



Office for
Low Emission
Vehicles

Grant fund for the installation of plug-in vehicle charging infrastructure at train stations

August 2013
Version 2.1

The Office for Low Emission Vehicles (OLEV) is a cross Government, industry-endorsed, team combining policy and funding streams to simplify policy development and delivery for ultra-low emission vehicles. OLEV currently comprises people and funding from the Departments for Transport (DfT), Business, Innovation and Skills (BIS), and Energy and Climate Change (DECC). The core purpose is to support the early market for electric and other ultra-low emission vehicles (ULEVs). OLEV is based in DfT and this document is published by The Department for Transport.

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1. Introduction

- 1.1** The Government is seeking to increase the uptake of ultra-low emission vehicles in order to help achieve the key objectives of reducing carbon emissions and improving local air quality and maintaining UK industry's position at the forefront of this fast developing technology. A key barrier to uptake of these vehicles is a lack of suitably sited charging infrastructure. Train station car parks are ideal locations for such infrastructure because vehicles are often parked there for several hours a day, giving a good opportunity for plug-in vehicle drivers to top up their charge.

The aim of the scheme

- 1.2** Many train operators have already made a valuable contribution in this regard with chargepoints having been installed at several stations in recent years. Through this grant scheme we hope to help train operators maintain and accelerate this roll-out of infrastructure. Our ultimate ambition is that there would be plug-in vehicle recharging infrastructure available at every train station that has parking facilities. In the short and medium term, however, we believe that infrastructure should be targeted where it will be of most use to consumers – both those who already own a plug-in vehicle, and those who would be more likely to consider purchasing one, given the availability of such infrastructure. For this reason we would encourage train operators to consider the current and likely future needs of their customers when preparing their bids.

The benefits for train operators

- 1.3** Encouraging train users to use plug-in vehicles can help reduce the overall carbon emission of end-to-end journeys, helping train operators to fulfil their environmental commitments.
- 1.4** Prominent positioning of the points close to a station entrance will send an important and valuable message to customers about environmental commitment and corporate responsibility.
- 1.5** The global regulatory and technological landscape means that the rollout of plug-in vehicles across the UK is very much a “when” not an “if”. Uptake of vehicles is accelerating and there are several new models coming onto the market in 2013 and 2014. Charging infrastructure is something that more and more train customers will want and expect from

station car parks. We would therefore encourage train operators to ensure that they are prepared for this inevitable transition and can stake an early claim on this emerging market.

- 1.6** Once the electricity supply is in place for a chargepoint this can provide opportunities for further development, such as the installation of additional charging infrastructure, including electric bicycle schemes or electric hire-car schemes or car clubs, at a reduced cost.

2. The grant fund

- 2.1** £9 million of funding has been made available to train operating companies in England for which they can apply in order to cover a proportion of the costs of obtaining and installing plug-in vehicle charging infrastructure at English train stations.
- 2.2** The Government will fund 75% of the capital costs of procuring and installing charging infrastructure that meets the technical specification that is attached as Annex A. This can include surveys at the point of procuring the infrastructure, provided that these are capitalised.
- 2.3** We would strongly encourage train operators to install double-header points that are capable of charging two vehicles wherever possible in order to maximise value for money for the taxpayer. If you include single header installations in your bid, you must include justification, such as there only being room for one vehicle to park.
- 2.4** The funding will be capped at £7,500 per installation. The available evidence suggests that this is sufficient in the majority of cases. If, however, a train operator treats a series of installations at a number of sites as one project, the capital costs of the whole project can be submitted as one claim, of which the Government would pay 75%, capped at an average of £7,500 per installation. This will help to mitigate the risk of some installations costing considerably more than others because of specific local conditions.
- 2.5** The capital items that are eligible for claim are limited to:
- Cost of unit
 - Capital costs of a parking bay (paint and signage)
 - Electrical components
 - Civil engineering works
 - Labour costs (for installation)
 - Hardware costs
 - Capital costs of developing associated software systems
- 2.6** The operation of back offices, membership schemes, transaction costs for credit card payments and other non-capital costs cannot be funded under this grant scheme. We would encourage the train operators to explore what commercial agreements can be made with partner organisations to offset these costs, which would be beneficial to the train operators, the industry and to the customer.

- 2.7** Train operators do, however, have the option of developing their own software systems to manage a network of chargepoints. Any capital costs associated with such development can be included in the final claim, still subject to the same total £7,500 cap per installation

Conditions

- 2.8** There would be a number of conditions placed on the provision of funding:
- a. In order to qualify for funding, the infrastructure being installed would have to meet the specification attached at Annex A.
 - b. Usage data must be provided to OLEV for a period of 3 years from the point of installation in a specified form (see Annex B). The collation and submission of this data has been a condition of OLEV funding for a number of years and chargepoint installers and operators would be able to include it in any commercial agreement.
 - c. The points must be maintained and available for use for the remainder of the franchise or concession.
 - d. Any infrastructure installed would become Primary Franchise Assets (or Primary Assets of the Concession, where appropriate), to be returned at nil value at the end of the franchise/concession period. If a chargepoint is sited on land that is owned by a third party such as a local authority then the train operator must seek assurances in the form a written legal agreement that the assets will fall within TOC ownership, and are capable of being transferred to the next franchisee and that the local authority will not assert any ownership rights.
 - e. At least 50% of the parking spaces associated with a chargepoint must be designated as an “Electric Vehicles (EV) Only” parking bay, restricted for EV use only for at least part of the day.
 - f. Chargepoints funded under this scheme should be publically accessible, unless there is a clear business case for reserving them for an alternative use (see the Q&A section below), although they can be subject to reasonable parking restrictions, particularly where these restrictions apply to the whole car park, for example time limits on parking or reserving them for the use of train passengers only.
 - g. All chargepoints must be added to the National Chargepoint Registry which is an open resource listing all publically accessible chargepoints in the UK, designed for use by website and smart phone app developers as well as Sat Nav manufacturers. If the chargepoint is in an area subject to parking restrictions, such as time limitations or being for the use of or train passengers only, then this must be included on the relevant field on the NCR.
 - h. All chargepoints must have some form of “Pay as You Go” functionality (further guidance is contained in the Q&A section below).

Value for money

- 2.9** In assessing applications for funding, value for money will be a key consideration for OLEV. This will be achieved by determining that

funding is allocated to those places where investment is likely to have the most significant impact on supporting the early market for plug-in vehicles. Applications need to set out how you predict the infrastructure will be used, by whom and why.

Promoting the use of the infrastructure

- 2.10** It is important that plug-in vehicle drivers, or those who would consider buying one, are aware of the existence of any infrastructure that is funded. You should consider how you would promote use of the infrastructure, such as membership schemes, providing signage in the local area, or using local media outlets. As a minimum all chargepoints must be added the National Chargepoint Registry.

Door to door journeys

- 2.11** The Government wants to make it easier and more convenient for people to get from their origin to their destination by sustainable means. We would encourage train operators to consider how they can use plug-in vehicle charging infrastructure to maximise the benefits of integrating these two sustainable transport modes, helping travellers to complete their journeys quickly and easily while minimising their environmental impact.

The bid process

- 2.12** Train operators are invited to submit initial outline bids to OLEV using the pro-forma attached at Annex C. Further guidance on submitting bids is included in the pro-forma. The deadline for OLEV to receive initial bids is 31 October 2013.
- 2.13** Train operators will be given feedback on these initial outlines, and required to submit supporting documentation including robust project plans, detailed financial statements and confirmation of any matched funding that has been obtained, by the End of December 2013 at the latest.
- 2.14** OLEV should be kept informed of any changes to the plans or cost estimates. Train operators will need to obtain the prior agreement of the Secretary of State for Transport before any of the projects are significantly changed or abandoned or there is a change of train operator responsibility for a project. OLEV will supply train operators with templates that should be used for ongoing reporting of progress.
- 2.15** Payments of grant money will be made by OLEV in arrears. For payments to be made, train operators must provide OLEV with:

- a. Evidence that a competitive procurement process has been followed.
- b. Completed grant claim form (to be provided to successful applicants)
- c. Itemised invoices covering all costs that are being claimed.

3. Questions and answers

Q1. Why are you not offering 100% funding?

We have carefully considered the level of funding to offer under this scheme, taking into consideration many factors such as the current strength of the UK market, the level of funding being offered to other sectors, European State Aid Regulations and value for money for the taxpayer. As explained above, there are benefits to be had for train operators from installing these chargepoints, and so we would expect you to source funding for the remaining capital costs and the ongoing running costs, either from your own budgets or from elsewhere. There are several organisations in the UK market who may be willing to enter into partnership agreements with train operators, and we would encourage you to explore all of the options.

Q2. There is considerable demand for parking spaces in most stations, how can we ensure that this infrastructure is being used?

We would encourage train operators to incentivise their customers to make use of this infrastructure in order to maximise the benefits. This could be achieved through reduced parking charges, discounted or combination fares, or simply through the provision of free electricity. In any event, the anticipated increase in plug-in vehicles on our roads over the coming years means that infrastructure installed in key locations such as train stations is likely to be much in demand in the coming years.

Q3. How do we decide on the positioning of the chargepoints?

The positioning of the points in the station car park would be a decision for the train operator to take, but evidence from other sectors, such as supermarkets and other large shopping venues, is that prominent positioning of the chargepoints near to the entrance to the station building will help to ensure best use of the facilities in the long term. Although such prominent spaces are at a premium, positioning the points close to the buildings rather than in a far corner of a car park is likely to reduce installation costs and disruption, as in most cases less new cabling will be required. It will also increase the number of customers who see the facilities on a daily basis and who will take it into consideration when they are considering purchasing a plug-in vehicle in the future, helping to ensure its maximum usage in the medium and long term.

There may also be other restrictions based on rail and other regulations, such as rules about proximity to rail lines. You must ensure that all of the relevant regulations and guidelines are complied with.

Q4. Can we make the points available to electric taxi firms or car clubs to use, to help ensure that they are commercially successful?

Infrastructure funded under this scheme should be primarily for the use of members of the public, but if train operators want to maximise its usage by allowing businesses such as taxi firms or car clubs to use specific parts of the infrastructure then this is acceptable, as long as at least 50% of the infrastructure is reserved for the public or train passengers. An example of how this might work would be a double-headed chargepoint installed in a station car park with two demarked bays, one marked “Plug-in Vehicles Only” to be used by the public, the other reserved either for a plug-in vehicles car club or a plug-in vehicles taxi firm. Details of any charging infrastructure that will be used in this way must be included in the initial bid, otherwise it will be assumed that all chargepoints are intended entirely for public use. If a train operator wishes to change the use of a chargepoint that has been funded by the Government at some point in the future, then our agreement must first be sought for this change.

Q5. What about electric bicycle charging?

Electric bicycle chargepoints are not covered by the technical specification for this grant scheme and cannot be funded. The market for electric bicycles and their associated infrastructure is already quite well established and the Government's current view is that it does not require intervention in the same way that the emerging market for plug-in vehicles and their infrastructure does. However, once the plug-in vehicle points and their associated trunking are installed as part of this scheme, this would greatly reduce the cost of installing electric bicycle chargepoints in the future, thereby providing another benefit to train operators and their customers. It may also make sense for electric bicycle chargepoints to be installed at the same time as the plug-in vehicle chargepoints to minimise costs and disruption. If that is the case, the costs for each must be clearly itemised on the invoice sent with the final grant claim and only those costs associated with chargepoints that meet our technical specification will be funded.

Q6. How do you define “Pay as You Go functionality”?

To ensure ease of use for the public it is important that any plug-in vehicle driver can access any point with ease. When deciding on how to achieve this you can assume that all users will have a debit or credit card and a mobile phone. Asking users to register at the time of the transaction is not a problem, but any such registration should not include any tie in to longer term membership fees or a membership scheme. The user should also not be limited to a maximum number of charges without joining a membership scheme.

Q7. Why is the funding only available for stations in England?

The improvement of rail assets in Scotland, Wales and Northern Ireland are devolved matters and generally are for the devolved administrations to fund and manage.

Annex A - Minimum technical specification

The minimum technical requirements¹ of the chargepoint and its installation are as follows²:

Reference	Clause
1.0	INTRODUCTION
1.1	This document defines the specification of electric and plug-in hybrid electric road vehicles conductive charging equipment for use in a train station car park application.
1.2	Manufacturers/ suppliers of the proposed charging equipment shall demonstrate compliance as part of the project bid.
1.3	This specification is for the charging equipment only and not the final installation. However, it is required that the final installation will be in accordance with the current edition of the IET Wiring Regulations (BS 7671), the IET Code of Practice (CoP) for Electric Vehicle Charging Equipment Installations, Electricity Safety, Quality and Continuity Regulations 2002 and all other applicable standards.
1.4	Clause not required.
2.0	STANDARDS
2.1	Charging equipment shall be compliant with:
2.1a	BS EN 61851 Parts 1 & 22
2.1b	EC Directive for Electromagnetic Compatibility 2004/108/EC
2.1c	EC Directive for Low Voltage Equipment 2006/95/EC
2.1d	Clause not used
2.2	Charging equipment shall be CE marked in accordance with EC Directive 93/465/EEC.
2.3	The chargepoint shall have a minimum operational life of 3 years to satisfy the requirements of the OLEV grant scheme.
3.0	CHARGING MODES
3.1	Mode 1 charging shall not be compliant with this specification.
3.2	Mode 2 charging shall not be compliant with this specification.
3.3	Clause not required.
3.4	Charging equipment shall use Mode 3 charging.
3.5	Clause not required.
3.6	Clause not required.

¹ Technical specification supplied by Ove Arup & Partners Ltd (www.arup.com) at request of OLEV.

² Note that some clauses are not required for this specification. These are stated as 'Clause not required'.

Reference	Clause
3.7	If required, Mode 4 charging shall be compliant with this specification where supplied integral to compliant Mode 2 or Mode 3 charging equipment.
4.0	EQUIPMENT RATINGS
4.1	Clause not used.
4.2	Charging equipment shall be rated 230Vac, single-phase or 400Vac, three-phase.
4.3	Clause not required.
4.4	Clause not required.
4.5	Charging equipment output shall be rated up to 22kW.
4.6	Clause not required
4.7	Clause not required
4.8	Clause not required
4.9	Where dual outlets are provided the charging equipment shall be rated for both to operate at rated capacity simultaneously.
4.10	Where supplied integral to compliant AC charging equipment, DC charging equipment with output rated up to 22kw shall be permitted.
5.0	CONNECTORS/ OUTLETS
5.1	Clause not required.
5.2	Charging equipment shall utilise socket outlets (BS 61851:1 Case A2 or B2 connection) or tethered cables (BS 61851:1 Case C connection).
5.3	Clause not required
5.4	Clause not required
5.5	Clause not required
5.6	Charging equipment socket outlet shall be BS EN 62196 Type 2.
5.7	Clause not required
6.0	HUMAN MACHINE INTERFACE
6.1	Clause not used.
6.2	An RFID card/ tag reader shall be provided as an option to allow authorised use as part of membership schemes.
6.3	Hardware/ software facilities to enable "Pay As You Go" schemes shall be provided. Details shall be submitted with project bids.
6.4	Clause not used.
6.5	Charging equipment shall have display(s) to provide user instructions for payment/ access, equipment operation and status. (Alternatively, status may be indicated using lights, or LEDs.)
7.0	OTHER FEATURES
7.1	Charging Equipment integral protective device required to comply with BS EN 61851 Mode 3 charging shall be Type A RCD.
7.2	Where installed in an outdoor location, the charging equipment shall meet the minimum IP ratings set out in BS EN 61851:1.
7.3	The design of the charging equipment shall permit compliance with

Reference	Clause
	the requirements of BS 8300: 2009 + A1:2010.
8.0	ENERGY METER/ DATA ACQUISITION
8.1	Clause not required
8.2	Data acquisition compatible with OLEV Chargepoint Usage Data Requirements (refer to Annex B) shall be provided.
8.3	Clause not required
8.4	A MID-approved meter for each outlet with energy used output to display and output to data acquisition system shall be provided.
8.5	Clause not required
8.6	Data communications to allow remote data collection shall be provided.
9.0	DEFINITIONS
9.1	For the purpose of this specification, train station car park defines installation and use within a car park adjacent to a train station operated by a train operating company.

Annex B - Format for providing usage data

1. This Annex sets out the Office for Low Emission Vehicles' (OLEV's) Chargepoint Usage Data Requirements.

Data fields and definitions

2. Chargepoint suppliers are required to collect data on each charging event under each of the following data headings:
 - Anonymised ID of user
 - Chargepoint ID
 - Start date and time
 - End date and time
 - Total energy drawn (kWh)
 - Price
3. The definition of each of data field can be found in Table 2.1.
4. It is expected all data points will be recorded at > 95% accuracy. Note that OLEV will accept data supplied from units which records energy consumption at intervals of to a maximum of 30 minutes.
5. Data should be reported to OLEV in an excel file or equivalent, preferably with a filename in this format: *YYMMDD CP usage data - Chargepointsuppliername*. An example of the expected data file is below, with definitions for each data field detailed in Table 1.1 :

Charging event	User ID	CP ID	Start		End		Total kWh	Price
			Date	Time	Date	Time		
20	SL11429	WMP11418	03/03/2011	15:54	03/03/2011	16:46	2.83	£10/yr
21	...	...	...	...	...	...	...	...
22	...	...	...	...	...	...	...	...

Data return schedule

6. The schedule for data return to OLEV is as follows:
7. by end of Wednesday 1 May 2014 - first usage data batch
8. 1st (or next following working day) every 3 months thereafter for 3 years following installation unless otherwise instructed by OLEV.

9. Each data set should cover the preceding year quarter i.e. the data return due by 1 May 2014 should cover 1 January 2014 - 31 March 2013.
10. Data should be sent as per the above timetable by email to olev.enquiries@olev.gsi.gov.uk. Please ensure the subject header to your email is in the following format: 'DD/MM/YY - Train station CP Usage data - train operator name'

Data field definitions

Table 3.1	
Data field	Description
Anonymised unique user ID	A unique identifier for the chargepoint user / membership card that enacts the charging event in question – RFID membership card identifier or equivalent. Roaming visitors to the scheme should be clearly distinguishable, if this is technically possible. Pay as you go events should be indicated as such.
Identifier for chargepoint	Unique identifier for chargepoint. This should match the chargepoint ID used on all forms and claim forms
Start date and time (dd/mm/yyyy) (00:00h)	The date and time that the charging event began, 24-hour clock, expressed to the nearest minute possible. OLEV will accept data supplied from units which record energy consumption at intervals of up to a maximum of 30 minutes.
End date and time (dd/mm/yyyy) (00:00h)	The date and time that the charging event finished, 24-hour clock, expressed to the nearest minute possible.
Total energy drawn (0.00kWh)	The volume of electricity drawn during the charging event, in kWh, rounded to two decimal places. If this is not directly recordable and you wish to infer this from the charging time and power rating of the unit please contact OLEV to discuss exactly how you propose to estimate

	the kWh drawn.
Price paid by end user (£0.00)	The price paid by the end consumer for this charging event, pounds and pence.

Annex C - Initial bid outline - train station scheme

Application details

Project Name	
Train Operator	
Project manager contact name/s	
Project manager contact job title/s	
Project manager contact email/s	
Project manager contact telephone/s	
Train Operator address	
Partner 1 Name & Address	
Partner 2 Name & Address	
Partner 3 Name & Address	
Partner 4 Name & Address	
Partner 5 Name & Address	

Your project

Please write a short summary of the content & objectives of your project.

Guide - 500 word maximum

Your planned infrastructure

Please use the space below to give details of the infrastructure that you are planning to install. You should include as a minimum:

- The number of chargepoints you plan to install
- The type(s) of chargepoints (connector type(s), kilowattage etc.)
- A description of the locations.
- Details of any preliminary feasibility assessments or survey work that has been conducted, including their outcomes

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Are you or any of your partners receiving funding from other Central Government or European Union sources that is being used as match funding for this project? If so, please provide details here.

Organisation	Additional funding arrangements	Conflicts of Interest

Value for money

Please provide an explanation of how the project provides value for money.

Value for Money
Guide - 500 word maximum

Promoting use of the infrastructure

Please provide evidence of how you will maximise the benefits of the infrastructure once it is installed.

Promotion
Guide - 500 word maximum

Implementation

Please provide an explanation of how the project will be implemented.

Delivery plans
Guide - 500 word maximum

When completed, this form should be emailed to olev.enquiries@olev.gsi.gov.uk.

Annex D - Process diagram

