

1. What is a Smart Charging Connection?

A Smart Charging Connection is the name given to the types of flexible connection being explored specifically for public chargepoints under the Charge Project. A Smart Charging Connection utilises the inherent intelligence of Smart Chargers to ensure their demand never exceeds the available capacity on the network.

The Charge Project is exploring four different variants of Smart Charging Connection:

- Timed capacity connections
- Customer load management schemes
- Locally managed constraint schemes
- Centrally managed constraint schemes

2. What are the key differences between chargepoint connection solutions?

There are two main options:

- **Reinforcement-led connections** – Traditionally, customers receive a connection offer based on the deployment of the necessary network reinforcement i.e. installation of new conductors, substations etc. While these reinforcement-led connections provide the customer with access to the requested capacity, they can be both expensive and timely to deploy, creating a barrier to the uptake of EVs and other forms of low carbon transport.
- **Flexible connections** – Minimise the need for reinforcement, likely to result in a cheaper and quicker connection. The connected load is managed by Smart Charger technology, which ensures that it never exceeds the operating limits of the network.

It is plausible that customers could look to adopt a connection that combines elements of both solutions.

As the **flexibility service market** matures, customers may be able to access a third chargepoint connection option, which would also minimise the need for reinforcement, and likely result in a cheaper and quicker connection. In this scenario, the DNO engages the market to see if existing customers on the same local network are willing to be compensated to lower their demand or increase their export to facilitate the new load. Through the acceptance of a flexible connection, the customer would agree to be flexible with their import/export in order to prevent stressing the network.

3. How can Smart Charging Connections help contribute to the UK's 2050 Net Zero target?

A key part of the UK's Net Zero planning is to radically increase the number of EVs on our roads. Smart Charging Connections will accelerate the roll-out of a UK-wide charging infrastructure and encourage the uptake of EVs by reducing the need for network reinforcement, making the installation of chargepoints quicker and cheaper, and making them a more attractive investment for operators.