

## **NESO Connections Reform Consultation – Heathrow’s response**

We appreciate the opportunity to respond to NESO’s consultation Connections Reform. Please consider this letter as our official response.

Heathrow is the UK’s hub delivering trade, tourism and investment through the world’s largest airport connectivity - 200+ direct destinations to 95% of the world’s economy, including 13 direct domestic routes, which enable national reach and local growth. We are the largest port by value in the UK (£198.5bn). Heathrow handles 26% of all UK exports and 70% of all UK cargo exports by value and we are one of the largest employment sites in the UK where over 90,000 colleagues are employed, and 985 businesses are located.

Contributing around £22bn to UK GDP, the UK’s aviation sector is critical to the economy. UK airports generate £27bn in GVA and support over 270,000 jobs while airlines operating from UK airports generate 390,000 jobs, and £26bn of GVA in the UK economy.

### **The importance of electricity to delivering a net zero Heathrow**

Electricity is essential to our operation, development and growth and underpins the service we offer our customers and the benefits we generate to the UK economy. Heathrow is a critical national infrastructure which relies on a resilient electricity supply. We have an ambitious net zero plan aligned with the UK’s Net Zero goal and the Climate Change Committee’s 6<sup>th</sup> carbon budget.

As we decarbonise, we will need a lot more renewable electricity: twice as much as today by 2035 to decarbonise our operations on the ground and possibly four times as much as today by 2050 to support decarbonisation in the air as well. We expect to operate a largely ‘electric airport’ by 2035, once heating and vehicles have transitioned away from fossil fuels to operating on electricity. Access to a resilient supply of renewable electricity is essential to achieve this goal.

### **Transmission capacity challenge in West London**

Heathrow is situated in an area with limited to no uncommitted transmission capacity. West London is home to a high concentration of energy-intensive industries such as manufacturers, logistics, data centres and engineering firms that are critical to the UK economy. Rapid growth of data centres has outpaced reinforcement of the transmission network in West London impacting development, growth and decarbonisation in the area, a situation which it is not expected to be resolved until transmission network upgrades are completed in 2037.

This is a picture that could be repeated elsewhere in the UK as the net zero transition accelerates. Significant further growth in electricity demand in West London is forecast into the future and will put even more pressure on the constrained transmission network in this area. Accelerating the broad range of reforms necessary to respond to these challenges is critical.

### **Proposed connection reforms do not adequately address the needs of non-embedded demand customers connections**

The focus of the proposed reforms is understandably on generation connections and those that support the delivery of the 2030 Clean Energy Plan. However, connections to the transmission network from non-embedded demand customers are equally essential. We agree that directly connected demand projects outside of the Clean Power 2030 Plan should be included in the new queue. These connections provide an outlet for the growth in renewable electricity to decarbonise the wider economy.

Unfortunately, the situation, experience, and needs of non-embedded demand customers have not received sufficient attention with CUSC modifications to support non-embedded demand customers progressing slowly. As electricity demands grow to achieve net zero, more organisations, like Heathrow, will need to step up to the transmission network to supply their electricity needs. It is important that the connections reform proposals have adequately understood and reflected the current experiences of non-embedded demand customers connecting to the transmission network, how this group of connecting customers will change in future and their needs, and the full impact of proposed connections reforms on their ability to access electricity going forward.

**We support aligning connections reform with the Clean Power by 2030 plan.**

We support the objectives of the connections reform process and agree with its overall principles, particularly on the alignment with the Government's plan for clean power by 2030.

It is essential to accelerate connections to the transmission network for viable projects that deliver the Clean Energy Plan, and therefore decarbonisation of the electricity system. The principle of investment ahead of need and accelerating the reinforcement of the transmission network in parallel cannot be overstated. Aviation and Heathrow will rely on access to zero carbon renewable electricity to decarbonise and we support better alignment of connections to the 2030 Clean Energy Plan.

A focus on a longer term than 2030 is essential with connections in West London now reliant on reinforcements that are not scheduled to complete until 2037 currently.

**There are specific risks to non-embedded demand customers from the proposed reforms**

The current connections process for non-embedded demand customers needing electricity, especially for non-energy sector organisations, is challenging to navigate, can be burdensome in some areas and does not offer the level of support that is necessary. Proposed CUSC changes are positive and respond to some of the more material issues, particularly the difference in securitisation methods for demand connections and generation connections. The resulting over-securitisation resulting from the current CUSC methodology is burdensome for connecting customers, could restrict access to the transmission network for some customers and diverts funds from economic growth and development. The work in 'Optimal use of the Network' also appears important work to complete.

The connections process would benefit from increased resourcing to support a wider range of customers to access the transmission network.

Our recent experience of connecting to the transmission network has highlighted a scenario that the connection reform process should consider in its efforts to create an effective connections regime. The capacity constraints in West London and the high number of non-embedded demand customers seeking connections have resulted in offers being made at future grid supply points that have not yet been fully defined at this stage with a connection date of 2037. Locations for the grid supply points are understandably not known given the stage of development, and it is too early to provide a timeline for that information being released. West London customers are being issued offers without a connecting cable from the grid supply point to their site boundary, with the customer required to develop and deliver the cable as part of the construction milestones in their connection agreement. That is challenging as non-embedded customers do not have statutory undertaker rights under the New Roads and Street Works Act, and for those outside the energy sector, no prior experience of such projects.

The provision of basic details, such as grid supply point locations, with sufficient advanced notice are essential for non-embedded customers to ensure there is sufficient time to plan and deliver complex cable schemes to meet the delivery obligations placed on them in their connection agreement. There is a risk that non-embedded customers would need to sign a connection agreement, with no firm timeline for the provision of critical enabling information required to meet those obligations. There is a risk that the 'readiness' criteria within the connections reform process could make a challenging situation worse still if it has not carefully considered these types of scenarios, placing non-embedded demand customers in an undesirable position. We understand there's uncertainty in the development of new future grid supply points, and there is a need to accelerate queue reform however the reform of the system must not be designed in a way that could lead to circumstances as outlined above and risk subsequently falling down the connections queue.

As a practical recommendation, we believe the reform process would benefit from a focus on understanding the experiences and challenges of non-embedded demand customers and reflect these in the reforms to resolve current issues and prevent further negative impacts. A narrow focus on generation could support decarbonising the electricity network at the expense of the wider UK economy.

To conclude, a reliable supply of renewable electricity is crucial for our ambitious net zero plans. The current transmission capacity and connection challenges in West London underscore the urgent need for reform. We support the objectives of the connections reform process and alignment with the Clean Power 2030 Plan and stress the importance of effectively addressing non-embedded demand customers' experiences and needs in the reform process, so reforms enable fair and swift connection to the transmission network, and access to zero carbon electricity to decarbonise the wider UK economy. Thank you for considering our input. We look forward to working together towards a decarbonised UK energy system.