

# Net zero and the tax system



## About this report

This report draws on earlier Institute for Government work on delivering net zero and on reforming the way in which the UK makes tax policy. It argues that the chancellor needs to address the role tax policy will play in supporting the transition to net zero.

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## Summary

The UK has committed to a wholesale transformation of its economy to become a net zero greenhouse gas emitter by 2050. Our [2020 report](#) on how the government could meet this target stressed the crucial role the Treasury would need to play in that transition. Developing a net zero tax strategy was part of that.

Such a strategy has not been evident in recent budgets or spending reviews. The Treasury did publish a high-level interim review on how to pay for net zero in December 2020. This posed questions but did not provide answers – those should have come in the final document, promised for spring 2021. That had not been released by summer 2021 when MPs were asked to endorse the sixth carbon budget, which set the framework for emissions reductions to the mid-2030s. The risk is that MPs claim that the government has failed to spell out the fiscal consequences and it adds to the sense that the Treasury is dragging its feet on net zero.<sup>1</sup> This has been made more acute by current concerns over rising energy prices for both households and businesses, and fuel shortages. The net zero strategy has still not been published less than a month before the UK hosts the COP26 climate summit.

The government's silence on how it might use the tax system to support businesses and households to make the transition means an important piece of the policy framework on how to deliver net zero is still missing. That in itself is not surprising. A strategic approach to tax policy has not been a hallmark of UK government policy over recent decades, and the Treasury has been consistently reluctant either to use tax policy to support the achievement of other departments' objectives, or to open up a genuine public discussion on the potential and limitations of tax as a policy instrument alongside spending, regulation and 'softer' interventions. We have [argued in the past](#) that this reluctance has reduced the government's ability to pursue wide-ranging reform.

But although the Treasury itself has been silent on the subject, there has been an increasing amount of public debate about the potential for using tax policy instruments, whether carbon taxes, more specific taxes (like a frequent flyer levy) or tax incentives such as reduced VAT rates or corporate tax reliefs, to promote the transition to net zero. There have been attempts to gauge the public appetite for change – in the citizens' assembly last year, convened by six parliamentary select committees, and in more recent work commissioned by Green Alliance.

There have also been reports looking at the feasibility of economy-wide carbon pricing, which some economists suggest would be the most efficient way of moving to net zero. And business groups have looked at the scope for using the tax system to encourage companies to make the necessary changes.

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Although the UK has a number of taxes that have an environmental impact, the UK tax system has not given consistent environmental signals over the last few decades and is not currently aligned with the government's net zero goal.

The transition will have consequences for the tax system that even a government that did not see a positive role for taxation in encouraging the move to net zero will have to engage with, not least the loss of the annual £27 billion contribution to the exchequer from fuel duty (also called tax on hydrocarbon oils). There will likely be losses from other taxes too – the independent fiscal forecaster the Office for Budget Responsibility (OBR) forecasts tax losses alone of 1.6% of GDP in 2050/51 if no offsetting action is taken.

This report looks at the UK's use of environmental taxes and how the current system sends conflicting and inconsistent signals to businesses and citizens. It then sets out a number of possible approaches that the government could adopt to developing a net zero tax strategy, either on their own or in combination. It does not recommend one particular strategy over another, but argues that a failure to set out a clear and consistent approach will raise the costs of the transition to net zero.

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## Recommendations in brief

- **The chancellor needs to start talking about net zero and how he will manage the transition.** The Treasury's net zero review should explain the government's estimates of the cost of the transition; who will bear the direct costs; how these will be shared between the taxpayer and consumers; and to what extent the Treasury will look to borrowing to meet its aims. It should also explain how the government proposes to protect those least well placed to bear the costs of transition.
- **The chancellor should make a coherent net zero tax strategy a key element in his October budget,** covering the roles both tax and spending will play in climate change mitigation and adaptation.
- **The Treasury should commit to a net zero tax audit** to ensure that the current tax system supports the transition. This should cover all taxes, not simply those the Treasury defines as environmental taxes.
- **The Treasury should commit to net zero proofing future tax policy changes.** Either the Office for Budget Responsibility or the Climate Change Committee should be routinely tasked with assessing budget measures for compatibility with net zero.
- **Tax policy needs to be properly integrated into departmental sectoral strategies.** Once the Treasury has set out its broad approach, it should be integrated into the strategies key departments are currently producing, setting out how the sectors they are responsible for will reach net zero.
- **The government needs to gain and maintain public consent for its approach to paying for net zero.** It will be unable to stick to its desired approach if it becomes too controversial. It needs to roll the pitch in advance and work actively to maintain public consent, which means it needs to convince people it is being fair. So the Treasury needs to commit to proper public engagement in its net zero review – and take account of the conclusions from that engagement in its decision making.
- **The Treasury needs to take responsibility for supporting households and businesses through the transition.** A convincing approach to cushioning the impact on low-income households will be critical to maintaining public consent, and the Treasury needs to play a lead role in that as the department with access to both tax and spending levers.

The move to net zero also potentially has wider consequences for tax policy, in terms of the need to raise additional revenue to cushion the costs for those who cannot afford to make switches, or those who find themselves without jobs in the new economy. While we do not look at these broader consequences for tax policy in this report, policy makers will need to bear them firmly in mind.

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## Part 1. Environmental taxation in the UK

Many parts of the tax system could have a potential impact, good or bad, on the government's environmental and climate objectives. But the government has not so far taken a strategic approach.

### **The UK has not been strategic in its use of taxes with potential climate impacts**

#### **Official bodies define 'environmental taxes' differently, with the Treasury's definition the most restrictive**

The Treasury defines environmental taxes narrowly, counting only those with explicit environmental objectives. Four currently meet this definition – the climate change levy (CCL), carbon price support (CPS), landfill tax and the aggregates levy – although the plastic packaging tax will also qualify when it is introduced.<sup>2</sup> But that gives only a partial view of the potential impact of the tax system on climate and the environment.

A much wider definition of environmental taxes comes from the Office for National Statistics (ONS). Its definition covers taxes based "on a physical unit that has a proven negative impact on the environment". On top of the taxes identified by the Treasury, it includes fuel duty and air passenger duty (APD). Neither was introduced with a primary or sole environmental objective but both increase the cost of travel and hence transport emissions (fuel duty as a per-litre tax more directly than APD, which is levied on flight tickets).<sup>3</sup> The ONS also includes revenue from the EU emissions trading scheme (EU ETS) – now the UK ETS – as well as other charges, such as the costs to electricity consumers of the Ofgem-administered renewables obligation, which the Treasury does not regard as a tax and is not set through the normal budget process.<sup>4</sup>

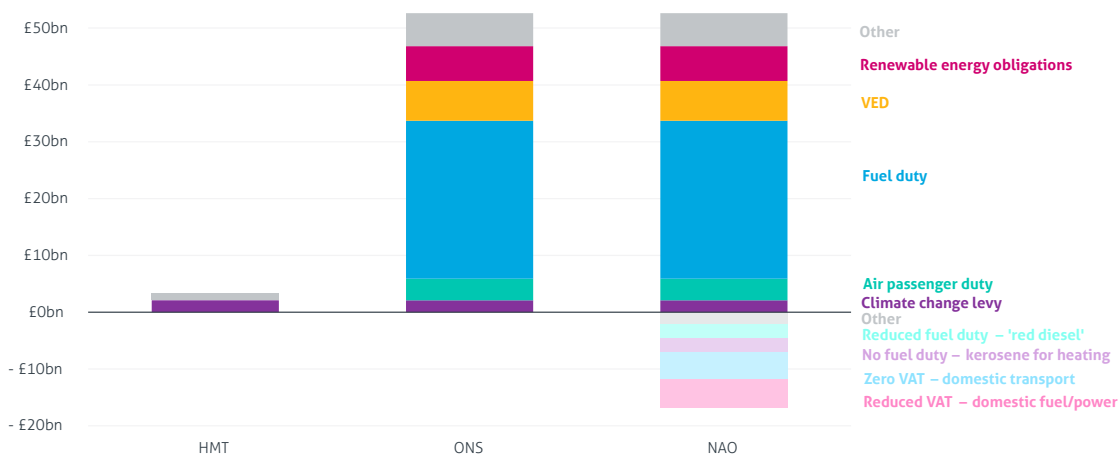
The National Audit Office (NAO), in its recent study of environmental taxes, also noted eight tax reliefs that have been specifically introduced to incentivise environmentally friendly action, and noted that a further £17bn of reliefs could impact the government's environmental goals. The biggest are the reduced rate of VAT on domestic fuel and power and the zero VAT rating of passenger transport including air travel.<sup>5</sup>

The differences in revenue between these definitions are shown in Figure 1.<sup>6</sup> These can have a real-world impact: as the NAO pointed out earlier in 2021, the Treasury's narrow definition of environmental taxes affects how it evaluates the impact of the tax system on the environment and climate. More generally, it impoverishes the discussion on the role the tax system can play in achieving – or undermining – the government's declared environmental objectives.

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\* A full list of these taxes and other charges, and their scope, can be found in the Appendix.

Figure 1 Revenue from environmental taxes, Treasury and ONS definitions, and cost of tax reliefs with a potential environmental impact identified by NAO, 2019



Source: Institute for Government analysis of Office for National Statistics, Environmental Taxes Dataset, June 2021 and National Audit Office, Environmental tax measures, February 2021.

### Many parts of the tax system have a potential impact on the government's environmental and climate objectives, whether positive or negative

The most explicit UK tax on greenhouse gas emissions is the UK Emissions Trading System (UK ETS). Emission trading systems work in the same way as carbon pricing/taxes by placing a cost on emissions. But in an ETS the price is not set solely by the government; instead, participants monitor and report their emissions each year and then surrender the required number of emission 'allowances'.

In both the EU and UK ETSs there is a cap on the total number of allowances, which are allocated through free allocations and auctions – in the UK ETS just under half are given out through free allocations. Allowances can then be traded on the secondary market, setting an effective price on carbon emissions.

The UK was part of the EU ETS until 1 January 2021, after the UK had left the EU. It was replaced by the UK ETS, which has a similar scope. Like the EU system, the UK ETS only covers part of the economy, taking in energy-intensive industries, the power-generation sector and aviation within the UK and European Economic Area (EEA). In 2019 the EU ETS covered 29% of UK emissions.<sup>7</sup>

Electricity generation is also subject to an additional carbon tax, carbon price support (CPS), which, combined with the ETS, ensures that the carbon price paid by generators meets the 'carbon price floor' (CPF) – a minimum price per tonne of CO<sub>2</sub> emitted. Carbon price support has been frozen at £18/tCO<sub>2</sub> since 2016 – it was originally intended to be £30/tCO<sub>2</sub> by 2020.<sup>8</sup>



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This approach to carbon pricing has been described as 'unusual' by the Zero Carbon Commission, as the UK levies a significant carbon tax in addition to the UK ETS through CPS on electricity, but many sectors pay no carbon price. In EU countries, such as France and Germany, sectors like heating are also subject to carbon prices or taxes.<sup>9</sup>

UK electricity suppliers are also subject to further charges that fund subsidies for renewable energy generation – these include contracts for difference (CFDs), the feed-in tariff (FIT) and renewable obligations (ROs). CFDs are a guaranteed price for generators of renewable energy, funded by a charge on electricity suppliers based on the electricity they sell. FIT is, similarly, a levy on electricity suppliers to fund small-scale renewable generation.

ROs require electricity suppliers to produce renewables obligation certificates (ROCs) proportionate to the amount of electricity they supply and the target for renewable electricity set by the government at the end of each year. The government issues ROCs to operators of accredited generating stations for the renewable energy they produce. Suppliers can buy certificates from generators and they can also be traded, effectively providing a subsidy to renewable generators. The Treasury states that the costs are ultimately passed on to consumers through energy bills. The RO and FIT schemes have now closed to new entrants but are still currently in operation.<sup>10</sup>

Energy delivered to non-domestic users (excluding charities, among others) is taxed through the climate change levy (CCL). Introduced in 2001, the levy is designed to incentivise energy efficiency. It is not related to emissions, with higher rates on electricity than gas, although rates on electricity have been lowered somewhat relative to gas recently.<sup>11</sup>

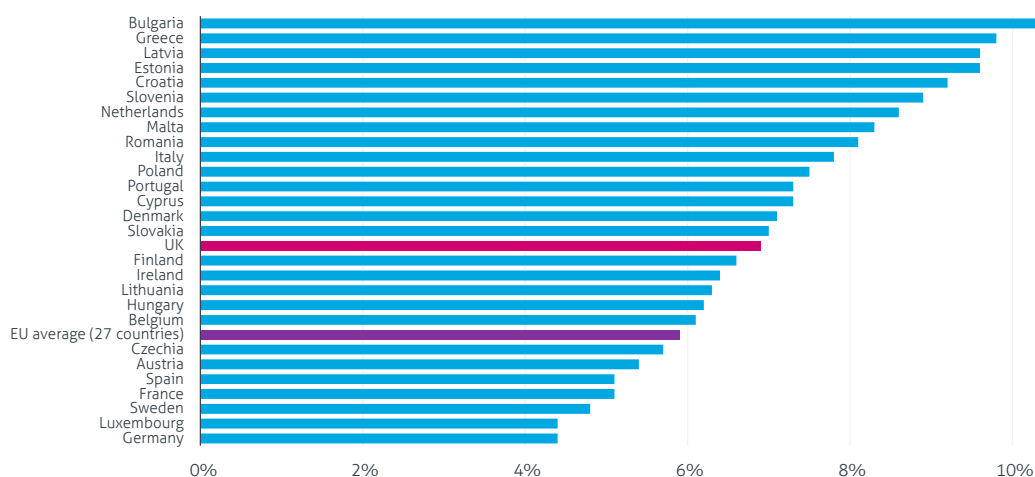
In other sectors, some greenhouse gas emissions are subject to taxes not specifically targeted at emissions. Fuel duty, for example, raises significantly more revenue than any other single environmental tax. Vehicle excise duty (VED) is also charged annually on car ownership and is higher for high-emission cars in the year they are bought. Air passenger duty (APD) is charged per passenger, with higher rates on long-haul flights, but is not linked to emissions (although flights within the UK and EEA are also subject to the UK ETS).<sup>12</sup>

Landfill tax, the aggregates levy and the incoming plastic packaging tax are all charged on businesses and designed to incentivise resource recycling and reuse. Respectively they increase the cost of waste sent to landfill, newly excavating or importing sand, gravel and rock, and manufacturing plastic packaging containing less than 30% recycled material.<sup>13</sup> The latter two are designed to indirectly reduce emissions by reducing the energy consumption that would be needed to make new plastic or extract new aggregate. The landfill levy aims to reduce the amount of biodegradable waste sent to landfill and thus associated methane emissions.

Tax reliefs also have a potential impact and some reduce the cost of greenhouse gas emissions. Domestic energy is subject only to a reduced rate of VAT (5%), while kerosene used for heating and airline tickets are both zero rated for VAT, for example.<sup>14</sup>

As a percentage of total taxation and GDP, the UK's environmental tax revenues seem fairly typical in comparison to EU and OECD countries, with the UK slightly above the EU average for revenue from environmental taxes as a share of total taxation, and very slightly below as a percentage of GDP (Figure 2).<sup>15</sup>

Figure 2 **Environmental tax revenue as a share of total taxes and social contributions, UK and EU27, 2019**



Source: Institute for Government analysis of Office for National Statistics, Environmental Taxes Dataset, June 2021.

### Environmental taxes are not big revenue raisers

Even on the widest ONS definition, environmental tax revenues represented only a fairly small percentage – 6.9% – of total revenue from taxes and social contributions, and only 2.3% of GDP in 2019/20.<sup>\*16</sup>

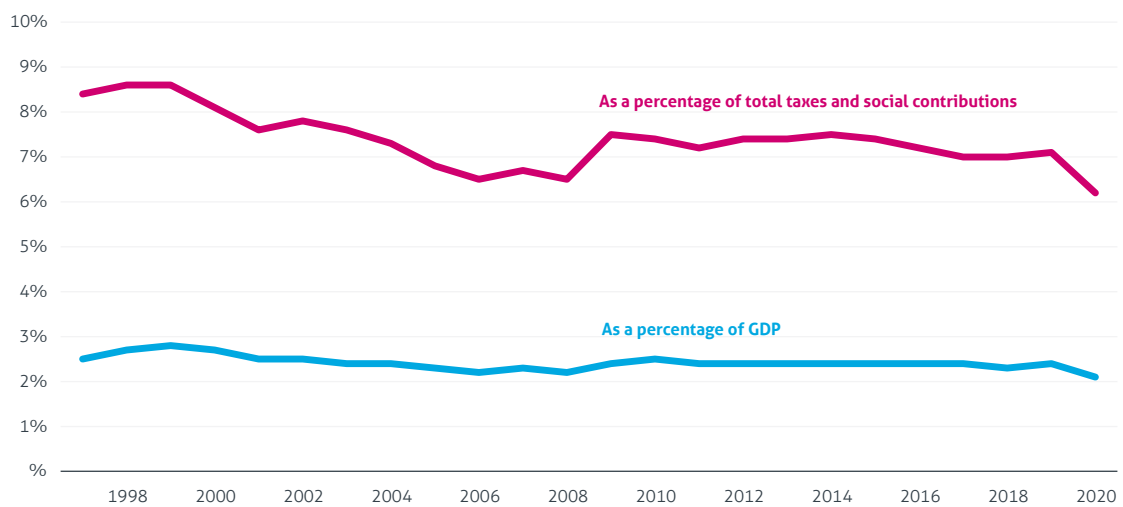
A low or falling yield from environmental taxes does not mean that the policy is not working. Many environmental taxes are designed to raise the cost of harmful activities and so discourage them. If they are successful in discouraging the activity, they may raise little or nothing. The sugar levy – a tax designed to encourage manufacturers to reformulate high-sugar products with the aim of improving public health – raised relatively little because it was successful in promoting the desired behavioural response. However, in some cases, low or falling revenues from an environmental tax could indicate a weakening of incentives for pro-environmental behaviour.

\* We have used 2019/20 figures as yields were affected in 2020/21 by changes to travel and consumption patterns due to the coronavirus pandemic.

## The share of environmental taxes in the total tax take has been stable – but the contribution of individual taxes has changed

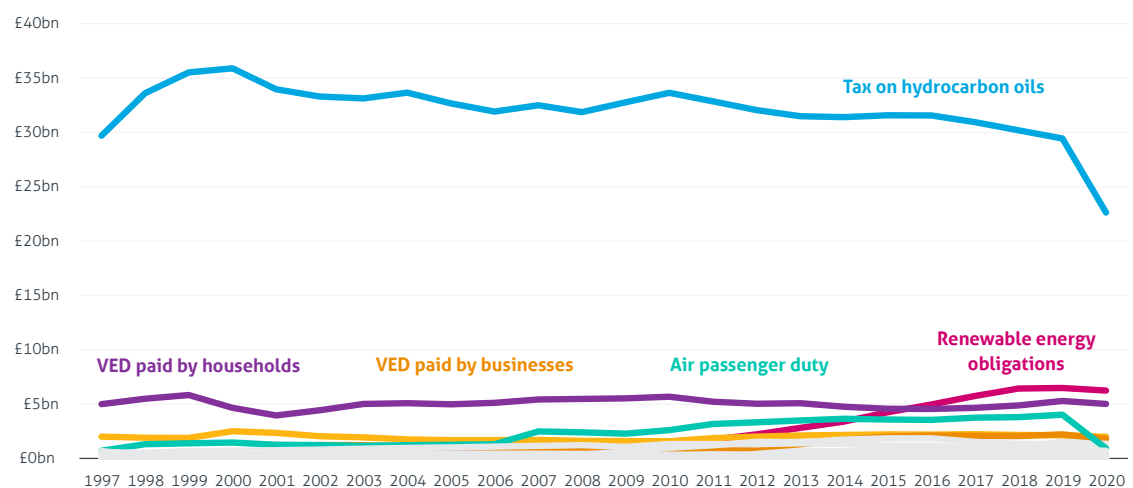
Environmental tax revenue as a percentage of GDP has been fairly stable since 1997, while it has been a bit more volatile as a share of total taxes (see Figure 3).<sup>17</sup> The most striking trend over the period, before the coronavirus pandemic, has been the steadily increasing revenue from the renewables obligation from 2002 as the scheme grew in size, although it has now been replaced by contracts for difference (CFDs) for new entrants. Revenue from fuel duty fell slightly in real terms from 2000 to 2019 due to being repeatedly frozen, before it dropped very sharply during the pandemic (see Figure 4).<sup>18</sup>

Figure 3 **Environmental tax revenues as a share of total taxes and social contributions and GDP (ONS definition)**



Source: Institute for Government analysis of Office for National Statistics, Environmental Taxes Dataset, June 2021.

Figure 4 **Environmental tax revenues (in real terms)**



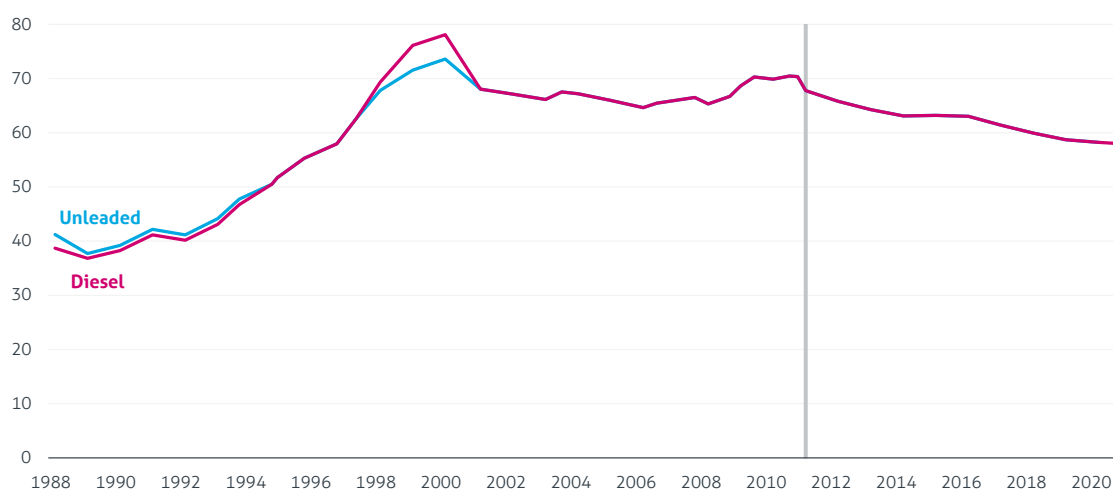
Source: Institute for Government analysis of Office for National Statistics, Environmental Taxes Dataset, June 2021.

## UK tax policy has not given consistent environmental signals

It is not just a question of levels of taxation. As we noted in our 2020 [net zero report](#), policy consistency matters when trying to promote long-term change. So changes matter too.

The Conservative government introduced a fuel duty escalator in 1993, designed to signal that fuel duty would rise in real terms. That policy was pursued until the escalator was suspended in 1999. Over the next decade, fuel duty was raised “sporadically” and has been frozen in cash terms since 2011, despite the default policy having notionally remained to raise it in line with inflation (see Figure 5). The Institute for Fiscal Studies (IFS) estimated that this cost the Treasury £5.5bn in 2019/20, compared to maintaining the level in real terms, and more than £11bn compared to the plans that had been set out under the last Labour government.<sup>19</sup>

Figure 5 **Fuel duty (pence per litre, January 2021 prices)**



Source: Institute for Government analysis of HM Revenue and Customs, National Statistics: Historical hydrocarbon oils duty rates, January 2021.

This not only meant significant revenue foregone and an increase in policy uncertainty, but also meant that a clear signal to manufacturers and car buyers on the importance of increasing fuel efficiency was lost. Meanwhile, vehicle excise duty, charged annually on car ownership, is graduated quite steeply according to carbon emissions in the first year that the car is registered – designed to send a signal to new car purchasers – but not in subsequent years, when the charge is a uniform £155 for all petrol and diesel cars, irrespective of their emissions.<sup>\*20</sup>

While any causal link is hard to establish, over the decade that fuel duty was frozen in cash terms, the popularity of sport utility vehicles (SUVs), which are much larger than standard passenger vehicles and have much higher levels of fuel consumption per mile, “boomed” and by 2017 they accounted for around a third of new car sales.<sup>21</sup>

\* There is a £10 discount for alternative fuels, and electric cars are exempt.

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However, where tax policy has given more consistent signals, and rates have been set at a level high enough to impact behaviour, they have had an effect on emissions. Between 1998 and 2014 the standard rate of landfill tax was increased by 700% in real terms and is now £96.70 per tonne. This has contributed to a fall in the waste sent to landfill, which declined by 54% between 2011 and 2021. Emissions from waste management fell by 71% between 1990 and 2018.<sup>22</sup>

### **Tax policy overall is not currently aligned with the government's net zero aims**

Despite some taxes targeted at the environment and climate, as a whole the tax system does not provide clear and consistent incentives when it comes to the net zero transition. Research by the Energy Systems Catapult in 2018 estimated that existing taxes and subsidies mean some sectors face very high effective carbon prices, while others effectively face negative ones. It estimated that the effective price for emitting a tonne of CO<sub>2</sub> while driving was between £29 and £190.\* In contrast, the effective price for emitting the same amount through burning gas in residential homes was estimated at between -£33 and £4 "due to reduced VAT rates and the 'taxes' on low-carbon electric heating alternatives".<sup>23</sup> This reflects the multiple pressures and drivers of tax policy making: the desire to correct externalities, the administrative convenience of meeting revenue needs through a specific source and the political acceptability (or otherwise) of increasing the tax burden on a specific group of taxpayers.

It produces some perverse incentives. Minimal taxation of aviation, with VAT charged on neither tickets nor aviation fuel, incentivises flying despite its significant carbon impact.\*\* The government's proposal to reduce air passenger duty (APD) on domestic flights within the UK – which is currently being consulted on – would further incentivise passengers to fly rather than take the (less polluting) train.<sup>24</sup> Rail and bus/coach fares have risen more rapidly than the cost of driving since 2012.<sup>25</sup> Zero-rating new-build homes, while imposing the standard rate of VAT on renovations, also incentivises demolition over retrofits.<sup>26</sup>

Most significantly, compared to gas, which cannot be decarbonised, electricity, which can, currently carries most of the climate policy costs – it is subject to carbon price support, the UK ETS, higher climate change levy rates, and other levies like the renewable obligation. Ofgem estimated that 25.48% of the average electricity bill in August 2021 was made up of environmental and social obligation costs, versus only 2.46% of the average gas bill.<sup>27</sup> In contrast, IFS analysis suggests that the implicit tax on emissions from domestic gas consumption is actually negative as a result of the reduced 5% rate of VAT on household energy.<sup>28</sup> These policies have increased the cost of electricity relative to gas and reduced the incentive to switch away from gas heating to heat pumps, despite this being the government's stated aim.

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\* Estimating effective carbon prices is complex. The carbon price estimated for driving depends on how much of fuel duty revenue is attributed to preventing carbon emissions rather than, for example, congestion. The upper bound of £190/tCO<sub>2</sub> assumes that it is mostly carbon, but this has been criticised by the [Zero Carbon Commission](#). We have presented the range that Energy Systems Catapult, an innovation and technology centre, estimates here but it should be stressed that they are only estimates.

\*\* The taxation of aviation fuel is quite contentious. Some countries tax fuel used on domestic flights. The EU is proposing to tax fuel on intra-EEA flights as part of its Fit for 55 programme and has concluded that this can be reconciled with international conventions. But the UK is no longer part of the Common Aviation Area so this would not apply to flights between the UK and the EEA. See: [www.transportenvironment.org/discover/eu-axes-airlines-fuel-tax-exemption-in-drive-for-greener-fuels](http://www.transportenvironment.org/discover/eu-axes-airlines-fuel-tax-exemption-in-drive-for-greener-fuels).

The decision to place the burden of paying for renewables development solely on electricity consumers also means that the impact is more regressive than it would have been if it had been paid for through general taxation.<sup>29</sup>

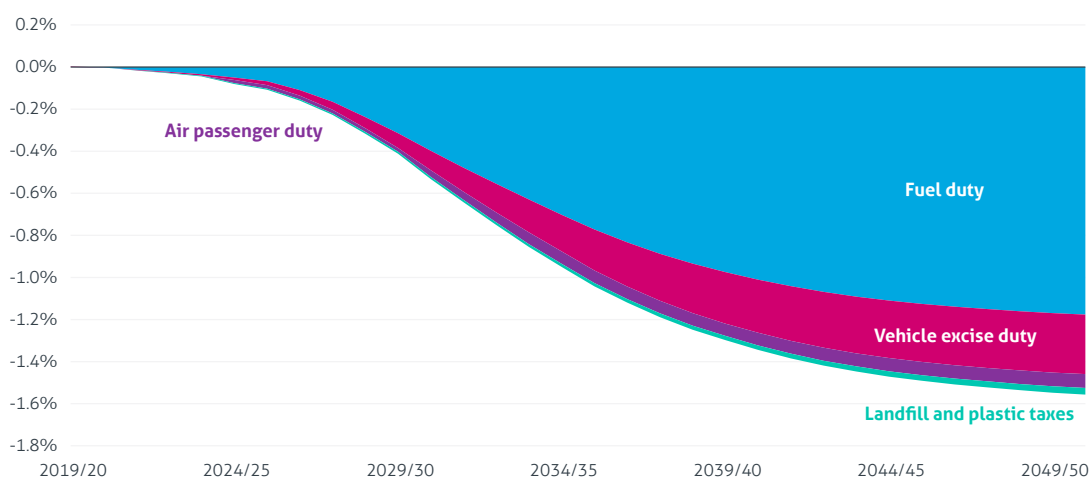
### The net zero transition will affect the tax system and public finances, even if the government does nothing

Even if the government does not want to use the tax system to support the transition to net zero, it cannot avoid the consequences.

The Office for Budget Responsibility (OBR) estimates that without policy changes, some revenues from taxes on motoring, aviation and waste could be lost as a result of decarbonisation: it estimates these losses would amount to 1.6% of GDP (or £36bn in today's terms) by 2050 under the Climate Change Committee's (CCC) balanced pathway, which is illustrative of what it thinks a broadly sensible path to net zero might look like.

Revenue losses are forecast to come primarily from a significant decline in fuel duty as people shift to electric vehicles, but vehicle excise duty (VED) and air passenger duty (APD) are also predicted to decline (see Figure 6). Modelling of the other CCC scenarios produced similar results.<sup>30</sup>

Figure 6 OBR estimates of loss of motoring, aviation and waste revenues as a percentage of GDP in the CCC's balanced pathway



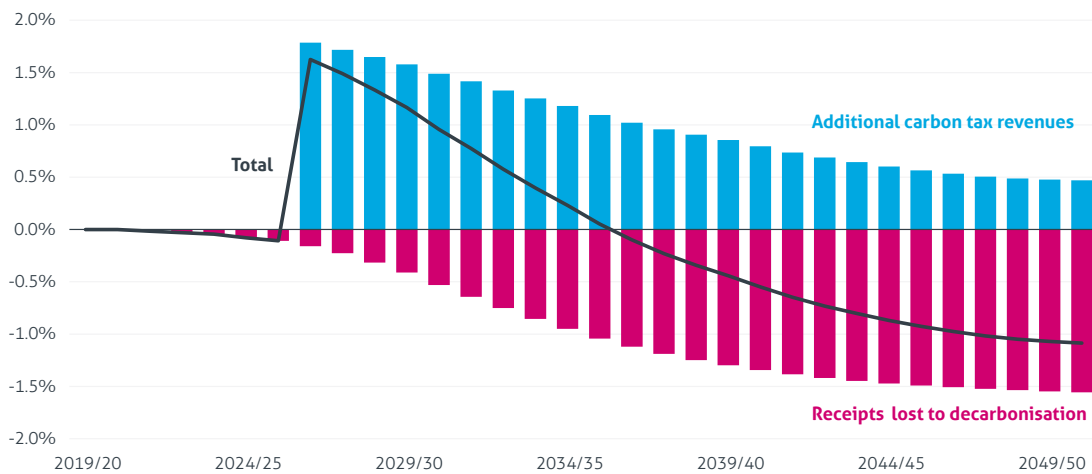
Source: Institute for Government analysis of Office for Budget Responsibility, Fiscal Risks Report, July 2021.

The Treasury's interim net zero report similarly estimated that £37bn of tax revenue, or 4% of total revenues – raised from fuel duty, VED, the EU ETS, landfill tax and the carbon price floor – was wholly dependent on the consumption of fossil fuels or the emission of greenhouse gases in 2019/20. It states that “much of this revenue is likely to be eroded during the transition to a net zero economy”, but the Treasury and the Department for Transport have so far seemed resistant to discussing alternatives.<sup>31</sup>

The OBR simulated a scenario in which the government introduces a carbon tax on all emissions from 2026/27. The rate was based on Bank of England scenarios, which assume a rising 'shadow' carbon price, half of which is delivered via a carbon tax.\* In the OBR's scenario this falls to a quarter by 2050/51 as more of the shadow price is delivered by non-tax policies like outright bans. With these assumptions the OBR's simulated carbon tax rises in real terms from £101 per tonne in 2026/27 to £187 per tonne in 2050/51.

Under this scenario, the OBR estimates that the carbon tax would raise 1.8% of GDP in 2026/27 but this would decline to just 0.5% by the middle of the century. As Figure 7 shows, between 2026/27 and 2035/36, such a carbon tax would more than make up for lost revenues from other taxes as a result of decarbonisation, but not thereafter. As the OBR points out, the hit to revenues could be mitigated by replacing fuel duty with other taxes on motoring – such as road-user charges – to maintain the revenue raised from this group, and also head off the risk that untaxed motoring could just end in much greater congestion.<sup>32</sup>

Figure 7 **OBR estimates of total direct impact of the transition to net zero on receipts as a percentage of GDP**



Source: Institute for Government analysis of Office for Budget Responsibility, Fiscal Risks Report, July 2021.

\* The shadow carbon price covers both any explicit prices set by a carbon tax or ETS and the tax-equivalent effect of other regulatory interventions.

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## **Net zero – and dealing with the impact of climate change – will both require some increases in public spending**

The CCC estimates that UK low-carbon investment will have to increase from around £10bn a year in 2020 to around £50bn by 2030, continuing around that level to 2050, to meet the net zero target. It anticipates that most of this investment will come from the private sector, and that much will be recouped through the lower operating costs of technologies like heat pumps and electric vehicles, leading to an estimated annualised resource cost which it described as “now down to less” than 1% of GDP from 2020 to 2050.<sup>33</sup>

However, some of this is likely to have to be met by higher public spending, not least because this will be needed to spur private investment and there are some areas businesses are less likely to invest. The OBR simulated public spending scenarios ranging from £152bn to £553bn across the period from 2020 to 2050 (2019 prices), while the CCC gave an illustrative scenario in which spending would rise from £5bn per year today to £9–12bn in 2030 under its balanced pathway.<sup>34</sup>

While noting the pressures from the transition to net zero, the OBR has assessed that unmitigated climate change would pose a greater, if difficult to quantify, risk to public finances. It simulates that debt could increase to 289% of GDP by the end of the century as a result of factors like more frequent extreme weather events in the UK and the indirect effects of more extensive damage in hotter countries.<sup>35</sup>

Additional spending is also likely to be required for adaptation measures to respond to, or mitigate, the effects of climate change that are already baked in over the coming decades.<sup>36</sup> These are not the only pressures on the public finances in coming decades – the UK has an ageing society, increasing health and social care costs and significant backlogs from the Covid pandemic. This means headroom will not easily be found.

The Treasury has its work cut out to meet the challenge of net zero – and of climate change itself. The government must decide how to pay for, and distribute, the costs of the transition to net zero and how to use the tax system to influence incentives.



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## Part 2. Approaches to a net zero tax strategy

The government has promised its comprehensive net zero strategy will appear before it hosts COP26. That needs to address the role the tax system will play.

### There are different approaches the government can take

There are numerous approaches the government could adopt. So far the Treasury seems to be sticking with its [traditional approach](#) to tax: maximising its flexibility to use tax policy instruments as it decides at each budget and keeping those instruments firmly under its sole control. This was evident in the Department for Transport's July 2021 decarbonisation strategy, which makes no mention at all of tax – either as an instrument for reducing transport-related emissions or how the government might cope with the loss of fuel duty.<sup>37</sup>

A continuation of that ad hoc, year-by-year approach, where the Treasury does not allow other departments to integrate tax policy into their approaches for sector decarbonisation, brings many risks. One is that it underuses the tax system when it might be more effective than the alternatives. Another is that the tax system continues to send conflicting signals, while a lack of stability and forward signalling risks confusing consumers and businesses and raising the costs of transition. It also means policy decisions may be left too late, necessitating sharp turns in direction and meaning changes have to be more dramatic than they would otherwise have to be.

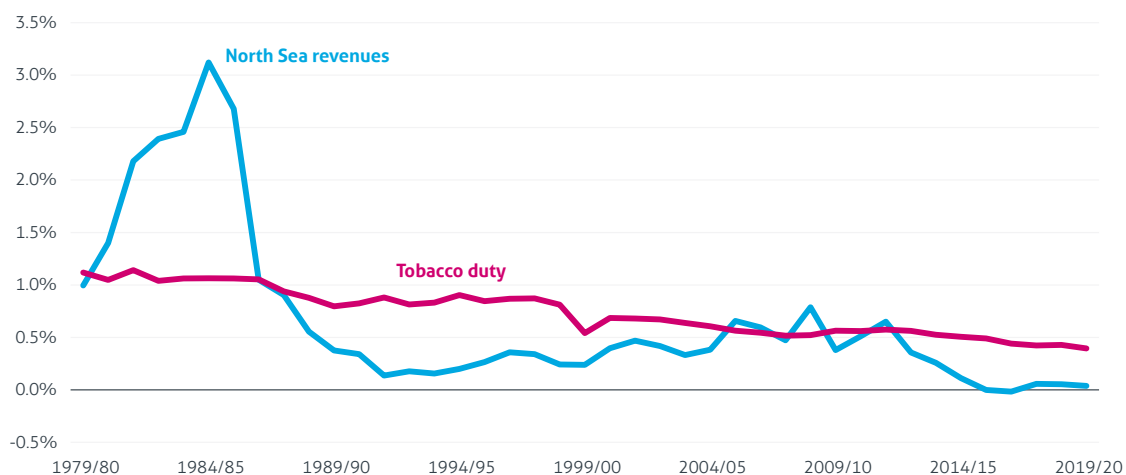
In this section we describe five broad approaches the government could take, ranging from the minimum needed to avoid major future revenue loss as a consequence of the move to net zero through to using the tax system much more ambitiously to support the net zero transition.

#### 1. Don't be an ostrich: plan how to deal with the revenue consequences of net zero

Although the Treasury does not classify fuel duty, or indeed other taxes on fossil fuels, as 'environmental taxes', reducing and then eliminating fossil fuel use from the economy will cut the tax take even in the absence of other action.

The government could just let this feed through gradually. Revenues from North Sea oil have been erratic as production levels and oil prices have moved (see Figure 8) and the government has simply absorbed those effects in the public finances.<sup>38</sup> Similarly, although tobacco duty has risen significantly in real terms, the government has not adopted an explicit offsetting strategy to cope with the long-term decline in cigarette smoking that has seen the tax take from tobacco products fall from 1.2% of GDP in 1978/79 to 0.4% in 2019/20 (see Figure 8).<sup>39</sup>

Figure 8 North Sea and tobacco duty revenues as a percentage of GDP



Source: Institute for Government analysis of Institute for Fiscal Studies, Taxlab Revenue Composition Spreadsheet, 2021.

But while those changes have been gradual or unpredictable, the government is already actively planning a strategy for the phase-out of petrol and diesel cars: the Institute for Global Change (IGC) has forecast that this will reduce revenues by approximately £10bn by 2030, rising to most of the annual £30bn or so revenue by 2040.\* That equates to around an additional 6p on the basic rate of income tax, raising it from 20% to 26%.\*\*<sup>40</sup>

The government could, of course, decide that fossil fuel-free motoring will be tax-free motoring, but as the IGC warns, that will lead to other unintended consequences, not least a rise in congestion (just of cleaner cars). Even without their current tax advantages, the CCC estimates that electric vehicles will be much cheaper to run than petrol and diesel cars and will reach lifetime cost parity by the late 2020s.<sup>41</sup> Wider use of congestion charging by local governments could deal with some of that in urban areas, but this is unlikely to make up the shortfall and would still leave a significant hole in government finances.

The government needs to be thinking now about how to deal with the widening revenue gap as electric vehicles become more popular, how far it will want to use taxes on car use, as opposed to car purchase or car ownership, to compensate and to what extent it wants to shift the burden to more general taxation. It also needs a plan to manage the changeover. It has already made one decision – to charge VAT on electricity for car charging at the standard rate rather than at the reduced rate charged on domestic heat and power.<sup>42</sup> It could decide to add a further tax there – either a ‘super rate’ of VAT that registered businesses could reclaim (possible, now the UK is outside the EU), or a form of pay-by-distance road charging, or ‘road pricing’.

Whatever route it ultimately decides to take, the government needs to start making preparations and working out how it will manage a system in which part of the vehicle fleet are electric vehicles, while other people – likely to be in less well-off households –

\* In 2021 prices.

\*\* Income tax rates are devolved to governments in Scotland and Wales; the rates are different in Scotland, which charges an intermediate rate of 21p. But the 6p increase is calculated on a UK-wide basis.

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are still dependent on petrol or diesel cars. This is the absolute minimum a government seriously committed to net zero needs to plan for, yet it rates not one mention in the Department for Transport's decarbonisation plan published in July 2021.<sup>43</sup>

The problem for the government is that road pricing – the obvious substitute for fuel duty – remains contentious, which is why successive governments have acknowledged the case for it, but only in the distant future. Recent deliberative work undertaken by Green Alliance suggests that there are still a lot of reservations about road pricing, which is felt to penalise people in areas without public transport alternatives and that these are compounded by concerns that if government encourages take-up of electric cars and then introduces taxes on them it would be “shifting the goalposts”.<sup>44</sup>

However, as the IFS has noted, it is much easier to manage the change to road pricing when significant numbers of vehicles are still paying fuel duty, which the government can reduce as it brings in road pricing as part of a tax switch package.<sup>45</sup> This points to the need to have a clear long-term strategy to manage the transition if government is not to find itself haemorrhaging fuel duty with no politically feasible alternative available.

## **2. Remove the anomalies: stop the tax system sending the wrong signals**

The government could also act to ensure that the tax system is not acting perversely, incentivising behaviours that take businesses or individuals away from the goal of net zero or penalising those who do the right thing. The tax system does not pass this test at the moment – whether it is on rebated fuels or perverse incentives in the VAT or rating system. Increasing policy effort has to be made simply to neutralise the effect of these aberrations, which affect both individuals and businesses. A more efficient transition would start by removing these anomalies.

In the 2020 budget, the government announced a series of measures designed to reduce the use of rebated fuel, so-called 'red diesel' and 'biodiesel', that were explicitly linked to the need to meet the government's net zero and air quality improvement objectives.<sup>46</sup> In 2021, the government announced it was proceeding with these (albeit in slightly modified form). This is welcome progress but the government has not applied that logic elsewhere in the tax system. Fuel used for commercial shipping, for example, still receives 100% relief from fuel duty while Energy Systems Catapult, an innovation and technology centre, estimated that the effective carbon price on road transport was between £29/tCO<sub>2</sub> and £190/tCO<sub>2</sub>.<sup>47</sup>

The government continues to allow research and development (R&D) tax credits to be claimed for fossil fuel extraction – a tax subsidy worth around £70 million a year.<sup>48</sup> It is currently consulting on the future of R&D tax credits and it has said it will look at whether to use tax credits policy to “disincentivise R&D in certain fields”, so that may be in its sights.<sup>49</sup>

But in other areas the tax system disincentivises desirable change. One of businesses' repeated complaints is about how the business rates system (widely disliked in any case) can penalise businesses if they invest in upgrading their premises to make them more energy efficient, by for example installing LED lighting, modern air conditioning

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or solar PV. While some investments have no impact on businesses' rateable values, having been specifically exempted, others can land them with a higher business rates bill as they are deemed to have increased the value of the property. The CBI has described the list of these exemptions as outdated. The tax charge is levied straight away, and business organisations have argued that this represents a strong disincentive to companies making these investments.<sup>50</sup> The government has the chance to respond to these complaints in its forthcoming review of business rates.

VAT anomalies play a similarly distorting effect in the residential sector. For example, renovations are taxed at the standard rate (in most circumstances) while new builds are zero rated for VAT. The government stated in January 2021 that it did not intend to change this at present.<sup>51</sup>

But by far the biggest anomaly is in the different treatment of gas and electricity. Both are taxed at the reduced rate of VAT – but electricity consumers have a range of additional charges levied on them, intended to subsidise the growth of renewables and help address fuel poverty. These are not called taxes, they have much the same effect. Although the big barrier to change is the upfront cost and inconvenience, this tax treatment makes no sense when the aim of policy is to persuade people to switch to using electricity rather than gas.

Similarly, the climate change levy (CCL), applicable on energy use by most businesses, also favours gas over electricity with a rate of £0.00775 per KWh on electricity compared to £0.00465 on gas. If the aim of the policy is to reduce carbon use, the CCL should reflect carbon content, not tax the lower carbon option more highly.<sup>52</sup>

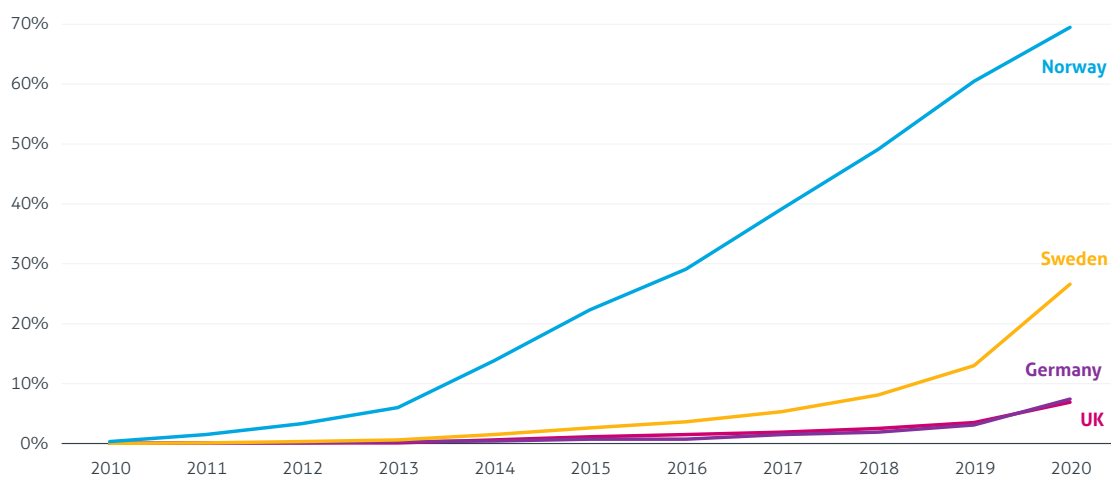
### **3. Do the right thing: use the tax system to incentivise and speed the transition to net zero**

While the first two options could be seen by the government as standalone strategies, they could also be seen more as the first two steps *towards* net zero, not as ends in themselves. There is scope for using the tax system more positively. Tax can be used to incentivise people or businesses to make necessary changes, to reward early adopters, and hopefully accelerate technological change and reduce prices to make changes less difficult for those that follow. This is an area in which the government has dabbled, but not necessarily on a consistent basis, through mechanisms such as the feed-in tariff and renewable heat incentive.

The government has tweaked the taxation of both company cars and vehicle excise duty to incentivise take-up of less polluting or electric cars. But it has also made changes at short notice, to plug-in grants and the tax treatment of company cars, which led the Business, Energy and Industrial Strategy Select Committee to conclude in 2018 that "The current fiscal regime for EVs [electric vehicles] provides inconsistent messages about the Government's ambitions for EVs".<sup>53</sup> However, a government committed to net zero should regard tax incentives as one clear instrument in its armoury to promote change.

There are some specific areas where the government could look to make those changes. Norway has successfully used a comprehensive package of vehicle taxation, supported by other incentives (for example, access to bus lanes and reduced parking charges), to drive uptake of electric vehicles. Just over half (54%) of all new vehicles sold in Norway in 2020 were electric.<sup>54</sup> Purchase tax on new cars is calculated based on weight, and CO<sub>2</sub> and NOx emissions, making big cars with high emissions significantly more expensive, and Norway has also committed to phasing out non-electric vehicles altogether by 2025.<sup>55</sup>

Figure 9 **Electric vehicles as a percentage of all new car registrations in the UK, Germany, Sweden and Norway**



Source: Institute for Government analysis of European Commission, European Alternative Fuels Observatory, Vehicles and Fleet Statistics, 2020.

While the priority for business taxation should be to remove disincentives to investment, the government could also consider whether to go further and incentivise businesses to invest in energy efficiency or decarbonisation measures. It has introduced a super deduction allowing for the acceleration of capital allowances for qualifying investment, due to expire in March 2023; this could be retained for net zero investments to help businesses prepared to move early.

The government now has much more freedom on VAT as a result of the UK's exit from the EU, so it could look at whether the current structure of zero rates, reduced rates and standard rates makes sense from the point of view of signalling the importance of – and incentivising – a move to net zero. There are, for example, very restrictive rules about eligibility for the reduced rate of VAT on the installation of energy efficiency measures in housing, which seem perverse when that is something that the government is keen to encourage, while use of energy remains reduced rated.<sup>56</sup>

The use of carrots rather than sticks is likely to be much more popular – and so more likely to avoid the sort of parliamentary opposition that might be expected for measures that increase the tax burden on voters. The disadvantage, of course, is that they have the potential to reduce revenue, while also risking some 'deadweight cost' – if people would have made the changes anyway without any additional incentive.

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#### 4. Do the right thing: and penalise behaviours that harm the net zero transition

Ensuring that the tax system does not penalise people or businesses who do the right thing is only half of the battle. The counterpart is to ensure that the tax system also sends the right signals about behaviour that needs to be discouraged. The UK has a long history of using so-called 'sin taxes' – high excise duties – on products whose consumption is deemed to be harmful. Duties on alcohol and tobacco are long-standing. But there are more recent examples: as chancellor, George Osborne introduced the sugar levy as an explicit new tax designed to incentivise soft drink manufacturers to reformulate their products to have lower sugar content; it appears to have been successful in doing so.

Fuel duty looks in principle like a primitive carbon excise tax, but its introduction predates any widespread concern about climate change and far from disincentivising car use it was initially intended to finance the building of the road network (one reason the Treasury does not regard it as an 'environmental tax').

The climate change levy, which increases the cost of energy for businesses to incentivise energy efficiency, was introduced as part of an explicit attempt by the Labour government in 2000 to shift away from taxing 'goods' like employment income, to taxing 'bads'.<sup>57</sup> There are also levies on landfill and aggregates extraction, both intended to promote recycling or waste reduction/resource reuse. The levy on single-use carrier bags, first introduced by the Welsh government, has led to a significant reduction in use, and from April 2022 the UK government will be introducing a new tax on plastic packaging with less than 30% recycled content.<sup>58</sup>

These are examples of the 'polluter pays principle', one of the government's five proposed environmental principles in the Environment Bill, which will establish the post-Brexit environmental oversight programme.<sup>59</sup> The government could strengthen this principle by reforming, or raising, existing taxes if the current signals are too weak, or misdesigned – or introducing new taxes.

One area where there is considerable policy support for redesign is to change air passenger duty (APD) from a levy on flights to a levy on frequent flyers: while a large proportion of the population (in normal times) might take one or two return flights a year at most, a huge number of air miles are clocked up annually by a relatively small number of frequent flyers. This repeatedly appears to command quite a high level of public support: 80% of climate assembly members, for example, "strongly agreed" or "agreed" with "taxes that increase as people fly more often and as they fly further", seeing these taxes as "fairer than alternative policy options".<sup>60</sup>

However, in its post-budget consultation on the reform of aviation taxation, the Treasury has pointed out (rightly) that it is administratively much more complex to tax individual flyers on the basis of the number of flights taken, than to tax a flight.<sup>61</sup> And this is an area where the government's net zero policy appears to be running up against other policy considerations, such as maintaining connectivity between the constituent parts of the UK and supporting the aviation industry to recover after Covid: the government is currently consulting on plans to *reduce* APD on domestic flights while introducing a more differentiated distance-based approach to tax long-haul flights.<sup>62</sup>

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Other possible areas are even more controversial. Reducing red meat consumption would have significant benefits both for net zero, where livestock are a major source of methane emissions, and potentially also for population health. But like other basic foodstuffs, meat is zero rated for VAT. The deliberative dialogues undertaken as part of the development of the National Food Strategy for Defra by Henry Dimbleby and his team concluded that a meat tax was a non-starter because the prospect elicited such a vehement response from panellists: "Every time we raised it, the atmosphere would suddenly crackle with hostility."<sup>63</sup>

That sort of hostility shows why governments tread cautiously even in areas where the environmental case may be compelling, but producers and consumers are resistant.

### **5. Economic efficiency rules: an across-the-board carbon tax**

The most coherent and rigorous approach would be to levy an economy-wide tax or other charge on greenhouse gas emissions. Many organisations have recommended this and eminent economists including Sir Dieter Helm have made the case for the introduction of a low but gradually rising charge as the most economically efficient way of reducing emissions.

A joint IMF/OECD report for G20 finance ministers in April 2021 stated that: "Pricing of greenhouse gases, including carbon, will be an indispensable tool in any cost-effective climate change mitigation strategy, provided that it is inclusive and supports economic development."<sup>64</sup> The CCC also stated in its sixth carbon budget that: "Carbon taxes offer a possible route to increasing Exchequer revenues while strengthening incentives to reduce emissions." The Environmental Audit Committee argued that: "One of the most economically efficient ways to incentivise low-carbon choices would be through the introduction of an economy-wide carbon tax."<sup>65</sup>

Another option would be an economy-wide emissions trading system. Emissions trading systems work in the same way as carbon pricing or taxes by placing a cost on emissions, but this is determined by the quantity of allowances available (the big difference is who gets the revenue, which depends on whether allowances are given away for free or auctioned by government – the UK does a mix of both).<sup>66</sup>

Neither the UK nor the EU ETS is currently comprehensive in its coverage. Some countries supplement the ETS with a comprehensive carbon tax or carbon taxes across different sectors.<sup>67</sup> Sweden introduced a carbon tax in 1991 at €24 per tonne, which applies to virtually all CO<sub>2</sub> emissions in Sweden not covered by the EU ETS, and it has steadily increased since then such that it now has the highest carbon price globally according to the World Bank – €114 per tonne of CO<sub>2</sub> in 2021. Sweden estimates that 95% of its carbon emissions are covered by either its carbon tax or EU ETS.<sup>68</sup>

Other EU countries, including France and Germany, also combine the EU ETS in some sectors with a carbon price on others, particularly heating and transport, increasing the percentage of the economy covered. The UK is an outlier as it only supplements the emissions trading system with a carbon price floor for electricity.<sup>69</sup> Carbon pricing would avoid the distortion of a mishmash of implicit carbon prices (which is a

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characteristic of the current approach). That mishmash means moving to a uniform price would have very different implications for sectors, and for those who pay, which is why the Zero Carbon Commission has recommended plotting sector-by-sector routes to their minimum carbon charge of £75/tCO<sub>2e</sub> by 2030, starting from the current variable levels of carbon charges across the economy.<sup>70</sup> A whole economy emissions trading system with allowances reducing over time would have a similar economic impact.

Introducing the tax at an initially low level and then raising it predictably over time would reduce the initial shock of introducing a new tax to the economy. But it would also mean that the government – or indeed successive governments – stick to the commitment to raise the tax. This has proved politically impossible with the fuel duty escalator: far from the initial commitments to raise fuel duty in real terms, successive chancellors have frozen it in nominal terms for fear of a public and parliamentary backlash, even though the theoretical commitment to indexation remains. Indeed, it seems likely that however pure the government's initial intentions were on carbon taxation, the politics of introducing it, and the differential impacts, would lead to exceptions and exemptions, replicating in part at least the current patchwork of rates.

Government would also be concerned about the impact on energy-intensive businesses and the risk of carbon leakage – the displacement of economic activity overseas to jurisdictions with lower carbon prices. It was this concern that led to the initial design of the climate change levy and rebates for companies that entered into climate change agreements. And this concern has also led the EU, Canada and other governments to explore the possibility of introducing a carbon border adjustment mechanism – effectively a levy placed on imports from countries which have much lower carbon prices to level the playing field with domestic industries. This would raise barriers to trade, be complicated to administer, place more burdens on importers and is very much a second-best option compared to persuading trading partners to adopt similarly stringent emissions reduction targets, but may be unavoidable until that happens.

A general carbon tax has the potential to generate very substantial revenues – the Zero Carbon Commission estimates its approach, which includes a carbon border adjustment for some sectors, would be generating £27bn a year by 2030 (in 2020 prices).<sup>71</sup> The OBR estimates that the carbon tax it uses in its fiscal risks modelling, which starts at £101 per tonne (in real terms) rising to £187 per tonne by 2050/51, would raise 1.8% of GDP (or £41bn a year in today's terms) in 2026/27, with revenues then declining steadily to 0.5% of GDP (or £11bn in today's terms) in 2050/51 as emissions fall.<sup>72</sup>

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\* The OBR notes that: "Towards the end of this time frame revenues are very uncertain, with an increasingly narrow tax base and an increasingly high tax rate, meaning even small differences in the pace of emissions abatement would have large revenue impacts."



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## **The government also needs a plan for the proceeds of any new taxes**

These approaches can be adopted independently or combined: the government needs a solution on fuel duty; it should act on perverse incentives as well; it can decide whether to go further and incentivise the right behaviours through specific tax incentives; and it can decide whether it wants to pick off areas to apply the polluter pays principle or apply an across-the-board carbon tax.

As it makes those changes it will need to be conscious of the cumulative burden it is placing on households, whether as drivers or consumers of home heating, but it also needs to take account of the differential effects. It needs to be particularly sensitive to the problems of less well-off households, who will find it harder to meet the upfront costs of electric vehicles, home energy efficiency improvements and new heating systems, which unlock future savings, and could be left stranded driving increasingly expensive diesel cars and facing rising gas bills – an issue that has risen up the domestic agenda recently. As we have argued before, governments need to think about the overall package of changes when introducing reforms.

The IFS has pointed out that while higher-income households have significantly larger carbon footprints, “the spending of poorer households is more carbon-intensive, meaning that, to the extent that policies which put a cost on emitting greenhouse gases are passed on to consumers, these costs will tend to take up a bigger share of poorer households’ budgets”.<sup>73</sup> Unless the government can find a way to cushion that impact, it will act as a brake on the government’s ability to proceed. As we have argued before, government needs to think about the overall package of tax and spending changes it is proposing when introducing reforms to make sure that the overall impact is fair and politically sustainable.

As the analysis above suggests, a carbon tax could raise significant revenue, while the net impact of other measures is less clear cut. The government would have to decide how to use any proceeds. With taxes designed to induce behavioural changes, at some point revenue should peak and then decline as emissions fall, as the OBR’s projections suggest. That suggests it would be unwise to regard it as part of the government’s permanent tax base, and much better to use it in two ways: to speed the transition by helping with upfront costs, and by cushioning the impacts of change on those who are adversely affected.

One model for this is Canada, which has committed to a rising carbon price but made clear that it will recycle all the revenue that it yields. The federal government has introduced a Climate Action Incentive Payment, modelled on a system pioneered in 2008 in British Columbia, which operates in provinces that do not tax fuel use at the federal standard (Ontario, Manitoba, Saskatchewan and Alberta). In those provinces the federal government applies a rising price on carbon but rebates the charge to households through a flat-rate payment through their income tax return, with a higher rate paid to people in rural communities. Some revenue is also held back to support others who pay the charge, like businesses.<sup>74</sup>

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The Austrian government has similarly proposed to use revenue from a rising carbon tax to cut corporate income tax, social security contributions and income tax rates for low- and middle-income workers, as well as giving a regionally graduated climate bonus, again with higher payments for those in rural areas. The plan has been criticised by opposition parties from both sides of the political spectrum, however, for, on the one hand, favouring big businesses through exemptions and giving minimal benefit to households after inflation is taken into account and, on the other, as a “punishment package for Austrian taxpayers”.<sup>75</sup>

The rationale for such a model would be to show that the tax is designed to change behaviour – not add to general taxation. But, as the Austrian debate shows, this does not mean that changes will necessarily be uncontested.

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## Recommendations

### **The chancellor needs to start talking about net zero and how he will manage the transition**

In his first budget, in March 2020, Rishi Sunak unveiled a small package of measures designed to address some anomalies in the tax system.<sup>76</sup> But a year on, net zero rated only one mention in the budget speech, and that was confined to a revision to the Bank of England's updated monetary policy remit to reflect the transition to net zero and the importance of environmental sustainability.<sup>77</sup> The Treasury's final conclusions from its net zero review are still yet to be published.

That review is critical because not only will it give the government's (as opposed to the Committee on Climate Change's) estimates of costs, it should also set out thinking on who will bear the direct costs, how they are shared between the taxpayer and consumers, and to what extent the Treasury will be looking to borrowing to finance some of the investment needed.

But the review also needs to address the consequences of the transition – in terms of how the government proposes to ensure that too big a burden is not placed on individuals and households who cannot afford to make changes and how to help people stranded with skills, or in industries or locations, that are not part of the future economy. The government has been quick to point to the opportunities, not least for jobs and underinvested regions, from the growth of the net zero economy, but has yet to talk in any detail about its plans to help those who are adversely affected.

That transition plan also needs to have a strategy on how to deal with the risk of carbon leakage, whether via a border adjustment mechanism or some other device. The transition strategy should deal with the impacts on industry as well as households. There is no point in simply displacing activity elsewhere only for the UK to import embedded emissions.

### **The chancellor should make a coherent net zero tax strategy a key element in his October budget**

The next budget – and announcement of the spending review outcome – is scheduled just in advance of global leaders gathering in Glasgow for what the government hopes will be a successful COP26 UN climate summit, committing nations to concrete measures to combat climate change by 2030.

The chancellor should use his budget to show that the Treasury has taken on board the scale of the challenge of climate change and that funding for both mitigation and adaptation measures has been incorporated into future spending plans, as well as explaining the role that the chancellor sees tax policy playing in the future. If the Treasury's review has not appeared earlier, it should be published alongside the budget.

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## **The Treasury should commit to a net zero tax audit**

The current tax system was not designed for a net zero economy. The National Audit Office pointed to the Treasury's failure to evaluate even the limited range of charges it classifies as environmental taxes, let alone the much longer list of taxes and reliefs it and the ONS have identified.<sup>78</sup> The net zero review should contain a comprehensive audit of the relationship between the tax system and its climate change objectives: if it does not, the Treasury should commit to do that before the 2022 budget.

## **The Treasury should also commit to net zero proof future tax policy changes**

The Treasury also needs to overhaul how it makes tax policy. Departments are required to assess the impacts on carbon emissions of proposed regulatory changes as part of the regulatory challenge process – but that does not apply to tax policy. Either the OBR (in its policy costs assessment produced alongside the budget, perhaps drawing on Climate Change Committee expertise) or the CCC itself (after the event) should be routinely tasked with assessing budget measures for compatibility with the net zero goals, an assessment of which should be published by the Treasury alongside the budget. This should reduce the risk of new anomalies emerging and open any that do up to potential parliamentary challenge.

## **Tax policy needs to be properly integrated into departmental sectoral strategies**

The chancellor should not develop his approach in a vacuum. He needs to work closely with his colleagues in all the relevant departments. That may be happening behind the scenes, but the transport department's decarbonisation strategy makes no mention of tax – nor indeed concedes any role for demand management.

Tax is a useful policy instrument – but one which the Treasury is reluctant to subcontract to other government departments. That means that the departments that are charged with producing the sectoral strategies which feed into the comprehensive net zero strategy have so far ducked the issue of tax consequences. As a result, tax policy instruments seem to be poorly integrated into overall policy approaches and changes driven by budget considerations potentially undermine the wider strategic goals.

This reflects the normal approach to tax policy making – where departments can use spending and regulatory approaches but the Treasury keeps tax instruments under its sole control. While tax policy is far from a panacea, as noted above it has a potentially important role to play in helping the transition to net zero. Having set out the broad approach the Treasury plans to adopt, that should be integrated into each of the sectoral strategies – and the Treasury should also commit not to make any changes without consulting other departments. This forms part of the wider cross-government co-ordination effort which is required to ensure the effective development and delivery of policies on net zero.

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## **The government needs to gain and maintain public consent for its approach to paying for net zero**

The Institute for Government has argued before for much better public debate on tax policy and much better pitch rolling before announcements are made and policies are implemented. This is particularly important on net zero, where the effectiveness of tax signals in influencing behaviour will be badly compromised if the government is unable to stick to commitments. That sort of 'policy risk' and uncertainty will add to the costs of transition. The work of the Climate Assembly UK and Green Alliance suggests that the public – at least in theory – supports the use of tax measures to speed the transition as long as they are perceived to be fair.

This sort of public engagement – as opposed to traditional consultation, which in the tax sphere has often been largely confined to a dialogue between the Treasury and the tax profession – only works if the government is genuinely committed to listen to the results.<sup>79</sup> But as the government has found in the way chancellors have been boxed in on fuel duty changes, the ability to use tax instruments can be lost if public and parliamentary consent is absent.

A recent [Institute for Government report](#) argued that the government needed a much more active approach to involving citizens in climate policy making. This particularly applies to the Treasury, given the key role it will play in the affordability of changes and distribution of costs. The Treasury should commit in its net zero review to routinely running public engagement exercises and building its capability to do public engagement well, and taking proper account of the conclusions from those processes in its decision making.

## **The Treasury needs to take responsibility for supporting households and businesses through the transition**

The Treasury must set out a convincing approach to cushioning the impacts on people less able to shoulder the burden of the necessary changes. While the aggregate costs of the transition are not huge and there are significant immediate benefits and potentially long-run savings, the transition to net zero imposes significant upfront costs which some people will not be able to afford; others may lose their jobs.

The Treasury is the best-placed department to oversee the transition and ensure that the overall balance of tax and spending helps make this manageable. It is also best placed to judge the cumulative impacts of policies and ensure that those impacts are managed in a way that is both fair and can be sustained. In managing the impacts on poorer households it will need to work closely with the Department for Work and Pensions, as the benefit system may be a more effective way of helping them cope than the tax system.

This will not be the Treasury's sole responsibility – but no other department has the same overview or instruments at its disposal. For at least the next two decades this will be a critical issue for budgets and spending reviews to address.

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## Conclusion

The chancellor's actions in the early stages of the pandemic did much to support households and businesses through the crisis and provide a sense that government was on their side. The backdrop to the budget and the spending review will be the immediacy of concerns about the surge in energy prices. The government has said that this underlines the need to wean the UK off its dependence on imported fossil fuels – and it makes it a great time to prioritise energy efficiency as a way of reducing bills.

The chancellor cannot duck net zero any longer. With COP26 opening days after he sits down from making his budget speech and announcing the outcome of the spending review, he must show that he is prepared to step up on the longer-term – and in many ways greater – challenge of delivering net zero; that he is prepared to deploy the full range of Treasury instruments in pursuit of the government's net zero objectives; and that he recognises that the Treasury has a critical role to play in managing the transition effectively.

The Treasury is critical to the credibility and success of the UK's net zero strategy. If that strategy is to succeed, the Treasury must be leading, and seen to lead, not sitting on the sidelines.

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## Appendix: Full list of environmental taxes according to ONS definition

**Tax on hydrocarbon oils (fuel duty)** – tax on petrol and diesel, different rates payable depending on the fuel.

**Climate change levy** – tax on energy delivered to non-domestic users (some industries like charities are exempt). Introduced in 2001, from 2013 includes the carbon price floor, which taxes fossil fuels used to generate electricity. Charged at the point of supply.

**Fossil fuel levy** – tax paid by suppliers of electricity from non-renewable energy sources. Introduced in 1990 but ended (set at 0%) following the introduction of the Climate Change Levy.

**Gas levy** – tax on gas suppliers who arranged gas supply contracts. Introduced in 1981, remanded in the Finance Act 1998.

**Hydro benefit** – tax on energy suppliers to protect domestic consumers from the high costs of distributing electricity in the north of Scotland. Ended in 2005 and was replaced with alternative schemes.

**Renewables obligation tax** – requires suppliers of electricity to generate a certain proportion of electricity from renewable sources. Introduced in 2002 for Great Britain, and in 2005 for Northern Ireland.

**Contracts for difference** – designed to incentivise investment in renewable energy generation. Generators are offered a contract with a known strike price for renewable electricity sold. If the market price for electricity is below the strike price, the generator is paid the difference from the government; if the market price for electricity is above the strike price, the generator pays back the difference to the government. Introduced in 2014 and previously included within renewables obligation data – has replaced the renewables obligation scheme for new claims.

**European Union Emissions Trading Scheme (ETS)** – designed to help limit greenhouse gas emissions from heavy energy-using installations by setting a cap on the allowance of greenhouse gas emissions. Introduced in 2005. Companies receive or buy emissions which they can trade with one another as needed. Each year a company must surrender enough emissions allowances to cover its emissions, otherwise fines are imposed. If a company reduces its emissions, it can keep spare allowances to cover its future needs or sell them to other companies. In January 2021, a UK version of the ETS replaced the EU scheme following the UK's exit from the EU.

**Carbon reduction commitment** – designed to improve energy efficiency and cut carbon dioxide emissions in private and public sector organisations that are high energy users, using allowances. Introduced in 2010, now being phased out in favour of increased use of the climate change levy.

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**Air passenger duty** – charged on all passenger flights from UK airports. Introduced in 1994, rates vary by destination and class of travel.

**Rail franchises premia** – premia paid by train companies to the UK government. The franchising system began in the 1990s as part of the privatisation of British Rail. This was paused in 2020 and it was announced that the franchise system would be replaced by another system.

**Vehicle registration tax** – revenue from tax on vehicle registration in the UK (Northern Ireland revenues separate from 2007 onwards).

**Motor vehicle duties (vehicle excise duty)** – payable annually by owners of most types of vehicles.

**Boat licences** – annual charge on owners of boats who use or keep their boats on inland waterways in the UK.

**Air travel operators tax** – insurance scheme run by the UK Civil Aviation Authority, a legal requirement for package holidays and some flights.

**Dartford toll** – toll for motorists to use the Dartford Crossing, payable by both households and industries.

**Fishing licences** – required to fish for certain species of fish in various locations across the UK.

**Aggregates levy** – tax on sand, gravel or rock that has been dug from the ground, dredged from the sea or imported into the UK. Introduced in 2002 and generally payable by the quarrying industry but could also apply when aggregate is removed in the course of infrastructure projects.

**Landfill tax** – tax on any and all waste disposed of via landfill, unless specifically exempt. Two charge bands.<sup>80</sup>



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