HM Treasury

Vehicle Excise Duty:
call for evidence

March 2020

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Chapter 1
Introduction

1.1 In 2019, this country took decisive action to fight climate change, becoming the first major economy in the world to put into law a requirement to reduce our net greenhouse gas emissions to zero by 2050. Budget 2020 has set this country on a clear course towards its transition to a net zero economy.

1.2 It is clear that if the UK is to achieve this target, it must address emissions from transport, which currently accounts for 28% of UK greenhouse gas emissions. The majority of transport emissions come from road transport, with cars and vans accounting for 70% of domestic transport emissions. To this end, this government has announced a consultation on the earliest possible phase-out date for the sale of new petrol and diesel cars and vans, taking into account the recommendation of the Committee on Climate Change to bring this forward from 2040 to 2035, or earlier if a faster transition is feasible. The consultation will also explore including hybrid vehicles in the target. Alongside this, the government's ambition is that by 2030 between 50% and 70% of new car sales will be zero emission. As we move towards these targets, the government would therefore like to explore ways of improving the ability of Vehicle Excise Duty (VED) to incentivise lower-emission car purchases.

1.3 Specifically, the government wants to understand how the VED regime influences individuals and fleet car purchasers when deciding which vehicle to purchase, and what bearing it has on manufacturers when deciding which models to produce.

Background

1.4 VED rates for cars have been based on the carbon emissions of vehicles since 2001. In 2017, a new regime was introduced to strengthen the incentive to purchase lower-emitting cars by significantly increasing the first licence VED rates for the most highly emitting cars, which are in the highest tax bands. A standard, flat rate was then charged in subsequent years for most cars (see box 2.A).

1.5 The government has welcomed the Worldwide harmonised Light-vehicle Testing Procedure (WLTP) which ensures a more rigorous set of tests to model-specific tail pipe emissions. By providing consumers with more accurate information regarding the environmental impact of their new car, consumers can make more informed decisions when they purchase cars. In July 2019, the government responded to a review of the impacts of WLTP on VED and the company car tax regime. As part of this, the government

announced that it would publish a call for evidence seeking views on a more dynamic approach to VED which recognises smaller changes in carbon emissions.

New Car Sales

1.6 The average carbon emissions of new cars have fallen significantly over the last two decades, with reductions every year until 2016. That average increased for the first time in 2017, by 0.8%, and by 2.9% in 2018. Initial data for 2019 suggests the upwards trend is set to continue, despite modest growth in the sale of battery electric vehicles. There are a number of reasons for this, including introduction of WLTP (which provides more accurate data on emissions) and the rising popularity of the sports utility vehicle (SUV). According to the International Energy Agency, the growing number of SUVs are the second-largest contributor to the increase in global carbon emissions since 2010 after the power sector.

1.7 The government believes that the VED rate should send a strong signal to individuals and businesses about which cars to buy as we transition to zero emission vehicles, rewarding those who purchase zero emission and alternatively fuelled cars with no, or lower tax, while ensuring the greater share of the tax burden falls on those who purchase the most polluting cars. The current system also treats RDE2 compliant diesel cars in the same way as petrol cars, reflecting the fact that their improved technology means they have similar NOx emissions to petrol cars.

1.8 Responses to this call for evidence are intended to inform government considerations over how best to achieve this.

1.9 Chapter 2 focusses on how first licence VED rates could be reformed and invites views on the merits of a granular system. Chapter 3 considers whether and how government could strengthen the link between VED liabilities and carbon emissions following first registration. Chapter 4 considers the VED treatment of motorcycles and air quality.

Chapter 2

Reforming First Licence VED Rates

2.1 Since 2001, VED liabilities have been calculated using emissions bands (see box 2.A). The bandings were designed to create a simple link between VED liabilities and carbon emissions. However, as set out above (see introduction), there is evidence to suggest that this approach has limitations in the extent to which it incentivises the take-up of lower-emission cars. There are two issues with the banded system.

2.2 First, the bands create a 'cliff-edge' system that does not reward manufacturers for improving their vehicles' efficiency within bands. This potentially leads to perverse incentives for manufacturers to produce vehicles with carbon emissions at the top end of VED bands.

2.3 Second, the differentials between band rates are uneven, meaning any given gram of carbon at the lower end of the tax bands is treated differently to a gram of carbon at the higher end of the bandings.

2.4 The government believes that a granular system has the potential to address both issues, because it would reward every gram of carbon efficiency.

Box 2.A: How is VED liability calculated now?

VED liabilities for all cars registered from 1 March 2001 are linked to carbon emissions.

Annual VED liabilities for cars registered between 1 March 2001 and 31 March 2017 are calculated using a graduated band system. In 2019-20, cars with emissions under 100 g/km pay no VED, whilst those with emissions over 255 g/km are liable to pay £570.

For cars registered from 1 April 2017, first licence VED is linked to CO_2 emissions. In 2019-20, zero-emission vehicles are liable to pay no VED, whilst vehicles with emissions over 255 g/km are liable to pay £2,135. In subsequent years most cars move to a standard rate. The exceptions are electric cars which attract a £0 rate, hybrids which receive a £10 discount, and expensive cars with a list price exceeding £40,000, which pay an additional supplement for five years.

The merits of a granular system

2.5 Under a granular system, first licence VED liabilities would be calculated exactly according to the carbon emissions recorded on a vehicle model's certificate of conformity. This would mean that a vehicle that emits 129 (g/km) would pay less VED than a vehicle that emits 130 (g/km). This system has two key benefits:

2.5.1 A granular system would eliminate the 'cliff edges' that currently exist between VED bands. It would provide continuous incentives for manufacturers to produce lower emitting vehicles, and for car buyers to make lower emitting choices through reduced VED liabilities.

2.5.2 A granular system would use a formula to calculate VED liabilities, meaning all carbon above the de minimis level is treated the same, creating a smooth curve of increasing VED liabilities. This would be used for all vehicles, eradicating the perceived unfairness that exists between different VED bands.

2.6 A granular system has been effectively implemented internationally. For example, a granular system of vehicle taxation was introduced in France in 2017. The French government use a continuous function to calculate the tax liabilities of vehicles that emit between 126 to 190 g/km.

How would a granular system work?

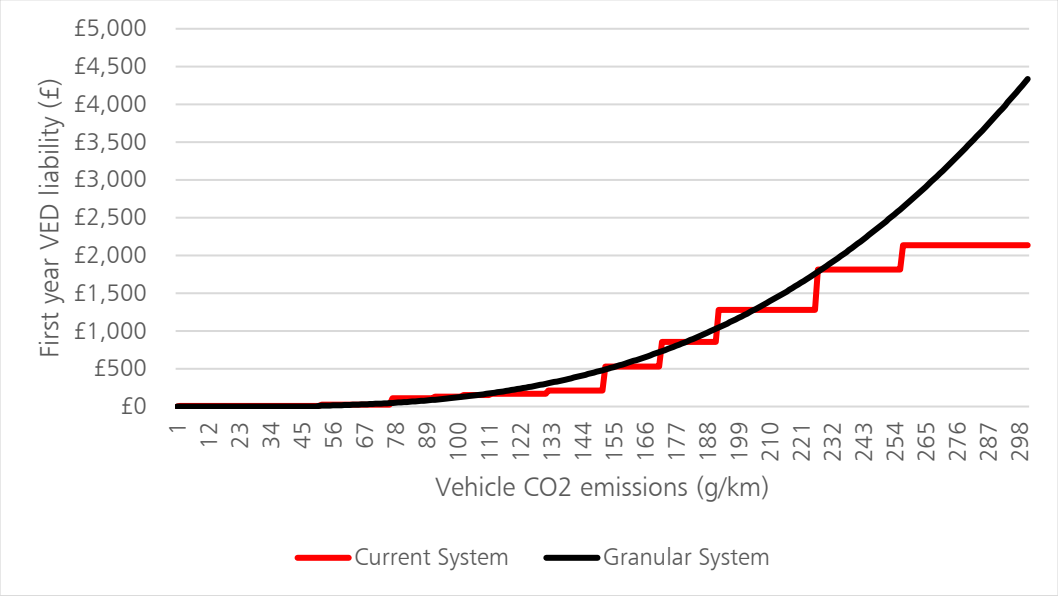
2.7 To begin, the government would create a formula to calculate the carbon cost per gram, within a granular system. In this example, we set out what the formula could look like, if government created it with a view to align incentives to the current band system. To approximate current VED liabilities, we could for illustrative purposes adopt the following formula:

- $y = 0.00018x^2-0.006x+0.05$, where 'x' represents a vehicle's emissions (g/km).
- Therefore, a car that emits 100g/km of carbon, for example, would be subject to a tax liability of £125.

2.8 The graph below illustrates how first licence VED liabilities under the proposed granular system compare with the existing VED bandings.

2.9 In this example, the result is not a uniform impact of either increasing or decreasing VED. However, it does sharpen incentives to make greener choices by increasing the differential between the most and least polluting cars. The exact VED liability for a particular model (including whether it is a decrease or increase from the current liability) would depend on the rate set.

Chart 2.A: First Licence VED liabilities under current and granular systems



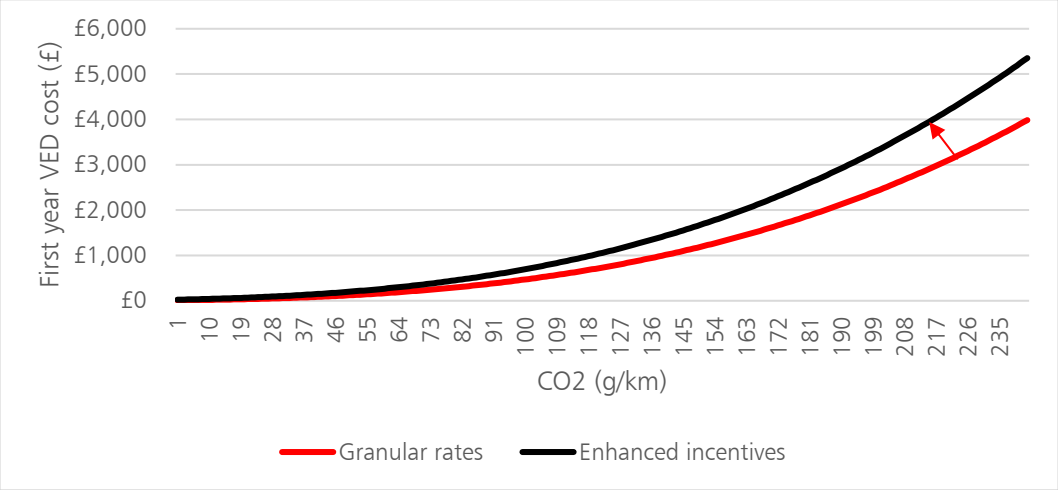
Enhancing the Environmental Incentives of First Licence VED

2.10 An effective way to influence consumer decisions on new vehicles could be first licence VED. Under the current VED system, there is a differential of over £2,000 between the highest and lowest emitting vehicle: zero emission models pay no first year VED, whilst the most polluting vehicles (>255 g/km), pay £2,135 (2019-20). However, as car buyers are, on average, making higher emitting choices, the government believes first licence VED incentives could be more effective in guiding consumer behaviour.

2.11 There are a number of examples of carbon-based first registration taxes across Europe, for example in the Netherlands and Norway, where top rates are significantly higher than in the UK. Here, these taxes have been effective in discouraging the purchase of higher- emitting vehicles. From March 2020, France is introducing a new fee schedule, which will see vehicles with carbon emissions exceeding 213 g/km, attracting a much higher fee on first registration, while purchasers of vehicles emitting 20 g/km or less will receive a financial bonus.

2.12 To enhance the impact of incentives within first year VED, the government could consider policy options, such as increasing first licence VED for more polluting vehicles to discourage car buyers from purchasing higher emitting vehicles; or introducing a granular VED system (see chapter 1), which eliminates 'cliff-edges' between bands and creates a system that rewards marginal carbon efficiencies. This system could be reformed to strengthen the VED price signal by changing the gradient of the tax formula (see chart 3.A).

Chart 2.B: Illustrative: Potential granular VED rate changes (long-term)



Questions

1. Why are first licence VED rates currently failing to discourage many car buyers from making higher emitting choices?

2. What are your views on higher first licence VED rates for more polluting vehicles?

3. How would this impact the vehicles that manufacturers sell in the UK?

4. What are your views on the potential ways of enhancing the impact of first licence VED outlined above?

Chapter 3

Greening VED after First Registration

3.1 The government is also interested in policy options to strengthen the link between VED liabilities and carbon emissions after year one. Under changes to VED introduced in April 2017, following first registration most cars move to a standard rate. The exceptions are electric cars which attract a £0 rate, hybrids which receive a £10 discount, and expensive cars with a list price exceeding £40,000 which pay an additional supplement for five years.

3.2 The 2017 reforms weakened the link between VED liabilities and carbon emissions after a vehicle is first registered. This particularly affects second-hand car sales, where the incentive for buyers to choose lower emitting cars is reduced.

3.3 There are a number of ways the government could strengthen the link between VED liabilities and carbon emissions following first registration. For example, it could:

- Introduce multiple standard rates for vehicles after first registration that reflect carbon emissions, such as a zero-rating for zero emission vehicles, a lower rate for vehicles with emissions from 1 to 150 g/km, and a higher rate for vehicles with emissions exceeding 151 g/km;
- Extend first licence VED for an additional few years, e.g. one to three; or;
- Abolish the standard rate, and instead link annual VED liabilities to the first licence charge.

3.4 Historically, the tax treatment of existing cars has not changed with VED reforms. The aim has been to drive carbon reduction through new car sales only. However, the government is seeking views on reforms for existing cars where the environmental incentives could be more effective.

3.5 For example, as there are minimal links between VED liabilities and carbon emissions after year one for vehicles registered from 1 April 2017, the government is interested in whether there is a case for reforming the standard rate for these vehicles to incentivise existing owners to move to lower-emitting vehicles.

3.6 Vehicles registered prior to April 2017 already have an ongoing environmental incentive built into the VED repayments. However, the government would be interested in views on whether the evolution of the system over time means that there are now unintentional perverse environmental incentives in the system. Such incentives could mean that

these owners are encouraged to run these vehicles for longer than they otherwise would, or that purchasers of second-hand cars are encouraged to choose less environmentally friendly models over cleaner alternatives. For example, many older diesel vehicles have comparatively low VED liabilities but high air quality impacts. Similarly, there are some pre-2017 models that would be considered relatively highly emitting by current standards, but pay VED below the flat rate of £145.

Questions

5. For new vehicles, do you think that the government should base ongoing VED liabilities on carbon emissions, rather than just at first registration?

6. Do you think the government should reform VED rates for vehicles registered from 1 April 2017 so their liabilities reflect their carbon emissions?

7. Are you aware of any unintentional perverse environmental incentives that have developed over time relating to VED on vehicles first registered prior to April 2017? Do you think government should take any action relating to this?

Chapter 4

Further Scope to Change VED

4.1 As part of its considerations of VED reforms, the government is exploring how motorcycles should be treated with respect to VED, and whether any VED reforms should also aim to improve air quality.

4.2 Motorcycles are currently taxed based on their engine capacity in cubic centimetres (cc). Those with smaller engines (less than 150cc) pay £20 a year. Engines sized between 151 and 400cc pay £43, between 401 and 600cc pay £66 and those with the largest engines, over 600cc, pay £91. The government now has data on the carbon emissions of different motorcycle models. This provides scope to for charging VED on motorcycles the basis of their carbon emissions, which could encourage the purchase of the cleanest models.

4.3 As part of the government's strategy to improve air quality, diesel cars which are not RDE2 compliant (and therefore have the roughly the name NOx as a petrol car) also pay a VED supplement which increases their VED liability. This ensures older, more polluting cars pay more while the cleanest cars pay the same as a petrol car.

Questions

8. Do you think motorcycles should be taxed based on carbon emissions?

9. What impact would this have on the behaviour of those looking to purchase a new motorcycle?

10. Should the government continue to take account of NOx emissions if it reforms the VED system?

11. Is the signal to purchase RDE2 compliant diesel cars strong enough?

Summary of Questions

1. Why are first licence VED rates currently failing to discourage many car buyers from making higher emitting choices?

2. What are your views on higher first licence VED rates for more polluting vehicles?

3. How would this impact the vehicles that manufacturers sell in the UK?

4. What are your views on the potential ways of enhancing the impact of first licence VED outlined above?

5. For new vehicles, do you think that government should base ongoing VED liabilities on carbon emissions, rather than just at first registration?

6. Do you think the government should reform VED rates for vehicles registered from 1 April 2017 so their liabilities reflect their carbon emissions?

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11. Is the signal to purchase RDE2 compliant diesel cars strong enough?

This call for evidence will be open for 12 weeks, opening Wednesday 11th March and closing Wednesday 3rd June. Please send your responses to ETTAnswers@hmtreasury.gov.uk

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