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4 November 2015

Dear Andrew,

Project Direction ref: ENWL / Customer Load Active System Services / 21 December 2012 (CLASS)

Further to recent discussions on the CLASS LCN Fund Project and our submission of the initial Closedown Report, it is proposed to extend the Project in terms of scope and timescales to improve the benefits to GB customers by completing additional work to enable a GB-wide roll-out of this technology.

The Project trialled the application of innovative voltage management technologies to provide demand response to reduce peak network demand, and a new mechanism for frequency and voltage control to National Electricity Transmission System Operator (NETSO). CLASS has shown that there is potential to unlock up to 3.3GW of demand response, the equivalent to two combined cycle gas turbine (CCGT) power stations and up to 2GVAR of reactive power absorption at distribution level across the whole of GB. The results have shown that there are possibilities to enter the frequency and enhanced reactive power markets, proving an alternative, low cost, carbon saving and flexible solution to the NETSO for ancillary services when compared to the existing costly and carbon intensive methods.

CLASS used existing off-the-shelf products to which configuration changes were made and some new designs of automated voltage control schemes. As such there are no technical hurdles to prevent the full rollout of CLASS in any GB DNO. In addition, automatic commands from the NETSO to DNOs via a communications link have been proven. This additional piece of work will demonstrate how this proven technology can be deployed commercially by DNOs into the various markets. DNOs do not currently participate in these markets and by demonstrating how this can be done and the value this creates for them and their customers, the Project will accelerate the implementation of this approach across all DNOs and bring forward the expected benefits to GB customers.

The overwhelming success of the original scope of the CLASS Project indicates there is potential for the technology to provide significant benefits to GB customers in reduced costs and provide additional options for delivering overall system security. The further work to assess the market implications of deploying this technology commercially represents a material change to the Project, as defined in paragraph 2.25 of the LCN Fund Governance Document v.7. There is a potential that the technology could allow DNOs to provide balancing services to the National Electricity Transmission System Operator (NETSO). Initial indications are that these services could include:

- DSBR (Demand Side Balancing Reserve)
- FR (Frequency Response)
- FFR (Firm Frequency Response)
- FCDM (Frequency Control by Demand Management)

- STOR (Short Term Operating Reserve), and
- Reactive Power Services.

The current estimated cost to the NETSO for the provision of these services is around £300 million per annum. The provision of these services by DNOs could provide a significant reduction in these costs by providing extra competition in the market. The remuneration a DNO receives for the provision of these services could be shared with DUoS customers to provide a direct benefit to them. The proposed Project extension is to provide further information on how this could be achieved, however potential benefits to DUoS Customers could be in the region of £50 million per annum. The additional project costs for identifying the market implications associated with the provision of these services is £622k. This can be accommodated within the total amount set out within the original Funding Direction.

The aim of the market modelling is to determine GB customers' benefit of a network led provision of CLASS services to the NETSO. In order to make this determination, the following objectives have been identified:

1. To assess the market for each CLASS service, including:
 - Market structure, entry qualifications and service price,
 - Size of market in 2015 and potential size annually to 2031,
 - Current and potential future competitors – no, type and size of players.
2. To assess the impact of a network led provision for each CLASS service, including:
 - Market structure and service price,
 - Competitors – number, type and size of players.
3. To determine the benefits for GB customers for each CLASS service, including:
 - Costs and benefits for GB customers,
 - Potential winners and losers in each market,
 - Whole market impact.

In order to deliver this work the following variations to the Project Direction are proposed.

Project extension

To allow for the delivery of the additional objectives for the Project it is requested that the completion date in the Project Direction is extended as follows:

7. PROJECT IMPLEMENTATION

Amend the completion date in bullet (iii) to,

“(iii) complete the Project on or before the Project completion date of **31 May 2016;**”

Project reporting

The majority of the approved CLASS Project has been completed and an initial Closedown Report issued, we would anticipate issuing an addendum to this report rather than reissuing it in its entirety. We would provide any necessary update reports during the period of the extension in accordance LCN Fund Governance Document v.7. In order to achieve this we request that the following changes are made to the Project Direction.

8. REPORTING

Add the following paragraph,

“With regard to the Project extension to cover the assessment of the commercialisation and market implications associated with full GB-wide roll-out of the CLASS technology, this requirement will be met by submitting a standalone addendum to its original Closedown Report issued to the Authority on 31 May 2016.”

Additional Project outputs

To support these additional objectives for the Project it is requested that the Successful Delivery Criteria in the Project Direction are extended as follows.

11. SUCCESSFUL DELIVERY REWARD CRITERIA

Add the following Successful Delivery Reward Criterion and Evidence into Table 3,

“Table 3. Successful Delivery Reward Criteria

Successful Delivery Reward Criterion	Evidence
Learning & Dissemination Workstream 5. Hold Webinar by February 2016 and host a Learning Event by April 2016 on the market implications of the CLASS services.	Learning & Dissemination Workstream 5. Webinar and Learning Event held by 30 April 2016.
Close Down & Long Term Monitoring Study 2. Produce an addendum to the Closedown report to publish the outputs of the Customer Benefits Workstream by 31 May 2106.	Close Down & Long Term Monitoring Study 2. Publish addendum to Closedown report on CLASS website by 31 May 2016.
Customer Benefits Workstream 1. Deliver market impact assessment, customer benefit assessment and cost benefit analysis tool(s) by 31 May 2016.	Customer Benefits Workstream 1. Publish report detailing the methodology and results of the benefits modelling and associated model(s) created for the analysis by 31 May 2016.”

As the above criteria are additional to the original scope of the project, which was completed in full, we do not expect this extension to affect our submission for a Discretionary Reward.

Project budget

The original Project Direction detailed the total costs for the Project as £8097.84k. At Closedown the total expenditure to deliver the original Project was £7214k leaving an under spend of £884k.

It is estimated that the additional cost of delivering the Project extension is £622k. The costs are primarily for Baringa to undertake the market assessment work and internal business resources for to assist Baringa in the technical understanding of the project, delivering the dissemination activities, project management and providing regulatory and commercial assistance. It has also

been identified that technical authors would be required to provide necessary documentation to support GB wide rollout.

Baringa is one of our framework partners and as such were appointed through a competitive tender process. The Baringa consultancy team are familiar with the outcomes of the project and have extensive experience in the electricity and energy markets, and have previously supplied support to DECC, ENA, Ofgem and NGET in these areas. Whilst we considered looking at alternative providers by undertaking a wider procurement exercise, this would not have provided additional value for money for customers and introduce delays to the ambitious timescales for delivering this Project extension in order to secure maximum benefit to GB customers.

In order to achieve this we request that the following changes are made to the Project Direction.

6. PROJECT BUDGET

Add the following final paragraph,

“For the Project extension to cover the assessment of the commercialisation and market implications associated with full GB-wide roll-out of the technology the Funding DNO is only required to report against the categories detailed in Annex 2. The Funding DNO will report against the Project Categories detailed in Annex 1 if there is a variation to expenditure detailed in the original Closedown Report.”

Add the following Annex,

“ANNEX 2: PROJECT BUDGET (PROJECT EXTENSION)”

Cost Category	Cost (£k)
Labour	243
Project Management for extension	61
Technical and regulatory support to Consultants	182
Contractors	260
Market modelling research	210
Policy documentation	50
Other	76
Publicity & dissemination	69
Accommodation	7
Contingency	43
General contingency	43
Total	622”

Should you require any further information or clarification, please do not hesitate to contact me.

Yours sincerely,



Tony McEntee
CLASS Implementation Manager