

## EngineeringUK's response to the *Green Jobs Inquiry* January 2021

### About EngineeringUK

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[EngineeringUK](#) is a not-for-profit organisation, which works in partnership with the engineering community to inspire tomorrow's engineers and increase the number and diversity of young people choosing academic and vocational pathways into engineering via programmes designed to excite young people about the variety and opportunity presented by a career in modern engineering. EngineeringUK aims to grow the collective impact of work across the sector to help young people understand what engineering is, how to get into it, and be motivated and able to access the educational and training opportunities on the way.

We also undertake research and work with partners in the engineering sector to influence government thinking in relation to the educational pipeline into engineering, and what systems, structures and funding need to be in place to enable all young people to decide whether a career in engineering is for them.

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### Policy recommendations

A green economic recovery has the potential to unlock opportunities for young people to transition into sustainable, rewarding and well-paid work, even during these turbulent times. However, for these opportunities to materialise and for young people to be able to access them, EngineeringUK believes that the government should do the following:

- 1. Define 'Green Jobs'** – In order to achieve net zero and meet the environmental challenges ahead, the government will need sufficient people with the right skills to deliver the changes to our infrastructure, transport and energy sector that will be required. This will demand a strategic approach to skills policy and delivery. As part of this the government, in discussion with the sector, must aim to define what a green job entails and what skills they actually require, so as to help get a clearer picture of the number of 'green-jobs' and future demand for the skills associated with them in the UK. The UK's standard occupational and industrial classifications (SIC and SOC) are, at present, not especially conducive to defining green jobs, which almost certainly cross multiple industries and role responsibilities. In the long-term, it is vital that such classifications reflect the growing importance of sustainability and enable the concept of 'green jobs' to be clearly defined and quantified. This will allow us to not only estimate the total number of green jobs in the current and future economy, but also gain an understanding of the levels and responsibilities these roles would constitute. We see the Green Jobs Taskforce having a clear role in this. Without a clear definition and understanding of the skills required to achieve net zero it becomes difficult to identify specific skills gaps and target resources effectively.
- 2. Develop a net zero skills plan** – The government must then focus on ensuring that the UK has the capability to deploy the required infrastructure, digitalisation, and technology installation and decommissioning for the transition to net zero to be delivered. It must also **establish a strategic workforce planning function across government** to ensure the supply of key skills for the nation's future outside the EU.
- 3. Establish a new STEM education strategy** with large-scale funding across the whole of the UK informed by strategic workforce planning and evidence of what works. The strategy must address STEM teacher shortages, teacher professional development, STEM careers education, outreach, diversity and

4. progression to post-16 academic and technical qualifications EngineeringUK is particularly concerned that the strategy improves access to high quality careers provision, as we believe that giving young people access to effective and impartial careers education, information, advice and guidance (CEIAG) in school, can play an important role in increasing the number of young people on pathways into engineering careers.<sup>1</sup> Young people in particular need support in understanding the nature of modern engineering and the critical role it will play in delivering net zero, and, given the increased importance they attach to job security in the context of their careers choices since the pandemic<sup>2</sup>, the opportunities that working in engineering can offer.
5. **Work with employers to increase 'green' apprenticeship and training opportunities for young people in the engineering sector.** The pandemic is having a worrying impact on apprenticeships, with research published by [the Sutton Trust](#) finding that from early April 2020 on average just 39% of apprenticeships were continuing as normal, with 44% having been furloughed or made redundant. While the government's *Plan for Jobs* is welcome, short-term schemes must go hand in hand with a longer-term strategic vision for apprenticeships and training and link in with the vision on Net Zero. We look forward to seeing how the government's new *Green Jobs Taskforce* will help to drive forward more apprenticeship and training opportunities for young people in the growth areas of the green economy.
6. **Make diversity and inclusion a priority in the context of green jobs -** Addressing the diversity gap in engineering with measures that open up pathways for young people is vital to not only overcome the persistent skills gap in engineering, but also to create opportunities for all young people in the green economy, regardless of their gender, ethnicity, disability status or socio-economic background. Getting this right is in many ways a 'win-win' situation. Not doing so will mean that large parts of young people in the UK will be denied the opportunity to participate in, shape and drive the green recovery of this country and the country will be denied the diverse and insightful workforce that enables it to thrive.
7. **Deploy cross-sectoral systems approaches to policymaking that underline the interconnectedness of different policy areas and economic sectors.** This will ensure that policy interventions work most effectively together to achieve net-zero and deliver co-benefits, reduce the risk of unintended consequences, and help account for social, cultural and behavioural factors, which can act as both barriers to and levers for change. For example, we hope that the government's refreshed Industrial Strategy, expected in the coming year, is able to fully reflect the role STEM education and skills policy can play in UK's ambitions to become a science superpower.

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### Young people and Net Zero - a 'win-win' situation

Young people will be vital to the UK's endeavour to achieve Net Zero, as they are the workforce of the future economy. Skills shortages have long been an issue for the engineering sector and if any of the predictions about demand for 'green' skills are to materialise, ensuring that we equip young people with the right skills to succeed will be vital.

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<sup>1</sup> Recommendations 2 and 3 are recommendations agreed and published by the National Engineering Policy Centre, of which EngineeringUK is a member. They can also be found in this document. <https://www.raeng.org.uk/publications/reports/engineering-a-resilient-and-sustainable-future>

<sup>2</sup> <https://www.engineeringuk.com/media/232314/young-people-and-covid-19.pdf>, p.6

- **One fifth** of people currently working in the **energy sector** are **set to retire by 2030** as the 'Baby Boomer' generation reaches pensionable age. ([National Grid, Building the Net Zero Energy Workforce, 2020](#)).
- In the **rail sector**, up to **120,000 extra** workers will be needed over the next five to 10 years, with demand for skills peaking around 2025. Over 28% of workers in the current rail workforce are over the age of 50 ([City & Guilds and the National Skills Academy for Rail \(NSAR\), Back on Track, 2020](#)).
- **56% of businesses** surveyed said they continue to experience skills shortages and **61%** say that they are not as agile as they need to be because of shortfalls in their skills. Engineering and construction were among the sectors most aware of local skills shortfalls ([The Open University, Annual Business Barometer 2020](#)).
- **40% of SME decision-makers** say that it is more difficult now than it was five years ago to find employees with the right skills ([AoC, Bi-annual survey, October 2020](#)).

At EngineeringUK we believe there is also a real opportunity to harness the passion young people have for the environment and their desire to make a difference to their local communities and to support young people to find secure, well-paid jobs. To help tap into this, young people need to be informed about what kind of skills and educational routes are most likely to help them secure a 'green job' in the future.

A recent [survey](#) with young people aged 11 to 19, commissioned by EngineeringUK, found:

- **36%** of respondents (aged 11 to 19) said that the pandemic had made 'having a positive impact on society' and 'ethics and social responsibility' (**33%**) more important when considering career choices.
- **Over 2 in 5** young people surveyed report that the pandemic had made 'having a job that you can be certain you can keep' (44%) and 'availability of jobs' (41%) more important to them when considering career choices.

According to a [survey](#) commissioned by the Institution of Engineering and Technology (IET):

- **68%** of children aged 5 – 13, hope to follow a career that helps the environment, but a lack of understanding about these jobs could stop them from getting there.
- **71%** of children feel this knowledge gap is the biggest barrier to their dream career.
- Making a positive difference (**55%**) is a bigger influence on kids' career choices than 'money' (**31%**) or 'fame' (**7%**).

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For more information on our research, go to our website [here](#).