

What is Smart Street?

Smart Street has been developed and designed by the innovation team at **Electricity North West** and will make it possible for the network operator to continually optimise the level of electricity delivered to households or businesses on various parts of the network, in line with real-time demand. The pioneering energy project could see **customers save up to £60* a year** on electricity bills and help the UK move towards a **low carbon economy**.

**The £60 saving is based on a high electricity user getting the maximum 8% energy consumption reduction and assumed an Ofgem average tariff for the Electricity North West area.*

Smart Street makes networks and customers' appliances perform more efficiently and makes it easier to adopt low carbon technologies onto the electricity network, by combining innovative technology with existing assets.

Voltage control is well established in the US but **Electricity North West will be the first network in the UK to reduce its voltage** towards the lower end of the normal 220V to 240V range. The technology could be used by **other UK distribution network operators**, offering similar savings to their customers and further supporting the UK's decarbonisation targets.

For example if the voltage is reduced by a few percent at times of high energy consumption, like the tea-time winter peak, then modern appliances continue to operate effectively, but consume less energy. Conversely when power demands are low on sunny, summer days photovoltaic panels on some customers roof-tops can cut-out because all installations in a street are trying to export together and the voltage is not high enough.

Who will benefit from it and when?

Up to **59,000 customers across the North West**, including some in areas with high levels of **fuel poverty**, will benefit from the first implementations of the project following a successful four-year trial, where improvements in energy efficiency resulted in customer **electricity consumption being reduced** by between 5 and 8 per cent, alongside a **reduction in carbon** of between 7 and 10 per cent.

Work began in April 2020, with the first voltage control devices scheduled for installation in November 2020 and a total of **180 areas in the North West** identified to benefit from the new technology over a three-year period as the installations will take place at substations, which transform electricity from high to low voltage.

The project will target areas with a high uptake of electric vehicles, solar panels and other low carbon technologies, particularly where these overlap with customers living in fuel poverty.

The rollout will cause **no disruption to customers** and all of the devices will be integrated into Electricity North West's network management system, creating the **UK's first actively optimised network**.

What impact will Smart Street have on the environment?

The potential carbon saving up until 2050 – the date when the UK has committed to achieve net-zero carbon – will be around 143,860 tCO₂e. That's the equivalent of **taking 2,570 polluting cars off the road per year**, although this figure takes into account the avoidance of potential network reinforcement costs, as well as reduced energy consumption and smaller electricity losses through distribution.

For more information visit www.enwl.co.uk/smartstreet