

Green fiscal stimulus

Why it is needed and how to implement it

June 2020



Key points:

- **Economic restructuring** – COVID-19 will lead to a fundamental restructuring of economies around the world.
- **Government levers** – governments will be looking to use tax, spending and regulatory levers to deliver a cleaner, and more sustainable economy in future.
- **A fiscal stimulus** – the UK's response to COVID-19 should be guided by decarbonisation goals in order to generate jobs and investment across the UK, to stimulate the future green industries and help the UK meet its legally binding target to reach Net Zero by 2050⁽¹⁾.
- **Decarbonisation goals** – the UK Government should make ongoing support for industries conditional upon achieving decarbonisation goals, as many other European countries have done⁽²⁾.
- **Clean power** – unlike after the Global Financial Crisis, many green forms of power generation are now as cheap as fossil fuels – investing in clean power makes sense from an economic viewpoint.
- **'Shovel-ready' infrastructure projects** – the Government should look to bring forward 'shovel-ready' energy infrastructure projects, while robust regulatory frameworks will be required to rapidly deploy key technologies required to reach Net Zero.
- **Private sector capital** – by giving certainty to the market through regulatory standards, the Government can attract private sector capital into these new industries whilst limiting the direct impact on the public finances.

Why now? The rationale behind a green fiscal stimulus is compelling for all governments, particularly for the UK.

COVID-19 undeniably proves a huge social and economic challenge and is expected to fundamentally restructure economies globally. The crisis has sapped economic demand across a range of sectors, bringing about structural changes in a number of industries. Following the global financial crisis in 2008, 1/6th of stimulus spending globally was focused on investment seeking to reduce CO2 emissions⁽³⁾. Facing the twin challenges of a near-term crisis of employment and the long-term threat of climate change, 'green stimulus' should be a key pillar of the UK Government's fiscal response to the crisis to help stimulate investment and jobs in the green technologies and industries of the future. As Mark Carney put it, "we can't self-isolate from Climate Change"⁽⁴⁾.

Clean energy investments are a jobs multiplier, while preparing UK corporates for a sustainable future.

Clean energy contributes to £13bn in annual investment in the UK. The Department for Business, Energy & Industrial Strategy (BEIS) estimates that in 2017 there were around 400,000 jobs in low carbon businesses and their supply chains in the UK, which could grow to 2 million by 2030⁽⁵⁾.

One example is the offshore wind sector, which in 2019 employed 7,200 people. Government had estimated its previous target of 30GW of total offshore wind capacity by 2030 could create around 20,000 additional jobs⁽⁶⁾; the Government's ambition for 40GW by 2030 would spur further job creation. The International Energy Agency (IEA) has identified energy efficiency as a particularly job-intensive area of clean energy investment in the context of post-crisis stimulus⁽⁷⁾. Likewise, flood defence and reforestation projects can also be highly labour intensive and mitigate climate risks. Capital-intensive clean energy infrastructure in technologies, such as Carbon Capture, Utilisation, and Storage (CCUS) and hydrogen, represent a prospect for long-term employment in these industries.

For companies, the ability to invest in frontier technologies and early UK deployment of capital-intensive clean energy technologies, like offshore wind, offer strong export potential, as countries around the world follow the UK's lead in setting Net Zero and decarbonisation targets. For example, CCUS could increase GVA by £4.3bn per year by 2050 according to a BEIS-commissioned report⁽⁸⁾, while the Offshore Wind Sector Deal envisages UK offshore wind exports reaching £2.6bn per year by 2030⁽⁹⁾.

The economics of several clean energy technologies have never been better, and the next two years will be critical to begin investing in early stage technologies.

The tremendous cost reductions seen in offshore wind (around 65% between 2015 and 2019) mirror those seen in onshore wind and solar, making these technologies much more competitive with thermal generation. This is a key distinction from the aftermath of the 2008 financial crisis, when these core renewable technologies were nascent and needed heavy subsidising.

While these can now be rolled out at speed and scale, it will be equally important to catalyse investment in early-stage technologies that are critical in reaching the Net Zero target (namely CCUS and hydrogen). The Committee on Climate Change (CCC) believes the UK will need at least two operational CCUS clusters before 2030, with one operational by 2026, which the government has recently allocated funding to deploy⁽¹⁰⁾.

The right investment can boost jobs and support clean energy infrastructure, leveraging private sector investment to achieve the UK's climate goals.

Support for all industries during and beyond the COVID-19 crisis should be conditional upon progress towards Net Zero and decarbonisation targets, supporting longer-term sustainable employment.

Many sectors will require targeted support to remain in business in the short term. The focus for policymakers should be how they align any support packages with Net Zero targets, through incentives and legal commitments, to ensure that the sectors are future ready and continue to deliver significant value for the UK as we transition to a Net Zero economy.

Furthermore, climate action groups have already undertaken effective legal challenges to the Heathrow runway extension and are challenging the planning permission for Drax's coal to gas replants. This suggests that any Government funded or sanctioned investments that are not compliant with the country's Net Zero targets may be subject to legal challenge.

In supporting industries, the UK can look to other European countries that are moving to implement conditionality on climate terms into financial support packages.



The French government has made clear that its planned €7bn loan to Air France is contingent on its becoming "the most environmentally friendly airline on the planet", while similar comments have been made in reference to support for the national airline in Austria⁽¹¹⁾.



In Germany, stimulus measures for the auto industry may take into account the country's climate targets, and Chancellor Angela Merkel has publicly stated that all stimulus measures should take account of climate targets⁽¹²⁾.



In a joint statement in May, both French and German governments have mentioned including conditionalities related to climate action and environmental targets as part of a green recovery roadmap⁽¹³⁾.



The European Commission is seeking to place its Green Deal at the heart of the bloc's recovery efforts: a draft report estimates it will allocate €1tn toward a range of investments including building renovations, clean mobility, renewables and hydrogen⁽¹⁴⁾.



The Austrian government has also stated that any state aid for Austrian Airlines will come with specific climate conditions⁽¹⁵⁾. Austrian Airlines applied for €767 million (\$833 million) in state aid on 28th April⁽¹⁶⁾.

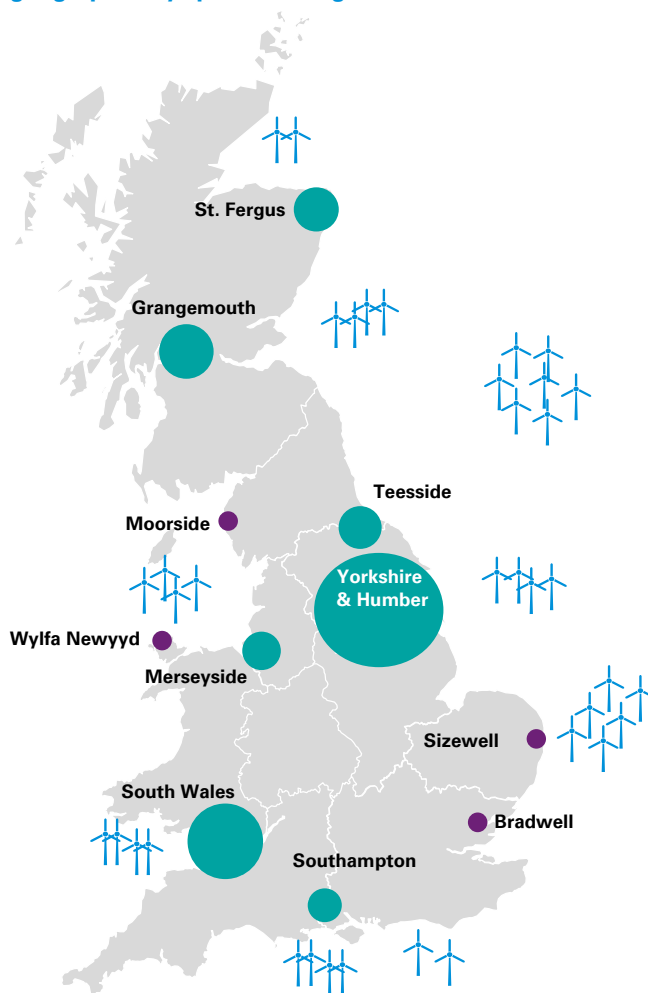
We Mean Business Coalition

Importantly, corporates understand the importance of linking government support to green stimulus; groups representing industry in the UK, France and Germany have called for conditions to be placed on stimulus funding so that it is consistent with national decarbonisation targets⁽¹⁷⁾.

As the UK moves toward a lower carbon energy ecosystem, jobs are being created around the country.

Developing a lower carbon energy system involves more decentralised energy and greater regional dispersion of energy production. This presents the opportunity to generate jobs and investment in all parts of the UK, especially coastal areas with great natural resources but relatively low income per head relative to the national average. In this way, the Green Fiscal Stimulus can also help support the Government's 'levelling up' agenda.

Jobs and investment in new energy projects are geographically spread throughout the UK.



Offshore wind concentration

Industrial cluster/CCUS

Proposed new nuclear

The technologies needed to support both employment growth and new clean infrastructure are well defined, and many can be scaled through increased funding within existing regulatory frameworks.

Areas of the energy value chain where 'shovel-ready' projects exist in which investment will accomplish both objectives include:

1. Energy efficiency

The Conservative election pledge to spend £9bn on energy efficiency allocates a significant amount of funding for new support schemes. Potential areas to spur project development include Government support to retrofit the UK's 27 million homes with double-glazing, insulation and (where appropriate) heat pumps. The NHS estate alone has an estimated £6bn critical maintenance backlog. A significant amount of this could be served by energy efficiency projects with short lead times, but which are currently stymied by capital budget restrictions.

2. Electric Vehicle (EV) Charging

Incentivising investment in EV charging infrastructure will be required to scale EV adoption. The £400m Charging Infrastructure Investment Fund, in which the Treasury matches private investor funding, has been successful in attracting private funding commitments. A substantial increase in government fund matching for public/private EV charging infrastructure funds could allow investment in these facilities to scale quickly. BEIS released details in May around its £500m Rapid Charging Fund, which will assist the private sector with funding costs for rapid chargepoints where these are currently uncommercial due to high costs.

3. Renewables

Expediting construction on a range of renewable projects in the UK could be possible through the execution of an earlier AR4 (Contracts for Difference (CfD) allocation round 4). While AR4 is intended to be held next year, there are a range of projects at an advanced stage which could participate in an auction much earlier. These include offshore wind projects which were unsuccessful in AR3, some new extension projects as well as a sizeable pipeline of onshore wind and solar projects particularly in Scotland. Bringing forward a CfD round would expedite construction (and job creation) on advanced projects that contribute to a lower carbon UK power supply.

4. Interconnectors

There are more than 10GW of proposed interconnection projects which have not received FID. Bringing forward investment in some of this new interconnection capacity would create jobs, and importantly offer lower energy costs for British households; National Grid has estimated that each 1GW addition of interconnection capacity can reduce UK wholesale power prices by 1-2%⁽¹⁸⁾.



Other technologies that will be needed to meet Net Zero will require rapid action on the development of a technology-specific policy framework that financially supports early-stage technologies and catalyses private investment in them.

Areas of the energy value chain where energy infrastructure projects are in an earlier stage of development or require new incentive frameworks include:

1. CCUS (carbon capture and storage)

Government is already targeting one operational CCUS cluster by the mid-2020s and a second by 2030 with the 2020 budget allocating £800m in funding for such a venture. Future support for the industrial sector could be linked to carbon reduction, thereby enabling the UK to be amongst the early global leaders on the production of green steel and aluminium. Resilience funding allocated to the sector should be conditional on medium term participation in this initiative, and ongoing Government funding should be used to bring attention to aggregating infrastructure – by this we mean centralised Steam-Methane Reforming (SMR) or Autothermal Reforming (ATR) with CCUS infrastructure, buying a lifeline for the UK's industrial sector and promoting their growth as some of the first global producers of green steel and aluminium.

2. Energy storage

There are proven storage technologies which can offer flexibility to the UK energy system, but which lack robust regulatory frameworks to support their deployment. The large pipeline of battery storage projects (more than 10GW) in the UK includes at least 1GW of shovel-ready projects. While operational projects have typically been delivered based upon revenue generated from participation in ancillary services markets, a new regulatory framework to incentivise battery investment at scale could expedite the progress of the existing pipeline, increasing jobs and system flexibility.

In contrast, pumped storage hydro is a long-standing technology that can deliver immediate jobs in remote regions in addition to offering tremendous system stability benefits as the UK scales renewable deployment. However it doesn't fit naturally within any of the government's existing support mechanisms. Therefore, the highly capital-intensive nature of these projects and the above-average lead time for construction requires government to think creatively or introduce a new regulatory framework for remuneration outside of those currently operating, such as CfD, Capacity Market or Ofgem's Cap and Floor mechanism.

3. Low carbon heat

The CCC expects heat pumps to play a significant role in residential decarbonisation⁽¹⁹⁾, however the existing policy mechanism, the Renewable Heat Incentive (RHI), which is due to expire in coming years, has been criticised by the National Audit Office for offering poor value for money. Government is looking at a range of proposals as part of its ongoing consultation on future support for low carbon heat: these include a Clean Home Grant scheme from 2022 to support heat pump deployments, and a Green Gas Support Scheme to increase the share of biomethane injection and potentially green hydrogen into the gas grid.

4. Hydrogen

There is increasing recognition of the need to develop a hydrogen economy, including the use of hydrogen for heating (as described above), transport, industry and power generation. Around half of the UK gas Combined Cycle Gas Turbine (CCGT) fleet should be coming to end of life decisions within the next decade; hydrogen conversions of existing turbines are a method of extending asset life and ensuring a sustainable role for these assets in a Net Zero future. However, operators are likely to require more clarity around the availability of affordable hydrogen feedstock before committing to these types of capital-intensive conversions. A robust regulatory framework incentivising the production and distribution of hydrogen can provide this critical investment signal. Regulatory standards can help drive this change, such as incorporating carbon targets in the Capacity Mechanism and a Low Carbon Obligation to drive the take up of low carbon forms of heating.

5. Nuclear

New nuclear also has the potential to generate thousands of jobs in less well-off parts of the country. Hinkley Point C is expected to generate up to 25,000 jobs in the South West and across the UK⁽²⁰⁾. Further projects are being planned at Sizewell, Bradwell, Wylva and Moorside. However, these are dependent on a suitable policy framework being in place to attract the large-scale private sector investment required to build such projects.

The private sector is ready to fund these critical investments – a robust and coordinated approach to wider regulation can help bring forward the large surplus of private capital.

Aligning the capital investment needed to fulfil the government's legal obligations to decarbonise, with government spending, will be the key challenge to unlocking further private investment. The National Infrastructure Plan due to be released later this year was already expected to focus on Net Zero objectives, and there is scope for the government to allocate even larger funding amounts given the COVID-19 crisis. Government stimulus is only expected to be the catalyst for much greater private sector investment.

A recent estimate from BEIS has put the cost of reaching Net Zero between £700-800bn⁽²¹⁾, with most of this provided by the private sector. With an estimated \$90 trillion in assets under management globally⁽²²⁾, \$35 trillion is estimated to be held in sustainable assets⁽²³⁾ – this large share has grown tremendously in recent years, and it is contributing to increasing demand of private capital to fund Environmental, Social and Governance-compliant (ESG) investment projects. The UK can unlock significant private investment in these projects, and in turn establish a robust and integrated framework for green investment in the UK. Some potential levers for success include:

1. Green bonds

Success in the green bond market (global green bond issuance rose around 50% to \$255bn in 2019⁽²⁴⁾) offers a way for UK corporates, and potentially the Treasury, to finance project specific investments at a lower cost of capital (the Bank of International Settlements estimates issuers can reduce bond yields by up to 45 basis points compared to non-green bonds from the same issuer⁽²⁵⁾). Clear regulatory guidelines from the Treasury could facilitate this.

2. Securitisation

Using large pools of capital to fund smaller-scale renewable projects, non-domestic energy efficiency projects or EV charging infrastructure is often not efficient given the relatively small loan size required for these projects. Securitisation of a number of loans for smaller projects can leverage the size of the aggregated group of projects and use this to channel institutional capital to these. The inclusion of government guarantees for these instruments could help financial institutions extend the opportunity to finance smaller-scale clean energy assets.

3. Tax

The Government could also look to use the tax system to influence behaviour. Tax breaks (like Enhanced Capital Allowances, which are currently used to incentivise CHP and heat pump deployment) could be expanded to a range of green investments. Additionally, Government could give a clearer trajectory for future carbon taxes to influence investment decisions.

4. Task Force on Climate-related Financial Disclosures (TCFD)

The UK is currently consulting on requiring all listed and large companies to comply with the recommendations of the TCFD by 2022. This provides impetus for integrating risk, governance and strategy on climate risk into business planning, indirectly incentivising the allocation of capital towards sustainable investment classes.

Competitive clean energy infrastructure opportunities can be a driving force behind fiscal stimulus.

Given the excess savings in the global economy, evidenced by the historically low level of interest rates in major economies over the past decade, private capital is likely to flow to projects with attractive rates of risk-adjusted returns. Large infrastructure projects which enable Net Zero and are backed up by a robust regulatory framework fit this bill. Establishment of a robust regulatory framework combined with early-stage government capital investment would jump start investment in Net Zero technologies, de-risking future investment and thereby starting a positive feedback loop for private investment, jobs and growth across the UK.

As COVID-19 reshapes the global economy, governments around the world will be looking to use tax, spending and regulatory levers to deliver a cleaner, and more sustainable economy going forward. With green technologies much cheaper now, we would expect these green measures to form a significantly higher share of all stimulus measures than the 16%⁽²⁶⁾ seen after the 2008 financial crash.



Footnotes

- Notes: (1) BEIS, *UK becomes first major economy to pass net zero emissions law*, June 2019.
- (2) Refer to p. 2 of this paper for more information.
- (3) HSBC, 2010.
- (4) BBC, *Mark Carney: 'We can't self-isolate from climate change'*, May 2020
- (5) HM Government, *Leading on Clean Growth – The Government Response to the Committee on Climate Change's 2019 Progress Report to Parliament – Reducing UK emissions*, October 2019
- (6) BEIS, *Green collar jobs in offshore wind set to triple by 2030*, March 2019
- (7) IEA, *Energy efficiency and economic stimulus – IEA strategic considerations for policy makers*, April 2020
- (8) Vivid Economics, commissioned by BEIS, *Energy Innovation Needs Assessment – Carbon capture, utilisation, and storage*, October 2019
- (9) BEIS, *Offshore Wind Sector Deal*, March 2019
- (10) Committee on Climate Change, *Net Zero – The UK's Contribution to Stopping Global Warming*, May 2019
- (11) Financial Times, *Air France-KLM secures at least €9bn in French and Dutch loans*, April 2020
- (12) Reuters, *Germany's Merkel wants green recovery from coronavirus*, April 2020
- (13) Politico, *France, Germany propose €500B EU recovery fund*, May 2020
- (14) Euractiv, *Europe's draft 'green recovery' plan*, May 2020
- (15) EURACITV, *Austrian Airlines bailout to be linked to climate targets*, April 2020
- (16) Aviation News, *Austrian Airlines Agrees State Aid Deal*, May 2020
- (17) Business Green, *Green recovery: More than 150 multinationals call for Covid-19 aid to be aligned with climate goals*, May 2020
- Note: (18) National Grid, *Getting more connected*, March 2014
- (19) CCC, *Analysis of Alternative UK Heat Decarbonisation Pathways*, June 2018
- (20) EDF, *About Hinkley Point C*
- (21) The Energyst, *Net zero: We'll need 10 times as much hydrogen*, November 2019
- (22) Willis Towers Watson/Thinking Ahead Institute, *The world's largest fund managers – 2019*, 2019
- (23) Citi Private Bank, *What COVID-19 means for sustainable investing*, April 2020
- (24) Reuters, *Green bond issuance hit record \$255 billion last year, research shows*, Jan 2020
- (25) City AM, *Green Bonds versus Traditional Bonds*, November 2019
- (26) HSBC, 2010

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