

# Take part in a low carbon project - and earn a cash reward

# RESPOND



Distribution network operator Electricity North West is looking for volunteers to take part in a revolutionary £5.5 million low carbon trial. The Respond project will deliver an intelligent approach to managing fault current and the company is looking for customers with generation or large motors to complete a one-off survey or to sign up for 'Fault Current Limiting services'.

**electricity**  
north west

Bringing energy to your door

Electricity North West is leading the way in developing smart solutions to meet the UK's future energy demands.

As the regional electricity operator, the company is responsible for keeping the lights on for five million people in the North West of England. It's also their job to plan for the future and look at smarter ways of meeting the expected increase in electricity demand as we start to reduce our reliance on fossil fuels.

Electricity North West has won funding from Ofgem's Low Carbon Networks Fund to launch the Respond project which will deliver an intelligent approach to managing fault current – the instantaneous surge of energy which occurs under fault conditions.

An increase in demand for electricity will increase the potential fault current on the network, known as fault level. If fault levels exceed the current safety rating of network equipment, it will need to be replaced, which can be disruptive, lengthy and expensive.

Respond will explore new technical and commercial solutions to resolve the fault current problem without the need to invest in new expensive infrastructure. It will ensure customers continue to get the power they need and give them the flexibility to connect renewable energy sources.

The Respond method releases the same capacity as traditional reinforcement but up to 18 times faster and at much lower cost – up to 80% cheaper – potentially saving £2.3 billion for customers in Great Britain by 2050.

## How does it work

Respond will deliver an intelligent Fault Level Assessment Tool which will actively monitor demand and generation on the network, continually assess the fault level and automatically enable one of three innovative techniques when a fault occurs:

**Adaptive Protection** – also known as sequential tripping. This technique re-sequences the operation of circuit breakers and will be retrofitted into existing substation equipment.

**I<sub>g</sub>-limiter** – a current-limiting fuse which interrupts the fault current in less than 1/200th of a second, meaning the network equipment can then operate safely.

**Fault Current Limiting service (FCL service)** – when a fault occurs, all sources of generation connected to the electricity network contribute to fault current. Using new technology which will be trialled as part of the Respond project, customers' generation sources can be turned off instantly for a few minutes so that it no longer contributes to the fault current. This is a unique opportunity for industrial and commercial customers to financially benefit from selling an FCL service to Electricity North West through a managed service agreement. This solution will benefit all electricity customers in the long term by reducing reinforcement costs.

## Taking part

Electricity North West is now seeking input from commercial and industrial customers from across Great Britain by asking them to take part in a one-off online survey. This will help the company to understand the appetite for an FCL service and how best to structure appropriate contracts.

You can take part if your electricity supply is connected to the distribution network at high voltage and you operate:

- Distributed generation, typically a combined heat and power plant or other large synchronous generators, or
- Industrial AC synchronous motors connected to a circuit breaker.

If you would like to take part in the survey, please register online at: [www.enwl.co.uk/respond-survey](http://www.enwl.co.uk/respond-survey) by Friday 14 August 2015.

You will be rewarded for taking part with £25 in shopping vouchers or an equivalent charitable donation.

The Respond project runs from January 2015 until October 2018.

To find out more and to watch the project video please visit [www.enwl.co.uk/respond](http://www.enwl.co.uk/respond).

