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SPONSOR: DCC Jon Stratford

DECISION NUMBER: D16-2019

SUBMITTED TO: Martin Surl, Police & Crime Commissioner for Gloucestershire

SUBJECT: Electrification of the Fleet – proposal to upgrade charging infrastructure

EXECUTIVE SUMMARY:

This report provides a summary of the 'Fleet Review 2018: Electrification Full Business Case'.

The business case considers the viability of extending our use of electric vehicles from 3% of the fleet to 21% over a period of 12 months.

The paper details the cost of the additional infrastructure required to support this level of electrification.

The benefits are both financial savings on fuel and CO2 emissions reductions.

Savings on fuel, vehicle servicing and maintenance would offset the cost of investment and, in some scenarios, represent an 'invest to save' initiative.

Replacing 84 vehicles with electric vehicles would reduce emissions by 212 tCO2 per year which represents 27% of the total carbon emissions reduction target in the Constabulary's Carbon Management Plan 2021.

RECOMMENDATION:

PCC Governance Board is asked to support the proposal for investment in additional charging point infrastructure through a direct award (sole source) to Chargemaster.

This will involve the installation of 22 additional charging points with a one-off cost of £144,649 plus ongoing revenue costs of £5,478.

The funding for this is included in the provisional costing from the Constabulary's Transformation Programme.

OUTCOME/APPROVAL BY:

Signature:

A handwritten signature in black ink, appearing to read 'Masi', with a horizontal line underneath.

Date: 25 June 2019

Police and Crime Commissioner for Gloucestershire

Public Access to Information

Information in this form and associated reports is subject to the Freedom of Information Act 2000 and the Elected Local Policing Bodies (Specified Information) Order 2011. Where it has been indicated that this is a decision of significant public interest, all of this form except Part Two will be made available on the website of the OPCC.

Any information that should not be automatically available on request should not be included in Part One but instead on a separate Part Two form.

Is this a decision of significant public interest?

This includes a decision with any impact on the community, expenditure in excess of £50,000, or any decision that would be of obvious interest to the media or the general public

Yes – due to the value of the work involved**Is there a Part Two form?**

This section should only include information that, if published:

- a) would, in the view of the chief officer of the police, be against the interests of national security;*
- b) might, in the view of the chief officer of police, jeopardise the safety of any person;*
- c) might, in the view of the chief officer of police, prejudice the prevention or detection of crime, the apprehension or prosecution of offenders, or the administration of justice; or*
- d) is prohibited by any enactment.*
- e) breaches commercial sensitivity*

No

ORIGINATOR CHECKLIST (MUST BE COMPLETED)	Comments including who has approved the report if applicable
Has legal advice been sought on this submission if required?	No
Has the Chief Finance Officer been consulted, if required?	Yes
Have equality, diversity and human rights implications been considered, as appropriate?	Yes
How is the recommendation consistent with the objectives of the Police and Crime Plan?	Electrification of the fleet is closely linked to the Police and Crime Plan, 'A Green and Pleasant County' through contributing to carbon management.
Has consultation been undertaken with people or agencies likely to be affected by the recommendation?	Yes
Has communications advice been sought on areas of likely media, community, staff or partner interest and how they might be managed?	Yes

Have all relevant implications and risks been considered?	Yes
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PART ONE – For publication

1. Purpose of the report

Constabulary Governance Board (June 2019) was presented with a paper and Full Business Case which covered proposals to expand the electric charging point infrastructure across the Force.

The Full Business Case provided information regarding background to the proposal, drivers, options, costs, benefits, risks and recommendations.

This report seeks support from PCC Governance Board to progress with the installation of a further 22 charging points across the estate to increase our ability to charge electric vehicles.

This will be necessary as the number of electric vehicles on the fleet increases.

2. Background

The commitment to ‘A Green and Pleasant County’ was made in the Police and Crime Plan 2017 – 2021. Little progress had been made towards electrification of the fleet prior to this review although there had been agreement to make a small increase to the number of charging points on our sites (as agreed following the recommendations made in the ‘Electric Charging Points’ CGB paper 14 November 2018).

On 5 December 2018, the ‘User & Building Requirements’ report was presented to the COG/OPCC monthly meeting. The paper summarised the current provision and actual requirement for vehicles to meet operational need. Cl Bourne was tasked with producing a further paper to consider and explain the options for electrification of the fleet at an accelerated pace. Response vehicles were deemed to be out of scope due to the limited capability of the technology at this time.

The anticipated changes that electrification would deliver relate to:

- Decreased negative environmental impacts
- Increased efficiency through reduced spend on fuel

With only 3% of the fleet electric at this time and with little infrastructure, an initial scoping phase took place to understand the potential scale and direction of the changes required to deliver significant increase in the electric fleet. This business case builds upon a decision paper ‘Electrification of the Fleet: Infrastructure and Approach’ considered by CGB 23 January 2019. CGB supported the agreement in principle to a tiered approach to electrification of the fleet:

- Tier 1: all possible unmarked vehicles. Target of 21% of vehicles being electric within 1 year.
- Tier 2: marked vehicles where safe target of 40% of vehicles being electric within 3 years.
- Tier 3: possible expansion to response vehicles if and when technology is in place. Target of over 40% of vehicles in total being electric when technology permits expansion to marked vehicles.

CGB approved the development of a full business case for Tier 1, with the expectation that Tier 2 will require a further business case in 3 years.

This business case deals with Tier 1 only.

Following this decision, activity has been underway to build upon the outlined approach and estimated costs and to address the questions and risks that were identified in scoping. The graphic below shows the main areas of research and testing that have been undertaken. Vehicles and infrastructure have been explored in parallel as they are intrinsically linked – we have no need for infrastructure without vehicles and no way to run vehicles without infrastructure.

3. Options and Recommendation(s)

Option 1: Do Nothing

There will be an ongoing need to take decisions about replacing vehicles that are end of life or that are no longer roadworthy. The Operational Transport Management Group reviews all requests for replacement and challenges the need to replace. Where replacement is required and swapping vehicles from other locations or departments is not viable, electric is the first choice. There will come a point, however, where the limited infrastructure to support electric vehicles prevents the purchase of electric as the vehicle of choice. Do nothing therefore represents a decision to purchase petrol or diesel vehicles with higher fuel, servicing and maintenance costs, over the more efficient electric vehicles.

Benefits

- The do nothing option avoids the initial higher outlay on electric vehicles compared to petrol or diesel and avoids the capital outlay on infrastructure.

Disbenefits

- There is a loss of opportunity to reduce environmental impacts associated with the do nothing option owing to continued use of petrol or diesel vehicles.
- Do nothing does not support the Police and Crime Plan 2017 – 2021.
- There is no opportunity to reduce fuel and servicing costs.

Option 2: Invest in Infrastructure- non-communicating charging points.

This option is to invest in the purchase and installation of 22 additional charging points for electric vehicles through a direct award to Chargemaster. This option is for the purchase of non-communicating units.

Benefits

- The charging capability provided would enable transport services to pursue the purchase of electric vehicles to meet the target of 21% of the fleet being electric.
- The increased use of electricity compared to petrol/diesel would represent a significant financial saving through reduced cost of fuel which would offset the investment.
- The increased use of electric vehicles compared to petrol/diesel vehicles would reduce the cost of servicing and maintenance of the fleet.
- The decreased use of petrol and diesel fuels would contribute significantly to reducing CO2 emissions. The benefits section demonstrates that implementation of this business case will achieve 27% of the overall target to reduce the tonnes of carbon emitted into the atmosphere by our whole Constabulary.
- No data and communication costs and lower cost of units.
- Slightly easier for staff to plug the vehicle in to be charged as there is no need to swipe any RFID cards.
- No administration burdens attached to the printing and issuing of RFID cards.

Disbenefits

- Cost of investment in infrastructure and higher purchase cost of electric vehicles compared to petrol/diesel. This would be offset by the savings against fuel and servicing costs and the eventual residual value of the vehicles at point of sale.
- The non-communicating unit does not provide the data required by the Environmental Manager to monitor and report on electricity usage. Whilst a proportion of this data could potentially be provided through vehicle telematics, there is additional private use of the charging points and the data collected from fleet vehicles would therefore be partial. The current stock of charging points across the estate is communicating and therefore there would be a mixed economy.
- Non communicating units require manual monitoring to detect faults. They cannot be fixed remotely and therefore there is a delay to resolving problems. This presents a risk that units will be out of order for long periods and therefore there is insufficient capacity to charge operational vehicles. This risk is particularly high at sites with a small number of charging points.
- There is no future proofing against changes in data and reporting requirements.
- There is no future proofing against changes to the policy not to charge private users in the event that uptake increases or regulations change.

Option 3: Invest in infrastructure – communicating charging points

This option is to invest in the purchase and installation of 22 additional charging points for electric vehicles through a direct award to Chargemaster. This option is for the purchase of communicating units.

Benefits

- The charging capability provided would enable transport services to pursue the purchase of electric vehicles to meet the target of 21% of the fleet being electric.
- The increased use of electricity compared to petrol/diesel would represent a significant financial saving through reduced cost of fuel which would offset the investment.
- The increased use of electric vehicles compared to petrol/diesel vehicles would reduce the cost of servicing and maintenance of the fleet. The decreased use of petrol and diesel fuels would contribute significantly to reducing CO2 emissions.

The benefits section demonstrates that implementation of this business case will achieve 27% of the overall target to reduce the tonnes of carbon emitted into the atmosphere by our whole Constabulary.

- The product is consistent with those already in use on the estate. It offers familiarity to users and provides a single system for monitoring and analysis.
- The communicating capability allows the Environmental Manager to track and monitor total usage and therefore offers data accuracy.
- The communicating capability enables remote fault detection and resolution. This greatly reduces the risk of charging points being out of order and therefore provides greater stability in terms of charging operational vehicles.
- Having control of the issuing of the associated RFID charge cards would more easily allow the Constabulary to better control the access to the charge points. This will provide security and support our commitment to allow our staff to use charge points for personal use where needed. At present this is supplied for free due to the very low costs but having control would allow us to charge internally to staff and also external to partners if required at later date to provide additional income.

Disbenefits

- Cost of investment in infrastructure and higher purchase cost of electric vehicles compared to petrol/diesel. This would be offset by the savings against fuel and servicing costs and the eventual residual value of the vehicles at point of sale.
- Cost of communications and data package make option 3 slightly more expensive than option 2. This would be offset by the fuel and servicing savings.

Recommendation

Option 3: Invest in infrastructure – communicating charging points

This option is to invest in the purchase and installation of 22 additional charging points for electric vehicles through a direct award to Chargemaster. This option is for the purchase of communicating units.

We believe that the additional £36,130 investment in the higher grade of charge posts has significant long term benefits particularly around automatic fixing, security and statistical reports on the environmental benefits, the communicating units also offer a degree of future proofing and flexibility not afforded by non-communicating units.

Proposed location of the new charging points

The additional 22 electric charging points will be installed at:-

Coleford	1
Compass House	11
Holland House	2
Hucclecote	1
Prism House	5
Workshops	2

4. Financial and resource implications

Following CGB, the Chief Finance Officer has supplied the following figures for the proposed recommendation:-

One off costs £145k – made up from:-

	£
Equipment & Installation	116,667
Contingency	14,584
Year 1 costs - S&M	5,478
Year 1 to 3 costs - data	7,920
Total	144,649

The funding for this is included in the provisional costing from the Constabulary's Transformation Programme.

Annual Revenue costs (from Year 2) £5,478

From Year 4, there will also be an additional £2,640 per year for data costs.

Procurement

SWPPD have been consulted to advise on the procurement route for charging points. They have provided the following decision and rationale:

'Chargemaster were awarded the initial Contract for electric charging points at Gloucestershire Police in 2015 following a tender process. Due to the proposed expansion proposal for charging points the SWPPD have identified the (ESPO-Eastern Shires Purchasing Organisation) Framework, this agreement allows for a direct award to a single supplier. The rationale for the direct award is based on the synergies with the existing charge points (inc. standardised vehicle charge cards) and single back office system used to manage the charging infrastructure across the Police estate. There are also internal administrative benefits in consolidating with a single supplier under a managed service for the monthly costs, warranty, servicing and maintenance'.

5. Risk assessment

A full risk assessment is contained with the Business Case paper – however, all risks have been considered and mitigation has been put in place.

6. Equality & Diversity impact assessment

At Tier 1, there are no negative impacts anticipated. Consideration has been given during surveys to the location of disabled parking facilities and these will not be affected. There may be an opportunity at Tier 3 to consider opportunities to provide electric vehicle charging points at disabled parking facilities however the majority of infrastructure is to be installed at WW HQ, where the Force does not own the car park close to the building. The requirement is seen to be primarily for private vehicles as

petrol or diesel vehicles will be made available for drivers requiring use of disabled parking facilities for work related purposes.

7. Environmental impact assessment

Gloucestershire Carbon Management Plan 2021 states that by the end of 2021 we will reduce the carbon emissions from our buildings, fleet and business travel by 15%, from a 2016/17 baseline of 5,180 tonnes of CO₂. This equates 777 tCo₂ per year.

Our Carbon management consultant predicts that every Diesel vehicle that travels 12,000 miles a year emits 3.5 tCO₂ as opposed to a comparable electric vehicle emitting 0.97 tCO₂ thus saving 2.53 tCO₂ per vehicle that we exchange.

Extrapolating these figures estimates that the replacement of 84 vehicles to electric vehicles would save the emission of 212 tCO₂ per year. 27% of the total carbon emissions that we want to achieve in the Gloucestershire Carbon Management Plan 2021 would therefore be delivered by this sole implementation plan.

8. Consultation

The CGB paper was subject to full consultation with members.

9. Discussed with Communications & Engagement

This will be shared with the Force as the infrastructure increases.

10. Conclusion

The Constabulary is committed to delivering the PCC's Green and Pleasant County strand of the Police and Crime Plan – the increase in charging points across the estate will support the planned increase in the number of electric vehicles in the fleet.

This increased infrastructure will provide a major contribution to the Constabulary's Carbon Management Plan target for 2021.

SPONSORING BOARD MEMBER APPROVAL

Name: Jon Stratford

Job title: Deputy Chief Constable

Signature:

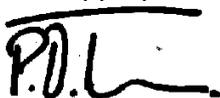


Date: 20/6/19

CHIEF EXECUTIVE APPROVAL

I am satisfied that relevant advice has been taken into account in the preparation of the report and that this is an appropriate request to be submitted to the PCC.

Signature:



Date: 21 June 2019