Balfour Beatty

For the Attention of RIIO Team
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Dear RIIO Team,

Balfour Beatty Response to the Ofgem Consultation: Accelerating Onshore Electricity Transmission Investment

Balfour Beatty has reviewed Ofgem's proposals on how they can support the accelerated delivery of strategic electricity transmission network upgrades needed to meet the Government's 2030 renewable electricity generation ambitions. We have provided responses based on our industry knowledge and experience.

In addition to the 26 schemes which are the focus of this consultation, Balfour Beatty recognises the requirement to deliver the full portfolio of identified projects as part of the Government's 2030 renewable electricity generation ambitions. We would like to highlight that our responses apply to the successful undertaking and delivery of the portfolio of works.

Yours Sincerely,

Ian Currie

Managing Director – Power Transmission and Distribution

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Question 5: Do you agree that without upfront certainty that they will be delivering enough of the investment needed for 2030, TOs will face significant difficulties mobilising the supply chain to deliver the works on time?

There is a significant resource challenge which requires upfront certainty and commitments to ensure that the supply chain can mobilise in time to meet the 2030 renewable transmission ambition. Resource is already an issue across the construction sector, with the CITB estimating that 217,000 new construction workers need to be recruited by the industry over the next five years, even accounting for productivity gains.

This coupled with the pull-on resource from other major rail and highway schemes (such as HS2 and Lower Thames Crossing) and other Network Operators, means there is a danger of a significant resource gap. The resource ramp-up needed is an additional requirement on top of current volumes of work, however that existing workload could provide a great opportunity to build on resource and capacity.

The current market of skilled labour is saturated and TO's need to deliver so much more than business as usual. The resources will be needed across all disciplines such as Overhead Line, Substations and Cabling and is required across all levels. This will need a significant influx of new people to allow development and upskilling with over and above our industry current norm resource levels there will need to be an additional 2900 skilled people to deliver the National Grid East Coast Development Programme alone.

A key challenge of this strategy is to increase productivity through smarter transmission systems that can be built off site quicker and reduce programme pressures. This will only be possible, however, with greater visibility of projects, commitment of workload and smarter allocation of projects. This would enable the supply chain to plan optimal resource requirements and continuity of work, including year-round working rather than seasonal.

The market is also currently experiencing a record demand for materials, which is leading to unprecedented challenges for the industry. Demand both in the UK and globally is currently exceeding supply and shows few signs of slowing down. Raw materials such as steel and concrete are the key shortages in the industry, which then feeds into price inflation, with the expectation that the high demand coupled with tight supply will sustain higher prices. To minimise this risk, contractors need to engage with their supply chain early and develop solutions collectively.

Collaboration is required with Ofgem and TO's to minimise the full implications of the delays and price rises, whilst continuing to maintain strong relationships with suppliers. The global shortage of steel continues to cause price increases and products are now on extended lead times and there is no sign yet of either price or availability easing soon.

A programme of works and early commitments to the supply chain will lead to benefits in the curtailment of increasing prices, as well as the reduction in lead times with visibility of work. HS2 will be at construction phase and will start hitting its peak as onshore electricity transmission network upgrades are required to be accelerated. There will also be a major pull from highways with additional major schemes beginning at the same time.

To get the best of the supply chain, they need to be on the same journey as contractors and TO's to ensure they are incentivised to innovate and deliver to meet the Government's 2030 renewable electricity generation ambitions.

Question 6: Do you agree that it is in consumer interest to consider streamlining our regulatory processes?

Contractors are currently involved at a late stage of project development which reduces the opportunity to add value. Where possible, contractors should be engaged in the up-front NOA / LOTI process, which will also enable value to be unlocked from suppliers through collaborative discussions around the solution rather than just supply. Working with the TOs, development of an active incentivisation model during preconstruction that is right for the supply chain would also provide greater value and this is model which has worked effectively in other construction sectors, such as Highways.

From our experiences of working on major electricity transmission schemes, the planning process takes a significant period of time, currently taking 3+ years where demand requirements dictate this needs to be closer to 6-12 months. We recognise there is an opportunity for streamlined DCO and/or planning discharge to be staggered with construction.

Projects could also get to construction faster through earlier awards and more direct allocation. Increased direct allocation of works will provide reduced lead-in times and enable earlier value engineering which in turn will provide better overall value. Project procurement can often be hampered and delayed by an excessive focus on disallowed costs and/or risk pots whereas more direct engagement between Contractors and Ofgem would allow Contractors to demonstrate the value of risk in the construction period and the potential of delays from mismanaged risk. A direct allocation approach would also enable commercial models to be adopted that drive innovation and collaboration. The emphasis would on reducing costs rather than a sole focus on price reductions through a tender process.

The level of infrastructure required also means that early order awards (approximately 3-5 years in advance) to both contractors and supply chain will be required to secure manufacturing slots and support subcontractors in allocating appropriate resource. This also gives the supplier the ability to supply the solution to the need for the product, rather than just supply what is asked for, unlocking the value of the supplier. Our experiences highlight that major projects can take two years from tender release to award due to such things as engineering and planning changes which is too long if we are to meet the Governments 2030 renewable generation ambition.

We would also highlight the requirement for consideration of costs outside of the project-by-project approach such as training, onboarding and bulk buying which will ensure that contractors and suppliers together are able to fully mobilise to support the infrastructure requirements. For example, buying standard materials in bulk outside of specific project needs would involve placing an order with a supplier for the product and effectively paying them regularly for that material as it is manufactured, rather than against specific project requirements. This would enable security of materials and the ability to place orders at strategic points dependent on market conditions to guarantee price fixation.

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Question 14: Are there any additional timetable issues that need to be considered?

In order to deliver the 26 projects set out by Ofgem, there is a requirement to have resource available ahead of schedule to be able to effectively onboard and embed them within the industry culture ahead of starting project delivery, with the TO's needing the flexibility to be able to embed these practices.

The industry typically requires four years to be able to develop resource through training and experience to enable them to deliver significant infrastructure schemes such as these. It is essential that we are creating a sustainable workforce that leaves a legacy and are able to continue delivering this scale of works for years to come.

It is estimated that existing workforce levels across the industry need to more than double at the peak of these works. This is against a backdrop of an aging workforce and seasonal demands that needs addressing. Therefore, contractors need time to allow the aging workforce to impart skills and knowledge to those coming into the industry and a review of current seasonal working. We expect this rise in demand to continue until 2050 when the net zero and security targets are realised.

Time and investment is required now to ensure the right volume of skilled labour is available for the whole profile, with time needed to develop people and give them sufficient exposure and experience to enable them to be effective. The traditional approach to contracting will not provide the required continuity to be able to successfully mobilise and deliver these works.

Competition for resource from existing Transmission workloads and other infrastructure projects is going to remain highly likely and therefore additional industry resource will be needed to complete other identified Transmission schemes. Any resource solution needs to be scalable so it can cater for all needs and requires development now to facilitate the timescales being set out.

Within the industry there is a significant reliance upon suppliers and subcontractors, particularly SME's who without commitment of workload and investment will face huge challenges in supporting these works. They will need time to employ, train and develop people alongside purchasing equipment and machinery which can only be achieved once investment has been made.

Our experience also suggests that longer regulatory periods which enable collaborative frameworks, best support the development of innovation and realisation of efficiencies as opposed to project-by-project funding approaches which may not lead to the best overall outcomes. This coupled with projects being evaluated based on need to use suppliers, rather than a '3 quote' approach, can also drive collaboration and allow for early order placements, mitigating potential timescale challenges.