

Written evidence submitted by the Association for Decentralised Energy (PEG0087)

Context

The ADE welcomes the opportunity to respond to the BEIS Committee's inquiry into post-pandemic economic growth.

The ADE is the UK's leading decentralised energy advocate, focussed on creating a more cost effective, efficient and user-led energy system. The ADE has more than 140 members active across a range of technologies, they include both the providers and the users of energy equipment and services. Our members have particular expertise in heat networks, combined heat and power, demand side energy services including demand response and storage, and energy efficiency.

Response

What core/guiding principles should the Government adopt/prioritise in its recovery package, and why?

The principles guiding the Government's work for the recovery should be that –

- Addressing net zero should create jobs and support the levelling up agenda
- Interventions support progress towards net zero and in particular, the areas currently lagging and that could risk the UK achieving its 4th and 5th carbon budgets, in particular energy efficiency and heat decarbonisation¹;
- Interventions involving short-term stimulus should be integrated into longer-term strategies that are sufficiently credible for the supply chain to scale up investment;
- Interventions should reflect that there is not a one-size fits all approach to net zero and that local decision-making, local participation and local solutions matter;
- Energy-related interventions relating to people's homes and business' offices should think about energy efficiency, heat decarbonisation and flexibility together, not in siloes
- Different areas of the UK have been affected differently by the pandemic and will have different routes to economic recovery. Government should enable local authorities and local actors to play a role in driving local economic recovery where they are able to

How can the Government borrow and/or invest to help the UK deliver on these principles?

The Government should invest to deliver on these principles through –

- Confirming that funding already announced to support net zero is protected in the next Spending Review. This should include: the Heat Networks Improvement Programme, the Green Heat Networks Fund, the Clean Heat Grant and the Industrial Energy Transformation Fund.
- Reviewing existing innovation funding and how it can be best used; for example, giving Energy Systems Catapult a greater role in use of innovation budgets, particularly the significant proportion of existing innovation budgets that have gone unspent under RIIO-T1 and RIIO-D1.

¹ Committee on Climate Change (2020) Reducing UK emissions: 2020 Progress report to Parliament

- Use the next Spending Review to build on the welcome £3bn announced as part of the economic recovery. This should include committing to the full remaining £9.2bn promised for energy efficiency in the Conservative Manifesto.

This investment should be aligned with policy and regulatory changes which we outline below to be maximally efficient.

What measures and support will businesses need to rebuild consumer confidence and stimulate growth that is sustainable, both economically and environmentally? And Whether Government should prioritise certain sectors within its recovery package and if so, what criteria should it use when making such decisions? What conditions, if any, should it attach to future support?

The Government should prioritise several overarching areas to stimulate growth and make progress towards net zero –

- Expand the current £3bn to a national buildings renovation programme, focusing on energy efficiency, heat decarbonisation and electricity demand flexibility in both domestic and non-domestic buildings. Where the heat decarbonisation pathway is clear (for example, there is waste heat nearby), this should target expanded use of heat pumps, heat networks and other forms of low carbon heat. Flexibility should be optimised by, for example, continuing to progress half-hourly settlement and requiring as a condition of funding that all new appliances and measures installed automatically run in smart control mode as the default setting.
- Build on the experience gained from the exceptional circumstances that have faced the UK electricity system during the pandemic to accelerate the transition to the smart, flexible, low carbon energy system of the future; for example, through putting in a more sustainable approach to using distributed energy to support the national grid.
- Invest greater funding towards heat decarbonisation; in particular, towards building a vibrant heat pump market in the UK.
- Support private investment into industrial decarbonisation by setting out a clear strategy for industrial steam decarbonisation to 2025 and beyond and maintaining incentives to invest in efficient CHP.
- Reviewing business rates and VAT; including lowering the VAT on solar and storage installations from 20% to 5% and reviewing how business rates are calculated for heat networks.
- Give businesses clarify on carbon pricing from 1st January 2021. Whilst it is clear that the UK will leave the EU ETS, it is not clear what this will be replaced by.
- Supporting all of this will need a very strong consumer engagement and awareness campaign to ensure that consumers and businesses are aware of their evolving role in the net zero landscape and to communicate that they will experience some level of disruption.

Investing in green, decentralised energy is lower cost to Government and has higher benefits than many of the other infrastructure options that could play a role in the recovery². Improving our building stock towards net zero, in particular, will require hundreds of thousands of skilled workers from across the country, drawn from both the construction industry and the energy industry. This will support immediate job creation and longer-term economic re-balancing outside the South East. It can also be scaled up relatively quickly, particularly if existing structures for funding are used³. Supporting the development and rollout of smart, low-carbon technologies also opens up lucrative export markets for the UK in the context of the global race to net zero.

² <https://www.carbonbrief.org/leading-economists-green-coronavirus-recovery-also-better-for-economy>

³ <https://www.greenfinanceinstitute.co.uk/wp-content/uploads/2020/05/Financing-energy-efficient->

It will also deliver real growth. Every £1 of Government investment in energy efficiency produces £3.20 of additional GDP⁴, and investment in home renovation for net zero could support over 150,000 jobs to 2030 while reducing household energy expenditure by £7.5 billion per year⁵. Energy efficiency will also play a key enabling role, helping to avoid annual costs of decarbonising heat to 2050 of up to £6.2 billion and facilitating increased levels of Demand Side Response (DSR), resulting in a more flexible electricity system, with associated savings of £15-40 billion by 2050⁶. Adoption of smart electric vehicle charging and technology could have saved the UK £133 million in balancing costs during the lockdown alone⁷. Similarly, studies have also shown that investment in heat networks could create tens of thousands of jobs and attract billions in private investment⁸. Indeed, the Heat Networks Industry Council has committed to 20,000-35,000 new direct jobs in the sector by 2050 and investment of up to £50bn into the UK market by 2050.

Whether the Government should give a higher priority to environmental goals in future support?

The ADE strongly agrees that the Government should give a higher priority to environmental goals in future support.

How can the Government best retain key skills and reskill and upskill the UK workforce to support the recovery and sustainable growth?

Compared to other infrastructure options, investing in the UK's building stock can be scaled relatively quickly and is likely to benefit not only larger companies but also SMEs; including in the hard-hit construction sector. This will immediately support the retention of skills needed for the transition to net zero.

To ensure this can begin to scale and support reskilling, the UK and devolved governments should invest grants and other support in re-skilling to deliver in a green economy those with closely matched skills who have lost jobs. This would create a skilled workforce of designers, builders and installers for low carbon heating, passive cooling, energy and water efficiency, ventilation, thermal comfort, and installation and operation of smart, flexible energy assets. This programme should build on the good work already being undertaken through Trustmark and PAS 2030/2035 and ongoing work to develop skills in the flexibility sector.

Is the Industrial Strategy still a relevant and appropriate vehicle through which to deliver post-pandemic growth?

The ADE welcomed the publication of the Industrial Strategy and its clear recognition that decarbonisation and industrial growth can go hand in hand. The overarching foundations of the Strategy remain relevant; specifically ideas, people, infrastructure, business environment and places. Further, the grand challenges remain relevant – including particularly clean growth. Finally, in its emphasis upon partnership between Government, the Devolved Administrations, local bodies and industry, including business champions, remain as important today as in 2017.

However, there are big questions upon which the Strategy touches, but which should be developed far further to support post-pandemic economic growth. These include, for example –

[buildings-the-path-to-retrofit-at-scale.pdf](#)

⁴ <https://www.e3g.org/docs/Building-the-Future-The-Economic-and-Fiscal-impacts-of-making-homes-energy-efficient.pdf>

⁵ https://www.theeeig.co.uk/media/1096/eeig_report_rebuilding_for_resilience_pages_01.pdf

⁶ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/568982/An_analysis_of_electricity_flexibility_for_Great_Britain.pdf

⁷ <https://www.current-news.co.uk/news/smart-charging-could-have-saved-133m-in-grid-balancing-costs-during-lockdown>

⁸ <https://www.ippr.org/publications/piping-hot>

1. Is the current division of responsibilities for net zero across central Government the most efficient for progress towards net zero? For example, should Treasury's accountability for progress towards carbon budgets be strengthened, should responsibility for the very significant building retrofit for heat decarbonisation, energy efficiency and demand flexibility be ultimately held in a single portfolio?
2. Will the transition to net zero require significantly more substantial devolution to regional actors than currently and if so, which regional actor is best placed to do this, and do they have sufficient funding and expertise? For example, heat decarbonisation is likely to require very significant local decision-making and intervention to reach the right pathway for the right area – a level of activity that cannot currently be resourced straightforwardly with current structures and levels of funding to Local Authorities and groups.

How should regional and local government in England, (including the role of powerhouses, LEPs and growth hubs, mayoralities and councils) be reformed and better equipped to deliver growth locally?

The Government should take two clear actions to ensure local and regional communities can contribute to Net Zero: support the development of electricity flexibility markets on the Distribution system and introduce a zoned approach to heat and energy efficiency.

1. Government should ensure that liquid flexibility markets are established on the Distribution system. This will help ensure that local businesses and participants can play an integral role to keeping the electricity system in balance and maximising the usable output of renewable generation. Government should take an active role in the DNO transition, before, during and after the RIIO-ED2 period (2023-28). Key considerations in establishing these markets are:
2. The ADE believes that a zoned approach to heat and energy efficiency should be taken; including both new buildings and retrofit.

There is no single solution to decarbonisation of heat - heating is locally specific and the right solutions differ from area to area. A zoned approach should therefore be taken, which empowers local decision-making and includes local actors in the process. This means understanding the local area through consultation, creating zones which specify the most appropriate decarbonisation pathway for an area and then implementing targeted policies to encourage the identified solution to come forward.

Zoning gives policy certainty by identifying the most cost-effective heat decarbonisation and energy efficiency pathway for a given area in consultation with local stakeholders and putting in place national and local support and regulation targeted at that pathway through a mix of Building Standards, funding, and more. It enables a learning by doing approach and creates a framework for consumer participation by involving local stakeholders in the decision-making process.

Tailoring policy to support the deployment of a specific decarbonisation pathway appropriate to a given zone helps to increase investor confidence and sends a clear signal to low carbon heat and energy efficiency markets. It will also encourage companies to invest in the skills and training suited to the needs of the local energy area, creating upskilling opportunities and green jobs, and can create local economies of scale and clear pipelines, helping to reduce the costs of low carbon heating and retrofit services and thereby making them a more attractive option for consumers.

For some pathways, there is not sufficient evidence currently to identify zones with confidence. However, and following Heat Hierarchies such as the GLA's, zones where waste heat, including for use in heat networks, can be prioritised now.

Government should therefore put in place an appropriately resourced zoning framework that sits above existing national policy and builds on them; including the upcoming BEIS Heat & Buildings

Strategy, Heat Networks regulation and Scottish Local Heat and Energy Efficiency Strategies (LHEES)

In several cases, devolved actors have taken leading approaches towards net zero. For example, the UKGBC's accelerator cities pathfinder works to drive retrofit action towards net zero in leading local authorities. These types of initiatives should be supported in the green recovery to help build and sustain a wider market.

Regarding zoning, local and regional economies can specifically be supported towards net zero in the green recovery by:

- Supporting trials/pilots in leading areas with clearer plans to meet net zero. This may include trials of zoning for heat and efficiency or a scaled demonstrator of retrofitting to facilitate flexibility. In both cases, building on existing momentum can help deliver short-term benefits in these areas, and longer-term benefits through lessons learned for the wider market.
- Devolved actors should also be able to effectively regulate the changes they wish to see in their area and the approach that works best for them based on factors including available heat sources and condition of the housing stock. The ability of local authorities to set higher standards for energy efficiency has resulted in considerable carbon savings and these powers should not be eroded through a green recovery.

What opportunities does this provide to reset the economy to drive forward progress on broader Government priorities, including (but not limited to) Net Zero, the UK outside of the EU and the 'levelling up' agenda? What should the Government do to ensure that delivering on these priorities does not exacerbate the vulnerability of businesses, consumers and communities/workers that have been impacted by Covid-19?

The recovery offers a very significant opportunity to make a step-change towards net zero, in preparation for the UK's hosting of COP26 in November 2021.

As set out above, a strong focus on buildings renovation and industrial decarbonisation will strongly support the Government's levelling up agenda by retaining and growing the need for jobs outside of the South East and will particularly target companies hardest hit by the pandemic; including SMEs and the construction sector.

To release such investment towards net zero and effectively build supply chain capacity from the recovery, it is important that any short-term support is integrated into a longer-term strategy which will reward businesses for investing in skills and capacity. Businesses engaged in retrofitting buildings to be fit for the future have experienced inconsistent demand over the past decade. As an example, insulation is currently being installed at just 5% of the rate it was in 2012-9. Regulation and advice must also guide the market to make safe investments, protect consumers and reward quality tradespeople. As such, scaled action on energy efficiency retrofit should be underpinned by robust quality assurance schemes.

This should include –

- Baking in progress made by the economic recovery into longer-term overarching strategies; including the Energy White Paper, the net zero cost review and the Heat and Buildings Strategy, the Smart Systems and Flexibility Plan and work to set out the future of the gas network and gas decarbonisation
- Setting a trajectory for building retrofit that demonstrably enables net zero commitments to be reached. This must work across tenures and accelerate action towards existing EPC Band C

⁹ <https://publications.parliament.uk/pa/cm201719/cmselect/cmbeis/1730/1730.pdf>

targets and beyond. This should be comprised of a rising trajectory of minimum standards and mandating action at key trigger points such as a sale of a property, a change in tenancy or a major renovation

- Stimulating demand in the able-to-pay sector. The connection between energy efficiency and more comfortable and healthy homes needs to be made much more apparent, as was achieved through the BetterHome initiative in Denmark¹⁰. Doing so can stimulate demand for retrofit and the products and services that facilitate these upgrades through, for example, better access to finance, as being trialled through Green Finance Institute demonstrators¹¹. Without sufficient demand, uptake of innovative products and services will be low, as demonstrated by the Green Deal experience.

What lessons should the Government learn from the pandemic about actions required to improve the UK's resilience to future external shocks (including – but not limited to – health, financial, domestic and global supply chains and crises)?

We would offer only two comments towards this very important question. The pandemic has required an unprecedented shift towards homeworking. This would have been much worse had it happened in Winter, with many living in sub-standard housing. It is important that we are prepared for next Winter.

Further to this, the Electricity System Operator (ESO) has had to respond to unprecedented patterns of demand and generation. This has required the ESO to rush in new services and changes to the rules governing the system. It is important that in the run-up to Winter, the ESO builds on these lessons to put in more sustainable arrangements, with substantial and appropriate industry consultation.

What opportunities exist for the UK economy post-Brexit and the pandemic for export growth?

Investment in a smart, decentralised energy system should provide significant opportunities for export growth. In particular, the UK has comparative advantage in energy efficiency goods and services¹², smart grid technologies and renewable energy.

What role might Government play as a shareholder or investor in businesses post-pandemic and how should this be governed, actioned and held to account?

The ADE has no comment.

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¹⁰ <http://bpie.eu/publication/boosting-renovation-with-an-innovative-service-for-home-owners/>

¹¹ <https://www.greenfinanceinstitute.co.uk/news/report-financing-energy-efficient-buildings-the-path-to-retrofit-at-scale/>

¹² Parliament publications (2020) **Energy efficiency: Building towards net zero**