Supporting the growth of electric vehicles

The use of electric vehicles is on the rise and they are fast becoming commonplace. 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 almost 80,000 and that number is predicted to continue to rise. That means demand for charge points is 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 charge points to the electricity network
How UK Power Networks can help

Who are UK Power Networks?
UK Power Networks owns and maintains the electricity cables and lines that bring the electricity to more than eight million homes and businesses across London, the South East and East of England. 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 meet its carbon emission ambition. UK Power Networks 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 new power supplies to connect them to the network

UK electric vehicle actuals

The number of electric vehicles has increased almost tenfold since 2010 and is predicted to continue to rise.

2010  2011  2012  2013  2014  2015  2016  80,000
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 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?

There are three types of charge points: Slow, Fast and Rapid. The speed that cars can charge at is determined by how much electrical power (kW) the charge point delivers:

- **Slow**: (up to 3kW) which can charge most EVs today in 8 to 10 hours
- **Fast**: (7-22kW) which provide a full charge to most EVs in 2-5 hours
- **Rapid**: (greater than 43kW) which are able to provide an 80% charge in around 30 minutes
How long does it take to connect new charge points?

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.

<table>
<thead>
<tr>
<th>Number of Charge Points</th>
<th>Approximate Connection Time</th>
<th>Approximate Connection Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small (up to 70KVA)</td>
<td>8 - 12 weeks</td>
<td>£1,000 - £3,000</td>
</tr>
<tr>
<td>Medium (200KVA - 1,000 KVA)</td>
<td>8 - 12 weeks</td>
<td>£4,500 - £75,000</td>
</tr>
<tr>
<td>Large (Above 1,000 KVA)</td>
<td>6 months +</td>
<td>£60,000 - £2 million</td>
</tr>
</tbody>
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- 1-3 fast or 1 rapid charge
- More than 3 fast or More than 1 rapid charge
- Multiple fast/rapid charge points
What is the connection process for a small, medium and large electricity connection?

**Small**  On average an 8-12 week process

1. Application
2. Site visit
3. Quotation
4. Payment
5. Delivery over 3 days

Apply via our website at ukpowernetworks.co.uk

**Medium and large**  On average a 6 month process

1. Pre-application surgery
2. Application
3. Network study and site visit
4. Quotation
5. Payment
6. Delivery plan

Arrange an appointment at electricvehicles@ukpowernetworks.co.uk
FAQs

What does UK Power Networks know about smart charging?

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

We connected Europe’s largest electric-only bus garage and are working with one of the world’s biggest logistics companies on a project to build one of the biggest freight vehicle charge points in London. In Kensington & Chelsea we have converted streetlights into electric vehicle charge points.

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.ukpowernetworks.co.uk or email electric.vehicles@ukpowernetworks.co.uk

How are you preparing for the future?

UK Power Networks embraces new technology and new ways of doing things. Through our Innovation team we love to trial new ideas that can save people money, improve the quality of supply or increase safety, and we have a track record of turning successful trials into business as usual. If you have an idea for any other projects then contact us at the email address below:

If you have any questions please get in touch via: electricvehicles@ukpowernetworks.co.uk
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