

Written evidence submitted by UKRI (NZG0078)

UKRI response to BEIS Select Committee 'Net Zero Governance' inquiry

Written response from UK Research and Innovation (UKRI):

About UKRI

Launched in April 2018, UKRI is a non-departmental public body sponsored by the Department for Business, Energy and Industrial Strategy (BEIS). Operating across the whole of the UK with a combined budget of more than £7.9 billion (2021-22), UK Research and Innovation (UKRI) brings together the seven disciplinary research councils, Innovate UK and Research England. Our vision is for an outstanding research and innovation system in the UK that gives everyone the opportunity to contribute and to benefit, enriching lives locally, nationally and internationally. Our mission is to convene, catalyse and invest in close collaboration with others to build a thriving inclusive research and innovation system that connects discovery to prosperity and public good.

1. What are the key requirements for a governance structure that can deliver cross-Government climate action at the pace, scale and over the duration required to meet the carbon budgets and the 2050 Net Zero target?

UKRI would support the establishment of a national Net Zero 2050 roadmap of policies, incentives and legislation embracing all sectors, which has a governance structure that delivers oversight of department and sector policy and delivery coherence. This would require the determination, collective will and ongoing oversight of metrics of policy success and impact.

Having such a roadmap would ensure that research and innovation are better aligned and more effective, helping to position the UK as a world leader. It would also ensure that carbon budgets are more likely to be achieved, drive private leverage and provide UK-based businesses with plenty of growth opportunities.

a) Are the Government's existing Net Zero governance structures effective in this role, both in terms of coordination across Whitehall, and coordination with the devolved administrations and local and regional authorities?

UKRI welcomes the leadership to date of the Net Zero Innovation Board (NZIB) in bringing partners from across government to the table to promote strategic coordination of the Net Zero agenda. We would encourage it to go further in aligning research and innovation programmes across departments to promote greater complementarity. The production of the first cross-government Net Zero Research and Innovation Framework is a positive start. Further consideration should be given to the role of NZIB in broader governance structures across departments, ensuring direct accountability to the BEIS Secretary of State. Although there is strong Chief Scientific Adviser representation at the Board, lines of accountability back into host departments are not always clear and could be improved. Similarly, having HM Treasury participate as a full member of the NZIB – instead of being observers, as they are currently – would ensure spending decisions incentivise and create structures that recognise the importance of optionality and strategic advantage as drivers for technology development and deployment for Net Zero.

The UK also needs better understanding, coordination and utilisation of its Net Zero assets and capabilities across government departments, in universities and through UKRI facilities, campuses, centres and catapults, so that their expertise and resources are harnessed to best effect, build on their abilities to engage business, and catalyse the private investment needed.

Achieving net zero by 2050 depends on better coordination between local and national low carbon policies and programmes. To achieve that coordination, improved skills, suitable levels of finance and joined-up policy are needed at national and local levels. The UKRI campuses, centres, institutes and the Catapult network could help facilitate this by providing capability for businesses and local authorities, while bodies such as the British Business Bank and the UK Infrastructure Bank could improve the flow of funds to start-ups, and local project development and finance assistance respectively.

b) What metrics should the Government use to measure their progress towards Net Zero?

The challenge of achieving Net Zero is extensive and wide ranging, and the metrics used to measure progress toward it must reflect this reality.

A key issue is the establishment of standardised metrics to assess the true carbon reduction impacts of public (and private) sector interventions. More research is required to establish comparable data capture and analysis

approaches and metrics to enable the government to understand the real impact of each intervention, and how interventions work together in the interrelated and complex system of a true UK Net Zero. Agreeing such metrics should be treated as a priority.

2. What governance structures would enable HM Treasury to give greater priority to the Net Zero target and the carbon budgets in its financial and economic decisions?

a) How could HMT better ensure that spending decisions contribute to achieving Net Zero in the long term?

As mentioned in our response to question 1a, full HM Treasury participation in the NZIB would help ensure spending decisions incentivise and create structures that will improve technology development and deployment for Net Zero.

3. What signals and support does business need from the Government in order to deliver cross-economy decarbonisation in line with the carbon budgets and the Net Zero target? What delivery function should Government provide itself and are relevant regulatory bodies mandated and resourced effectively to deliver on Government priorities?

a) How do policy and regulatory signals and support vary between Government Departments (and how have they varied over time)? How is this affecting business activity on climate change?

UKRI would welcome a clear, holistic policy and legislative roadmap for the UK to achieve Net Zero. A clear, well communicated policy roadmap with proactive, coordinated policy and implementation planning across all government departments would accelerate the route to Net Zero more effectively and efficiently. Not only would this give existing businesses more certainty with respect to growth, diversification and investment decisions, while also providing opportunities for new business creation, it would also signal the societal changes that are required to achieve this goal, and enable public and consumer confidence in the Government's Net Zero approach.

The challenges of reaching Net Zero are complex and interrelated. Research and innovation can help overcome these challenges, while also informing Net Zero policy development and implementation including addressing integration issues across government, business and society. We must also recognise that

achieving Net Zero will require action at the local, regional and national level. Appropriate connectivity with the relevant actors across government and its arm's length bodies is critical to achieving this.

Strong policy connectivity across departments and coordination with research and innovation investments will enable outcomes to be better exploited for the UK's benefit, and ensure markets are created for new technologies to support economic growth through the transition. Improved land and built environment management offers significant opportunities for capturing more carbon and reducing emissions, for example with more sustainable housing stock and transport infrastructure, using land as a carbon sink or as a site for power generation, or for flood and drought management etc. By working effectively across this policy landscape, recognising the interdependencies of decarbonising different sectors across the economy, we can also join up research and innovation needs and deliver multiple outcomes from investments.

Similarly, government could go further in ensuring greater coordination and connectivity between individual departments' own carbon emission reduction policies and strategies. It has a role to play in ensuring that a departmental Net Zero policy such as the DfT's Transport decarbonisation plan are closely aligned with similar initiatives by other departments, for example MHCLG reforms to planning regulations, as well as local economic generation strategies and working-from-home incentives for which BEIS is responsible.

Signalling to industry is important and requires strengthening. Uncertainty, policy reversals and/or a perceived lack of clarity on the direction from government can result in a lower private funding leverage. Examples where further clarity are likely to be required include decarbonisation of heat, and carbon capture and storage. Furthermore, heavy industry and energy intensive industries struggle to justify investment in low carbon solutions when demand for low carbon products does not currently exist in a substantive way (due to unbalanced carbon pricing markets) making lower carbon solutions less competitive.

In the international investment market, better rates of return are seen in areas such as software and medical technologies rather than in clean technologies¹. This has deterred investment in Net Zero. Furthermore, returns in Net Zero are

¹ [Gaddy, B. et al \(2016\) 'Venture Capital and Cleantech: The Wrong Model for Clean Energy Innovation', MIT Energy Initiative.](#)

often longer than in sectors such as digital and biotech, and as such require more patient capital with long term policy and regulatory frameworks to encourage investment. More could be done by government to indicate to the market where investment should be targeted. Offshore wind mechanisms are held up as a success story in providing the initial market stimulus, although as the market matures new market mechanisms will be required to ensure the growth of wind benefits the UK in the form of supply chain jobs. Government could consider prioritising a select group of high-potential markets in which to provide similar market incentives.

More needs to be done to scale-up and leverage private investment. For each of the major sectors identified by the Climate Change Committee, government should aim to develop an understanding of what will be required from a policy and investment perspective, for example how much public investment will be required to de-risk, and what market mechanisms will be required to encourage private investment and to build national investment timelines with target dates.

An effective cross government investment strategy for Net Zero research, innovation and commercialisation with strong governance and programme management will not only ensure the UK delivers its Net Zero target; it will also enable the UK to be at the vanguard of the key green technologies and solutions of the future contributing to the Global Britain agenda, demonstrating international leadership at COP26, and supporting the UK to become one of the most innovative, clean energy economies as envisaged by the Government's Innovation Strategy.

3.b Should Ofgem play a greater role in delivering on Net Zero and, if so, what changes are required to deliver this?

UKRI is delighted to be running Ofgem's Strategic Innovation Fund (£450m over 5 years) which will trial and measure new ideas at scale to support the transition to Net Zero. There is a real opportunity to build a strong alignment of policy, R&D and regulation between BEIS, UKRI and Ofgem. We would welcome the strengthening of these collaborative arrangements.

4. The BEIS Committee will be working with the Environmental Audit Committee on this inquiry and inviting guests from other select committees. We are also interested in comments on the effectiveness of current parliamentary scrutiny arrangements for climate change and proposals to improve this.

We welcome rigorous scrutiny of the UK's progress to Net Zero. To assist parliamentary scrutiny we would suggest that a national measurement, reporting and verification programme is needed, this could be administered by an arm's length body from government.

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