

Capacity to Customers

Electricity customers' appetite for new demand side response contracts

From April 2013 Electricity North West's customers can choose to receive financial incentives in return for allowing their electricity supply to be 'managed' following a power outage. This new form of arrangement will help network operators best utilise their existing asset base by deferring the need for future expansion investment and therefore reduce their carbon footprint. But what would customers think of such a scheme? Can they comprehend it, are they willing to accept it and if so, how should they be incentivised? These are the questions addressed in a recent piece of important customer engagement carried out by Electricity North West – the region's electricity distribution network operator (www.enwl.co.uk).

Capacity to Customers (C₂C)

Electricity North West's Capacity to Customers (C₂C) project is part of Ofgem's Low Carbon Networks Fund (LCNF) and aims to use new technology and innovative commercial contracts to increase the amount of energy that can be transmitted through the infrastructure that's already in place throughout the region. The project takes advantage of the latent capacity that exists within the current network and could reduce the amount of new infrastructure that would normally be needed to meet the growing demand for electricity.

C₂C will involve major energy users in the region signing up to a trial which will offer incentives to switch their consumption patterns and prioritise their energy usage following a power outage. If successful, it could lead to reduced costs for new connections and incentive payments for participating businesses.

The C₂C project will test if new and existing customers are willing to adopt new forms of commercial arrangements which allow the local Distribution Network Operator (DNO) to place short duration restrictions on their demand and/or generation as necessary in response to infrequent power outage events. This trial will run for 18 months, covering 300 HV circuits and approximately 10% of Electricity North West's customers.

Customer Engagement

Ahead of the main trial, which will take place in 2013, a four month customer engagement exercise has just been completed, involving approximately 1,800 I&C (Industrial & Commercial) customers throughout the Electricity North West region.

This research was designed to identify the level of interest in C₂C, the needs of different customer segments and the value they place on the different elements of C₂C contract. It also indicated who might be willing to take part in the trial itself. Peer reviewers were involved throughout the research to ensure that the research was carried out to a high standard.

Respondents were recruited by phone and, when identified as the right person to take part (ie a person in their company who was responsible for negotiating / approving electricity contracts), asked to complete an online survey.

The biggest challenges for the research were: (1) how to clearly convey to customers the C₂C concept and its potential impacts and benefits and (2) how to get hold of the right person to talk to and (3) how to get enough of them to participate in the survey so that the findings would be statistically robust.

To develop the best way to communicate C₂C to customers, a pilot survey was conducted in which respondents assessed a short introductory video and supporting material. It was found helpful to explain C₂C as being like a motorway with a hard shoulder – ie containing a high level of expensive capacity that is used only for exceptional circumstances. This capacity could be used a normal lane at no additional expense, but would require careful management on the rare occasion of an emergency.

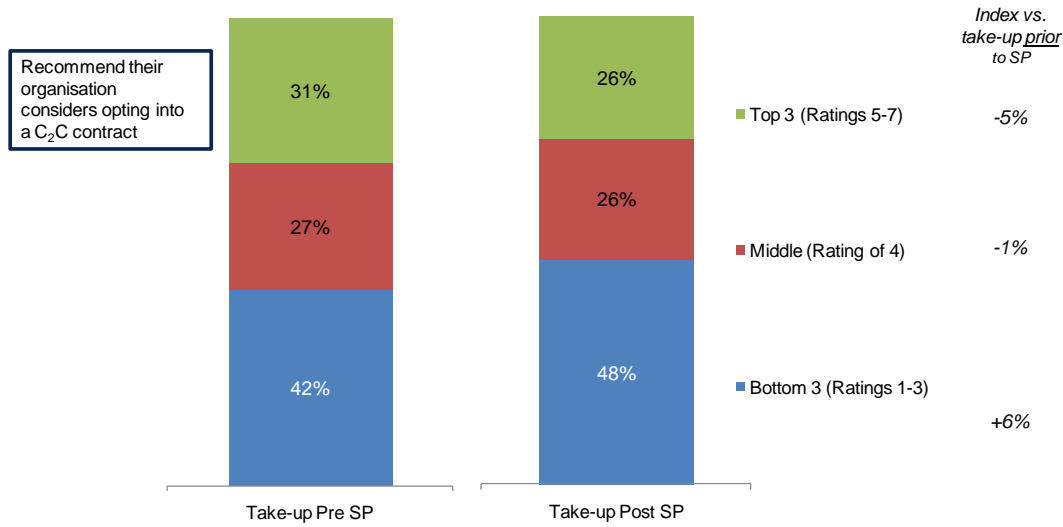
Contacting the right person often required a number of calls to be made. In many cases, interviewers did not have a specific name to contact; when they did get through to a likely contact, they were then required to ask a number of screening questions to ensure they were the right person.

As regards participation in the research, a final sample of 200 respondents was achieved from the 1,800 who were originally contacted. This rate of over 10% is fairly typical of surveys of business respondents, though it required incentives to be paid to participants and a considerable amount of effort in calling them back to complete the questionnaire.

An appetite for C₂C

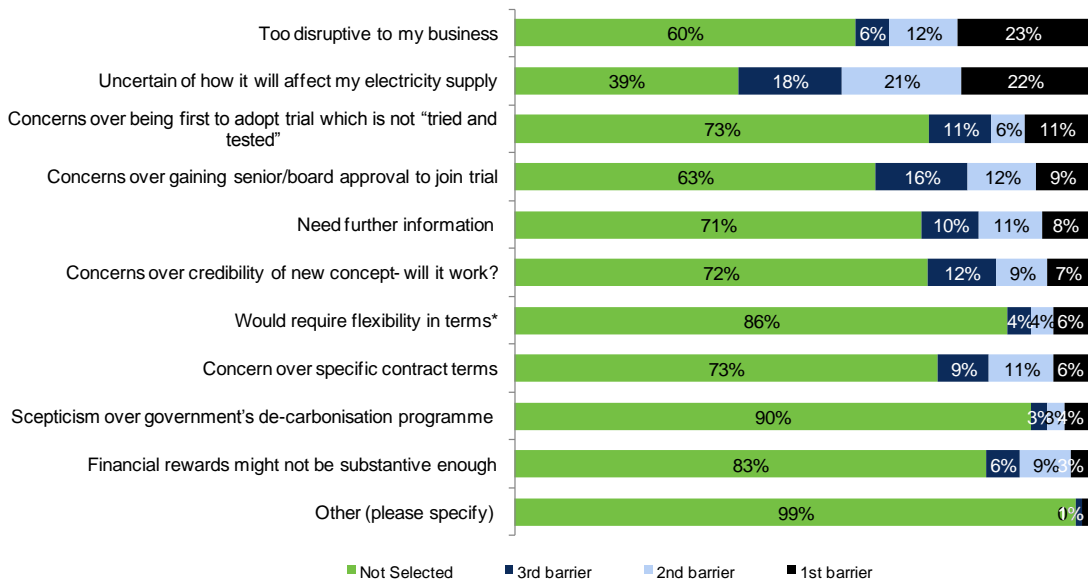
The research established that there is an appetite in the I&C market for C₂C: Over half of customers found the C₂C concept appealing and a third indicated that they would go as far as recommending their organisation consider opting into a C₂C contract. However, when they considered specific examples of rewards using present levels of Interruptions Incentives Scheme (IIS) incentive as a test value, only 26% would take up the contract as shown in Figure 1 below. In forming this judgement, customers were balancing the reward offered against the notional cost as represented by their current demand. This represents the worst case scenario for cost; as the interruption of future loads such as Electric Vehicle (EV) charging are likely to be less costly than current demand. So despite the general interest in C₂C, higher incentives are needed if larger amounts of demand are to become available.

Figure 1: Likelihood of recommending C₂C pre- and post- Stated Preference



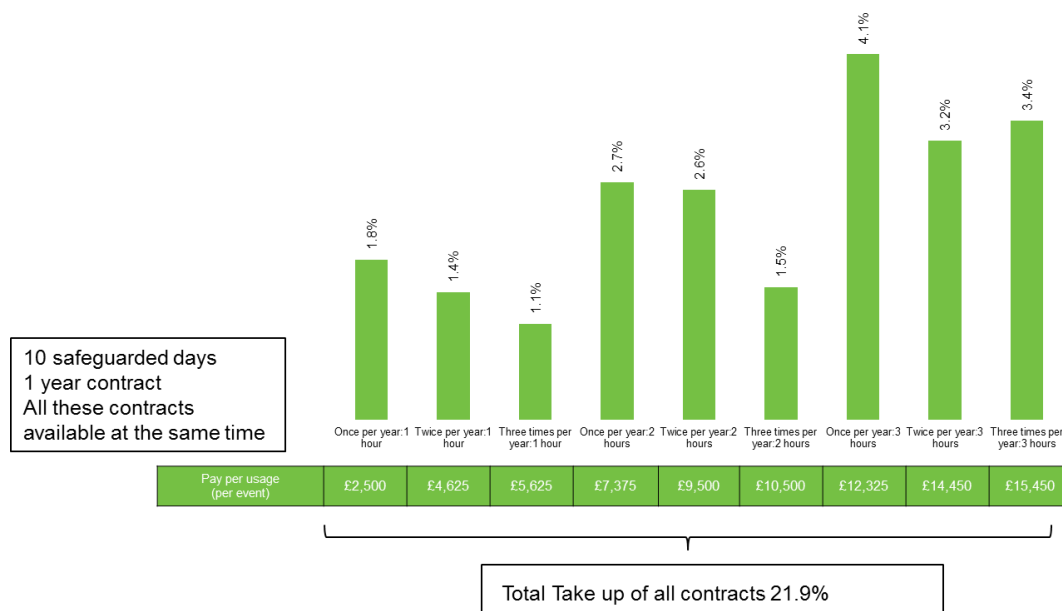
When questioned about potential barriers to C₂C, 61% of customers rate ‘*uncertainty over how it will affect my electricity supply*’ as either their first, second or third barrier, far outweighing any other concern, as shown in Figure 2.

Figure 2: Perceived barriers to C₂C



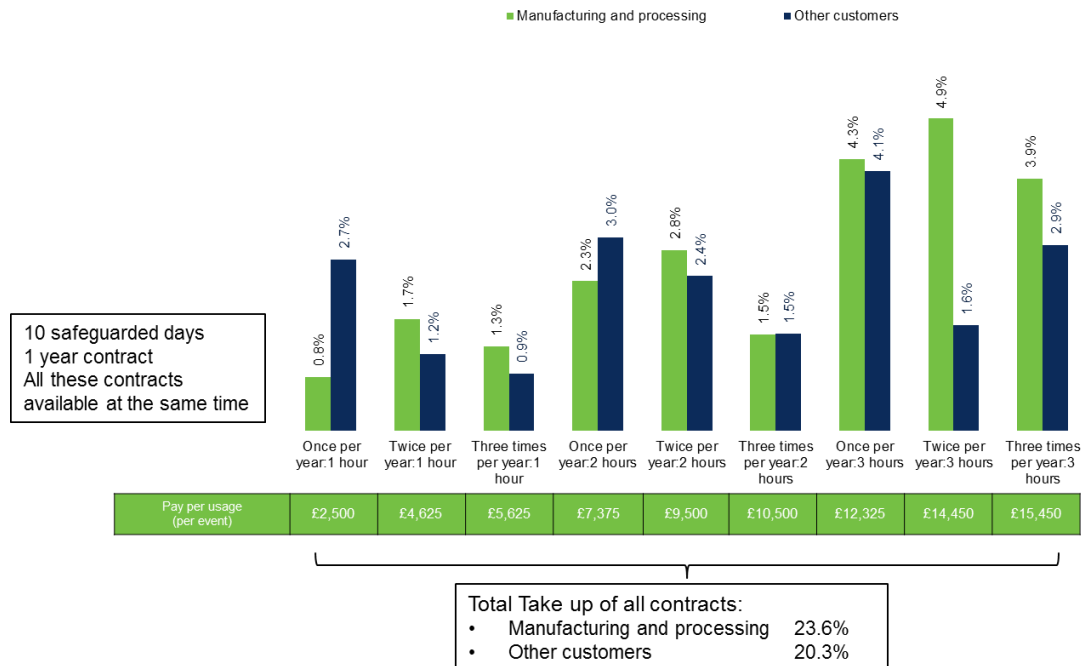
In terms of what components make up the contract, customers were offered the ability to vary the number of interruptions per annum and the duration of any interruption. The results show that the number of interruptions is more off-putting than the amount of time it could take to restore power, and requires higher incentive payments to compensate. Length of contract is very important with an initial period of one year much preferred, and it is important to offer the right type of compensation mechanism, together with the ability safeguard certain days. Both Pay-Per-Usage and Pre-Payment were offered as payment options with Pay-Per-Usage considered more attractive. Figure 2 shows the potential take up from a full range of contracts based on a Pay-Per-Usage Payment.

Figure 3: Potential Take Up from a full range of contracts (Pay-per-usage payment)



When looking at different types of customer, the Manufacturing & Processing sector showed greatest potential, but only if the contract is right. This emphasised the importance of tailored contracts combined with sufficiently high incentives as shown in Figure 3.

Figure 4: Potential Take Up from a full range of contracts by Manufacturing and Processing v Other



The learning so far

Engaging customers in a new concept like C₂C is challenging and sufficient time and resources are required to both develop suitable material and recruit sufficient numbers to the research. In this case, a total fieldwork period of 8 weeks was required to get 200 interviews, though most (180) were obtained in the first 4 weeks.

Given that the concept is new to customers, and could only be explained in a limited way (a short video and summary screens during an online interview), it is encouraging that over half showed strong interest and a quarter would seriously consider taking it up. It is anticipated that contracts tailored to the needs of individual customers and offering sufficiently high rewards will further boost customer acceptance.

Throughout the trial Electricity North West shall continue to engage with trial participants in order to continuously refine their understanding of the market for demand response contracts. Each time they will document the findings and incorporate them into learning and dissemination material such as future documents or industry knowledge dissemination presentations.

For the full report on this engagement work please see <http://www.enwl.co.uk/c2c/about-c2c/key-documents>.

About the author

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David is an established expert in the use of advanced analytical methods over a range of sectors including FMCG, pharmaceuticals, IT & Telecoms and public utilities. He has worked on studies of utility customers' satisfaction and their willingness to pay for services and is experienced in the use of a wide variety of survey and analytical methods to draw insights from market research data.