Getting Electric Vehicles Moving

All you need to know about installing on-street charge points

WESTERN POWER DISTRIBUTION

Serving the Midlands, South West and Wales

Supporting the growth of electric vehicles

2

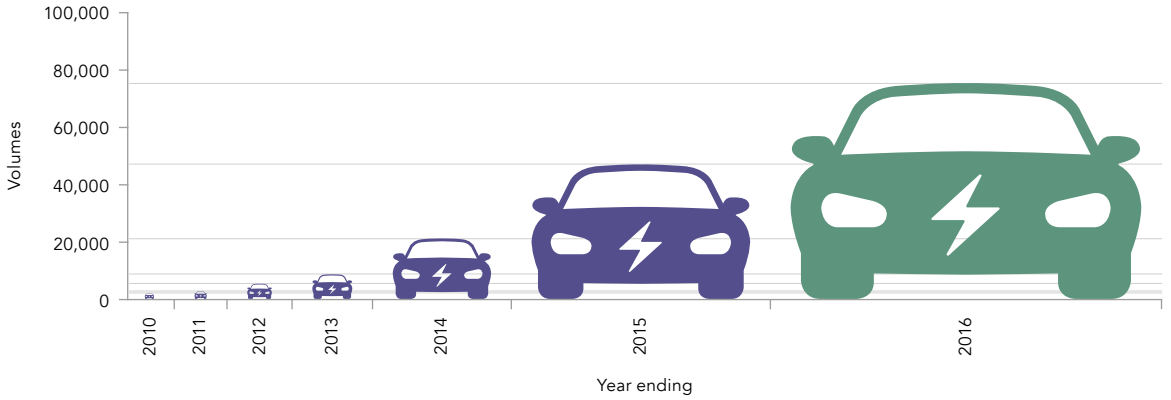
The use of electric vehicles is on the rise, and are fast becoming more common place. Electric vehicles are expected to play an important role in achieving the UK's targets for improving air quality and reducing carbon emissions. Just six years ago there were only 2,500 electric vehicles in the UK – now there are over 80,000, and that number is predicted to rise to more than 7 million in the next 30 years. That means demand for charge points are likely to rise, and as the electricity network for your local authority, we want to help you meet that demand.

This guide lets you know:

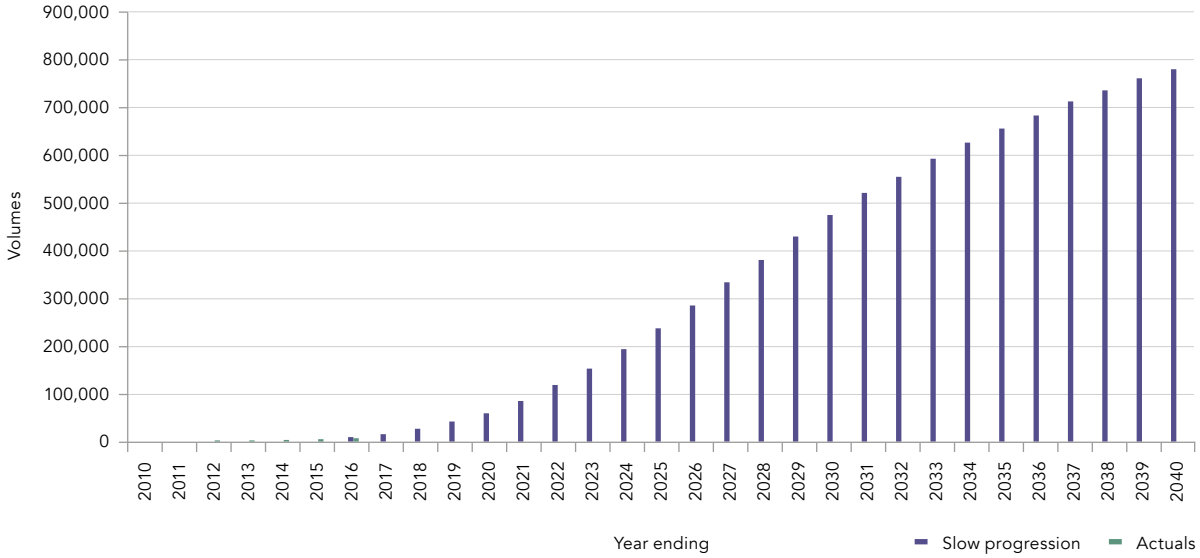
- Why charge points matter so much to your electricity network.
- What the different kind of charge points are and what they do.
- The quickest, most efficient and economical way of connecting charging points to the electric network.

This guide explains the different kinds of charge points there are, what the quickest ways of installing the most economical, efficient and practical charge points in your local area and the role Western Power Distribution play providing power to on street charge points.

UK Plug-in electric vehicle actuals



UK Electric vehicle uptake (actuals + NG FES 2016 forecast)



How Western Power Distribution can help?

3

Who are Western Power Distribution?

Western Power Distribution owns and maintains the electricity cables and lines that bring the electricity to approx 7.8 million homes and businesses across The South West, South Wales and the Midlands. We run and maintain the electricity cables in your area and keep the lights on, regardless of which electricity supplier you pay your bills to.

Supporting the transition to a low carbon future

Electric vehicles can help the UK met its carbon emission ambition. Western Power Distribution want to support local residents, businesses and the public sector to embrace a low carbon future.

We distribute electricity to charge points and we provide supplies to connect them to the network.

Cost of connecting an on-street charge point to the electricity network

4

How much it costs to connect a charge point to the electricity network and how long it will take to install comes down to three things.

How much a charge point costs and how long it will take to install depends on:

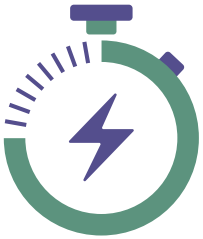
- How many charge points do you want to connect?
- How many vehicles do you want to charge at any one time?
- How quickly do you want them to charge?

How long does it take to charge an electric vehicle? (Based on a 30KWh battery)

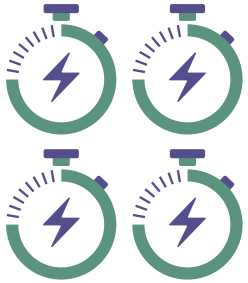
There are three types of charge points:

- Slow
- Fast
- Rapid

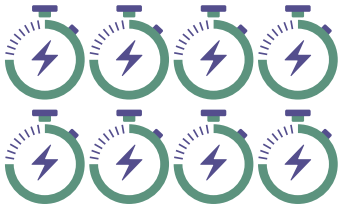
The speed that cars can charge at is determined by how much electrical power (kW) the charge point delivers.



RAPID CHARGING
1 HOUR
Greater than 43kW



FAST CHARGING
2-4 HOURS
7-22kW



SLOW CHARGING
8-10 HOURS
Up to 3kW

How long does it take to connect new charging points? 5

We describe new electricity connections as Small, Medium or Large. This section explains the costs and time for the power supply to be connected to different types of charge points.

Step 1

- Decide on the number and type of charge point(s)
- Identify a location
- Appoint an electrical contractor for the charge point installation

Step 2

- Apply for an electrical power connection from Western Power Distribution

Step 3

- Appoint an electricity supplier who will bill for the electrical energy used
- Your supplier will appoint a meter operator to install a meter for the charge point

Step 4

- Energise your charge point(s)
- Operation and maintenance

	Small	Medium	Large
Number of charge points	1 - 3 fast or 1 rapid charge	More than 3 fast or more than 1 rapid charge	Multiple fast/rapid charge points
Approximate connection time	8 - 12 weeks	8 - 12 weeks	6 months +
Approximate connection cost	£1,000 - £3,000	£4,500 - £75,000	£60,000 - £2 million
Other considerations that may affect the cost	Street work costs	Street work costs – Legal costs for easement and wayleaves	Street work costs – Legal costs for easement and wayleaves – Planning permission and space for a substation

FAQs

What does Western Power Distribution know about smart charging?

Smart charging can help reduce costs for customers as well as manage demand on the network.

Through our innovation team, we are running the world's largest EV project called Electric Nation. More details on this can be found at www.electricnation.org.uk.

How much does the electrical connection for an on-street charge point cost?

Depending on how many vehicles you want to charge and how quickly you want to charge them, it can range from £1,500 for a single slow to fast charge point, to £2 million or more for a cluster of rapid charge units. That's why we're really keen to work closely with local authorities and charge point operators to help you find the right solutions for your residents and businesses.

How can I find out more?

To find out more visit our website at www.westernpower.co.uk or call 0800 0963080.

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www.ukpowernetworks.co.uk/internet/en/our-services/electric-vehicle-charging/Electric&

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