

My Electric Avenue (I²EV)

Change Request to Project Direction v1.10

Project Number	SSET205
DNO	Southern Electric Power Distribution Ltd
Project Lead	EA Technology
Project Direction referenced	v1.10

Author: T. Butler / D. Yellen, EA Technology

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Version: Issue 4.3

The 'My Electric Avenue' project is the public identity for the Low Carbon Networks Fund Tier 2 project "I²EV." The formal title "I²EV" is used for contractual and Ofgem reporting purposes.

Project leads



Project partners



My Electric Avenue has received support from Ofgem through the Low Carbon Networks (LCN) Fund.

Version History

Date	Version	Author/s	Notes	Reference documents
02/03/2015	3.1	TB	Implementation of comments from SSEPD Regulation Team	Project Direction v1.10
09/03/2015	3.1.1	DY	Response to comments from Ofgem	
27/03/2015	3.1.2	DY	Response to comments from Ofgem	
07/04/2015	3.1.3	RH	Response to comments from Ofgem	
21/05/2015	4.1	TB	Updated with clarification for Ofgem	
06/07/2015	4.3	RH	Update following version control concern	

Final Approval

Date	Version	EA Technology authorisation by	SEPD authorisation by
06/07/2015	4.3	Duncan Yellen	Nigel Bessant

Executive summary

The I²EV (My Electric Avenue) Project was proposed to Ofgem's Low Carbon Networks (LCN) Fund as a bid under the Tier 2 Competition for 2012. After the submission of the project bid, but before award, an error was identified in the budget spreadsheet, resulting in a reduced requested budget and the remaining budget being incorrectly allocated between categories.

To rectify this problem, but without the need for increased contribution, the purpose of this document is to:

- Request the Authority's consent to spend more than 110% of one Project Budget category total (as required under Clause 6 of the Project Direction) in order to:
 - Correct the transcription errors inherent within the Project Submission documentation within original budget constraints
 - Request and justify additional variation of expenditure between project tasks and categories within the project, predominately due to a change in recruitment from the project Bid to that required in the Project Direction
- Request changes to the specific legal entities named within the Project Direction to match that named on the sub-contracts for the project.

No change to the overall funding is sought. In order to meet the additional requirements introduced through the Project Direction v1.10, reductions have been identified elsewhere through:

- Refining plans for the latter half of the project compared to plans developed 6 months before the project start date, including availability of new information
- EA Technology increasing its 'in-kind' contribution through reduction of staff rates and cost of equipment
- Fleetdrive Electric increasing its 'in-kind' contribution for customer engagement

Approval of this change request will allow successful completion of the project at no extra cost to Ofgem and electricity customers. It will correctly reflect the change in legal entity status of some of the contractors involved in delivery of the project and it will allow a full reflection of the costs of the individual components of the trial to be captured and funded.

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1 Overview

The I²EV (My Electric Avenue) Project has at the time of writing, been ‘running’ for 26 months with four six monthly Project Progress Report having been submitted from June 2013 onwards, outlining the progress to date against the project plan and Project Direction requirements

This document seeks to agree specific changes to the Project Direction in order to ensure the project can be undertaken and managed effectively and efficiently, whilst maintaining the value for money within every task of the project.

Each requested change is outlined individually to detail how the change affects the Project Direction, what the change is, the rationale behind the request and the benefit to the project and the industry customers.

1.1 Change 1: Section 3 – Table 3 & Table 4

Change Made to Project Direction: Section 3 – Tables 3 & 4

Change: Changed the company name of Charge Your Car (North) Limited to Zero Carbon Futures (UK) Limited.

Reason for Change: Charge Your Car (North) Limited and Zero Carbon Futures (UK) Limited are both companies operated within the Gateshead College business. At the time of bid submission, the company planned to undertake the work was Charge Your Car (North) Limited but since that time, the staff involved with the project and the associated work have been transferred to the company Zero Carbon Futures (UK) Limited.

Benefit: Maintains accuracy between the Project Direction and the legal commercial structure within the project.

Evidence: A letter from Colin Herron, Managing Director of Zero Carbon Futures, explaining the need to move the work undertaken for the I²EV project to ZCF is located in Appendix A.

1.2 Change 2: Section 3

Change Made to Project Direction: Section 3

Change: Changed the legal entity from Northern Powergrid Holdings Company Limited to Northern Powergrid (Northeast) Ltd. and Northern Powergrid (Yorkshire) Plc. as requested by the Northern Powergrid representative.

Reason for Change: During task order and sub-contract discussions, it was identified by Northern Powergrid that the name by which they were identified within the Project Direction was not appropriate for the signing of the sub-contract and as such, to maintain accuracy between the commercial documents of the project, the company name requires updating in the Project Direction.

Benefit: Maintains accuracy between the Project Direction and the legal commercial structure within the project.

Evidence: The e-mail provided by Andrew Spencer or Northern Powergrid requesting the specific legal entity to be detailed in the Memorandum of Understanding (MoU) and sub-contract is located in Appendix B.

1.3 Change 3: Annex 1 – Project Budget

Change: Updates to finance sections, segregated by Ofgem cost category and specific tasks.

Reason for Change: The values detailed in the new (requested) budget allocation are the values for the project's Forecast Cost at Completion (FCAC) incorporating the correction of the transcription error and the costs incurred in the approach required to ensure sufficient customer recruitment was achieved.

Benefit: There is no change to the final planned costs to the project, only a re-allocation of funds within categories to correct the error introduced during translation to Ofgem spreadsheet and more accurately reflect the forecast expenditure at this point of the project rather than the view prior to project instigation.

An error in the final submission spreadsheet reduced the total amount of project funding requested by c£220k and altered the intended distribution of funds between Tasks and Categories. To address this, EA Technology has reduced its daily cost rates and the cost of trial equipment.

The project is currently expecting to deliver, at a minimum, the learning planned for in the bid submission whilst the real costs of delivery have increased. These additional costs are being borne by EA Technology and partners to ensure the project is successful. The financial re-allocation requested below is required to aid these efforts. The requested table for revision in the Project Direction (Annex 1) is located in Appendix C, with the details provided below by Category.

Table 1 – Ofgem Category Financial Changes

Ofgem Category	Bid Submission Budget (£k)	Re-forecast Budgets (£k)	Net Change (£k)	% Variation
Labour	222.25	222.25	0	0%
Equipment	484.71	278.63	-206.1	-43%
Contractors	3120.44	3532.15	411.70	13%
IT	3.27	2.71	-0.60	-17%
Travel & Expenses	107.43	3.00	-104.40	-97%
Payments to Users	311.76	276.63	-35.10	-11%
Contingency	400.40	400.40	0	0%
Decommissioning	26.29	26.29	0	0%
Other	72.88	7.37	-65.51	-90%
Total	4749.43	4749.43	0	0%

Explanations behind each Category's change are outlined below.

1.3.1.1 Equipment

The equipment has been provided to the project by EA Technology at a significant reduction to the cost originally budgeted for at bid submission. This allows further funding for the increased effort required to recruit customers for the Technical Trials following the Project Direction v1.10.

1.3.1.2 Contractors

There has been an increase in the effort required across several areas of the project because of the following. A full explanation of the risks identified because of these additional requirements is provided in Appendix D. Furthermore, the additional effort required by both Fleetdrive Electric and Zero Carbon Futures is outlined in Appendix E and Appendix F respectively. ZCF have not incurred any extra costs to the project as they are on a fixed price contract but they have made extra efforts.

For clarity, all of the changes to costs in the Contractors category relate to EATL. The costs to ZCF and Fleetdrive are unchanged. The supporting letters from ZCF and Fleetdrive are provided to demonstrate the full involvement and support of the partners in identification of the extra tasks required to ensure delivery of the project. The increase in necessary effort will be provided entirely by EATL through supporting ZCF and Fleetdrive in the delivery of their contractual elements.

Customer Recruitment

As a consequence of the additional requirements imposed through the initial Project Direction (version 1.10), significant emphasis was placed on the target of recruiting a minimum of seven clusters of at least ten participants, whilst simultaneously restricting the funding that was intended to allow a sequential cluster establishment.

This required the project to re-plan the recruitment strategy where all ten clusters required recruiting in parallel, with no earlier clusters available to provide support to marketing campaigns. Additional costs relating to marketing, customer liaison and test-drive events were required to recruit the necessary clusters but significant further effort was required to maintain customer's interest in the project until funding was released. The earlier clusters were in some cases waiting six months between agreement to participate and order of their vehicles.

Equipment Installation

Despite some difficulties in managing the installation process in parallel rather than in a phase approach we have further subsidised the cost of the equipment installed.

Monitoring of the Trials

Monitoring of the trials is forecast to take more effort to complete than had been originally anticipated due to the requirement for increased liaison between ZCF, the University of Manchester, SSEPD and Northern Powergrid.

1.3.1.3 IT

A minor decrease in anticipated budgetary requirements for the project IT equipment.

1.3.1.4 Travel & Expenses

This category was never intended to be valued at c£107k, being incorrectly increased to this extent because of the transcription error. There was the intention to provide 'travel and expenses' for SSEPD but this was included within the labour category; the planned budget has been transferred from 'Labour' in order to provide the requisite funding.

1.3.1.5 *Payments to Users*

The Payments to Users Category was incorrectly submitted because of the transcription error that occurred during the bid submission and is being corrected as part of this Change Request.

1.3.1.6 *Contingency*

This Category has not been changed.

1.3.1.7 *Other*

This category was primarily intended to cover costs such as payment for parking a participant's original vehicle for the duration of the trials but has been reduced to correct the effect of the transcription error resulting in a higher requested value than required.

1.3.1 Factors driving financial change request

The overall changes required are due to two distinct factors.

- A) **Correction of an error** with the subsequent requirement to flex the budgets in order to ensure all tasks have sufficient funding availability.
- B) **Increased customer engagement** resulting from the additional terms in the agreed project direction.

In order to alleviate these issues cost savings have been identified, including provision of **additional benefit in-kind contributions** in addition to those originally budgeted for in the project bid. These savings ensure the project can be delivered without exceeding the available budget:

1. EA Technology providing further in-kind support, (through the reduction in labour and equipment costs), to the project beyond that originally planned for in the project submission; current forecasts put this figure at approximately £400k.
2. Additional efforts to recruit customers by Fleetdrive Electric, of which a significant proportion was undertaken at their own cost. This additional in-kind contribution increases the forecast project support provided by Fleetdrive from £97k to £158k.

Task Changes

Where significant changes, relative to the currently applicable (Project Direction v1.10) budget, are requested by task, the reason is summarised below.

- Task 2: The customer engagement task required a significant increase in the total budget to accommodate the changes to the planned approach to customer recruitment imposed through the Project Direction v1.10.
- Task 3: Contact was made with a number of charging point manufacturers, resulting conversations enabled a forecast for the remaining effort for subsequent discussions to be reduced.
- Task 4: The reduction in Task 4 is principally provided through the reduced costs for equipment and vehicles.
- Task 8: Initial discussions with Nissan around the implementation of charging control strategies and the subsequent impact on the LEAF battery technology enabled a reduction in forecast efforts for liaison with other vehicle manufacturers.
- Task 11: The additional project direction clauses, affecting customer recruitment and cluster deployment required significantly more staff time to deliver both by project partners focussed on customer recruitment and by EA Technology. Consequently, the effort required to manage this additional work also increased. The additional effort required is in part mitigated through the reduced staff costs but still requires an increase in overall budget.

The below table provides a breakdown and explanation of the budgetary increases requested across the Contractor spend and confirms that the increase in budgetary expenditure will be utilised by EA Technology or managed subcontractors. It is noted that reductions across the 'Contractor and Equipment' categories are also being borne by EA Technology as the costs predominantly relate to the cost of staff utilisation within the project.

Reductions proposed across the project within the Contractors category are made available as a consequence of EA Technology's offer to reduce rates in order to mitigate the increased effort required following the issue of Project Direction v1.10. Reductions in Equipment are offered by EA Technology subsidising the equipment for the trials beyond that intended at the point of project submission.

Table 2 - Ofgem category increase request details

Ofgem Category	Variation (£k)	Task	Breakdown	Explanation
Contractors	£411.70	2	£ 341.66 EA Technology	<p>Customer Engagement task: The customer engagement task required a significant increase in the total budget to accommodate the changes to the planned approach for customer recruitment necessary to meet the targets introduced through the Project Direction v1.10. In order to assist Zero Carbon Futures and Fleetdrive Electric in recruiting the necessary participants to the planned schedule, EA Technology provided a high level of support to them throughout the process.</p> <p>Substantial additional effort was spent on meeting the higher volume of communications than expected due to large number of clusters being recruited in parallel, whilst also having to maintain interest of potential participants and manage expectations to avoid</p>

Ofgem Category	Variation (£k)	Task	Breakdown	Explanation	
				attrition through frustration whilst waiting for clusters established to reach 7 clusters of 10 and funding to be available to deploy EVs as cannot establish one by one. Additional significant effort was expended in simultaneously engaging more clusters than required to control for unknown cluster drop-out rate, also necessitated by having to carefully bring all clusters together to complete at same time due to 3 month expiry on credit checks.	
		6	£ 60.88	EA Technology	Trial participant interviews task: The process of interviewing trial participants was intended to follow the same timescales as the cluster recruitment, focussed around the delivery of the vehicle and installation of equipment. Adaptations to the original plan were required due to the changed recruitment approach. As DMU agreed a fixed price contract for the delivery of work under the MEA project, EA Technology provided the additional staff time to support DMU in the re-designing of the interview and survey process, including development of the associated materials, e.g. online questionnaires. In addition, it was necessary to update the Data Protection Strategy to use the most appropriate software for customer data analysis.
		7	£ 22.10	EA Technology	Network modelling task: The set-up of trial equipment on-site was intended to make use of early outputs from the University of Manchester; as the University of Manchester's start date was delayed until customer recruitment was complete the necessary analysis had to be created by EA Technology.
		11	£ 102.63	EA Technology	Programme management task: The additional project direction clauses, affecting customer recruitment and cluster deployment required significantly more staff time to deliver both by project partners focussed on customer recruitment and by EA Technology. Consequently, the effort required to manage this additional work also increased. The additional effort required is in part mitigated through the reduced staff costs but still requires an increase in overall budget.

1.3.2 Specific questions by Ofgem

As part of the process of submitting this request to change the project direction, a number of questions have been raised by Ofgem with answers provided by the project team.


1.3.3 Changes required to the full 'Bid Submission'

The specific changes required to ensure the bid submission aligns with the project, specifically including the changes requested within this document are detailed in Appendix H.

1.4 Conclusion

In conclusion, approval of this change request will allow successful completion of the project at no extra cost to Ofgem or electricity customers. It will correctly reflect the change in legal entity status of some of the contractors involved in delivery of the project and it will allow a full reflection of the costs of the individual components of the trial to be captured and funded.

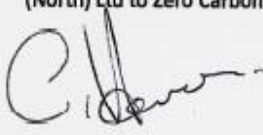
Appendix A. Zero Carbon Futures Letter



Zero Carbon Futures
Limited, Tyneside North, East England


Zero Carbon Futures (ZCF) was set up to support the development of the EV sector in North East England. Charge Your Car (North) Ltd, managed by ZCF, was primarily set up to deliver the North East Plugged In Places (PIP) project after One North East, the Regional Development Agency for the North East of England closed, and there was an obligation to continue to deliver the project until March 2013.

As the NE PIP project is now coming to a close, to avoid any confusion over the work which has been delivered to date as part of the PIP project, all future activity outside of the PIP project will be conducted as Zero Carbon Futures. This explains the rationale for the change from Charge Your Car (North) Ltd to Zero Carbon Futures in respect of delivering work relating to the I2EV Project.



Colin Herron

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north east
england

Appendix B. Northern Powergrid E-Mail

From: Spencer, Andrew <Andrew.Spencer@northernpowergrid.com>
Sent: 21 February 2013 14:37
To: Timothy Butler
Subject: RE: My Electric Avenue - I2EV Memorandum of Understanding

Timothy,

To correct the Company legal entities, please could you change page 1 and the signatory page as follows:

The front page of the MoU needs amending from:

NORTHERN POWERGRID HOLDINGS COMPANY (CRN 3476201) whose registered office is at Lloyds Court, 78 Grey Street, Newcastle upon Tyne, NE1 6AF ("NPG");

To:

Northern Powergrid (Northeast) Limited (CRN 2906593) and Northern Powergrid (Yorkshire) plc (CRN 4112320)
The registered office of both companies is Lloyds Court, 78 Grey Street, Newcastle upon Tyne, NE1 6AF.

The signatory page needs amending to

Signed for and on behalf of Northern Powergrid (Northeast) Limited and Northern Powergrid (Yorkshire) plc
But will only need one signatory.

If you don't plan to install any equipment in the Yorkshire region, then just use the Northeast Company.

Please note that, we don't abbreviate to NPG so please ensure that references to us within the document are to Northern Powergrid

Other mods
The above are all that is required for us to sign the document (so apologies for giving you the holding company details in the first place).
If others have requested modifications and you plan to reissue an updated document reflecting all comments, we would like to see the following changes (as mentioned in my email below):

- * Clause 5 - add 'independently developed information' to the list; and
- * Clause 6.3 - add that consent will not be unreasonably withheld by SEPD.

regards

Andrew Spencer
Regulation & Strategy
Northern Powergrid
98 Aketon Road, Castleford, WF10 5DS
Tel 01977 605672 (746 5672)
Mob: 07778 141341 (716 1110)

Appendix C. Replacement 'Annex 1' for Project Direction

Ofgem Categories	Category Cost (£k)
Labour	£ 222.25
Equipment	£ 278.63
Contractors	£ 3,532.15
IT	£ 2.71
Travel & Expenses	£ 3.00
Payments to users	£ 276.63
Contingency	£ 400.40
Decommissioning	£ 26.29
Other	£ 7.37
Total	£ 4,749.43

Appendix D. Recruitment Strategy – Risk Management

My Electric Avenue (I²EV) Recruitment Strategy:

Differences between risks and plans at bid stage and post Project Direction issue

The table below contrasts the risks associated with recruitment before and after the conditions imposed in the Project Direction and the planned and actual recruitment strategies. It explains why the planned approach budgeted for at bid stage was inadequate to meet the new conditions imposed through the Project Direction and how the modified approach has enabled sufficient recruitment but also increased the cost of customer engagement compared with our original plans.

Bid stage – expected risks and recruitment	Post Project Direction v1.10 – actual risks and recruitment
<p><u>Expected risks associated with cluster recruitment at bid stage</u></p> <p>The key risk SSEPD and EA Technology relating to recruitment at bid stage was that the project would be unsuccessful in recruiting 100 customers across sufficient clusters by the dates set out in SDRC 9.5.1 i.e. 10 clusters by Month 18 (<i>Project bid page 51</i>).</p> <p>The consequence would have been failure to meet this SDRC, with a potential impact on the likelihood of receiving funding through the Discretionary Reward Mechanism.</p> <p>In the event of failure to meet the SDRC, mitigations proposed in the bid (e.g. use of heat pump clusters) would have been used to enable the project to continue and deliver relevant learning.</p> <p><i>Planned mitigation measures are detailed in the Project Bid: Page 6, ‘Project stage gates’</i></p>	<p><u>Actual risks associated with cluster recruitment post issuing of the Project Direction v1.10</u></p> <p>The Project Direction added a new requirement to achieve 100 trial participants and at least seven clusters with at least ten participants per cluster, with the project being halted if not achieved by March 2014 (Month 15). Funding for cluster establishment was also restricted until seven clusters of ten were recruited.</p> <p>The consequence of failure to meet these conditions would be halting the project. The potential impacts are substantially greater to the project participants:</p> <ul style="list-style-type: none"> • Reputational risk to EA Technology, SSEPD and the project partners for failing to deliver project; • Market positioning risk – EA Technology is a new entrant to EV charging and associated infrastructure (this is the dominant reason why EA Technology is undertaking the I²EV project), a premature halt to the project would likely result in a loss of any market positioning, undermining our ability to sell product into the marketplace; • Loss of the full compulsory contribution of c£480k (NB. the proportion of this contribution made by EA Technology (c£120k) is equivalent to 25% of the company’s operating profit for FY13).
<p><u>Sequential recruitment strategy planned - cluster-by-cluster establishment</u></p> <p>In the context of the expected risks, sequential cluster recruitment was planned as an appropriate, relatively low cost, strategy.</p> <p>As clusters were identified and signed-up to participate in the project, each one would be</p>	<p><u>Parallel recruitment strategy adopted – many clusters in one ‘hit’</u></p> <p>The condition requiring seven clusters to be signed up before anyone could be established prevented one-by-one establishment and the expected publicity benefits from established clusters seeding further clusters. The new requirement for seven clusters of ten participants on one feeder by March 2014 meant the early clusters to meet the</p>

established in turn allowing customer engagement to be focussed on one or two clusters at a time, shifting to another emerging cluster once one had been secured.

Project Bid: page 34, final para: “To ensure value for money, funds to install and monitor clusters will only be released once a cluster is signed up.

This shows our intention to establish clusters on a sequential basis, with funding being released cluster by cluster, and a gradual build-up of publicity and engagement activity.

In addition, this approach would provide additional marketing and publicity benefits to the project without additional expenditure as **established clusters could be used to promote the project** further.

While SDRC 9.5.1 included a target of 3 clusters to be signed up by September 2013, it was anticipated these could be smaller, rural clusters, quickly established to generate momentum and publicity.

September SDRC 9.5.1 could not be smaller rural clusters, expected to be less costly to establish.

Combined with the three-month expiry period on credit checks, the condition necessitated **several clusters of ten being engaged and brought to the same stage at the same time.**

The only feasible way to achieve this and control for risk of failure/drop out is through simultaneous engagement with more clusters than actually required.

It is a fundamentally more difficult process to manage multiple simultaneous clusters in disparate locations around GB whilst also being required to have them all complete within a narrow timescale. It requires more resource for customer engagement at any one time.

Trial Recruitment – Social then Technical

It was planned during the bid development that **the project would look to recruit social trial customers initially and use them as ‘nodes’ from which to grow individual clusters for the technical trial.**

[Project Bid: Page 4, Task 2 – Customer Engagement, paragraphs 1 – 4; page 45, Section 8.3 ‘Clusters of EV Charing Points’;

Page 48, top diagram, ‘I²EV customer engagement routes’]

Trial Recruitment – Technical then Social

It was determined that the **high level of risk around insufficient recruitment of trial participants (namely halting of the project) required a more focussed effort on cluster recruitment** rather than relying entirely on social trial participants who were already part of the project to find and recruit others.

Customer Interest (Planned)

Less customer interest was expected through the sequential approach of securing clusters by establishing one by one, as they are signed up.

This is because the approach enables targeted marketing, gives early knowledge of whether a cluster is viable, and reduces risk of cluster failure due to a long lead-time between engagement and

Customer Interest (Reality)

The parallel recruitment process requires additional marketing and engagement effort to maintain a sufficient rate of recruitment to ensure the new, tighter targets are achieved.

The requirement to have clusters ready at the same time means engaging with more than needed, to control for an unknown failure rate. Additional effort is needed to sustain potential clusters’ interest from

<p>establishment.</p> <p>The original budget was planned with the expectation that the project would liaise with between 30 and 50 potential clusters to achieve the target of 10.</p>	<p>initial engagement until establishment, because clusters cannot be established one by one.</p> <p>To date, the project has engaged with 370 potential clusters and produced a network diagram for each. This has involved contact with over 280 currently ‘active’ champions. As such, in the region of seven times more effort has been required to date, in half the time it was expected to be required.</p> <p>In order to cultivate interest in the various clusters, road-show events have been held as clusters have approached the required numbers. To date, the project has undertaken approximately twice as many as had been anticipated, at a variety of costs dependant on location and weekday of the event.</p>
<p><u>Marketing – Planned</u></p> <p>The marketing strategy originally planned would have used tools described in the bid, but less intensively, because of the cluster-by-cluster approach, and with a reliance on positive publicity from early-established clusters.</p> <p><i>[Project Bid: Page 29, ‘Technical trials’ and ‘General information’]</i></p>	<p><u>Marketing – Reality</u></p> <p>The same tools were used but for a mass marketing approach to attract in a wider range of interest, which has then be managed in parallel.</p> <p>The volume of communications has been significantly higher than planned, due to the significantly increased volume of interested potential participants. Consequently, in combination with the need for maintaining the interest of potential participants without the ability to establish the cluster as an active trial site personal communications to manage the expectations of individual customers / cluster champions have been required. Ultimately, this has yielded extremely positive customer recruitment results, and generated solid learning for the Low Carbon Network Fund.</p>

Appendix E. Letter from Fleetdrive Electric

From: Mike Potter [mailto:mikep@fleetdrive.co.uk]

Sent: 07 October 2013 18:20

To: Dave ARoberts

Subject: Effect of strategy change for My Electric avenue cluster engagement

Hi Dave

I have had a look at how we gauged the effort required as part of the initial bid and how this has changed. This relates to the technical trails only as we have yet to focus on the Social Trials. Originally we would have tackled these the other way around.

It is important to frame the task at hand. One that has given me a few sleepless nights along the way. In most areas we have been looking to find 10 people out or 50 to drive not just the same cars but electric cars. Even though well subsidised they have to spend their own money to do this as well. I think any motor manufacturer would consider a 20% by population market share a miracle.

This was made more difficult as follows:

- Originally I expected to deal with over a much longer timeframe. Up to 30 months in total. We also underestimated how small the average area would be for clusters – there were many more enquiries in rural areas than we originally thought.
- Making the recruitment of 7 clusters of 10 a requirement has resulted in us making a much more concentrated effort to ensure we could recruit the clusters in a short space of time so that project funding could be guaranteed.
- We had to ensure we met the target so we have probably worked at a rate of 1.5 to 2 x what would have been required from our initial planning to get to the same point. The technical trial clusters are also more time consuming as we have to liaise between participants and explaining the process is more complicated. The amount of face to face communication required has been greater. I now expect to have carried out 2 x the test drive events originally planned by the time the whole project has completed.
- We probably have more clusters than we need now. The intensive approach has been effective in achieving the deadline but probably lead to an overrun on the cluster trials. Something we could have avoided at a steadier pace. This was a result of the uncertainty of success. Until even 6 weeks ago achieving the first target was not certain so we have continued to put in a lot of energy into the process. It has been very difficult to gauge the outcome of our effort so there was no option but to press on. We had discussed easing off at several point but the consensus was always that we need to keep pushing hard until the targets had been achieved. Especially with deadlines looming.
- The luxury of easing back on calls and marketing would have enabled us to match the numbers of participants.

- Originally we thought C 500 potential participants would give us the result required for the technical clusters in total – this is more like 1200. With the social trials we may well go past 2000 total potential participants against a projection of C 1000.
- The technical trial cluster are also more time consuming as we have to liaise between participants and explaining the process is more complicated. Also the amount of face to face communication required has been greater. I now expect to have carried out 2 x the test drive events originally planned.

Most importantly I would ask that we can make sure the participants we have recruited can have the grants awarded for cars in a reasonable timescale. The “Champions” in these areas have worked with us and put themselves in the spotlight with their neighbours. This is something I did myself to understand fully how the process could work. As it stands I am worried that any long delays will result in people dropping out of the process through frustration or changing plans. In some of the areas this would result in the cluster failing by dropping under 10 participants and no one would be able to participate. Potentially very frustrating for all involved.

Michael Potter

Managing Director

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Appendix F. Letter from Zero Carbon Futures

From: Lois Warne [mailto:lois.warne@gateshead.ac.uk]
Sent: 10 October 2013 11:58
To: Timothy Butler
Cc: Colin Herron; Josey Wardle
Subject: Impact from Change to Project Direction

Hi Tim

A number of factors have changed significantly since the original bid stage which has an impact on the quotation provided by ZCF. Activity to support cluster engagement in the Northern Powergrid licence areas began in mid-June 2013 and ZCF's objectives were:

- to support the cluster engagement of the MEA project and helping to raise awareness of the national initiative to prompt more electric avenues to come forward.
- Make sure that as many people as possible were made aware of the project in the North, an area which already has a higher than average take up of EVs.

ZCF had a clear plan of action for cluster engagement and after launching a PR campaign began to heavily engage with forming clusters in an attempt to manage these clusters up to the qualifying number of 10 participants

This involved coordinating test drive events and face to face discussions with cluster members, regular communication through telephone discussions, answering email queries and reporting on progress to cluster members and the project and its partners.

ZCF envisaged the process would be to work with around 3 clusters in the NPG licenced areas using a staged approach over 12 months; working with one cluster to completion and then moving on to the next. However, due to the risk of project closure in March 2014, this necessitated that an intensive approach to cluster engagement had to be adopted.

To date ZCF have taken 302 enquiries which translates into 18 potential clusters.

The change in direction has resulted in:

- The allocation of additional resource to manage the recruitment of the clusters and enquiries from potential participants.
- Additional resource was needed to manage the project inbox and field enquiries to the project and its partners
- ZCF hosting, attending and supporting more test drives in a shorter space of time than was originally set out in the bid stages of the project
- More resource to manage cluster engagement and maintain regular contact with cluster members, answering queries, producing cluster communications and reporting on progress to date. Managing the technical clusters has been time consuming and has required an additional 2 members of the team working almost full time.
- On-going communications with clusters, potential participants and enquiries to the project.

Although customer interaction was originally intended to be undertaken by the delivery team at EATL, ZCF now handle enquiries via email and telephone and communicate with clusters on a daily basis.

The pressure to achieve targets ahead of deadlines has resulted in more resource and time spent on a drive towards achieving clusters of 10 in the North. ZCF have worked rigorously since June 2013 to ensure that the project achieves the targeted clusters ahead of the project deadline. There is now

the concern that we have geared up individuals to an oversubscribed project, with the risk of creating a negative attitude towards the project and its partners.

The additional responsibilities of coordinating PLC checks with EATL, project suppliers and cluster members has also fallen with ZCF, an area which we had not set out at the original bid stage.

An important point to add at this stage is to highlight that the cluster champions and individuals which ZCF have worked with throughout this process have been fundamental in the project achieving the clusters we have to date. ZCF is very appreciative for the efforts demonstrated from champions and cluster members, and would recommend that the project must do everything in its power to avoid further delay, which could result in withdrawal from the project.

Many thanks

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Appendix G. Task List

Task 00	Novel Commercial Arrangement
Task 01	Evaluation of Initial Trial
Task 02	Customer Engagement
Task 03	Integration of Technology into Charging Points
Task 04	Cluster Establishment
Task 05	Monitoring or Trials
Task 06	Trial Participant Interviews
Task 07	Network Modelling
Task 08	EV Manufacturer Consultation
Task 09	Independent Evaluation
Task 10	Dissemination
Task 11	Programme Management
Task 12	Contingency

Appendix H. Changes required to ‘Full Submission’

Change Number	Document Section	Document Page	Paragraph	Original Text / Value	Revised Text / Value
1	External Funding	1	1	4,908	5,369
2	List of Project Partners, External Funders and Project Supporters	1	1	Charge Your Car	Zero Carbon Futures (UK) Limited (ZCF)
3	List of Project Partners, External Funders and Project Supporters	1	2	Charge Your Car	Zero Carbon Futures (UK) Limited (ZCF)
4	2.3 Description of design of trials	4	7	Charge Your Car North Ltd.	ZCF
5	2.3 Description of design of trials	5	2	Charge Your Car North Ltd.	ZCF
6	2.3 Description of design of trials	5	3	Charge Your Car North Ltd.	ZCF
7	2.3 Description of design of trials	5	6	Charge Your Car North Ltd. (CYC)	ZCF
8	2.4 Changes since Initial Screening Submission	9	4	Charge Your Car	ZCF
9	2.4 Changes since Initial Screening Submission	9	9	Charge Your Car North	ZCF

Change Request to Project Direction v1.10

Change Number	Document Section	Document Page	Paragraph	Original Text / Value	Revised Text / Value
10	4.1 Accelerates the development of a low carbon energy sector and has the potential to deliver net benefits to future and/or existing customers	19	1	Charge Your Car	ZCF
11	4.2 Provides value for money to distribution customers	21	3	Charge Your Car	ZCF
12	4.4 Involvement of other partners and external funding	23	2	Charge Your Car	ZCF
13	4.4 Involvement of other partners and external funding	23	3	Charge Your Car North Ltd.	ZCF
14	4.4 Involvement of other partners and external funding	23	5	In-kind value: £97,000	In-kind value: £158,000
15	4.4 Involvement of other partners and external funding	23	11	EA Technology will contribute circa £636,000...	EA Technology will contribute £1,036,000
16	4.5 Relevance and Timing	24	4	Charge Your Car	ZCF
17	5.1 Knowledge dissemination	29	4	Charge Your Car	ZCF

Change Number	Document Section	Document Page	Paragraph	Original Text / Value	Revised Text / Value
18	6.1 Why the project can start in a timely manner	33	8	Charge Your Car North	ZCF
19	6.1 Why the project can start in a timely manner	34	1	Charge Your Car North	ZCF
20	6.2 How the costs and estimates have been estimated	34	4	<p>A breakdown of the costs are given below. Phasing over the years is estimated from the likelihood of when clusters will be established and therefore when data will be available.</p> <p>The cost of each task has been budgeted by estimating the days for EA Technology and partners' time and the materials, travel and accommodation required. Where possible fixed price contracts have been arranged. The contingencies were calculated by multiplying the costs for mitigating the risk</p>	<p>A breakdown of the utilisation of the funding provided to the project by the Low Carbon Network (LCN) Fund is given below. This does not include the additional funding provided towards the project under the areas of:</p> <ul style="list-style-type: none"> • DNO Compulsory Contribution (£474.94k) • Original in-kind contributions from partners (£4,908.26k) • Additional in-kind contributions from partners (£461k) <p>The total value of the project is forecast to equate to c£10,119k, of which £4,749.43k is funded by the LCN Fund (nb. this value includes the</p>

Change Request to Project Direction v1.10

Change Number	Document Section	Document Page	Paragraph	Original Text / Value	Revised Text / Value		
				by the probability of the risk occurring. The breakdown of costs per tasks is as follows. Please note that all costs are in gross real terms (i.e. the partner / customer contributions(s) have not been shown and the figures are un-inflated).	DNO's compulsory 10% contribution).		
				Novel commercial agreement	£211k	Novel commercial agreement	£197.55k
				Initial background – evaluation of initial trial	£24k	Initial background – evaluation of initial trial	£8.62k
				Customer engagement	£194k	Customer engagement	£547.25k
				Integration of the Technology with charging points	£357k	Installation of the technology in clusters	£1,015.31k
				Establishment of Customer / Cluster	£5,545k	Establishment of	£721.49k

Change Number	Document Section	Document Page	Paragraph	Original Text / Value		Revised Text / Value	
				trials		Customer / Cluster trials	
				Monitoring the trials	£122k	Monitoring the trials	£121.63k
				Trial participant interviews	£177k	Trial participant interviews	£259.93k
				Network Modelling	£199k	Network Modelling	£231.64k
				Independent Project Evaluation	£150k	Independent Project Evaluation	£153.21k
				Consultation with eV manufacturers – cycle times	£30k	Consultation with EV manufacturers – cycle times	£19.65k
				Project recommendations and implementation	£264k	Project recommendations and implementation	£16.18k
				Dissemination	£322k	Dissemination	£229.71k
				Programme Management	£848k	Programme Management	£826.85k

Change Request to Project Direction v1.10

Change Number	Document Section	Document Page	Paragraph	Original Text / Value		Revised Text / Value	
				Contingency	£395k	Contingency	£400.4k
21	6.4 Verification of all information in the proposal	36	9	Charge Your Car		ZCF	
22	6.4 Verification of all information in the proposal	36	9	Charge Your Car		ZCF	
23	6.4 Verification of all information in the proposal	37	2	Charge Your Car		ZCF	
24	Section 8: Customer impacts	44	2	Charge Your Car		ZCF	
25	8.2 Monitoring Existing EV owners (the social trials)	45	2	Charge Your Car		ZCF	
26	8.2 Monitoring Existing EV owners (the social trials)	45	4	Charge Your Car		ZCF	
27	8.2 Monitoring Existing EV owners (the social trials)	45	8	Charge Your Car		ZCF	