

ACHIEVING NET-ZERO

The government decisions needed to deliver a green recovery

Progressing the UK's economic recovery: a roadmap for government decisions on a net-zero aligned recovery

The impacts of the COVID-19 pandemic continue to be felt with significant job losses and the UK's first recession since 2009. The future remains uncertain with a balance needing to be struck between the continued reopening of the economy, and the measures needed to contain the spread of the virus. In June this year the CBI published a paper presenting the principles and policy priorities needed to maximise the opportunities for job creation and economic recovery offered by clean technologies, improved efficiencies, and better resilience. CBI members continue to view the recovery from the COVID-19 pandemic as a real opportunity to build back better and pivot towards the low-carbon, sustainable, and net-zero aligned economy that we know we need.

The CBI welcomed the Chancellor's Summer Economic Statement that included a significant allocation of funding for improved energy efficiency and low-carbon heating solutions. However, the need for further urgent action remains and this follow-up paper sets out a number of priorities where government intervention can help deliver much needed investment and job creation.

Today, we are calling for government action to:

- Accelerate the deployment of low-carbon electricity generation and investment in grid system flexibility
- Accelerate the delivery of electric vehicle charging infrastructure and supporting demand side measures, alongside investments in connected and autonomous technologies
- Deliver jobs and energy savings by retrofitting homes and buildings to be more energy efficient and switch to low-carbon heating
- Become a world leader in Carbon capture, utilisation and storage (CCUS) technology
- Kick-start the development of a hydrogen economy in the UK
- Support the UK's aviation sector in the development of sustainable aviation fuels

We are entering a crucial period for delivery of the government action needed to create a positive investment environment for business, both in terms of the plans to support the economy through what will be a difficult short-term period as we recover from the ongoing pandemic, and the need to set out clear policy roadmaps following the setting of the net-zero emissions target last year.



Despite some positive announcements seen over recent months, we still lack clear policy frameworks needed for the transition to net-zero, with notable delays to the Energy White Paper and National Infrastructure Strategy. There is a clear urgency for publishing these documents, alongside other sector strategies, such as the Decarbonisation of Transport Plan and Heat and Buildings Strategy. The Budget and Comprehensive Spending Review are also key milestones for setting out clear fiscal support where needed, alongside predictable market and policy frameworks that can help create a positive investment environment. The completion of the HM Treasury net-zero review next year is an opportunity to embed decision making across government that contributes to our cross-economy goal.

But to ensure that the 2020s continue to be a decade of delivery on net-zero, there needs to be step-change in the pace of investment, supported by a government commitment to drive delivery. Delays to policy, and regulatory decisions that hold back investment both act as barriers to this goal. The Government's 'Project Speed' is a positive initiative for accelerating infrastructure deployment, and this could be used to drive faster investment in low-carbon and resilient infrastructure as well. Action taken now will not only set us on a path to net-zero but will also help secure the myriad of economic benefits that can be secured through investment in low-carbon technologies and services. Bold decisions are needed, with opportunities at hand to remove regulatory barriers and speed up planning processes.

The timing of COP26 next year represents a clear deadline for a national net-zero strategy to be in place, however, that should not hold back progress now on delivering crucial investment. Government can help catalyse progress while continuing to work with industry on the sector roadmaps needed for net-zero and how they interlink and create a whole-economy plan for reaching this crucial goal. With all sectors needing some degree of private investment, these roadmaps must focus on market design, underpinned by long term policy frameworks that provide clear targets and regulatory standards, and fiscal support where required. Some roadmaps will by necessity involve greater collaboration between business and government to develop transformative technologies in their infancy, such as hydrogen or carbon capture, utilisation and storage. Understanding international trends will also be critical to ensure that we learn best practice and share learnings on this global challenge, which can also help influence international carbon reduction frameworks, such as for aviation. The CBI has highlighted sectors that need to see urgent progress if the UK is to make the 2020s deliver the investment and technology progression needed to achieve net-zero emissions by 2050. These are not exhaustive, and the realities of net-zero mean this will require a cross economy effort and continuous review. There are crucial drivers for change that must be facilitated now to enable the whole economy to decarbonise and drive a green economic recovery.

Priority

Impact

Action

Recovery benefit

Accelerate the construction and deployment of low-carbon electricity generation and investment in system flexibility

The continuing rapid decarbonisation of our electricity generation and supply will form the foundations of a net-zero economy. Low-carbon power projects are delivering employment and regional investment today, so maintaining construction progress using the established market-framework that we have in place is vital.

Increased ambitions for renewable power, such as 40GW of offshore wind capacity by 2030, need to be matched by the right policy and regulatory framework that will enable continued private sector investment. A key part of this will be accelerating investment in the network grid to support a flexible low-carbon system.

Despite progress in recent years, much more progress is required. Between 9-12GW of capacity needs to be installed every year across a range of low-carbon technologies if we are to achieve net-zero.

Lift the cap on Contract for Difference auctions to enable investment in more low-cost renewable power capacity to come forward, and clarify how the auction pot structure will change to deliver 40GW of offshore wind capacity by 2030 and a level playing field for nascent technologies such as floating offshore wind.

Use the Energy White Paper to:

- Clarify the policy objectives on enhancing market flexibility at a local and distribution level, creating a value for system flexibility at this level of the system.
- Set out the Government's strategic steer to the economic regulator, Ofgem on delivering to a high ambition pathway in meeting the net-zero target.

Introduce a new financing model to enable investment in large-scale new nuclear power, such as the Regulated Asset Base (RAB) model. Signal commitment for Small Modular Reactors (SMRs) and accelerate the deployment of funding under the Industrial Strategy Challenge Fund at the start of 2021 to quicken the progress of this industrial programme.

Facilitating an additional 9,000 jobs, on top of the 27,000 estimated for 30GW, that could be created if we achieve the new 40GW offshore wind target for 2030.¹

Supporting £20bn investment in Sizewell C new nuclear power station, with 25,000 jobs during construction in the East of England.²

Enabling a construction programme of Small Modular Reactors that could employ up to 40,000 by 2040 around the country with additional benefits from UK export orders.³

Accelerate the delivery of electric vehicle charging infrastructure and supporting demand side measures, alongside investments in connected and autonomous technologies

Transport continues to be the UK's largest carbon emitting sector. Whilst the government has signaled high ambition levels for phasing out diesel and petrol vehicles, this must be matched with support for consumers and business to adopt new vehicle technologies and for the delivery of infrastructure needed to make these viable alternatives.

Long term the UK also has an opportunity to lead in the development of connected and autonomous vehicle technology, particularly within freight and logistics, further supporting emissions reduction.

Commit funding for the development of a UK based gigafactory to provide battery technology needed to support domestic automotive manufacturing and accelerate the adoption of electric vehicles.

Introduce a net-zero mobility credit scheme to incentivise people to switch from an older polluting vehicle to a clean form of transport, whilst maintaining existing incentives for new electric vehicle purchases with a gradual reduction over time as costs fall.

Deliver a national charging infrastructure strategy that delivers a core national network of world-class electric vehicle infrastructure across urban, rural, and remote parts of the country. Prioritise a national network of rapid chargers and improve on-street charging infrastructure in towns and cities around the UK where the market will not deliver.

Commit to undertake a review into fuel duty by the end of 2021 following any change to the phase out date for new petrol, diesel and hybrid cars and vans.

Progress development of connected and autonomous logistics with a comprehensive package of investment to develop this more resilient, low-carbon way of moving goods around the country.

By 2040, it is estimated that the UK will require seven gigafactories which will result in employment in the automotive industry and battery supply chain increasing by 78,000 new jobs.⁴

1. BEIS Announcement 'Green Collar Jobs in Offshore Wind set to triple', March 2019

2. Sizewell C 'proposals', EDF Energy, Ongoing

3. UK small modular reactor: pioneering intelligent power, Rolls Royce Consortium, ongoing

4. UK electric vehicle and battery production potential to 2040, The Faraday Institute, March 2020

Priority

Impact

Action

Recovery benefit

Deliver jobs and energy savings by retrofitting homes and buildings to be more energy efficient and switch to low-carbon heating

The Government has already recognised the opportunity for delivering jobs and investment through the deployment of energy efficiency and low-carbon heat solutions. The £3bn of support announced by the Chancellor at the Summer Economic Statement is welcome but must be the start of a longer-term program of fiscal support, regulatory certainty, and consumer information.

Making progress here remains a top priority for reaching net-zero emissions with a third of UK emissions coming from heat. Homes are a particular concern, as they alone account for just under a fifth of UK emissions, and the challenge of retrofitting more than 20 million homes by 2050 remains stark. We need to progress installations of a range of technologies including mass installation of heat pumps, development of hydrogen technologies and expanding heat networks and district heating.

Use the National Infrastructure Strategy to designate energy efficiency and low-carbon heat as a national infrastructure priority.

Publish the Heat and Buildings Strategy before the end of 2020 to help tackle the UK's poor energy efficiency in buildings and progress low-carbon heat installations.

Extend the Green Homes Grant to March 2022, followed by the introduction of a new Low-Carbon Heating Scheme to replace the Domestic Renewable Heat Incentive with a grant system from April 2022 to support a range of low-carbon heat solutions, including heat pumps and hybrid systems.

Mandate that after 2025 all new boiler installations must be part of a hybrid system or be 'hydrogen-ready'. By 2035 no new natural gas boilers should be installed so that only zero-carbon solutions are installed, such as air and ground source heat pumps, hydrogen-powered boilers and heat network connections.

Indicate further funding via the upcoming Spending Review, for a new support scheme for SMEs to make energy efficiency improvements.

An energy efficiency programme could support over 150,000 jobs by 2030 spread across all regions of the UK. Investment in energy efficiency and heat programmes provides an opportunity to reduce health inequalities and could help level-up infrastructure disparities.⁵ These jobs can be scaled up quickly and deliver employment opportunities in the short-term through these 'shovel-ready' projects.

A conservative estimate in the recent WWF/Vivid Economics report of direct jobs in green building retrofits stands at 85,000 by 2030, which could increase by a further 7,000 if low-carbon heating and cooling installations are included.⁶

Become a world leader in Carbon capture, utilisation and storage technology (CCUS)

CCUS has a critical role to play in the UK's decarbonisation journey. Accelerating progress now means the UK could also be a world leader in this vital technology, supporting long-term competitiveness, job creation and negative emissions technologies. The first CCUS 'anchor' projects should be operational before 2030, with at least three CCUS-enabled, net-zero industrial clusters operational by 2035.

Introduce a privately financed RAB model for the transport and storage element of CCUS infrastructure.

Before the end of 2020 clarify plans for the CfD-type revenue stabilisation mechanisms needed to enable power sector users of CCUS infrastructure, and to support CCUS use in heavy industry.

Creating up to 6,000 new highly-skilled jobs in industrial clusters planned for Teesside, Humberstone, Merseyside and Aberdeenshire.⁷

Kick-start the development of a hydrogen economy

Hydrogen represents another technology leadership opportunity for the UK due to our geography, industrial capabilities and infrastructure.

But a global race is developing rapidly, and there is a clear danger that the UK will fall behind without bold action from government to enable private sector investment in this growth technology. Hydrogen could help cut emissions across a range of sectors, including heavy industry, power generation, transport, heating and long-term energy storage.

Introduce a variant of the Contracts for Difference (CfD) auction, with a variable cost for the production of hydrogen and a fixed payment to cover the CAPEX cost, with such auctioning based on different 'pots' for 'green' and 'blue' hydrogen production, reflecting their respective long term cost reduction pathways.

Commit at least £1bn over the next spending review period to hydrogen testing programmes and demonstration projects involving production, storage and distribution.

Update the Gas Safety Management Regulations to allow greater flexibility for the injection of hydrogen into the gas grid.

Investing in hydrogen could unlock £18bn in GVA by 2035 and support 75,000 additional jobs (Imperial College Consultants/Hydrogen Taskforce).⁸

5. Rebuilding for resilience, Energy efficiency's offer for a net zero compatible stimulus and recovery, Energy Efficiency Infrastructure Group, June 2020

6. A UK Investment Strategy: Building Back a Resilient and Sustainable Economy, Vivid Economics and WWF UK, June 2020

7. Chancellor's Budget speech, HMT, March 2020

8. UK Hydrogen Taskforce, Economic Impact Assessment Summary, August 2020



Priority

Support the UK's aviation sector in the development of sustainable aviation fuels

Impact

The government recognises that with time aviation's proportional contribution to emissions will likely rise whilst other sectors rapidly decarbonise. However, with an established history in aviation and aerospace technologies the UK has a unique opportunity to develop the right policy frameworks to enable the sector to meet its net-zero commitments.

Further still, given the international nature of aviation the UK has a chance to use its expertise to drive innovation and global leadership through structures like the Jet-Zero council and membership of the International Civil Aviation Organisation.

Therefore, to develop a thriving domestic market in the years to come requires a sense of policy prioritisation today.

Action

Create an Office for Sustainable Aviation Fuels or similar cross-department body, to secure the policies needed to develop new technologies.

Commit £500m of matched public/private funding of £500m over five years (totaling £1bn) to support a flagship first of a kind commercial plant in the UK as well as a UK centre of excellence for sustainable aviation fuel development.

Recovery benefit

By 2035, the development of a domestic industry for the production of sustainable fuels could generate a Gross Value Added (GVA) of up to £742m annually and support up to 5,200 UK jobs. A further 13,600 jobs could be generated from the growing market for sustainable aviation fuels through global exports.⁹

9. Decarbonisation Road-Map: A Path to Net Zero, Sustainable Aviation, February 2020