

The NERL states that any person who sells energy “to a person for premises” is required to have a retailer authorisation or hold an exemption³³.

The AER considers that “to a person for premises” captures an electric vehicle charging station at a home or small business but does not apply to commercial charging stations³⁴. Based on this view, a charging station operator does not need to hold a retailer authorisation or an exemption to sell electricity to consumers (at commercial charging stations).

³⁰ 2019 AEMC Retail Energy Competition Review, page 175, <https://www.aemc.gov.au/market-reviews-advice/2019-retail-energy-competition-review>

³¹ Small customers are defined in jurisdictional instruments.

³² Australian Energy Regulator, <https://www.aer.gov.au/retail-markets/guidelines-reviews/retail-exempt-selling-guideline-march-2018>

³³ National Energy Retail Law, clause 88, www.legislation.sa.gov.au

³⁴ AER Draft advice – Energy Market Frameworks for Electric and Natural Gas Vehicles <https://www.aer.gov.au/system/files/Energy%20market%20arrangements%20for%20electric%20and%20natural%20gas%20vehicles%20%28draft%20report%29%20-%20202%20October%202012.pdf>

Electric vehicle charging stations are not considered to be operating a distribution network under the NECF. In contrast to Western Australia, the AER considers that the supply of electricity from a charging facility to a vehicle is a service to the transport sector, which is not regulated by the AER³⁵. The network operator will determine the metering arrangements and no additional regulatory requirements are imposed.

If an electric vehicle charging station is not directly connected to the national electricity network, and instead is connected to a private network then an exemption may be required³⁶. Electric vehicle charging facilities are a deemed exemption category under the AER Network Service Provider Exemptions. An example might be a shopping centre that allows a vehicle leasing company to install a charging system that can be used by members of the public. An exemption is required by the shopping centre because its exempt network sits between the distributor and the charging facility.

The key differences between Western Australia and the other Australian jurisdictions is that in Western Australia, charging stations are assessed as distributing and selling electricity and are therefore subject to electricity-specific regulations. In most other Australian jurisdictions, charging stations are considered as being part of the transport sector and are not covered by electricity-specific regulation.

International arrangements

In some countries, the uptake of electric vehicles has been higher than in Australia. The regulatory arrangements in these jurisdictions may assist in informing Western Australia's future regulation of charging station services.

The regulatory frameworks for electric vehicle charging stations in California and the United Kingdom are described briefly below.

California

As at the end of 2019, California had around 550,000 registered battery electric and plug-in hybrid electric vehicles³⁷. On 30 September 2020, there were around 67,000 public and shared private chargers³⁸.

To improve customer access to public charging stations, regulations are being implemented in a staged process to³⁹:

- prohibit charging station operators from requiring a customer to be a member of a billing network to charge;

³⁵ Australian Energy Regulator, Guideline – Exemption from registration as network service provider, Version 6, March 2018, p. 52 <https://www.aer.gov.au/networks-pipelines/guidelines-schemes-models-reviews/network-service-provider-registration-exemption-guideline-march-2018>

³⁶ Australian Energy Regulator, Guideline – Exemption from registration as network service provider, Version 6, March 2018, p. 30 <https://www.aer.gov.au/networks-pipelines/guidelines-schemes-models-reviews/network-service-provider-registration-exemption-guideline-march-2018>

³⁷ California Energy Commission, <https://www.energy.ca.gov/data-reports/energy-insights/zero-emission-vehicle-and-charger-statistics>

³⁸ California Energy Commission, Assembly Bill 2127 – Electric Vehicle Charging Infrastructure Assessment, 2021 <https://afdc.energy.gov/publications/search/keyword/?q=evs>, p. 2.

³⁹ California Legislature, Electric Vehicle Charging Stations Open Access Act, and additional rule making by the California Air Resources Board (CARB) effective from 1 July 2020. <https://ww2.arb.ca.gov/our-work/programs/electric-vehicle-supply-equipment-evse-standards>

- allow alternate methods of payment, such as credit card or by mobile payment;
- require charging station operators to adopt at least one open source interoperable billing standard to allow customers to charge across different charging networks ('roam');
- require charging station operators to outline all fees and charges payable, including network roaming charges for non-members; and
- require charging station operators to report publicly available data to enhance competitiveness and foster development of apps and other services for customers.

California recognises the role of organisations and industry in determining standards as an alternative to regulation. The charging standard of the connector that attaches a charging station to a vehicle, for example, is not mandated. Instead, the European and North American auto markets are driving the proliferation of Combined Charging Standard 2 (CCS2) plugs for DC and AC charging in preference to other charging standards, including in other jurisdictions⁴⁰.

United Kingdom

The United Kingdom has in excess of 450,000 registered electric vehicles and 21,000 charging stations⁴¹ and imposes minimum customer experience standards for public charging stations⁴². Like the Californian approach, access is improved by:

- prohibiting operators from requiring customers to become members of a billing network that requires ongoing fees; and
- mandating open access data reporting requirements⁴³ for the benefit of any person, such as developers of navigation services to incorporate charging station locations.

Additionally, charging stations must meet technical standards for customer facing aspects, such as the type of charging plugs and metering functions. These enable the amount of charge, and how it is converted to a bill, to be chosen by the customer at the time of charging. Energy consumption data must be transferred to a central system for customers to compare their energy use with previous charging sessions in real time⁴⁴.

The United Kingdom recently consulted on a proposal to require private electric vehicle charging stations to use smart charging technologies to reduce network impacts and optimise charging costs for customers by adjusting the time of charging⁴⁵. If implemented, privately accessible chargers will be interoperable to allow customers to move between electricity retailers based on a consistent communication standard and facilitate new services, such as vehicle-to-grid services.

⁴⁰ For example, Tesla Model 3 vehicles for the US and Australian markets now allow access to CCS2 and Tesla proprietary chargers.

⁴¹ Zap Map. <https://www.zap-map.com/statistics/>.

⁴² Alternative Fuels Infrastructure Regulations 2017 (UK)

⁴³ Operators can meet their reporting requirements by supplying station location and other data to the National Chargepoint Registry or display on a map on a mobile phone app.

⁴⁴ The Alternative Fuels Infrastructure Regulations 2017 – Guidance, pp. 11-12, 15.

<https://www.gov.uk/guidance/regulations-alternative-fuels-infrastructure>

⁴⁵ Further details are available at www.gov.uk

Findings

- Other Australian jurisdictions do not consider electric vehicle charging stations to contain an electricity distribution system, meaning that the regulatory approach differs from that in Western Australia.
- Certain international jurisdictions where electric vehicle uptake has been significant have regulated to facilitate improved customer access to, and interoperability between, public charging stations.

4. Regulatory reform

The energy sector is undergoing a period of rapid change as it moves from a centralised to a decentralised sector increasingly supplied by renewable energy sources. Households and small businesses are installing solar photovoltaic and battery systems, with technology enabling a growing range of innovative energy services.

In response to these changes, the State Government has several reform projects underway. Foremost is the Energy Transformation Strategy, which aims to improve the way we plan and manage our power system to ensure we can continue to embrace new, cleaner technologies and supply systems.

4.1. Distributed Energy Resources Roadmap

A major deliverable of the Energy Transformation Strategy, the DER Roadmap, is a five-year plan to guide the integration of DER, including electric vehicles, and ensure the benefits of DER are shared across individual customers and the broader community.

The DER Roadmap notes that given existing electric vehicles sale forecasts and the limited impact of vehicle-to-grid power flow, electric vehicles are not expected to be a significant factor for network performance toward 2025⁴⁶. Noting that the uptake of electric vehicles, and the provision of charging infrastructure, are in their infancy in Western Australia, the DER Roadmap outlines actions to assess opportunities that they present to customers, the network and the electricity system. These actions are:

- Delivery of a register of DER data for the South West Interconnected System, the DER Register, with processes to support data collection and future Distribution System Operator functionality (Action 15). The DER Register will provide visibility of generation and storage assets to AEMO to manage the power system. Given the expected low uptake of electric vehicles, the DER Register will not include charging stations in its first iteration, which commenced operation on 1 March 2021⁴⁷, although it is expected to do so in future.
- Planning to integrate electric vehicles into the grid, including for the deployment of charging points (household and fast charge) and trials to better understand the capabilities of vehicle-to-grid technology (Action 16).
- Development of tariff pilot programs to explore tariff structures that encourage system-efficient use of, and investment in, DER and help share the benefits of DER with all customers (Action 17). The first 'Midday Saver' time of use tariff trial commenced in late 2020⁴⁸.
- Establishment of a Distribution Market Operator and a Distribution System Operator to facilitate the participation of aggregated DER in the wholesale electricity market and provision of network services from 1 July 2023 (Actions 24-32). The Energy Transformation Taskforce has published an Issues Paper to consider the responsibilities that attach to these roles⁴⁹.

⁴⁶ Energy Transformation Taskforce, *Distributed Energy Resource Roadmap*.

<https://www.wa.gov.au/government/publications/der-roadmap>

⁴⁷ <https://aemo.com.au/en/initiatives/major-programs/wa-der-program/wa-der-register>

⁴⁸ <https://www.synergy.net.au/Our-energy/For-tomorrow/Midday-Saver-Pilot>

⁴⁹ Energy Transformation Taskforce, *Issues Paper: Distributed Energy Resources Orchestration Roles and Responsibilities*.

<https://www.wa.gov.au/government/publications/issues-paper-released-distributed-energy-resources-orchestration-roles-and-responsibilities>

- Establishment of a regulatory framework for new energy service business models that provides appropriate protections for customers, including hardship schemes and access to the Western Australian Energy and Water Ombudsman Scheme (Actions 34-35, see section 4.2 below).

4.2. Retail electricity licensing reform

In December 2020, Energy Policy WA released a Final Report, *Tailoring customer protections for alternative electricity services – a registration framework*⁵⁰ in response to a request from the Minister for Energy to identify an alternative regulatory framework that would ensure businesses supplying AES, such as behind-the-meter solar photovoltaic systems and battery storage, provide adequate protections to their customers.

The proposed regulatory framework, outlined in the Final Report, could be used to regulate electric vehicle charging stations, if a need for regulation is identified.

The proposed framework includes amendments to the Electricity Industry Act to:

- prescribe categories of AES;
- require that persons seeking to provide a prescribed service register with the Economic Regulation Authority (ERA);
- establish an enforceable code of practice that specifies obligations for prescribed AES;
- ensure enforceable consumer protections are relative to the service provided;
- provide a robust compliance and enforcement regime (via the ERA); and
- facilitate customer access to a practical dispute and complaint resolution process (via the Western Australian Energy and Water Ombudsman Scheme).

Subject to approval of a legislative package by Government, the registration framework for AES is intended to be implemented in late 2022.

Findings

- The DER Roadmap does not consider the uptake of electric vehicles to be a significant factor in the electricity system in the near term, although electric vehicles have the potential to play a significant role in the future.
- The new AES registration framework could be used to regulate electric vehicle charging stations, if a need for regulation is identified.

⁵⁰ Energy Policy WA, Final Report – Tailoring customer protections for alternative electricity services – a registration framework (2020). <https://www.wa.gov.au/government/announcements/new-customer-protections-alternative-electricity-services>

5. Future regulation of electric vehicle charging station services

Energy Policy WA considers that licence exemptions continue to be a suitable mechanism to regulate electric vehicle charging stations in Western Australia over the short to medium-term. It is therefore intended that the licence exemptions for electric vehicle charging stations should be extended for a further three years from their expiry on 30 June 2021.

This position has been developed in acknowledgement of:

- the lack of consumer protection concerns identified to date with customers interacting with electric vehicle charging stations;
- the scenarios where electric vehicle charging stations may exist and the predicted low sales forecasts of electric vehicles;
- amendments to the Electricity Industry Act, intended to be made in late 2022, to enable AES categories to be regulated; and
- actions and trials in the DER Roadmap, expected to be implemented over the period to 2024, that will facilitate the entry of AES that aggregate DER, such as electric vehicles, into the wholesale electricity market.

Electric vehicle charging stations could be pursued as a prescribed category of alternative electricity services under the proposed amendments to the Electricity Industry Act if consumer protection is needed in the future. Prescription as a category of AES could enable conditions to be applied to charging station operators to provide consumer protections and ensure adequate oversight.

Energy Policy WA intends to consult with industry and consumer stakeholders in 2023 on what, if any, customer protections may be needed for electric vehicle charging stations and a suitable regulatory approach. This will follow establishment of the new regulatory arrangements for AES and further development of the electric vehicle industry.

If customer protections are considered necessary, it is likely that each scenario identified in section 2.4 above will require a different level of customer protection. A charging and discharging station, for example, may be required to ensure a sufficient level of disclosure of the impact of the service on a customer's battery. By contrast, a roadside one-way charging station may not require the same level of disclosure but may be prohibited from requiring a user of the facility to be a member of an exclusive membership scheme to access the charging station.

Table 1 illustrates the requirements that could be considered in the future regulation of customer protections for electric vehicle charging stations.

Table 1: Considerations for a future AES Code for public electric vehicle charging stations

Objective	Possible Components	Outcome
Open Access	<ul style="list-style-type: none"> Prohibition on station operators from requiring users to be a member of a platform to charge. Requirement for station operators to facilitate various payment methods. 	Customers have wider access to charging stations and can conveniently transact.
Price Transparency	<ul style="list-style-type: none"> Minimum customer billing and price disclosure requirements. 	Customers are aware of prices prior to charging and receive notification of total cost of transaction after charging.
Data	<ul style="list-style-type: none"> Requirement for station operators to share standardised station data, such as location, opening hours and operational status. Ensure customers can access historical use data. 	Customers can see where stations are and their historical charging events. Innovative services for customers, such as new EV station booking apps, can be developed.
Privacy	<ul style="list-style-type: none"> Data disclosure protections. 	Customers' personal information is protected.
Visibility and control	<ul style="list-style-type: none"> Ensure network and market operator can collect and share standing data on charging stations. Requirement for station operator to respond to network constraints communicated by the network system operator 	Consistent with the Distributed Energy Resources (DER) Register, increased visibility of DER will enable better system operation.
Consumer Experience	<ul style="list-style-type: none"> Requirement for station operator to have a customer complaints and dispute processes. 	Customers are aware how to make a complaint and raise a dispute.
Performance Standards	<ul style="list-style-type: none"> To the extent it is not covered through other instruments, requirement to meet applicable Australian Standards and local network connection requirements. 	Customers can interact safely with charging stations.

Findings

1. That the distribution and retail electricity licence exemptions for electric vehicle charging station operators should be extended from 1 July 2021 until 30 June 2024.
2. Prior to 2024, Energy Policy WA should consider the additional consumer protections that may be required for users of charging station services as the electric vehicle industry continues to develop, potentially forming part of a new AES Code for these services.