

Dora Guzeleva
Ofgem
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London
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11 December 2012

Dear Dora

Re: Low Carbon London Change Request – LCL CR1

I am pleased to submit our formal project change request, reference LCL CR1 vFinal 051212.

There are three parts to this correspondence:

- This letter, setting out as requested, the required formal changes in the project direction that are driven by material changes in circumstances, and, separately, the developments to the project as recognised and discussed as non material changes, now classified as developments.
- The reworked LCL CR1 executive summary document, reference LCL CR1 vFinal 051212 as previously issued, with the revised layout format, including the DNO letters and responses to them, and
- Requested supporting attachments as follows: Project Description including, project direction SDRC milestones schedule; updated use case document detailing material change edits only and the cost phasing schedules. All other parts of the bid submission remain unchanged in intent, and so have therefore not been resubmitted for the purposes of clarity.

Material changes driven by material changes in circumstance

In accordance with Ofgem's LCNF Governance Document V5, (paragraph 3.98), we have set out the three components of the change request resulting from material changes in circumstances that require a change to the Project Direction.

For completeness, I have also outlined minor revisions to the project that do not form part of the formal change request as material changes, but will assist in keeping you informed of the project's evolution as it completes its detailed design phase.

Each material component of the change is set out in turn, providing a concise explanatory reason why the change is required (n.b. should they be required, more detailed explanations of each are contained in the change request executive summary document):

- a) Heat Pumps - Cease active recruitment of further participants for the heat pump trials

The project formally notifies Ofgem that it wishes to cease active recruitment of further participants for the heat pump trials. This applies to both Industrial & Commercial as well as residential trials.

- b) Expansion of the trial area within LPN – from the 10 original Low Carbon Zones (LCZs) and the developed 3 Engineering Instrumentation Zones (EIZs)

The project formally notifies Ofgem that it wishes to move from a London topology framework based solely on the now-defunct Mayor of London's 10 Low Carbon Zones to all of London Power Networks Plc's (LPN) licensed area for smart meter recruits and low carbon technology trial recruits. We are also proposing to develop an instrumentation topology based on three Engineering Instrumentation Zones, which in fact comprise three of the original LCZs – Brixton, Merton and Queens Park.

The project formally notifies Ofgem of its intention to increase tariff recruitment and the demographic profiling and spread of those participants for Time of Use tariff participants.

This requirement is driven by the move from 10 LCZ's to all of LPN's licensed area. The project undertook a detailed and thorough review of the statistical validity, sample sizes and categories for a robust representative demographic spread for London and the UK. This resulted in recruitment numbers being defined where not previously and where these were stated previously in the Use Case as 100 recruits for dynamic wind twinning to c.1500 ToU participants. Evidence assessment for this request can be referred to in document reference: Low Carbon London - Smart meter options - v1 0.pdf.

- c) Move from ENXsuite carbon impact tools to a custom-built carbon tool

The project formally notifies Ofgem of its intention to replace the generic ENXsuite of carbon impact software tools with a custom-built carbon tool.

The project originally intended to use a generic "common off the shelf" (COTS) software package "ENXsuite" to provide the required carbon impact analyses and reports. It was always recognised that since this was a COTS package, that it would require some substantial customisation in order to properly analyse and report the very specific and unique carbon impacts emanating from the project's various trials. Agreed prices had been agreed, pre bid, with the original owners, ENXsuite, for both the purchase and subsequent customisation which were factored into the original LCL bid.

The above constitutes the three material change elements of the formal change request LCL CR1.

Other changes to the project that do not require changes to the Project Direction

Further to our discussions, I would like now to outline other revisions to the project that whilst not forming a material change and therefore are not part of the formal change request, are worth noting to provide you with an oversight of the overall shape and development of the project at this stage:

- a) The use of a combined dynamic multi-tariff trial covering wind twinning and residential and SME demand side management.

The project intends to adopt a dynamic multi-tariff trial that combines wind twinning and residential and SME demand side management. Small Scale Embedded Generation (SSEG)

- b) SSEG - Increased co-ordination and profile of Small Scale Embedded generation (SSEG) within the overall project

The project will increase the prominence of SSEG within its monitoring trials into a coherent set of coordinated combined trials.

The agreement and confirmation by TNEI to include small scale embedded generation (SSEG) specific trials is welcomed. It should be noted that these will largely be I&C-based SSEG installations – by far the most common and relevant implementation of this type of low carbon technology in a city metropolis such as London.

- c) Active Network Management (ANM) - Recruitment Challenges around customer trial participant numbers

The project previously flagged up challenges associated with ANM active trial participant recruitment numbers due to customer inability or unwillingness to participate

Given the continued and increased successes in recruiting participant numbers for the active trials, and as per the development of the monitoring and facilitation trials this is no longer a material concern or change. The project has also developed ANM active trials to trigger demand response customers.

- d) Adoption of Landis & Gyr (L&G) 5236 smart meter

The project has adopted the L&G 5236 “Generation 2” smart meter as its core smart meter for the residential and SME demand response and wind twinning trials.

This decision was taken due to delays in the availability of a SMETS-compliant Generation 3 smart meter (still commercially unavailable at time of writing). The L&G 5236 meter is a production version fully tested meter that will provide half-hourly meter reads to enable new demand profiles to be constructed – a crucial component of the project’s smart meter trials.

- e) Wind Twinning of I&C customers to provide reserve capacity and frequency regulation and multipartite DR contracts involving National Grid

The project is working closely with aggregators, other DNOs and National Grid to explore and develop a framework for the provision of reserve capacity and frequency regulation to address the emerging implications based on the variability and unpredictability of wind generation.

- f) Small to Medium size Enterprises (SMEs) involvement in Demand Side Management (DSM) trials

For the avoidance of doubt, there has been no change to the treatment of SMEs to that contained within the original use case, project terms of reference scoping or project direction documents. In the change request, the project has stated that it will not be conducting any SME-specific trials and this is in line with the original use case document, where SMEs are always referred to and contained within the phrase “residential and SME customers”. SMEs will inevitably be included where captured and recruited across all trials, but will not be explicitly managed as a separate trial group.

- g) Electric Vehicle Trials - Enabling electrification of transport: explore the impact of electric vehicles

Following guidance from Ofgem on the definition of material changes requiring submission, developments to the EV trial delivery strategy are deemed to not represent a material change to the project.

The project previously flagged up challenges associated with EV and charging infrastructure trial participant recruitment numbers, due to lack of EV's and charge post installations. The project can now report increased successes in recruiting participant numbers for the monitoring of EV charging infrastructure, c.1300 charge posts. For the demand shifting response trials the project has secured EDF Energy support for a number of EV ToU trial participant's currently c. 28 vehicles.

Developments in the analysis strategy to include external data injections alongside recently improved recruitment conversion will allow the project to deliver the envisaged analyses with no material change to the project outputs.

Attached to this letter are supporting documents as detailed above and a fuller detailed narrative of the changes; should you need any further documentation or information please let me know.

I trust you will be able to approve the change request in due course.

Yours Sincerely

A handwritten signature in black ink, appearing to read 'K Hutton', with a stylized flourish at the end.

Keith Hutton
Head of Regulation
UK Power Networks

Cc Liam O'Sullivan, Programme Director - Low Carbon London (a learning journey)
Paul Measday, Regulatory Returns & Compliance Manager
Ben Wilson, Director of Strategy & Regulation and Chief Financial Officer