

Electricity planning standards and demand side response

Electricity North West is trialling a new way of managing the electricity network to increase its capacity and keep customer bills down at the same time. As part of the trial the company is looking at how electricity planning standards may need to change to accommodate this new approach.

electricity
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Bringing energy to your door

C₂C

Electricity North West, the company who operates the electricity network in the North West of England, is conducting a trial known as Capacity to Customers (C₂C) as part of Ofgem's Low Carbon Networks Fund. C₂C will use existing technology and innovative commercial contracts to increase the amount of energy that can be transmitted through the region's existing electricity network.

How it works

The existing electricity network is designed to keep the lights on when things go wrong by keeping some capacity for emergency use. This allows electricity to be re-routed following a power cut (fault). Typically, the majority of customers are affected by a fault once every three years. So for most of the time, only half of the total capacity of the network is used with half reserved for emergencies. By reconfiguring the network and working smarter, this extra emergency capacity can be released for everyday use.

To enable the extra capacity to be released, customers are asked to reduce their demand after a fault and sign up to a new kind of contract in exchange for payments or lower connection charges. Incentivising customers to change their demand behaviour in this way is known as 'demand side response' (DSR). This can help distribution network operators (DNOs) like Electricity North West manage their networks better and reduce the amount of new infrastructure that would normally be needed to meet the growing demand for electricity.

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Accommodating demand side response in electricity licence conditions

Electricity North West has recently completed a review of how industry standards and licence obligations might accommodate or limit the widespread application of post-fault DSR. The findings show that one possible issue may be compliance with Engineering Recommendation (ER) P2/6 - Security of Supply, July 2006.

ER P2/6 does not explicitly allow or disallow DSR so there is uncertainty whether the benefits of customers signing up to C₂C can be realised while remaining within the requirements of ER P2/6.

The report produced by Electricity North West presents the results of a review of ER P2/6, its supporting document ETR 130 and a set of proposed changes to how DSR might be accommodated. The definition and treatment of DSR with P2/6 security assessments is an important factor in the adoption of DSR as business as usual. Unrestricted or inappropriate use of DSR may adversely affect security of supply to customers. Conversely unnecessarily restrictive treatment of DSR may prevent some or all of the potential economic and technical benefits.

In parallel with the C₂C work, the industry's Distribution Code Review Panel has commissioned a more structural review of ER P2 to look at network security assessments.

This more fundamental review is expected to recommend more extensive changes but is unlikely to finalise its recommendations in less than two years.

The work presented in the Electricity North West report provides a valuable bridge between current assessment methodologies and a future P2/7. The recommendations will allow DNOs to adopt DSR in a consistent and prudent manner.

The company has produced its report following an industry-wide consultation exercise. The report recognises the need for a number of short-term modifications to ETR 130 which are designed to provide timely guidance on how DSR should be accounted for within network security of supply assessments. These recommended modifications will enable DNOs to make an appropriate allowance for DSR when determining group demand.

The changes recommended by the report will be referred to the Distribution Code Review Panel which is responsible for the formal governance of ER P2/6.

To see the full report visit www.enwl.co.uk/c2c/keydocs

To find out more about Ofgem's low carbon network fund visit www.ofgem.gov.uk

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