



## **GB Grid Code and Renewable Energy**

### **October Monthly Report**

### **Econnect Project No: 1484**

<b>Prepared For</b>	<b>BWEA Renewable Energy House 1 Aztec Row Berners Road London N1 0PW</b>
---------------------	---

	<b>Name</b>	<b>Date</b>	<b>Signature</b>
<b>Prepared By</b>	<b>G. Nicholson</b>	<b>4 Nov 2005</b>	
<b>Checked By</b>	<b>S.Cowdroy</b>	<b>8 Nov 2005</b>	
<b>Approved By</b>	<b>G.Nicholson</b>	<b>8 Nov 2005</b>	

<b>Document History</b>		
<b>Issue No</b>	<b>Description</b>	<b>Date</b>
01	Original Document Issue	08/11/2005

<b>Copy No.</b>	<b>Copy Issued To</b>	<b>Company</b>
1	Richard Ford	BWEA
2	Econnect (Client File)	Econnect Ltd
3	Econnect (Project File)	Econnect Ltd

## Table of Contents

1	Scope	4
2	Appendix A - GB Grid Code Development and Renewable Energy Report for October 2005	5
2.1	Last report	5
2.2	BWEA Grid Code review meeting on 23rd November	5
2.2.1	National Grid Electricity Transmission plc (NGET)	5
2.3	Grid Code Web Page	5
2.4	Large Medium and Small	5
2.5	Grid Code Review Panel September	6
2.5.1	Transmission or Distribution Connections	6
2.5.2	Connection Standards	6
2.5.3	Significant event reporting – first 3 phase fault	7
2.5.4	Governance of SQSS	7
2.6	Extraordinary Grid Code Review Panel July	7
2.7	Grid Code Consultations	7
2.8	GB Grid Code Revisions	7
2.9	Grid Code Issue 3 Revision 11 Effective from the 15 <sup>th</sup> July 2005	7
2.10	Grid Code Issue 3 Revision 12 Effective from the 30 <sup>th</sup> September 2005	8

## **1 Scope**

Econnect is carrying out work for the British Wind Energy Association (BWEA) funded under a contract agreement between the Secretary of State for Trade and Industry and the BWEA.

A key deliverable of this contract is a monthly report to the BWEA members on key Grid Code issues and developments. The latest of these monthly reports is presented in Appendix A in a format suitable for dissemination by the BWEA to its members.

## **2 Appendix A - GB Grid Code Development and Renewable Energy Report for October 2005**

### **2.1 Last report**

This is the first report since June 2005. There has been a gap in reporting due to the summer recess and a gap in the funding program.

### **2.2 BWEA Grid Code review meeting on 23rd November**

The BWEA is holding a review meeting of experience with the GB Grid Code for wind farms to date on 23<sup>rd</sup> November near Coventry. Details from Guy Nicholson at Econnect or Richard Ford at BWEA. The meeting precedes a Grid Code Review Panel meeting on the 24<sup>th</sup> November and any issues coming out of the meeting can be raised then.

#### **2.2.1 National Grid Electricity Transmission plc (NGET)**

At the National Grid Annual General Meeting held on 25<sup>th</sup> July 2005, shareholders approved the change of the group name to 'National Grid plc'. As a result, to avoid any confusion, at the same time that the group name was changed, the name of the Transmission Licence holder was changed from 'National Grid Company plc' (NGC) to 'National Grid Electricity Transmission plc' (NGET). This change was effective from 27<sup>th</sup> July 2005 and a Grid Code consultation proposes to update the Grid Code references of NGC to NGET.

A proposal by Guy Nicholson to future proof the Code by replacing all references to NGC with a relevant reference to the GB System Operator or the England and Wales Transmission Licensee was rejected.

### **2.3 Grid Code Web Page**

As a result of the corporate name change National Grid have updated their web site. The Grid Code, Review Panel info and consultations etc can be found on.

- <http://www.nationalgrid.com/uk/Electricity/Codes/gridcode/>

### **2.4 Large Medium and Small**

The definitions of Large Medium and Small power stations have an impact on Grid Code requirements such as Fault Ride through and frequency response. The definitions vary from one Transmission Operator to another as per the following table.

Transmission Area	Licence	Small MW Capacity	Medium MW Capacity	Large MW Capacity
	NGETL	<50	50-100	>100
	SPTL	<5	5 -30	>30
	SHETL	<5	N/a	>5

**Table 1 Current Definitions of Small Medium and Large power stations**

The definitions have been inherited from pre-BETTA definitions that had less commercial significance than now. The logic for such definitions is unclear and it was agreed that these would be reviewed following BETTA implementation. This review process has commenced and Simon Cowdroy of Econnect represents the BWEA on the committee. The three TO's are due to present their proposals and justifications for rationalising the definitions of small, medium and large power stations prior to the next meeting of the working group which is scheduled for 6<sup>th</sup> December 2005. Simon will be seeking to get feedback on these proposals from BWEA members, in order to present the developers / manufacturers view at the meeting.

## 2.5 Grid Code Review Panel September

A Grid Code Review Panel Meeting was held on the 22<sup>nd</sup> September 2005 and the following issues are of note.

### 2.5.1 Transmission or Distribution Connections

A paper was presented to the Distribution Code Review Panel earlier this year by S&SE discussing connection options for transmission and distribution. It resulted in some potential confusion as to whether generators were connected at transmission or distribution, in particular when dedicated 132/33kV assets were employed. (The matter should not be so much of a problem for new connections as the connectee can apply to the DNO for distribution or to the GBSO for transmission). Bridget Morgan of Ofgem stated that the forthcoming consultation should address these issues. This consultation has now been issued.

- “Enduring transmission charging arrangements for distributed generation”.
- [http://www.ofgem.gov.uk/temp/ofgem/cache/cmsattach/12472\\_211\\_05.pdf](http://www.ofgem.gov.uk/temp/ofgem/cache/cmsattach/12472_211_05.pdf)

### 2.5.2 Connection Standards

NGC has collated all the relevant aspects of the 18 technical standards that apply to NGET assets inside the bus protection zone into a single draft document available prior to formal consultation at:

- [http://www.nationalgrid.com/NR/rdonlyres/C26FD416-3200-4A4C-846A-4363C5E0D01C/1429/RES\\_DraftIssue1090905.pdf](http://www.nationalgrid.com/NR/rdonlyres/C26FD416-3200-4A4C-846A-4363C5E0D01C/1429/RES_DraftIssue1090905.pdf)

This document does not apply in Scotland and there are no plans for such a standard at present.

The document does not yet include standard items from the Bilateral Agreements. Generators are pressing NGET to ensure that only very site specific and unique conditions are included in Bilateral Agreements in the future.

### **2.5.3 Significant event reporting – first 3 phase fault**

This report showed only 3 events in the last year.

- [http://www.nationalgrid.com/NR/ronlyres/AFD36030-94BB-43A0-9387-49A048772630/1991/pp05\\_22significantevents.pdf](http://www.nationalgrid.com/NR/ronlyres/AFD36030-94BB-43A0-9387-49A048772630/1991/pp05_22significantevents.pdf)

The first system incident that was not a rate of change of frequency event was included. It showed a 3-phase fault at Sizewell on 15<sup>th</sup> April 2005 at 14:44 however no embedded generation was reported as tripping. If any generator had a trip at this time please contact Guy Nicholson [guy.nicholson@econnect.com](mailto:guy.nicholson@econnect.com)

Guy Nicholson has responded to NGET with questions and suggestions regarding the future of this report.

### **2.5.4 Governance of SQSS**

Ofgem has recognised that the Governance of the Security and Quality of Supply Standard is unclear and Ofgem has written to the 3 TOs requesting proposals for governance. It is expected that changes will be needed to the SQSS for offshore transmission assets so this is one to watch.

## **2.6 Extraordinary Grid Code Review Panel July**

An extraordinary Grid Code Review Panel Meeting was held on the 20<sup>th</sup> July 2005 and the minutes are available as follows.

- <http://www.nationalgrid.com/NR/ronlyres/757998F7-B466-42D3-947F-080FEF2A1DBC/4330/minutes19.pdf>

The primary role of the meeting was to launch the consultation on LEEMPS – see below.

Other issues raised are dealt with elsewhere in this briefing.

## **2.7 Grid Code Consultations**

The consultation “D / 05 - Grid Code Changes associated with Licence Exempt Embedded Medium Power Stations” (LEEMPS) closed for responses on 07 October 2005.

## **2.8 GB Grid Code Revisions**

There have been two grid code updates since the last briefing.

## **2.9 Grid Code Issue 3 Revision 11 Effective from the 15<sup>th</sup> July 2005**

- See the revisions update table at the end of this document for details. <http://www.nationalgrid.com/NR/ronlyres/5C65EACB-0C46-492D-B2F0-D53CCD3DD126/2582/I3R11upd.pdf>

The changes in revision 11, arise from the implementation of the proposals in consultations.

A/05 updates the Grid Code as follows:

- Technical definitions of 4 categories of intertripping schemes are added to the glossary and definitions

- The connection conditions now explain that in certain conditions the installation of an intertripping scheme may be required.
- A reference to the requirement of arming an operational intertripping scheme is included in OC2.
- Intertrips are removed from the list of special actions in BC1.
- The requirement for a bid offer acceptance to be for the use of an intertripping scheme is removed from BC2.

C/04 updates the Grid Code by detailing the process of exchange of safety keys in OC8A and OC8B, along with definitions of Isolation and Earthing in the Glossary and Definitions.

E/03 introduces changes to CC.6.3.3 (b) to reduce risk to the Transmission System in the event of prolonged operation at frequencies below 49.5Hz.

## **2.10 Grid Code Issue 3 Revision 12 Effective from the 30<sup>th</sup> September 2005**

- See revision table at the end of the update document
- [http://www.nationalgrid.com/NR/rdonlyres/250E0DB9-092A-413E-B109-D354BE463152/2151/Rev12\\_Update\\_pt2.pdf](http://www.nationalgrid.com/NR/rdonlyres/250E0DB9-092A-413E-B109-D354BE463152/2151/Rev12_Update_pt2.pdf)

In summary these include:

- NGC changed to NGET.
- Definition of Output Usable revised.
- OC2 2 OC2.1.7 deleted and OC2.1.8 renumbered as OC2.1.7.
- BC2 8 BC2.6.1 (h) Appendix 4 and Annexure 1 added.
- GC.15.1 cut-off date amended to 31 March 2007. This clause allows users of Large and Medium Licensed Exemptable Embedded Power Stations (LEEMPS and LEELPS) to be exempt from certain requirements if NGET or Ofgem agree.