



# My Electric Avenue

## MONTH 06 INDEPENDENT REVIEW REPORT

**Project Number** Q005691

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**Date** 30 July 2013

**Client Confidential** EA Technology Ltd

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**Approved (Ricardo)**

A handwritten signature in blue ink, appearing to read 'P. Jordan', is written over a light blue horizontal line.

Paul Jordan  
Global Head Clean Energy & Power Generation

LCNF Project Number: SSET205

Project Acronym: I<sup>2</sup>EV

Project Title: Innovation-squared: managing unconstrained EV connections

Alternative Project Title: My Electric Avenue<sup>1</sup>

Funding Scheme: Second Tier  
Ofgem Low Carbon Networks (LCN) Fund

Funding DNO: Scottish and Southern Electric Power Distribution (SSEPD)

Third Party Lead Supplier: EA Technology Ltd

Other Project Partners: Fleetdrive Electric  
Nissan  
Northern PowerGrid  
Zero Carbon Futures

Subcontractors: University of Manchester  
De Montfort University  
Automotive Comms  
Ricardo  
ANDtr  
Creative Concern

Project Start Date: 7 January 2013

Project End Date: 31 December 2015

Project Website: <http://myelectricavenue.info/>

Type of Review: Regular 6-month independent review

Period covered by review: 7 January 2013 to 30 June 2013

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### Version History

Date	Version	Author	Notes
18 July 2013	RD.13/280901.1	Stuart Bower Jane Patterson	First issue
30 July 2013	RD.13/280901.2	Stuart Bower Jane Patterson	Minor typing errors corrected, as requested by EA Technology and SSEPD

<sup>1</sup> The "My Electric Avenue" project is the public identity for the Low Carbon Network (LCN) Fund Tier 2 project "I<sup>2</sup>EV". The formal title "I<sup>2</sup>EV" is used for contractual and Ofgem reporting purpose.

## EXECUTIVE SUMMARY

This project was submitted to Ofgem's Tier 2 Low Carbon Network (LCN) Fund as 'I<sup>2</sup>EV' but was rebranded as 'My Electric Avenue' in early 2013 to improve public acceptance. The project is led by EA Technology (Third Party Lead Supplier), with project partners Scottish and Southern Energy Power Distribution Limited (SSEPD) (the host Distribution Network Operator), Northern PowerGrid, Nissan, Fleetdrive Electric and Zero Carbon Futures. Further support is provided via subcontractors, which include the University of Manchester, De Montfort University, Ricardo UK Ltd, Automotive Comms, Creative Concern, and ANDtr.

This report is the first of the 6-month independent reviews and includes recommendations on specific improvements and adaptations to working practices to be incorporated by the project team. It covers the key project activities and deliverables during the period **7 January 2013 to 30 June 2013**, principally involving:

- **Novel Commercial Arrangement** - Agreement of Principal and Subcontracts along with associated Task Orders for each of the project partners and subcontractors
- **Technical Trial** - Engagement of potential participants in the technical trial clusters
- **Project Management** - Project internal and external kick-off meetings

The review is based upon key documents delivered to Ricardo prior to or for the purpose of the review, and has been augmented with formal and informal discussions during project meetings and conference calls.

### Overall assessment of project so far

What is the reviewers' overall assessment of the project so far?	Good
Have the key objectives for the period been achieved?	Yes
Has the project made satisfactory progress towards meeting the overall project objectives?	Partially
Has each Task made satisfactory progress against the Plan of Works?	Partially
Has the project management been performed as required?	Partially
Has the collaboration between project partners and sub-contractors been effective?	Yes
Is there evidence of underperforming project partners or sub-contracts, lack of commitment or change in interest?	Partially
Have the project partners adequately publicised the project to raise awareness of the project with the general public?	Yes
Have the project partners adequately disseminated results and learning from the project?	Yes

The project team has made good start to the 'My Electric Avenue' project. EA Technology has worked professionally and diligently in their role of project coordinator for a complex arrangement of project partners and suppliers/subcontractors. A cohesive project team has been created, bringing together members from across the project partnership. This new project team appears to be functionally well.

Initial customer engagement has been strong, with 500 registrations of interest received for participation in the technical "cluster" and social trials. The first Successful Delivery Reward Criteria reports have been made available to the public via the 'My Electric Avenue' project website (<http://myelectricavenue.info/project-library>).

One item of concern is the delay in confirming all Subcontracts and Task Orders with the project partners and subcontractors. The project partners and subcontractors have operated at risk and on goodwill during the project start-up over the first six months. This situation urgently needs to be resolved to ensure continued smooth running of the project during the next 6-month period.

### Highlighted Strengths

A key strength of the 'My Electric Avenue' project is a Third Party Lead Supplier providing the overall project management and coordination. Whereas a project of this size would be considered small by the DNO, it is considered significant by the Third Party Lead Supplier so project tasks are given a higher priority.

Evidence to-date of the benefits brought by having a Third Party Lead Supplier responsible for project delivery include:

- Over 500 registrations of interest for the technical and social trials within two months of launching the project website
- Good project team cohesion between the project partners and subcontractors

### Recommendations

The independent reviewers make the following recommendations to the I<sup>2</sup>EV project team:

- 1) Ensure **Subcontracts and Task Orders** are in place with all project partners and subcontractors as soon as possible
- 2) Create an internal **Project Plan of Works** for the benefit of the project partners and subcontractors
- 3) **Update the Project Plan Gantt chart** to reflect changes made to the project plan since the start of the project, and showing a task breakdown by 2-4 month activities with clear (internal) milestone deliverables for each activity
- 4) **Improve communication of key dates and milestones to the project partners and subcontractors**
- 5) Improve the **format and maintenance of the Risk Register** and include risks associated with the **Novel Commercial Arrangement**
- 6) Include information on the activity for recruiting for the **social trials** in the next 6-month review
- 7) Produce an **internal Project Progress Report** for each independent review, which should include information from each project partner and subcontractor regarding activities performed in the review period by project task, and a high-level view of spend against forecast budget for that review period

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# My Electric Avenue

## MONTH 06 INDEPENDENT REVIEW REPORT

### 1 INTRODUCTION

The project 'Innovation-squared: managing unconstrained EV connections' (I<sup>2</sup>EV), also known as 'My Electric Avenue', is seeking to trial a new technology for managing the supply of electricity to electric vehicles connected to a local distribution network. The project is funded by Ofgem's Low Carbon Networks Fund (LCNF)<sup>2</sup> with Southern Electric Power Distribution, part of Scottish and Southern Energy Power Distribution (SSEPD), as the host Distribution Network Operator (DNO). Unusually for a LCNF project, the project is being coordinated by a Third Part Lead Supplier, EA Technology. The other project partners are Northern PowerGrid (DNO partner), Nissan (EV supplier), Fleetdrive Electric (EV rental programme management) and Zero Carbon Futures (charging point network developer).

Further support to the project is provided via subcontractors, which include the University of Manchester (network modelling and analysis), De Montfort University (socio-economic data gathering and analysis), Ricardo UK Ltd (independent review at 6 month intervals), Automotive Comms (media relations), Creative Concern (website and publicity material), and ANDtr (technology support).

The purpose of the I<sup>2</sup>EV ('My Electric Avenue') project is twofold:

- **Innovation 1 (commercial): Novel commercial arrangement**

The project is delivered by a third party innovation technology provider (EA Technology), with the DNO (SSEPD) ensuring the requirements of the LCNF and other obligations are met.

- **Innovation 2 (technical): New Technology trials**

A trial of EA Technology's Espirt technology for monitoring and controlling the supply of electricity to EVs connected to distribution networks.

This three-year project started in January 2013 and is due to complete in December 2015. Further information on the project can be found in the Full Submission Pro-forma, Ofgem's letter on the Project Direction and the Management and Delivery document<sup>3</sup>. A summary of the Task Structure is provided in Appendix 1, and an overview of the project deliverables is provided in Appendix 2.

Ricardo's role in this project is to act as the Independent Reviewer, conducting regular 6-month reviews of the project and the technology. The review includes recommendations on specific improvements and adaptations to working practices to be incorporated by the project team. The review reports form part of the project's Successful Delivery Reward Criteria 9.4.1.

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<sup>2</sup> Information on the Low Carbon Networks Fund is available on Ofgem's website: <http://www.ofgem.gov.uk/Networks/ElecDist/lcnf/Pages/lcnf.aspx> [Accessed 17 July 2013]

<sup>3</sup> All of these documents are available to download from the My Electric Avenue website: <http://myelectricavenue.info/project-library> [Accessed 17 July 2013]

This report is the first 6-month Independent Review Report covering the first six months of the project from January to June 2013 (inclusive). The review is based upon key documents delivered to Ricardo prior to or for the purpose of the review, and has been augmented with formal and informal discussions during project meetings and conference calls.

Ricardo has used RAG indicators (Red/Amber/Green) in this review report to provide a quick, visual key of the reviewers' subjective opinion on the project and technology. A brief explanation of these indicators is provided in Table 1. A further explanation of the RAG indicators is provided in Appendix 3.

**Table 1: Explanation of RAG indicators**

RAG Indicator	Explanation
<b>Green</b>	<ul style="list-style-type: none"> <li>• The project is delivering to plan (time, quality, budget)</li> <li>• There are no major issues</li> <li>• All the objectives have been met</li> <li>• The deliverables are of high quality</li> </ul>
<b>Amber</b>	<ul style="list-style-type: none"> <li>• The project is at risk of not delivering to plan (time, quality, budget)</li> <li>• There are issues / risks that will impact the project if not fixed</li> <li>• All the objectives have been met</li> <li>• The deliverables are of adequate quality</li> </ul>
<b>Red</b>	<ul style="list-style-type: none"> <li>• The project is not delivering to plan (time, quality, budget)</li> <li>• There are issues / risks that are impacting the project right now</li> <li>• All the objectives have been met</li> <li>• The deliverables are of poor quality</li> </ul>

## 2 SCOPE OF THIS INDEPENDENT REVIEW

The scope of this Independent Review concerns project activities conducted during M0 – M06. During this period the project focused upon:

- **Novel Commercial Arrangement**  
 Agreement of Principal and Subcontracts along with associated Task Orders for each of the project partners and subcontractors
- **Technical Trial**<sup>4</sup>  
 Engagement of potential participants in the technical trial clusters
- **Project Management**  
 Project internal and external kick-off meetings

A list of the documents included in the Month 06 Independent Review is provided in Table 2 below. The documents were received via an email from Richard Potter at EA Technology to Stuart Bower at Ricardo UK, sent on 27 June 2013. Review feedback specific to these documents is provided in Appendix 4.

<sup>4</sup> A review of the technology and its performance against competition has not been included in the Month 06 Independent Review because the project team has focused on the Novel Commercial Arrangement and on engaging with potential participants. Reviewing the technology will be included in subsequent 6-month reviews

**Table 2: Documents supplied by EA Technology to Ricardo for the M06 Independent Review**

Document Title	Deliverable Reference	Author Organisation	Version	Issue Date	Public Domain?
LCN Fund Full Submission Pro-forma	-	EA Technology	-	23 November 2012	<a href="#">Yes</a>
Ofgem Letter - Project Direction	-	Ofgem	-	21 December 2013	<a href="#">Yes</a>
Learning from third party delivery of a Tier 1 LNCF project – bid submission process	SDRC 9.1	EA Technology	v1	28 February 2013	<a href="#">Yes</a>
Customer Engagement Plan for Relevant Customers	SDRC 9.5.0.1	EA Technology	v5.6	01 March 2013	<a href="#">Yes</a>
Data Protection Strategy	SDRC 9.5.0.2	EA Technology	v4.2	01 March 2013	<a href="#">Yes</a>
Supporting Guidance for the I <sup>2</sup> EV (My Electric Avenue) Novel Commercial Arrangement	SDRC 9.2.1	EA Technology	Issue 1.0	30 April 2013	<a href="#">Yes</a>
Management & Delivery Document	SDRC 9.2.1 – Annex 1	EA Technology	Issue 1.0	30 April 2013	<a href="#">Yes</a>
Principal Contract Template	SDRC 9.2.1 – Annex 2	SSEPD	Issue 1.0	30 April 2013	<a href="#">Yes</a>
Partner / Supplier Task Order Template	SDRC 9.2.1 – Annex 3	EA Technology	Issue 1.0	30 April 2013	<a href="#">Yes</a>
1 <sup>st</sup> Project Six Monthly Progress Report	-	EA Technology	Issue 2.2	17 June 2013	No
Cluster Identification Progress Report	-	EA Technology	v1.2	11 June 2013	No
Risk Register	-	EA Technology	v4.5	12 June 2013	No
Project Plan	-	EA Technology	v1.4	18 June 2013	No



**Table 3: Additional documents considered by Ricardo during the M06 Independent Review**

Document Title	Deliverable Reference	Author Organisation	Version	Issue Date	Public Domain?
Ofgem Letter - Approval of Customer Engagement Plan and Data Protection Strategy	-	Ofgem	-	12 March 2013	No
Email - My Electric Avenue (I <sup>2</sup> EV) project - press release		EA Technology		27 March 2013	Yes
Email - My Electric Avenue (I <sup>2</sup> EV) reports on its innovative commercial arrangements		EA Technology		16 May 2013	Yes

A summary of the participation of the project partners and subcontractors during the first six months is provided in Table 4. A description of the Tasks is provided in Appendix 1.

**Table 4: Participation of Project Partners and Subcontractors during this Reporting Period**

Project Partners / Subcontractors	Tasks											Comments on key activities		
	0	1	2	3	4	5	6	7	8	9	10		11	
1 SCOTTISH AND SOUTHERN ELECTRIC POWER DISTRIBUTION PLC	✓	-	✓	-	-	-	-	-	-	-	✓	✓	✓	Agreement of Novel Commercial Arrangement
2 EA TECHNOLOGY LIMITED	✓	-	✓	✓	-	-	-	-	-	-	✓	✓	✓	Project management and kick-off meetings Agreement of Novel Commercial Arrangement with SSEPD, Project Partners and Subcontractors Beginning Customer Engagement activities to recruit participants for the Technical and Social Trials Project marketing
3 NISSAN MOTOR LIMITED	✓	-	✓	-	-	-	-	-	-	-	-	✓	✓	Provision of attractive leasing terms for the New LEAF, which will be an incentive to participants in the technical and social trials

Project Partners / Subcontractors	Tasks											Comments on key activities	
	0	1	2	3	4	5	6	7	8	9	10		11
4 NORTHERN POWERGRID HOLDINGS	✓	-	✓	-	-	-	-	-	-	-	✓	✓	Involved in the project's Customer Engagement activities in the Northern PowerGrid region
5 ZERO CARBON FUTURES	✓	-	✓	-	-	-	-	-	-	-	✓	✓	Involved in the project's Customer Engagement activities and associated roadshows
6 FLEETDRIVE MANAGEMENT LTD	✓	-	✓	-	-	-	-	-	-	-	✓	✓	Involved in the project's Customer Engagement activities and associated roadshows, providing two Nissan LEAFs for the Ride & Drive
7 PROMOTE DESIGN & MARKETING LIMITED / AUTOMOTIVE COMMS	✓	-	✓	-	-	-	-	-	-	-	-	✓	Arrangement and coordination of press releases and media events, including the official launch of the project at IET in London on 3 June 2013
8 DE MONTFORT UNIVERSITY	✓	-	-	-	-	-	-	-	-	-	-	✓	Attended Project Kick-Off Meeting and subcontract negotiations
9 THE UNIVERSITY OF MANCHESTER	✓	-	-	-	-	-	-	-	-	-	-	✓	Attended Project Kick-Off Meeting and subcontract negotiations
10 RICARDO UK LIMITED	✓	-	-	-	-	-	-	-	-	✓	-	✓	First six month Independent Review
11 ANDtr	✓	-	-	-	-	-	-	-	-	-	-	✓	No activities yet beyond discussions on Task Order
12 CREATIVE CONCERN	✓	-	✓	-	-	-	-	-	-	-	✓	✓	Project marketing, including website, flyers and other promotional material
13 Installation Partners	-	-	-	-	-	-	-	-	-	-	-	-	Not yet appointed

Notes:

- Contrary to the Project Plan Gantt chart, Tasks 1 and 6 did not start during this reporting period
- Tasks 4, 5, 7, and 8 are scheduled to begin later in the project

### 3 OVERALL ASSESSMENT

**What is the reviewers' overall assessment of the project so far?**

**Good**

The project team has made an excellent start to the 'My Electric Avenue' project through strong customer engagement as evident by over 500 registrations of interest in the technical "cluster" and social trials.

EA Technology, the Third Party Lead Supplier, have worked professionally and diligently in their role as project coordinator for a complex arrangement of project partners and suppliers/subcontractors. A cohesive project team has been created, bringing together members from across the project partnership. This new project team appears to be functioning well.

However communication of key dates, milestones and deliverables could have been better.

Also, as of 30 June 2013, only a few subcontracts with project partners and suppliers had been signed. The project partners and subcontractors have operated at risk and on goodwill during the project start-up over the first six months. It is not reasonable to expect this goodwill to continue ad infinitum. Therefore EA Technology need to ensure that all Subcontracts and Task Orders with project partners and subcontractors are in place by 31 August 2013.

### 4 PROGRESS TOWARDS OBJECTIVES

The overall project objectives, as stated in the Management & Delivery document, are divided into two categories – commercial and technical.

The **commercial** objectives of the I<sup>2</sup>EV project are to:

- 1) Demonstrate delivery of a LCN Fund project by a non-DNO on behalf of a DNO;
- 2) Develop a novel commercial arrangement;
- 3) Enable all procurement related to the project activity to be managed by a non-DNO; and
- 4) Evaluate the extent to which third party delivery accelerates deployment of LCN Fund projects.

The **technical** objectives of the I<sup>2</sup>EV project are to:

- 1) Learn customer driving and charging habits and the implications for control via the Technology;
- 2) Develop and trial the equipment to ascertain its ease of installation;
- 3) Develop the integration of the Technology into the EV charging points including how existing intelligence and attributes in charging points can be harnessed to reduce the cost and improve the performance;
- 4) Evaluate the range of networks where it can operate successfully and identify any type of networks that are inappropriate;

- 5) Evaluate how often switch off routines are likely to be initiated from real life trials and extrapolation via modelling using the results;
- 6) Evaluate the most appropriate length of time to switch off charging and how to cycle switches with references for battery management and customer preference and habits; and
- 7) From the results and extrapolation via modelling, estimate the typical and maximum thermal capacity gained.

The objectives for the first six months were to:

- **Commercial**

- Establish the Novel Commercial Arrangement between the SSEPD (DNO) and EA Technology (Third Party Lead Supplier)
- Agree the Subcontracts and Task Orders with the project partners and subcontractors
- Deliver:
  - SDRC 9.1 – Learning from third party delivery of a Tier 1 LNCF project – bid submission process
  - SDRC 9.2.1 - Supporting Guidance for the I2EV (My Electric Avenue) Novel Commercial Arrangement, and associated Annex documents

- **Technical**

- Deliver:
  - SDRC 9.5.0 – Customer Engagement Plan for Relevant Customers
  - SDRC 9.5.0 – Data Protection Strategy
- Begin the process for Customer Engagement in the Technical and Social Trial through marketing the project
- Set up the project website
- Begin to identify potential clusters of EV users for the Technical Trial

- **Project Management**

- Hold the project Kick-Off Meeting for project partners and subcontractors
- Set up the regular project meetings, as outlined in the Management and Delivery Document

**Have the key objectives for the period been achieved?**

**Yes**

**Has the project made satisfactory progress towards meeting the overall project objectives?**

**Partially**

The project team has made good progress towards meeting the objectives for the first six months through delivering the required Successful Delivery Reward Criteria (SDRC) to schedule, holding the project Kick-Off Meeting on 21 March 2013, and strong initiation activities for identifying potential customers for the Technical and Social Trials.

**Table 5: Contract status as of 30 June 2013**

Partner / subcontractor	MoU (v1)	Contract Status	Task Order Status
1 SOUTHERN ELECTRIC POWER DISTRIBUTION PLC	Agreed and signed.	Novel Commercial Agreement Agreed	-
2 EA TECHNOLOGY LIMITED	Agreed and signed.	Novel Commercial Agreement Agreed	-
3 NISSAN MOTOR LIMITED	Agreed and signed.	Final clauses being discussed (90%)	Agreed
4 NORTHERN POWERGRID HOLDINGS	Minor Changes required	Discussions on going Aim to complete by 30 July 2013	Agreed
5 ZERO CARBON FUTURES	Minor Change required.	Final clauses being discussed (90%)	Agreed
6 FLEETDRIVE MANAGEMENT LTD	Agreed and signed.	Subcontract agreed and signed	Agreed
7 PROMOTE DESIGN & MARKETING LIMITED / AUTOMOTIVE COMMS	Agreed and signed.	Final clauses being discussed (90%)	Agreed
8 DE MONTFORT UNIVERSITY	Awaiting Feedback	Awaiting initial response from DMU	Agreed
9 THE UNIVERSITY OF MANCHESTER	Agreed and signed.	Final clauses being discussed (90%)	Agreed
10 RICARDO UK LIMITED	Agreed and signed.	Subcontract agreed and signed	Agreed and approved (24 June 2013)
11 ANDtr <sup>5</sup>	n/a	n/a	Agreed
12 CREATIVE CONCERN	-	Subcontract agreed and signed	Agreed and approved

<sup>5</sup> EA Technology is outsourcing technical work to ANDtr. ANDtr were not named in the project direction, but will be following a similar subcontracting arrangement for consistency with the project partners and project subcontractors.

However, as of 30 June 2013, the contractual arrangements with most of the project partners and sub-contractors were not yet in place. Several contractors have had to proceed at a commercial risk, while waiting for the subcontracts to be finally agreed. In the case of Ricardo, the subcontract was not signed until late June 2013. The commercial agreement status of the other project partners and subcontractors is summarised in Table 5 above.

## 5 PROGRESS AGAINST WORK PLAN

### Has each Task made satisfactory progress against the Plan of Works?

#### Task 0: Novel Commercial Arrangement

Partially

The Novel Commercial Agreement between SSEPD and EA Technology is in place, as planned for the first reporting period. However, as of 30 June 2013, the contractual arrangements for most of the project partners and subcontractors were still to be agreed and approved (see Table 5).

#### Task 1: Initial Background

No

No written information has been provided to Ricardo regarding Task 1, which was scheduled to start on 7 January 2013 and complete on 28 June 2013. Discussions with EA Technology held during this Independent Review confirmed that Task 1 has been postponed to the second 6-month period.

#### Task 2: Customer Engagement

Yes

The project team have made good progress towards engaging with the public for the technical trials (see Cluster Identification Progress Report). The Customer Engagement Plan and Data Protection Strategy were successfully completed during this reporting period. However insufficient evidence has been provided regarding progress with recruiting participants for the social trial. More information on the recruitment of participants for the social trial should be included in the next review.

#### Task 3: Integration of the Technology with charging points

No

Task 3 was scheduled to start on 17 June 2013, however Ricardo has not been provided with evidence to confirm if this task has commenced or been delayed.

#### Task 4: Establishment of Customer / Cluster Trials

n/a

Task 4 is not scheduled to begin until 30 September 2013.

**Task 5: Monitoring first trials**

n/a

Task 5 is not scheduled to begin until 31 March 2014.

**Task 6: Trial Participant Interviews**

No

Task 6 was scheduled to start on 30 April 2013. No evidence has been provided for review regarding progress made with developing the Interview Pack. This task is the responsibility of De Montfort University, so the delays in agreeing the sub-contractor terms and conditions may be contributing to a delay in Task 6.

**Task 7: Modelling**

n/a

Task 7 is not scheduled to begin until 07 April 2014.

**Task 8: Consultation with EV manufacturers: cycle times**

n/a

Task 8 is not scheduled to begin until September 2015.

**Task 9: Project and Regulatory recommendations and implementation**

No  
comment

This task concerns the 6-month Independent Reviews, which is the subject of this report.

**Task 10: Dissemination**

Yes

Several 'My Electric Avenue' reports are available to download from the project website<sup>6</sup>, including SDRC 9.1 on learning from the bid process, and SDRC 9.2.1 on guidance for the novel contract arrangement. These reports can therefore be read by other DNOs, industry and the general public.

The external project launch was held on 03 June 2013 at the IET in Savoy Place, London. It was well attended and reported by the trade and technical press.

Project press releases highlighting the publication of project deliverables are disseminated via a dedicated email list (see emails from additional documents (Table 3)).

<sup>6</sup> "My Electric Avenue" project reports and flyers available to download from <http://myelectricavenue.info/project-library> [Accessed 11 July 2013]

**Task 11: Project Management**

Yes

The project Kick-Off Meeting with project partners and subcontractors took place on 21 March 2013. EA Technology hold regular project meetings with SSEPD, project partners and subcontractors, as outlined in the Management and Delivery Documents.

However, the current Project Plan Gantt Chart is insufficient for communicating the project schedule to the project partners and subcontractors. It does not reflect changes to the project plan. Ricardo strongly recommend that EA Technology create a Plan of Works document to be read in conjunction with the Gantt chart. This should be a living document that is updated in advance of each review to highlight changes to the proposed scope of work and for tracking progress towards milestones.

**Have planned SRDCs been achieved for this reporting period?**

Yes

**Have planned milestones been achieved for this reporting period?**

Partially

As discussed in Section 4 above, although the SDRC for the first six months have been achieved, not all subcontracts with partners and subcontractors have been agreed.

**6 INDEPENDENT REVIEW OF THE SUCCESSFUL DELIVERY REWARD CRITERIA AND OTHER DELIVERABLES**

A full list of the project's Successful Delivery Reward Criteria (SDRC) is provided in Appendix 2. Listed below are the SDRCs completed in this reporting period (January – June 2013), along with reviewer "traffic light" ranking. Further comments on these SDRCs can be found in Appendix 4.

**SDRC 9.1 Learning from third party delivery of a Tier 1 LNCF project – bid submission process**

G

This is a well considered and professionally presented report documenting the bid process, issues encountered, and suggested improvements for the bid process in future.

**SDRC 9.2.1 Supporting Guidance for the I<sup>2</sup>EV (My Electric Avenue) Novel Commercial Arrangement**

G

The Novel Commercial Arrangement is one of the key innovations of the project. This document, and associated Annexes, guides the reader through the process, documentation produced, and key learning from the process.



<b>SDRC 9.2.1 – Annex 1</b>	<b>Management &amp; Delivery Document</b>	G
<p>A sensible, thorough and well conceived 'quality' document that supports the Principal Contract between SSEPD and EA Technology, and the Supporting Guidance document.</p>		
<b>SDRC 9.2.1 – Annex 2</b>	<b>Principal Contract Template</b>	G
<p>A robust initial template for the Principal Contract. However it is important that learning from the process is captured in the Learning Log so best practice gained through experience is reflected in the updated template due at the end of the project.</p>		
<b>SDRC 9.2.1 – Annex 3</b>	<b>Partner / Supplier Task Order Template</b>	G
<p>The document provides a suitable template for future Partner / Supplier Task Orders for similar projects. No review comments or areas for improvement noted.</p>		
<b>SDRC 9.4.1.1a</b>	<b>Month 06 Independent Review Report</b>	n/a
<p>This document</p>		
<b>SDRC 9.4.1.1b</b>	<b>Report in response to Month 06 Independent Review</b>	n/a
<p>To be completed by EA Technology and SSEPD after this review.</p>		
<b>SDRC 9.5.0.1</b>	<b>Customer Engagement Plan for Relevant Customers</b>	G
<p>Describes a good, well-thought through plan for engaging with potential trial participants.</p>		
<b>SDRC 9.5.0.2</b>	<b>Data Protection Strategy</b>	G
<p>Appears to be sensible and appropriate for this type of project. It is important that the project team adhere to this Data Protection Strategy.</p>		

## 7 IMPLEMENTATION OF THE PROJECT

**Has the project management been performed as required?**

**Partially**

The project appears to be well managed by EA Technology, with good engagement from all project partners and subcontractors. However key project management tools, such as the Gantt chart and Risk Register have scope for improvement (see Section 10, Appendix 4L and Appendix 4M). Also, communication of key dates and timelines to the project partners was not fully effective, contributing to misunderstandings regarding when Subcontracts and Task Orders would be received.

**Has the collaboration between project partners and subcontractors been effective?**

**Yes**

EA Technology has built a good project team of partners and subcontractors. The roadshows provided an unexpected additional benefit through providing an opportunity for team building between key project partners.

**Is there evidence of underperforming project partners or subcontractors, lack of commitment or change in interest?**

**Partially**

A few subcontractors have been slow to provide feedback on the subcontract terms and conditions (see Table 5).

## 8 DISSEMINATION OF PROJECT LEARNING

**Have the project partners adequately publicised the project to raise awareness of the project with the general public?**

**Yes**

The project team has made good progress in advertising the project via the media and personal contacts, as evident in the high number of registrations of interest for the technical trials (see 1<sup>st</sup> Project Six Monthly Progress Report).

**Have the project partners adequately disseminated results and learning from the project?**

**Yes**

Two of the published SDRCs completed during this reporting period capture learning from the project and have been made available to download from the project website at <http://myelectricavenue.info/project-library>. SDRC 9.1 outlines key areas

of learning from the LCNF bid process. SDRC 9.2.1 and supporting Annex documents provided guidance and templates for the Novel Contract Arrangement.

These reports have been made available to download. A press release was issued for each report, which was emailed to relevant industry contacts on the 'My Electric Avenue' email distribution list (see emails from Additional Documents in Table 3). Also, SSEPD have secured a presentation slot at the next LCNF Conference in November 2013, which is likely to be a good opportunity for sharing project results with relevant stakeholders.

## 9 HIGHLIGHTED STRENGTHS

A key strength of the 'My Electric Avenue' project is a Third Party Lead Supplier providing the overall project management and coordination. Whereas a project of this size would be considered small by the DNO, it is considered significant by the Third Party Lead Supplier so project tasks are given a higher priority.

Evidence to-date of the benefits brought by having a Third Party Lead Supplier responsible for project delivery include:

- Over 500 registrations of interest for the technical and social trials within two months of launching the project website
- Good project team cohesion between the project partners and subcontractors

## 10 RECOMMENDATIONS FOR IMPROVEMENTS AND ADAPTIONS TO THE WORKING PRACTICES

Ricardo, as the independent reviewers, make the following recommendations to the 'My Electric Avenue' project team:

- 1) Ensure **Subcontracts and Task Orders** are in place with all project partners and subcontractors as soon as possible
- 2) Create an internal **Project Plan of Works** for the benefit of the project partners and subcontractors

This document should be an accompaniment to the Project Plan Gantt chart, providing information on the project tasks and activities, such as task objectives, task leaders, task contributors, task duration, task description, task output / deliverables.

The Plan of Works should be a living document, with regular updates to reflect changes in the project plan caused by the output from earlier activities. Ricardo expect the Plan of Works document to be included in subsequent 6-month independent reviews.

- 3) **Update the Project Plan Gantt chart** to reflect changes made to the project plan since the start of the project

Ricardo recommend breaking down the sub-tasks into 2-4 month activities with key (internal) milestone deliverables at the end of each sub-task that can be used to track progress.

4) **Improve communication of key dates and milestones to the project partners and subcontractors**

The internal Plan of Works document could be a good mechanism for recording and communicating the key dates for delivery of project SDRC and internal deliverables to the wider project team.

5) Improve the **format of the Risk Register** to include:

- Date risk raised
- Date risk needs to / will have been addressed
- Date risk addressed, closed or superseded by events
- Revision column to indicate changes since last formal issue
- A legend or guide describing metrics behind the colour coding
- A combined risk rating (likelihood x severity)

Also, Ricardo strongly advocate that each risk should have one owner only.

6) **Update the Risk Register** to include risks associated with the **Novel Commercial Arrangement**

7) Include information on the activity for recruiting for the **social trials** in the next 6-month review

8) Produce an **internal Project Progress Report** for each independent review

This document could also be used for the Steering Group Meetings. It should include information from each project partner and subcontractor regarding activities performed in the review period by project task.

A high-level view of spend against budget should be provided, possibly using 'S' curves to illustrate project progress and spend to plan

9) Once data collection has begun, **schedule frequent data reviews**, possibly monthly, throughout the duration of the fleet trials to ensure the data collected is of suitable quality and quantity.

10) Documents to be included in future 6 month independent reviews:

- **Management & Delivery Document**
- **Project Plan of Works and Gantt chart**
- **Learning Log**
- **Risk Register**
- **Internal project progress report**

## APPENDIX 1 PROJECT TASK STRUCTURE

The My Electric Avenue project consists of 12 Tasks, as described in the table below, taken from Annex 2 of the Project Direction letter from Ofgem, dated 21 December 2012, and from the Project Plan (dated Tuesday 18 June 2013). Further information on the Tasks is provided in Section 2 of the LCNF Full Submission Pro-forma.

Task ID	Task Title	Task Description	Start	End
<b>Task 0</b>	<b>Novel commercial arrangement</b>		2 January 2013	31 December 2015
0.1	Establish the 3rd party delivery commercial framework (yr 1)	Draft and agree the contract for a non-DNO to manage a LCNF Tier 2 project		
0.2	Review the commercial framework and recommend changes (yr 3)	Review the initial contract towards the end of the project and make necessary changes following the lessons learnt		
<b>Task 1</b>	<b>Initial background – evaluation of initial trial</b>		2 January 2013	28 June 2013
1.1	Evaluation of initial on-site trial	Evaluation of the initial trial of the Esprit Technology (December 2012) to improve the Technology and the plans of trials to occur as part of the I <sup>2</sup> EV Project		
1.2	Literature survey - additional load	Literature survey of the estimates regarding additional load to be introduced from EVs and the potential for load shifting		
1.3	Literature survey - customer behaviour	Literature survey of the existing knowledge of customer behaviour with respect the use of EVs and the acceptance of direct control appliances		
<b>Task 2</b>	<b>Customer engagement</b>		2 January 2013	11 December 2014
2.1	Customer engagement plan	Develop customer engagement plan for the I <sup>2</sup> EV Project		

Task ID	Task Title	Task Description	Start	End
2.2	Social trials	Engagement with Nissan, Charge Your Car North Ltd and Fleetdrive to approach EV owners throughout the UK with the intention of monitoring and recording location, driving and charging habits in statistically significant numbers		
2.3	Technical trials	Establishment of statistically significant clusters, relative to the individual network, to trial the Technology on multiple network types and across multiple demographics		
<b>Task 3</b>	<b>Integration of the Technology with charging points</b>		17 June 2013	30 June 2015
3.1	Technology development of Epsrit			
3.2	Ongoing development of Esprit during project	Development of the Esprit Technology, integrating learning from the Project (not to be funded under LCNF)		
3.3	Engage with charging point manufacturers	Liaise with charging point manufacturers to discuss the Technology and the impact on their equipment		
3.4	Integrate technology with charging points	Work on integration of the Technology (Logic and Communication Systems) into Charging Points		
<b>Task 4</b>	<b>Establishment of customer / cluster trial</b>		30 September 2013	18 December 2015
4.1	Managing subsidised rental programme for fleet users	Management of the vehicles and participants in the Fleet Trials		
4.2	Managing collection and delivery of cars	Delivering and managing the Fleet Trial Participants		
4.3	Finding trial (fleet) participants and providing funding / risk of funding	Identification, discussion and engagement with Fleet Trial Participants		

Task ID	Task Title	Task Description	Start	End
4.4	EV leasing costs (fleet)	EV leasing costs (fleet)		
4.5	Engage with local network cluster(s)	Identification, discussion and engagement with local network clusters		
4.6	Assess network(s)	Assessment of the local networks around potential cluster locations to validate the suitability of the site for participation in the trial		
4.7	Install technology and charging points	Install technology and charging points		
4.8	Removal of charging points at end of trial	Removal of charging points at end of trial		
<b>Task 5 Monitoring first trial</b>			31 March 2014	30 November 2015
5.1	Monitor and download data	Data to be collected on a monthly basis during each trial		
5.2	Report on data (6 monthly)	Report summarising high level analysis of gathered data		
5.3	Uninstall monitoring at end of trial	Removal of any charging points as required		
<b>Task 6 Trial participant interviews</b>			2 January 2013	30 October 2015
6.1	Develop interview pack	Develop interview pack for social and technical trial participants		
6.2	Pre-trial interviews	Undertake pre-trial interviews		
6.3	During trial interviews	Undertake during-trial interviews		
6.4	Post-trial interviews	Undertake post-trial interviews		

Task ID	Task Title	Task Description	Start	End
6.5	Socio-economic modelling	Modelling and analysis of the data gathered as part of the social trials		
6.6	Make recommendations and report	Recommendations as to the anticipated acceptance of the Technology		
<b>Task 7</b>	<b>Modelling</b>		7 April 2014	30 November 2015
7.1	Network modelling and analysis contract	Develop a test network based on the information gathered from the trials		
7.2	Model the test network	Undertake simulation and modelling of the test network		
7.3	Extrapolate to different network types and locations	Extrapolate to different network types and locations		
7.4	Compare the results with existing work identified in literature survey	Compare the results with existing work identified in literature survey		
7.5	Estimate savings through the use of the Solution	Estimate savings that could be achieved using the Technology on wider networks		
<b>Task 8</b>	<b>Consultation with EV manufacturers</b>		1 September 2015	18 December 2015
8.1	Agree the cycle times for the Technology with OEMs	Discussion with EV manufacturers to prevent premature ageing of EV batteries as a results of charging cycles		
<b>Task 9</b>	<b>Project and regulatory recommendations with implementation</b>		1 May 2013	31 December 2015
9.1	Independent evaluation (Project and Solution)	Monitoring and evaluation of the project by an independent party		
9.2	How might the solutions be used by DNO planners as part of BAU	Make recommendations as to the ideal uptake of the Technology/solution by DNOs		



Task ID	Task Title	Task Description	Start	End
9.3	Technical framework recommendations	Identify and elements of the Project Framework that if changed, would improve the Technical development of the Project		
9.4	Commercial framework recommendations	Identify and elements of the Project Framework that if changed, would improve the Commercial development of the Project		
<b>Task 10 Dissemination</b>			2 January 2013	31 December 2015
10.1	Develop dissemination / comms plan	Develop the plans for Project Learning Dissemination and Communication with Stakeholders		
10.2	Implement communications plan	Implement the Communication Plan		
10.3	Reporting of SDRC outputs	Reporting of SDRC outputs		
<b>Task 11 Project Management</b>			2 January 2013	31 December 2015
11.1	Programme management to deliver the project	Programme management to deliver the project		
11.2	Project governance and support	Project governance and support		
11.3	DNO project review and results	DNO project review and results		

## APPENDIX 2 LIST OF SUCCESSFUL DELIVERY REWARD CRITERIA (SDRC) AND OTHER DELIVERABLES

### Successful Delivery Reward Criteria (SDRC):

SDRC	Document Title	Planned Delivery Date	Actual Delivery Date	Current Version	Author Organisation	Status
9.1 9.1.1	Learning from third party delivery of a Tier 1 LNCf project – bid submission process	28 February 2013	28 February 2013	v1 28 February 2013	EA Technology	Complete
9.2 9.2.1	Supporting Guidance for the I2EV (My Electric Avenue) Novel Commercial Arrangement	30 April 2013	30 April 2013	v1 30 April 2013	EA Technology	Complete
9.2.1 – Annex 1	Management & Delivery Document	30 April 2013	30 April 2013	v1 30 April 2013	EA Technology	Complete
9.2.1 – Annex 2	Principal Contract Template	30 April 2013	30 April 2013	v1 30 April 2013	EA Technology	Complete
9.2.1 – Annex 3	Partner / Supplier Task Order Template	30 April 2013	30 April 2013	v1 30 April 2013	EA Technology	Complete
9.2.2	Review of Novel Commercial Arrangement	30 October 2015	-	-	EA Technology	Not Started
9.2.3	Updated Principal Contract Template	31 December 2015	-	-	EA Technology	Not Started
9.3 9.3.1	Project Processes Report, including templates, meeting records and evaluation of collaboration between SSEPD and Northern PowerGrid with third party interface	30 October 2015	-	-	SSEPD	Not Started
9.3.2	Framework for updating policies and procedures at SSE, using suggestions identified during the project	30 October 2015	-	-	SSEPD	Not Started
9.3.3	Assessment of DNO Project Management Effort compared to previous innovation projects	30 October 2015	-	-	SSEPD	Not Started

SDRC	Document Title	Planned Delivery Date	Actual Delivery Date	Current Version	Author Organisation	Status	
9.4	9.4.1.1a	Month 06 Independent Review Report	31 July 2013	-	-	Ricardo	Due to start in July 2013
	9.4.1.1b	Report in response to Month 06 Independent Review	31 July 2013	-	-	EA Technology	Due to start in July 2013
	9.4.1.2a	Month 12 Independent Review Report	31 January 2013	-	-	Ricardo	Not Started
	9.4.1.2b	Report in response to Month 12 Independent Review	31 January 2013	-	-	EA Technology	Not Started
	9.4.1.3a	Month 18 Independent Review Report	31 July 2014	-	-	Ricardo	Not Started
	9.4.1.3b	Report in response to Month 18 Independent Review	31 July 2014	-	-	EA Technology	Not Started
	9.4.1.4a	Month 24 Independent Review Report	31 January 2014	-	-	Ricardo	Not Started
	9.4.1.4b	Report in response to Month 24 Independent Review	31 January 2014	-	-	EA Technology	Not Started
	9.4.1.5a	Month 30 Independent Review Report	31 July 2015	-	-	Ricardo	Not Started
	9.4.1.5b	Report in response to Month 30 Independent Review	31 July 2015	-	-	EA Technology	Not Started
	9.4.1.6a	Month 36 Independent Review Report	31 December 2015	-	-	Ricardo	Not Started
	9.4.1.6b	Report in response to Month 36 Independent Review	31 December 2015	-	-	EA Technology	Not Started
9.5	9.5.0.1	Customer Engagement Plan for Relevant Customers	28 February 2013	29 January 2013	v5.6 1 March 2013	EA Technology	Complete
	9.5.0.2	Data Protection Strategy (DPS)	28 February 2013	29 January 2013	v4.2 1 March 2013	EA Technology	Complete

SDRC	Document Title	Planned Delivery Date	Actual Delivery Date	Current Version	Author Organisation	Status
9.5.1.1	Sign up of 3 cluster groups	30 September 2013	-	-	EA Technology	In Progress
9.5.1.2	Sign up of 5 cluster groups	31 December 2013	-	-	EA Technology	In Progress
9.5.1.3	Sign up of 100 customers in at least 7 cluster groups	31 March 2014	-	-	EA Technology	In Progress
9.5.1.4	Sign up of 10 cluster groups	31 August 2014	-	-	EA Technology	In Progress
9.5.2	Allocation of Cluster Funding	31 August 2014	-	-	EA Technology	In Progress
9.5.3	Social Trials: Sign up minimum of 100 EV drivers	31 August 2014	-	-	EA Technology	In Progress
9.6	9.6.1 Findings from socio-economic analysis on public reaction to the Espirit technology	30 October 2015	-	-	De Montford University	Not Started
9.7	9.7.1 Technology Integration Assessment Report containing: a) Views of the OEM community on the impact of charge cycling on EVs b) Recommendations of suitable cycle times for EVs for demand-side response c) Evidence on whether the Espirit solution is feasible	30 June 2015	-	-	EA Technology	Not Started
9.8	9.8.1 Modelling to assess additional thermal and voltage headroom	30 November 2015	-	-	University of Manchester	Not Started
	9.8.2 Potential cost and carbon emission savings	30 November 2015	-	-	University of Manchester	Not Started

Other internal project deliverables:

Deliverable Reference	Document Title	Planned Delivery Date	Actual Delivery Date	Current Version	Author Organisation	Status
Task 1i	Assessment of the initial trial and recommendations on improvements to the design					Not Started
Task 1ii	Technical literature survey of load shifting potential of EVs and heat pumps					Not Started
Task 1iii	Social-economic literature survey of customer behaviour with EVS and acceptance of direct control of appliances					Not Started
Task 3i	Report(s) confirming integration of the technology into charging points or other loads					Not Started
Task 4i	Report(s) confirming charging points, Esprit technology and monitoring installed					Not Started
Task 4ii	Report documenting likely number and length of switch-offs under different scenarios, including impact of higher capacity charging					Not Started
Task 5i	Data collection reports					Not Started
Task 6i	Report on results from customer interviews and social economic analysis					Not Started
Task 10i	Dissemination plan					Not Started

### APPENDIX 3 EXPLANATION OF RAG INDICATORS FOR EACH REVIEW QUESTION

Question	RAG Indicators		
What is the reviewers' overall assessment of the project so far?	Excellent / Good	Adequate	Poor
Have the objectives for the period been achieved?	Yes	Partially	No
Has the project made satisfactory progress towards meeting the overall project objectives?	Yes	Partially	No
Has each Task made satisfactory progress against the Project Plan of Works?	Yes	Partially	No
Have planned SRDCs been achieved for this reporting period?	Yes	Partially	No
Have planned milestones been achieved for this reporting period?	Yes	Partially	No
What is the reviewers' opinion of the delivered SDRCs?	Excellent / Good	Adequate	Poor

## APPENDIX 4 RICARDO COMMENTS ON DOCUMENTS INCLUDED IN M06 REVIEW

Appendix 4 contains review comments on each document submitted for the Independent Review. Suggestions for improvement are emphasised in **bold blue**. Questions are emphasised in **bold orange**.

### Appendix 4A Ricardo comments on LCNF Submission

SSEPD and EA Technology's Full Submission Pro-forma for the I<sup>2</sup>EV project has previously been reviewed by PPA Energy as part of Ofgem's process for assessing bid applications for the Low Carbon Networks Fund. It has been included in this review for the purpose of providing a description of work against which the review has assessed progress made during the first six months of the project.

The bid application describes the two innovations of this project:

- **Innovation 1 (commercial): Novel commercial arrangement**

The project is delivered by a third party innovation technology provided (EA Technology), with the DNO (SSEPD) ensuring the requirements of the LCNF and other obligations are met.

- **Innovation 2 (technical): New Technology trials**

A trial of EA Technology's Espirt technology for monitoring and controlling the supply of electricity to EVs connected to distribution networks.

### Appendix 4B Ricardo comments on Ofgem's Project Direction

Ofgem's letter dated 21 December 2012 contains their Project Direction for the I<sup>2</sup>EV project. It effectively provides approval for Low Carbon Network Funding, subject to a number of conditions.

Ofgem will judge the project against the Successful Delivery Reward Criteria set out in Table 2 of the Project Direction letter. This table contains the required delivery dates for each SDRC.

### Appendix 4C Ricardo comments on SDRC 9.1 – Learning from third party delivery of a Tier 2 LCNF project – bid submission process

SDRC 9.1 was issued on 28 February 2013, meeting Ofgem's requirements for this deliverable to be made available by the end of Month 02.

This is a well considered and professionally presented report documenting the LCNF bid process, issues encountered, and suggested improvements for the bid process in future.

Item 7 on Project Costing (Page 20) highlights the issue of data transfer from 'project costing spreadsheet' to 'Ofgem cost sheet'. This does appear to be a major and unwieldy task. **Consideration could be given to the roll-up of tasks and associated costing prior to consolidation into the Ofgem cost sheet.**

Item 8 on Bid Development Commitment and the Cost to Bid (Page 22) discusses the "hidden" project cost resulting from the effort required to develop, write, manage and submit the LCN Fund Tier 2 bid. EA Technology's effort was significantly higher than their initial budget. Ricardo shared a similar experience. Initially costs to bid were relatively small, following a traditional RFQ process. However subsequent to being selected, extensive time and effort was expended in reviewing, commenting and agreeing the Task Order and the Subcontract over many months.

Item 10.3 on Clarity on the mechanisms (Page 30) discusses the 10% risk / reward arrangement that is paid back against successful completion of milestones, and does require clarification. **Is there are schedule of links between milestones and payments?**

#### **Appendix 4D Ricardo comments on SDRC 9.5.0 – Customer Engagement Plan**

Although the document was issued to Ofgem within the schedule specified in the Project Direction, it took several iterations to reach approval, as recorded on the second page of the document. The current version (v5.6) was issued on 1 March 2013, and it is this version that has been considered in this review.

The Customer Engagement Plan describes a good, well-thought through plan for engaging with potential trial participants.

The date and version number on the front cover should be corrected to align with the version information on the second page. It would also be helpful to add the SDRC reference number (SDRC 9.5.0.1) to be consistent with the other SDRC documents.

'My Electric Avenue' intends to offer an exclusive trial package (subject to availability) for participants in the cluster trials. **Have the project team considered what user incentives could be applied to encourage EV users to participate in the social trial?**

The communications strategy mentions a media pack (Page 7). **It might be useful to include a sample of the media pack as an appendix item to the main document.**

#### **Appendix 4E Ricardo comments on SDRC 9.5.0.2 – Data Protection Strategy**

As for the Customer Engagement Plan (SDRC 9.5.0.1), although the Data Protection Strategy was issued to Ofgem within the schedule specified in the Project Direction, it took several iterations to reach approval. The final version was issued on 1 March 2013 (v4.2).

The Data Protection Strategy appears to be sensible and appropriate for this type of project. **However, is there evidence to demonstrate that it is being applied and compiled with?**



## **Appendix 4F Ricardo comments on SDRC 9.2.1 – Supporting Guidance for the I<sup>2</sup>EV (My Electric Avenue) Novel Commercial Arrangement**

SDRC 9.2.1, and supporting Annexes, were issued on 30 April 2013, just within the timeframe set in the Project Direction.

The Novel Commercial Arrangement is one of the key innovations of the project. This document, and associated annexes, guides the reader through the process, documentation produced, and key learning from the process.

The I<sup>2</sup>EV approach offers a number of advantages and disadvantages compared to the traditional DNO-lead approach.

- Advantages
  - Potential to accelerate the work by having a dedicated team away from the 'routine' business of a DNO
  - Strong incentive for the Third Party Lead Supplier to succeed (EATL in this case) due to larger proportion of turn-over and proximity to the technology being trialled
- Disadvantages
  - Additional layer in contract structure
  - Complication in risk/reward basis
  - Requires high levels of trust and strong will to succeed between DNO and Third Party Lead Supplier

A Memorandum of Understanding (MoU) was circulated to all project partners and subcontractors in the early phase for contract development. Whilst well intended it is unclear whether this served any real purpose, and it wasn't finalised with some parties (see Table 5). Ultimately this MoU was superseded by the agreement process for the Task Orders and Subcontracts. **For future projects, it may be more appropriate to use "Letters of Intent" to indicate the commitment of the project partners and subcontracts to the project while contract terms and conditions are negotiated.**

## **Appendix 4G Ricardo comments on SDRC 9.2.1 – Annex 1 – Management & Delivery Document**

This is a sensible, thorough and well presented 'quality' document that supports the Principal Contract between SSEPD and EA Technology, and the Supporting Guidance document. Its purpose is to describe the working relationship between SSEPD and EA Technology. It forms one of the Successful Delivery Reward Criteria for Ofgem, and is a published document freely available in the public domain.

Since it is a "living document" that will be updated during the project (Page 2), **Ricardo recommends that this document is included in each six month independent review.**

In Section 3, "Installation Partner(s)" are listed as Project Suppliers (Page 8), although these installation partners have not yet been selected. **When will this selection occur? And, has this been captured in the Project Plan?**

Section 4 on Project Management includes a diagram to describe the project team (Figure 3 on Page 9). The small font size used in the team structure diagram makes it difficult to read the detail. A larger version of the figure has been included as an appendix item (Appendix

B). However, **Ricardo recommend that the font size in the original diagram is increased so it can be read easily** within the main body of the document without having to refer to Appendix B.

Section e on Page 10 is labelled "Project Steering Group Meetings". However, in addition to specifying the frequency of these meetings, this section also described the role of the Project Steering Group. **Ricardo recommends that the section is relabelled to "Project Steering Group"**.

Project Management involves regular meetings:

- Project Steering Group Meeting at least every 3 months
- Project Assurance Meetings, held monthly
- Partner / Supplier Meetings, held monthly

To encourage efficient working practices, **have these meetings been aligned?**

**How are the meetings minutes recorded and disseminated? How are actions from these meetings controlled?**

**Page 13 contains an incorrect cross reference to Section 0. This should be corrected.**

Section h in Project Management (Page 13) contains a flowchart explaining the project's document review and approval process. **How long does the review process take? Has this been factored into the Project Plan?**

Section i in Project Management discusses the auditing requirements for SSEPD as the DNO and EA Technology as the Third Party Lead Supplier of the I<sup>2</sup>EV project. **What are the auditing requirements for the other project partners and subcontractors? How have these auditing requirements been communicated to the project partners and subcontractors?**

Since this document has been produced for Ofgem to describe the working relationship between SSEPD and EA Technology, there is a focus on the project deliverables that form Successful Delivery Reward Criteria. As a consequence other project deliverables and the project task structure are not defined within this document. **Ricardo strongly recommends that EA Technology produce a sister document that explains the Project Plan of Works for the benefit of the Project Partners and Suppliers.** Such a document would also support the Project Plan provided in the Project Gantt Chart.

#### **Appendix 4H Ricardo comments on SDRC 9.2.2 – Annex 2 – Principal Contract Template**

It is understood that the Principal Contract Template (Annex 2) was circulated around the project parties for initial comments and then one-to-one discussions were used to agree and finalise the terms and conditions for each party. **Consideration should be given to keeping the main body of the Contract unchanged and then listing all amendments, additions or deletions in an addendum to the Contract.** This would provide for an easier way of viewing what changes were made on a subcontract by subcontract basis.

For most project partners and subcontractors, the legal discussions on the contractual arrangements occurred after the Project Kick-Off Meeting held in March 2013. As a consequence, much project work proceeded at risk without contract cover.

Clause 6 on Supplier Obligations (Page 5). **Should there be a "Customer's / Project Manager's" obligations item?** Normally there's input required to enable the subcontractor to perform their tasks. In the subcontract with Ricardo these were listed in Appendix D, Dependencies.

During the contract negotiation process, various minor changes were discussed and agreed between Ricardo and EATL. If there is a common theme across all subcontracts, these should be rolled up in the template revision planned for later in the project (November 2015).

**It is important that learning from the contractual process is captured in the Learning Log over the course of the project to ensure the best practice learnt throughout the process captured in the updated template produced at the end of the project.**

#### **Appendix 4I Ricardo comments on – Annex 3 – Partner / Supplier Task Order Template**

This document provides a suitable template for future Partner / Supplier Task Orders for similar projects. No review comments or areas for improvement noted.

#### **Appendix 4J Ricardo comments on 1<sup>st</sup> Project Six Monthly Progress Report**

The Six Monthly Progress Reports are prepared by the project team for Ofgem, according to the Progress Reporting template provide by Ofgem. The report was issued on 17 June 2013, two weeks before the end of the reporting period on 30 June 2013.

The 1<sup>st</sup> Project Six Monthly Progress Report highlights the good progress made by the project team towards recording the learning from the Novel Commercial Arrangement, and towards forming the clusters for the Technical Trial.

The project team have demonstrated good interaction and initial customer engagement. To ensure successful delivery of the project, focus should now shift towards turning this interest into complete, ready-for-trial clusters.

A Learning Log is mentioned on page 3. Ricardo has not seen this Learning Log and therefore cannot comment on its functionality for adequately capturing learning over the duration of the project.

**Page 7 contains several incorrect cross references to Section 0. These should be corrected.**

The Progress Report predicts that the first cluster will be signed-up by the end of June 2013 (page 7 & 17). **Did this happen? Has the assessment for this cluster been completed?**

The 1<sup>st</sup> Project Six Monthly Progress Report discusses the activities for engaging with potential participants in the clusters for the technology trials. However no clear statement is provide on customer engagement for the social trial. **Activity on recruiting for the social trials should be included in the Six Monthly Progress Reports.**

Section 5.1.2 (page 16) refers to the initial trial of the Esprit technology at Bramley. Ricardo has not received information on this trial beyond what is stated in the Progress Report. **What further investigations are required prior to beginning the full trials within the I2EV project?**

The Progress against Budget table (page 29) follows Ofgem's format for reporting spend to date. The labour and equipment categories refer to the budget for the DNO, SSEPD. The contractor categories refer to the budget for EA Technology and the other project partners and contractors. Unfortunately, this table does not display the full spend for the first six months since the Progress Against Budget is up to 31 May 2013, not 30 June 2013.

It is noted by Ricardo that SSEPD claim to have spent nearly a quarter of their Programme Management budget, but have claimed no spend on Novel Commercial Agreement and Customer Engagement. **Is this a mistake?**

**It would be useful to include the predicted budget for the six month period reported for comparing actual against forecast. Another potential improvement to the project monitoring includes the use of 'S' curves<sup>7</sup> to illustrate progress and spend to plan. Perhaps this could be included in an internal progress report for the benefit of the Project Steering Group and independent reviewers.**

#### **Appendix 4K Ricardo comments on Cluster Identification Progress Report**

The version of the Cluster Identification Progress Report sent to Ricardo for inclusion in this review was dated 11 June 2013 (v1.2). This document contains a useful summary of the progress made towards obtaining clusters for the Technical Trials. However only 4 potential clusters were marked high likelihood, which is of concern given the SDRC deadline of 3 clusters of 10 to be established by 12 September 2013. Also, no information was provided on the number of people who have signed an initial statement of interest, which is required to start the process for the necessary assessments.

**Consideration should be given to providing additional data on the process for fully engaging participants in the technical and social trials.**

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<sup>7</sup> Information on 'S' curves, also known as Earned Value Management, can be found on these web pages:

<http://www.maxwideman.com/guests/s-curve/using.htm> [Accessed 17 July 2013]

[http://en.wikipedia.org/wiki/Earned\\_value\\_management](http://en.wikipedia.org/wiki/Earned_value_management) [Accesses 17 July 2013]

## Appendix 4L Ricardo comments on Risk Register

The format of the Risk Register could be improved to include:

- Date risk raised
- Date risk needs to / will have been addressed
- Date risk addressed, closed or superseded by events
- Revision column to indicate changes since last formal issue
- A legend or guide describing metrics behind the colour coding
- A combined risk rating (likelihood x severity)

The I<sup>2</sup>EV project features two sets of innovation related to the Novel Commercial Arrangement and the Technical Trials of the Esprit technology. The Risk Register lists the main risks associated with the Technical Trials, but does not list any risks associated with the Novel Commercial Arrangement. **Is this an oversight of the project team? Or, is there a separate Risk Register for the Novel Commercial Arrangement?**

As Independent Reviewer, it is not Ricardo's role to insure all risks are noted with suitable mitigation strategies in place. However, during the course of this independent review, the following items were noted:

- Several of the risks listed have multiple owners (Risk ID 004, 005, 012, and 013). This opens the risk of no one taking responsibility for mitigating against the risk. **Ricardo strongly advocates that each risk should have one owner only.** An additional column could be added to list other project stakeholders impacted by the risk.
- Risk ID 001 concerns the risk of limited results due to insufficient data gathering. The mitigation measure is to hold 6-month data reviews. Since the actual fleet trials are scheduled to last only 12-18 months, it is the opinion of the reviewers that 6-month data reviews will not be frequent enough to mitigate this risk. **Therefore Ricardo recommend that the project team to schedule frequent data reviews, possibly monthly, throughout the duration of the fleet trials to ensure the data collected is of suitable quality and quantity.**
- Risk ID 023 seems commensurate with a large, complex project like this. However it is not clear if subcontractors are expected to manage their own risks. **Are subcontractors expected to manage their project risks via their own project risk register? If so, how are these summarised at the project level?** For example Ricardo risks, identify in our Task Order, are not fully included in the Project Risk Register.
- Risk ID 024 is poorly defined. It implies that reaching the target of 7 clusters of 10 participants within 12 months is a risk. **Should this be redefined to say that the risk is not achieving the target of 7 clusters of 10 participants?**

## Appendix 4M Ricardo comments on Project Plan

The Project Plan supplied to Ricardo, dated 18 June 2013, contains the main tasks, key sub-tasks and milestones for delivery of the SDRC. It features 104 line items, which in the opinion of Ricardo, is not commensurate for a project as large and complex as I<sup>2</sup>EV. Many subtasks exceed 6 months duration, which will make it difficult to track real progress. **Ricardo recommends breaking down the sub-tasks into 2-4 month activities with key (internal) milestone deliverables at the end of each sub-task which can be used to track progress.**

One of the main issues regarding the implementation of the Project Plan has been the delay in agreeing Subcontracts and Task Orders with the project partners and subcontractors (see Table 5).

It is noted by Ricardo that line items 13 (literature survey – customer behaviour) and 25 (Sage ACT! Database) should have been completed by 30 June 2013. Ricardo has not been provided with evidence of outputs from the literature survey or the creation of the Sage database.

The 1<sup>st</sup> Project Six Monthly Progress Report confirms that Project Roadshow events have occurred at EA Technology, SSE Portsmouth, Bracknell, Watlington, Bramley, East Oxford, Chale, Medstead and Hyde by 30 June 2013 (line items 31 to 36). Roadshows at SSE Perth and Drayson Racing are scheduled for July, but these events do not feature in the Project Plan provided.

According to the Project Plan, work should be c. 75% complete on preparation of the Interview Pack for Task 6 (line item 67). However, progress on this activity has not been reported in the 1<sup>st</sup> Project Six Monthly Progress Report.

The lead times for procurement of the charging equipment, Espirt technology and electric vehicles are not shown on the Project Plan.

The milestones of subcontract placement with each project partner and subcontractor is not shown on the Project Plan.

The Gantt chart on its own is insufficient for describing the Work Plan for this project. **Ricardo strongly recommends that a Plan of Works is created documenting the project tasks and activities, including:**

- Objectives of each task and activity
- Who is responsible for leading each task, and which project partners and subcontractors are contributing to the delivery of the task and associated activities
- Duration of each task, and expected start and end dates
- Description of the task or activity
- Expected output from the task or activity

**The Plan of Works should be a living document, with regular updates to reflect changes in the project plan caused by the output from earlier activities.**