



THE ASSOCIATION
FOR RENEWABLE ENERGY
& CLEAN TECHNOLOGY



REA Green Recovery Report
*Reviving the Economy, Growing the Renewable and
Circular Economy & Delivering Net-Zero*

Foreword - Dr Nina Skorupska CBE Chief Executive, REA

The UK, as with the entire world, has been rocked by the ravages of Covid-19 on our lives, and society as a whole. The fear, anxiety and loss we have all endured has been truly awful, and it would have been inconceivable to us in 2019. We clearly do not want to step out of one crisis straight into another one, in the form of catastrophic climate change.

Something, which has been encouraging, is that the unprecedented impacts of the pandemic have seen many Governments across the world take remarkable steps to control the situation and save lives; it has demonstrated the art of the possible. We still, however, face many challenges ahead of us, notably a looming recession. It is widely agreed, on both sides of the political divide, that the best way out of this recession is to implement an economic stimulus package; and that this should take the form of a Green Recovery. The UK Government has the opportunity to address both the impact Covid-19 has had on our economy and the Climate Crisis.

The REA's vision is a future built on renewable energy and clean technology and we know that our members, over 500 across the renewable energy, recycling, energy storage and electric vehicle charging sectors, are instrumental in delivering a Green Recovery. They can help to decarbonise the complete energy system across heat, transport and power, as well as preserving natural capital.

The Green Recovery isn't about building back to pre-Covid standards it's about creating a cleaner, fairer and more efficient economy. That is why in this paper *"Reviving the economy, growing the renewable and circular economy and delivering net zero"* we look beyond just the financial aspects to explain the impact introducing measures will have on individuals, businesses and the national interest. We look at how these three sectors can not only benefit from the Green Recovery but play their part in the transition towards a Net Zero economy. Implementing policies throughout this report will ensure that we not only bounce back from the pandemic but that we bounce back a stronger, more resilient, and more unified nation.

We consider different priorities - stimuli that can bear fruit within 12-18 months if not sooner, accompanying longer term recovery options (around 18-36 months) and policies to support a green economic recovery in the longer term. Many of the recommendations made in the paper are local and decentralised, which is a central tenet to much of renewable energy and clean technology, making renewable energy and clean technologies critical in the levelling up agenda and enabling the UK to build back better.

Introduction

The REA is not the first, and will not be the last organisation to offer up ambitious, yet pragmatic suggestions for a Green Recovery. We join many influential and knowledgeable organisations such as IRENA, the Committee on Climate Change, Greenpeace, the Local Government Association and Aldersgate Group who are calling for the Government to deliver green jobs across the UK, build an infrastructure that ensures better living conditions for both people and the planet and accelerate leading technologies to put us clearly on track to deliver our world beating Net Zero agenda that we will be proud to share at COP26 in 2021.

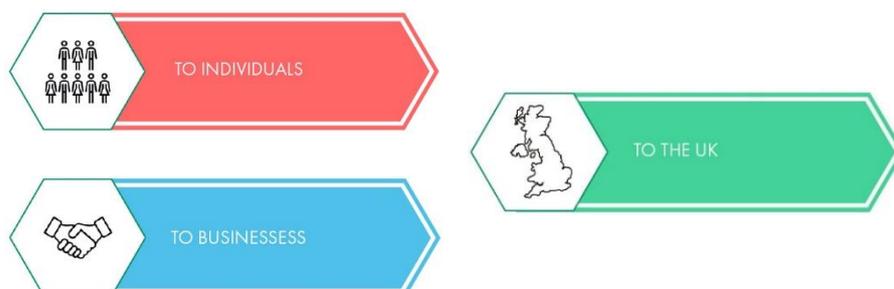
This paper does not seek to replicate or repeat the measures called for in those documents, but rather to add REA's unique voice and perspective across the Green economy on the matter. We cover renewable power, heat, transport clean technologies such as storage, and the Circular economy. That is why we concentrate on everything from soil health, to battery production, and biomethane plants to the development of large-scale power from a range of technologies, in order to truly grow the entire green economy.

The renewable and clean technology sector is ready and willing to play its part in the country's economic recovery and can be central to our revival.

This report is broken down into key sectors to summarise clear, costed proposals for supporting a sustainable economic recovery across the UK by:

- ▲ *Decarbonising Power & Homes*
- ▲ *Decarbonising Heat*
- ▲ *Decarbonising Transport*
- ▲ *Moving to a Circular Economy*

For each sector, we outline the suggested measure, the challenge it is seeking to solve and the benefits to individuals across the country, UK businesses and the country as a whole.



Although this document doesn't set out all the industry's key policy asks, we do believe that the stimulus suggestions will contribute to:

- Renewable energy and clean technology delivering jobs across the country
- Innovation and expertise in the renewable energy and clean technologies sectors creating valuable export opportunities for the UK
- Renewable energy and clean technology being market competitive
- Carbon reliant & emitting companies transitioning to 100% renewable energy & clean technologies

Summary: The REA's Green Recovery Recommendations

Decarbonising Power & Homes

- ▲ Bring forward new renewable power generation capacity and energy storage projects to enable the shift to Net Zero - £2bn funding could deliver an extra 15-20 GW of renewable power¹
- ▲ Commit to low-carbon power and heat generation in new homes and Retrofit Existing homes with energy efficiency measures and Low Carbon Technologies
- ▲ Reform the tax system to enable the low-carbon transition, particularly Business Rates and VAT
- ▲ Launch an ambitious national training and re-skilling programme to help workers in oil and gas transition to the net zero world and train a new generation of electrical apprentices to enable the low-carbon energy and transport evolution
- ▲ Invest in battery manufacturing capacity in the UK in line with the Faraday Institution's recommendations, to enable EV production and energy storage to smooth the energy transition

Decarbonising Heat

- ▲ Stimulate renewable heat deployment by providing an immediate cash injection into the Non-Domestic Renewable Heat Incentive, extending it for 12 months

¹ Based on outcomes of 2019 CfD Auction when £60m secured up to 6GW capacity

- ▲ Provide funding to ensure the third allocation round of RHI Tariff Guarantees provides adequate support for biomethane plant development and other eligible technologies, with flexible timelines for commissioning plants

Decarbonising the Transport Sector

- ▲ Accelerate the programmes under way to enable the deployment of public and private EV infrastructure through regulatory support and funding to ensure continued investor confidence
- ▲ Maintain existing low-carbon vehicle incentives and clarify future tax and regulatory questions to provide certainty to consumers and industry
- ▲ Promote renewable transport fuels and the Circular Economy by supporting the removal of fatbergs

Moving to a Circular Economy

- ▲ Adequately Fund Local Authorities to take actions locally to meet Net-Zero, across waste and resources, transport, heat and power with a £2.5 billion Local Low Carbon Transition Fund
- ▲ Invest in an Education and Communications programme to drive quality recycling with funding of at least £50million for a programme to reach every home in the country
- ▲ Fund the revision of the Quality Protocols for compost and digestate at a cost of up to £260,000 & End the use of carbon intensive peat by supporting commercial peat-free sustainable compost alternatives with a £50m Fund
- ▲ Implement a targeted programme of enhanced landfill mining to recover valuable materials and promote a more Circular Economy

Economic Stimulus measures to ensure a Green Recovery

▲ Decarbonising Power & Homes



The Challenge

Ageing energy generation assets and an increase in demand for power from electrification in heat and transport, will require a considerable increase in power generation - National Grid estimate at least 4GW a year extra due to more demand from Electric Vehicles alone - while decarbonising the power system is essential to achieving Net Zero.

What's Required

Short term stimulus package

- a. *Provide the Contracts for Difference (CfD) auctions with an additional £2bn of ringfenced funding for future auctions, delivering c.15-20GW extra capacity²*

Longer term recovery package

- b. *Introduce ring-fenced funding of £200m for energy storage (concentrating on long term, long duration projects), and include such projects in Pot 2 of the CfD mechanism. This funding would be equivalent to the expected net savings to consumers from CfD Allocation Round 3 Projects and will ensure the development of energy storage projects vital to the UK's energy transition.*

Policy to facilitate stimulus and recovery

- c. *Provide 'ring fenced' CfD funding for emerging technologies with large benefits to UK supply chains and 'UK Plc' - this includes marine and advanced energy-from-waste technologies*
- d. *CfD auctions must take place every six months on a rolling basis*
- e. *Enact the proposed planning changes to battery storage in relation to national project size thresholds enabling greater subsidy-free solar and wind projects (co-located with batteries) to be developed.*
- f. *Consider more robust measures for small scale renewable power projects, such as a simplified CfD for smaller capacities.*

The Benefits

² The 2019 CfD Auction when £60m secured up to 6GW capacity



Taking these actions would catalyse a host of new distributed power generation projects across the country, provide jobs for local individuals in construction and operations and benefit local communities through revenue shares. The UK renewable power sector employs around 85,000 people across the UK and the energy storage sector employs several thousand³. REA modelling suggests that with the right support, this could increase up to 109,000 more people across renewable energy (including power, heat and transport) by 2030⁴.



Businesses would benefit in the short-term from the development of new low carbon generation, and in the long-term from lower energy costs. There would also be benefits for the Treasury with many new CfD projects likely to be 'subsidy free'.⁵



Existing coal, gas and nuclear assets are due to come offline soon and greater electrification of the heating and transport sectors is planned, pushing up supply pressures.⁶ Introducing a pipeline of new, flexible, low-carbon generation now is essential if we are to replace ageing generation and meet our Net Zero targets as a nation.



The Challenge

Buildings accounted for 18% of UK carbon emissions in 2019, according to the Committee on Climate Change.⁷ Our homes are among the least energy efficient in Europe and due to

³ REA, REView Publication, 2020

⁴ REA, REView Publication, 2020

⁵ Depending on future wholesale electricity prices.

⁶ Assets are expected to come offline by 2040

⁷ "Reducing UK emissions: 2020 Progress Report to Parliament", Committee on Climate Change (2020): 21.

this, amongst the most expensive to heat. Millions of UK homes are poorly insulated with the most vulnerable members of society and key workers and the lowest paid are disproportionately likely to live in such housing.⁸ We must take serious steps now to deliver a step change in emissions across the country, lower living costs and improve our homes. By the early 2030s, low-carbon heating must be the dominant form of new heating installation according to the Government's own climate change advisers.⁹

What's required:

Short term stimulus package

- a. *Introduce a nationwide £1.1 billion a year Retrofit Programme of all homes below EPC level C to bring them up to decent Energy Efficiency levels. Install solar, renewable heating and smart technologies to save the occupiers money. REA Analysis shows a range of benefits could be delivered at a cost of around £1.1 billion, including insulation, Low Carbon Technologies and other measures.*
- b. *Allocate £500m to kick-start low-carbon technologies' deployment in homes already under construction.*

Longer term recovery package

- c. *Fit new homes and housing developments with a minimum amount of onsite renewable power and heat generation. This should be done by 2025 in line with the CCC's recommendation that no fossil fuels to be burnt in new homes past this point.¹⁰*
- d. *New homes and housing developments must have onsite energy storage technologies and be future proofed with electrical connections (three phase). This will ensure that electrical systems infrastructure is not a limiting factor, for future installation of EV charging and participating in energy aggregation services.*

The Benefits



The deployment of onsite renewables and flexible power assets would greatly reduce domestic electricity bills and overall living costs and prepare the grid for new demands as the heating and transport sectors become decarbonised.¹¹ Providing the materials were made in the UK, REA analysis shows that this would create around 75,000 new direct jobs and 15,000 indirect jobs.¹²

⁸ This includes the lowest paid in society as well as key workers.

⁹ "Reducing UK emissions: 2020 Progress Report to Parliament" Committee on Climate Change (2020): 13.

¹⁰ "Reducing UK emissions: 2020 Progress Report to Parliament" Committee on Climate Change (2020): 39, 54.

¹¹ A typical Passivhaus property can cost as little as £5 a month to heat and light

¹² Details available on request, assumes 28 million homes need upgrading, with insulation, LED lighting, sustainable heating and new homes built to Passivhaus standard with solar and smart technologies



Businesses would benefit from a huge boost in energy efficiency and low carbon technology product demand - the UK is a leader in the deployment of domestic clean energy technologies and has particular specialisms in the integration of multiple smart energy appliances with dynamic electricity supply tariffs so could deploy ready-made solutions and expertise in their home market. Implementing this measure would create a buoyant home market and this will also enable British companies to export their products, services and expertise abroad.



If Low Carbon Technologies were installed during home retrofits, this would create a considerable 'Virtual Power Plant' reducing the need for other generation capacity, and flexibility options on a national scale which would help enable the energy transition. Energy efficiency is one of the most cost effective and impactful ways of delivering emissions reductions to enable us to meet our Net Zero target.



The Challenge

As of 2019, the rate of VAT for Energy Saving Materials was raised from 5% to 20%. This directly increased the cost of installing renewable energy systems.¹³ This is directly disincentivising the deployment of renewable energy and clean technology at a time when deployment needs to be bolstered.

As well as this, in commercial properties, Business Rates within some renewable clean technology sectors have become prohibitive. This has led to some sites being penalised for utilising their own renewable generation rather than exporting it to the grid, having seen their rateable value increase six-fold in the last revaluation. Directly disincentivising further deployment.

What's Required

Short term stimulus package

- a. *Introduce business rate relief for microgeneration of heat and power on domestic properties*

¹³ such as solar panels, energy storage systems, heat pumps or biomass boilers, within domestic properties

- b. *Reduce business rates for onsite generation of renewable power and heat on commercial properties*

Longer term recovery package

- c. *Reduce VAT on Energy Saving Materials, including retrofitted solar and energy storage post-Brexit to 5%*

The Benefits



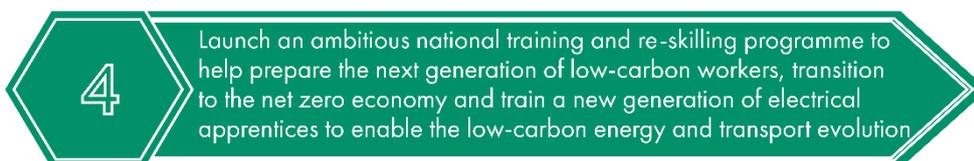
The installation of Energy Saving Materials is crucial to alleviating the symptoms of fuel poverty, which effects 2.5 million people in England. Zero rating VAT will drive installations of these materials which on average reap consumers annual savings of around £270 per household.¹⁴



Business Rate relief would provide immediate support to businesses as they recover from the impacts of Covid-19. Focusing additional support on those who have proactively decarbonised their business activities creates a clear market signal from Government, while incentivising further installation of renewable energy systems.



Investment in energy efficiency measures would provide a net present value to the UK economy of £7.5 billion, with scenarios suggesting 66,000 to 86,000 new jobs could be sustained annually across all UK regions. Dropping VAT and providing business rate relief could provide the renewed impetus for new installations and see these scenarios realised¹⁵.



¹⁴ House of Commons, BEIS Committee (2019) "Energy Efficiency: building towards net zero" <https://publications.parliament.uk/pa/cm201719/cmselect/cmbeis/1730/1730.pdf>

¹⁵ Ibid

The Challenge

When it comes to employment there are two big problems facing the sector and the UK. Firstly, the immediate loss of jobs from oil, gas and traditional fossil fuel reliant sectors with companies such as BP already announcing 10,000 job losses¹⁶. This will disproportionately affect specific regions of the UK predominantly in Scotland, the North East and West, Yorkshire and Humberside.¹⁷ There needs to be enough jobs of similar expertise to replace those lost if unemployment is not to rise and living standards decrease.

Secondly, there is a sharp skills gap when it comes to renewable energy and clean technology with the LGA predicting solar installation, design and construction for anaerobic digestion, the manufacture of hydrogen fuel cells, smart control engineers, EV research and chargepoint installation to be the areas with the biggest skills gaps by 2025-2035.¹⁸ Much like with job losses, the skills gap is already hitting certain regions harder than others.¹⁹ Coinciding with this, a combination of payroll reforms coming in from April 2021 and the introduction of a points-based immigration system in January 2021, is likely to reduce the size of the contractor workforce, meaning that low-carbon technology businesses may find it harder to source specialist labour from abroad.²⁰

What's required

At minimum an effort to replace jobs lost with jobs of similar expertise and skill and launch a national re-skilling and training programme to equip new and existing workers with the tools to deliver the scale of the Net Zero challenges. Measures could include:

Short term stimulus package

- a. *Fund retraining schemes for Oil and Gas workers and apprenticeships to address existing and future skills shortages in low-carbon technology sectors.*

Longer term recovery package

- b. *Introduce national apprenticeships and retraining schemes that can be tailored to individual regions to increase employment and reboot our regions. The 2020 LGA report identifies regional specialisms in energy, which can be built on and utilised to revitalise some regions with traditionally strong manufacturing industries, where unemployment has tended to be relatively high over the last few decades.*

¹⁶ BBC News, 08 June 2020, *BP to cut 10,000 jobs*, <https://www.bbc.co.uk/news/explainers-52966609>

¹⁷ ONS figures released in March for November 2019 to January 2020, show that the unemployment rate in the North East & West, Yorkshire and the Humber, and the West Midlands, remains high.

¹⁸ LGA report, p17-24

¹⁹ A June 2020 report from 2019 identifies that more than 40% of vacancies in the North West and the East of England suffer from skills shortages. EUSP Skills Strategy 2020-25. p 28

²⁰ EUSP Skills Strategy 2020-25. p 28

The Benefits



Individuals who will be affected by the decline of the oil, gas and fossil fuel industries will be able to find new jobs that utilise their existing skill sets ensuring that employment levels and standard of living remains stable. Younger generations ready to embark upon a career in renewable energy and clean technology will have the ability to gain the qualifications and experience needed to succeed.



An economic recovery plan presents an opportunity to boost employment in these areas for local people and to transition to a green economy at the same time. For instance, the LGA estimates that in the Midlands alone, 194,000 jobs could be generated by 2050 in low-carbon technologies, primarily in the manufacture of low emission vehicles, batteries, and modules in gigafactories close to existing automotive manufacturing sites with local and national businesses benefitting from the investment and supply chains.



The country will be able to minimise the social impacts of industrial change, deliver exports, reduce imports and make the most of existing labour pools at a time of profound national and industrial transition.



The Challenge

Britain is a world-famous manufacturer of vehicles. Although endorsed by the Government and even the Prime Minister himself, gigafactories (to manufacture batteries for vehicles and the energy market) are yet to be built. With the phase out of conventional ('ICE') car and light van sales approaching, the UK faces losing its status as a world-leading vehicle manufacturer as well as facing a cliff edge in replacing vehicle factory line jobs with battery manufacturing jobs.

A number of new battery production gigafactories in the UK are required. According to the Faraday Institute, based on current plans alone, battery manufacturing capacity in the

industrial hubs of the EU will reach almost 450GWh per year by 2030. If Britain does not invest in gigafactories now, we will be at risk of letting our automotive industry become drastically less competitive.

What's required

Short term stimulus package

- a. *Introduce tax incentives and direct grants to encourage new battery factories and get new supply businesses off the ground. This must be tailored to accommodate for the different business requirements in the sector²¹.*
- b. *While £274 million has been allocated over the 2017-2021 period for the UK's Faraday Challenge, Germany and France have announced 1 billion and 700 million euros respectively in financial support for EV battery production. The European Commission has also recently approved 3.2 billion euros of funding for research across the battery value chain in several countries²².*

The Benefits



This would create up to 78,000 new jobs for individuals in battery gigafactories and their supply chains.



A thriving domestic battery manufacturing industry would help automotive businesses by reducing transportation costs for battery and EV components, and ensuring a sustainable supply chain.



The country must remain competitive in the automotive industry during the period of transition or risk a collapse in jobs and exports. New battery production in the country will keep Britain competitive in the European automotive market by providing gigafactories close to car production plants - these minimise costs for producers and could help ensure the future of automotive suppliers in the UK.

²¹ Different sections of the supply chain are likely to need different forms of support, for varying reasons.

²² "UK Electric Vehicle and Battery Production Potential to 2040" *The Faraday Institution* (2020): 8.

▲ Decarbonising Heat

1

Stimulate renewable heat deployment by providing an immediate cash injection into the Non-Domestic Renewable Heat Incentive, and extending it for 12 months

The Challenge

The UK's primary renewable heat policy is due to end in March 2021²³. Delays caused by Covid-19 mean that shovel ready commercial heat decarbonisation projects will not be able to deploy before the end of the scheme.

As well as this, the current decision not to extend the scheme leaves a 12-month policy gap between its budgetary end and the start of the proposed, and much less ambitious, Clean Heat Grant Scheme. The situation will see a contraction of the renewable heat market, leading to the loss of skills, jobs and supply chains, threatening the UK's ability to meet its net zero heat decarbonisation target.

What's Required

Short term stimulus package

- a) *Treasury must immediately utilise the underspent RHI budget by injecting cash into the Non-Domestic RHI. This would allow for the scheme to be extended by twelve months ensuring projects abandoned due to Covid-19 delays will be able to deploy, creating new growth potential for the renewable heat sector.*

The Benefits



The chance to create over 44,000 jobs in the heat pump, solar thermal, biomass boiler, biomass CHP and AD sectors that may otherwise be lost due to the closure of renewable heat businesses.^[1]



Companies and businesses will be able to save on energy costs and decarbonise - the Non-Domestic RHI has enabled over 20,000 installations of low carbon heating technologies.

²³ The Non-Domestic Renewable Heat Incentive (ND RHI)

^[1] REA (2020) *REview 2020* <https://www.r-e-a.net/resources/review-2020/>

Based on current deployment levels, a further 1,000 businesses could benefit from the scheme if it were extended by twelve months, seeing the installation of a further 600 MW of installed renewable heat capacity.



As well as lower carbon emissions, a secure and growing renewable heat market that provides new jobs which are directly applicable to the transfer of skills from the fossil heating market. The development of opportunities to train in high skilled jobs around the design, installation and maintenance of the renewable heating systems that will be required in all UK buildings by 2050.



The Challenge

The levels of support provided to biomethane - from Anaerobic digestion (AD) plants - under the Renewable Heat Incentive (RHI) aren't sufficient enough to stimulate the development of projects that are both financially healthy and built in line with environmental and safety industry standards.²⁴

As well as this, inflexible timescales are resulting in projects being built in a rush. This has led to many projects failing to complete building in time and for those that do finish to be built to a lower standard.

What's required

Short Term Stimulus package

- a. *Set a tariff higher than 5.5 pence/kWh to support a sustainable biomethane sector built in line with good practice and the minimum standards. This would result in a cost to taxpayers of approximately £50 - 80m for the measure and fund an additional 20-30 biomethane plants.*

Policy to support longer term Recovery package

²⁴ Industry feedback is that a tariff higher than 5.5 pence/kWh would need to be provided to support a sustainable, financially healthy biomethane sector built in line with good practice and the minimum standards ('Best Available Techniques') required by the environmental regulators.

- b. *The RHI and the future Green Gas Support Scheme must provide flexible timescales for commissioning projects*
- c. *Ensure there are no delays in the implementation of new Renewable Heat Incentive (RHI) regulations so that RHI funded biomethane plants can claim under either the RHI or the Renewable Transport Fuel Obligation (RTFO)*

The Benefits



Individuals will benefit from improved health and a better experience if living near biomethane plants, as these would be built and operated in line with best practice. There would also be an increase in up to 30,000 jobs by 2030.²⁵



AD businesses will be able to build sustainable, financially healthy and quality assets with around 20-30 additional biomethane plants being built. Companies involved in the supply of AD and biomethane process equipment, technologies, civil engineering works, storage tanks and covers, as well as gas connection and injection services, gas networks, consultancy firms would benefit from selling more equipment and technologies, or services to assist companies to develop new plants (or expand existing ones).



This proposal will help the country achieve the UK net-zero target and can make significant contributions to decarbonising heat and transport.

²⁵ Further development of biomethane plants would also result in additional jobs - the anaerobic digestion sector currently employs around 2,000 individuals ([Review 2020](#)) and according to the report [Biomethane: the pathway to 2030](#) the industry could create another 30,000 jobs by 2030.

▲ Decarbonising the Transport Sector

1

Proactively collect fats and greases to manufacture biodiesel whilst preventing fatburgs

The Challenge

Grease management in FSEs (food service establishments) is unregulated in the UK, leading to grease entering the sewers and forming 'fatburgs', which are extremely expensive and disruptive to remove. They can be processed into biodiesel, a glowing example of resource recovery and the circular economy. But it should never come to this. If the material were collected at source, it could be readily accessed by biodiesel manufacturers, reducing their reliance on importing used cooking oil and food processing wastes from China, the US and elsewhere. Making biodiesel from segregated oils and fats is much cheaper than making it from solid, congealed fats, bound together by wet wipes and worse.

There is no pro-active legislation that requires the fitting of grease management leaving water companies to deal with the problem, through the investigation of blockages, and education of the offending establishments. The size of the challenge is large - there are tens of thousands of FSEs around the country, with 28,000 FSEs in the Southern Water area alone, and it is unknown what proportion have grease traps.

What's Required

Short term stimulus package

- a. *A sum of £20m could pay for the initial outlay for all the FSEs in Glasgow and Edinburgh to be treated with grease trap equipment. Liverpool has almost 4,000 FSEs, and a particularly challenged sewerage system - £8.4m could cover all aspects of the city's grease management infrastructure and collection costs (not including collection vehicles).*

Longer term policy to support recovery

- b. *An industry standard for the cleaning of grease traps should be developed and the required regulation or legislation for FSEs to fit equipment to tackle the issue explored further.*

The Benefits



This proposal will create an employment and investment boost with the initial installation programme, followed by enduring jobs in grease management. The Glasgow and Edinburgh investment would entail the creation of 50 jobs in the installation and a further 150 - 200 permanent jobs in engineering, maintenance and cleaning operatives, drivers and back office staff. The Liverpool investment should create 50 - 75 permanent jobs, and is a model which could be rolled out across many UK cities. People would also benefit from the avoidance of the inconvenience of blockages ranging from small to large and a reduction in knock on impacts on water bills from the problem.



These measures would support the hospitality industry, which is amongst one of the sectors which has suffered hugely as a consequence of the pandemic and many of which are small family establishments. Water companies, grease trap manufacturing companies and biodiesel companies would benefit hugely through the reduction of blockages, increased sales and increased feedstock supplies respectively.



These measures would safeguard the country's infrastructure, much of which is outdated and need of investment.



The Challenge

An ambitious national end date for the end of sales of new fossil fuelled cars requires significant investment now in Electric Vehicle infrastructure and fossil fuel alternatives to make this a reality. The CCC identifies an urgent need to scale up our Electric Vehicle charging infrastructure in the 2020s to support a rapid take-off in Electric Vehicles.^{26#} The UK's car 'parc' is over 23 million vehicles and with over 2 million new cars sold per year the scale of change is enormous.

What's required

²⁶ "Reducing UK emissions: 2020 Progress Report to Parliament" Committee on Climate Change (2020): 155.

Short term stimulus package

- a. Roll out the Rapid Charging Fund and upgrade electricity grid capacity for rapid charging roll out along the Strategic Road Network based on the principles outlined by the REA.
- b. Provide targeted and ring-fenced low carbon energy and transport funding to Local Authorities giving them the resource and skills to develop robust individual renewable energy and low-carbon transport strategies. An initial £40 million would enable this programme.

Longer term recovery package

- c. Continue to fund crucial grant schemes such as the Workplace Charging Scheme, EV Homecharge Scheme, On-street Residential Chargepoint Scheme, and Plug-in Taxi Grant.
- d. Enable future rounds of innovation funding that the EV charging sector can access, such as the Catalysing Green Innovation Competition
- e. Reduce the cost of public EV charging and the cost difference between public and home charging by reducing the rate of VAT paid by consumers on public charge points to 5%. This could only be done after exiting the EU.

Longer term policy to support recovery

- f. Work with Ofgem and electricity network operators to streamline and speed up the process by which charge point developers are able to deploy projects, including through the standardisation of wayleave processes.

The Benefits



Individuals will benefit from the ability to charge their electric vehicle more easily in more places, giving them the physical infrastructure they need to make the move from fossil fuel to electric vehicles and the financial support (via the grant schemes) to help enable this.



Businesses will be able to shift their company cars and fleets to electric vehicles and this is shown to save money when compared to running diesel vehicles.



The country will benefit as transport is the largest single source of emissions in the UK at present, which will be reduced from a shift to EVs, as well as a boost for air pollution with knock on impacts for public health.



The Challenge

The UK aims to eliminate new car and light commercial fossil fuelled vehicle sales by 2035 at the latest - there is a huge amount of work to be done to enable this, while delivering our net zero targets.

What's Required

Short term stimulus package

- a. *Extend the Enhanced Capital Allowance to the leasing and rental sector and increase it to 120% of the vehicle's value*
- b. *Extend the 0% 'Benefit in Kind' company car tax (BiK) rate for zero emission vehicles to ensure company car drivers can take full advantage of the policy*

Longer term recovery package

- c. *Continue the Plug in Car and Van grant schemes and, in due course, replace them with a reduced rate of VAT (5%) for battery electric vehicles*

Policy to support longer term recovery

- d. *Support leasing customers to exit contracts in their last six months on the proviso that a leasing company replaces that lease with a new zero emission vehicle*

The Benefits



People can directly be supported in the green transition by beneficial tax policies, which have proven to be effective elsewhere in the energy system, for example Enhanced Capital Allowance tax support helped finance over 4GW of power projects. This means spending less on the transition to green technology to commute and get around.



Companies and businesses will benefit from tax incentives to move to an electrified vehicle fleet, making EVs an commercially viable option. When combined with other 'smart tech' measures such as Smart EV Charging and 'Vehicle to Grid' technologies the savings to them could be considerable.



The country as a whole will benefit from new jobs, investment and balanced regional growth and lowered carbon emissions alongside better air quality and fewer pollution related deaths and health problems.

▲ Moving to a Circular Economy



The Challenge

Local authorities must deliver the Net Zero transition locally and need funding to deliver this. Approximately 35% of central Government funding to Local Authorities has been cut in the past decade, with new service requirements to deliver. This has had a huge impact on the ability of local councils to deliver wider objectives, such as climate change targets and the Circular Economy. Many are now left severely diminished and lack in-house expertise to develop their own renewable and low-carbon assets which would guarantee them long-term returns on investment into the 2030's.

What's required

Short term stimulus package

- a. *Deliver ringfenced decarbonisation funding to local authorities - A Local Low Carbon Transition Fund of £2.5 billion - which can be used to strategically support the growth of renewable energy businesses and jobs, the development of the EV chargepoint network and a reduction in air pollution, and more energy efficient buildings.²⁷*

²⁷ A Local Low Carbon Transition Fund of £2.5 billion would enable local authorities to seize the initiative to decarbonize across energy and adapt to the net zero challenge - this fund should involve some leeway for local

- b. *This should include a concerted programme to upgrade local Government buildings estates, such as schools, offices and care homes.*

Longer term recovery package

- c. *Mandate local authorities to create Local Decarbonisation Boards and Plans, in consultation with local business and communities, to enable them to create tailored plans that can boost the local green jobs.²⁸*

The Benefits



People will benefit greatly from better waste and circular economy options. Improved waste services could also see Local Authorities save money which can be reallocated to the frontline, and health benefits from improved air quality.



Businesses will gain from new opportunities for more local energy generation, circular economy activities, and better and improved services.



The country will benefit from a revival in local economies, meeting our Net Zero targets, jobs and investment in the green economy, improved air quality, and savings to the NHS from reduced air pollution locally.



bodies to decide how best to spend the finds locally, be it by a local enhanced recycling scheme, building local generation of power and heat, or funding more low carbon infrastructure. These could build on the LA carbon plans each authority is required to report on.

²⁸ A comprehensive programme of activities by Local Authorities around the country can deliver real impacts on our decarbonisation and net zero targets as they run services, operate buildings and can lead the way for local people and businesses. The CCC 2020 Progress Report to Parliament notes that local authorities could have a crucial role in creating local support for decarbonising heat. "Reducing UK emissions: 2020 Progress Report to Parliament", Committee on Climate Change (2020): 58.

The Challenge

Currently the UK is not achieving its true potential for recycling. Not all suitable material is captured for recycling, leading to increased disposal costs of residual waste, recycling rates not achieving their full potential and increased emissions from waste disposal. In addition, the quality of materials arriving at organics recycling facilities can be poor, leading to an increased cost of processing (conservative estimate of £7.26M per year and in some cases up to £156 per tonne of contamination removed and disposed). Previous WRAP campaigns have shown for every £1 invested in communications, £8 was saved.

What's Required

Short term stimulus package

(a) £50m to deliver an effective public communications campaign across every Local Authority area.²⁹

The Benefits



Individuals will gain greater clarity of what is required with regards to recycling making it easier for individuals to do the right thing and reduce confusion. The creation of jobs will also benefit individuals, both jobs to deliver the education and communications but also in the recycling sector to enable the extra materials to be recycled.



Companies and businesses in the recycling sector will benefit from better quality feedstocks into sites both in reduced processing costs, but also in the ability to access higher value markets with better quality end products. An effective communications programme will lead to a greater yield of material at sites resulting in economic gains for waste and recycling businesses.



Capturing all available food and garden waste is for recycling will reduce emissions that would otherwise be disposed of in landfill. Higher quality products will ensure that soil and our natural capital is protected and can continue to produce food for future generations.

²⁹ This is based on an average cost of £1.50 per UK household

3

Fund the revision of the Quality Protocols for compost and digestate at a cost of up to £260,000 and end the use of carbon intensive peat by supporting a £50m fund for commercial peat-free sustainable compost alternatives

The Challenge

The Environment Agency are planning to revise Quality Protocols (QP) which would result in years of research and funding being undermined.³⁰ As well as this, QPs are detrimental to the uptake of sustainable compost and digestate, removing these could result in compost and biofertiliser being identified as waste.³¹ Currently 1.68M tonnes of compost and 3.4M tonnes of digestates are produced that have achieved product status and would potentially revert to being waste should be QPs be withdrawn.

The use of natural peat degrades the environment and emits large amounts of carbon annually. England's peatlands store 580m tonnes of carbon and if this were all to be lost to the atmosphere, it would be equivalent to 2.14 billion tonnes of CO₂. Waste-derived composts and the solid fraction of digestates (digestate fibres) have potential to replace more of the peat in growing media.

In terms of policy challenges, under current End of Waste rules for producing and placing waste-derived digestate products on the market, the growing media market is not allowed to be supplied and this must be reformed.

What's Required:

Short term stimulus package

- a. *A total spend of £20,000 per QP from Defra or the Environment Agency. With two critical QPs to be updated the minimum spend would be £40,000, or if all 13 were revised the cost would be £260,000.*
- b. *Government to create a £50m fund to support for manufacturer transition to peat-free and peat-reduced growing media products, so they use more of the alternatives to peat that have proven effective in R&D. This would reduce demand for peat and support the CCC recommendation of widespread peatland restoration.³²*

Longer term recovery package

³⁰ Quality Protocol's (QPs) are end of waste frameworks used by Industry on a voluntary basis to identify the point at which waste, having been fully recovered, may be regarded as a non-waste product.

³¹ Currently 1.68M tonnes of compost and 3.4M tonnes of digestates are produced under the compost and biofertiliser certification schemes respectively

³² "Reducing UK emissions: 2020 Progress Report to Parliament", Committee on Climate Change (2020): 58.

- c. Government should commission and fund a review of research into the use of digestate solids in growing media for use in amateur and professional horticulture markets. This should include how similar digestates in published research are to UK-produced dewatered, matured digested solids. The review should include any published information on the differing characteristics of fibre digestate according to the waste/material mixtures from which it is made.

The Benefits



Individuals will benefit because QPs ensure that recycled biofertilisers and soil improvers are good quality and fit for purpose, so this would benefit households by continuing to ensure these materials are safe to use and would build confidence in using these materials, ultimately not contributing to the plastics crisis. Thanks to the Growing Media Responsible Sourcing Scheme more consumers will become aware of the environmental impacts associated with product choices they make and should drive up demand for peat-free and reduced-peat-content growing media and reduce demand for peat-based and peat-included growing media.



Companies who produce products under the QPs will be able to access higher value end markets. Meanwhile more investment in peat-free compost alternatives would unlock job and growth opportunities for the industry.



The country would benefit because ensuring materials applied to land are fit for purpose plays an important role in maintain and improving the nation's soil quality, thus combatting the looming soil health crisis. Digestates can be a viable replacement for chemical fertilisers and both compost and digestate applications to soil support soil health. They are a true circular economy exemplar and can be produced near to the farms that need them, reducing the need for imports and transport over long distances.

By increasing the soil organic matter levels in degraded UK soils by 20% over the next 20 years, UK soils would provide better defense against flooding and dramatically increase the yield and quality of food produced. The use of these materials in growing media will help to preserve peatland and leave carbon in the ground. The benefits, in terms of climate change emissions alone, of restoring 55% of peatlands to near natural conditions are estimated to have a present value of approximately £45-51 billion.

4

Implement a targeted programme of enhanced landfill mining to recover valuable materials and promote a more Circular Economy

The Challenge

There are over 21,000 landfill mining sites, many of which pose an environmental risk from a range of factors. There are currently just over 1,800 more modern sites, with environmental permits, of which 380 are still taking waste³³.

Landfill site operators can only hand back their permit once the site poses no human health or environmental risk. Operators are only required to make financial provision for 60 years of leachate and gas management, whilst it can take far longer for the site to stabilise. A recent report to Defra³⁴ warns of the potential for sites to be abandoned and presents options for accelerating their remediation.

Without action therefore, these environmentally risky closed sites could be left to degrade and abandoned - with negative impacts on the local environments.

What's Required

Short term stimulus package

- a) *Landfill mining is possible and a recommended approach for dealing with old landfill sites, but not currently seen as financially viable at most sites. Modelling the economics is complex, as noted in a recent Defra report. Previous projects suggest a cost of £50 - £100 /m³ of landfilled waste, not considering any income from resource recovery or avoided future costs.*
- b) *Up to £100million could be spent on a programme to address 100 of the most at risk sites. These could be mined for valuable materials and energy feedstocks and restored to an environmentally stable condition, removing decades worth of expense in aftercare costs.*

The Benefits



This package will create employment, particularly in coastal areas where landfill sites may be at risk from rising sea levels. There are around 1,200 historic landfills around English coasts, and seaside towns are among the most deprived communities in the UK according to Government and as noted in a recent House of Lords report³⁵. We are not aware of any

³³ REA Analysis

³⁴ Honace, 2019, Landfill Aftercare Report

³⁵ House of Lords, Select Committee on Regenerating Seaside Towns and Communities, 2019, <https://publications.parliament.uk/pa/ld201719/ldselect/ldseaside/320/320.pdf>

published data on the employment creation potential of this activity, and therefore cannot quantify the impact however new jobs would be created in the management, planning and operation of such mining activities. Following restoration, the amenity of the environment would be improved.



The recycling sector businesses will benefit from the recovery of materials discarded in an era before recycling took place. Material deposited in the 1960s through to mid-1990's coincides with an increase in the value of materials discarded, and pre-dates the uptake of recycling. The dry, lignin-rich, non-degraded biomass would be a good feedstock for energy recovery. The recovered aggregates could be used for construction, and other inorganic residue could be used for daily landfill cover or soil restoration. Jobs would be created in environmental remediation. This could start immediately. Once the most promising sites have been identified, pre-treatment for mechanical stabilisation and odour control would start, followed by actual excavation and processing.



The country will benefit from materials recovery (reducing the need to import some valuable materials), reduced landfill site management costs, and avoiding the health and environmental risk of landfill abandonment. The country would start to move towards a much more Circular Economy and develop a first mover advantage in the field.

▲ Conclusion

The UK must grasp the historic, once in a lifetime opportunities from the energy transition and use the need for an economic stimulus to drive a green recovery that creates jobs across the country while improving lives and benefiting the UK as a whole – this plan aims to provide all of these benefits.

It is clear that the renewable energy and clean technologies sectors can deliver for the country at this time of national strain - with economic, quality of life and environmental benefits.

Please contact the REA to discuss any of the above in more detail.

Find Out More and Support the Sector

The report will be available on the REA website, here:

<https://www.r-e-a.net/our-resources/>

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