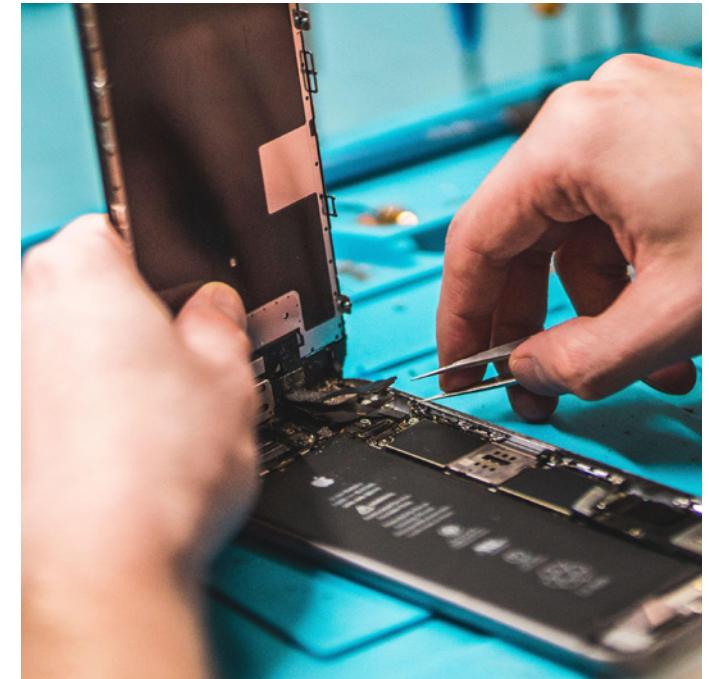


# Improving the environmental and social impact of UK VAT



“ green  
alliance...

# It's time to transform the tax system

“Decades of piecemeal changes to the tax system have left it complicated, inefficient and beset with perverse incentives that do little to raise revenue or meet the government’s wider economic objectives. Changes in the economy also risk making the system outdated and threaten to undermine revenue. The system is ripe for reform.”

Bronwen Maddox, director, Institute for Government<sup>1</sup>

## About the TransformTax project

For too long, governments have avoided fundamental changes to tax, tinkering only with the rates of existing taxes, rather than conducting a root and branch review of the system to consider what taxes are for, including what is taxed, and why.

Our TransformTax project, supported by the Joseph Rowntree Charitable Trust, is using a multidisciplinary approach, looking at the history of taxation, analysing alternative approaches from abroad, comparing fiscal instruments and, crucially, incorporating behavioural science. As part of this, we are using deliberative democracy techniques to understand what the public wants from the tax system.

We are investigating how taxes can be applied in a way that helps society to navigate away from an economic system founded on the ever increasing consumption of goods, with little consideration of its impact on the wellbeing of people and the planet. Through this project, we will examine opportunities for the tax system to enable people to make more sustainable choices.<sup>2</sup>

This is our first report for the project, which outlines three changes to VAT that can be made relatively easily in the near term. They should be made as a priority to begin the process of embedding environmental and social benefits in the tax system.

Added value

“76 per cent of people in the UK would either support or are neutral about the idea of replacing or changing VAT to better reflect environmental impact.”

## VAT: an obvious place to start transforming tax

Value added tax (VAT), the UK’s tax on consumption, is one of the most important sources of government revenue. In 2019-20, it was expected to raise nearly £140 billion, and recent figures show it accounts for more than 20 per cent of UK tax revenue.<sup>3</sup>

It is in the spotlight at the moment, as Brexit will allow more flexibility around how it is applied. Ministers have repeatedly said that leaving the EU will give the UK more freedom to map its own path. Reforming VAT is an opportunity to show what that means in practice.<sup>4</sup>

The chancellor has also shown willingness to vary VAT as one of the recovery measures being considered to stimulate the economy. This is a chance to fix some longstanding problems with VAT as a first step towards reforming the tax system.

Perversities of VAT, as it currently stands, mean it is discouraging activities that will lead to more secure jobs and a greener, healthier society, while at the same time it is encouraging activities that damage our environment, make us unhealthy and suppress job creation. This is the opposite of what the country needs to recover from the coronavirus pandemic.

It is also not what the public wants: our research shows that 76 per cent of people in the UK would either support or are neutral about the idea of replacing or changing VAT to better reflect environmental impact.<sup>5</sup>

In this report we show three major areas where adjusting VAT would have clear social and environmental benefits, while helping the government to revive the economy. These adjustments should be a priority in the forthcoming ‘fiscal moments’, including the autumn 2020 budget and the Treasury’s net zero review, the interim report for which is also due in late 2020.

This should be the start, rather than the end, of much wider reform to put social and environmental principles at the heart of the tax system.

# We are encouraged to demolish useful buildings

“We advocate radical reform of the VAT provisions so as to remove the incentive favouring new build over reuse when it comes to discarded buildings. Such reforms will bring to an end the unnecessary and ecologically unacceptable destruction of adaptable and durable buildings, and their replacement by short-lived glossy boxes.”

The government’s Building Better, Building Beautiful Commission’s final report<sup>6</sup>

“Many older buildings are being left vacant or demolished unnecessarily.”

## The problem

New build is zero-rated for VAT while most renovation and repairs are charged 20 per cent VAT which favours demolition over restoration.

## Why it matters

The UK has some of the least energy efficient housing stock in Europe, a situation perpetuated by a tax system which favours new build and makes upgrading buildings more expensive. This puts people off installing energy efficiency measures, leading to cold homes, the consequences of which are costing the NHS £1.2 billion a year.<sup>7</sup>

The VAT bias towards new build means that instead of renovation, many older buildings are being left vacant or demolished unnecessarily. Around 50,000 buildings are knocked down every year, and the number of long term vacant buildings in England has risen over the past three years in a row and is now nearly 226,000.<sup>8,9</sup> As many experts have noted, this is because the current system advantages developers who profit from new development, while owners of existing buildings needing repairs are deterred by unfairly high costs.<sup>10</sup>

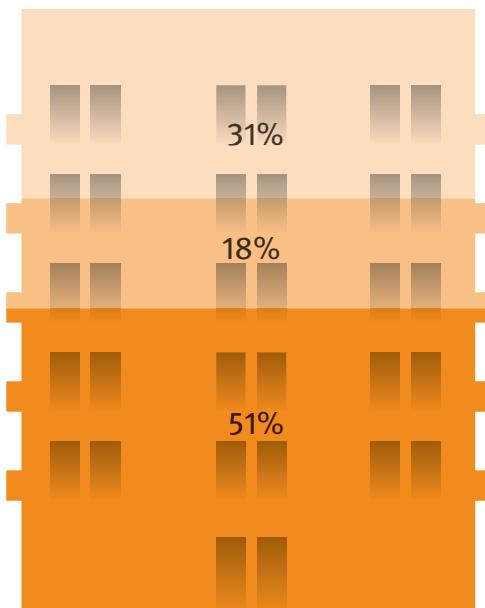
Demolishing buildings squanders the carbon emissions generated in their construction. This is especially problematic for residential buildings, where emissions associated with their construction can account for over half of their total climate impact over their lifecycle.<sup>11</sup> This share is likely to increase as emissions from heating and powering buildings are reduced because of renewable energy and efficiency measures. Demolition also creates a lot of waste: the construction, demolition and excavation sector is responsible for a massive 62 per cent of the total waste generated in the UK.<sup>12</sup>

Encouraging more urban renovation could also help with the housing crisis. Our research shows that long term vacant properties could fulfil between 14 and 46 per cent of new housing needs to 2030 across different metropolitan areas.<sup>13</sup>

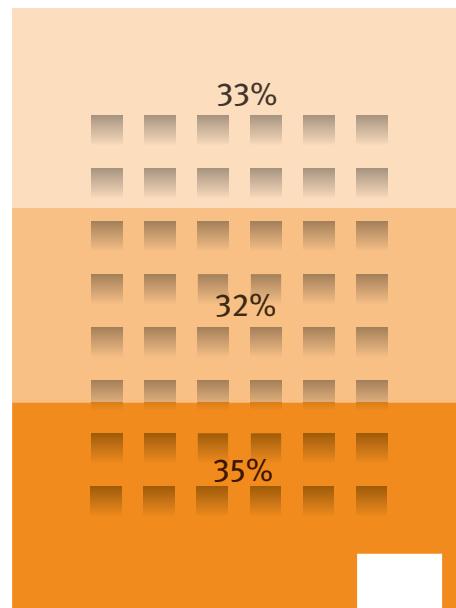
Added value

Avoiding demolition is better for the climate: the biggest share of a building's emissions comes from construction<sup>14</sup>

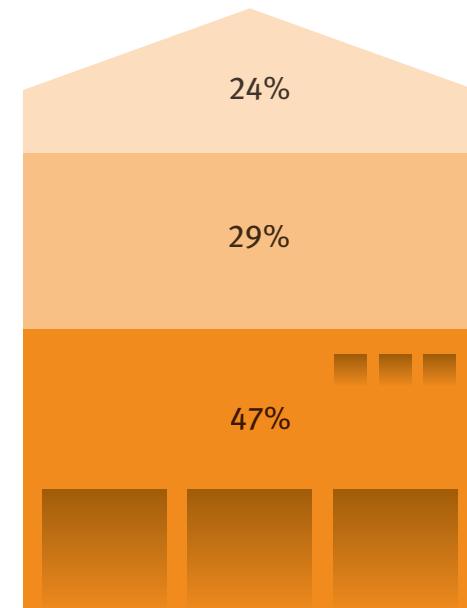
Residential block



Office building



Warehouse



- Operational emissions
- Embodied emissions from maintenance
- Embodied emissions from construction

## The solution

Make VAT for repair and renovation zero-rated, in line with new build.

### Contribution to a green recovery

This change would provide a long term stimulus to the building energy efficiency sector to consolidate the £2 billion direct funding the government has announced for energy efficiency measures through the new Green Homes Grant. It is estimated that, in its first five years alone, cutting VAT on housing renovation and repair in the UK would provide an economic stimulus of over £15 billion, while creating nearly 100,000 extra jobs in construction and the wider economy.<sup>15</sup>

### Impact on the Treasury

A rise in demand for renovation, maintenance and repair services, and shifting more of this work into the formal economy, would lead to higher income tax and National Insurance revenues. There would also be other social, health and local community benefits. These would serve to offset some of the VAT revenue losses to the Treasury, leading to an overall modest impact. According to Experian, net losses to the Treasury in the first year would be around £920 million.<sup>16</sup>

# Household energy subsidies aren't fair

“In the UK, the lower rate of VAT on household energy... is effectively the largest subsidy to fossil fuel use; in other words, it is an environmentally harmful subsidy... Higher income households use rather more energy than lower income households, and therefore it is the seven higher decile income groups that get most of the subsidy.”

Professor Paul Ekins, Institute for Sustainable Resources, University College London<sup>17</sup>

“The UK gives bigger subsidies to the fossil fuel industry than any country in Europe.”

## The problem

Reduced VAT on household gas and other heating fuels like oil (currently five per cent) is a considerable fossil fuel subsidy which benefits the wealthy most in cash terms.

## Why it matters

Households’ use of gas accounts for ten per cent of carbon emissions in the UK, but rather than being discouraged, it continues to be heavily subsidised.<sup>18</sup> In fact, this subsidy on domestic heating fuels is a significant part of the reason why the UK gives bigger subsidies to the fossil fuel industry than any country in Europe. Of the £10.5 billion in UK fossil fuel subsidies, £2.2 billion comes from this source.<sup>19,20</sup>

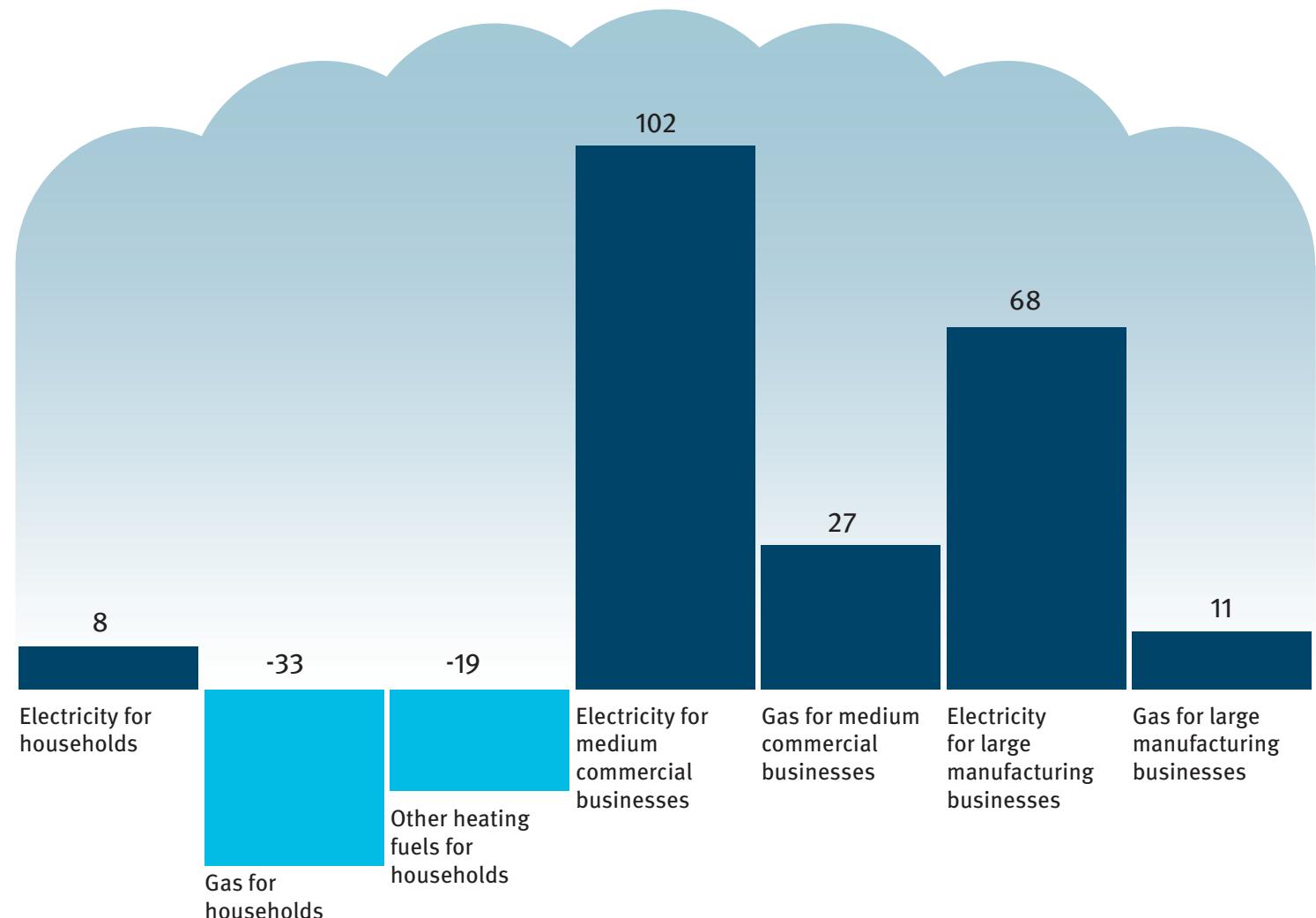
A consistent price for carbon emissions is considered vital to achieving net zero carbon across the economy. But, according to the Energy Systems Catapult, domestic gas is effectively subsidised to the tune of £33 per tonne of carbon, predominately because of the low VAT rate. Other heating fuels, like oil, are subsidised at £19 per tonne of carbon.<sup>21</sup>

Although poorer households spend a larger proportion of their income on energy, the benefits of this subsidy in cash terms accrue mostly to the wealthy, who use the most energy. On average, households in the lowest three income deciles spent £9.70 a week on gas and other heating fuels in 2019, compared to £13.40 in the seven highest deciles, with the wealthiest decile spending more than twice as much as the poorest.<sup>22</sup>

Added value

## A lower VAT rate for domestic gas is a big fossil fuel subsidy

Effective carbon prices for different fuel uses, £/tonne<sup>23</sup>



## The solution

Apply 20 per cent VAT to household gas and domestic heating fuels, and ringfence the new revenue for redistribution and improvements to low income households.

### Contribution to a green recovery

This change will encourage innovation. Heating is considered to be one of the hardest sectors to decarbonise. The Committee on Climate Change estimates that only £100 million a year is being invested in the change, although £15 billion is needed.<sup>24</sup> This subsidy of the high carbon status quo has so far discouraged businesses to innovate in solutions that can be scaled up, as well as householder investment in energy efficiency measures, different heat technologies and electrifying heating.<sup>25</sup> Targeted redistribution of tax revenues would help those on low incomes to bring down the cost of heating, by improving the energy efficiency of their homes or switching to low carbon heating.

### Impact on the Treasury

Initially, charging full VAT on household gas and other heating fuels would yield an additional £2.2 billion per year.<sup>26</sup> However, the application of this tax must be progressive and fair. This can be achieved through public investment in energy efficiency or by redistributing the revenue to those on low incomes and who are fuel poor, preferably through the existing benefit system. Research shows that most low income households would be better off overall if such a VAT change was paired with appropriate redistribution.<sup>27</sup>

# Repairing things is too expensive

“It will be easier for people to buy high quality products because they know it’s affordable to have them fixed if something breaks... it is a boost for the local labour market because repairs are by their nature done near where you live. So hopefully this will contribute to the growth of jobs locally all over the country.”

Sweden’s then deputy finance minister Per Bolund, introducing a scheme (soon to be expanded) of reduced VAT and labour charges for repair in 2016<sup>28</sup>

“Nearly two thirds of people in the UK think products are currently too difficult to repair.”

## The problem

VAT is normally charged at the standard rate for repairs which, combined with high labour costs, discourages people from mending broken items.

## Why it matters

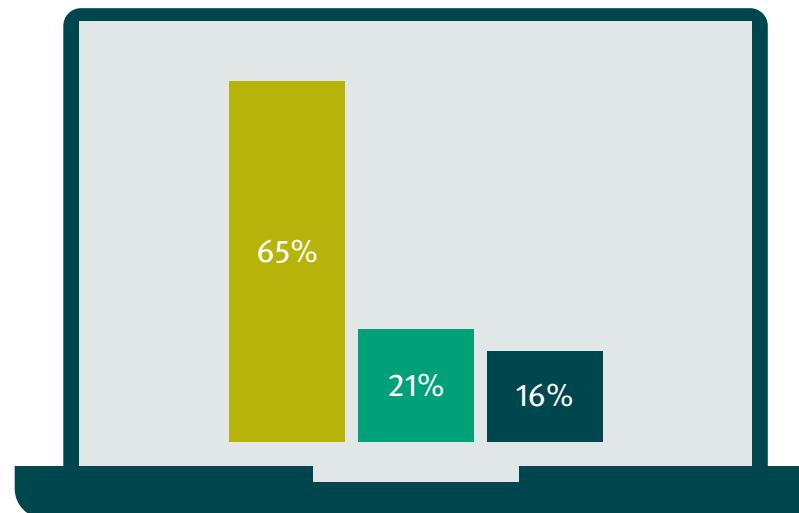
Because VAT is charged on both labour and capital, it disadvantages activities that are labour intensive. A lack of affordable repair services encourages huge amounts of unnecessary waste. The problem of electronic waste, for instance, is particularly acute in the UK, which generates more e-waste per capita than any other country in the world, apart from Norway. In 2019, the UK generated 23.9 kg of e-waste per person, against an EU average of 16.2 kg and a global average of just 7.3 kg per year.<sup>29</sup>

Affordability is one of the biggest barriers to getting products repaired.<sup>30</sup> The majority of people in the UK want longer lasting, repairable products, but they find accessing affordable repair services frustrating. Nearly two thirds of people in the UK think products are currently too difficult to repair.<sup>31</sup> Recognising the need for more labour intensive activities that conserve resources, other countries, including Greece, Ireland, Luxembourg, Malta, Netherlands, Poland and Finland, charge six per cent VAT on some repair activities, the lowest rate allowed by the EU.<sup>32</sup>

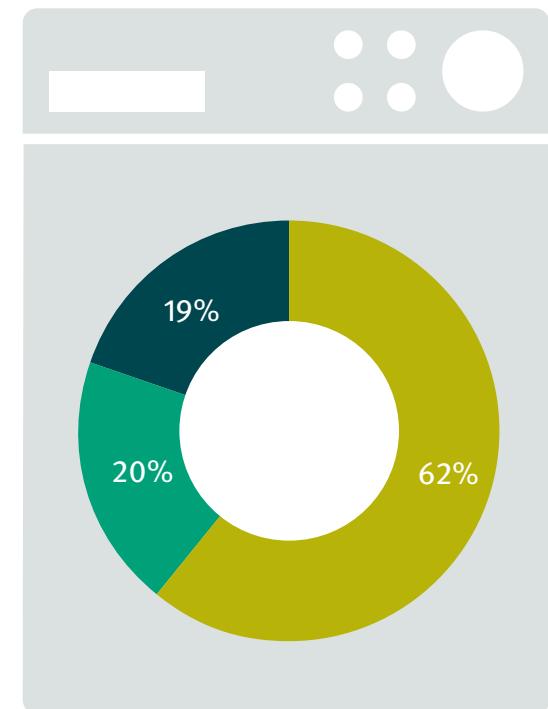
Added value

## Reducing VAT on repairs would keep products in use for longer

People are frustrated by product lifespans and lack of repairability<sup>33</sup>



“I often feel frustrated about how long products last”



“Currently products are difficult to get repaired”

- Agree
- Neutral
- Disagree

## The solution

As the UK will no longer be subject to EU VAT rules, it should zero-rate VAT on all repairs, potentially starting with high impact, frequently wasted products like electronics.

### Contribution to a green recovery

With a boost like this, many new jobs in the repair and remanufacturing industry would be created in all areas of the country. Combined with other policies to accelerate the circular economy, repair could create 34,000 new jobs as it would be needed in every locality. And a robust remanufacturing sector could support 312,000 new jobs.<sup>34</sup> With unemployment rising because of the economic impact of coronavirus, an increasing proportion of these jobs will also be net jobs to the economy.

### Impact on the Treasury

Initially, this would decrease the Treasury's revenue, but improved labour opportunities could counteract some of the loss, as with reducing VAT on building renovation. If the government were to follow Sweden's example, the loss could also be more than balanced by a new tax to discourage a harmful activity. When Sweden reduced VAT on some repairs and allowed the labour costs to be reclaimed on others, it estimated it would reduce its tax revenue by 460 million kronor (£40 million) a year. But this was more than counteracted by a new tax on hazardous chemicals, predicted to raise two billion kronor (£174 million) a year.<sup>35</sup>

Added  
value

## Endnotes

- 1 Institute for Government, 2019, *Taxing times: the need to reform the UK tax system*
- 2 Green Alliance and CIEMAP, 2018, op cit
- 3 The total amount and share of revenue from VAT has been increasing in recent years, although this was at least temporarily reversed because of the pandemic lockdown. In 2017-18, VAT brought in £125.5 billion, compared to just £75.8 billion a decade before. In its latest forecast, the Office of Budget Responsibility (OBR) expected VAT to raise £136.6 billion in 2019-20. See: OBR, March 2019, *Economic and fiscal outlook*
- 4 Two of the changes we recommend – increasing VAT on gas and decreasing it on renovation – could have been made regardless of the outcome of Brexit. Brexit, though, provides an opportunity to review VAT in general and we believe that, as well as considering changes that are now possible, the government should use the opportunity to address some longstanding problems with the domestic application of the VAT regime. As far as possible, economists favour simplification of the VAT system and the application of a uniform rate to reduce complexity and improve operational and economic efficiency. Given the high level of deviations in UK VAT, achieving this is politically challenging. In the near term, our recommendations will help to address the perversities of the current system.
- 5 Green Alliance and the Centre for Industrial Energy, Materials and Products (CIEMAP), 2018, *By popular demand: what people want from a resource efficient economy*
- 6 Building Better, Building Beautiful Commission, January 2020, *Living with beauty; promoting health, well-being and sustainable growth*
- 7 Figures adapted from BRE, 2015, *The cost of poor housing to the NHS. Excess cold is the number one hazard from poor housing to the NHS*. The health conditions caused by cold homes include pneumonia, heart attack and high blood pressure.
- 8 Architects' Journal, 12 September 2019, 'Introducing RetroFirst: a new AJ campaign championing reuse in the built environment'
- 9 Ministry of Housing, Communities and Local Government, 21 May 2020, *Live tables on dwelling stock (including vacants)* table 615, 'Vacant dwellings by local authority district: England, from 2004'. The total number of long term vacant buildings in 2019 (those that have been empty for at least six months) was 225,845, up from 216,186 in 2018 and 205,293 in 2017.
- 10 See, for instance, Heritage Alliance, 20 May 2018, 'Treasury Committee VAT inquiry: Heritage Alliance response'; and Building Better, Building Beautiful Commission, January 2020, op cit
- 11 Royal Institute of Chartered Surveyors (RICS), 2017, *Whole life carbon assessment for the built environment*.
- 12 Department for Environment, Food and Rural Affairs, March 2020, *UK statistics on waste*
- 13 Green Alliance, 2020, *Smart building: how digital technology can futureproof UK construction*
- 14 Adopted from RICS, 2017, op cit. Embodied emissions are those that occur during construction, resulting from materials and making them into products and the building themselves, as well as emissions associated with transport and work on the construction site. After the building is completed, further embodied emissions are associated with materials, parts and products to maintain the building over its lifetime, which is assumed to be 60 years. The operational emissions are those associated with heating and powering the building following completion. The analysis does not include the end of life phase.
- 15 Experian, 2015, *An estimate of the effects of a reduction in the rate of VAT on housing renovation and repair work: 2015 to 2020*
- 16 Ibid
- 17 Environmental Audit Committee, 10 July 2013, 'Minutes of evidence'
- 18 Energy Systems Catapult, 2019, *Near term options to address low-priced emissions: rethinking decarbonisation incentives*
- 19 The £10.5 billion statistic represents the total subsidy the EU says the UK gives to the fossil fuel industry. See: European Commission, 9 January 2019, *Energy prices and costs in Europe*. The UK government denies that this is a subsidy. The £2.2 billion figure is explained in endnote 26.

Added  
value

- 20 OECD, *OECD.stat*, ‘Fossil fuel support – GBR’
- 21 Energy Systems Catapult, 2018, *Current economic signals for decarbonisation in the UK: rethinking decarbonisation incentives*. The report notes that £4 per tonne of carbon is recouped through other policy measures, making the effective price for carbon for household gas £33 per tonne. While these VAT subsidies apply to both electricity and gas, the cost of decarbonising the electricity grid is passed through in electricity bills resulting in a carbon price of £8 per tonne, based on 2017 figures (the effective carbon price for electricity may be higher now as the EU ETS price, which affects it, has since increased). As there are charges for renewable energy on electricity bills that counteract the VAT reduction, and as electrification will form the backbone of low carbon energy in the future, we do not consider it necessary to increase VAT on electricity.
- 22 Office of National Statistics (ONS), March 2020, ‘Family spending workbook 1: detailed expenditure and trends’
- 23 Derived from Energy Systems Catapult, 2018, op cit
- 24 Committee on Climate Change (CCC), 2019, *Net zero: the UK’s contribution to stopping global warming*
- 25 The CCC, for instance, has noted: “costs are significantly larger for electricity than gas or oil heating, and the full carbon costs are not reflected in the pricing of heating fuels. These factors currently weaken the private economic case for electrification.” See, CCC, 2019, op cit
- 26 Figure calculated from BEIS, 25 June 2020, *Energy prices domestic prices: total household expenditure on energy*, table 2.6.1. In 2019, households spent £15,363,000,000 on gas and heating fuels, which included five per cent VAT. Raising VAT to 20 per cent would therefore yield an additional £2,195,000,000 for Treasury based on 2019 figures. The expectation would be that this figure would decrease as consumption of gas and other fuels decreases.
- 27 Previous research has shown that it is possible to end the subsidy on household energy, while benefiting the majority of low income households, if appropriately designed redistributive packages are used. See, for example: Joseph Rowntree Foundation, 2013, *Designing carbon taxation to protect low income households*; IFS, 2013, *Household energy use in Britain: a distributional analysis*; and Arun Advani and George Stoye, June 2017, ‘Cheaper, greener and more efficient: rationalising UK carbon prices’ in *Fiscal Studies*, volume 38, issue 2
- 28 World Economic Forum, 27 October 2016, ‘Sweden is paying people to fix their belongings instead of throwing them away’. The scheme is due to be expanded this year.
- 29 UN, June 2020, *Global e-waste monitor*
- 30 Research by CIEMAP, based on a detailed and representative focus group data collected between 2016 and 2018, has shown that affordability is a key consideration when it comes to whether or not people access repair services. See, for instance: C Cherry et al, 2018, ‘Public acceptance of resource efficiency strategies to mitigate climate change’, in *Nature climate change*, which notes: “Affordability and convenience arose as general caveats across all strategies... Relative costs of products were deemed highly relevant.”
- 31 Green Alliance and CIEMAP, 2018, op cit.
- 32 RREUSE, 2017, *Reduced taxation to support reuse and repair*
- 33 Green Alliance and CIEMAP, 2018, op cit. These figures are based on a representative survey of 1,093 people conducted by CIEMAP researchers at Cardiff University. Results may not always add up to 100 per cent due to rounding
- 34 Green Alliance and WRAP, 2015, *Employment and the circular economy: job creation in a more resource efficient Britain*. This 2015 report included the headline figures that more than half a million jobs could be supported by the circular economy, with 102,000 of them net jobs. It did not break the job creation numbers down by sector; the figures here are taken from the background calculations that the overall figure in the report was based on.
- 35 *The local*, 17 September 2016, ‘How Sweden wants to make repairing things cheaper’

## **Added value**

Improving the environmental and social impact of UK VAT

Author: Libby Peake

Additional research: Ravina Singh

## **Acknowledgements**

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The opinions expressed in this report are solely those of Green Alliance and do not necessarily reflect those of the advisory board members.

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## **Green Alliance**

Green Alliance is an independent think tank and charity focused on ambitious leadership for the environment. Since 1979, we have been working with the most influential leaders in business, NGOs and politics to accelerate political action and create transformative policy for a green and prosperous UK.

Green Alliance

11 Belgrave Road,  
London, SW1V 1RB  
020 7233 7433  
ga@green-alliance.org.uk  
www.green-alliance.org.uk

blog: [greenallianceblog.org.uk](http://greenallianceblog.org.uk)  
twitter: @GreenAllianceUK

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