

RESPONSE TO REQUEST FOR FURTHER INFORMATION IN RELATION TO THE PROPOSED AQUIND INTERCONNECTOR PROJECT

1. Introduction

- 1.1 By a letter dated 3 March 2023, the Secretary of State has requested further information from both National Grid Electricity Transmission Plc ("NGET") and National Grid Electricity System Operator Limited ("NGESO").
- 1.2 NGET is one of the Transmission Owners in Great Britain, owning the high voltage National Electricity Transmission System ("NETS") in England and Wales. NGET's obligations include building and maintaining the NETS safely, reliably, economically and efficiently; providing transmission services to NGESO as the operator of the NETS; and providing connection offers to NGESO in response to users' requests.
- 1.3 NGESO is the operator of the NETS. Its role is to coordinate and direct the flow of electricity onto and over the NETS in an economic and coordinated manner. NGESO must maintain system balance minute by minute, and address supply and demand mismatch, generation shortfall and/or high demand and insufficient generation margins to maintain supply. Additionally NGESO manages the connection application and offer process in Great Britain between NGET and the party wishing to connect to the NETS (generator, customer etc.). NGESO operates the NETS, but is not responsible for the infrastructure needed to carry the electricity.
- 1.4 This response is a joint response from NGET and NGESO.

2. Response

The Secretary of State has requested any information relevant to the following items. NGET and NGESO's response to each item is set out below.

2.1 Feasibility of Mannington substation as an alternative, including any relevant correspondence or studies, and an explanation of whether or not Mannington is a feasible alternative location for the substation.

- 2.1.1 Connecting Aquind into Mannington Substation is technically feasible. However, there are several issues that arise when considering Mannington 400 kV Substation as the connection point for this interconnector. These issues are summarised below.
- 2.1.2 When the connection options for the Aquind Interconnector were first assessed, substations to the west of Lovedean (including Mannington 400 kV) required all or nearly all of the same network reinforcements as a connection at Lovedean.
- 2.1.3 In addition to these network reinforcements, substations to the west of Lovedean also required additional reinforcements to either get the power to Lovedean, or reinforcements to the west to Exeter substation and as far northwards as Minety. These reinforcement works were identified as needed if the project were to connect in to a substation west of Lovedean (i.e. Mannington) to prevent circuits overloading with the additional 2GW from the Aquind connection.

- 2.1.4 More recent assessments of possible connections in the South West area of the transmission system (as indicated by system studies for recent connection applications at adjacent substations to Mannington such as Nursling, Fawley and Chickerell) indicate that for a connection in that area today the reinforcement works would also include a new double 400kV circuit in the South West area and reinforcement of the existing Fawley - Chilling 400kV cables.
- 2.1.5 Given these reinforcement works, the timescales involved in providing a connection at the Mannington 400 kV substation are significantly increased compared to a connection to Lovedean 400 kV substation.
- 2.1.6 Works would also be required at Mannington Substation to facilitate a connection. A detailed assessment would be required to determine the full extent of the works which would be required to realise this and would need to consider factors such as the operational footprint, suitability of substation design and power system studies.
- 2.1.7 From an initial assessment, the reinforcement works would require an extension to the double busbar substation to accommodate two interconnector connection bays, including additional bus coupler and section breakers.
- 2.1.8 Overall and based on the above transmission and substation works, if the Aquind connection was considered at Mannington 400 kV substation today, the earliest connection date would be 2037.

2.2 **This should include consideration of whether Mannington could offer a realistic prospect of an alternative in delivering the same infrastructure capacity, including energy security and climate change benefits in the same timescale as the proposed development. The information provided should confirm what the impact of selecting Mannington as the substation would have on the proposed development as a whole.**

- 2.2.1 The 2037 connection date at Mannington is due to wider transmission reinforcement requirements. For the reasons mentioned above, this location is unlikely to be suitable as a realistic alternative option in delivering the connection to the same timescales - any benefits this proposed development brings, in terms of energy security or otherwise, would not materialise until this later date.
- 2.2.2 There would also be an impact on the Developer's works if there were to be a change in connection site.

2.3 **The response should also set out the impact of the previously proposed Navitus Bay offshore windfarm on the feasibility of Mannington.**

- 2.3.1 Compared to the former proposed Navitus Bay connection (1104MW), the Aquind interconnector (at 2000MW) is nearly double the capacity; the effect of the two connections cannot be considered equivalent in terms of system impact as they are fundamentally different projects, one being an interconnector and the other a generator which operate in different ways. The system impacts and need for system

reinforcements for the connection of Aquind at Mannington are set out in section 2.1 above.

2.3.2 In respect of the Mannington Substation, the fact that the connection for Navitus Bay is no longer required does not mean that there would be space for the Aquind connection. A generator connection like Navitus Bay only requires one connection bay within the substation whilst an interconnector connection like Aquind would require two connection bays within the substation. An extension to the double busbar substation to accommodate two interconnector connection bays, including additional bus coupler and section breakers would be required. This is a greater volume of local substation works than was required for Navitus Bay and would accordingly have greater impacts and associated costs.

2.3.3 As set out above, as the Navitus Bay and Aquind projects are different in nature the connections for them are not on equivalent terms, it is not the case that removing Navitus Bay allows Aquind to connect on an equivalent basis.

2.4 We hope that the information provided is helpful. Please do not hesitate to contact NGET and NGESO if any further information or clarifications are required.