AQUIND Interconnector CION Cover Note

The attached Connection Infrastructure Options Note (CION) for the Aquind Interconnector was prepared by National Grid in 2016 as a part of the connection application process, with the purpose of evaluating the techno-economically optimum connection point for the interconnector. The analysis focussed on two short-listed connection locations — Bramley and Lovedean, as well as various capacity and technology options.

Although the CION is dated September 2016, it is associated with a connection offer made in January 2016 and studies performed quite some time prior to this date, with data that was available at the time. Since then, developers' plans have changed and so have National Grid's proposed reinforcements. Section 3.8 of the CION states that: "It is recognised that in time elapsed since this assessment was commenced, developments in the UK energy industry context have occurred which could have a bearing on the outcome of this analysis. Most notable of these are public announcements from the Navitus Bay offshore wind farm developers, release of FES15 and funding announcements associated with the new Hinkley Point C nuclear power station. All of these points within the economic assessment relate to the construction of background scenario data in future years... There is no scope however for considering these aspects within the assessment as they were not current at the point of commencement and their consideration would require the re-simulation of constraint results which would severely delay output of report conclusions."

Furthermore, since the CION was produced, additional changes to connections have meant the further evolution of the proposed future transmission network. In particular, three more interconnector projects have been announced –GridLink (1GW), NeuConnect (1.4GW) and the 2nd UK – Belgium Interconnector (1GW), which connect into Kingsnorth, Grain and Kemsley substations respectively. To accommodate these and other connection changes, reinforcement options will need to be re-evaluated and the extent to which Aquind contributes to the need for each of these reinforcements will change, as the reinforcement works might now be shared with subsequent connectees.

It is also important to understand the extent of the CION: to the best of Aquind's knowledge, the CION methodology focuses exclusively on the active power ratings for the scheme. It does not attempt to monetise the benefits associated with the impressive reactive power capabilities of a VSC scheme, its black start capability or ability to provide frequency or voltage control. In addition to providing a quantifiable benefit that has not been evaluated, some of these ancillary services have potential to lead to displaced investment. For example, Aquind's reactive power capability might mean fewer sources of reactive power compensation are required and VSC black start capability provides greater flexibility, speed and geographic range than conventional generators, meaning fewer may need to be retained for black start services.

Confidential

The CION document is confidential. A summary note is provided above