

**Report of: Sustainable Energy & Air Quality (SEAQ)**

**Report to: Chief Officer Sustainable Energy & Air Quality**

**Date: 17 September 2020**

**Subject: Project AMiCc – Wireless Vehicle Charge Technology**

Are specific electoral wards affected? If yes, name(s) of ward(s):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Has consultation been carried out?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are there implications for equality and diversity and cohesion and integration?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Will the decision be open for call-in?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Does the report contain confidential or exempt information? If relevant, access to information procedure rule number: Appendix number: 10.4 (3)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

**Summary**

**1. Main issues**

- Leeds City Council (LCC) has been allocated a grant of **£478,026** to 100% fund project delivery from Innovate UK as part of the AMiCc project. The funding awarded to LCC will facilitate the authority to be at the forefront of using cutting-edge technologies in the form of wireless vehicle charging infrastructure as well as allowing for the purchase of and retrofit to 5 electric vehicles to trial this technology. Wireless charge technology enables the delivery of contactless/non-plug in charge to a vehicle without the need to plug in allowing greater flexibility and quick interim charging. As well as funding the capital costs of 5 electric vans and associated retrofit of wireless charge plates and associated wireless charge pad technology at £367,771, the project will also provide £100,255 of labour costs be used to assign a project management resource to the project over the 21 month duration of the project. Additionally a further £10,000 has been allocated in the Leeds project budget for travel, subsistence and overheads.
- Leeds City Council is part of a consortium including the following stakeholders: University of Warwick, University of Nottingham, Sprint Power Technology, 4<sup>th</sup> Dimension Technology and Loughborough University.
- The AMiCc project will support the installation of wireless electric vehicle infrastructure at fleet and service locations contributing to the growing electric vehicle charging infrastructure network across LCC sites. Furthermore, the project enables LCC to further enhance its fleet of zero emission, electric vehicles through the purchase of 5 further vehicles that will be used to trial wireless charging.

## **2. Best Council Plan implications** (see the [latest version of the Best Council Plan](#))

- The contents of this report have implications for a number of best council plan priorities in particular:
  - a. Working towards being a net zero carbon city by 2030
  - b. Improving air quality, reducing pollution and noise
  - c. Achieve the savings and efficiencies required to continue to deliver frontline services

## **3. Resource implications**

- This funding identified in this report will provide the additional resource necessary to extend and provide variety to the Council's charge point network, supporting the expansion of electric fleet in consortium with external partners. This approach forms part of the successful relationships established with external funders to continue to deliver on priorities relating to the Climate Emergency.

## **Recommendations**

The Chief Officer Sustainable Energy & Air Quality is requested to:-

- a) Authorise the approval of a Grant Offer with Innovate UK and the collaboration partners on this project and approve the injection of £478,026, into the Capital Programme.
- b) Authorise expenditure of up to £478,026 to be funded via the Innovate funding award to cover the cost of the work streams.
- c) Approve the use of £100,255 of that total expenditure to cover project management costs in the Sustainable Energy & Air Quality service to lead on the delivery of the project for a period of 21 months in 2020/21 and 2021/22.
- d) Note that this grant offer is subsequent to an earlier grant for £197,826.00 that had been awarded for Vehicle to Grid (EV-Velocity) electric vehicle charging. The report that requested approval for that capital injection stated that this further report would be submitted to request an appropriate capital injection in the event of the AMiCc bid being successfully awarded. It is therefore proposed that this grant is incorporated into the existing capital scheme for the EV-Velocity project.

## **1. Purpose of this report**

- 1.1 This report provides a summary of the AMiCc project including;
  - 1.1.1 The inventory of funded items to support the trial of wireless charging as part of the AMiCc project.
  - 1.1.2 How the AMiCc project will assist in contributing towards ensuring that LCC's fleet continues to act as an exemplar in demonstrating charge infrastructure.
  - 1.1.3 The benefits of funding the staff resources for delivery of the AMiCc project
  - 1.1.4 The costs associated with the AMiCc project.

- 1.2 The purpose of this report is to seek approval to incur expenditure of up to £478,026 which will be sourced via Innovate UK funding to support activities related to the planning, installing and assessment of wireless charge technology at selected LCC Fleet locations.
- 1.3 To commence a procurement exercise to allow for the purchase of the 5 Nissan ENV200 electric vehicles and direct purchase of the wireless charge technology for vehicles and charge infrastructure as being developed by project partners to facilitate the research and assessment of wireless technology as part of improving the accessibility, user experience and flexibility of EV utilisation.

## **2. Background information**

- 2.1 Leeds City council has ambitions targets for the expansion of its electric zero emission fleet. Currently the existing EV fleet is understood to be the largest of any UK local authority with rapid expansion plans to increase that through the fleet replacement programme as projected up to 2025.
- 2.2 The need to support that expansion through delivery of a network of electric vehicle charge points is therefore critical. This project offers both funding to support installation of wireless charge technology as designed and produced by Innovate funded project partners as well as funding additional vehicles to be added to the corporate fleet.
- 2.3 The AMiCc project facilitates LCC to be at the forefront of using cutting-edge technologies in the form of wireless charging infrastructure. In doing so, the project will provide an opportunity for LCC to demonstrate this technology to EV users across the region.
- 2.4 The wireless technology will allow LCC's trial fleet of adapted electric vehicles to charge through contactless transfer of charge, enabling greater flexibility and speed of charging. The ability to charge quickly has the potential to support the transition of more vehicles to zero emission EV models, such as emergency response vehicles. Traditional plug-in charging does suit a large number of fleet, however vehicles and services that do not have significant dwell/idle times are generally not suitable for EV replacement as overnight plug-in charging is not suitable.
- 2.5 On a wider scale, LCC will be contributing to the knowledge surrounding the establishment of use cases and underlying data sets that will support the growth of the wireless market as a way of encouraging uptake of EV's across the market.
- 2.6 The AMiCc project facilitates the installation of electric vehicle charge points across 2 sites which are accessible to council fleet vehicles two wireless charge pads and a single fast plug-in charge point to be installed as outcomes of the is project. The prospective electric vehicle charge point locations are to be confirmed in partnership with Fleet Services, Asset Management and the respective service leadership teams.

## **3. Main issues**

- 3.1 The AMiCc project provides the resources to support the trial of the Wireless technology that will assist with better enhancing the transition of the LCC Electric vehicle fleet. In conjunction with telematics data, the data collected by the updated charging infrastructure will allow for more information to be collated about LCC's

vehicle fleet and will allow for the consideration of transition of vehicles previously not deemed suitable for EV transition.

- 3.2 The project will deliver additional benefits which are not quantifiable in terms of cashable savings but instead will raise the profile of electric vehicle charge points within the public domain across the city, to overcome issues associated with the lack of uptake of electric vehicles such as charge anxiety (the fear that the destination travelled to by the electric vehicle owner will not have available electric vehicle charging infrastructure or that the charge process will be complicated or time consuming).
- 3.3 There are two options available to the council for the procurement of the charge points and retrofit of vehicles – Option 3.3.2 is preferable for the EV-Elocity project:
- 3.3.1 Conduct our own procurement exercise for the appointment of a supplier for the Wireless charge-points and the retrofit of vehicles to accept contactless charging, however this must match the criteria of the lead project and currently there is no expertise within the authority on technical specifications for such points.
- 3.3.2 Use of the supplier that is developing this technology as a project partner that is being developed as part of the AMiCc project by SPRINT Technology, who are working with Cenex (the project lead) to make this technology available. As such we would look to direct award with approval from the SEAQ Chief Officer on that basis of no existing market being available for this to be a viable procurement in line with CPR's and the contract and terms and conditions with the supplier being assessed by our commercial and legal team.
- 3.3.3 Vehicles for the project will be purchased through the existing framework that is utilised by the authority for the procurement of fleet vehicles and as such is already approved.
- 3.4 There has not been a fixed member of staff working on the electric vehicle charge point network for LCC, this work has been included within the wider remit of the Sustainable Energy & Air Quality team. To mitigate the risk of overlaps in work, and to ensure maximum efficiency, the AmiCc project has been brought into line with other EVCP projects and fall under a single project manager. The funding secured for the AmiCc project has provided the SEAQ team with the ability to resource delivery of these capital assets using existing officers. A project manager and project officer have been assigned to the project to provide advice and consistent contact points throughout the delivery of the project, they will continue to work on other SEAQ projects once this project has been completed. The involvement of legal and procurement will ensure that any decisions made surrounding the EV-Elocity project will be in line with LCC's Contract Procedure Rules. The grant awarded by Innovate UK to support Leeds participation in the AMiCc project will be broken down to fund an additional officer(s) in the following way. The budget for the project is based on the project commencing with effect from 1<sup>st</sup> June 2020 (Grant Offer will be backdated by Innovate UK) with the funding to cover the period up to 31<sup>st</sup> January 2022.

The overall project breakdown of the funding allocation is as below.

Funding Allocation		
<b>Labour</b>	To cover SEAQ Project Management resource	£100,255
<b>Travel &amp;</b>	The travel to appropriate meeting and	£10,000.00

<b>Resources</b>	dissemination events associated with the AMiCc project.	
<b>Equipment</b>	The site assessment, purchase and installation cost of wireless electric vehicle charge points, vehicles and retrofit of vehicles.	£367,771
<b>Total</b>		<b>478,026</b>

3.5 Innovate provide funding in arrears on a quarterly basis with claims being submitted by projects through their \_Connect system. As such the authority will be required to provide finance to support project costs that will be repaid by Innovate UK in the same manner in which project costs have been managed for the EV-Velocity project.

3.6 As noted in 3.5 a submission had successfully been made to Innovate UK for funding for a previous (ongoing) project to trial vehicle to grid electric vehicle charge technology – EV-Velocity. It is proposed that the scheme created for the EV-Velocity project is utilised for this project as the external funding source remains the same.

3.7 . Wireless charge point application;

- Vehicles: 5 x Nissan ENV200 @ £27,555 (Excl VAT) = **£137,771**
- 5 x Wireless conversion units @ £25,000 = **£125,000**
- Charge Points: 2 x Wireless Charge Pads @ £15,000
- Install of wireless Charge Pads @ £40,000
- 1 x Supply & Install of 50Kw Rapid Charge Unit @ £50,000 =**£90,000**
- Transport & Subsistence - **£10,000**
- Labour - **£100,255**
- **Total = £478,026**

3.7.1 Details of the locations of the wireless charge points and rapid charge point are yet to be determined and will require site assessment that will commence once funding has been granted final approved. A decision on the full funding to be awarded is expected in August 2020 from Innovate UK.

## **4. Corporate considerations**

### **4.1 Consultation and engagement**

4.1.1 Fleet Services and the project have consulted with site and depot managers on the specifications of all of the electric vehicle charging infrastructure being implemented.

4.1.2 Fleet Services and Sustainable Energy and Air Quality (SEAQ) team have worked closely together to ensure that the electric charge points to be installed are compatible with the fleet vehicles and to ensure that they are suitable to the electrical capacity of each location. AmiCc will therefore support the strategic work by reducing emissions from LCC's vehicle fleet and making a contribution to improving public health through bettering air quality.

### **4.2 Equality and diversity / cohesion and integration**

4.2.1 An equality, cohesion and diversity impact assessment has been undertaken as part of LCC's plan to deliver an infrastructure of electric vehicle charging points

across LCC's estate. This showed that there were no equality, diversity or cohesion issues.

### **4.3 Council policies and the Best Council Plan**

4.3.1 This report draws attention to co-ordinated working that demonstrates a contribution towards the following priorities contained in the Best Council Plan:

- Achieve the savings and efficiencies required to continue to deliver frontline services

4.3.2 The report highlights the contribution to the following Best Council Plan priorities:

- Developing Leeds as a Low Carbon city and declaration of a Climate Emergency in April 2019.
- An ambition to be carbon neutral as a city by 2030.
- Improving the city's Air Quality through reductions in harmful pollution from diesel engines
- Spending Money Wisely – Achieving Value For Money in respect of its fleet replacement programme

#### Climate Emergency

4.3.3 The Climate Emergency is a key driver for the priorities identified in this report; improving the city's air quality and reducing carbon emissions are direct contributors to the cities response.

### **4.4 Resources, procurement and value for money**

4.4.1 LCC's current electric vehicle charge points have been funded directly through the services as part of replacing diesel vehicles with electric vehicles. As part of the procurement exercise to replace diesel vehicles, the funding was also provided for the purchase and installation of electric vehicle charge points to be located where the electric vehicles are charged overnight.

4.4.2 This project will provide the additional funding necessary to extend and provide variety and flexibility to the Authority's charge point network in support of its expansion of its electric fleet. The external funding is subject to audit by Innovate UK and as such best value must be delivered in the appointment of a supplier for the charge points as detailed in 3.3.

4.4.3 The investment in Wireless electric vehicle charge points and compatible vehicles will support LCC's electric vehicle fleet provide value for money via the following means:

- Reduced maintenance charge to services: the maintenance of an electric vehicle is significantly cheaper than a conventional vehicle with an internal combustion engine.
- Reduced fuel charge to service: the cost of running a diesel vehicle is 7p per mile, 3p more expensive than an electric vehicle, which costs 4p per mile.

- Through the innovation project there is opportunity to identify additional vehicles to transition to EV that will broaden the number of vehicles that will be able to realise the above savings.

Previous total Authority to Spend on this scheme	TOTAL £000's	TO MARCH 2020 £000's	FORECAST				
			2019/20 £000's	2020/21 £000's	2021/22 £000's	2022/23 £000's	2023 £000's
LAND (1)	0.0						
CONSTRUCTION (3)	0.0						
FURN & EQPT (5)	0.0						
DESIGN FEES (6)	0.0						
OTHER COSTS (7)	197800.0	0.0	27400.0	170400.0			
<b>TOTALS</b>	<b>197800.0</b>	<b>0.0</b>	<b>27400.0</b>	<b>170400.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
Authority to Spend required for this Approval	TOTAL £000's	TO MARCH 2020 £000's	FORECAST				
			2019/20 £000's	2020/21 £000's	2021/22 £000's	2022/23 £000's	2023 £000's
LAND (1)	0.0						
CONSTRUCTION (3)	0.0						
FURN & EQPT (5)	0.0						
DESIGN FEES (6)	0.0						
OTHER COSTS (7)	478000.0	0.0		239000.0	239000.0		
<b>TOTALS</b>	<b>478000.0</b>	<b>0.0</b>	<b>0.0</b>	<b>239000.0</b>	<b>239000.0</b>	<b>0.0</b>	<b>0.0</b>
Total overall Funding (As per latest Capital Programme)	TOTAL £000's	TO MARCH 2020 £000's	FORECAST				
			2019/20 £000's	2020/21 £000's	2021/22 £000's	2022/23 £000's	2023 £000's
LCC Supported Borrowing	0.0						
Private Sector	0.0						
Section 106 / 278	0.0						
Government Grant	675800.0		27400.0	409400.0	239000.0		
Any Other Income ( Specify )	0.0						
<b>Total Funding</b>	<b>675800.0</b>	<b>0.0</b>	<b>27400.0</b>	<b>409400.0</b>	<b>239000.0</b>	<b>0.0</b>	<b>0.0</b>
<b>Balance / Shortfall =</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>

#### Capital funding and cashflow:

#### 4.5 Legal implications, access to information, and call-in

- 4.5.1 This is classified as an administrative delegated decision. No call in period applies.
- 4.5.2 There should be no legal issues relating to this report and all information within this report is publicly available.
- 4.5.3 The procurement process will be compliant with LCC's Contract Procedure Rules and involves a call off from an established framework that is compliant with European Union legislation as outlined in Section 3.3.

4.5.4 Due to the value of this procurement exercise the decision is not subject to call in.

## **4.6 Risk management**

4.6.1 A full risk assessment has been undertaken and risk register has been developed as part of the development of the business case to deliver this procurement exercise.

## **5. Conclusions**

5.1.1 At a time of continued financial pressure, this external capital will support the continuing development of the authority's electric vehicle charge point infrastructure and fleet. Furthermore, the updating of electric vehicle charge capability with the addition of wireless charging offers opportunities to extend the range of vehicles that can transition to EV.

## **6. Recommendations**

6.1 The Chief Officer Sustainable Energy & Air Quality is requested to:-

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## **7. Background documents<sup>1</sup>**

No background documents

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<sup>1</sup> The background documents listed in this section are available to download from the council's website, unless they contain confidential or exempt information. The list of background documents does not include published works.