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*Promoting choice and
value for all customers*

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27 February 2007

Dear Duncan

**REVIEW OF THE GRID CODE: DECISION AND NOTICE IN RELATION TO
CONSULTATION E/06 (LOW FREQUENCY DEMAND DISCONNECTION RELAY
SETTINGS)**

We¹ have considered carefully the changes that NGET² has proposed to its Grid Code as set out in the report to the Authority arising from consultation E/06 ("Low Frequency Demand Disconnection Relay Settings")³ that has been submitted to us for approval.

We have decided to approve the proposed changes to the Licensee's Grid Code (the "Grid Code") as set out in the Appendix A of the report to the Authority arising out of Consultation E/06. In conjunction the Authority has decided to direct the amendments to the Grid Code⁴ as set out in Appendix 1 of this letter.

This document explains the background to the proposals and sets out the reasons for our decision to approve these changes to the Grid Code and direct the amendments set out in Appendix 1. This letter constitutes notice by the Authority under Section 49A of the Electricity Act 1989 in relation to these decisions.

¹ Ofgem is the office of the Authority. The terms "we", "Ofgem" and "the Authority" are used interchangeably in this letter.

² National Grid Electricity Transmission plc

³ Report from NGET – Consultation Reference E/06, Issue 1, Date of Issue 25 January 2007, http://www.nationalgrid.com/NR/rdonlyres/E9DC40F7-FCAB-48D4-98FE-B24904F8FD91/14606/ReporttotheAuthorityE06LFDD_SettingsFinal.pdf.

⁴ As permitted in C14.4

Background to the proposed changes to NGET's Grid Code

The electricity system in GB is protected against system collapse due to a severe fall in frequency by the national, automatic Low Frequency Demand Disconnection Scheme ("LFDD Scheme"). The LFDD Scheme is a protection scheme that is set up to disconnect customer demand in preset stages in the event of system conditions that are more onerous than those considered in the GB Security and Quality of Supply Standard.

The requirements on NGET and Distribution Network Operators ("DNOs") relating to the setting and operation of the LFDD Scheme are defined in Grid Code Operating Code 6.6 ("OC6.6"). Grid Code Connection Conditions Appendix 5 ("CC.A.5") provides indicative technical requirements for the Low Frequency relays that are used as part of the LFDD Scheme. NGET has agreed actual performance requirements and the settings for these Low Frequency relays on a site specific, bilateral basis with each DNO.

NGET's review of these arrangements was welcomed by the Grid Code Review Panel where members have sought improvements to the visibility of the information currently specified in specific bilateral agreements between NGET and each DNO.

NGET has proposed changes to the Grid Code to:-

- Include definition of the required settings (frequency and demand reduction requirement) for the low frequency demand disconnection scheme in OC6 and CC. This would remove the need for NGET to define these requirements in specific bilateral agreements with DNOs.
- Remove the requirement for an annual review of the settings.
- Amend CC.A.5.1.1 to require relays installed after 1 April 2007 to comply with the minimum performance requirements.

NGET received three responses to Consultation E/06 from authorised electricity operators. NGET reported that all respondents were generally supportive of the proposed changes.

We note that:

- One respondent noted the importance of information about Low Frequency relay settings being publicly available.
- One respondent raised concerns that the change proposed to CC.A.5.1.1 to make the technical performance requirements mandatory, may necessitate the need for derogations in respect of some existing relays.

NGET noted in its report to the Authority that it had amended the drafting of the proposed Grid Code changes so that the technical performance requirements will continue to be agreed on a bilateral basis for relays installed before 1 April 2007.

NGET's recommendation

In its report⁵ to the Authority on Consultation E/06 NGET set out the drafting for proposed changes to the Grid Code. It recommended that the Authority approved the proposed changes.

⁵ As required by C14.2.a

NGET has subsequently advised us of factual inaccuracies within its proposed changes to the Grid Code. NGET noted that the low frequency relay settings defined in Table CC.A.5.4.1a did not accurately reflect the required settings for Scottish Hydro Electric Transmission Limited's transmission area. NGET provided an amended version of Table CC.A.5.4.1a and asked us to take account of this when making a decision on these proposed Grid Code changes.

Ofgem's view

Having considered carefully NGET's report on the proposed changes and having had regard to the licensee's obligations⁶ set out in condition C14(1)(b) of the Transmission Licence ("the obligations") and our wider statutory duties⁷, we consider that the proposed changes to the Grid Code should be approved by the Authority. Our reasons for reaching this decision are outlined below.

We note that all respondents to NGET's consultation were supportive of the proposed Grid Code changes. We consider that transparency of arrangements is important and note that these Grid Code changes will improve the visibility of the LFDD scheme.

We also note that these Grid Code changes will require new Low Frequency relays to meet defined technical performance requirements. We consider that this will enhance the effectiveness of the LFDD scheme which is provided to protect the security of the electricity systems as a whole. We therefore consider that the proposed changes meet the obligations.

We acknowledge that these Grid Code changes would remove the need for an annual review of the Low Frequency relay settings. We note that changes to these settings are infrequent and most likely to be associated with a detailed review. We note that NGET is obliged to keep the Grid Code under review and consider that the Grid Code governance arrangements are sufficiently robust should changes be needed to the Low Frequency Relay settings in the future. We do not consider that additional obligations for review are required.

We note that following the submission of the report to the Authority on Consultation E/06, NGET has identified factual errors in the proposed Grid Code changes. We have considered NGET's revised proposal for Table CC.A.5.4.1a and are satisfied that these further changes better reflect the actual LFDD scheme that is in place. As such, we have decided to direct amendments to the proposed Table CC.A.5.4.1a to address these accuracy points. These additional changes to the Grid Code, that we consider are needed, are set out in Appendix 1.

⁶ The licensee's transmission licence defines the Grid Code objectives as follows:

- (i) to permit the development, maintenance and operation of an efficient, co-ordinated and economical system for the transmission of electricity;
- (ii) to facilitate competition in the generation and supply of electricity (and without limiting the foregoing, to facilitate the GB transmission system being made available to persons authorised to supply or generate electricity on terms which neither prevent nor restrict competition in the supply or generation of electricity); and
- (iii) subject to sub-paragraphs (i) and (ii), to promote the security and efficiency of the electricity generation, transmission and distribution systems in Great Britain taken as a whole.

⁷ Ofgem's statutory duties are wider than the matters that the NGET has to take into consideration and include amongst other things a duty to have regard to social and environmental guidance provided by Ofgem to the government.

The Authority's decision

Based on the reasons set out above we have decided to approve the Grid Code changes set out in Appendix A of the report submitted to the Authority arising from Consultation E/06 ("Low Frequency Demand Disconnection Relay Settings"). In conjunction we have decided to direct the amendments set out in Appendix 1 to correct factual inaccuracies in Table CC.A.5.4.1a.

The implementation date for these Grid Code changes is 1 April 2007.

Please do not hesitate to contact me on the above number if you have any queries in relation to the issues raised in this letter or alternatively contact Bridget Morgan on 020 7901 7080.

Yours sincerely

A handwritten signature in black ink that reads "John Scott". The signature is written in a cursive style and is underlined with a single horizontal line.

John Scott
Technical Director

Signed on behalf of the Authority and authorised for that purpose by the Authority

cc: Lilian MacLeod, GCRP Secretary

Appendix 1 – Amendment to Changes Proposed in the Report to the Authority Arising from Consultation E/06 (“Low Frequency Demand Disconnection Relay Settings”)

Revision to Table CC.A.5.5.1a (change marked from text proposed in NGET’s report to the Authority)

Table CC.A.5.5.1a

Frequency Hz	%Demand disconnection for each Network Operator in Transmission Area		
	NGET	SPT	SHETL
48.8	5		
48.75	5		
48.7	10		
48.6	7.5		10
48.5	7.5	10	▼
48.4	7.5	10	10
48.3			▼
48.2	7.5	10	10
48.0	5	10	10
47.8	5		
Total % Demand	60	40	40

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