

EV STREET SIDE CHARGING PROJECT

ELECTRIC VEHICLES AND EV CHARGING NETWORKS

EVs in Australia

- According to the Australian Government, carbon emissions from the transport sector makes up about 19% of Australia's total emissions.
- Data from the Australian Energy Market Operator suggest that one in ten new vehicles purchased by Australians by 2025 will be an EV, equal to about 120,000 new vehicles each year between now and 2025.
- While energy consultancy Energeia estimates that by 2040 nine out of ten new vehicle sales will be EVs.
- The estimated value of the EV public charging market in Australia is about \$902 million.
- Eight out of ten existing EV owners charge at home, according to the NRMA, with the remaining relying on their workplace, shopping centres and highway fast chargers.

Australia's Challenge

- About one in four Australian households – or 1.9 million homes – do not have access to off street parking and can't charge an EV from home.

The Solution

- There is potential for 190,000 EV chargers that could be connected to street side power poles across Australia.
- It's estimated that one on-street charger could service 10 households which don't have access to off-street parking.
- This represents about 1,400 megawatts of controllable load for retailers and electricity networks to support the sustainability of the grid.



HOW THE TRIAL WORKS

The Trial

- Australian first deployment of 50 EV chargers installed on street side power poles for EV owners without off-street parking to charge at their convenience.

Where

- 50 sites across nine local government areas in NSW.

EV Chargers

- Schneider 7.4kW EV chargers allowing for convenient top ups and overnight charging.

GreenPower

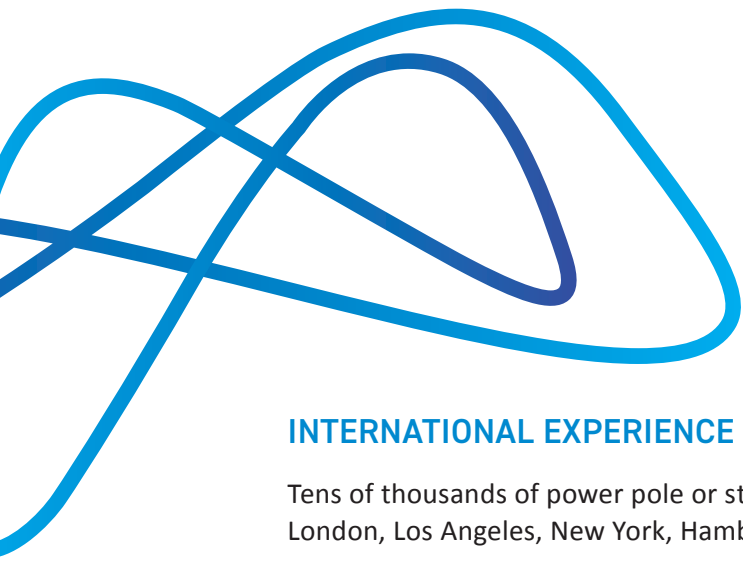
- Origin Energy will supply 100 percent GreenPower, meaning all of the energy required to charge the vehicles will be matched with the equivalent amount of certified renewable energy added to the grid.

Customer Experience

- The charging service will be managed via Exploren, an EVSE customer experience app which outlines billing, time limits, and other tools for interfacing with the electricity grid.

Objective

- To demonstrate that there are no regulatory barriers to using existing street furniture that already has power running to it.
- Test how many people will use the chargers. If a commercial success is achieved, then a wider rollout of chargers will be possible on a commercial basis.
- Understand the impact of the chargers on the electricity network, including how they could charge back into the electricity grid when required or to soak up excess rooftop solar energy during low demand or peak production periods.



INTERNATIONAL EXPERIENCE

Tens of thousands of power pole or streetlight EV chargers have been deployed across London, Los Angeles, New York, Hamburg; and Toronto.

Other cities such as Seattle, Lancaster, Philadelphia, Miami, Chicago, Berlin are exploring similar alternatives to increase Electric Vehicle adoption and reduce greenhouse gas emissions from private transport.

CONSORTIUM MEMBERS

The project is being supported by the Australian Renewable Energy Agency and led by smart metering and data intelligence provider Intellihub.

Consortium members include:

- Schneider Electric
- Withywindle
- EVSE
- AutoGrid
- Origin Energy

Local Government Partners:

- Inner West Council
- Singleton Shire Council
- Waverley Council
- Lake Macquarie City Council
- Woollahara Council
- City of Ryde
- Randwick City Council
- Northern Beaches Council
- Parramatta City Council