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for energy consumers

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Dear John,

Authority decision to send back the Final Report for GC0077 Sub-Synchronous Oscillations (SSO)

On 22 August 2016, National Grid Electricity Transmission (NGET) submitted the final report to the Authority (Final Report) for NETS SQSS and Grid Code modification proposal GSR018/GC0077 'Sub-Synchronous Oscillations (SSO)'¹ for a decision.

In relation to Grid Code modification GC0077 we have decided that we cannot properly form an opinion on whether to approve the modification proposal based on the information submitted and we direct that the Final Report is revised and resubmitted. We are therefore sending the Final Report back to NGET and the industry for further work, to address the issues we have identified below.

In relation to NETS SQSS modification proposal GSR018, this is to let you know that this letter has also been provided to the Chair of the SQSS Review Panel.

The proposal and our initial views

GSR018 seeks to modify the NETS SQSS to define Unacceptable SSOs and explicitly place an obligation on Transmission Licensees to design and operate a Transmission System that does not have Unacceptable SSO conditions. GC0077 proposes to modify the Grid Code to stipulate that NGET must ensure that Users' plant is not subject to unacceptable SSOs, and that Users may be required to undertake site specific requirements related to the damping or mitigation of SSOs to achieve this.

The Final Report does not provide clear evidence of consideration and comparison of the costs of the consequences of unacceptable SSOs nor the cost of mitigating the SSO risks as required as a result of the proposed modification. The Final Report indicates a number of methods of SSO mitigation, such as asset design, dampers/filters or generator actions

¹ The Final Report submitted to us for decision was a joint report covering Grid Code change GC0077 and NETS SQSS change GSR018 (Sub-Synchronous Oscillations (SSO)). Papers relating to GSR018/GC0077 can be accessed through the National Grid website here: <http://www2.nationalgrid.com/UK/Industry-information/Electricity-codes/Grid-code/Modifications/GC0077/>.

procured through the Balancing Mechanism or required through User Bilateral Agreements. However, we are concerned that the costs of these methods have not been fully explained and compared against the potential consequences of not mitigating SSO.

We require clear articulation of the potential costs of unacceptable SSO interactions, and the likelihood of occurrence, compared to the costs of proposed SSO identification and mitigation to both Transmission Licensees and Users.

The practical and commercial processes to mitigate unacceptable SSOs are described in the Final Report as a potentially iterative process between a User and Transmission Licensee as part of the Connection or Modification Application processes.

We recognise the need for a clear and consistent approach to SSO mitigation, and therefore require further clarification of the process to determine where the most cost effective SSO mitigation works lies (i.e on Transmission equipment, Existing User plants or New User plants), and its implication on the responsibility and funding of SSO mitigation. The clarification should include the identification of relevant documentation and how relevant parties would be able to contribute to further clarity or modification of relevant aspects if necessary.

Further work required

We therefore direct NGET and the industry, in relation to GC0077, to revise the Final Report to address our concerns highlighted above and re-submit it to us for consideration.

Yours sincerely

Min Zhu
Associate Partner