New project will help Western Power Distribution better support electric vehicle market

Western Power Distribution has teamed up with ElectraLink, the UK's Energy Market Data Hub (EMDH), on a ground-breaking project to understand the impact of electric vehicles and other low carbon technologies on the electricity distribution network.

The new project, called the Low Carbon Technologies (LCT) Detection project, will allow WPD to identify areas where there is a high number of electric vehicles, solar panels or other low carbon technologies and manage its network accordingly.

Electric vehicle (EV) ownership is on the rise and will continue to increase - with the UK government predicting that there could be 10.5 million EVs on the road by 2030. While this brings significant benefits such as improved air quality and reduction of carbon emissions, it also poses a challenge to electricity networks.

Managing this new demand will require smart charging and other smart solutions but these necessitate visibility of where EVs are connected to the distribution network at a local level.

The LCT Detection project will make use of ElectraLink's unique energy market dataset combined with other data and enhanced by IBM's Watson capability to provide WPD with much needed visibility of the ever-growing demand for EVs, as well as other low carbon technologies such as solar panels and heat pumps. This will allow WPD's network planners to accurately assess the existing network capacity and understand how this is likely to change in the future.

"The LCT Detection project could be a gamechanger for Distribution Network Operators," said Roger Hey, WPD's Future Networks manager. "Through analysis of historic data and identification of future trends, the project will deliver a virtual monitoring capability that will allow network planners to forecast the locations of 'hot spots' of electric vehicles, solar panels and heat pumps. This will help us plan for strategic deployment of real-time monitoring as we approach our next investment period."

Stuart Lacey, chief executive at ElectraLink said, "ElectraLink performs a vital role as the data hub at the centre of the energy market in the UK. Since 2012, we have pioneered the use of market data to facilitate competition and improve the efficiency of the energy market believing that data transparency is good for consumers and the energy industry. The LCT Detection project is an excellent example of how ElectraLink is using innovative data analysis to engage with its DNO shareholders in support of their transition to the role of Distribution System Operators."

IBM's Laurence Carpanini added, "IBM is incredibly excited to be working with WPD and ElectraLink on this project. By using our deep learning platform 'IBM Watson Studio™', this project will demonstrate how to accelerate infusion of AI in WPD's business to drive innovation that can be used to help facilitate increasing numbers of electric vehicles and other low carbon technologies on our local electricity networks."