National Grid's response to DfT's consultation on Future of transport regulatory review: future of flight

22nd November 2021

National Grid sits at the heart of Britain's energy system, connecting millions of people and businesses to the energy they use every day. We understand our responsibilities to the environment and future generations, we are committed to developing innovative solutions to enable the transition to a clean environment and economy, in which nobody is left behind. Furthermore, as we look ahead toward recovering from the COVID-19 pandemic, it is important that we seize the opportunity to be world leading in decarbonising our economy as a driver for economic growth. We are committed to continuing to work closely with Government, regulators, and industry to bring energy, transport and digital together to deliver this ambition.

We are happy to respond to DfTs consultation on the future of transport regulatory review: future of flight and would welcome further engagement.

Infrastructure and digital infrastructure

Are you aware of any digital infrastructure or other infrastructure needs for new or novel aircraft? If so, what needs?

Our response:

We anticipate significantly greater demands for electricity for the aviation sector and therefore the electricity infrastructure to power both the airports themselves as well as for the generation of 'power to x' fuels. Producing synthetic fuels, will require a lot of energy and the capacity provided through high-voltage electricity transmission connections will be critical to meeting this demand.

It is important that key stakeholders from across the aviation sector begin to assess their future electricity demand requirements and consider where they would need this additional capacity. We are committed to engaging with stakeholders from across this sector to understand their future demand needs, and ensure that we build the right infrastructure, in the right place, ahead of need, to enable the net-zero transition.

We recognise and support the potential for larger airports that support the movement of freight to be utilised as transport hubs (multi-modal interface locations with shared charging / refuelling facilities). We believe that bringing multiple transport types together at shared interface locations, would make more efficient use of energy infrastructure as power is brought to key places where it is needed. Economies of scale are important, the larger the hub with numerous diverse market participants, the more economically efficient the addition of capacity through connections will be. However, with larger hubs that bring together multiple organisations across different transport sectors, from both the private and public sectors, the need for a coordinating body is clear. Government could act as the coordinator or identify which organisations should coordinate. We also recommend that Government develop a roadmap for decarbonising high-demand transport terminals such as ports and airports. This should be linked to local and regional transport hub plans to ensure the most efficient energy infrastructure solutions are developed.

This response represents the views of National Grid Electricity Transmission (NGET). NGET owns the high voltage electricity transmission network in England and Wales. We connect sources of electricity generation to the network and transport it onwards to the distribution system, so electricity can reach homes and businesses.

Following the legal separation of the Electricity System Operator (ESO), their views are not represented in this submission.

In responding to the consultation, we have only addressed questions that are relevant to NGET.