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C2C

Capacity to Customers
Engaged Customer Panel Report

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APPROVAL

Name	Role	Signature & date
Kate Quigley	Customer Work Stream Manager	

GLOSSARY OF TERMS

Abbreviation	Term
CEP	Customer Engagement Panel
C_2C	Capacity to Customers
DNO	Distribution Network Operator
HV	High Voltage
I&C	Industrial & Commercial

CONTENTS

1. EXECUTIVE SUMMARY

This report is submitted as part of the Electricity North West Capacity to Customers (C_2C) Tier 2 Low Carbon Network Fund (LCN Fund) Project.

C_2C seeks to test if both 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 in response to infrequent fault outage events.

This document and the analysis therein forms part of the project dissemination and specifically details the learning from the first in a series of strategic pieces of qualitative market research. The research has been undertaken with an engaged customer panel (ECP) to understand both domestic and industrial and commercial (I&C) customer reactions to C_2C; in order to help formulate effective communication plans to customers affected by C_2C.

The research approach referenced within this document was submitted as part of the Electricity North West C_2C customer engagement plan (CEP) approved by Ofgem on 21 June 2012.

1.1 Research objective

The aim of the research conducted through the ECP was to explore the extent to which customers understood C_2C, its benefits, any perceived barriers to its success and whether domestic customers felt they needed to be communicated with about it. The research was designed in order to help provide clear and relevant information to customers affected by C_2C, thereby formulating an effective communication plan for its rollout.

The principal objective of the research was to identify the optimum method of communicating C_2C in a simple manner to domestic customers who live in a property situated on a C_2C Trial circuit. The work sought to establish which communications materials and techniques would work best with this audience. During this engagement, the ECP was briefed on the UK's de-carbonisation obligations under the Climate Change Act 2008, the C_2C initiative, the proposed effect of C_2C on customers and its benefits. This briefing was carried out using bespoke materials to ensure the participants were sufficiently educated prior to the data gathering phase of the research.

The research was designed to address four key questions:

- Which communication material(s) and type of information is best suited to ensure customers understand the C_2C initiative?
- When they understand, do customers feel it is important that other customers receive information about the C_2C initiative?
- If so, how, to whom and when should Electricity North West engage with customers about C_2C?
- How can the learning from the ECP be used effectively to design and implement a communication plan to brief customers affected by C_2C?

1.2 Research approach

The ECP was selected so as to represent an appropriate cross section of customers in sufficient numbers to support qualitative research in the areas of interest. Panelists were recruited to be representative of Electricity North West's customer base with quotas set on gender, age, social grade and home ownership.

The recruitment of the ECP and moderation of all focus groups was conducted by Impact Research, an independent market research agency. All research was carried out according to the standards of the Market Research Society Code of Conduct.

A staggered approach was taken to sharing information and testing its effectiveness through three phases of research. This was a deliberate strategy to gradually develop, test and evaluate communication materials in order to understand customers' appreciation of both the problem statement and the C_2C initiative. This three stage approach allowed the effectiveness of the phase one materials to be tested against the more comprehensive phase two materials which were later refined and tested again in phase three.

Upon completion of the first phase of research, the communication materials presented to customers were enhanced to incorporate the feedback of the ECP. The updated materials were then re-presented during phase two to facilitate further discussion and to understand if there had been an improvement in the clarity and quality of communication materials. The learnings from both phases one and two were then used in phase three whereby two communication pieces, one of which was intended for distribution to all customers on a C_2C Trial circuit before the Trial commences and the other for distribution to all customers that experience a fault on a C_2C Trial circuit, were presented to the ECP.

In each phase of research, three 90 minute focus group discussions were run:

- Group 1: Carlisle, domestic customers
- Group 2: Manchester, domestic customers
- Group 3: Manchester, I&C customers.

Although the research needed to represent the views of all customers, domestic customers were the key interest group, given that they represent the large majority of the approximately 300,000 customers on C_2C Trial circuits. Prior to this market research, domestic customers had not been engaged with regarding any aspect of C_2C other than via published articles and web based materials.

1.3 Summary of key findings

This section summarises the key findings of this customer engagement against the four key questions detailed above. Further detail is given in Section 2.

Which communication material(s) and type of information is best suited to ensure customers understand C_2C?

If the objective was to ensure customers have a thorough understanding of C_2C, they would need to be subjected to the same level of education as undertaken with the ECP. Given the apparent lack of understanding of who Electricity North West is, the role of a distribution network operator (DNO) versus suppliers, the role that decarbonisation will have on increasing demand for electricity and the weak connection customers make between this and the need to potentially expand the electricity network, all of these things need be addressed before even introducing the C_2C initiative to customers.

The ECP demonstrated through phases one and two that the most effective way of communicating the aforementioned is through a simple question and answer fact sheet, video material and a C_2C concept board which explains the problem, how C_2C could address the problem and how it affects customers on a C_2C Trial circuit. To maintain interest and credibility customers must also be reassured on the reliability of their supply.

The conclusion of this element of the work was that the effort required to inform the general domestic customer base about C_2C and gain a reliable level of understanding would be very considerable. Such an exercise would be both costly and time consuming and would therefore only be justified if a clear need to establish such understanding was apparent. This was the focus of the second research objective summarised below.

When they do understand, do customers feel it is important that other customers receive information about the C_2C initiative?

Phase two of the research demonstrated that customers understood C_2C through the materials provided to them, yet they were divided as to the importance of communicating such information to the wider customer base.

On the one hand, some customers felt that given the perceived complexity of C_2C and the initial questions it raised, Electricity North West should not directly communicate with domestic customers on the C_2C Trial circuits. This was based on the fact that:

- The frequency of power cuts experienced by customers will not be discernibly different to the current situation
- The power cut duration on C_2C circuits is likely to be noticeably improved
- Whilst there may be a second or third order effect on customers from participating I&C customers such as supermarkets, domestic customers are unlikely to notice.

On the other hand, some customers felt that disseminating information about C_2C would be in the interests of the public and a positive message to receive.

Further deliberation in phase three of the research covered a simplified communication piece which deliberately avoided any mention of the technical details of C_2C, only that work was being undertaken that would improve their electricity supply. When presented with this revised approach, the ECP overwhelmingly agreed that Electricity North West should proactively communicate C_2C to customers but only in this manner.

If they do communicate C_2C, how, to whom and when should Electricity North West engage with customers?

The ECP recommended that all customers on C_2C Trial circuits should be communicated with proactively before the live Trial phase commences in April 2013. This option was preferred over the alternate option of reactively sending out information after a fault had occurred on a C_2C circuit.

Communicating proactively by distributing an information card was the preferred method. The ECP recommended that the card should be hand delivered so that the card does not arrive at the same time as other post or circulars.

How can the learnings from the ECP be used effectively to design and implement a communication plan to brief customers affected by C_2C?

The ECP has been effective in establishing the perceived complexity of C_2C and hence the need to carefully select both the forma and scope of any information that is proactively shared for future customer engagement. The level of briefing that was necessary in phases one and two with the ECP would not be feasible across a large customer base given the relative cost of engagement and the general paucity of industry awareness in domestic customers.

Phase three clearly indicated that in order to effectively and proportionately engage with customers, Electricity North West should remove technical information and focus on the positive information messages that had resonated with the ECP in phase two. This information includes, but is not limited to:

- Introducing Electricity North West and its role as a DNO
- Delivering good news, ‘Improving your Electricity Supply’
- Explaining how to find out more
- Giving advice on what to do if there is a power cut
- Raising awareness of the priority service register for vulnerable customers.

Such information serves to convey a positive message, whilst raising awareness of the role Electricity North West has in the region.

The ECP were very complimentary regarding the design, language used, tone, and usefulness of the information contained within the communication. The ECP also offered suggestions as to how to maximise the level of engagement the communication provokes when other customers read it. Electricity North West's communications expert has since incorporated this into the final material design.

1.4 Conclusions

Valuable lessons can be drawn from the ECP and their exposure to C_2C:

- Any direct communication with customers needs to address the current lack of awareness of Electricity North West and its role as a DNO in a simple, friendly manner with clear delineation from the role of suppliers.
- Customers tend to be supply focused, in the sense that they expect a safe, continuous supply at a fair price and should any changes be proposed, they require reassurance on the reliability of their supply going forwards. Indeed the main focus of any communication should make it clear how any changes to the customers supply will benefit them.
- Beyond this, there is no apparent need to 'sell' the C_2C initiative to domestic customers. Any attempt to explain decarbonisation, gain customers' acceptance of the problem, achieve credibility and enhance the appeal of the solution opens them up to information that is deemed too technical and unnecessary. The information provided in this scenario has then to be able to address the many questions that are raised about the 'why' and 'how' C_2C will work. This is a distraction from the key messages around supply reliability and environment.
- The ECP recommends a proactive approach to informing customers about C_2C, which means contacting those who are on a Trial circuit before the live phase of the Trial starts. This approach also serves as an opportunity for Electricity North West to improve its visibility to customers within its region.

2. KEY FINDINGS

2.1 Which communication material(s) and type of information is sufficient to ensure customers understand the C_2C initiative?

Awareness of Electricity North West

It was an objective in phase one of the ECP to establish the level of awareness of Electricity North West and customers understanding of its role, before approaching the subject of C_2C. It was considered unlikely that customers would comprehend C_2C without having this basic understanding first.

There was minimal spontaneous awareness and understanding of the role and responsibilities of DNOs and Electricity North West, the only exception being a minority of I&C customers who reported that DNOs "run the network".

Customers are very focused on the reliability of their supply and the price of their bill. In the absence of accurate understanding, they assume DNOs play the role of the original supplier of electricity. If customer perceptions of Electricity North West are to fairly reflect the service given by the DNO, any communication from Electricity North West must therefore be specific in distinguishing and explaining the role of DNOs from suppliers.

Customers, both domestic and I&C, have low levels of engagement with electricity supply, be it in relation to a supplier or DNO. The majority simply expect a reliable supply for a fair price. The only exceptions to relatively low levels of routine interaction are customers who want to know who to contact during a power cut, and a minority of very environmentally driven or price sensitive customers.

Customers expect suppliers to contact them more frequently than DNOs, given that suppliers are responsible for customer bills. In phase one the ECP questioned why suppliers were not

responsible for communicating about C_2C. By phase two customers had a better understanding of the difference between a DNO and a supplier and this question was therefore answered and generally accepted. The project should however engage further with suppliers as a potential route to new C_2C demand side response customers.

Whilst power cuts are generally described as “rare these days”, the reliability of supply is still of high importance for domestic customers and even more so for I&C customers. Indeed any discussion around power cuts, without quantification as to how many, is viewed negatively by customers.

Awareness of the Climate Change Act and its implications

A further objective of phase one of the ECP was to gauge customers’ reaction to the consequences of the Climate Change Act 2008 and establish their view of how best to satisfy future electricity demand. Without this understanding, it was hypothesised that customers would have less appreciation of the problem that C_2C seeks to remedy and thus its credibility would be affected.

Customers are typically apathetic towards the future demands on the network and government targets. They may be aware of key phrases such as ‘low carbon’, ‘carbon footprint’ or ‘being environmentally friendly’ but this understanding is largely superficial.

When probed, customers expect the demand for electricity to rise in the future but this is attributed to an increasing reliance on technology and population growth. Customers had not considered the effects of de-carbonisation on electricity demand or infrastructure. There was no awareness of the ‘Climate Change Act 2008’ and even when briefed, customers showed little interest.

“It is only worth it if other countries are doing the same, 2050 is too far off”

From reading the materials provided, customers found it hard to appreciate how and why de-carbonisation would necessarily result in an increase in electricity demand. This is partly attributable to the fact that historically, environmental initiatives have focused on minimising or cutting consumption as opposed to changing energy delivery mechanisms.

Terminology such as ‘de-carbonisation of heat, transportation and electricity production’ also compounded their confusion and lack of understanding.

Electric cars were viewed with a relatively high level of scepticism and not regarded by the ECP participants as viable or practical for the immediate future. In part, this was in response to the message that ‘to travel 80 miles will use the same electricity as it takes to power a small house for the day’.

There was a strong perception that investment into alternative sources of energy, particularly solar power, which is becoming increasingly top of mind for customers, should help to minimise the demand on the electricity network

“If all houses are powering themselves through roof solar panels, won’t there be less reliance on the grid?”

Whilst customers have a relatively vague understanding and appreciation that the electricity network will need to change due to de-carbonisation; if asked to hypothesise solutions to increased electricity demand, their answers are dominated by alternative sources of energy and concerted efforts to try to reduce electricity consumption, where possible.

When shown the ‘problem statement’, the ECP responded with concern, based on a perceived implied increase in bill prices, without fully understanding the reasons for the increase. This lack of understanding was correlated with their not comprehending the scale of the increase in electricity demand. Some also felt this should be ‘paid for’ by Electricity North West, out of its ‘profits’.

The ECP suggested that a proactive and reassuring tone is required when communicating the problem statement to customers with a focus on shared responsibility and a sentiment of, 'we are in this together'.

Introducing C_2C

It took a great deal of explanation and time throughout phase one and two of the ECP meetings for customers to understand C_2C. Even after taking part in both group discussions, many were still not sufficiently confident enough in the specifics of C_2C to describe it to another person.

Without fully understanding the concept, some customers developed misconceptions early on:

- They expected power cuts to be more frequent and disruptive. Some had a misconception that power cuts will be used as a means of saving energy. This was particularly acute and driven by their experience of shortages in other essentials such as fuel during the tanker drivers' recent action.
- Some also expressed concerns about the phrase "using our emergency capacity more efficiently". This raised concerns over the possibility of 'losing' emergency capacity and that potentially this would mean that in an emergency, there would be no back up.
- Some ECP members felt that investment in alternative sources of supply; solar power, wind power, represented a more viable solution and therefore, perhaps C_2C represented a misplaced focus.

For domestic customers reassurance on the reliability of their electricity supply was crucial to overcoming their immediate 'increased power cuts' fear. They also needed to understand clearly why C_2C was relevant to them before they would engage;

"I've always thought what impact does it have on me and why do I need to know?"

For I&C customers, the initial perception of power cuts combined with 'agreed delays' raised concerns. Customers immediately envisaged worst case scenarios in terms of outages and the effect on their business. The term 'flexible contracts' suggested capped or rationed electricity tariffs to some, similar to mobile phone contracts.

Following phase one of the research, the ECP recommended that further clarity was needed on the effect that C_2C will have upon them as a customer and the necessity of maintaining emergency capacity.

The acceptability of C_2C and engagement with it increased significantly once the ECP understood that the reliability of their electricity supply would be maintained in terms of frequency of interruptions and more specifically, that C_2C will result in a reduction in the average power cut duration for many customers from approximately one hour to approximately three minutes.

The ECP supposed that other customers would, when fully understanding the initiative, view C_2C as a much more appealing alternative to many million pounds worth of investment to increase existing network capacity.

Perceived benefits of C_2C

Customers understanding of the benefits of C_2C was one way of establishing understanding of the initiative as a whole. It also meant the benefits, as they were understood by customers, could be used in future customer engagement to optimise take up of commercial contracts.

Avoiding future bill increases and contributing to the future of the North West, combined with the reality of relatively infrequent power cuts, appealed to the majority of customers. They appreciated the sentiment of limiting bill increases in the future, although some questioned for how long C_2C as a strategy would be sufficient to cope with additional electricity demand

in the future. For example, they asked if Electricity North West will need to expand the network in five or ten years anyway, even after implementing C_2C.

"I find it fascinating that one power cut every couple of years will save £9bn. I don't really believe it".

The main perceived benefit of C_2C for I&C customers was the prospect of financial rewards by signing up to a commercial contract. Given the many variables that would determine the level of the financial reward that customers would receive, this was outside of the scope of this piece of research and instead, is addressed in the customer segmentation report.

In a C_2C Seminar on 11 December 2012 at the Bolton Reebok Stadium, existing connections customers gave similar feedback to that of the ECP. Financial rewards and making businesses in the North West more competitive (by keeping infrastructure costs down) were the most important benefits of C_2C.

The perceived benefits of C_2C and some I&C customers' scepticism over its credibility are important to consider for future dealings with existing demand and generation customers and new connection customers, when the C_2C commercial frameworks are communicated out to customers.

Summary

If the objective of future customer engagement is that C_2C needs to be understood by all customers, then the ECP has unearthed important pre-conditions to this happening.

Customers have to be taken on a journey from being introduced to Electricity North West to understanding the connection between decarbonisation and increased demand for electricity and the problem of meeting that level of demand. The materials used in phase two which are referenced in section three of this report achieved this purpose.

The video material shown to customers in phase two then successfully made the link between the problem statement and how C_2C would seek to remedy it, with the help of a motorway analogy to explain the concept of emergency capacity. At this stage in the future, customers need to be told how C_2C will affect them and their electricity supply.

A practical issue is that this gradual briefing of customers on C_2C through a mixture of written and visual communication would be challenging to deliver on a mass scale and there would still be potential for confusion amongst a cross section of society.

2.2 When they understand, do customers feel it is important that other customers receive information about C_2C?

In phase two, feedback was mixed amongst domestic customers with regards to whom they feel should be informed about C_2C.

Carlisle

In Carlisle, the consensus was that domestic customers did not need to be informed about C_2C. They perceived C_2C would have a minimal effect on them;

"It will be just the same, there aren't going to be many more power cuts but it should be back up and running quicker".

Therefore, customers asked why domestic customers need to be informed about C_2C. There was a strong consensus that given the complexity of C_2C and the fact that it will have a minimal effect on them, any direct communication could raise more questions than answered;

"The less you know, the less you worry, I don't think it is something that should be discussed with ordinary people, these are all technicalities, which the majority of people do not

understand and would not be interested in, and people are frightened of change. You start asking people about a change and they will start asking questions".

Manchester

In contrast to the Carlisle panelists, domestic customers in Manchester felt that both I&C and domestic customers on the C_2C Trial circuits should be informed, believing that C_2C is;

"A good thing – isn't it a good thing to know about it?"

The rationale for informing all customers on the C_2C Trial circuits was in the interests of 'public information'.

Hence on the one hand, the Carlisle ECP felt that given the perceived complexity of C_2C and the initial questions and concerns it raised, that Electricity North West should not directly communicate with domestic customers on the C_2C Trial circuits. This was based on the fact that:

- The frequency of power cuts experienced by customers will not be discernibly different to the current situation.
- The power cut duration on C_2C circuits is likely to be noticeably improved.
- Whilst there may be a second or third order effect on customers from participating I&C customers such as supermarkets, domestic customers are unlikely to notice.

On the other hand, the Manchester ECP felt that disseminating information about C_2C would be in the interests of the public and a positive message to receive.

Phase three

I&C customers clearly need to understand the principle aspects of C_2C before accepting a new commercial contract, and the learnings from phases one and two will therefore be important in helping to shape this communication. However, the ECP raised the question: do domestic customers really need the same level of understanding?

In phase three a fresh approach was taken to communication with domestic customers with the information given to the ECP scaled back considerably. Phases one and two indicated that it was more important for domestic customers to understand how their electricity supply had changed, rather than why it needed to change or the technology underlying it.

When the ECP were presented with refreshed communication materials in phase three, the feedback was that they were quick to read, easy to understand and conveyed informative yet concise messages. The ECP were then unanimous in their recommendation that the information produced should be shared with all customers on C_2C Trial circuits.

This feedback showed very clearly the importance of the information to be communicated in terms of its breadth and depth in determining the right audience to receive such information.

I&C customers

Effectively communicating C_2C to I&C customers is an essential pre-requisite to persuading them to opt into C_2C contracts. The learnings from the ECP suggest that to make this communication more effective, Electricity North West should carefully explain the role it has as a DNO and how it differs to that of a supplier. Prior to fully understanding the role of DNOs and suppliers customers expect communication to be via their supplier. However, after discussion and understanding the distinction between the two organisations, they then feel communication from Electricity North West is more appropriate. This is pertinent should a third party organisation be appointed by Electricity North West to approach customers and sell its managed connection agreements on its behalf.

Furthermore, to improve the effectiveness of communication Electricity North West should:

- Use easy-to-understand terminology wherever possible and avoid industry 'jargon' or abbreviations.
- Emphasise the key benefits to the customer of C_2C, focusing on the financial rewards, making businesses more competitive by keeping infrastructure costs down and the availability of protected days and flexibility in the contracts.
- Instigate a proactive communications strategy for I&C customer's eg sending out letters, leaflets, holding public seminars, telesales and face to face meetings.

The low carbon agenda

The ECP hypothesised about how other DNO's were addressing the same problem, suggesting that Electricity North West could communicate more widely about low carbon initiatives. Interestingly, some domestic customers were also intrigued by C_2C and assumed that C_2C, or a variation of it, could be used amongst domestic customers in the future. Exploring these ideas was outside the scope of the first three phases of ECP research

2.3 If customers feel it is important that other customers receive information about C_2C, how, to whom and when should Electricity North West engage with customers about C_2C?

As a result of reviewing updated communication materials, in phase three it was agreed by all participants of the ECP that Electricity North West should communicate with customers about C_2C because:

- Customers "have a right to know" if changes are being made to their electricity supply.
- Providing this information can allow commercial customers to manage their own customers' expectations in the event of a power cut.
- It is an opportunity to educate customers in the way electricity industry is changing in terms of energy consumption and demand
- Vulnerable people "need to know".

Given that there was widespread agreement that Electricity North West should communicate about C_2C, but in a more simplified manner, two communication pieces were designed and critically evaluated by the ECP in phase three:

- Option A: a proactive piece of communication sent to all 300,000 customers on selected C_2C Trial circuits before the Trial starts on 1 April 2013
- Option B: a reactive piece of communication only sent to customers who are on a selected C_2C Trial circuit and have experienced a power cut.

Option A was regarded as the most effective communication piece as it conveys what is perceived as good news; 'improving your electricity supply' and tells customers precisely what they need to know without going into too much detail.

The tone of the language is considered to be friendly, inclusive and;

"It isn't trying to sell you something. It is giving something for nothing. It reads like a public service announcement"

Overall Option A was considered to be a friendly and informative communication piece that isn't too technical for customers who have not been part of the ECP to understand.

Whilst reactions to Option B were also relatively positive, in that it acknowledges a recent power cut and that 'we were able to restore you supply quicker than in the past', it is deemed 'less giving' than option A because it asks for something in return (participation in market research).

Overall the ECP felt that Option B was too reactive:

"It is a bit inattentive. It says to me that Electricity North West could not be bothered to tell us about these changes before"

Some I&C customers claimed that they would be dissatisfied if they experienced a power cut and they had no prior warning that it would have a short duration, despite Electricity North West knowing this in advance.

In terms of how the preferred communication piece, Option A, should be delivered to customers, the ECP suggested a letter or card be addressed to a person. This is because addressing the communication to 'the occupier' risks it being thrown away or considered junk mail, especially if it is delivered by Royal Mail with the rest of the individual's post. Ideally the letter or card should be hand delivered to avoid it arriving at the same time as other post. Some participants of the ECP also suggested that 'gimmicks' could be used to grab customer's attention, such as including a fridge magnet with Electricity North Wests contact details on it.

Both communication pieces had the same information on the back of the card containing advice on what to do in the event of a power cut and about the priority service register for vulnerable customers. This information was considered to be very useful and consistent with the view that the piece as a whole was a 'public service announcement' with helpful information and advice. Some customers commented that they would be likely to keep the information on the fridge, by the phone or in a safe place for future reference.

This fact that the advice and information given on the materials that were tested were received so positively is an important learning for Electricity North West in terms of its branding and how it communicates with its customer base going forwards.

2.4 How can the learnings from the ECP be used effectively to design and implement a communication plan to brief customers affected by C_2C?

Despite some initial reservations about the general size and small font used in the communication pieces, it was clear that a proactive rather than reactive approach would be most suitable. Phase three of the research confirmed that all customers that are on selected C_2C Trial circuits should be communicated with before the live Trial starts on 1 April 2013.

The information contained in the proposed leaflet was considered to be informative and was presented in an approachable and easy to understand way, in a friendly tone.

The information on the back of the leaflet was considered particularly useful as many confess to not knowing what to do in the event of a power cut. Having this included ensures that the communication is perceived as an important public service announcement.

A leaflet, letter or card are perceived as the most effective and cost efficient mediums for delivering the information and ensuring the greatest reach across those on the C_2C Trial circuits.

However, the ECP stipulate that the challenge will be to ensure that customers will read the information sent to them and that it isn't lost amongst other junk mail received. A personally addressed envelope would have a greater chance of being opened, particularly in a commercial environment where mail might be opened by a third party.

Delivering the leaflet, letter or card at a different time to 'regular' post may reduce the risk of it being lost amongst other information; but this may only work if customers are at home during the day and are able to pick up the information in isolation to other items posted through the door.

Given the current lack of awareness of Electricity North West and its role, the ECP recommended that the branding on the communication sent out to customers on C_2C Trial circuits is made very prominent so that its identity is not mistaken for an electricity supplier.

The learnings from phases one through to three of the ECP deliver clear recommendations as to;

- Whether Electricity North West should communicate with customers on C_2C Trial circuits
    - Yes, Electricity North West should communicate with customers.
- Why they should do so
    - The information to be communicated is considered to be an important public service announcement and conveys positive news about customers electricity supply.
- What format the communication should take
    - Printed information using a card format is the recommended approach.
- What it should say
    - The information card should introduce Electricity North West and its explain its role as a DNO, confirm that an improvement has been made to the customers electricity supply and how this benefits them, give advice about what to do in the event of a power cut, raise awareness of the priority service register and how to get in touch with Electricity North West with any questions.
- When it should be delivered
    - The card should ideally be delivered proactively prior to the C_2C Trial starting on 1 April 2013.
- To whom it should be delivered to
    - The card should be communicated to all customers on selected C_2C Trial circuits

3. ECP FEEDBACK ON THE COMMUNICATION MATERIALS USED DURING THE RESEARCH

The learning and evolvement of the communication materials used in all three phases of the research were essential to facilitate the ECPs understanding of C_2C and attainment of the overall research objectives. This section of the report contains more detailed ECP feedback on the stimulus materials used in phases two and three of the research and outlines how the materials were developed and refined over the course of the research in response to that feedback. The findings from phase one of the research have been disseminated in section two of the report and were used to inform the decision regarding which materials were required for phase two.

3.1 Question & answer (Q&A) document

The ECP were provided with a Q&A document (Appendix 4.2.5) which contained a series of frequently asked questions and useful information about Electricity North West.

Overall, the ECP found the Q&A document to be “useful”, “informative” and “helpful”. The language was judged to be clear and easy to understand. The document was regarded as helpful and informative in assisting the ECP to understand the electricity marketplace, the role of DNOs and suppliers and the future carbon challenges. The ECP advised that the document should be improved by giving more specific information on C_2C, for example what C_2C is, how it will work and what effect it will have on individuals.

Specific feedback potentially useful to other LCNF projects and future C_2C work include:

The rhetorical format of the headings and questions were considered simple, clear and effectively addressed the main things that customer's wanted to know.

The 'who's who' section in particular was praised for being "simple", "useful and clear" and "easy to follow". The road comparison provided a useful visual analogy of the C_2C concept.

The 'what does Electricity North West do?' section helped customers to understand that Electricity North West are responsible for the "day to day running of the system". The '99.9% reliable' statement provided welcome reassurance for the customers and was an effective reference point for the discussions that followed.

The 'fast facts' section was quickly noticed by all ECP members. Whilst it provided some useful information in an easily assimilated form, by its very nature the staccato style tended to raise more questions than it answered.

The 'why are we asking questions about Electricity North West' was felt to need more information with regards to C_2C in particular. The communication piece introduces C_2C as a viable alternative to traditional reinforcement of the network and briefly explains that it is primarily aimed towards I&C customers. It was felt that greater clarity and detail was required with regards to why C_2C is a viable alternative, how it works and why customers should believe that it will actually work in practice. These additional questions were addressed in a separate piece of communication.

The large scale adoption of electric vehicles was greeted with scepticism and some disbelief. Customers suggested alternatives that they considered more viable, such as:

- Methane
- recycled cooking oil and
- LPG.

Notwithstanding the technology debate, the feedback illustrates that Electricity North West should consider which drivers for change it uses as examples to underpin the need for initiatives such as C_2C. If the change driver is not considered credible by customers then the concept itself can be undermined at an early stage.

3.2 Video

As part of the briefing material used in phase two, Electricity North West prepared a video which covered who Electricity North West was, the future carbon change agenda and an outline of C_2C.

A copy of the C_2C video can be found at: www.enwl.co.uk/c2c.

The video was well received by all members of the ECP who praised its clarity and thought the material and style to be easy to understand. The simple language used, combined with clear visual aids were considered to be particular strengths.

The element of flexibility in the commercial contracts, for instance being de-energised for two hours rather than one, sacrificing non-critical load such as air conditioning as opposed to more critical load used to operate tills, and opt-in nature of the initiative also enjoyed positive responses and made C_2C feel more relevant and realistic.

The hard shoulder analogy was appreciated and aided understanding of the C_2C proposition, providing an extension to the road analogy used in the Q&A document. However, it was noted that this can suggest that it is simply a case of using emergency capacity, rather than re-routing it. This assumption can then lead to questions such as:

"Is there enough emergency capacity left?"

The explanation as to why electricity demand is likely to double was considered to be clear and visually seeing electric cars in the video made customers feel like they were more of a feasible entity. However, I&C customers were the most sceptical that electric cars will be as prevalent as the video suggests;

"I don't think anything will change for the next 50 or 60 years"

The ECP feedback clearly illustrates the power of well-prepared video material in assisting customers to understand something as complex as C_2C. The usefulness of such materials arises not only from the visualisation and verbalisation of concepts for customers but equally from the preparation and thought processes that are required to script the material.

3.3 Concept board

In phases one and two customers were presented with 'concept boards' which succinctly summarised the problem statement (satisfying an increase in electricity demand without the need for large scale traditional reinforcement), an explanation as to how C_2C attempts to address that problem and why customers should care ('What's in it for me?'). Presenting new concepts in this format is an established method in qualitative market research for encouraging focused feedback from audiences.

A copy of the original concept board used in phase one can be found in Appendix 4.2.4. The C_2C concept board was then enhanced using the learnings from phase one and the version used in phase two can be found in Appendix 4.2.8.

The phase two concept board was described as clear and easy to understand. Both the Carlisle and Manchester groups felt that if they gave the revised concept board to someone else, who didn't know about C_2C, that they would understand it.

The simple structure, sub-headings ('problem', 'solution', 'how and what's in it for me'), and its short length all received positive reactions:

"It's clear and understandable"

"If it was any longer, I'd have lost concentration"

The 'problem' section was understood and was void of any confusing terminology. The simple and easy to understand language was appreciated and helped to quickly convey the problem.

Likewise, 'the solution' section was clear, clarifying that C_2C uses the existing infrastructure, without the need for expanding the network and thus helps to keep bills down.

The 'how' section was deemed reassuring in terms of the information given on reliability of supply, although the specifics of how this would be achieved were not self-explanatory. However, this was not seen to be as important as the reassurance message itself which was felt to be credible.

The 'what's in it for me' was seen as explicit and its transparency was appreciated.

For I&C customers, immediate reactions to the concept board were positive, in particular the message of 'your supply will be as reliable as usual'. I&C customers had expected from previous ECP discussions and exposure to stimulus materials that the power cut frequency would be unaffected after the C_2C Trial had commenced. However, they were then told that the average fault frequency could change from once every three years to once every one to two years on selected C_2C Trial circuits. I&C customers then became somewhat disbelieving and felt 'misled' as to the definition of 'your supply will be as reliable as usual'. Their immediate expectation is that power cut frequency will be unchanged. They also questioned why being on a C_2C Trial circuit meant a slight increase in power cut frequency.

The terminology used in the concept board seeks to reassure all customers on the reliability of their supply post C_2C implementation, for instance, 'if your business ever experiences a power cut' and 'in the unlikely event of a power cut'. That said, customers see a slight increase in power cut frequency i.e. once every three years, to once every one to two years, as something to be concerned about and to seek further clarification on.

The message that power cuts are likely to be restored more quickly on selected C_2C Trial circuits was received well. That electricity supply for all 'essential uses' could be restored in a few minutes was in particular, considered to be very appealing amongst I&C customers given that it would facilitate a 'business as usual' service for their end customers, even in the event of a fault.
The feedback on the concept board reinforces the earlier findings that any communication around reliability of customers electricity supply needs very careful management throughout any form of customer engagement. This is linked to the fact that having a safe and continuous supply of electricity at a fair price is top of mind in terms of their stated importance.

3.4 Transport analogy

To assist in simplifying C_2C, a transport analogy was used to explain the need for emergency capacity and how power supplies are re-routed when network faults occur. A copy of the transport analogy material presented to the ECP can be found in Appendix 4.2.7.

Overall, the transport analogy board, which was a separate communication piece to the motorway analogy referenced in the Q&A and hard shoulder analogy referenced in the video, failed to aid understanding, but rather raised more questions and confused many customers.

The main issues were its long length, terminology used, complicated language, use of jargon and 'school like' visuals used to describe the analogy. Customers reported that it felt like "hard work" and "being back at school" reading it.

The diagram was also criticised as being unclear as to what each symbol refers to and the need to make the lanes and traffic clearer.

Using this analogy to explain the electricity infrastructure and flow of power around the network confused customers at a point where they believed they had previously achieved a good level of understanding of C_2C. This prompted requests to use either just the transport analogy referenced in the video or just explain the flow of power and emergency capacity more simply.

The relative failure of this analogy illustrates the need for LCN Fund projects to select appropriate and simply analogies to explain their concepts but also the need to stick with a small number of ideally linked analogies.

3.5 Option A: Proactive communication intended for all customers on C_2C Trial circuits

Option A was considered to be a positive 'good news' piece of communication emphasising that the customer's electricity supply has been improved and why, "because we recently installed new equipment on the part of the electricity network which supplies your home". The information is considered precise in that it tells customers what they need to know, without going into too much detail and is presented in a simple manner without unnecessary technical jargon. The content is such that customers feel the communication is not commercial in its nature, rather conveying a public service announcement.

Some of the ECP commented that the language used could be stronger, particularly regarding reliability of their electricity supply whereby Option A states, 'most of the time we provide you with a continuous and reliable electricity supply'. Although customers would prefer the use of 'all of the time' as opposed to 'most of the time', in this context, there was an appreciation that they had, as a collective group, relatively little exposure to power cuts in the past hence shouldn't be drawn on it.

The ECP was quick to realise that Option B had many similarities to Option A in the look and feel of the information and picked up on any subtle differences, namely that Option B communicates the fact that there has been a fault recently and informs customers that, 'fortunately we were able to restore your electricity supply much quicker than in the past". This improvement is seen in a positive light.

The blue box used in Option B was generally liked by the ECP for its ability to draw attention to a message and break up the text. This should be remembered for all future communication materials. However, with the reference in the blue box to taking part in market research, Option B is less favourable to Option A given that it, therefore, gives the impression that is asking for something in return. Some customers assume that the communication will be sent out to all customers that have been affected by a fault on a C_2C circuit, each time a fault is experienced, thus assume it will be an expensive communication strategy.

Overall, the ECP felt that Option B should not be distributed to customers, as they felt it could be construed as inattentive:

"It reads like Electricity North West can't be bothered to tell customers about these changes in the first place"

I&C customers in particular felt that it would be a disservice for Electricity North West to communicate with them reactively, given that they would feel safer in the knowledge that the majority of interruptions would now result in power being restored much more quickly, thus having a much smaller impact on their daily routine. Without this knowledge, I&C customers felt that they may take action which is inappropriate or worry unnecessarily in the event of a fault. This led them to suggest that communication should be proactive, or there should be none at all.

Common to both communication pieces and in line with previous feedback regarding the need to differentiate between the role of Electricity North West as a DNO versus a supplier, the ECP also suggested that opening the communication with "Improving your electricity supply" may lead some customers to believe the information has been sent by their electricity supplier. This led the ECP to recommend that the Electricity North West branding should be emphasised more strongly in the final communication draft.

The ECP praised the language used in both Option A and Option B as being 'friendly' and 'touchy feely', such as the opening statement, "Hello. We are Electricity North West". The friendly and caring emotion the literature provoked is enhanced by the advice given on the back of the leaflet regarding what to do in the event of a power cut and raising awareness of the priority service register for vulnerable customers. Many customers in the ECP professed to not knowing what they should do in the event of a power cut and how they may, therefore, attach such information to their fridge, put it by the phone or keep it in a safe place. This feedback points to a broader communication challenge for Electricity North in terms of its visibility as an organisation to customers and the positive affect advice and guidance can have.

Participants suggested that in order to make the information generally more accessible, it could be made available in Braille or other languages.

One of the key challenges ahead looks to be engaging the recipient of the communication in actually reading the information. The ECP were in unanimous agreement that the text should increase in size to improve its readability. Furthermore the way the information is delivered in terms of who it is addressed too is important, given that the ECP claim to throw away any post that is not personally addressed. In the absence of having customer names and addresses to fulfill this request, customers' preference would be that a reference is made to the information "not being a circular" or in bold font adding the following to the envelope it may be enclosed in; "important information regarding your electricity supply". This may reduce the risk of it being interpreted as junk mail.

4. APPENDIX

4.1 Engaged customer panel – terms of reference

Background

The broad C_2C project will ascertain whether it is possible to release the whole of the installed high voltage (HV) network capacity for use by new and existing customers thereby reducing the costs for reinforcing the distribution network.

The technology used to enable C_2C releases additional capacity from assets already installed whilst the new customer contracts, via demand and/or generation response arrangements, maximise its use. C_2C offers both new and existing customers a new low intrusion form of post-fault demand/generation response contracts and seeks to prove this can be implemented in a manner acceptable to customers.

C_2C offers customers a genuine choice of service and price options and thereby seeks to engage customers in helping to mitigate the cost of future increase in network demand. It has the potential to release significant network capacity for use by customers at much lower costs than traditional techniques. However, its success is entirely dependent on engaging customers in meeting the UK's future challenges through new forms of contracts.

In April 2013 Electricity North West will start trailing C_2C on around 10% of its network. The Trial's circuits which have been identified serve around 1300 industrial and commercial (I&C) customers and approximately 300,000 domestic customers.

Active customer participation is an integral part of C_2C and will form an important part of the learning and development for future low carbon programmes. Engagement with customers has been designed to promote a positive customer experience throughout the C_2C journey. All the necessary steps have been and will be taken to ensure that customers' best interests remain a primary concern at all times.

Overall objectives

Customer engagement is at the heart of the C_2C Trial and ongoing stakeholder engagement is facilitated through the use of an engaged customer panel. This engaged customer panel has been and will be used to help Electricity North West formulate effective communication plans and thereby provide relevant and clear information to customers on C_2C Trial circuits. It is Electricity North West's intention to publish a simple explanation of C_2C to all domestic customers on affected circuits.

The first meeting was held in July 2012 with predetermined terms of reference and future membership of the grounds of repeat attendance at ECP meetings.

Membership

The ECP is made up of an appropriate cross section of customers in sufficient numbers to provide qualitative research on an ad hoc basis. As a cross section of the population is required to represent the diverse customer base across the North West; panelists have been recruited from a range of ages, social grades, educational attainment, gender, region and home ownership. This is in addition to a range of I&C customers who have responsibility for their organisation's energy supply. Panelists are geographically clustered, with five locations selected to broadly cover the Electricity North West footprint ranging from rural Carlisle to urban Manchester in easy access of central research locations.

The ECP will consist of 50 customers, all of whom will be available to attend group discussions and/or depth interviews on an on-going basis, with a requirement to attend a minimum of three group discussions. The size of the ECP was based on the following principles:

- It allows the research to cover a sufficiently wide range of customers (age, gender, domestic / I&C)
- It allows the research to cover a sufficiently broad geographical area with four key research locations. The locations are Manchester, which makes provision for one I&C group of ten members and another group of ten domestic customers. Additional locations; Carlisle, Warrington and Preston all make provision for a further ten domestic customers in each location
- As focus groups are conducted over a period of time, it avoids having the same respondents involved in every phase of research. This reduces the risk of customers becoming fatigued and the process becoming repetitive for them
- Standard qualitative research protocol is to recruit ten customers to take part in each ECP meeting with a view to eight customers actually participating on the day. This allows some coverage for non-attendance at meetings
- Recruiting and interviewing panelists is a costly process, and a panel of 50 represents a cost-effective balance between the requirements of the consultation process and the cost of that consultation.

It was anticipated that across the year there would be around a 10% to 15% dropout rate from panelists who no longer wish to take part for unforeseen or personal reasons, so the number of panelists was over-recruited by 10% initially. Additional panelists over this level will also be recruited as and when required.

Panelists were told at the recruitment stage what would be expected of them and how often they would need to take part in the market research, as well as how they would be incentivised for participation.

Frequency

The ECP meets regularly to test and develop communication materials to ensure that customer engagement and protection remain a prime consideration at all times.

Whenever Electricity North West wishes to schedule a group discussion, the panel members are contacted to check their availability for the dates in question. The research and venue is then booked and a reminder is sent by text, email or phone depending on the individual's preference.

Admin support/facilitation

The ECP research is conducted by Impact Research, an independent market research agency, on behalf of Electricity North West.

Impact Research is responsible for the day to day management of the ECP, booking of venues and associated arrangements, moderating group discussions and conducting in-depth interviews and the provision of analysis, findings and report writing.

Research objectives

The research was designed to address four key questions:

- Which communication material(s) and type of information is sufficient to ensure customers understand C_2C?
- When they understand, do customers feel it is important that other customers receive information about C_2C?
- If so, how, to whom and when should Electricity North West engage with customers about C_2C?
- How can the learning from the ECP be used effectively to design and implement a communication plan to brief customers affected by C_2C?

The research approach

The ECP research undertaken so far has comprised of a phased approach, with three phases of research to date. In phase one, customers were provided with the following stimulus materials during the group discussion:

- Distribution network operator and supplier definitions
- The Climate Change Act 2008 descriptor
- 'Problem' statement outlining the impact of decarbonisation on future electricity demand
- A concept board outlining the specifics of C_2C.

This phased approach was part of a deliberate strategy to gradually educate, test and evaluate communication materials in isolation and then as a whole to understand customers' appreciation of the problem statement and the proposed C_2C solution. Customers required an appropriate level of education given the perceived complexity of the electricity market. Upon completion of phase one, the stimulus materials used were developed and further refined, based on the feedback received.

The following stimulus was then presented to the same customers in phase two for discussion, all of which can be found in the Appendix:

- Q&A document, outlining more detail on the role and responsibilities of DNOs
- Video, detailing the impact of decarbonisation on electricity demand and introduces the C_2C solution
- Transport analogy to explain the flow of power around electricity circuits and emergency capacity in more detail
- Concept board, outlining the specifics of C_2C.

Given that there was widespread agreement after phase two that Electricity North West should communicate about C_2C, but in a more simplified manner, two communication pieces were designed and critically evaluated by the ECP in phase three:

- Option A: a proactive piece of communication sent to all 300,000 customers on selected C_2C Trial circuits before the Trial starts on 1 April 2013
- Option B: a reactive piece of communication only sent to customers who are on a selected C_2C Trial circuit and have experienced a power cut.

This gradual, evolutionary approach allowed for C_2C to be fully understood through the development of effective communication materials

In each phase of research, three 90-minute group discussions were run:

- Group 1: Carlisle, domestic customers
- Group 2: Manchester, domestic customers
- Group 3: Manchester, I&C customers.

Each sample was weighted towards domestic customers, as whilst the research needed to represent the views of I&C customers, domestic customers were the core focus given that they hadn't been exposed to C_2C in any customer engagement to date. Importantly, the research needed to understand how domestic customers would understand and react to C_2C.

I&C customers were not exposed to example contracts with financial rewards, mainly due to the many different variables involved, such as the reward depending upon the capacity available, the accepted length of interruption, the number of times the contract can be used and any other contract stipulations. This was outside of the scope of the ECP research and is included within the customer segmentation report. Despite not receiving information about possible contracts, I&C customers hypothesised about potential pay as you go (PAYG) or pre-paid financial rewards.

4.2 Stimulus material

Distribution network operator and supplier definitions

SHOWCARD C

ELECTRICITY SUPPLIERS

Suppliers are the companies who ***supply and sell*** electricity. Consumers are able to choose who supplies their electricity.

The suppliers are the first point of contact when arranging an electricity supply to domestic, commercial and smaller industrial premises.

Suppliers then bill customers for the electricity they use on an on-going basis

SHOWCARD D

Distribution Network Operators

There are 14 licensed distribution network operators (DNOs) each responsible for a distribution ***area*** in the UK. Consumers have no choice over who their DNO is.

Electricity North West owns, operates and maintains the North West's electricity distribution network, connecting 2.4 million properties, and more than 5 million people in the region to the National Grid.

Electricity North West is the first point of contact in the event of a power cut; it is their responsibility to restore power and maintain a constant supply.

The Low Carbon Act descriptor

SHOWCARD E

Climate Change Act 2008

As the UK fulfils its decarbonisation obligations under the Climate Change Act 2008 to cut greenhouse gas emissions by 80% by 2050, the demand on electricity networks will dramatically increase.

This increase in network demand will be driven primarily through the decarbonisation of heat, transportation and electricity production rather than by a growing population.

'Problem' statement outlining the impact of decarbonisation on future electricity demand

SHOWCARD G

PROBLEM STATEMENT

If we (Electricity North West) continue to use our electricity network in the same way as we do now, we will need to invest nearly £9 billion in the North West to expand the network (more pylons, cables etc.) and cope with the extra demand as early as 2025.

The impact of this potentially enormous increase in electricity demand has consequences for customers' bills and the impact on society which will need to be resolved if the UK is to move towards a low carbon future.

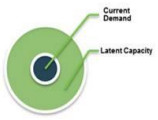
Concept boards outlining the specifics of C_2C

SHOWCARD H

C2C- Domestic Customers

electricity northwest

Current Situation	The network is designed to keep the lights on when things go wrong and allow us to re-route power around network faults. This means that for most of the time, we only use half of our total capacity with half reserved for emergency use.
Solution	Capacity to Customer ("C2C") will make **better** use of **existing capacity** and help **keep bills down**.
How?	We will use smart network reconfiguration and flexible commercial customer contracts to release our emergency capacity which can be used in homes and businesses every day. If ever a power cut occurs, by commercial customers accepting an agreed delay in restoring their supply to full power, they will be financially rewarded by a variety of means.
What's in it for me?	By using our emergency capacity we can avoid the cost and disruption of expanding our network and keep bills down, whilst meeting future electricity demands.



SHOWCARD I

Get rewarded for entering into a new commercial contract

electricity northwest

Problem	Demand for electricity is predicted to double by 2050, driven by the UK's need to reduce its carbon emissions via the decarbonisation of heating and travel (*Climate Change Act 2008*). To maintain current levels of service the cost of upgrading the electricity infrastructure would mean *higher bills from 2015.*
Solution	Capacity to Customer ("C2C") will make **better** use of **existing capacity** and help **keep bills down**.
How?	We will use smart network reconfiguration and flexible customer contracts to release our emergency capacity for general use.
What's in it for me?	If ever a **power cut** occurs, by accepting an agreed **delay** in restoring your supply to full power, you will be **financially rewarded** by a variety of means.

Everyone benefits with C2C

Q&A document, outlining more detail on the role and responsibilities of DNOs

PRODUCED BY IMPACT RESEARCH

Issue 1

Q&A

1st October 2012

THANK YOU FOR TAKING PART IN OUR CUSTOMER CONSULTATION RESEARCH

IN THIS ISSUE...

Who's Who in the UK's Electricity Industry?

There are many different types of companies and organisations involved in supplying you with electricity.

- **The National Grid** is responsible for operating some of the power lines in the UK – the most powerful ones – and transmitting electricity from power stations closer to where people live and work. The National Grid is a little like the UK's motorway network...
- **Distribution Network Operators** – sometimes called DNOs – maintain many of the UK's electricity wires and cables. Each region of the UK has a DNO allocated to maintaining the electricity network in that area. Electricity North West is the Distribution Network Operator – or DNO – for the region in which **you** live. The DNO's connect to the National Grid's network to individual homes, offices, and other buildings: a little like the UK's 'A' and 'B' roads and local roads.
- **Suppliers** are the final step in the process and are the people who send you bills for your electricity, some of them – like EON, EDF and NPower – you may be more familiar with. Some of the money you pay your supplier is passed to DNOs to cover their costs in supplying you with electricity.

What Does Electricity North West Do?

Electricity North West manages and maintains the electricity distribution network – consisting of sub-stations, transformers, overhead lines, underground cables and other equipment across the North West. Electricity North West is responsible for connecting your home/business to the electricity network. Before Electricity North West, United Utilities and prior to them, Norweb were responsible for distributing electricity in your region.

Electricity North West ensures the day-to-day running of the system in the North West, repairs the network when things go wrong and invests in the network to replace worn out or old parts.

Electricity North West's network is 99.99% reliable.
A typical home in the North West will experience one power cut every three years and, on average, is without power for about an hour a year. These figures are only averages: some homes will experience problems more often, while some homes and businesses will never have problems with their power supply.

Electricity North West is also responsible for making sure the network can cope with any changes in how electricity is used.

INVESTING IN THE NORTH WEST

Electricity North West only owns and operates the network in the North West of England. That means that any money we invest, we only invest in the North West. We're completely focused on our region.

But I've Never Heard of Electricity North West!

In many ways, Electricity North West is a 'behind the scenes' company.

Electricity North West do not send you a bill for their services. Instead your supplier passes on part of what you pay them to Electricity North West. About £85 to £90 of the typical yearly household electricity bill goes to Electricity North West to cover their costs in managing the network.

FAST FACTS

2.4 million

Electricity North West connects 2.4 million households (5 million people) to the National Grid.

17p

You get your electricity bill directly from your supplier, then your supplier pays us around 17 pence from every pound in your bill for the use of our network, allowing us to operate and maintain the local grid.

Why Are We Asking Questions About Electricity North West?

On this page we've outlined some of the issues and challenges facing Electricity North West. As well as experts inside the company thinking about these issues, we want to get the views of our customers who live in the North West.

Part of our role as Distribution Network Operator is to plan for the future. In order to meet government carbon reduction targets we need to reduce our dependence on fossil fuels like gas and petrol and use more renewable sources. Demand for electricity will increase as dependence on fossil fuels is reduced, for instance with the anticipated usage of electric vehicles.

As a country, the demand for electricity is forecasted to double by 2050. In the North West we would need to invest approx. £9 billion to expand the network (i.e. more power lines and cables) to cope with the extra demand.

This would be a massively disruptive programme of work and lead to higher bills in the near future.

In order to avoid this situation, Electricity North West are proposing changing the way it uses the existing network in order to increase its capacity without expanding the network. This solution is called **Capacity to Customers;** C_2C.

The C2C trial is aimed at our business customers; however power cut frequency should stay the same for for all our customers (one in every 3 years).

Electric Cars

One of the biggest challenges we will face in a low carbon future is powering thousands of electric cars for the region's commuters. Electric cars need re-charging regularly- an 80 mile drive uses about the same amount of electricity that a small house uses in one day.

One of the changes for business customers is to install charging points for company vehicles, and for electric cars belonging to their employees and customers.

Electric Heat Pumps & Solar Panels

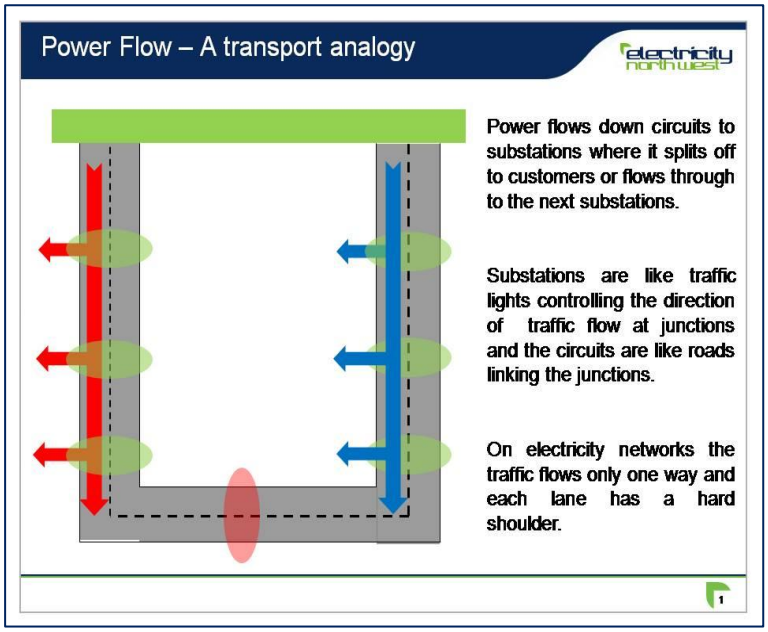
To help us use more renewable energy sources, other challenges include replacing gas central heating systems with electric heat pumps.

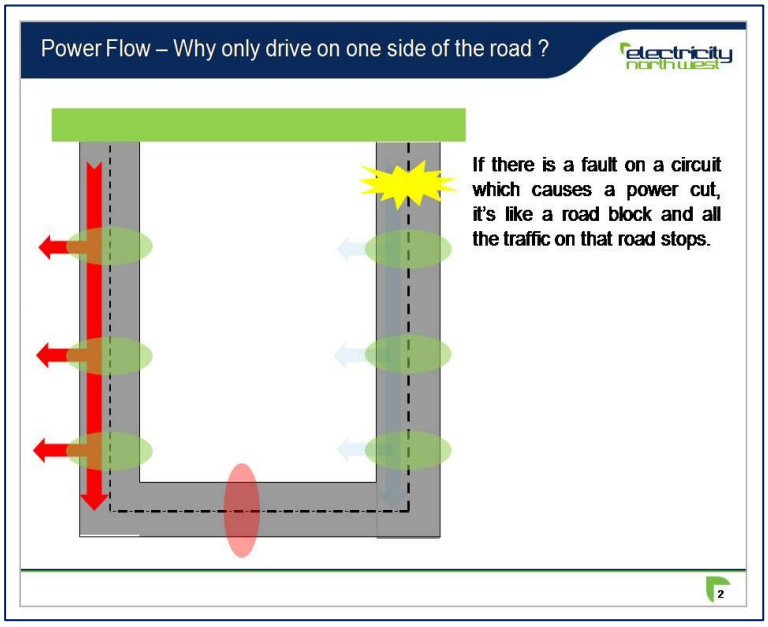
In addition, customers may install solar panels on their roofs to reduce their energy bills and carbon footprint.

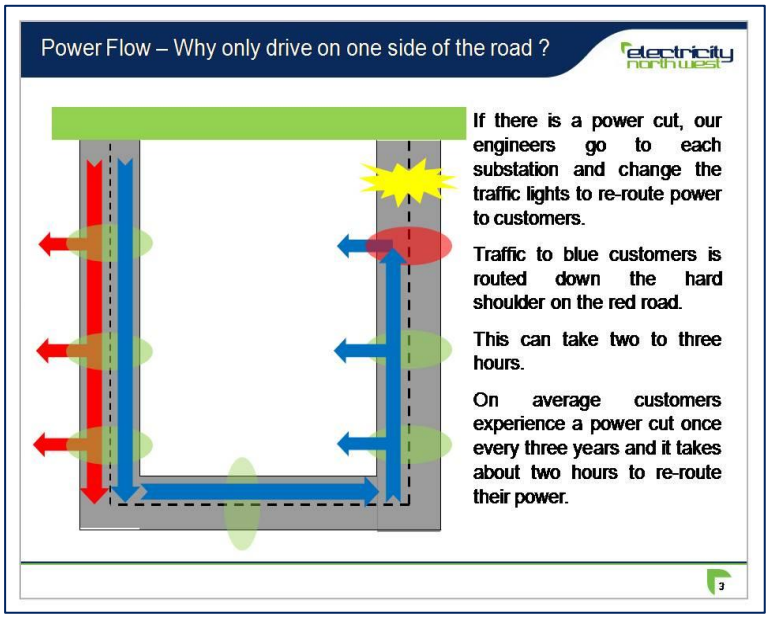
Video aimed at I&C customers, detailing the impact of decarbonisation on electricity demand and the C_2C solution

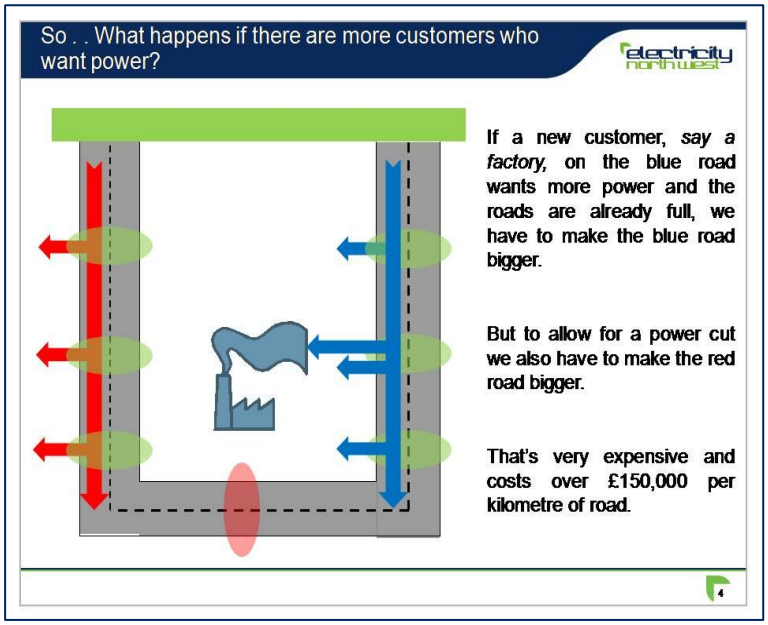
A copy of the video can be found at: www.enwl.co.uk/c2c.

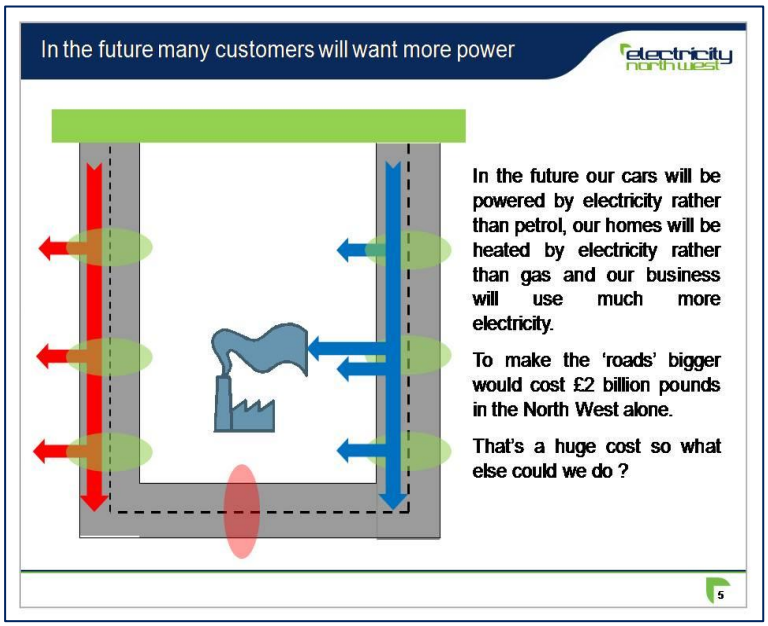
Transport analogy to explain the logistics of C_2C in more detail

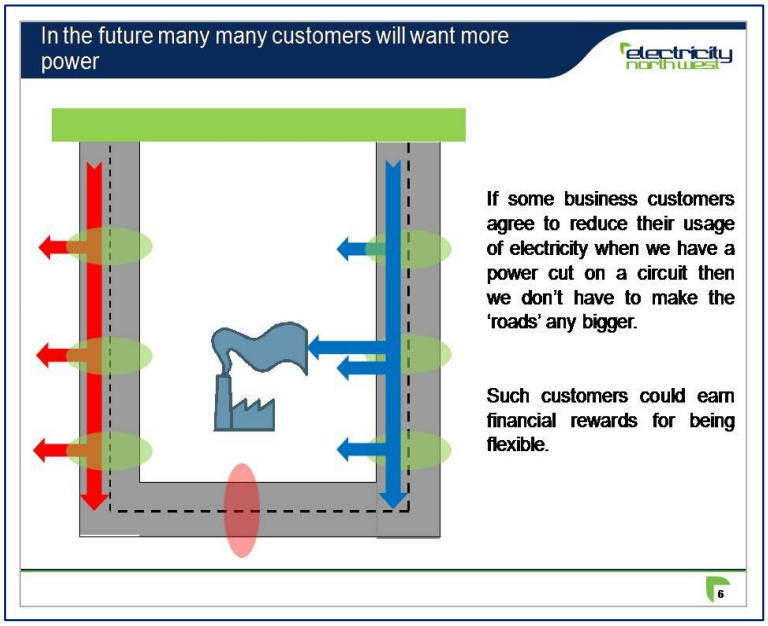


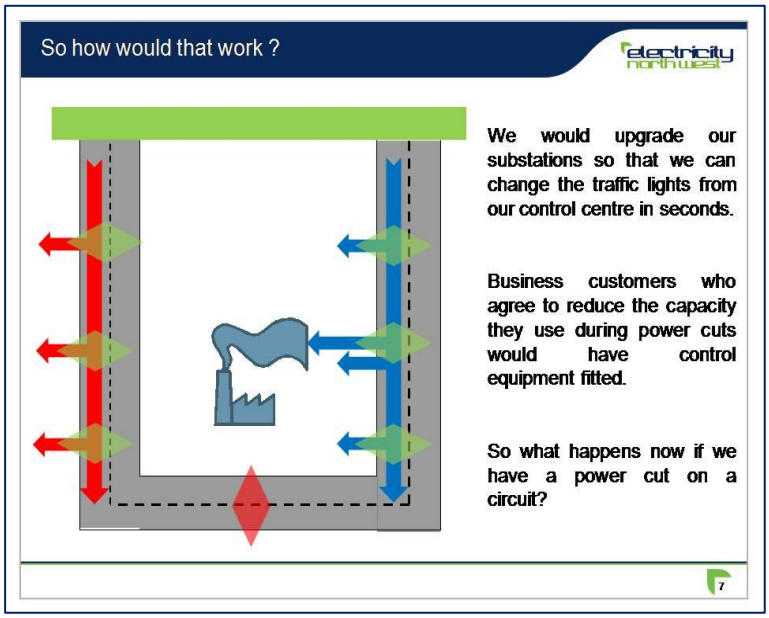


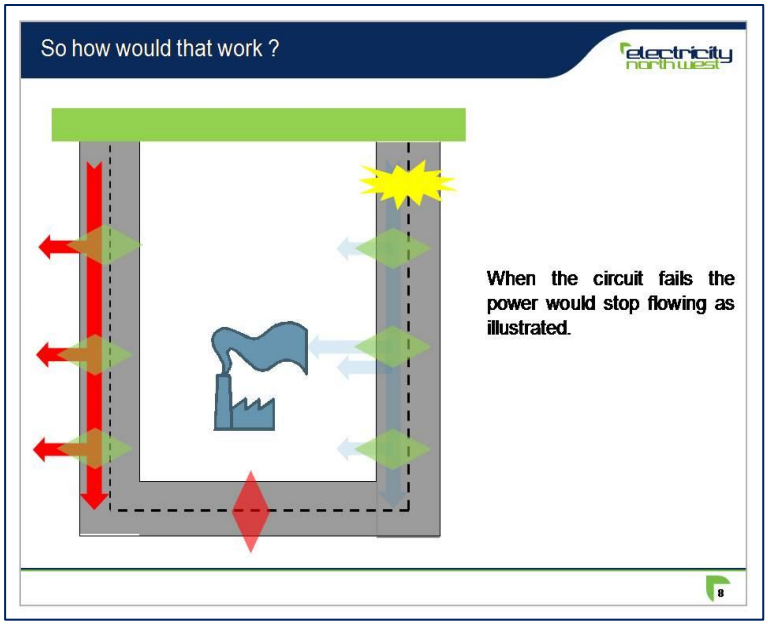


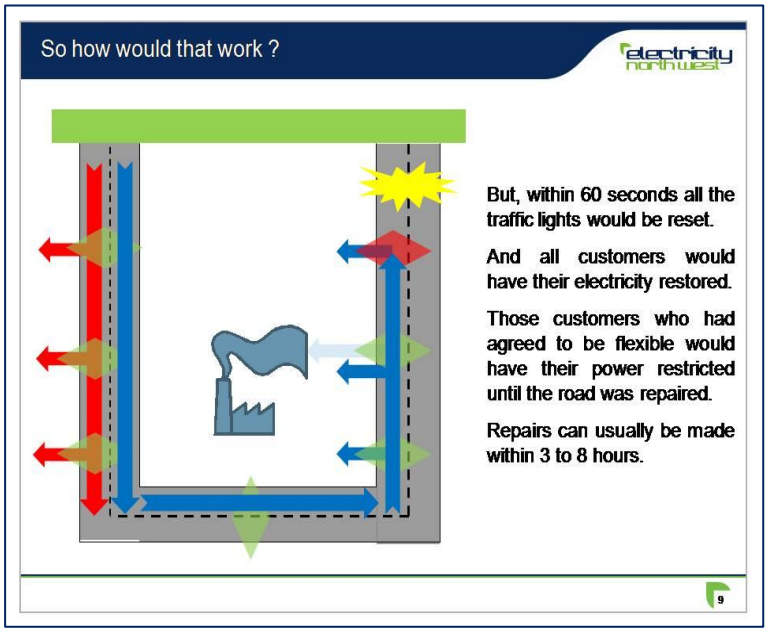

So . . What happens if there are more customers who want power?
electricity north west
If a new customer, *say a factory,* on the blue road wants more power and the roads are already full, we have to make the blue road bigger.
But to allow for a power cut we also have to make the red road bigger.
That's very expensive and costs over £150,000 per kilometre of road.
4


In the future many customers will want more power
electricity north west
In the future our cars will be powered by electricity rather than petrol, our homes will be heated by electricity rather than gas and our business will use much more electricity.
To make the 'roads' bigger would cost £2 billion pounds in the North West alone.
That's a huge cost so what else could we do ?
5

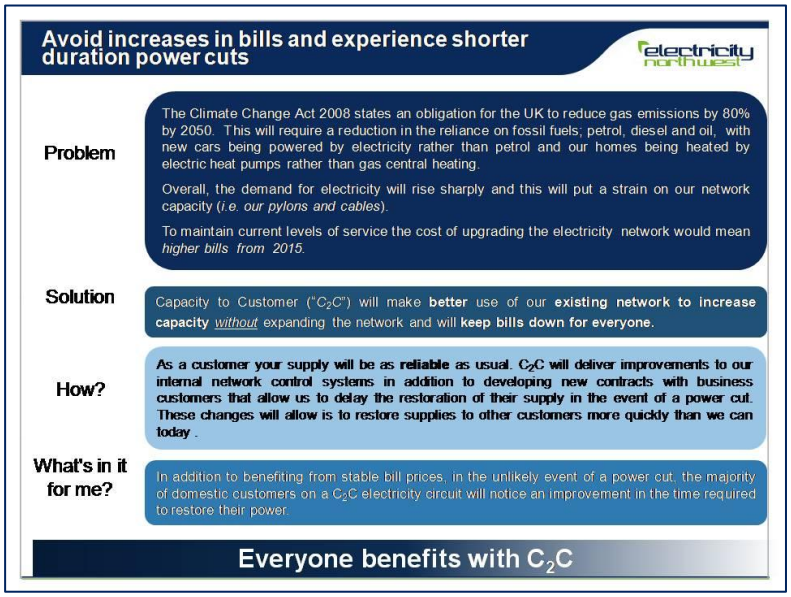

In the future many many customers will want more power
electricity northwest
If some business customers agree to reduce their usage of electricity when we have a power cut on a circuit then we don't have to make the 'roads' any bigger.
Such customers could earn financial rewards for being flexible.
6

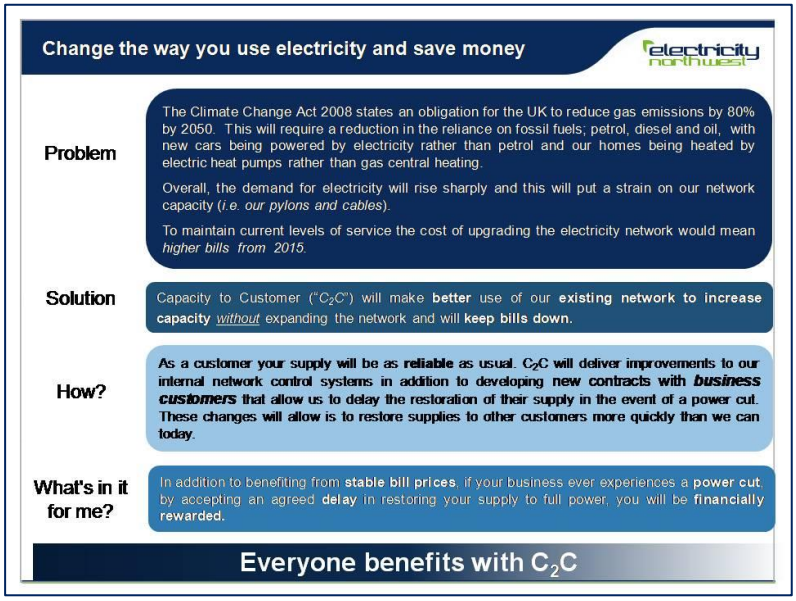

So how would that work ?
electricity northwest
We would upgrade our substations so that we can change the traffic lights from our control centre in seconds.
Business customers who agree to reduce the capacity they use during power cuts would have control equipment fitted.
So what happens now if we have a power cut on a circuit?
7


So how would that work ?
electricity northwest
When the circuit fails the power would stop flowing as illustrated.
8

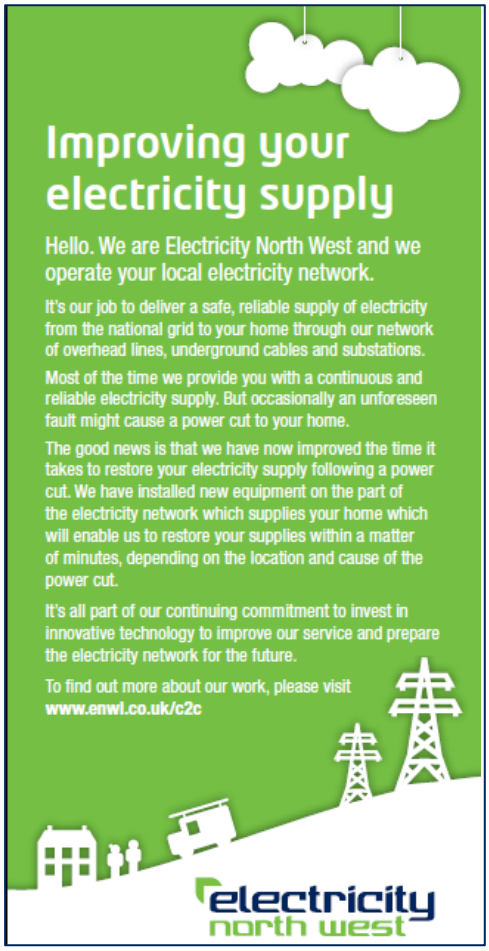


Concept board, outlining the specifics of C_2C





Option A: Proactive communication intended for all customers on C_2C Trial circuits



Option B: Reactive communication intended for all customers that experience a fault on a C_2C Trial circuit