

Written evidence submitted by the Association for Consultancy and Engineering (ACE) and Environmental Industries Commission (EIC) to the call for written evidence on the Great British Energy Bill (GBEB02)

1 Executive Summary

- 1.1 This document contains the ACE and EIC submission to the Public Bill Committee call for written evidence regarding the Great British Energy Bill.
- 1.2 In this submission, we outline how our member organisations, spread across the consultancy, engineering and environmental technology sectors, support Great British Energy (GBE) and its opportunities, followed by our concerns around skills shortages, funding and insufficient grid infrastructure.
- 1.3 We also look at the provisions of the Great British Energy Bill, illustrating the important role of industry in implementing Section 3 *Objects*, Section 5 *Strategic Priorities and Plans*, and Section 6 *Directions* successfully.

2 About ACE and EIC

- 2.1 We are the Association for Consultancy and Engineering (ACE) and the Environmental Industries Commission (EIC). We represent the views of over 400 members in the UK's consultancy, engineering, and environmental technology sectors. Our members consist of UK businesses of all sizes, from global operations to SMEs.
- 2.2 ACE represents the UK's consultancies and engineering companies in the social and economic infrastructure sectors. With around 400 members employing over 420,000 people, ACE contributes £15 billion to the UK economy, with their projects adding £570 billion annually in GVA.
- 2.3 EIC advocates for environmental markets and policies, representing about 70 members from the environmental technologies and services sector. EIC members, including multinationals and startups, contribute 3.9% to GDP, creating £28 billion in GVA over six years and supporting 349,000 jobs.

3 How we support Great British Energy

- 3.1 ACE and EIC members have a significant role for 'UK Plc' in driving growth, sustainability and connectivity across the UK through the provision of infrastructure and environmental technology services. The Great British Energy Bill, therefore, is very important to our members and how they can contribute to making this policy a success.
- 3.2 Our members are already major contributors to green energy and environmental sustainability in the UK. They are ready to use their significant expertise and experience to aid the Government in driving the UK's transition to a cleaner, cheaper and more independent energy landscape that is more equitable for its users. Our members welcome the following potential benefits that GBE could bring:
 - 3.2.1 **New major energy infrastructure projects:** Collectively, the expertise of our members spans the entire project lifecycle, and GBE's focus on clean energy infrastructure projects brings welcome opportunities for members, from advising to implementing emerging energy technologies.
 - 3.2.2 **Public-Private partnerships:** The work of GBE will involve significant collaboration between the public and private sectors, and our members look forward to utilising their

strengths alongside Government and working together closely to accelerate the green energy transition.

- 3.2.2.1 A key example of the importance of public-private partnerships is low carbon heat networks. They are crucial to the energy transition, helping to achieve a low carbon economy and net zero goals, while easing grid demand, boosting supply security, creating jobs. Our member AECOM is working on several schemes, including Leeds City Council's heat network, Old Oak Common and Park Royal Development Corporations Heat network. All these schemes are to be delivered through public-private partnerships which are crucial to deploying heat networks at scale and maximising infrastructure use and investment.
- 3.2.3 **Innovation:** ACE and EIC members are leading the way in new and advanced climate and energy technologies and welcome the opportunity that GBE provides to develop and implement new solutions. ACE and EIC are ready to engage with and facilitate fruitful relationships between industry and academia leading the way in energy innovation.
- 3.3 It is, however, important to consider the key risks and concerns that could prevent the full benefits of GBE from being realised:
 - 3.3.1 **Skills shortages:** GBE, and the transition to net zero, requires hundreds of thousands of workers trained in green skills. However, research has shown that the UK is currently experiencing a "green skills gap", with a shortfall of around 200,000 workers,¹ meaning significant investment in training, upskilling and reskilling is required to ensure that long-term energy goals, including those of GBE, can be met. It should be noted that skills shortages are wide-ranging, affecting the private sector but also government regulators and advisors who are key to progressing developments through the consenting system to operation. This is a systemic issue that requires significant new entry of skilled individuals to the sector.
 - 3.3.2 **Funding:** There are concerns around the level of funding (£8.3bn) allocated to GBE across the course of this Parliament. Energy projects of the type that will be carried out by GBE are expensive to establish and maintain, with high upfront costs. High costs, particularly in an environment of high interest rates and costs of construction materials, are a key risk, and stable and adequate funding is crucial. Whilst we recognise the aspiration for the Government to own energy assets for the nation, the funding might be more effectively used to de-risk projects, lower the cost of capital, and accelerate deployment of private investment. Our members are able to help assess and advise how the funding allocation can be best deployed to create economic and social value.
 - 3.3.2.1 The energy transition will require continuous funding for innovation in the nuclear sector to develop small modular reactors (SMRs) and drive forward fusion. Our members are already supporting the world-leading STEP Fusion programme that seeks to commercialise fusion in the 2040s and establish the UK as a world leader in fusion technology and energy innovation.
 - 3.3.3 **Insufficient grid infrastructure (Transmission and Distribution):** A flagship report by the International Energy Agency found that, in order to meet worldwide energy and climate goals, over 80 million kilometres of grid needs to be developed or refurbished, equivalent to

¹ PwC (2022). Energy transition will be constrained by green skills gap of c.200,000 workers - PwC Green Jobs Barometer. URL: <https://www.pwc.co.uk/press-room/press-releases/Energy-transition-constrained-by-c200000-jobs-PwC-GJB.html>

the entire grid that currently exists worldwide.² This contextualises the inadequacy of existing energy infrastructure, a situation which is not compatible with GBE's goals to significantly increase the capacity of renewable energy sources. The Strategic Innovation Fund (SIF) projects by SSEN Transmission and projects such as Eastern Green Link 2 by National Grid are key examples of energy transition delivery. However, significant work is still needed to extend the capacity of the UK's grid, in terms of both transmission and distribution, and in good time. This is something our members can support.

- 3.3.3.1 Government leadership is needed to accelerate planning for renewables projects and grid connections. Bringing the public and local communities with us on this journey is essential. Our member AECOM is at the forefront of progress in this area with innovative stakeholder engagement tools such as their Virtual Consultation Tool. On the A428 Black Cat, AECOM used augmented reality, traffic management animation, video flythroughs, and virtual consultations (a first for National Highways). They also used a Minecraft model and partnered with Mumsnet to reach as wide an audience as possible, which resulted in a ten per cent shift in the proportion of under 45s taking part compared to previous consultations.
- 3.3.4 **Insufficient grid infrastructure (Battery Energy Storage Systems):** A significant increase in storage capacity is needed for a successful energy transition. Our member AECOM is supporting the industry with the planning and design of these facilities, as per their role on the SSE Renewables Staythorpe project, which proposes a 437MW battery and ~200 MW of photovoltaics. Pumped storage hydroelectricity is also needed in the battery storage mix: there is a need for Government to conclude the cap and floor mechanism consultation for long-duration electricity storage (LDES) as soon as possible. AECOM is also supporting a range of clients in this sector, such as on the Red John Pumped Storage Hydro project at Loch Ness, delivering feasibility design and environmental impact assessment for the 450MW storage development.
- 3.3.5 **Development framework:** The offshore wind system architecture, including marine planning, seabed leasing and Contracts for Difference support mechanisms, currently operates in an uncoordinated way.³ A coherent system architecture is required, to ensure that the establishment and operation of GBE does not exert stress on the underpinning development framework, which may become a barrier to the quick rollout and delivery of necessary national infrastructure.
- 3.3.6 **Supply chain constraints:** There is also a case for using this approach to unlock private sector investment in supply chains that are globally constrained and might bring manufacturing jobs to the UK. Our member Arup has undertaken work for the Scottish Government on the Strategic Investment Model programme that has enabled collaboration between developers, government and industry to de-risk and accelerate investment in supply chains and the infrastructure needed to deliver offshore wind projects.

² International Energy Agency (2023). Electricity Grids and Secure Energy Transitions. URL: <https://www.iea.org/reports/electricity-grids-and-secure-energy-transition>

³ Offshore Wind Industry Council (2024). Policy and Legislative Barriers to Offshore Wind Consenting. URL: [1c0521_33f3ef14555949c68731b51d2dc991d4.pdf \(owic.org.uk\)](https://www.offshore-wind.org.uk/wp-content/uploads/2024/01/1c0521_33f3ef14555949c68731b51d2dc991d4.pdf)

4 Bill provisions

4.1 Beyond the general points made in the opening section of this briefing we have made the following specific observations.

4.2 Section 3: Objects

4.2.1 Section 3(2) outlines the objectives of GBE. In the first instance, GBE may facilitate, encourage and participate in the production, distribution, storage and supply of clean energy. Our members are integral to public projects that produce, distribute, store and supply clean energy per the role of GBE in Section 3(2)(a).

4.2.1.1 Scotland currently has more than half of the total number of operational wind turbines in the UK today, and with more than 215 turbines able to generate enough electricity to power around 300,000 homes, Whitelee is the UK's largest onshore windfarm. This forward-looking Scottish Power Renewables project presented many engineering challenges, including the construction of a network of site access roads, and the excavation and construction of turbine foundations and crane hardstandings at locations where significant deposits of peat existed.

Our member, AECOM, played an integral role in reviewing the construction methodologies designed to overcome significant ground related geotechnical constraints of this project, tracking and monitoring progress and construction quality. Our involvement helped make this large-scale renewable energy project a reality, helping Scotland to generate cleaner, greener power.

4.2.1.2 Our members are well-placed to support GBE in producing, distributing, storing and supplying clean energy. By leveraging the expertise of ACE and EIC members in similar projects, GBE could drive innovation and scale up such initiatives across the UK, contributing to national energy goals.

4.2.2 Furthermore, in Section 3(2)(c) GBE can look for ways to improve energy efficiency and we would recommend that they consider undertaking this role in conjunction with the private sector and all the expertise they have to offer.

4.2.2.1 Ramboll is one of the most experienced bioenergy engineering consultancies in the world. Having worked on more than bioenergy plants, they specialise in delivering high efficiency rates, in some cases exceeding 100%. This international experience showcases how industry expertise can accelerate the development and deployment of cutting-edge energy efficiency, which is essential for GBE's strategic success.

4.3 Section 5: Strategic priorities and plans

4.3.1 Section 5 outlines how the Secretary of State must prepare a statement of priorities for GBE and strategic plans which support delivery. Both may be updated from time to time.

4.3.2 Our members believe in close collaboration with Government to share best practice, drive innovation and develop workable solutions. It would, therefore, support the Secretary of State's plans to be robust if there were to be a formal role from industry delivery bodies to be consulted on the strategic plans which support the statement of priorities. Our members, as industry leaders and major employers, are part of the solution to a successful energy transition and are ready to engage with GBE.

4.3.3 ACE and EIC members have international experience across energy. From feasibility studies assessing renewable technologies to providing technical solutions to building infrastructure such as wind farms they are at the forefront of clean energy. This, and a focus on innovation, can help the strategic plans deliver the maximum benefits from renewable and cost-effective power if industry is consulted while developing them. The best

of public and private can leverage innovation and investment for the benefit of the economy and society.

4.4 Section 6: Direction

- 4.4.1 We welcome Section 6(3)(b) and the potential for our members to share their domestic and international knowledge. We believe the expertise of our members as leaders and innovators of the industry will prove to be an invaluable asset to make challenging and clear directions for GBE. Representing over 400 consulting firms, we would be well-placed to facilitate discussions between stakeholders and our members.

5 ACE and EIC Plan for Government

- 5.1 In June 2024, ACE and EIC published Sustainable Growth and Prosperity, A Plan for the Next UK Government,⁴ setting out the priorities of the sector and a 100-day plan for what the Government must deliver to support the built and natural environment. The Great British Energy Bill is particularly relevant to our following positions:

- 5.1.1 **We believe that it is beneficial to have a robust central government procurement pipeline for infrastructure projects.** We would like to see a long-term demand visibility and a pipeline which showcases major projects to be completed by 2035, prioritising nature and climate change. This is particularly relevant where GBE may ramp up infrastructure projects and require support from our members and their expertise. If the industry can plan it can upskill appropriately and reduce costs.

We believe it is important to shift to portfolios and longer-term contracts to foster investment certainty. As a key aspect of the success of GBE is major energy projects carried out in collaboration with industry, pipeline certainty is important to its success as it fosters consistent confidence and delivery, reduced costs and the full realisation of project goals.

- 5.1.2 **We would like to see the Department for Energy Security and Net Zero have an integrated energy system plan.** This plan should consider and prioritise energy needs for communities, industry and transport, and coincide with the annual progress report to Parliament by the Climate Change Committee. We believe that the establishment of GBE will go a long way in achieving this.

- 5.1.3 **In order to deliver in an efficient and cost-effective way, our members would welcome an industry skills action plan for net zero and nature recovery from the Department of Business and Trade.** We have called on the Government to develop an industry skills action plan including the assessment of skills gaps specific to net zero and environmental resilience, and an industry roadmap of new skills standards, frameworks and qualifications specific to the built and natural environment.

As set out in Paragraph 3.3.1, the shortage of green skills in the UK is a significant barrier to the long-term energy goals of GBE. An industry skills action plan, combined with significant investment, is needed to ensure the UK can effectively move towards net zero, energy security and lower household bills.

6 Further information

For further information please contact our Interim Director of Policy, Laura Wright, lwright@acenet.co.uk

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⁴ ACE Group (2024). Sustainable Growth and Prosperity: A Plan for the Next UK Government. URL: <https://www.acenet.co.uk/media/usxhdulp/ace-eic-manifesto-2024.pdf>