

## **1. Executive Summary**

- 1.1 The Customer-Led Network Revolution (CLNR) project is assessing the potential for new network technology and flexible customer response to facilitate speedier and more economical take-up by customers of low-carbon technologies and the connection to the distribution network of increasing amounts of low carbon or renewable energy generation. This second formal progress report sets out how the project is on track to deliver the learning outcomes relating to understanding existing and future load, customer flexibility, network flexibility, the optimum mix of solutions and the most effective delivery routes to implement those solutions.
- 1.2 The June to November 2011 period has primarily comprised the detailed specification phase of the project. In summary, the project remains on track to deliver learning that is relevant, timely and valuable. However, the route to achieving this learning has been adapted to take account of externalities and learning generated in this second period. The need to adapt is reflective of the features that make the route to delivery of networks to support the developing low-carbon economy a key challenge for the industry. Consequently, the learning being generated by the project remains on track to ensure that this project informs GB network operators' solutions for efficiently supporting the low-carbon economy.
- 1.3 Turning to progress, the fourth and final key milestone for 2011 was achieved on time; relating to the commencement of installation and commissioning of network equipment. Monitoring equipment installed and commissioned in September is now capturing baseline data at two of our main network technology trial areas (rural location and the site of a solar photovoltaic (PV) cluster). Also in the network technology area, we have completed our technical and commercial evaluations for the long lead-time electrical energy storage devices and we will be awarding a contract December 2011 with installation and commissioning planned for autumn 2012. On the customer-facing trials, the propositions for trial participations are nearing completion for many of the 20 individual trials. Our customer engagement plans have been approved by Ofgem and enrolment of customers will commence in December 2011 and January 2012 across the majority of test cells.
- 1.4 There continue to be a wide range of resources deployed across all partner organisations and these have been supplemented in the period by specialists where required. For example, Frontier Economics have advised on the commercial aspects of tariff and trial design, the Rolton group have advised on heat pump controls and Sustainability First have continued to be influential in the area of demand response (the GB smart demand forum continues to be a useful adjunct to CLNR). Technology providers have become increasingly involved in the project as orders have now been specified and/or raised for a number of the core technical requirements. Eight speaking engagements at industry events over the past six months have maintained visibility of the project and attracted approaches from a variety of parties in order to become involved in the project. There has been an increased level of knowledge sharing occurring between distribution network operators to the mutual benefit of the various low carbon networks fund projects and thereby to GB customers. On CLNR we continue to recognise the value of maintaining dialogue with the UK Power Networks Low Carbon London project in particular due to the two projects' similarities.
- 1.5 The project continues to be operated to a detailed three-year plan ending in December 2013. This has been adapted in the period to take account of the slow uptake of air-source heat pumps and electric vehicles. Also, the specification of the customer-facing trials has taken longer than forecast with the complexity of the commercial propositions being challenging and workarounds being required to

deal with the scarcity of customers from sources originally envisaged. Although the plan is more back-ended loaded, we are holding to a four seasons' coverage for the trial period and we are confident that this will not materially adversely affect the quality of the project's outputs. The project plan addresses these issues, maintains the quality of learning being delivered, holds to the project key milestones and is endorsed at the senior levels in each of the partner organisations.

- 1.6 The thinking developed in the design phase of the projects has led to the creation of numerous documents that define key aspects of the commercial, technical and social aspects of the project. We expect to publish this documentation in quarter one 2012.
- 1.7 We are not forecasting any cost variances to the total project spend of £31.0m.
- 1.8 The key project risks continue to be associated with the application of innovative network technology, the availability of sufficient customers to deliver the required learning from the trials and the limited attractiveness of the trial propositions with consequent risks to trial recruitment. For the network technology, the specification and delivery of the control system grand unified scheme is the key risk area; specification is on track to be complete by end 2011 with contracts placed in quarter one 2012. For the customer-facing trials we are actively seeking alternative routes to overcome the shortage of customers in a number of areas; predominantly customers with air-source heat pumps (ASHP) and electric vehicles (EVs). We anticipate that there are sufficient solar PV installations already in operation such that the scaling back of the feed-in tariff should not materially impact our trials. The existing British Gas smart meter roll out means that the project is utilising both national and regional datasets. Solutions have already been generated to capture data attributes that are not available from the existing population of smart meters (e.g. voltage). Also, work is now underway to make up for those customers under-represented by existing smart meter installations (e.g. fuel poor due to the absence of a prepayment option).
- 1.9 The following table sets out the key project events that took place in the reporting period.

Key events for period 1 June 2011 to 30 November 2011

<b>Event</b>	<b>Date</b>
Irish Smart Meter Trials Discussion Workshop	19 July 2011
Energy Networks Association Low Carbon Networks Fund conference	20-21 July 2011
Commenced installation and commissioning of network equipment – solar PV test cell and rural network location	28-29 September 2011
Customer engagement plan and Data protection strategy formally approved by the Authority	8 November 2011
Invitation to tender issued for electrical energy storage	30 September 2011