



Customer Load Active System Services (CLASS) Project



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### **VERSION HISTORY**

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v1.1	16 Sep 2013	K Quigley	2 <sup>nd</sup> issue	Clarifications to address feedback from Ofgem
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#### **EXECUTIVE SUMMARY**

#### The CLASS project

The Customer Load Active System Services (CLASS) project is funded via Ofgem's Low Carbon Networks (LCN) second tier funding mechanism. Electricity North West received formal notification of selection for funding on 21 December 2012. The project is due for completion by 30 September 2015.

CLASS will demonstrate a low cost, rapidly deployable solution that applies innovative and active voltage management to provide a range of demand response capabilities and network voltage regulation services. By aligning demand to existing network capacity through voltage control, CLASS has the potential to minimise the need for costly asset-based interventions and make a positive contribution to a low carbon future.

This Customer Engagement Plan sets out how Electricity North West will engage and interact with customers during the project.

#### **Customer engagement in CLASS**

To demonstrate the applicability of the CLASS approach, the range of CLASS techniques will be trialled on 60 primary substations, representing 17% of Electricity North West's network.

A key hypothesis of CLASS is that customers will not observe any adverse effects on their electricity supply as a consequence of the CLASS trials.

To test this hypothesis a range of customer surveys will be undertaken following the trials, to elicit customer perceptions and observations of any effects on their electricity supply.

In addition to the customer surveys, a range of activities will also be undertaken to raise awareness amongst customers in the trial area, of CLASS, its benefits and how it can help to lower customer costs and reduce carbon emissions.

#### **Customers participating in the CLASS surveys**

Two groups of customers will be actively surveyed as part of CLASS ie:

- *Trial participants* These are customers affected by one or more CLASS trials who will be surveyed to assess their observations of any effects on their electricity supply
- Control group These are customers not affected by the given CLASS trial but who
  will be surveyed to assess any placebo effect and to compare and contextualise the
  responses from trial participants above.

To ensure that both categories of CLASS survey participants remain engaged throughout the five CLASS trials, the project team will draw on various tools. These will include the provision of stimulus materials, easily understandable survey instruments and a financial incentive. The development of the materials and instruments will be guided by a small representative group of customers, the 'engaged customer panel' (ECP), to maximise their suitability, applicability and ease of understanding.

#### Trial area customers not involved in the CLASS surveys

A targeted campaign will be launched to ensure that customers in the trial area who are not participating in the surveys are aware of CLASS, its benefits and the issues that it is seeking to address.

This will include the distribution of leaflets, utilisation of social media, including Facebook and Twitter, and the development of a dedicated CLASS website that will provide information about the project.

#### **Priority services register customers**

Electricity North West already maintains a priority services register (PSR) of customers who have special requirements or who may be vulnerable during a power outage. The register enables the company to provide prompt assistance to these customers if required. The CLASS project team will use this register to identify PSR customers in the trial area. They will be issued with leaflets that describe CLASS and provide details of how to contact the project team.

#### **Customer feedback**

Customers will be able to provide feedback or raise queries with the CLASS project team through various methods. In particular, customers will be able to contact the team via the CLASS website, which will have a simple contact form for that purpose, the Electricity North West customer contact centre (tel: 0800 195 4141), SMS/text messaging facility, a dedicated project email address and a postal address for written correspondence. The CLASS project team will seek to respond to all queries as soon as possible, and in all cases within ten working days.

#### **Customer safety**

All CLASS technologies and equipment will be installed on the network, and all techniques initiated at primary substations. As such, there will be no installation works at customer premises. It is therefore not envisaged that CLASS will introduce any new safety risks to customers.

#### **Customer consents**

There will be no installation of equipment or any installation works at customer premises. Consent and agreement will be sought from the customer however, prior to any entry into their premises for the face-to-face Recruitment Interview. This will be in the form of an introductory question, asking the customer if he/she is happy to be engaged about potential participation in the CLASS surveys; and if so, whether the customer is happy for the interviewer to enter their premises (as necessary). If the customer is happy to do so, a signature will be obtained.

During the actual Recruitment Interview, further and formal consent will be obtained from the customer for participation in the full series of CLASS surveys.

#### 1 THE CLASS PROJECT

#### 1.1 Background and context

Current trends towards a significant increase in electricity demand driven by greater levels of low carbon technologies (LCTs), combined with an increased uptake of renewable and low carbon energy generation, will present new challenges to operators of electricity networks in Great Britain (GB). In particular, these trends have the potential to necessitate expensive capital investments. In addition to being costly, these capital investments would also be carbon-intensive and would cause considerable traffic disruptions etc.

To minimise financial costs – which will inevitably be passed to customers – as well as disruption and carbon emissions, innovative approaches to managing electricity networks are required.

Electricity North West is leading a number of innovative projects including the Customer Load Active System Services (CLASS) project, which will demonstrate a low cost, rapidly deployable solution that applies innovative and active voltage management to provide a range of demand response capabilities and network voltage regulation services. By aligning demand to existing network capacity through voltage control, CLASS has the potential to minimise the need for costly asset-based interventions and make a positive contribution to a low carbon future.

CLASS is funded via Ofgem's Low Carbon Networks (LCN) second tier funding mechanism. The project is being undertaken by Electricity North West in partnership with key industrial and academic partners, namely General Electric (GE), Siemens, Parsons Brinkerhoff, Impact Research, Chiltern Power and the University of Manchester. Formal notification of selection for funding was received from Ofgem on 21 December 2012. The project is due for completion by 30 September 2015.

Some of the challenges that operators of electricity networks are facing – and will increasingly face if current trends in demand continue – and which CLASS is seeking to address, are outlined below.

#### 1.2 High peak demands

Demand for electricity is not constant. Demand tends to be greatest during specific seasons, ie winter; and during particular times of the day, eg early evenings.

Although these periods of 'high peak demand' are temporary and seasonal, networks traditionally must be built with enough capacity to accommodate them. In some cases therefore, this could result in costly investments being made to increase capacity to accommodate high demand peaks that only occur a few times a year. The expected doubling in electricity demand by 2050 driven by customer adoption of LCTs, has the potential to increase these peak demands and therefore necessitate significant investment in network capacity.

Cost-effective tools that could enable distribution network operators (DNOs) to accommodate short-term, high peak demand, without expensive asset-based interventions, would therefore provide significant benefits. Not only could such tools achieve cost-savings for customers, they could also give DNOs time to fully investigate any new patterns of peak demand and only invest where absolutely necessary.

CLASS is seeking to exploit the natural relationship between voltage and demand to manage high peak demand. The ability to actively manage peak demand through voltage control, in a way that does not adversely affect customer perceptions of their electricity supply, could provide DNOs with a useful tool for accommodating increasing demand and avoiding or deferring costly network reinforcement; thus realising cost savings for customers.

#### 1.3 Frequency response to support system balancing

As electricity cannot be stored, instantaneous generation must match the demand that is being taken from the system at any given point in time. If the instantaneous demand is higher than generation, system frequency will fall. Conversely if demand is lower than generation then frequency will rise.

In addition to owning the electricity transmission network, National Grid is also the national electricity transmission system operator (NETSO) for GB. In its role as NETSO, National Grid has a licence obligation to maintain frequency within the limits specified in the electricity supply regulations, ie  $\pm 1\%$  of 50 Hz.

In the period to 2050, the generation mix in GB is expected to change significantly, with increased amounts of low inertia intermittent generation connected to the system along with large nuclear generating units that will increase the largest secured generation loss from 1320 MW to 1800 MW. The increasing proportion of intermittent renewable energy sources in the GB generation mix will increase the need for so-called 'frequency balancing services' used by the NETSO to maintain system stability and to ensure that frequency remains within statutory limits.

The traditional approach for ensuring a ready source of frequency balancing has been by maintaining a number of power stations connected to the grid ready to produce power when required. These so called 'spinning reserves' are effective but are expensive and very carbon intensive.

CLASS will demonstrate the application of a number of voltage control measures that will enable rapid and significant reductions in demand, thus providing the NETSO with a flexible and cost-effective tool for frequency response and achieving their balancing requirements. By providing the NETSO with a fast-acting and flexible demand management capability for frequency balancing, CLASS has the potential to contribute to both reductions in costs to customers as well as carbon emissions.

#### 1.4 High network voltages

A key challenge for network operators is managing the unacceptably high voltages that can occur on distribution and transmission networks during periods when high renewable generation output coincides with low local demand. The operation of primary transformers in a staggered tap configuration has the potential to provide a highly flexible and cost-effective means of absorbing reactive power within a network, thus controlling these dangerous overvoltages.

CLASS will demonstrate the viability of the tap staggering technique for provision of reactive power services (ie voltage regulation) to the NETSO and the DNO. The aim is to demonstrate that a reactive power absorption service can be provided, quantify the effect on the distribution network and the aggregate effect on the transmission network.

# 2 HOW THE REQUIREMENTS OF THE GOVERNANCE DOCUMENT HAVE BEEN MET

#### 2.1 The Customer Engagement Plan

Section 3.92 of the *Low Carbon Networks Fund Governance Document v.6* sets out certain requirements for DNOs undertaking projects funded by the LCN second tier funding mechanism.

Specifically, it requires the DNO to submit to Ofgem at least two months prior to initiating any form of customer engagement, a plan of how it, or any of its project partners, will engage with, or impact upon, relevant customers as part of the project.

This Customer Engagement Plan sets out the approach that Electricity North West will take to engage with customers directly or indirectly affected by CLASS. It provides a framework for all customer engagement that will be undertaken throughout the project, and sets out the activities and tools that Electricity North West and its partners will draw upon to maximise customer outcomes.

This section of the Customer Engagement Plan outlines how the requirements of the LCN fund governance document have been met, and points the reader to the relevant sections of the document where appropriate.

#### 2.2 Requirements for a communication strategy

The governance document requires DNOs to set out a communication strategy that sets out:

a. Any proposed interaction with a relevant customer or premises of a relevant customer or proposed interruption to the supply of any customer for the purposes of the project, and how the customer will be notified in advance

Section 5 of this plan sets out how survey participants and customers in the trial area not participating in the surveys, will be engaged in CLASS. Notably, various tools will be utilised, including a range of stimulus materials, simple and easily understood survey instruments, leaflets, a dedicated website, social media forums, etc. An engaged customer panel (ECP), ie a focus group comprised of a cross-section of customers, will help develop and test the materials to ensure that they are understandable to customers and will achieve the required outcomes.

Section 3 of this plan sets out the trials that will be undertaken to test the CLASS approach. It will be noted that the CLASS techniques will be applied at primary substations. As such, there will be no installation of equipment on customer premises. Furthermore, as the CLASS approach is centred around voltage management, there will be no interruptions to the electricity supply of any customer.

b. Ongoing communications with relevant customers involved in the project

Section 5 of this document sets out how the CLASS project team will engage with survey participants as well as customers in the trial areas who are not participating in the surveys, but who may observe the effects of the CLASS trials. As already indicated, this engagement will draw on various tools, including a range of stimulus materials, simple and easily understood survey instruments, leaflets, a dedicated website, social media forums, etc. The ECP will be used to support the development and testing of these tools.

### c. Arrangements for responding to queries or complaints relating to the project from relevant customers

Section 7 of this document outlines the various media that customers can use to feed back concerns or raise queries with the CLASS project team. In particular, customers will be able to contact the CLASS project team via the CLASS website, which will have a simple contact form for that purpose, the Electricity North West customer contact centre (tel: 0800 195 4141), an SMS/text messaging facility, a dedicated project email address and a postal address for written correspondence. The CLASS project team will seek to respond to all queries as soon as possible, and in all cases, within ten working days.

#### 2.3 Requirements to provide information on priority services register customers

The governance document also requires DNOs to provide:

'Information on the priority services register customers who will be involved in the project and how they will be appropriately treated'

Section 6.2 of this plan outlines how the CLASS project team will interact with priority services register (PSR) customers. Electricity North West already maintains a priority services register (PSR) of customers who have special requirements or who may be vulnerable during a power outage. The register enables the company to provide prompt assistance to these customers if required. The CLASS project team will use this register to identify PSR customers in the trial area and any special needs that they might have. PSR customers will be issued with leaflets that will describe CLASS and provide details of how to contact the project team.

#### 2.4 Requirement to provide details of any safety information that may be relevant

The governance document requires DNOs to detail:

'Any safety information that may be relevant to the project'

As per the description of the CLASS trials provided in section 3, all CLASS technologies and equipment will be installed on the network, and all techniques initiated at primary substations. As such, there will be no installation works at customer premises. It is therefore not envisaged that CLASS will introduce any new safety risks to customers.

#### 2.5 Requirement to provide details any customer consents

The governance document requires DNOs to provide

'Details of how any consents that may be required as part of the project will be obtained'

As there will be no installation works at customer premises, no customer consents for access to premises for installation are required for CLASS.

Consent and agreement will be sought from the customer however, prior to any entry to their premises for the face-to-face Recruitment Interview. This will be in the form of an introductory question, asking the customer if he/she is happy to be engaged about potential participation in the CLASS surveys; and if so, whether the customer is happy for the interviewer to enter their premises (as necessary). If the customer is happy to do so, a signature will be obtained.

During the actual Recruitment Interview, further and formal consent will be obtained from the customer for participation in the full series of CLASS surveys. Customers will indicate their agreement to participate in the CLASS surveys by signing a consent form. A draft of the consent form is provided at Appendix B of this plan.

#### 3 THE CLASS TRIALS

CLASS will demonstrate and assess the applicability of rapidly deployable voltage management approaches to manage demand and address the challenges outlined above.

To demonstrate the applicability of the CLASS approach and to assess customers' perceptions of the effects, the range of CLASS techniques will be trialled on 60 primary substations, representing 17% of the Electricity North West's network and serving around 350,000 customers (348,500 domestic and 1500 commercial customers).

To assess the CLASS techniques, five trials will be undertaken as described below.

- Trial 1: Voltage increment and decrement over one year Trial 1 will use the normal increment and decrement of system voltage at primary substations across an annual period to assess the relationship between voltage and demand. The outcome from this trial will be a voltage /demand relationship matrix, to be developed by the University of Manchester, that will describe mathematically the voltage/demand relationship for every half-hour in a year.
- Trial 2: Voltage decrement to achieve a demand response at times of system peak –
  Trial 2 will investigate the demand response that can be achieved through voltage
  reduction at times of high peak demand. The outcome of this trial will be confirmation
  that a demand response can be realised at times of peak demand (eg in winter), thus
  maximising existing network capacity and deferring costly network reinforcement.
- Trial 3: Voltage decrement to provide very fast frequency response This trial will investigate the use of a low frequency relay to switch out one transformer of a standard primary substation and will also quantify the demand reductions achieved. The outcome of this trial will be confirmation that a very fast demand response (ie <0.5 seconds) can be provided to meet the NETSO criteria for frequency response.
- Trial 4: Voltage decrement to provide a fast frequency response to the NETSO Trial 4 will investigate the use of demand response, initiated by lowering primary substation taps, as a means of providing fast frequency response to the NETSO. The outcome of this trial will be confirmation that a fast demand response (ie <30 seconds) can be provided to the NETSO.</li>
- Trial 5: Reactive power absorption to redress high network voltages Trial 5 will investigate the viability of tap staggering for the provision of reactive power services (ie voltage regulation) to the NETSO and the DNO. During the trial, the tap positions across the pair of primary transformers will be staggered, and the change in power factor (ie the reactive power absorbed) quantified at each primary substation. The outcome of this trial will be confirmation that a reactive power absorption service can be provided. The impact on the distribution network in terms of losses and network loading and the aggregate impact of this on the transmission network for voltage stabilisation will also be quantified.

During all trials, the health of primary transformers and tap changers will be monitored and analysed to understand whether the CLASS approaches have any material or detrimental effects on the assets.

#### 4 CUSTOMER ENGAGEMENT IN CLASS

One of the key CLASS hypotheses is that:

Customers within the CLASS trial areas will not see/observe/notice any impact on their power quality when these innovative techniques are applied.

To test this hypothesis a range of customer engagement activities will be undertaken during the life of the project. Key amongst these will be a series of customer surveys. Where appropriate these surveys will align with the trials outlined in section 3 above, and will elicit customer perceptions and observations of any effects on their electricity supply.

In addition to the customer surveys, the CLASS team will actively engage customers to raise awareness of the project and its drivers, including the challenges posed by increasing electricity demand. In doing so, the project will draw on informative and easily understood campaign material; and will takes steps to ensure that the project's messages and outcomes adequately reach the target audience.

The CLASS project will generate outputs and learning in a number of key areas. These will be of particular interest to other DNOs, Ofgem, DECC and other parties. In addition to the customer-specific activities to raise awareness of CLASS and the energy/carbon challenges, various engagement activities will also be undertaken to provide and share relevant learning from CLASS with stakeholders.

#### 4.1 Customer engagement activities covered in this plan

This Customer Engagement Plan sets out the approach and the wide-ranging activities that will be undertaken to engage customers and stakeholders throughout the CLASS project. The plan covers the following:

- Establishing which customers need to be engaged
- Planning customer selection and approach
- Developing and implementing engagement plans
- Bringing customers into the project and associated customer contracts
- Keeping customers engaged in the project
- Managing customers' issues, enquiries and complaints
- Managing customers who leave the project
- Managing the exit methodology for customers at the end of the trial.

#### 4.2 Project partners

Electricity North West has selected seven project partners based on their knowledge and experience in issues related to CLASS. Six of these partners, shown below, will primarily support the technical aspects of the project. They share Electricity North West's commitment to maximising customer participation and awareness, and will ensure that this guides all installation and implementation work.

- Siemens
- GE Digital Energy
- National Grid
- Chiltern Power
- Parsons Brinckerhoff
- The University of Manchester

The seventh project partner is Impact Research who will provide dedicated support to the CLASS project in developing and implementing engaging customer surveys and analysing the results.

Impact Research is a leading market research organisation with extensive experience in customer engagement activities in the utilities industry. They will draw on this experience to support the project in maximising the positive outcomes from the various customer engagement activities.

This Customer Engagement Plan is the outcome of a robust process that has been undertaken in collaboration with Impact Research to ensure maximisation of customer engagement and understanding of CLASS.

## 4.3 Continued quality assurance of customer engagement outcomes during the project

The CLASS project has received internal support from the Electricity North West executive leadership team and the future networks steering group (FNSG). This is comprised of members of the Electricity North West executive leadership team and oversees the company's future grid activities.

The FNSG will continue to have ultimate oversight over CLASS and will receive monthly updates on the project's progress. A CLASS project steering group (PSG) has also been established. This is comprised of representatives from all project partners and will guide the strategic direction of CLASS. This will include reviewing and guiding project activities and deliverables to ensure that they are of the required quality and align with the CLASS vision.

The project will be undertaken in accordance with Electricity North West's robust governance and project management approach. This will further ensure that the deliverables are of highest quality and that any deviation is quickly rectified.

#### 4.4 Engaged customer panel (ECP)

An ECP will be formed in advance of a targeted marketing campaign and surveys. This panel is effectively a focus group comprised of a representative cross-section of customers reflecting the customer base. This approach was very successful in Electricity North West's other LCN fund tier 2 project Capacity to Customers project (C<sub>2</sub>C).

Throughout the course of the project, the ECP will assist in formulating and testing the customer engagement material and survey instruments. To this end, the group will hold a number of meetings to discuss and test CLASS customer engagement materials, with a view to maximising their effectiveness, suitability, applicability and ease of understanding. The material that the panel will support the project team with developing will include:

- CLASS video
- Customer literature
- Stimulus materials for recruiting survey customers
- Media campaign materials
- Customer survey

#### 5 CLASS CUSTOMER GROUPS

Three customer groups have been identified as being indirectly or directly involved in CLASS, and therefore must be actively engaged during the project. These customer groups are discussed below.

#### 5.1 Customers participating in the CLASS surveys

Understanding whether customers observe any adverse effects of the quality of their electricity supply as a consequence of the CLASS techniques is key to the CLASS project. Customers will therefore be recruited to participate in a series of customer surveys throughout the CLASS trials period. The aim of these surveys will be to assess CLASS hypothesis 2:

Customers in the CLASS trial areas will not see/observe/notice any impact on their power quality when the demand response and reactive power absorption are being provided.

Two groups of customers will be surveyed:

- Trial participants These are customers affected by one or more CLASS trials who will
  be surveyed to assess their observations of any effects on their electricity supply
- Control group These are customers not affected by the given CLASS trial but who
  will be surveyed to assess any placebo effect and to compare and contextualise the
  responses from trial participants above.

A total of 350 customers (250 domestic and 100 industrial and commercial) will be surveyed in each group. The recruitment process and the timings of the surveys for the two groups will be the same.

Survey participants will be recruited through a face-to-face interview. The 15 minute interview will be undertaken by a trained interviewer from Impact Research, who will introduce the project, the research objectives, the benefits of CLASS and the incentive structure. Furthermore, customers will be informed of how their data will be used and shared.

An advantage of a face-to-face interview is that potential survey participants will be able to ask questions, to help their understanding of the project and the survey process.

Consent and agreement will be sought from the customer prior to any entry to their premises for the face-to-face Recruitment Interview. This will be in the form of an introductory question, asking the customer if he/she is happy to be engaged about potential participation in the CLASS surveys; and if so, whether the customer is happy for the interviewer to enter their premises (as necessary). If the customer is happy to do so, a signature to that effect will be obtained.

During the actual Recruitment Interview, further and formal consent will be obtained from the customer for participation in the full series of CLASS surveys. Customers agreeing to participate in the full series of CLASS surveys will be asked to sign a consent form and by doing so, will agree to their responses being used in the analysis and for their feedback to be included in any aggregated presentation of the survey outcomes. A copy of the consent form that will be used is provided at Appendix B.

Both groups of survey participants will be asked to complete five surveys during the trial period. These will include a baseline survey and four seasonal surveys. The timing of each survey will be matched to the technical CLASS trials.

To ensure that CLASS survey participants remain engaged throughout the series of trials, the following activities will be undertaken.

- Stimulus materials A range of stimulus materials to recruit customers to take part in the survey. The materials will be signed off by the engaged customer panel.
- Engaging and easily understandable survey instruments To ensure that customers
  complete and actively participate in the surveys, the instruments will be designed to be
  engaging and easily understandable by diverse customer groups.
- Piloting and refinement of survey instruments Surveys will be developed and piloted
  with a small group of customers before roll-out. This is a direct learning from the C<sub>2</sub>C
  project and will enable testing and refinement of the survey instruments.
- Financial incentive A financial incentive will be offered to customers to complete the series of survey activities.

#### 5.2 Customers in the trial area not participating in the CLASS surveys

The project team will launch a targeted CLASS awareness campaign amongst customers in the trial area who are not participating in the surveys to raise awareness of the CLASS project, its benefits and the issues that it is seeking to address. Some of the channels that will be used to maximise engagement with these customers are outlined below.

- Engaged customer panel An ECP will be formed to assist in formulating effective communication plans and instruments to provide clear and relevant information for customers. The panel will be made up of a representative cross-section of customers.
- Information leaflets Leaflets will be produced and distributed to every household or business in the trial area. In addition to providing an overview of CLASS, these leaflets will inform customers of the ways through which they can take part in the project.
- CLASS website Information about CLASS, including all communications materials, published outputs and details of upcoming events will be published on the CLASS website.
- Electricity supplier letters Electricity suppliers of customers in the trial area will be contacted to advise them of the nature of the trial and the timing and nature of communications with these customers.
- Social media A range of social media channels, including Twitter, Facebook and LinkedIn, will be used to update stakeholders on CLASS outputs, events and project developments.

#### 5.3 Wider electricity consumers

The challenges posed by increasing electricity demand will have implications for all electricity consumers. Furthermore, the outcomes of CLASS, ie in terms of reducing customer costs and carbon emissions, have the potential to provide benefits to all electricity consumers.

Recognising these wider implications, the CLASS project team will seek to raise awareness amongst wider customers both of the challenges and the opportunities provided by CLASS.

This will done by making relevant information available in the public domain in a way that is easily understandable to customers; and by sharing findings and project outcomes with key consumer groups. In this regard, some of the tools that will be used to engage customers in the trial area (outlined in sections 5.1 and 5.2 above) will also be relevant to wider customers. The range of tools that will be applied will include the following:

- CLASS website The project website will describe, in a way understandable to all
  customers, the challenges posed by increasing electricity demand, and the benefits
  that CLASS is seeking to provide.
- Social media A range of social media channels, including Twitter, Facebook and LinkedIn, will be used to provide information and updates about CLASS in a way accessible to all customers.

- Knowledge-sharing with consumer groups As part of the project's knowledge dissemination activities, learning and outcomes will be shared with organisations that have a specific interest in consumer and energy issues. These will include, for example, Consumer Futures, Sustainability First and Ofgem.
- Internal team briefings A number of briefings throughout the project will ensure that CLASS objectives are fully understood and lessons learned shared across the wider Electricity North West community. Furthermore, articles will be submitted to the internal company magazine and the intranet updated to keep colleagues informed of the project's progress. This will ensure that the knowledge, lessons learnt and project progress is disseminated to all employees, who will then be able to share these with customers they interact with.

#### 6 COMMUNICATIONS AND PRIORITY SERVICES CUSTOMERS

#### 6.1 CLASS partners

Each of the CLASS partners brings existing customer engagement and management experience to the project. For the purposes of CLASS, the project partners will adhere to the key principles outlined below.

- Project partners responsible for any form of customer contact must ensure that customer contact is appropriate. This must include making clear to customers that the contact relates to the CLASS project. As a minimum, any customer contact will involve:
  - o Provision of clear information on the CLASS trials in which they are taking part
  - o Provision of clear information on the aims and objectives
  - o Provision of information on data protection
  - o Provision of information on how to cancel their participation in the trial.
- Project partners with access to customer data gathered for CLASS will sign an
  agreement to ensure that this data is not used for purposes other than in relation to the
  CLASS project (see also CLASS Data Privacy Statement). Electricity North West's data
  security manager will take responsibility for all aspects of data privacy in the project.
- Where project partners have existing or previous relationships with customers participating in CLASS, the partners will make it clear when contacting the customer that this communication specifically relates to CLASS.
- Any customer considering taking part in CLASS will receive clear information about what the trial will involve. They will also be provided with details of who to contact with queries or complaints, and informed of who will have access to their data.
- Any customer agreeing to participate in CLASS will be provided with sufficient information to enable them to understand what will be expected of them, and the purpose and scope of the survey exercise.
- When data is collected the project team and project partners will be transparent about why they are collecting it and how it will be used, stored and accessed. (A detailed approach for managing personal data is set out in the Data Privacy Statement.)

#### 6.2 Priority services register customers

Electricity North West appreciates that some of its customers have additional requirements due to being disabled, elderly or having a chronic illness. The company has a strong history of promoting safety and security at the homes of these vulnerable customers. Amongst other things, the company maintains a priority services register (PSR) of customers who have special requirements or who may be vulnerable during a power outage. The register enables the company to provide prompt assistance to these customers if required.

The CLASS trial area is comprised of 350,000 customers, the majority of whom are domestic customers. A number of these will be registered on Electricity North West's PSR. The CLASS project team will accordingly use this register to identify PSR customers in the trial area.

A leaflet will be distributed to all PSR customers. Amongst other things, this leaflet will provide an overview of the CLASS project, details of PSR services available and information on how to contact the CLASS project team with any queries or concerns.

It should be noted however, that CLASS is not expected to have any adverse or specific effects on PSR customers. Under current normal operations, voltage fluctuates regularly during the course of the day. As CLASS will effectively be doing this, albeit in a different manner, it is unlikely that PSR customers (or indeed any customers) will observe any new effects.

As it is not expected that CLASS will have any unique effects on PSR customers, vis-à-vis non-PSR customers, the same survey approach will be used for categories of customers.

Notably, during the recruitment phase, which will be undertaken via a face-to-face interview (see section 5.1 above), Impact Research will explain the survey process and ask all interested participants whether the planned telephone surveys would be suited to them.

Where customers, eg, those with a disability, indicate that telephone surveys would not be suitable, alternative arrangements, such as postal questionnaires, will be considered. At no stage however, will Impact Research elicit any specific details about the customer's disability, medical condition, PSR status, etc.

When the actual CLASS trials and associated surveys commence, a question will be included in the surveys asking all households whether any medical equipment had been affected by the variation in voltage, or whether any vulnerable member of the household had been adversely affected.

This question will help with analysis of the effects of CLASS, and in particular, will help to assess the CLASS assumption that the techniques will have no noticeable effects on vulnerable customers. (Respondents will be able to opt out of answering this question if they choose to.)

If a vulnerable customer (or any other customer) indicates that the CLASS trials are having a detrimental effect on them, either via their survey response, or by contacting the CLASS project team using the contact details in the leaflet, the complaint will be investigated, and if shown to be caused by the CLASS trial, the trial on the Primary will be halted as described in section 7.5.

#### 6.3 Customer interruptions

It is not envisaged that customers will experience supply interruptions as a result of the installation of network equipment or technologies relating to CLASS.

#### 7 CUSTOMER STRATEGY AND CUSTOMER RELATIONS

#### 7.1 Overview of the CLASS communications strategy

Electricity North West understands that without the support and buy-in of its customers, the CLASS project will not succeed. The project is therefore committed to ensuring that all customer interaction with CLASS is a positive experience.

To ensure that this is achieved, a range of targeted communication and engagement activities will be undertaken with the groups of customers outlined in section 5 above.

In the context of CLASS, the communications strategy can be summarised as follows:

- Launching a targeted awareness campaign to build on existing customer relationships in each of the customer segments
- Engaging with these customers on an on-going basis to ensure that the customer experience remains a positive one
- Considering and addressing the needs of any priority services register (PSR) customers who may be affected by the project.

#### 7.2 General customer contact with CLASS

Several communication channels will be available for customers, partners and stakeholders who require further information about the CLASS project, or who want to engage with the CLASS team. These channels are discussed below.

- CLASS website The CLASS website will be the main source of information about the
  CLASS project for stakeholders and customers. Details will be available on the CLASS
  website at <a href="www.enwl.co.uk/class">www.enwl.co.uk/class</a>. Every aspect of the CLASS project will be hosted on
  this site. All customer focused information (eg trial area, customer literature, contact
  details, FAQs etc) will be posted on the site and available to download. Queries can be
  raised on the website using the online enquiry service.
- Telephone contact Electricity North West operates a contact centre that is continuously staffed on 0800 195 4141. There will be a specific interactive voice response (IVR) option available for all smart grid/low carbon enquiries.
- SMS/text messaging facility Customers wishing to receive a call back service can send an SMS to a dedicated number (555-5555) quoting 'CLASS'. An Electricity North West representative will then call the customer back as soon as possible.
- Written correspondence The CLASS project team will handle written enquiries from customers and stakeholders. Customers will be able to contact the project team at the following address:

CLASS project team Frederick Road Salford M6 6QH

Alternatively, customers can contact the CLASS project team at the following email address: <a href="mailto:futurenetworks@enwl.co.uk">futurenetworks@enwl.co.uk</a> for queries or further information.

Response times will be in line with Electricity North West's standard practice, ie a maximum period of ten working days.

- Information for suppliers Electricity suppliers whose customers have signed up to
  participate in the project will be contacted to advise them of the nature of the trials and
  detailing the timing and nature of communications with these customers.
- Information for project partners and other interested parties The CLASS website will
  provide regular updates. Furthermore, interested parties will be able to register for a

newsletter which will be produced on a periodic basis. Learning experience of the CLASS project outcome will be shared with interested parties, including other DNOs and academic institutions, throughout the project.

• Alternative formats – All customer information about the CLASS project will be available in alternative formats such as audio, Braille or minority languages on request.

#### 7.3 Communication plan – CLASS survey participants

The range of tools that will be used to engage and communicate with CLASS survey participants have been outlined in section 5.1.

To maximise participation and completion of the full suite of surveys, a financial incentive will be offered to customers to participate in and complete the customer surveys. The scope and design of the customer surveys will be developed and piloted with a small group of customers before roll-out. This is a direct learning point from the  $C_2C$  project.

Notably, once the CLASS customer survey methodology has been finalised, it will be reviewed by an external third party before the pilot survey. This will ensure its robustness and applicability to achieve the required outcomes.

#### 7.4 Communication plan – customers in the trial area not involved in the surveys

A targeted awareness campaign will be launched to raise awareness about CLASS and its benefits amongst customers and communities in the trial area. In doing so, special regard will be given to PSR customers.

A range of multi-media approaches will be used to engage customers who are not being surveyed. These are discussed in section 5.2 and will include a dedicated CLASS website as well as social media tools including Facebook and Twitter.

In developing all customer material, guidance will be taken from the engaged customer panel. It is envisaged however, that the suite of communications materials will outline the scope, size and areas of the CLASS trial area and how the project fits within the context of GB's low carbon agenda. They are also likely to provide general information about CLASS and ways of participating in the surveys.

#### 7.5 Customer enquiries and feedback

The surveys will provide a robust approach for obtaining feedback about the effects of CLASS and customer observations.

Additionally, a range of tools will be used to facilitate and obtain customer feedback outside of formal surveys. These are outlined in section 7.2 above and include a dedicated project website with customer feedback facilities, a contact telephone number, an SMS texting facility and an address for written communication.

Furthermore, a process will be implemented to record all queries or concerns raised by customers. In some cases, these queries and feedback will supplement the survey results.

For example, a customer in the trial area may call to indicate that he/she has just witnessed flicker at the point that a CLASS technique is being tested. In such cases, this feedback would be useful to the project, and the customer concerns would supplement the survey results.

In the event that this was to occur, the customer would be advised that the flicker is a result of the CLASS project, which they may already be aware of through the leaflet that would have been distributed in the trial area. Furthermore, the customer would be advised of the temporary nature of the tests, ie., lasting from 2 to 30 minutes.

It is expected that most customers will be satisfied once they know that; (a) Electricity North West is aware of the perceived issue and are actively managing it in a 'controlled' manner; and (b) the trials are temporary, lasting no more than 30 minutes.

In the unlikely event that the customer is still not satisfied, or/and deems the trials to be having unbearable detrimental effects on his/her electricity supply, the trial will be temporarily halted at the primary substation feeding the customer, to investigate the 'severe' effect observed by the customer. Whilst this is not expected, and would not be ideal, it would also contribute to the learning from the project, and supplement the feedback obtained through the customer surveys.

It should also be noted that as part of CLASS, monitoring equipment will be installed on the network, which will assist in verifying any concerns raised by customers.

At all times, the customer will be kept informed of the process and the results of any investigation. Only when the customer's concerns have been resolved – or the issue found to be unrelated to CLASS, will the trial be re-started. Where the customer's concerns cannot be resolved, the trial at the primary substation supplying the customer will not be re-started. (As there are 60 primary substations in the trial area, it will be possible to undertake the trial at another appropriate/similar primary.)

To reiterate however, it is not expected that CLASS will have any severe effects on customers' electricity supply. Where effects are observable, they are expected to be minor and of such short duration as to be inconsequential to the average consumer.

#### 7.6 Feedback from DNOs, project partners and interested parties

The CLASS customer engagement process will result in key lessons being learned about how to effectively engage customers. As part of learning and dissemination activities, such learning and lessons will be shared with other DNOs. It is anticipated that stakeholders such as Consumer Focus and the Climate Change Group will also have a keen interest in the customer impact of the CLASS techniques. All partners and stakeholders will disseminate the learning points around the customer engagement aspects of the project.

#### **8 CONCLUSION AND NEXT STEPS**

This Customer Engagement Plan sets out the CLASS project's approach for communication and engagement with customers throughout the project. All CLASS partners will adhere to the plan and the basic principles outlined. There will, however, be learning and lessons learned as the project progresses. The plan will therefore be reviewed on an on-going basis in light of any feedback and useful lessons learned. Ofgem will be consulted before any material changes are made to the plan.

Appendix A sets out the activities outlined in this plan to engage customers for CLASS and their timings.

In line with the vision of the LCN fund, all outputs and learning gained from customer engagement activities will be made available to other DNOs. Specifically, all communication materials developed in the project will be publicised on the CLASS website. All relevant learning will be shared at CLASS learning events, through trade magazines and in other appropriate forums.

# APPENDIX A – TIMETABLE OF CUSTOMER ENGAGEMENT ACTIVITIES

Activity	Target date
Customer Engagement Plan and Data Privacy Statement submitted to Ofgem for approval	July 2013
CLASS website and social media forum go live	September 2013
Customer marketing/campaign materials published on CLASS website	September 2013
First pilot customer workshop	October 2013
Final pilot customer workshop	December 2013
Suppliers of customers taking part in the trial contacted	January 2014
Peer review of customer engagement methodology published	January 2014
Control group and trial area customers identified and communication leaflet #1 distributed	February 2014
Customers recruited for the surveys	March 2014
Control group and trial area customer communication #2 distributed	May 2014
Baseline customer survey	April – May 2014
Control group and trial area customers communication #3 distributed	August 2014
First customer survey(summer)	August 2014
Control group and trial area customers communication #4 distributed	November 2014
Second customer survey(autumn)	November 2014
Control group and trial area customers communication #5 distributed	February 2015
Third customer survey(winter)	February 2015
Control group and trial area customers communication #6 distributed	May 2015
Fourth customer survey (spring)	May – June 2015
Customer surveys completed	June 2015
Customer survey initial draft of report	June 2015
Customer survey final draft of report	August 2015
Final customer survey report published on website	September 2015



#### APPENDIX B: DRAFT PARTICIPATION CONSENT FORM

You are about to enter a market research interview. Please read the following information carefully and then sign the declaration at the bottom of the document.

#### What is the purpose of market research?

Market research attempts to generate understanding and knowledge about customer behaviour within it, by gaining information (*data*) from specific samples of customers and extrapolating results to the population as a whole.

Market research is scientifically-conducted research where the identity of respondents, and all personal data they give to the researchers, are kept fully confidential, and cannot be disclosed or used, for any non-research purpose.

Market research is not a commercial communication or a selling opportunity. Market research has no interest in the individual identity of respondents.

#### Who is Impact Research?

Impact Research is an Independent Market Research Agency whose registered address is 3 The Quintet, Churchfield Road, Walton on Thames, Surrey, KT12 2TZ.

Impact Research has been commissioned by Electricity North West to carry out primary market research with customers on the aforementioned CLASS project which is due for completion in September 2015.

#### What is personal data?

The following definitions are taken from the Data Protection Act 1998.

'Personal data' is defined as any information which is capable of being used to identify a living individual.

In addition to name, address and contact details, this could include individual preferences, transactional history, record of activities or travel, profiles or credit scores.

'Sensitive personal data' is defined as any personal data that relates to any of the following: racial or ethnic origin, political opinions, religious or other similar beliefs, trade union membership, physical or mental health, sexual life, criminal convictions or proceedings.

#### What personal or sensitive personal data will be collected from you?

You will be asked to provide Impact Research with your contact details so that we are able to recontact you to take part in market research by telephone up to four times in addition to the interview today.



You will also be asked to provide us with details about your household, such as the number of people living in your household or your energy consumption. Any answer you give will be treated in confidence in accordance with the Code of Conduct of the Market Research Society. This means that all of the information we collect will be used for research purposes only and it will not be possible to identify any particular individual or address in the results.

You will also be asked if you, or anyone in your household have a disability, medical equipment in your household, mobility problems, are seriously ill or have visual or hearing impairment. This sensitive personal data is asked to understand if customers falling into any of these categories have different dependency or perceptions regarding their electricity supply. You will have the opportunity to opt out of answering questions of this nature.

Should you, or anyone in your household have a disability, medical equipment, mobility problems or are seriously ill or have visual or hearing impairment, we shall, with your permission, record this in our database, but we will not require you to disclose specific details such as the type of illness, medical equipment or medical history.

#### Who will this personal or sensitive personal data be shared with?

The data you provide us with today will be captured on a paper questionnaire by our interviewer and then returned to our office where it will be inputted electronically into a database and securely retained.

Personal or sensitive personal data will only be shared with Electricity North West if you give permission for us to share this information in Question A below.

At the end of the project and as part of sharing the learning and outcomes, aggregated data and the results of the project will be shared with interested parties and other electricity companies and academic institutions. Any data shared with interested parties or published for general readership will not contain any personal data.

No personal or sensitive personal data will be provided to any third parties for any marketing activity.

Electricity North West will not use this project or any information collected in connection with the project to market any products or services to customers.

Customers may be contacted about any supply quality problems that are identified through the feedback they give, but only if they have given their consent for us to do so.

#### So that this is absolutely clear, we would like you to now sign the following statement:

A. I am happy to have the feedback I give through participating in this market research attributed to me so that Electricity North West are aware that I have taken part in this market research. Please circle:

YES/NO



В.	I am happy for Impact Research to get in tou service I receive from Electricity North West	•			
	YES/NO				
C.	I am be happy for my data to be passed to Electricity North West in order that they can discuss with me any aspect of my electricity supply in the future? Please circle:				
	YES/NO				
D. I agree that after the above explanation, I was given the option not to tal interview, if I had any reservations.					
	YES/NO				
Name .		Signed			
Date					