Balfour Beatty

July 2024

Briefing: Energy skills initiative overview

- Skills shortfalls have been identified as a key risk across a number of infrastructure sectors, in particular in energy infrastructure where many of the skills, including civil, mechanical and electrical engineers, are in short supply. With the significant increase in the number of energy schemes being commissioned, across nuclear, Carbon Capture Utilisation and Storage, offshore wind, hydrogen, transmission and distribution and other areas, these existing skills shortages are likely to be exacerbated, with increased competition for the same pool of skilled workers, putting at risk the simultaneous delivery of critical energy schemes.
- Given the length of time it can take to train people and ensure they have the necessary experience to work on the delivery of these critical schemes, the recruitment and training needs to begin before the schemes are commissioned. However, one of the key concerns relates to the timing of key decisions which can, in turn, lead to reactive and uncoordinated attraction and recruitment activities and risks not allowing sufficient time to plan and effectively train / re-train people in sufficient numbers with the requisite skills to fill the relevant roles.
- For industry, the principal challenge relating to skills investment is certainty around project delivery. Contractors and other key stakeholders only invest the significant required funds to set up training centres or deliver skills training on the back of real commitments. Likewise, colleges only provide the relevant courses once there is proven demand for them. Recent delays and cancellations of key infrastructure projects - such as the Birmingham to Crewe leg of HS2 and the Lower Thames Crossing - have concerned industry. Even where companies such as Balfour Beatty are awarded contracts, as in the case of Lower Thames Crossing and the M25 Junction 10, delays in the Development Consent Order (DCO) process and wider planning and consenting issues stymie business planning and investment. The Government has identified the DCO as a major block in the system, which we agree with and we welcome proposals aimed at addressing this. However, these points further undermine the case for early investment in skills.
- Both the Government and Opposition have acknowledged these issues. The priority for all parties is to ensure a strong UK skills base and that these skills come from the domestic labour market. At the moment, the investment that is taking place is happening inefficiently, in an uncoordinated way with duplicated effort, and critically it is not happening early enough.
- Balfour Beatty's view is that there is a need for a new skills initiative built on publicprivate partnership that would meet all of these objectives. We propose a model in which Government and/or Combined Authorities and industry would all provide funding for investments, in specific areas e.g. around energy hubs, in order to kickstart training, de-risking the investment for both sides and building confidence in delivery. The Government or Combined Authority would act as a coordinating body to align activities into an efficient, collaborative approach from schools, colleges, asset owners, contractors etc with a view that all parties are working to the same goals and not wasting or focusing on conflicting activities.

The model

A partnership could take the form of the following model:

- Once a project has been identified and taken forward to a point at which it is set to go ahead - but with uncertainties remaining about specific financial commitments and timelines - a cross-industry group could work together to clearly set out the goals from a sector/geographic context and then with the necessary certainty would commit to appropriate investment, with Government or the relevant Combined Authority agreeing to also contribute, to invest in technical training in the area in which it is to be delivered. Depending on the training need and increase in resource this might need to be 12 - 18 months (or earlier) ahead of the expected full go-ahead for the scheme.
- This initiative would need to be coordinated by Government or by the relevant Combined Authority as the ones with the reach and clout to do so.

- In practise, this could be done either on a cross-industry basis - i.e. a number of Tier One constructors come together in an area of significant investment to co-fund training centres to supply training for key skills gaps - or on a supply chain basis - i.e. the principal contractor (i.e. Balfour Beatty) partners with supply chain partners to deliver the same training opportunities in key areas. In this case, the lead contractor would receive Government / Combined Authority / Client funding to organise training centres in the relevant region and agree to a percentage of training or access to the facility to be provided to others participating in the agreement. In many cases the best approach will be to use or adapt existing local training provision in colleges or private providers as opposed to building new to avoid issues such as the HS2 National College for High Speed Rail which eventually failed due to lack of demand resulting from project delays. In some cases, bespoke training centres such as Balfour Beatty's HS2 Skills Academy at Kingsbury will be appropriate.
- In many cases, major projects involve two industry levy organisations (the Construction Industry Training Board (CITB) and the Engineering Construction Industry Training Board (ECITB). These should be part of any funding model as the industry has already contributed to them. Local Skills Improvement Plans should also reflect these major projects and be adapted to support.
- For example, Balfour Beatty is proud to have been selected to assist in the design and development of optimal technical solutions for Net Zero Teesside Power's pioneering planned power station and carbon capture and compression plant, with our Carbon Capture Alliance partners. On key schemes such as this, an assessment of the broad skillsets and the numbers we would need during the construction phase is worked out. For that scheme, this includes a peak workforce during the construction phase, of c.3,000 including mechanical engineering technicians i.e. fitters; electrical installation engineers including High Voltage operatives; pipe fitters and welders; and civil operatives. The priority will be to recruit locally and to establish a training offering near to the site to ensure a pipeline of skilled people to deliver the scheme. However, companies will not set up training centres until there is certainty that the scheme is definitely due to go ahead, and an understanding of the timescales.
- There are a large number of schemes in this area, many of which will need skilled workers with similar skillsets. A scheme such as the one we are suggesting, where all of the parties needing skilled workers to work on the schemes around Teesside, including the companies commissioning them such as bp, are brought together and supported in beginning training through some upfront funding which industry contributes to, would help kickstart the necessary skills investment.
- The scheme would allow for both training and reskilling via existing routes such as apprenticeships, traineeships, graduate programmes, and reskilling programmes. Those organisations involved in the initiative would be responsible for providing the practical experience either in their own business or via placements in their supply chain.
- With Apprenticeships, new skills could be trained using front-loaded, block release Apprenticeships whereby the off-the-job training takes place first and could then be done before a project is on site. The on-the-job phase would then be done when the project starts. This requires project certainty but is a pre-existing delivery model.
- The outcome would be an upfront investment in skills in areas of investment, ahead of key decisions on delivery being resolved. It would signal that industry is willing to do their part on upskilling, whilst also engaging public funding to ensure that the investment does not lie solely with industry - reducing risk for all parties involved. The investment of Government funding would provide further certainty to industry that the scheme will go ahead, driving further investment.
- To train people with lifelong skills is expensive and investment would need to be significant (millions) - but since the investment would be made at some point in the process, by selecting sites of significant investment (such as Teesside), and sectors with significant skills challenges (such as nuclear), the risk of misallocating funds would be limited in the long-run. Investing in the future skills base of the UK economy is better done in an efficient joined up way.

Balfour Beatty

About Balfour Beatty

Balfour Beatty is a proud British business founded and headquartered in the UK 114 years ago. We are also one of the Government's 40 strategic suppliers. With c.12,000 employees across the UK, we finance, develop, build, maintain and operate the increasingly complex and critical infrastructure that supports national economies and deliver projects at the heart of local communities. Our projects span transportation, power and utility systems, social and commercial buildings - combining world-class investments capability and leading construction and support services to deliver both large, nationally critical complex infrastructure and local and regional projects at the heart of local communities.

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Registered Head Office:

5 Churchill Place
Canary Wharf
London
E14 5HU

www.balfourbeatty.com