



GB Grid Codes for Wind Energy

November Monthly Report

Econnect Project No: 1294

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

	Name	Date	Signature
Prepared By	A. Oliver	3/12/2004	<i>A. Oliver</i>
Checked By	G. Nicholson	3/12/2004	<i>S. Cowdroy</i> PP. G. NICHOLSON.
Approved By	S. Cowdroy	3/12/2004	<i>S. Cowdroy</i>

Document History		
Issue No	Description	Date
01	Original Document Issue	3/12/2004

Copy No.	Copy Issued To	Company
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 Representation for Wind Energy Monthly Report for November 2004	5
2.1	Grid Code Changes For Wind	5
2.2	Overseas News	5
2.2.1	Spain	5
2.2.2	Norway (SINTEF)	5
2.2.3	EoN Netz new Grid Code	5
2.3	GB Grid Code Review Panel (GCRP)	6
2.3.1	Embedded License Exempt Power Stations	6
2.3.2	Electrical Standards For Transmission Connection	6
2.3.3	Intertrip Proposals	6
2.4	GB Grid Code Changes	6

1 Scope

Econnect is carrying out work for the British Wind Energy Association (BWEA) funded under a contract agreement DG/DTI/00035/00/00 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 fourth 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 Representation for Wind Energy Monthly Report for November 2004

2.1 Grid Code Changes For Wind

National Grid Transco (NGT), Scottish Power (SP) and Scottish & Southern Energy (S&SE) are developing the forthcoming GB consultation for wind farms so that GB wording translates the Scottish Proposals (SA2004) into the GB code.

Ofgem are currently preparing a regulatory impact assessment on these proposals, which originally had an October deadline for consultation. The October deadline has now passed and no firm deadline has been given for the forthcoming consultation. Our latest estimate is that the consultations will be issued before Christmas. The BWEA through Econnect will be working with the members to develop our response when the consultation is issued.

2.2 Overseas News

The European Wind Energy Association conference took place in November and was attended by representatives from Econnect Ltd. The following items of interest were noted at the conference.

2.2.1 Spain

The Spanish regulation, REE RD 436/2004 encourages wind farm developers to meet Grid Code requirements on an incentive rather than obligation basis. An adjustment to the generators feed in tariff (fixed price paid by the nationalised utility) (e.g. +8% or -4%) is awarded depending on whether or not the different technical capabilities are available..

2.2.2 Norway (SINTEF)

During a presentation at the EWEA Conference, John Olav Tande of SINTEF remarked that a generic model is satisfactory to model fixed speed turbines, however when variable speed turbines are modelled a generic model is no longer sufficient since the control systems dictate behaviour.

2.2.3 Ireland

A meeting is being held on 15th December to discuss the validation requirements of dynamic models and grid code compliance for wind turbines in Ireland.

2.2.4 EoN Netz new Grid Code

EoN Netz are drafting a new Grid Code. We await to see what new and revised requirements will be put forward for wind.

2.3 GB Grid Code Review Panel (GCRP)

A meeting of the GB GCRP was held on 25th November and was attended by Guy Nicholson. Grid Code changes for wind were discussed at the meeting and are reported below.

2.3.1 Embedded License Exempt Power Stations

The current consultation 2532/04 was noted: "Treatment of Embedded Exemptible Large Power Stations under BETTA - An Ofgem/DTI conclusions and further consultation document November 2004". Responses are due to this consultation by 10th December 2004.

2.3.2 Electrical Standards For Transmission Connection

There are currently 18 National Grid Technical standards (NGTS) listed in the Grid Code and on the NGT web site. However, generators are also being asked to meet further NGTS and there are references to even more NGTS within these. In many cases there were only a few clauses within each standard that were applicable to generators.

It was proposed and agreed that NGC would review these standards, references and clauses in order to rationalise and put these proposals to the panel in 2005.

It was noted that a set of standards would be published on the NGT web site for Scottish Power Transmission and Scottish Hydro Electric Transmission.

2.3.3 Intertrip Proposals

There is a working group under the Connection Use of System Code (CUSC), amendments panel reviewing CUSC Amendment Proposal (CAP) 076 "Treatment of System to Generator Intertripping Schemes". It is due to report in 2004 and provide the panel with Grid Code change proposals by January. The group is considering a number of alternatives to CAP 076 that have been proposed.

2.4 GB Grid Code Changes

The GB Grid Code (Issue 3) came into effect on 1st September 2004 at the beginning of the BETTA transition period that will extend until the BETTA go-live date of 1st April 2005. Most of the provisions in the GB Grid Code that relate to Scotland are 'switched off' until the go-live date, as the Scottish Grid code remains in effect until that time, however Ofgem retain the right to activate any of these provisions as they see fit during the transition period.

There have been two minor changes to the GB Grid Code since 1st September.

a) Grid Code Issue 3 Revision 1 Effective from the 4th October 2004

Revision 1 is modified as a result of Consultation F/04 (Development of Maximum Generation Service). Basically the change is that this service will now be utilised in accordance with the terms of the CUSC rather than the Maximum Generation Service Agreement.

b) Grid Code Issue 3 Revision 2 Effective from the 11th October 2004

Revision 2 is modified as a result of Consultations A/04 (Changes to Data Validation, Consistency, and Defaulting Rules) and G/04 (Changes to Operating Codes 1 & 2). Both are minor changes and do not appear to have any implications for wind.

c) Grid Code Issue 3 Revision 3 Effective from the 29th November 2004-12-01

Revision 3 is modified as a result of Consultations F/03 (Changes to Operating Code OC2 – Outage Planning), E/04 (Further changes to Grid Code OC2) and D/04 (Grid code compliance issues with refurbishment of plant). It has also updated the Grid Code to include requirements associated with Cascade Hydro Schemes.

F/03 and E/04, update the obligations to more fully reflect the current practices, changing most pages of OC2. F/03 updates generation and transmission outage planning by clarifying requirements regarding data records and timescales, together with general updates to improve ease of reading a remove redundant text. E/04 clarifies that for the 2 to 49 day ahead period generators should provide National Grid with an estimate of daily output usable forecasts, on a Genset basis.

The changes resulting from D/04, have updated section OC5 “Testing and Monitoring”, enabling the addition of a process to check that plant items that have been refurbished or replaced comply with Grid Code requirements, and to demonstrate delivery of Ancillary Services.

Additionally changes have been made to define the Cascade Hydro terms “Cascade Hydro Scheme” and “Cascade Hydro Scheme Matrix”. A Cascade Hydro Scheme being defined as:

“Two or more hydro-electric Generating Units, owned or controlled by the same Generator, which are located in the same water catchment area and are at different ordnance datum’s and which depend upon a common source of water for their operation”

Requirements on such schemes have been included in the Planning Code, Connection Conditions, OC2, OC5 and Balancing Codes 1 and 2 sections of the Grid Code.