

Smart Street Project Progress Report (PPR) Version 1.0 19 June 2014



VERSION HISTORY

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APPROVAL

| Name | Role | Signature & date |
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GLOSSARY OF TERMS

| Abbreviation | Term |
|------------------|---|
| C ₂ C | Capacity to Customers (Electricity North West Tier 2 Project) |
| CEP | Customer Engagement Plan |
| CLASS | Customer Load Active System Services (Electricity North West Tier 2 Project) |
| DINIS | Distribution Network Information System |
| DPS | Data Protection Statement |
| HV | High Voltage |
| IFI | Innovation Funding Incentive |
| LV | Low Voltage |
| ITT | Invitation To Tender |
| NMS | Network Management System |
| SDRC | Successful Delivery Reward Criteria |
| SDRC output | Discrete evidence of attainment or part attainment of an SDRC as defined in the Project Direction |

All other definitions shown starting with a capital letter are as per Low Carbon Networks Fund Governance Document v.6

1 EXECUTIVE SUMARY

Funded via Ofgem's Low Carbon Networks Second Tier funding mechanism, Smart Street is being undertaken by Electricity North West in partnership with Kelvatek, Siemens and Impact Research. In addition to our Partners we have academic support from Manchester University and Queens University Belfast. The Smart Street Project was authorised to commence in December 2013 and is due to complete in December 2017.

Smart Street will demonstrate a step change in the co-ordination and integrated operation of distribution networks in Great Britain. Utilising the most advanced technology developed today for LV network management, Smart Street challenges the current operational practices and demonstrates how to optimise HV and LV networks in real time.

The Smart Street method combines the concepts of interconnection of networks, developed within our Capacity to Customers Project, and elements of the voltage control technologies developed within our LCNF Tier 1 programme. The Capacity to Customers Project focused on EHV and HV networks, Smart Street will extend these technologies and their benefits down the voltage levels to encompass HV and LV networks. The Project utilises advanced real time optimisation software to simultaneously manage all HV and LV network assets to respond to customers changing demands in the most efficient end to end manner. The three key incremental steps in the Smart Street method are the application of:

- 1. Co-ordinated voltage control, using transformers with on load tapchangers and capacitors, across HV and LV networks;
- 2. Interconnecting traditionally radial HV and LV circuits and assuming control of these networks within the Control Room;
- 3. Real-time co-ordinated configuration and voltage optimisation of HV and LV networks.

The four year Smart Street Project, which started in January 2014, will employ these techniques to demonstrate that a network operator can quickly release capacity and voltage headroom to facilitate the connection of LCTs and at the same time operate a cost, carbon and energy efficient distribution network. The themes of LV Network Management and Interconnection, HV and LV Voltage Control, and Network Configuration and Voltage Optimisation are the key interlinking aspects of the Smart Street method.

Enhancing existing networks in this way enables accelerated connection of clusters of Low Carbon Technologies that contribute to emissions reduction targets. Smart Street is a low risk, transferable, non intrusive method which is an alternative first intervention to traditional network reinforcement. The Smart Street method is envisaged to release capacity up to four times faster and 40% cheaper than traditional reinforcement techniques for Low Carbon Technology clusters. Smart Street's optimisation software is expected to deliver Conservation Voltage Reduction to improve the energy efficiency of customers' electrical appliances reducing energy up to 3.5% per annum, and lowering network losses by up to 2% per annum across HV and LV networks; delivering recurring financial savings for customers, without degradation to the quality of customers' supplies. During Smart Street we will monitor communications from customers within the Trial areas to collect quantitative customer information. We will also hold a series of customer focus groups recruited from within the Trial areas to collect qualitative customer information. In addition, we will utilise outputs from the CLASS survey which is designed to establish the customer experience of a change in supplied voltage to supplement our customer research.

We estimate the Smart Street Solution will be transferable to 64% of the Electricity North West and 72% of GB networks releasing capacity up to 2 985MW for Electricity North West and 39 630MW for GB. The method is less carbon intensive than traditional approaches delivering an asset carbon saving of up to 93%. Through Smart Street, the delivery of electricity will become more efficient, flexible, with a real focus on minimising carbon impact

whilst enhancing supply resilience for customers as they will become increasingly dependent on electricity as their primary source of energy.

Progress to date

The Project actual costs to date are £85k and the estimated completion cost is in line with the project budget excluding contingency. This report is the first Project Progress Report and covers the period December 2013 to May 2014 inclusive. The Project is on track and key highlights to date are;

The Smart Street mobilisation is complete.

- The Project Manager has been appointed along with the Customer Workstream Manager, Technical Engineer, Research and Trials Engineer and Programme Administrator.
- External Partners and Supporters have been engaged and have attended a Project initiation seminar aimed at confirming understanding of the Project and introducing all stakeholders to each other.

Contracts have been signed with Project Partners

- Kelvatek has signed a contract for the supply, installation support and user training of Low voltage circuit breakers and link box switches.
- Siemens UK Ltd has signed a contract for the supply, installation, commissioning and support of optimisation software.
- Impact Research has signed the contract to carryout customer engagement and surveys.

All Condition Precedents in the Project Direction have been met

The Project Direction received from Ofgem in December 2013, outlined Condition Precedents for Smart Street. These conditions were prerequisites for withdrawal of funds from the Project Bank Account. To meet the Condition Precedents Electricity North West was required to sign contracts with all Project Partners. The Condition Precedents have been met, as Electricity North West has now signed contracts with all Smart Street Project Partners.

During the reporting period the Project has delivered one SDRC output, this is detailed in section 5.

Table 1.1 SDRC delivered during the reporting period

| Milestone | Workstream | Completion date |
|---|---------------|--------------------|
| Publicise Smart Street within Electricity North West in Monthly Team Brief pack and Volt (intranet) and/ or Newswire (bimonthly staff magazine) | Dissemination | Jan 14 |

During the next reporting period the Project aims to have all site selection and analysis completed, design methodology finalised, the Customer Engagement Plan and Data Privacy Statement will be sent to Ofgem, engaged Customer Panel workshop delivered and disseminate learning on an ongoing basis.

Summary of key risks

There are currently no uncontrolled risks that could impede the achievement of any of the SDRCs outlined in the Project Direction, or which could cause the Project to deviate from the Full Submission.

We monitor risks on a continuous basis, including the potential risks that were documented in the Full Submission. The status of these is described in section four.

Summary of key learning outcomes delivered in the period

A detailed description of the Project's learning outcomes can be found in section six, the areas where learning has emerged are summarised below:

- Agreement of detailed software requirements pre-contract to de-risk delivery.
- Benefits of holding an introductory presentation for Ofgem Smart Street Project officer.
- Importance of Project start-up meeting involving all internal and external stakeholders.
- Early identification of resources to conduct DINIS studies.

Table 1.2 Third party dissemination activities

| Event | Contribution | Date |
|---|--------------|----------|
| Held briefing with MR tap change manufacturer to share technical understanding and detail our requirements. | Presented | March 14 |
| Meeting with Ofgem LCNF Project Officer | Presented | April 14 |
| Presented Project overview to Kelvatek Engineering Staff. | Presented | May 14 |
| Hosted Project stakeholders start up meeting to ensure all parties had a clear understanding of the Project scope and individual roles. | Presented | May 14 |

Internal dissemination activities

Internal Smart Street kick off day held. Attended by both the Bid Team and Project Team to share and confirm understanding of the Project. Several members of Electricity North West's senior management also attended on the day demonstrating their acknowledgement of the importance of the Project.

- Smart Street was publicised in NewsWire (quarterly staff magazine) in December 2013.
- Smart Street was publicised in NewsWire in March 2014.
- The Project was highlighted in weekly Electricity North West bulletin in November 2013.
- A Project overview was included in January 2014 Staff team brief pack.
- Included on the Volt (Electricity North West's internal web site).

2 PROJECT MANAGER'S REPORT

2.1 General Project management

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

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

During the reporting period the Project emphasis has focused on three key areas:

- The internal and external mobilisation of resources.
- Stakeholder engagement and briefings.
- Signing of Partner contracts.

During the reporting period the Project emphasis has focused on the mobilisation of the Smart Street team and establishing agreed understanding with all stakeholders through a number of briefings and one to one sessions. The signing of Partner contracts has been an important step and additional time was taken in reaching agreement with Siemens on detailed software requirements pre-contract to de-risk delivery. Numerous individual meetings with Project Partners and suppliers have taken place in order to refine and enhance understanding of Project requirements. The mobilisation process has culminated in a Project start-up meeting that was held in May that involved all Project Partners and suppliers. During this meeting the Smart Street bid team briefed the delegates on the key aspects of the Project Full Submission document and each of the suppliers presented a high level overview of their own contribution to the Project. This start-up meeting proved a means to confirm Project requirements and build team relationships.

During the next reporting period the most significant Project management activities will be:

- Project monitoring and control.
- Continued stakeholder engagement and management.
- Active participation at Annual Low Carbon Networks & Innovation Conference.

There are no Project management risks or issues that are associated with delivery of a Project SDRC or maintaining consistency with the Full Submission.

2.2 Technology Workstream

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

- Commenced Trial area feasibility studies.
- Agreed strategy for overlap with CLASS to avoid conflicting trial periods, and to ensure best use of existing equipment.
- Engaged with stakeholders who are providing equipment.
- Carried out DINIS studies on shortlisted circuits.

- Finalised site selection methodology.
- Designed Initial Installation Plan.

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

During the current reporting period the emphasis has been on circuit selection. Considerable effort has been devoted to ensure circuit suitability at this early stage to de-risk future technical delivery.

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

- Ring fence/screen Smart Street Trial area.
- Implement the installation plan and commence construction.
- Develop current codes of practice to include new technologies.
- Roll-out of training on new technology to operational staff.
- Installation and configuration of new IT hardware and software.

There are no Technical Workstream risks or issues that are associated with delivery of a Project SDRC or maintaining consistency with the Full Submission.

2.3 Trials and Research Workstream

The most significant Trials and Research Workstream stream activities during the reporting period are listed below:

- Adapted TNEI scripting tool to analyse trial circuits.
- Finalised product description for design methodology.
- Produced table of results from circuit data.
- Produced first draft of design methodology based on results.

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

During the current reporting period the emphasis has been on finalising product descriptions, circuit design methodology and modelling of the trial circuits. The Trials and Research Engineer has been working closely with TNEI on these activities along with specialist assistance from within Electricity North West.

During the next reporting period, the Trials and Research Workstream's significant activities will be:

- Model and analyse selection of trial circuits.
- Produce network design methodology / rules based methodology.
- Apply rules based methodology to the proposed trial circuits.
- Production and approval of a product description for the design of the trial and test regimes.
- Start detailed design of the trial and test regimes.

There are no Trials and Research risks or issues at this time that are associated with delivery of a Project SDRC or maintaining consistency with the Full Submission.

2.4 Customer Workstream

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

- Commenced work on Customer Engagement Plan.
- Commenced work on Customer Data Privacy Statement.

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

- Complete Customer Engagement Plan and send to Ofgem for approval.
- Produce Data Privacy Statement and send to Ofgem for approval.
- Go live of Smart Street website and social media forums.
- Deliver Engaged Customer Panel workshop.
- Deliver general awareness materials and publish on the Smart Street website.
- Publish Engaged Customer Panel lessons learned on the Smart Street website.

There are no customer risks or issues at this time that are associated with delivery of a Project SDRC or maintaining consistency with the Full Submission.

3 CONSISTENCY WITH FULL SUBMISSION

At the end of this reporting period, we can confirm that the Smart Street Project is being undertaken in accordance with the Full Submission.

4 **RISK MANAGEMENT**

4.1 Risks and issues experienced during reporting period

There are currently no uncontrolled risks that could impede the achievement of any of the SDRCs outlined in the Project Direction, or which could cause the Project to deviate from the Full Submission.

We monitor risks on a continuous basis, including the potential risks that were documented in the Full Submission.

4.2 Risks that existed at time of documenting the Project Full Submission

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

Recruitment Risks

Risk 1 - Risk that Electricity North West and/or Partners are not able to mobilise their resources in time - Status: Controlled

Electricity North West has mobilised the Smart Street Team, weekly and monthly Project governance meetings have been established and implemented. These include monthly updates to the sponsoring director. A comprehensive Project plan with clearly defined

timescales and milestones has been agreed with Project Partners, internal delivery team and other stakeholders. Framework agreements with clear terms & conditions have been agreed and put in place with all Partners.

Risk 12 - Risk that there may be some confusion amongst customers due to other ongoing government initiatives, e.g. The Green Deal and Smart Metering roll out program. This could lead to customer engagement being adversely affected. - Status: Controlled

The Smart Street Customer Engagement Plan is both non intrusive and simple, thus minimising the potential for confusion with other government initiatives. In addition, the Project intends to conduct engaged customer panel workshops with a representative sample of customers in order to obtain feedback on how best to inform customers of the Project and how if may affect customers.

Procurement Risks

Risk 4 – Risk that a lack of suitable equipment vendors may result in a poor response to Invitations for Tenders - Status: Controlled

Our request for information during Smart Street development showed that products are available from a number of vendors, but some vendors require further development. The initial response to tender process has been good and no problems are envisaged. We have already issued expression of interest through Achilles (Utilities Vendor Database) for the procurement of LV capacitors, HV pole mounted capacitors and HV ground mounted capacitors with four vendors responding positively and the ITT documents have now been issued.

Risk 5 –Risk that actual product delivery lead times may be greater than Planned - Status: Controlled

Clearly defined timescales have been included in all vendor agreements to ensure that project timescales are met. In addition, the evaluation criteria for procurement activities include weighting for delivery timescales. This will ensure that we are able to procure a suitable product within the required timescales of the project.

Installation Risks

Risk 2: Risk that following preliminary design, planning issues where equipment is proposed to be located could lead to extended consultation requirements - Status: Open

Electricity North West will engage early to inform customers of local works, thus minimising risks of sustained objections. Furthermore, any installation of equipment will be planned to minimise intrusion and disturbance, whilst maximising advantageous positions for delivery of benefits. Physical size of equipment and location will be considered to prevent issues further into installation programme.

Risk 6: Risk that the vendor does not achieve delivery and installation of the Optimisation software or that there are potential constraints with Electricity North West NMS configuration and commissioning - Status: Controlled

Early contact was made with Siemens for discussion and agreement to deliver to Project plan. Through this an understanding of the data requirements and connectivity between the optimisation software and Electricity North West NMS system has been agreed at an advanced stage. In addition, since project go-live significant effort has been invested in finalising functional requirement prior to signing contracts with our Partner Siemens. This is aimed at de-risking Project delivery.

Risk 7: Risk that new technologies or software installed do not perform as expected in commissioning stage leading to delays to commencing the Trial and potentially impacting the quality of Smart Street outputs - Status: Open

All Smart Street equipment technologies have been trialled and proven under previous IFI and LCNF Tier 1 funded projects; or proven in business as usual scenarios. In addition we have planned early commissioning dates allowing contingent time should this risk materialise.

Other Risks

Risk 3: Risk that the Trial areas selected will not include areas with CLASS or C_2C leading to a lost opportunity to gain further value from utilising existing assets - Status: Controlled

The circuits that have been shortlisted for selection have had the selection criteria outlined in Appendix B of the Full Submission applied. This has given priority to contain CLASS and C_2C assets. Our circuit selection criteria was designed to utilise existing trial networks where practicable and only where there are other factors that prevent overlap with CLASS or C_2C have alternate circuits been included.

Risk 8: Risk that customers in the Trial areas perceive a change to their electricity supply leading to hypothesis failure and potential adverse publicity for Smart Street - Status: Open

As part of proving that no change will be perceived by customers, we will be performing ongoing monitoring the customer contact centre. Following any notification of a perceived change, extra monitoring equipment will be installed to validate the claim and ensure that the perceived change is not due to the customer being sensitised to the Trial. In addition, the customer surveys which have been designed for CLASS include control groups that can be used to benchmark any survey responses that are obtained from the trials. To further qualify the customer experience, focus groups will be held in the latter part of the second year of the Trial period with customers from each of the Smart Street Trial locations.

Risk 9: Risk that the survey group does not form a representative sample of either the Electricity North West or GB customer base - Status: Controlled

We will be leveraging previous Tier 2 surveys that will establish customer perception of a change to the supply Customers recruited for the Trial surveys will be representative of the wider population at both Electricity North West and GB level and be matched by ACORN classification.

Risk 10: Risk that some industrial customers have transformer winding ratios of 11000/400 leading to out of limit voltages on their networks - Status: Open

A search for potential customers in Trial areas will be conducted and if any are found we will inform them of Smart Street Trials in order to ensure appropriate actions are taken to avoid out of limit voltages on customers premises.

Risk 11: Risk that external factors, not directly influenced by the Trials or related to Smart Street, could cause customers to become negative towards Electricity North West or LCN Fund Projects - Status: Open

The Smart Street project team are working closely with the Electricity North West Press Officer to identify any potential issues and formulating targeted communication to proactively minimise any adverse impacts to Smart Street.

Risk 13: Risk that the University of Manchester or Queen's University, Belfast undergo personnel changes during the Project, leading to loss of specific skills which could impact the quality of deliverables - Status: Controlled

Work packages agreed with the Universities have defined the tasks each university is responsible for. All research activities are being undertaken in a collaborative manner, with involvement of multiple individuals across both academic institutions in order to minimise the risks associated with movement of research staff.

Risk 14: Risk that the high volume of LCN Fund events will dilute the effectiveness of dissemination activities leading to lower than expected value derived from Smart Street being achieved - Status: Open

Strong Project branding is being developed along with key messages and high-quality dissemination materials to ensure that Smart Street is clearly differentiated and reaches the right audience. Choice of dissemination media is being optimised to achieve maximum reach and coverage. Throughout the Project our learning and dissemination approach will be tailored to meet the needs of each stakeholder group. In addition to the publication of learning materials through social media and online, industry wide and bespoke knowledge sharing events will take place.

Risk 15: Risk that the varied interests of the stakeholders prevents knowledge from being disseminated effectively leading to the learning outcomes from Smart street not being maximised – Status: Open

During the Smart Street mobilisation, multiple communication channels and a range of stakeholders have been identified to maximise Smart Street dissemination outcomes. A Smart Street Project Partner event has been held to open communication channels between all parties and this will be followed by quarterly steering group meetings. Dissemination of knowledge forms a key part of each Project steering group in order to ensure all internal stakeholders are aware of the outcomes of the Project.

5 SUCCESSFUL DELIVERY REWARD CRITERIA

During the reporting period, one planned SDRC was delivered. This is detailed in table 5.1 below.

| Milestone | Planned date | Completion date | Comments |
|---|-----------------|-----------------|-----------|
| Publicise Smart Street within Electricity North West in Monthly Team Brief pack and Volt (intranet) and/ or Newswire (bimonthly staff magazine) | Jan 14 | Jan 14 | Completed |

Table 5.1 SDRC delivered in reporting period

The SDRC planned for the next reporting period can be seen in table 5.2 below.

Table 5.2 SDRC look ahead

| Milestone | Planned date | Forecast date | Comments |
|--|-----------------|------------------|----------|
| Send Customer Engagement Plan and Data Privacy Statement to Ofgem. | Jun 14 | Jun 14 | On track |
| Project Progress Reports | Jun 14 | Jun 14 | On track |

| Milestone | Planned date | Forecast date | Comments |
|---|-----------------|------------------|----------|
| published on Smart Street website. | | | |
| Publish on the Smart Street website a report detailing the site selection methodology, and a map of Smart Street Trial areas. | Jul 14 | Jul 14 | On track |
| Contracts for the supply of networks equipment signed. | Jul 14 | Jul 14 | On track |
| Smart Street website and social media forums to be live. | Jul 14 | Jul 14 | On track |
| Publish advertorials. | Jul 14 | Jul 14 | On track |
| Smart Street Webinars held. | Jul 14 | Jul 14 | On track |
| Engaged Customer Panel workshop delivered. | Sep 14 | Sep 14 | On track |
| Publicise Smart Street within Electricity North West in Monthly Team Brief pack and Volt (intranet) and/ or Newswire (bimonthly staff magazine) | Sep 14 | Sep 14 | On track |
| Deliver general awareness materials and publish on the Smart Street website. | Oct 14 | Oct 14 | On track |
| Engaged Customer Panel lessons learned published on the Smart Street website | Oct 14 | Oct 14 | On track |
| Active participation at four Annual LCN Fund Conference – (2014) | Oct 14 | Oct 14 | On track |
| Smart Street Knowledge Sharing Events. | Oct 14 | Oct 14 | On track |

During the next reporting period none of the SDRCs are forecast to be delivered at variance to the dates contained within the Project plan appended to the Full Submission.

6 LEARNING OUTCOMES

We have established a Project website which is used as a repository for sharing Project learning to interested stakeholders. The learning outcomes during the period are described below.

Lesson 1: Agreement of detailed software requirements pre-contract to de-risk delivery.

Background: Siemens and Electricity North West needed to establish a clear understanding of the compatibility of interconnectivity between their various systems and databases. In addition to this formats had to be agreed for the transfer of existing data between the systems. Additional effort has been invested into this activity in order to ensure that both parties fully understood the technical solution in order to ensure the implementation of the software is achieved in the most effective way possible.

Lessons learned:

Early contact with Partners is essential to maximise timescales available to review systems and processes pre-contract. This reduces the risk of misunderstanding or technical issues materialising later in the project causing an adverse affect on project delivery.

Lesson 2: Ofgem Smart Street Project officer desire for bi-monthly update calls.

Background: In April the Project Manager arranged for the Ofgem LCNF Project Officer to visit the office to give her a project overview and a chance to be introduced to the Electricity North West staff engaged in the project. A site visit was also conducted to allow her to gain an insight into the on site activities. This is the first time we have extended this type of invite to a Project Officer and we feel that the day was extremely useful. We would be happy to repeat this exercise at key stages throughout the Smart Street implementation and for future Projects.

Lessons learned:

As a result of holding the briefing session with the Ofgem Smart Street Project officer we have learnt that she would appreciate bi-monthly update calls in addition to the formal six monthly project progress report. This will allow her to keep a more up to date and fresh understanding of developments and issues within the Project. We also gained a better understanding of the Project Officers background and were able to personally introduce her to all of the key members of the team.

Lesson 3: Importance of Project start up meeting involving all internal and external stakeholders

Background: In May a Smart Street Partner event involving Electricity North West, Partners and suppliers was held. A project walk through was given by Electricity North West which was followed by presentations from each stakeholder.

Lessons learned

Early interaction between all stakeholders is essential in order to give clear understanding to all parties of each stakeholder roles and accountabilities. This is particularly critical in ensuring that early SDRC's are understood and delivered.

Lesson 4: Importance of early allocation of resources to conduct DINIS studies.

Background: A need for specialist skills to carryout DINIS studies was identified during the circuit selection which potentially could have delayed the process had suitable resources not been identified and secured quickly.

Lessons learned

This resource is available within Electricity North West but needs to be secured early as the resource is of limited capacity and utilised by other sections of the business.

7 BUSINESS CASE UPDATE

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

8 PROGRESS AGAINST BUDGET

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

Project expenditure compared to baseline forecast is summarised below at the cost category level and in Appendix B at project activity level. The report includes expenditure up to and including 31 May 2014.

Table 8.1 – Project expenditure

| £'000s | S | Spend to date | | | Total Project | | |
|---|--------|---------------|----------|----------|---------------|----------|--|
| Excluding Partner Funding Ofgem Cost Category | Actual | Budget | Variance | Forecast | Budget | Variance | |
| Summary | | | | | | | |
| Labour | 83 | 123 | 40 | 1,873 | 1,888 | 15 | |
| Equipment | 0 | 0 | 0 | 3,178 | 3,235 | 57 | |
| Contractors | 0 | 37 | 37 | 1,957 | 1,960 | 3 | |
| IT | 0 | 0 | 0 | 1,090 | 1,090 | 0 | |
| Contingency | 0 | 0 | 0 | 0 | 1,015 | 1,015 | |
| Decommissioning | 0 | 0 | 0 | 39 | 39 | 0 | |
| Other | 2 | 11 | 9 | 314 | 323 | 10 | |
| Total Costs | 85 | 171 | 86 | 8,451 | 9,550 | 1,100 | |

Note 1: Project Budget as defined in Project Direction - December 2013

The actual spend to date is £85k and the estimated at completion cost is now £8,451k.

The phased mobilisation of the project has resulted in a deferment of expenditure to latter part of the year. This has resulted in an £86k variance to the original project budget. This is not expected to jeopardise the delivery of the SDRC as the costs are associated with relatively long duration activities whose SDRC are not due until June 2015. The estimated at completion forecast is currently expected to remain in line with the original budget of £8,451k excluding contingency (There are currently no known issues that will require utilisation of contingency held within this budget). The Project bank statement is shown in Appendix C. The statement contains all receipts and payments associated with the Project up to the end of May 2014.

9 INTELLECTUAL PROPERTY RIGHTS (IPR)

Electricity North West is following the default IPR arrangements. We have considered our IPR approach to current period Project deliverables and concluded the default IPR arrangements apply.

10 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 the SDRC.

11 ACCURACY ASSURANCE STATEMENT

The Project team and select members of the Smart Street Project Steering Group, including the lead member of the bid development team have reviewed this report to ensure its accuracy. 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 Smart Street Project Manager and the Project's finance representative 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 also been peer reviewed by the Electricity North West Distribution Finance Business Partner. Issue of the document has been approved by the Networks Strategy & Technical Support Director.

APPENDIX A – PROJECT BUDGET

| £000's | |
|---|-------|
| Excluding Partner Funding | |
| Ofgem Cost Category | |
| | 4.000 |
| | 1,888 |
| HV & LV Network Management & Interconnection - Labour | 305 |
| Network Configuration & Voltage Optimisation - Labour | 431 |
| Project Management, Planning, Policy and Training - Labour | 1,152 |
| Equipment | 3,235 |
| Data Preparation - Equipment | 285 |
| HV & LV Network Management & Interconnection - Equipment | 2,229 |
| HV & LV Voltage Control - Equipment | 721 |
| | 4.000 |
| Contractors | 1,960 |
| Customer Engagement & Survey - Contractors | 110 |
| HV & LV Voltage Control - Contractors | 350 |
| LV Network Management & Interconnection - Contractors | 161 |
| Network Configuration & Voltage Optimisation - Contractors | 381 |
| Peer reviews, support & customer research - Contractors | 142 |
| Research -Technical - Contractors | 626 |
| Research - CBA & CIA - Contractors | 189 |
| п | 1,090 |
| Network Configuration & Voltage Optimisation - IT | 1,090 |
| Contingonov | 1,015 |
| Contingency HV & LV Network Management & Interconnection - Contingency | 272 |
| | 426 |
| HV Voltage Control - Contingency | |
| Dissemination, Policy, Training & Trials - Contingency | 82 |
| Network Configuration & Voltage Optimisation - Contingency | 235 |
| Decommissioning | 39 |
| Decommissioning | 39 |
| Other | 323 |
| Technology build and Trials data - Other | 87 |
| Learning & Dissemination - Other | 133 |
| • | |
| Accommodation - Other | 103 |
| Total | 9,550 |

Source: Ofgem Schedule to Project Direct - December 2013

APPENDIX B – DETAILED PROJECTED PROJECT EXPENDITURE

| £'000s | Tot | al Projec | t | | |
|--|----------|-----------|----------|--|--|
| Excluding Partner Funding | Forecast | Plan | Variance | Comments | |
| Ofgem Cost Category | | | | | |
| Labour | 1,873 | 1,888 | 15 | | |
| HV & LV Network Management & Interconnection - Labour | 305 | 305 | 0 | | |
| Network Configuration & Voltage Optimisation - Labour | 440 | 431 | -9 | | |
| Project Management, Planning, Policy and Training - Labour | 1,128 | 1,152 | 24 | | |
| Equipment | 3,178 | 3,235 | 57 | | |
| Data Preparation - Equipment | 285 | 285 | 0 | | |
| HV & LV Network Management & Interconnection - Equipment | 2,172 | 2,229 | 57 | | |
| HV & LV Voltage Control - Equipment | 721 | 721 | 0 | | |
| Contractors | 1,957 | 1,960 | 3 | | |
| Customer Engagement & Survey - Contractors | 115 | 110 | -5 | | |
| HV & LV Voltage Control - Contractors | 351 | 350 | 0 | | |
| LV Network Management & Interconnection - Contractors | 161 | 161 | 0 | | |
| Network Configuration & Voltage Optimisation - Contractors | 381 | 381 | 0 | | |
| Peer reviews, support & customer research - Contractors | 134 | 142 | 8 | | |
| Research -Technical - Contractors | 626 | 626 | 0 | | |
| Research - CBA & CIA - Contractors | 189 | 189 | 0 | | |
| п | 1,090 | 1,090 | 0 | | |
| Network Configuration & Voltage Optimisation - IT | 1,090 | 1,090 | 0 | | |
| Contingency | 0 | 1,015 | 1,015 | | |
| HV & LV Network Management & Interconnection - Contingency | 0 | 272 | 272 | Not anticipating use of contigency at this stage | |
| HV Voltage Control - Contingency | 0 | 426 | 426 | Not anticipating use of contigency at this stage | |
| Dissemination, Policy, Training & Trials - Contingency | 0 | 82 | 82 | Not anticipating use of contigency at this stage | |
| Network Configuration & Voltage Optimisation - Contingency | 0 | 235 | 235 | Not anticipating use of contigency at this stage | |
| Decommissioning | 39 | 39 | 0 | | |
| Decommissioning | 39 | 39 | 0 | | |
| Other | 314 | 323 | 10 | | |
| Technology build and Trials data - Other | 87 | 87 | 0 | | |
| Learning & Dissemination - Other | 134 | 133 | -1 | | |
| Accommodation - Other | 93 | 103 | 10 | | |
| Total | 8,451 | 9,550 | 1,100 | | |

APPENDIX C – PROJECT BANK ACCOUNT

The bank statement below details all transactions relevant to the Project up to 10 June 2014. This includes all receipts and payments associated with the Project up to the May 2014 month end reporting period.

| 🎿 Lloyds Bank | Yesterday's Statement | C082421 |
|-------------------------|-----------------------|---------|
| Statements and Balances | | |

| ate | Туре | Narrative | Value Date | Payments | Receipts | Balance |
|-------------|-------------------|-------------------------------|------------|--------------|-----------------|-----------------|
| FEB14 | | Opening Ledger Balance | | | | 0.00 Cr |
| APR14 | BGC | UK PN OPERATIONS BGC | | | 85,967.37 | 85,967.37 Ca |
| | 1000 2000070554 K | | | | | |
| APR14 | BGC | UK PN OPERATIONS BGC | | | 54.226.33 | 140.193.70 Cr |
| | | 1000 2000070555 K | | | | |
| 40814 | E/ELOW | WESTERN POWER DIST F/FLOW | | | 186.323.31 | 326,517,01 C |
| APR14 | | ELECTRICITY NWL NO.4 PYMT | | | 1.121.495.94 | 1.448.012.95 Cr |
| CAPAIT CA | TRANSFER 00620 | | | 1,121,493.94 | 1,448,012.93 Ci | |
| | | WESTERN PWR DISTR F/FLOW | | | 6 201 05 | 1 463 714 66 6 |
| | | | | | 5,701.85 | 1,453,714.80 C |
| | | SCOTTISH HYDRO-ELE F/FLOW | | | 18,022.36 | 1,471,737.16 C |
| | | SOUTHERN ELECTRIC F/FLOW | | | 15,363.76 | 1,487,100.92 C |
| APR14 | BGC | NORTHERN ELECTRIC BGC | | | 54,572.54 | 1,541,673.46 Cr |
| | | LCNF | | | | |
| APR14 | BGC | NORTHERN ELECTRIC BGC | | | 38,031.71 | 1,579,705.17 Cr |
| | | LCNF | | | | |
| APR14 | BGC | R B S-SP DISTRIBUT BGC | | | 47,939.13 | 1,627,644.30 Cr |
| | | LOW CARB NWRK2014/ | | | | |
| 8APR14 BGC | BGC | R B S-SP MANWEB BGC | | | 35,804.33 | 1,663,448.63 Cr |
| | | LOW CARB NWRK2014/ | | | | |
| MAY14 | F/FLOW | WESTERN POWER DIST F/FLOW | | | 186.323.17 | 1.849.771.80 Cr |
| MAY14 | | ELECTRICITY NWL NO.4 PYMT | | | 166,958.26 | 2.016.730.06 C |
| | | TRANSFER 00629 | | | | 2,010,120.00 0 |
| MAVIA | E/EL OW | SCOTTISH HYDRO-ELE F/FLOW | | | 18.022.37 | 2.034.752.43 C |
| | | SOUTHERN ELECTRIC F/FLOW | | | 15,363.80 | 2,050,116.23 C |
| MAY14 | | | | | | |
| | | NORTHERN ELECTRIC BGC LCNF | | | 54,572.59 | 2,104,688.82 C |
| MAY14 | BGC | NORTHERN ELECTRIC BGC LCNF | | | 38,031.66 | 2,142,720.48 Ci |
| MAY14 | BGC | UK PN OPERATIONS BGC | | | 85,967,38 | 2,228,687.86 Ca |
| | 1000 2000080121 K | | | 03,507.50 | 2,220,007.00 0 | |
| | RCC | UK PN OPERATIONS BGC | | | 54,226,33 | 2.282.914.19 C |
| 28MAY14 BGC | DGC | 1000 2000080122 K | | | 34,220.33 | 2,282,914.19 C |
| 28MAY14 BGC | RCC | R B S-SP DISTRIBUT BGC | | | 47,939.08 | 2,330,853.27 C |
| Zamail+ BGC | DGC | LOW CARB NWRK2014/ | | | +7,939.06 | 2,000,800.27 C |
| 28MAY14 BGC | | R B S-SP MANWEB BGC | | | 36 004 37 | |
| | DGC | | | | 35,804.37 | 2,366,657.64 C |
| | | LOW CARB NWRK2014/ | | | | |
| 0MAY14 DR | DK | SERVICE CHARGES | | 3.90 | | 2,366,653.74 C |
| | | REF : 0144333498 | | | | |
| JUN14 | DR | ELECTRICITY NWL NO.4 PYMT | | 61,333.41 | | 2,305,320.33 C |
| | | TRANSFER 00649 | | | | |
| JUN14 | | Value of Credits (21) | | | 2,366,657.64 | |
| JUN14 | | Value of Debits (2) | | 61,337.31 | | |
| JUN14 | | Closing Ledger Balance | | | | 2.305.320.33 Cr |
| | | | | | | |

*** End of Report ***

Version : 3,16,1,513

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