

Overview of operational models

Value creation

While there are only four core roles to providing charging infrastructure (owner/host, installer, operator, site owner), there are a number of parties that may derive benefit from a charging infrastructure installation. These include:

- Governments who are committed to decarbonisation of our economy investing in increased charging infrastructure to drive increased uptake of electric vehicles;
- The host of the electric vehicle charging station seeking to obtain leasing revenue for the provision of the parking space;
- The electric vehicle user (or prospective EV user), who benefits from:
 - Critical journey enablement re-fuelling services;
 - Non-critical convenience re-fuelling services; and
 - “Peace of mind” that there is sufficient charger coverage for general journeys.
- The infrastructure owner, who seeks a profit from the capital risk invested in an installation, or to manage losses that may be viewed as investments in other benefits of the system related to travel revenue, retail revenue or subscription revenue; and
- Local businesses who seek a marketable point of difference or to benefit from increased tourism or retail expenditure.

Sources of revenue

There are several key revenue models that have been used in Australia and internationally. Direct revenue models may include:

- A membership fee
- A fixed “connection fee” for using a charger
- Energy fee - directly related to a per kWh usage of the charger
- An hourly usage fee

It should be noted that in some cases there will be no revenue derived from the service for a period, or potentially indefinitely. In such situations, charging will be provided purely for the purpose of obtaining co-benefits, including:

- Additional tourism revenue by attracting electric vehicle drivers to areas that they otherwise would not have travelled to
- Additional retail activities (including accommodation revenue in hotels) through attracting electric vehicles drivers to a site
- Advertising at the charging station
- Subsidies from other 3rd parties (vehicle manufacturers, energy companies)

Charging station operation

A charging station operator is responsible for mediating the interaction between the driver and the charging system, performing the following functions that depend on the specification of the charger:

Feature	Basic	Smart - Local network	Commercial - Cloud
Time of use controls	Manual	Programmable	Smart
Report and aggregate usage data	Via meter	Manually	Cloud based
User authentication	None	RFID Card	RFID/Cloud
Local energy management	None	Programmable	Smart
Monitor charger status (in use/available/fault)	None	None	Cloud based
Update firmware	N/A	Manually	Cloud based
Handle billing for paid services	N/A	N/A	Cloud based

Host/Operator

The charger operator role can be performed by the charger host using basic, unconnected hardware or smart, local network chargers using standalone software.

Third Party Operator

Charging station operation can be outsourced to a third party service provider, and where publicly accessible, such chargers can be operated as part of a broader network. A handful of charger networks operate in Australia and are usually associated with the major charger hardware distributor/installers.