



Whole system approach to energy infrastructure development could save Britain £38 billion by 2050

Report emphasises the importance of a hydrogen backbone in delivering an integrated, cost-effective net-zero energy system.

A new report published by global research & consultancy firm, Guidehouse, highlights the potential for significant cost-savings of up to £38 billion through the adoption of a whole-system approach to Great Britain's hydrogen and electricity transmission infrastructure planning.

The *Gas and Electricity Transmission Infrastructure Outlook 2050 ("GETIO")*, a collaboration between National Grid Electricity Transmission, National Gas Transmission and National Grid ESO, finds that integrated system planning will deliver infrastructure optionality and help de-risk new projects, boosting investment and long-term cost savings, despite the potential for increases in the near term.

Across the modelled scenarios, including with higher electrification and renewables generation, a hydrogen transmission system plays a vital role with gas turbines and hydrogen storage being critical in supporting whole energy system demand by delivering up to 95 GW of firm, dispatchable supply to supporting the gas and electricity systems during peak demand periods and low wind days.

Given the locational differences in future hydrogen demand and supply across Britain, the repurposing of existing gas transmission infrastructure is highlighted as crucial to ensuring the development of an effective hydrogen network, regardless of the potential differences in design and scale which differ between scenarios.

The report highlights a number of challenges that require addressing including leadership, incentives, infrastructure and collaboration and how urgency in developing regulatory arrangements, appropriate incentives and infrastructure investments can help Britain achieve its ambitious goal of reaching net zero by 2050.

Martin Cook, Chief Commercial Officer at National Gas, commented: *"The challenges we face in reaching net zero are complex, but we have a once-in-a-generation opportunity to decarbonise our energy system and secure the future of our economy and environment.*

"This report reinforces how developing a hydrogen backbone for Britain will be a critical part of our journey to a clean energy future and why industry and government must work together and take a whole system approach to deliver a flexible, reliable and affordable energy network that works for everyone.

Ends



About National Gas Transmission

National Gas comprises two businesses, National Gas Transmission and National Gas Metering. As both the transmission owner and system operator, National Gas Transmission owns, builds and operates the high-pressure NTS with day-to-day responsibility for balancing supply and demand in real time and facilitates the connection of assets to the transmission system. The NTS comprises approximately 7,600 kilometres of high-pressure pipe and 23 compressor stations connecting to 8 distribution networks and other third-party independent systems.

National Gas also owns and operates an independent metering business, National Gas Metering, the largest owner of traditional gas meters in the UK with approximately 7 million domestic and commercial meters. The business' activities cover asset procurement and logistics management, meter installation, maintenance, exchange and removal and customer service provision.