



Department for  
Business, Energy  
& Industrial Strategy

Rt Hon Kwasi Kwarteng MP  
Minister of State for Business, Energy  
and Growth

Department for Business, Energy &  
Industrial Strategy  
1 Victoria Street  
London  
SW1H 0ET

Sir Patrick Vallance  
Co-Chair

T +44 (0) 20 7215 5000  
E [enquiries@beis.gov.uk](mailto:enquiries@beis.gov.uk)  
W [www.gov.uk](http://www.gov.uk)

Professor Dame Nancy Rothwell  
Co-Chair

12 October 2020

Council for Science and Technology  
10 Victoria Street  
London  
SW1H 0NB

Dear Sir Patrick and Dame Nancy,

Thank you for the further briefing you have provided. As the Prime Minister said back in March “our determination to get to net zero by 2050 remains undiminished” and the Government will continue to support the green recovery to build back better.

As we recover from Covid-19 we must do so in a clean and resilient way, one that makes our economy match-fit for tomorrow’s challenges – not yesterday’s – reducing risk and increasing our resilience to the threat climate change poses to the UK’s prosperity and security as well as the linked challenges of biodiversity and public health.

### **Decarbonising homes**

The Government is planning to publish a Heat and Buildings Strategy in due course, which will set out the immediate actions we will take for reducing emissions from buildings. These actions include the deployment of energy efficiency measures and low carbon heating as part of an ambitious programme of work required to enable key strategic decisions on how we achieve the mass transition to low-carbon heat and set us on a path to decarbonising all homes and buildings. We are developing policies to deliver low carbon heating in the 2020s and meet our climate targets.

Improving the energy efficiency of homes could play a central role in supporting economic recovery post-Covid-19. Energy efficiency is labour-intensive with supply chains able to ramp-up quickly in response to increased demand. Increasing action in this area could support jobs and economic activity in key sectors of the economy such as construction.

The Chancellor recently announced a net zero building package worth in excess of £3 billion. This new funding represents a significant and accelerated down payment on our manifesto commitments, to help stimulate the economic recovery and create green jobs. These announcements reflect our commitment to build back greener, deliver a green recovery and reach our net zero ambition, through a sustainable, diverse and resilient energy system.

The package will support a number of schemes including a new £1 billion Public Sector Decarbonisation Scheme to upgrade public sector buildings, including schools and hospitals, making them fit to help meet net zero with energy efficiency and low carbon heat measures, and accelerating delivery against the manifesto commitment to invest £2.9 billion in decarbonising the public sector. We will use the public sector to set an example for the private non-domestic sector and help build up supply chains for larger buildings to act as a springboard for the wider low carbon market in the UK and internationally. The package will also support a £2 billion 'Green Homes Grant' (comprised of £1.5 billion vouchers and £0.5 billion Local Authority delivery), under which homeowners and landlords can apply for a voucher to fund up to two thirds of the cost of hiring tradespeople to upgrade the energy performance of their homes (up to a maximum contribution of around £5000). Low income households will be eligible for up to 100% government funding, up to around £10,000. This will upgrade more than 600,000 homes in England and save households up to £600 a year on their energy bills. It also will help people get their homes towards the standard we need to reach our net zero climate goals.

In addition, the package will support a £50m demonstrator project to start the decarbonisation of social housing over 20/21. This short-term investment will encourage innovation and help inform the design of the future Social Housing Decarbonisation Fund.

The Government has an ambitious program of work already underway to support heat decarbonisation. We are spending an estimated £1bn in 2020/21 to encourage the deployment of low carbon heating in homes and businesses through the Renewable Heat Incentive (RHI). Investing £320m to accelerate the growth of the UK heat networks market through the Heat Networks Investment Project and launching a £270m Green Heat Network Fund to ensure the sector installs the most cost-effective low-carbon heat sources available.

For new builds, by 2025 the government will introduce a Future Homes Standard for new build homes to be future proofed with low carbon heating and world leading levels of energy efficiency, to create healthy homes that are fit for the future, have low energy bills, and are better for the environment. In our recent consultation, closed 7 February, we propose that new homes built to this standard should have 75-80% fewer CO<sub>2</sub> emissions than ones built to current building regulations standards. These homes will be 'zero carbon ready', with the ability to become fully zero carbon homes over time as the electricity grid decarbonises, without the need for further costly retrofitting work. To work towards ensuring that all new homes are fit for a zero-carbon future we will also explore options for the future of energy efficiency standards, beyond 2025.

We know installers, consumers and businesses will need to be educated and upskilled on low-carbon heating and energy efficiency measures, in order to bring about the step-change in deployment needed to meet net-zero. Demand in the UK for retrofitting buildings and increased low carbon construction could contribute £5.7bn GVA and 82,000 jobs by 2030, which presents an opportunity UK firms could capture. Low carbon heating and cooling technologies and their associated services (installation and maintenance) could support £3.9bn GVA and 43,000 jobs by 2050.

As part of the National Retraining Scheme, we are investing £34 million to scale up innovative training models for construction skills across the country. This includes the

Construction Skills Fund, which supports the development of construction on-site training hubs.

We have launched the 'Green Homes Grant Skills Training Competition' to support the delivery of the Green Homes Grant Voucher Scheme. The £7.5 million competition will look to secure training provisions supporting supply chain development across England, and to bolster the number of accredited retrofit installers available to support the delivery of the scheme. To support delivery of the £1 billion Public Sector Decarbonisation Scheme, we are launching a £50 million Public Sector Low Carbon Skills Fund to address one of the key barriers to emission reductions in the public sector; insufficient capacity and capability.

### **Developing Hydrogen at Scale**

I agree that the next 12 months will be crucial on hydrogen, and I am pleased that we have recently committed to publish the first UK hydrogen strategy in early 2021.

The evidence suggests that hydrogen will be essential if we are to meet net zero in the UK, and I believe that the UK has a near unique position in terms geography, geology, history & institutional arrangements, alongside conditions that support the use case for hydrogen across sectors as you have set out. This is an advantage that very few, if any, other countries enjoy.

The strategy will take a whole system view to ensure that we are able, as you say, to realise the full range of benefits that hydrogen offers as a strategic, decarbonised, chemical energy vector for the UK. Setting out a clear strategic approach to hydrogen is essential if we are to establish a domestic market and cement a position as a global leader in hydrogen. The strategy will underpin the expansion of our domestic market leader in producing.

The development of a UK hydrogen strategy is a top priority in BEIS. It will bring together the UK hydrogen story, showcasing activity to date and setting out an action plan for decarbonisation and expansion in the 2020s, and pointing to actions that will be required over the longer term to scale up on a pathway to net zero.

In the UK, we are already investing up to £121m (between 2015 and 2021) in hydrogen innovation across the value chain. We are also developing new policy, in partnership with industry, to bring forward the technologies and supply chain we will need to grow the UK hydrogen economy. This includes business models to support the deployment of, and investment in, low carbon hydrogen production and a £100m Low Carbon Hydrogen Production Fund to stimulate capital investment.

We understand the importance of ensuring that we are promoting a switch to low carbon methods of hydrogen production in the long-term. The Government is gathering evidence on emissions associated with different hydrogen production technologies and developing standards for low carbon hydrogen production. In parallel, we are working with our international partners through the International Partnership on Hydrogen and Fuel Cells in the Economy to consider what international standards might include to support global action on climate change and aid international trade in future.

We want to utilise the UK's high-quality engineering and manufacturing capability to ensure we are a global leader in hydrogen fuel cell powered transportation. Our

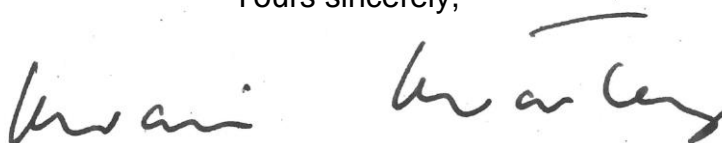
approach to delivering long-term ambitions for greener transport is technology neutral and we are supporting hydrogen where the market favours its use.

The Office for Low Emission Vehicle's (OLEV) £23m Hydrogen for Transport Programme is increasing the uptake of fuel cell electric vehicles and growing the number of publicly accessible hydrogen refuelling stations. The programme is delivering new refuelling stations and upgrading some existing stations as well as deploying hundreds of new hydrogen vehicles.

OLEV is supporting public and private sector fleets to become early adopters through the £2m fuel cell electric vehicle Fleet Support Scheme. In addition, £6.4m of the Department for Transport's Low and Ultra-Low Emission Bus Scheme has been invested in more than 60 hydrogen buses operating in Birmingham and Gatwick.

We need to put the right building blocks in place now to give confidence that low carbon hydrogen can be produced reliably and cost-effectively on a pathway to net zero. We do not take this task lightly.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Kwasi Kwarteng', written in a cursive style.

**RT HON KWASI KWARTENG MP**  
Minister of State for Business, Energy and Clean Growth