

**Public and stakeholder consultation on a  
Variation Order to modify the  
Congestion Charging scheme**

**Scheme Description and  
Supplementary Information**

## Table of contents

|  |    |
|--|----|
| 1. Introduction.....   | 3  |
| 1.1 Purpose of the document .....  | 3  |
| 1.2 Background and scheme description .....  | 3  |
| 2. Description and operation of proposals .....  | 5  |
| 2.1 Introduce a new Ultra Low Emission Discount to replace the Greener<br>Vehicle Discount and Electric Vehicle Discount ..... | 5  |
| 2.2 Removing the option to pay the charge in shops .....   | 9  |
| 2.3 Increase the penalty charge .....  | 9  |
| 3. Impacts .....   | 10 |
| 3.1 Impacts on traffic and congestion.....   | 10 |
| 3.2 Environmental and air quality impacts.....   | 11 |
| 3.3 Social and equalities impacts .....  | 11 |
| 3.4 Revenues and costs.....  | 11 |
| 4. Next steps and timetable .....  | 12 |

## **1. Introduction**

### **1.1 Purpose of the document**

Proposal 129 of the Mayor's Transport Strategy (MTS) sets out that the Congestion Charging scheme will be kept under review with variations made to ensure it remains effective in reducing traffic and congestion in central London and reflects best practice and other developments in relation to its operation and discounts and exemptions.

The Mayor of London, Boris Johnson, has asked Transport for London (TfL) to consult on proposals to modify the scheme to:

- Introduce a new Ultra Low Emission Discount (ULED) to replace the Greener Vehicle Discount (GVD) and Electric Vehicle Discount
- Remove the option to pay the Congestion Charge in shops (the retail payment channel)
- Increase the penalty charge from £120 to £130

Changes to the Congestion Charging scheme require public and stakeholder consultation, with the changes set out in a Variation Order (VO). This document provides information on the proposals set out in the VO and sets out the forecast impacts of the proposals.

If implemented, the first day the proposals would come into effect would be 29 April 2013 for the penalty charge increase; 28 June 2013 for the closure of registrations for the GVD and Electric Vehicle Discount and the closure of the retail payment channel; 1 July 2013 for the introduction of the ULED; and 26 June 2015 for the closure of the GVD.

### **1.2 Background and scheme description**

The central London Congestion Charging scheme was introduced in February 2003. The primary objective of the scheme is to reduce traffic and congestion in central London, and the scheme has been successful in doing this. Since its introduction, there have been a number of changes to the scheme, including to the level of the daily charge and penalty charge, the charging area, payment methods and to the discounts and exemptions from the charge.

The Congestion Charge applies to all motorised vehicles being driven on or kept on a public road within the zone from 7am to 6pm, Monday to Friday, unless they are exempt or registered for a discount. The £10 daily charge is payable in advance or before midnight on the day of travel. Drivers paying by midnight the next charging day after travelling in the zone pay £12.

Congestion Charging Auto Pay (CC Auto Pay) is an automated payment system which automatically records the number of days a vehicle travels within the charging zone each month and bills the account holder's payment card accordingly. Drivers registered for CC Auto Pay avoid penalty charges for forgetting to pay the charge and pay a reduced daily charge of £9. An annual £10 registration charge per vehicle applies to register for CC Auto Pay.

Drivers can also pay online or pay by phone in advance, by midnight on the day of travel or by midnight the following charging day. In addition, drivers can register with TfL to pay by mobile phone text message or pay the charge in selected shops and petrol stations before midnight on the day of travel. Drivers can also pay the charge in advance by post. TfL needs to receive payment 10 days before the date of travel if paying by post.

Drivers who do not pay the charge by midnight on the next charging day after travelling in the Congestion Charging zone, pay the charge for an incorrect vehicle registration or pay for an incorrect date of travel are liable to receive a Penalty Charge Notice (PCN). The penalty charge is currently issued at £120 and is reduced to £60 if paid within 14 days or is increased to £180 if not paid within 28 days.

### ***Environmental discounts***

Discounts from the Congestion Charge can provide the Mayor with a lever to encourage drivers to switch to the cleanest possible vehicles. Since the scheme's introduction, there have been 100% discounts from the charge for electric vehicles and for alternative fuel/ low emission vehicles.

The GVD was introduced in January 2011 and provides a 100% discount from the Congestion Charge for cars that have carbon dioxide (CO<sub>2</sub>) emissions of 100g/km or less and meet the Euro 5 air quality standard<sup>1</sup>. The aim of the GVD is to encourage a shift to the use of the cleanest cars available on the market and the eligibility criteria is intended to reflect best practice on vehicle emissions.

The GVD replaced the Alternative Fuel Discount, which ran from February 2003 until December 2010. The Alternative Fuel Discount provided a 100% discount for certain vehicles powered by an alternative fuel and not solely petrol or diesel, which also met minimum air quality emissions requirements. Technological developments had resulted in a number of conventional petrol and diesel cars having lower CO<sub>2</sub> emissions than some cars eligible for the discount and the discount was no longer considered to represent best practice. For these reasons, the Mayor decided to close the discount to new registrations on 24 December 2010. At its closure there were around 27,000 alternative fuel vehicles registered for the discount and around 9,000 eligible vehicles appearing in the charging zone each day. Drivers registered for the Alternative Fuel Discount before it closed continue to receive the discount until December 2012, after which they will be required to pay the full daily charge, unless they are eligible for another discount.

In January 2011, the 100% Electric Vehicle Discount was widened to include plug-in hybrid electric vehicles that meet minimum criteria. Plug-in hybrids use a battery pack, charged from the mains supply overnight, but also feature an internal combustion engine.

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<sup>1</sup> This is a European Union standard that limits the levels of air pollutant emissions for new vehicles sold in Europe, with which all vehicles manufacturers must comply. Euro 5 applies to cars registered as new with the Driver and Vehicle Licensing Agency (DVLA) on or after 1 January 2011 and vans registered as new on or after 1 January 2012. Euro 6 will apply to cars and vans manufactured from September 2014 and September 2015, respectively.

## **2. Description and operation of proposals**

### **2.1 Introduce a new Ultra Low Emission Discount to replace the Greener Vehicle Discount and Electric Vehicle Discount**

#### **2.1.1 Background and context**

When it was introduced, the Mayor committed to review the GVD by 2013, recognising that, as the low emission vehicle market grew, increasing numbers of cars qualifying for the discount would enter the Congestion Charging zone and could start to erode the congestion and environmental benefits of the scheme.

TfL's review of the GVD has shown that, while the discount successfully increased the proportion of lower emission cars using the zone by around 30%, thereby helping to reduce air pollution, increasing traffic resulting from the GVD was estimated to have caused additional congestion valued at around £1.5m net in 2011. The GVD has capitalised on the trend in reducing CO<sub>2</sub> emissions in the new car market generally and has also led to a reduction in CO<sub>2</sub> emissions compared with the Alternative Fuel Discount, which it replaced.

The GVD has been an important first step on the way to focusing Congestion Charging incentives on the cleanest ultra low emission vehicles, while recognising that the market for these vehicles, particularly electric vehicles, was less mature. However, there have been recent advances in the design and technology of electric vehicles, which gives the latest generation models greater equivalence with conventional petrol or diesel vehicles. The range of these models, in excess of 70 miles, and maximum speeds over 60mph also make them more than adequate for London driving, where around 90% of all car trips are under six miles. In addition, the infrastructure to support electric vehicles is becoming more widespread, with over 800 publicly available charge points currently in operation across London. Grants from the Office for Low Emission Vehicles (OLEV), cheaper maintenance costs, exemptions from vehicle excise duty and company car tax and rising fuel costs for conventional vehicles make electric vehicles relatively more cost effective over their life span, despite being more expensive than conventional diesel or petrol vehicles to purchase.

If no changes were made to the GVD, it is expected that the number of cars registering for the discount and using the zone would continue to increase. When the GVD was introduced in January 2011, around 18 models of car met the eligibility criteria and this has now risen to 54 models. As of October 2012, almost 17,500 cars were registered for the GVD and, at the present rate of uptake, the GVD could exceed 26,000 registrations by the end of 2013.

Presently, around 2,500 GVD eligible cars are observed in the Congestion Charging zone on a typical weekday during charging hours. Of these eligible cars, around 1,000 are registered for and claiming the GVD on an average day.

Continuing with the GVD in its present form would be expected to increase traffic volumes and congestion in the Congestion Charging zone because the provision of a 100% discount creates an incentive for certain drivers to enter the zone who were previously deterred, or travelling by other modes. It is forecast that up to 6,000 GVD eligible cars could be seen in the zone daily in charging hours by the end of 2013. This group could also be further boosted by drivers who were receiving the Alternative Fuel Discount and for whom the sunset period ends at the end of 2012. Some of the drivers receiving the Alternative Fuel Discount could be expected to purchase a GVD eligible car to maintain a 100% discount.

The cars currently eligible for the GVD are relatively cheaper than equivalent sized electric models. While an electric quadricycle, for example the Renault Twizy, can be purchased for £6,690, generally electric cars range from £18,000 to £30,000 (inclusive of the £5,000 grant from the Office for Low Emission Vehicles). In contrast a conventional petrol or diesel car qualifying for the GVD costs between £6,000 and £16,000. Without changes to the GVD, there is a risk that the discount could reward car purchasing behaviour that needs no incentive because of the low purchase costs of the eligible cars. In addition, with the expansion of the electric and ultra low emission car markets, cars eligible for the GVD are no longer the cleanest vehicles on the market.

Over half of the car models that meet the criteria for the GVD are diesel. Diesel cars have lower CO<sub>2</sub> emissions than petrol models with equivalent output. However, current diesel cars emit oxides of nitrogen (NO<sub>x</sub>) and particulates (PM) at levels at least three times greater than petrol cars. Furthermore, research into the application of the European Union's air quality standards for vehicles has highlighted that the recent standards do not deliver the expected improvements in emissions of NO<sub>x</sub>, especially for diesel cars and vans. Over the past few years, the amount of primary nitrogen dioxide (NO<sub>2</sub>) emitted directly by these vehicles has increased and overall NO<sub>x</sub> emissions (which include NO<sub>2</sub>), have tended to stabilise, rather than reduce. However, it is expected that the NO<sub>x</sub> and PM differential for petrol and diesel cars should decrease as Euro 6 models become available.

The number of electric vehicles using the Congestion Charging zone has remained relatively stable for the past two years, although is expected to increase as the electric vehicle market expands. There are currently around 2,000 vehicles registered for the Electric Vehicle Discount and around 400 electric vehicles use the zone daily.

### **2.1.2 Proposed changes to Congestion Charge discounts**

It is proposed that registrations for the GVD and Electric Vehicle Discount would close on 28 June 2013 and the ULED would be introduced on 1 July 2013.

The ULED would be a 100% discount from the Congestion Charge, with a £10 annual registration payment. It would apply to electric vehicles and any other ultra low emission cars or vans (light goods vehicles not exceeding 3.5 tonnes) that emit 75g/km or less of CO<sub>2</sub> and meet the Euro 5 emission standard. Pure electric and plug-in hybrid electric cars, commercial vehicles and quadricycles that are currently eligible for the Electric Vehicle Discount would all qualify for the ULED and would be automatically transferred to the new discount on 1 July 2013. Drivers of these vehicles would then be required to pay the annual registration payment of £10 once their discount is due for renewal, which is in keeping with other types of Congestion Charging discounts.

The proposed vehicle criteria for the new ULED are set out in Table 1 below. A list of electric vehicle and plug-in hybrid electric vehicle models that would qualify for the ULED can be found on the Source London website at [www.sourcelondon.net/electric-vehicle-models](http://www.sourcelondon.net/electric-vehicle-models).

Cars currently registered for the GVD would not meet the CO<sub>2</sub> emissions criteria for the new ULED. However, a sunset period would apply whereby cars registered for the GVD when it closes would continue to receive the discount for a further two years, until 26 June 2015. If the vehicle owner sells the vehicle during this period, the new owner would not be eligible for the GVD.

The sunset period is in recognition of the fact that many drivers have made a decision to purchase an eligible low emission car in order to register for the GVD and allows time for electric vehicles to become more mainstream. TfL and the Mayor have always been clear that Congestion Charging discounts do not exist in perpetuity and all discounts are regularly reviewed and could be subject to change.

The ULED continues to offer a technology neutral approach and ensures that, unlike the GVD, both cars and vans that meet the emissions criteria would qualify. The focus of the new discount is consistent with the Mayor's policy to promote electric vehicles and his aspiration to make London the European capital for electric vehicles. It also aligns with Government policy to encourage the use of ultra low emission vehicles.

**Table 1: Vehicle criteria and eligibility for the proposed Ultra Low Emission Discount**

| <b>Criteria</b>                | <b>Eligibility</b>   | <b>Detailed description</b>  |
|--------------------------------|--|--|
| <b>Pure electric vehicles</b>  | <p>Cars, vans, lorries and quadricycles that run solely on batteries.</p> <p>Note: motorcycles remain exempt from the Congestion Charge.</p>   | <p>Eligible vehicles will have the fuel type recorded as 'electric' on the V5C car registration document or be defined as a vehicle for which a nil licence is in force by virtue of being an exempt vehicle for the purposes of the Vehicle Excise and Registration Act 1994 in accordance with paragraph 20G (electrically propelled vehicles) of Schedule 2 to that Act.</p>  |
| <b>Ultra low emission cars</b> | <p>Cars that emit less than 75g/km of CO<sub>2</sub> and meet the Euro 5 emission standard.</p> <p>This group currently includes plug-in hybrid electric cars but could in future include ultra low emission petrol, diesel or hydrogen cars.</p>      | <p>Eligible passenger cars are those of any means of propulsion that are type approved in category M1 (the EU classification for cars) and emit less than 75g/km CO<sub>2</sub>, as recorded on the V5C registration document.</p> <p>Internal combustion engines must be type approved to a minimum of the Euro 5 air emission standard.</p> <p>Plug-in hybrid electric cars must have a minimum range of 10 miles in electric mode and a maximum speed of at least 60mph. TfL will publish a list of eligible vehicles.</p>                |
| <b>Ultra low emission vans</b> | <p>Vans that emit less than 75g/km of CO<sub>2</sub> and meet the Euro 5 emission standard.</p> <p>There are currently no vehicles available in this group but in future could include ultra low emission hybrid, plug-in hybrid or hydrogen vans.</p> | <p>Eligible light goods vehicles are those of any means of propulsion that are type approved in category N1 (the EU classification for light duty vehicles with gross vehicle weight of 3.5 tonnes or less) and emit less than 75g/km CO<sub>2</sub>.</p> <p>Internal combustion engines must be type approved to a minimum of Euro 5 emission standard.</p> <p>Plug-in hybrid electric vans must have a minimum range of 10 miles in electric mode and a maximum speed of at least 50mph. TfL will publish a list of eligible vehicles.</p> |



## 2.2 Removing the option to pay the charge in shops

### 2.2.1 Background and context

The retail payment channel allows drivers to pay the Congestion Charge in selected shops and petrol stations in advance or until midnight on the day of travel. Payments can be made using cash or by credit or debit cards or cheque at the discretion of the retailer. Shops where payments can be made are identified with the Congestion Charging logo or the epay logo, as shown below.



When the Congestion Charge was introduced in 2003, the retail channel was the most popular payment method accounting for 37% of all charge sales. Over time, the volume of retail sales has declined and charges purchased in shops now make up around 6% of all charges.

The decline in retail sales has been attributed to the promotion of other payment channels, such as through the website, by mobile phone text message and, most recently, through automatic payment accounts. CC Auto Pay was introduced in January 2011 and around half of customers now use it. As CC Auto Pay grows in popularity it is anticipated there would continue to be a decline in retail users.

The retail channel is provided under contract to TfL by epay. TfL pays epay a transactional cost based on the volume of charge sales. With the declining number of retail transactions, this payment channel is no longer cost effective for TfL.

### 2.2.2 Proposed changes to retail channel

It is proposed that the retail channel closes on 28 June 2013. After this date, customers would no longer be able to pay the Congestion Charge using cash in shops. The Barclays Cycle Hire scheme sets a precedent requiring a debit or credit card to use their service.

## 2.3 Increase the penalty charge

### 2.3.1 Background and context

A Penalty Charge Notice (PCN) is a formal penalty notification. It is sent to the registered keeper of a vehicle that's been driven, or parked on a public road, in the Congestion Charging zone in charging hours, when the appropriate charge was not paid in the allowable time frame.

There are a number of reasons why a driver may be issued with a PCN, including not paying the daily charge by midnight on the next charging day after travelling in the zone or paying the charge for an incorrect vehicle registration number or for the incorrect date of travel.

### **2.3.2 Proposal**

It is proposed to increase the penalty charge from £120 to £130 for non-payment of the Congestion Charge. This would bring the penalty charge in line with moving traffic, bus lane and parking penalty charges. This would be only the third increase to the penalty charge since the Congestion Charging scheme was introduced in 2003.

From 29 April 2013, the penalty charge would be £130, reduced to £65 if paid within 14 days or increased to £195 if not paid within 28 days.

## **3. Impacts**

The impact assessment of the VO considered the impacts of the proposed changes on a range of categories, based on the MTS primary and secondary objectives. The impact assessment identified that the proposed changes would have an effect on sustainable transport and travel patterns, equality, air quality and CO<sub>2</sub> emissions. No effects were identified on economic efficiency and productivity, health and wellbeing, safety and security and the physical and built environment.

A summary of the key impacts is presented below. Overall, the impacts of the proposed changes were found to be small and not significant.

### **3.1 Impacts on traffic and congestion**

The closure of the GVD would result in a small reduction in traffic in the Congestion Charging zone during charging hours as some of the previously induced traffic (around 2,000 cars per day by end of 2013) is deterred again. This effect would diminish as the market for vehicles claiming the ULED grows. It is estimated that the induced traffic contributes less than 0.5% to total traffic volumes so the effect on both traffic speed and congestion of removing these vehicles would be small.

The two year sunset period for the GVD would allow drivers registered for the discount to make potential savings of up to £4,536 (at the CC Auto Pay rate) if they were to drive in the zone on each charging day up to 26 June 2015. This is a significant proportion of the purchase price for many of the GVD eligible cars. Even with the removal of the discount, these cars continue to benefit from reduced vehicle excise duty rates and lower fuel costs as they tend to be more fuel efficient.

It is anticipated that the number of ultra low emission vehicles registered for the ULED would increase to in excess of 8,000 vehicles by the end of 2015 as the market expands and drivers take advantage of the Office for Low Emission Vehicle's grant, exemptions from vehicle excise duty and company car tax, the 100% discount from the Congestion Charge and generally lower running costs. It is forecast that around 2,000 ultra low emission vehicles would claim the ULED on a daily basis by the end of 2015.

### **3.2 Environmental and air quality impacts**

The 2,000 vehicles expected to claim the ULED on a daily basis by the end of 2015 could potentially save 15 tonnes of NO<sub>x</sub> and 740kg of PM<sub>10</sub> per year, based on an annual distance of 10,000km per vehicle, compared with the current air pollutant emissions for new cars in the UK. In the longer term, the increase in the proportion of vehicles emitting no or fewer emissions using the Congestion Charging zone would be expected to lead to reductions in air pollutant emissions.

The technical standards for the ULED would, for the foreseeable future, address the issue of higher air pollutant emissions from diesel cars and vans. Currently the only vehicles eligible for the ULED are pure electric vehicles and plug-in hybrid electric vehicles. Most of the plug-in hybrids utilise petrol engines and therefore do not emit significant levels of air pollutants. It is further anticipated that plug-in hybrids operating under the ULED could run on 'electric only' mode while in the Congestion Charging zone. This means that, as the take up of the ULED increases, a steadily growing group of electric vehicles and plug-in hybrids could potentially emit no exhaust emissions whilst operating in sensitive urban areas within central London.

Any incentives to encourage the uptake of electric (and plug-in hybrid electric) vehicles could also be considered to have a further positive impact on emissions of air pollutants because, in addition to having no tailpipe emissions, some of these vehicles have lower tyre and brake wear emissions of PM<sub>10</sub> owing to deployment of regenerative braking systems.

The ULED would incentivise the uptake of the cleanest vehicles available, currently electric cars and vans, by reducing incentives for the purchase of other less clean (albeit still low emission) cars, thereby contributing to reductions in CO<sub>2</sub> emissions. However, given the relatively small number of electric vehicles being driven on London's roads, the reductions in CO<sub>2</sub> emissions would be very small. If the number of vehicles claiming the ULED reaches 2,000 by the end of 2015 and these vehicles cover 10,000km per annum, this would lead to a reduction in CO<sub>2</sub> emissions of 1,000 tonnes per annum, compared with the current average CO<sub>2</sub> emissions for new cars in the UK.

### **3.3 Social and equalities impacts**

The closure of the retail payment channel would disadvantage customers who do not have access to a debit or credit card. Socially excluded people, including those on low incomes and the unemployed, are less likely to have bank accounts and, by proxy, access to debit or credit cards, but are also less likely to own a car and drive it in the Congestion Charging zone. While TfL does not have specific data on the numbers of drivers who use the Congestion Charging zone who do not have access to a debit or credit card to pay the charge, the consultation provides an opportunity to further investigate whether there are any implications from the removal of the retail channel.

### **3.4 Revenues and costs**

The removal of the GVD would be expected to generate additional Congestion Charging income of between £1m and £2m per year.

The removal of the retail payment channel would be expected to save TfL £600,000 per year.

The proposed increase in the penalty charge would result in £20.5m extra net income over the TfL Business Plan period 2013/14 to 2021/22.

There would be some costs to TfL associated with implementation of the proposed changes. The most significant change is the creation of a new ULED and the closure of the GVD and Electric Vehicle Discount, which the Congestion Charging service provider, IBM, would deliver.

There would also be some other (one off) costs associated with introducing the changes, such as a public information campaign. These would be part of the same publicity campaign thereby minimising the costs involved.

#### **4. Next steps and timetable**

This scheme description and supplementary information document is provided as part of the statutory consultation on the VO.

The consultation runs from 19 November 2012 to 8 February 2013. Information on how to respond to the consultation, including an online form, is available from [www.tfl.gov.uk/ccyourviews](http://www.tfl.gov.uk/ccyourviews).

Following the close of consultation, TfL will prepare a report to the Mayor reflecting the comments received during the consultation and provide the Mayor with all of the responses it receives. The Mayor will then make a decision on whether or not to go ahead with the proposals and confirm the VO, with or without modifications.

Should the Mayor confirm the proposals, the next steps in the process would be:

|               |   |
|---------------|---|
| 29 April 2013 | Congestion Charge penalty charge increase from £120 to £130   |
| 28 June 2013  | Closure of the retail payment channel<br>Closure of the GVD and Electric Vehicle Discount   |
| 1 July 2013   | Introduction of the Ultra Low Emission Discount <ul style="list-style-type: none"><li>• Drivers registered for the Electric Vehicle Discount would be automatically transferred to the new ULED</li><li>• Drivers registered for the GVD would continue to receive the GVD for a further two year period, until 26 June 2015</li><li>• ULED eligible vehicles that were not registered for the GVD or Electric Vehicle Discount could register for the new ULED</li></ul> |
| 26 June 2015  | End of GVD sunset period <ul style="list-style-type: none"><li>• From 29 June 2015, drivers registered for the GVD would pay the full daily charge, unless they are eligible and have registered for another discount.</li></ul>  |