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Project Progress Report (PPR)

Capacity to Customers (C₂C) Project



This report was submitted to Ofgem in December 2012

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VERSION HISTORY

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d0.1	08 November 2012	C McNicol	First draft	Project team review
d0.2	15 November 2012	C McNicol	2 nd draft	Wider team review
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APPROVAL

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GLOSSARY OF TERMS

Abbreviation	Term
CEP	Customer Engagement Plan
CRMS	Control Room Management System
C ₂ C	Capacity to Customers
DPS	Data Protection Statement
I&C	Industrial & Commercial
MPAN	Meter Point Administration Number
SDRC	Successful Delivery Reward Criteria
SDRC output	Discrete evidence of attainment or part attainment of an SDRC as defined in the Project Direction
RTU	Remote Terminal Unit

All other definitions shown starting with a Capital letter are as per LCN Fund Governance Document v5.

1. EXECUTIVE SUMMARY

The Capacity to Customers (C₂C) Project is funded via Ofgem's Low Carbon Networks Second Tier funding mechanism. The C₂C Project was authorised to commence in January 2012 and is due to complete in December 2014.

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 is forecast to 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 or growing energy usage. The likely consequences of this increase are increased electricity costs to customers and significant environmental and social impacts.

The aim of the C₂C Project is to test new technology, network operational practices (ie closed HV rings) and commercial demand response contracts that will allow Electricity North West to increase the loadings on a selection of trial circuits representing approximately 10% of our HV network without resorting to conventional network reinforcement. In other words to 'release' inherent spare capacity in the HV system in order to accommodate the future forecast increases in demand whilst avoiding (or deferring) the cost and environmental impacts that are associated with traditional network reinforcement. The C₂C Project consists of customer and commercial, technology and learning, and dissemination workstreams.

The C₂C Project will develop and trial new demand response contracts that will allow Electricity North West to manage the import or export capacity of contracted customers, with their agreement, on the trial circuits under fault or abnormal system conditions. When a new customer connects to the network they will be offered the option to sign up to a connection contract with demand response obligations in exchange for a reduced connection charge.

In the event that a fault occurs on the HV network feeding such a customer, the contract will allow Electricity North West to manage all or part of their demand if required to enable Electricity North West to restore customers' supplies in as short a time as possible. It is envisaged that many future customers may opt for part of their demand to be managed in this manner in exchange for reduced connection charges.

Prior to commencing the live trial, it will be necessary for Ofgem to grant a derogation from Licence Condition 24 in relation to Engineering Recommendation P2/6 (ER P2/6) compliance. This is because ER P2/6 requires that in the event of a worst case fault, the network should be capable of restoring customers' unconstrained demand within a defined timescale. The C₂C Project will increase the demand on the selected HV circuits and Primary Substations and use demand response to manage this increase. The derogation application was made to Ofgem during June 2012 and we are expecting approval during December 2012. The application needs to be approved by March 2013 to avoid delaying the project deliverables.

ER P2/6 does not explicitly recognise this technique which enables the use of the HV circuits' latent capacity. This derogation application has been made and we await Ofgem's approval.

In addition to new demand response contracts the C₂C Project will implement new technology in the form of an interface from our existing Network Management System to the GE PowerOn Fusion system to provide real time adaptive network management which, along with additional system automation fitted to our trial HV circuits, will allow faulted circuits to be restored to normal running conditions as quickly as possible. Other technology elements of the Project will be to monitor power quality on the trial HV circuits in order to prove what affect the changes in operational practice (ie running HV circuits closed) have on supply quality. Dissemination of learning is a key deliverable for the project and this will be achieved by sharing our findings via our C₂C website, industry conferences, consultations and publication of trade articles and white papers.

Progress to date

This report is the second C₂C Project Progress Report and covers the period June 2012 to November 2012 inclusive.

The status of the Project at the beginning of the current reporting period was that the Project had successfully mobilised and delivered two Successful Delivery Reward Criteria (SDRC) outputs namely: enriched customer data and the software design for the interface to the GE PowerOn Fusion network management system. The Project expenditure was at that time behind the original baseline due to deferment of orders for high value plant and software. The expenditure was deferred in order to ensure each high cost project work package had received the maximum amount of due diligence during the design stage in order to minimise both cost and risk to customers. The gap between original budget and actual expenditure was forecast to close by the end of the financial year 2012 / 13.

The current period has been extremely productive; highlights include final identification of HV trial circuits, application for derogation from the distribution licence relating to ER P2/6 and the completion of a major a customer survey activity involving 200 I&C customers. This survey gauged the appetite of I&C customers to participate in the trial and also provided invaluable feedback regarding barriers and motivators. This is now being used to shape the development of our commercial templates for the post fault demand response services that we will seek to procure from trial participants.

During the reporting period the Project has delivered seventeen SDRC outputs, these are shown in table 1.1 below.

Table 1.1 Successful Delivery Reward Criteria delivered during the reporting period

Milestone	Workstream	Completion date
List of HV circuits, selection & variation methodology	Technical	Jun-12
Submit derogation application to Ofgem	Technical	Jun-12
Customer engagement plan accepted by Ofgem	Customer	Jun-12
C ₂ C website live	Customer	Jun-12
Trial HV circuits published	Customer	Jun-12
Various engagement programmes including emails June 12 to August 14	Customer	Jun-12
Submit project first progress report to Ofgem	Dissemination	Jun-12

Milestone	Workstream	Completion date
First project pamphlet	Customer	Jul-12
Complete customer survey	Customer	Aug-12
Complete & publish customer segmentation model on website	Customer	Aug-12
C ₂ C connection offer process published	Customer	Sep-12
Publication of first trade magazine article (C ₂ C overview)	Customer	Sep-12
Present to first industry conference (Brunel University)	Dissemination	Sep-12
Publish information pamphlet for HV circuits	Technical	Oct-12
Present to LCN Fund Annual Conference by 2014	Dissemination	Oct-12
Publication of first white paper (Customer Survey)	Dissemination	Oct-12
Publication of 2 nd trade magazine article (Customer Survey)	Customer	Nov-12

Project expenditure as at the end of November 2012 was £3.4 million compared with a planned expenditure of £6.6 million, full details can be found in section 5.

The expenditure is still behind the original cost baseline. The deferment of the procurement of the IT system and remote control equipment has resulted in the installation and commissioning of the equipment being later than forecast in the original baseline. Despite the current variance to original cost baseline, the C₂C Project is on track and we are optimistic that future SDRC outputs will be achieved in order to meet the 'go live' date of April 2013.

During the reporting period Electricity North West has participated in knowledge dissemination events as shown in table 1.2 below:

Table 1.2 Knowledge sharing events participated in during the reporting period

Event	Contribution	Date
WPD LCNF Knowledge Sharing Event	Attended	July 2012
IET Smart Grid 2012 event	Chaired	September 2012
Smart Grid Demonstrator Forum (Brunel University)	Presented	September 2012
Low Carbon London Knowledge Sharing Event	Attended	October 2012
Distribution Automation Europe conference	Attended	October 2012
2012 LCN Fund Annual Conference (Cardiff)	Presented	October 2012
DG Forum	Presented	November 2012

During the next reporting period the C₂C Project will focus on preparations for trial 'go live'. Whilst we are optimistic about achieving the agreed milestones there is a substantial amount of work to complete and the next period is one of the most critical for overall delivery. Key activities looking forward will include commissioning and acceptance of enhanced network management software, commissioning of remote control and power quality monitoring equipment. Our Customer and Commercial work-streams will focus on customer briefings, seminars and completion of the development of our C₂C commercial templates. This will be followed by starting negotiations with prospective aggregators and trial participants who will be incentivised to sign up to post-fault demand response contracts for the duration of the trial.

Looking further ahead, the live trial period is scheduled to occur from April 2013 until September 2014, during which time the C₂C Project will seek to complete negotiations on twenty post-fault demand response contracts across existing and new customers, continuously monitor the effect of changes to the network running configuration, monitor any subsequent impact on trial participants and disseminate learning on an ongoing basis.

2. PROJECT MANAGER'S REPORT

2.1 General Programme Management

The most significant general programme management activities undertaken during the reporting period are listed below:

- Recruitment of project resources
- Project monitoring and control
- Internal and external stakeholder awareness.

During this reporting period the Project has continued to recruit resources in preparation for project activities reaching a peak from December 2012. Internal stakeholder engagement has continued with the emphasis moving away from initial project awareness to describing the specific impacts of the project on each group of stakeholders, this process will continue as the project moves towards the trial 'go live' in April 2013.

2.2 Technology Workstream

The most significant Technology Workstream activities during the reporting period are listed below:

- Development of network management system software
- Installation of 130 out of 486 remote control devices on the HV network
- Commencement of ER P2/6 consultation process
- Specification and procurement of power quality monitoring equipment
- Formation of Engaged Customer Panel.

All SDRC that are associated with the above activities are completed or on track.

Whilst we are optimistic about the next six months there is a substantial amount of work to complete within the Technical Workstream. This work is required to be completed prior to trial 'go live' in April 2013.

2.3 Customer and Commercial Workstream

The most significant Customer and Commercial Workstream activities during the reporting period are listed below:

- C₂C website go live
- Customer engagement and market segmentation model
- Publication of connections offer process review
- Development of new commercial templates for C₂C contracts.

All SDRC that are associated with the above activities are complete or on track.

2.4 Learning and Dissemination Workstream

The most significant Learning and Dissemination Workstream activities during the period have been listed in table 1.2 of the Executive Summary. In addition we have established a C₂C Project website which is being used as a repository for sharing project learning to interested stakeholders.

A general list of lessons learned during the period can be found in table 2.1 below:

Table 2.1 Lessons learned

Activity	What could have gone better / Lesson learned
Sign off of 6 monthly PPR	<p>Due to Ofgem’s requirement for a mid month submission (7 working days after financial month end) and the fact that the last report was the first we had prepared, the timescales for review & sign off were challenging particularly as sign off requires the briefing and quality assessment by board members.</p> <p>Lessons learned</p> <ol style="list-style-type: none"> 1. Report narrative to commence 6 weeks prior to submission and conclude 2 weeks prior to submission.
Customer Survey – Pricing Model	<p>Due to the ambitious timescales within the project to design and carry out the survey and produce a robust pricing model for respondents to consider, examples of proposed rewards were based on IIS values as a test value.</p> <p>Lessons learned</p> <ol style="list-style-type: none"> 1. This observation is being factored into the development of our pricing model which is likely to use a variety of different methods of evaluating an ‘acceptable range’ of contract prices for any given customer. These will be used as a start point for negotiations with customers and to determine whether the actual sale prices are economically viable.
Customer Survey Design	<p>The Customer Survey indicated very clearly that it is essential to generate sufficient customer confidence in relation to maintaining their security of supply and to avoid a barrier to engagement.</p> <p>Lessons learned</p> <ol style="list-style-type: none"> 1. In order for us to be successful when it comes to securing trial participants, we must ensure we are able to present the customer with a robust impact assessment. This is likely to require the use of fault rate history and fault restoration performance for each particular customer.
Engaged Customer Panel	<p>To embed ongoing stakeholder engagement we formed an Engaged Customer Panel to help formulate effective communication plans. The research was designed to identify the best method of communication to publish a simple explanation of the C₂C project to domestic customers on these circuits. The panel was made up of an appropriate cross section of customers to provide qualitative research. The research comprised a staged approach with two phases of research. This was a deliberate strategy to gradually educate and test the respondents and evaluate the communications materials and customer feedback.</p> <p>Lessons learned</p> <ol style="list-style-type: none"> 1. The C₂C concept is too complex for customers to understand after one session and even after a second session, some respondents still lacked clarity as to the specifics of both the problem and the solution. Without fully understanding the concept, it created a number of immediate misconceptions causing both confusion and unnecessary concerns amongst the respondents. Those panel members who understood the concept did not have such concerns. 2. Given the complexity of the C₂C concept and the myriad

Activity	What could have gone better / Lesson learned
	<p>of questions and concerns it raises, the Engaged Customer Panel research recommended that Electricity North West avoid direct communications with customers other than those I&C customers directly participating. This was based on their assessment that the frequency of power cuts will not be discernibly different and the power cut duration will mostly improve in the unlikely event of a fault during the trial.</p>

3. BUSINESS CASE UPDATE

We are not aware of any developments that have taken place since the issue of the C₂C Project Direction that affect the business case for the project.

4. PROGRESS AGAINST PLAN

4.1 Current reporting period

The C₂C Project has successfully delivered seventeen SDRC during the reporting period. These are detailed in section 7, table 7.1. The Project has encountered a number of risks during the reporting period. These are described below.

Risks and issues experienced during reporting period

Procurement of monitoring equipment (R022) - Status: Controlled

Risk: There was a risk that we have yet to finalise the power quality monitoring installation resource, leading to delays to power quality monitoring activities, because of insufficient time to install the equipment.

Action plan: Power quality monitoring devices have been identified and ordered. The equipment suppliers have informed us of an 8 week lead time for delivery of the equipment. The first batch of devices is expected to be delivered in January 2013. Two options exist regarding installation resource involving internal and external resources. It is planned to finalise installation resource during December in time to commence installation in January 2013.

May not secure 10 new connections contracts - low volumes (R023) - Status: Open

Risk: There is a risk that we may not secure 10 demand response contracts with new customers, leading to failure to achieve a project SDRC output, because of lower than anticipated connections market activity.

Action plan: We will closely monitor the volumes of new connections applications on the C₂C circuits from January 2013 onwards. Whilst the economic downturn has adversely affected the volume of demand connections applications, we expect the volume of generator connections to be affected to a lesser degree. This risk may therefore alter the 'mix' of new C₂C connections agreements but not the volume.

High cost of power quality monitoring equipment (R025) - Status: Controlled

Issue: There was an issue that despite selecting the lowest cost device the unit costs for power quality monitoring equipment was greater than budgeted for, leading to overspending the project budget for power quality monitoring.

Action plan: A decision was taken to adopt a manual data collection process as opposed to remote streaming of data as this significantly reduced the cost of the overall solution. A review of the required quantities with University of Strathclyde has been conducted. Despite reducing the scope of the solution the cost of the equipment will exceed original budget and full utilisation of contingency on this item will be required.

Failure of aggregators to engage (R026) - Status: Open

Risk: There is a risk that our aggregators may be unwilling to engage, leading to difficulties in securing existing trial participants because there may be little overlap between trial customers and their customer base.

Action plan: We have commenced engagement with the aggregators early and provided them with trial circuit MPANs in order for them to assess the potential trial participants. However until commercial terms have been developed we do not have a detailed expenditure forecast for this element of the project. We are working closely with our named aggregator partners to achieve this and have in addition identified a number of alternate aggregators.

Remsdaq NX units (I008) - Status: Controlled

Issue: There was an issue that the installation of remote control devices was halted, leading to the potential failure to install all RC devices by trial go live and failure to meet an SDRC, because of a software problem that came to light with the Remsdaq RTU.

Action plan: Meetings were arranged to identify and resolve the issue. A software upgrade has been issued and this is being applied to all units that have already been installed. The installation programme has been re-started with approximately 3 weeks lost production. It is expected that this can be accommodated within the plans and that the programme will be completed on time in March 2013 however there is little or no 'float' remaining with this project activity.

4.2 Next reporting period

During the next reporting period significant programme management activities will be:

- Continued stakeholder engagement and management
- Continued project monitoring and control.

During the next reporting period the Technology Workstream's significant activities will be:

- Testing and commissioning of the enhanced the network management system
- Testing and commissioning of 486 remote control actuators and RTU equipment
- Testing and commissioning of 80 power quality monitors

- Completion of the ER P2/6 industry engagement process and drafting of the recommendations report for amending ER P2/6
- Commencement of losses, power quality, carbon and economic benefit analysis work with the Universities of Manchester & Strathclyde.

During the next reporting period the Customer and Commercial Workstream's significant activities will be:

- Customer seminars and briefings
- Completion of commercial templates
- Commencement of negotiations with potential aggregators and trial participants.

During the next reporting period the Learning and Dissemination Workstream most significant activities will be:

- Preparation and hosting for Electricity North West's first learning and dissemination event that is due to take place during March/ April 2013.

The SDRC planned for the next reporting period can be seen in table 7.2 in Section 7.

5. PROGRESS AGAINST BUDGET

The Project Budget as defined in the Project Direction is shown in Appendix A.

Prior to the acceptance of the Project Direction we discussed with Ofgem the re-categorisation of expenditure as our understanding of delivery methods had changed during the development of the project initiation documentation; for example, we proposed to change our delivery approach by using contractors for some activities rather than our own personnel. We accepted the Project Direction and agreed to inform Ofgem of the proposed changes within the Project progress report process. Appendix B details the proposed re-categorisation.

We are aware that Electricity North West is required to formally request approval of changes to expenditure if our forecast expenditure at cost category level exceeds the originally agreed values that are included in Annex 1 of the Project Direction by 10%. We plan to submit this request in the early part of 2013. As stated above, this will be as a result of re-categorisation of expenditure with no net increase being requested.

Actual spend to date compared to Project Budget is summarised in table 5.1 below. The report includes expenditure up to and including 30 November 2012. Detailed expenditure can be found in Appendix C at project activity level.

Table 5.1

£'000s Excluding Partner Funding Ofgem Cost Category	Spend to date			Total Project		
	Actual	Plan	Variance	Forecast	Plan	Variance
Labour	333	1,331	998	1,755	2,512	758
Equipment	1,671	3,065	1,395	3,078	3,078	0
Contractors	1,101	1,480	379	3,012	2,254	(758)
IT	238	594	356	740	740	0
IPR Costs	0	0	0	0	0	0
Travel & Expenses	0	0	0	0	0	0
Payments to users	0	0	0	300	300	0
Contingency	0	0	0	947	947	0
Other	96	124	29	445	445	0
Total Costs	3,438	6,596	3,158	10,275	10,275	0

Source: Ofgem Schedule to Project Direct 19-12-11

The deferment of orders and subsequent implementation of high value plant and software has caused a deferment of expenditure to latter parts of the year. This has resulted in a £3.2 million variance to the original project budget as at 30 November 2012. This is not expected to jeopardise the delivery of the SDRC as this expenditure is associated with relatively long duration activities whose SDRC are not due until March 2013. The Estimated At Completion cost for the project is forecast to remain in line with the original budget of £10.3m (subject to utilisation of contingency).

6. BANK ACCOUNT

The C₂C Project bank statement is shown in Appendix D. The statement contains all receipts and payments associated with the project up to the end of November 2012.

7. SUCCESSFUL DELIVERY REWARD CRITERIA

During the reporting period, May 2012 to November 2012, seventeen planned SDRC were delivered.

Table 7.1 SDRC delivered in reporting period

Milestone	Planned date	Completion date	Comments
List of HV circuits, selection & variation methodology	Jun-12	Jun-12	Completed as per Project Direction
Submit derogation application to Ofgem	Jun-12	Jun-12	Completed as per Project Direction
Customer engagement plan accepted by Ofgem	Jun-12	Jun-12	Completed as per Project Direction
C ₂ C website live	Jun-12	Jun-12	Completed as per Project Direction
Trial HV circuits published	Jun-12	Jun-12	Completed as per Project Direction
Various engagement programmes inc emails June 12 to August 14	Jun-12	Jun-12	Completed as per Project Direction
Submit project progress report #1 to	Jun-12	Jun-12	Completed as per Project

Milestone	Planned date	Completion date	Comments
Ofgem			Direction
First project pamphlet	Jul-12	Jul-12	Completed as per Project Direction
Complete customer survey	Jun-12	Aug-12	Change request agreed due to events outside ENWL control. Refer to section 10, 'Approval of Customer Engagement Plan' for details.
Complete & publish customer segmentation model on website	Jul-12	Aug-12	Change request agreed due to events outside ENWL control. Refer to section 10, 'Approval of Customer Engagement Plan' for details.
C ₂ C connection offer process published	Sep-12	Sep-12	Completed as per Project Direction
Publication of 1st trade magazine article (C ₂ C overview)	Sep-12	Sep-12	Completed as per Project Direction
Present to 1 st industry conference (Brunel University)	Sep-12	Sep-12	Completed as per Project Direction
Publish information pamphlet for HV circuits	Oct-12	Oct-12	Completed as per Project Direction
Present to LCN Fund Annual Conference by 2014	Dec-14	Oct-12	Completed as per Project Direction
Publication of first white paper (Customer Survey)	Jun-12	Oct-12	Affected by delay to customer survey
Publication of 2 nd trade magazine article (Customer Survey)	Nov-12	Nov-12	Completed as per Project Direction

Details of the SDRC that were delivered at variance to the planned dates agreed in the Project Direction are highlighted below:

Customer Survey – Planned June 2012, Delivered September 2012

There was an issue with delivering the Customer Survey in June 2012 as per the plan. This issue related to the approval of our Customer Engagement Plan that was required prior to the Customer Survey commencing. This approval did not occur during the assumed timescale.

Customer Segmentation Model – Planned July 2012, Delivered September 2012

This SDRC output was also affected by the delay to the approval of the Customer Engagement Plan.

White Paper #1 – Planned June 2012, Delivered December 2012

This SDRC output was also affected by the delay to the approval of the Customer Engagement Plan.

The SDRC planned for the next reporting period can be seen in table 7.2 below.

Table 7.2 SDRC look ahead

Milestone	Planned date	Forecast Completion date	Comments
C ₂ C commercial templates available to customers	Dec-12	Dec-12	On track
First customer seminar (New connections customers)	Dec-12	Dec-12	On track
Submit 2 nd project progress report to Ofgem	Dec-12	Dec-12	On track
Publication of 2 nd white paper (ER P2/6 derogation)	Dec-12	Dec-12	On track
Publication of 3 rd trade magazine article	Jan-13	Jan-13	On track
2 nd customer seminar	Apr-13	Dec 12/ Jan-13	Brought forward
P2/6 workshops completed	Jul-13	Jan-13	Brought forward
Publication of 4 th trade magazine article	Mar-13	Mar-13	On track
Software & IT hardware I&C complete	Mar-13	Mar-13	On track
Actuators, comms & ME I&C complete	Mar-13	Mar-13	On track
P2/6 industry consultation completed	Dec-13	Mar-13	Brought forward
Live trials commence	Apr-13	Apr-13	On track
Complete P2/6 simulation exercise	Apr-13	Apr-13	On track
P2/6 recommendation report issued	Sep-14	Apr-13	On track
Publication of 5 th trade magazine article	May-13	May-13	On track

Details of the SDRC that are forecast to be delivered at variance to the planned dates agreed in the project direction are highlighted below:

Customer seminar #2 – Planned April 2013, Forecast December 2012 - March 2013

Our second customer seminar was originally planned to take place in April 2013. We have now commenced seminars aimed at existing I&C customers who may be interested in participating in the trial. The first of these has already been conducted and will be written up during December. The purpose of this seminar was to follow up the Customer Survey and inform the development of our commercial templates. We will complete the development of our commercial templates during December and we feel that it was of benefit to obtain face to face feedback prior to finalising the commercial templates. It is likely that we will hold a further customer seminar with existing customers prior to go live in order to start the process of securing trial participants.

P2/6 workshops complete – Planned July 2013, Forecast January 2013

If the Capacity to Customers concept were to be rolled out post trial, changes may need to be made to ER P2/6. An industry consultation has always been in scope of the project and

we are planning to accelerate this consultation in order to avoid an overlap between it and an industry debate regarding its replacement ie the development of ER P2/7 and also to fit in with Ofgem's timetables for ED1 and WS6 (Smart Grids Forum). We believe it will be beneficial to the project and the industry as a whole to conclude this debate as soon as practicable and our plan involves engaging with all the DNOs and various stakeholders.

P2/6 industry consultation complete – Planned December 2013, Forecast March 2013

Please refer to narrative above.

8. LEARNING OUTCOMES

The C₂C Project is still at an early stage in its life cycle and has not yet delivered large volumes of products that warrant specific dissemination to industry stakeholders. Our most significant deliverable to date has been our Customer Survey and we have published our survey findings on our website at <http://www.enwl.co.uk/c2c/about-c2c/key-documents>

We have also presented our high level Customer Survey findings to the 2012 LCN Fund Annual Conference, held in Cardiff between 24 to 26 October 2012.

During the next reporting period the project will have completed all preparations for project 'go live' and will be in a position to disseminate knowledge and learning covering all workstreams. It is therefore planned to hold our first learning event during April 2013.

9. INTELLECTUAL PROPERTY RIGHTS (IPR)

Electricity North West is following the default IPR arrangements and during the current period we have undertaken a Customer Survey and developed a Customer Segmentation Report. These results have been fully published on our C₂C website in line with the default IPR arrangements. There has been significant interest in the results of the Customer Survey which has shown that the C₂C concept is appealing to I&C customers.

Looking ahead to the next period we will complete work on the following activities that may have IPR implications:

1. Interface to the GE PowerOn Fusion network management system
2. Commercial templates
3. Installation of network monitoring
4. Customer engagement learning.

We are currently considering our IPR approach to the above project deliverables and will report on them in the next project progress report.

10. RISK MANAGEMENT

Major risks that have arisen during the reporting period have already been described in section 4. The narrative below refers to risks that arose during previous reporting period(s).

10.1 Risks encountered during previous reporting period (January - May 2012)

Internal stakeholder awareness of C2C Project (R014) - Status: Controlled

Risk: At the beginning of May a risk was identified that some internal stakeholders may not be fully aware of the detailed scope of their involvement in the project.

Action plan: To resolve this issue an internal stakeholder analysis was performed which identified key individuals or groups that needed to be more fully engaged in the project detailed plan. A process of increasing stakeholder awareness and formalising resource commitments was undertaken, involving one-to-one briefing sessions for directors, management teams and resource schedule controllers. Having completed this exercise during May the need to develop a wide scale 'internal launch' of the project was identified. This activity has been carried out during the current reporting period of project and details have been added to the key documents area of the project website.

Insufficient number of suitable closed rings on HV circuits (I002) - Status: Controlled

Issue: During the circuit selection process it became apparent that a number of circuits that satisfied initial selection criteria would not actually be suitable for inclusion in the trial, either because they had a spring closing mechanism circuit breaker at the feeding end (ie limited auto-reclose capability) or because the circuits did not actually form a closed ring on the same primary substation. This led to the need to widen the selection criteria to include circuits with expected lower connections application market activity or the need to install Retvac¹ circuit breakers.

Action plan: It was decided to lower the criteria for the volume of I&C connections applications and introduce a new category of circuit called 'low fault rate open rings'. The introduction of this third category of trial circuits will be used to establish whether the C₂C concept will require multi shot circuit breakers at feeding primary substations. The learning from this issue has been included in the circuit selection report and will provide valuable additional learning for application to networks with older configurations of switchgear.

Approval of Customer Engagement Plan (I005) - Status: Controlled

Issue: An issue emerged regarding the approval of the C₂C Customer Engagement Plan (CEP), this was submitted at the end of March 2012 and it was understood that Ofgem required two months to review the plan as outline in the LNCF Governance Fund Document v5. During the initial project planning it was assumed that entire approval process would last two months and our customer engagement exercise was scheduled to commence immediately after the two month review period. In reality Ofgem provided their comments two months after submission of the document and these required material changes to be made to the CEP. This has delayed the start of the Customer Engagement.

Action plan: Electricity North West and Ofgem discussed the issue and agreed a 'no fault' delay to the Customer Engagement and Customer Segmentation Model SDRC. It was agreed to amend and approve the CEP within one month and for Electricity North West to formally request a delay to two SDRC that were dependent on the approval of the plan.

¹ A replacement circuit breaker with a suitable mechanism for the automation required by C₂C.

A key lesson from this is to allow one month between any Ofgem review period and the commencement of an activity that is dependent on positive outcome of that review. This principal will be reflected in the project plan.

10.2 Risks that existed at time of Project submission

The narrative below refers to risks that existed at time of submission and were detailed in Appendix 2 of the submission.

Risk 1: Risk that internal Operations team will not be able to support installation of automated devices - Status: Controlled

The work requirements have been defined and communicated to the relevant delivery manager and will be tracked via our Network Investment Group governing body.

Risk 2: Risk that key personnel will not be available to deliver the project - Status: Controlled

The project delivery team has been recruited and is part of the same department as the bid development team, which has supported the delivery team during the mobilisation stage of the project.

Risk 3: Risk of problems with the financial control of the project because of the new requirement for a separate bank account - Status: Controlled

The project bank account has been set up and monthly processes have been put in place to review receipt and payments on a monthly basis.

Risk 4: Failure to achieve low carbon saving - Status: Open

The carbon impact of the project will be better understood once we begin to negotiate C₂C contracts and gain an understanding of customer willingness to engage.

Action plan: Continuously review from commencement of live trials. This is also a key activity that is being modelled by our partner University of Manchester.

Risk 5: Poor project management - Status: Controlled

The project team has been recruited. The programme manager is a member of the Project Management Institute and holds their Professional Project Manager credentials (PMP). Weekly and monthly project governance meeting have been established and implemented. These include monthly updates to the sponsoring director.

Risk 6 – Network equipment cost overruns - Status: Controlled

The project requires 486 remote control sites to be established at an estimated average cost of £6k per site. The estimate at completion cost for this task is £3.1m. This is within budget for this activity. However some additional costs are expected associated with primary substation alarm issues (eg one primary substation currently does not have the capability to activate automated restoration sequence (ARS) and therefore the ARS capability will need to be established by the C₂C Project). At the time of writing this report project expenditure was within budget.

Risk 7 – Payment to customer cost overruns - Status: Open

The costs associated with the payments to customers will be better understood once we begin to negotiate C₂C contracts and gain an understanding of customer willingness to engage.

Risk 8 – Project partners walk away once project is won - Status: Open

We have signed contracts with GE Energy, PB Power and our University partners. We have yet to sign contracts with the aggregators Enernoc or Flexitricity and there is a risk that they may decline to take part in the Project. This will be a key area of focus during the next reporting period.

11. OTHER

There is no other information at this time that would be of use to Ofgem in understanding the progress of the project and performance against SDRC.

12. ACCURACY ASSURANCE STATEMENT

This document has been reviewed by a number of key business stakeholders in order to ensure its accuracy. The general narrative has been reviewed by members of the project team and select members of the C₂C Programme Steering Group, including the lead member of the bid development team to ensure accuracy of statements associated with events prior to project mobilisation. The narrative has also been peer reviewed by the Electricity North West Future Networks Manager and the Electricity North West Networks Strategy and Technical Support Director.

The financial information has been produced by the C₂C Programme Manager and the Project's finance business partner who review all financial postings to the project each month in order to ensure postings have been correctly allocated to the appropriate project activity. The financial information has been reviewed by the Electricity North West Distribution Finance Business Partner and the Electricity North West Chief Financial Officer.

Issue of the document has been approved by the Networks Strategy & Technical Support Director and the Chief Financial Officer (a Board Director).