

THE NATIONAL GRID COMPANY plc**Revisions to the Grid Code****Consultation Paper I/01****CLARIFICATIONS TO THE GRID CODE IN CONJUNCTION WITH
CHANGES TO THE BALANCING AND SETTLEMENT CODE****23 OCTOBER 2001****A. Introduction**

1. The National Grid Company plc ("National Grid"), in accordance with its obligations under paragraph 2 of Condition 7 of the Transmission Licence, recognises that the time has come to review, in consultation with authorised electricity operators liable to be materially affected thereby, the Grid Code and its implementation in certain respects.
2. This review relates to some proposals, including the creation of some new defined terms, to clarify Operating Code No 2 dealing with Operational Planning and Data Provision. The proposed changes to the Grid Code have been considered by Grid Code Review Panel members who agreed that National Grid should issue a Consultation Paper.
3. Following receipt of comments from those authorised electricity operators which it has consulted by this Paper, National Grid intends, in accordance with paragraph 2 of Condition 7 of the Transmission Licence, to send to the Authority :-
 - (a) a report on the outcome of its review, including this consultation process;
 - (b) the proposed revisions to the Grid Code which National Grid (having regard to the outcome of such review) reasonably thinks fit for the achievement of the objectives of the Grid Code referred to in sub-paragraph (b) of paragraph 1 of Condition 7 of the Transmission Licence; and
 - (c) any written representations or objections from authorised electricity operators (including any proposals by such operators for revisions to the Grid Code not accepted by National Grid in the course of the review) arising during the consultation process and subsequently maintained.
4. The revisions to the Grid Code proposed by National Grid and sent to the Authority then require approval by that body and will, if approved, come into force on such date (or dates) of which you will be notified by National Grid, in accordance with the Authority's approval. The date is expected to be coincident with the date that the related changes to the Balancing and Settlement Code (BSC) come into force.

B. DESCRIPTION OF THE PROPOSED AMENDMENTS AND THEIR EFFECTS**Background**

5. Two proposals for modification of the BSC are under consideration (MP22 and MP33) which both deal with issues related to the processes carried out under OC2 of the Grid Code. During consideration of these proposals, it has become apparent that some changes to clarify OC2 of the Grid Code would assist all Users.
6. The BSC modification proposals may be briefly described as:

- Provision of Generator Planned Outage Information to all BSC Signatories (P22).

Although not yet finalised, the most likely outcome of the modification proposal is a BSC change to publish Output Usable data, on a zonal and national basis on the Elexon website. The data would be released under the governance of the BSC (thereby, strictly speaking, not requiring a Grid Code change, although it is proposed that a small addition to the Grid Code is made to recognise this data flow). However, it is considered that a change to the Grid Code to define the meaning of a zone would be helpful, and this will introduce a term which can be cross-referenced from the BSC, to avoid a need to define the term in that document.

- Resolution of Inconsistencies in terminology between BSC and Grid Code OC2 (P33).

This proposal relates to the descriptions given to certain data published on the Balancing Mechanism Reporting System (BMRS). Data described as Generating Plant Margins on the BMRS is in reality the "surplus" data released by National Grid to Generators under OC2 of the Grid Code. It is recognised that the OC2 wording could be made clearer, by defining and rationalising the use of the term "Surplus". This term can then be cross-referenced from the BSC.

The proposed Grid Code changes

7. New defined terms of "Surplus" and "System Zone" are proposed for inclusion in the Grid Code. Changes are proposed to various paragraphs of OC2 dealing with the planning of Genset outages to make reference to these new defined terms. A minor consequential change is required to the DRC. An small amendment to BC1.5 is proposed to clarify that additional data will be released under the BSC. The proposals are shown in Appendix 1.
8. The Grid Code changes need to be implemented on the same date as the BSC changes associated with P22 (currently 1st April 2002, although efforts are being made to bring this date forward) and on or before the date of the BSC change associated with P33 (currently 25th Sept 2002).

C. COMMENTS

9. National Grid would be grateful to receive your comments on, or any suggestions you may have in relation to, these proposed amendments to the Grid Code. Comments would be welcomed and should be sent to National Grid by 16th November 2001. National Grid will review and respond to the comments and will then prepare its report to the Authority.
10. Your formal responses may be:-

Posted to: Mr Geoff Charter
Commercial Development
The National Grid Company plc
National Grid House
Kirby Corner Road
Coventry
CV4 8JY

Faxed to: 024 7642 3298

Emailed to: geoff.charter@uk.ngrid.com

Appendix 1

Grid Code Change Proposals

a) Extract from Glossary & Definitions

<u>Surplus</u>	<p><u>A MW figure equal to Output Usable:</u></p> <p><u>a) minus forecast Demand, and</u></p> <p><u>b) minus the export transfer capability in the case of an exporting zone.</u></p> <p><u>or</u></p> <p><u>plus the import transfer capability in the case of an importing zone.</u></p> <p><u>and</u></p> <p><u>c) (only in the case of a zone comprising the NGC Transmission System) minus the Operational Planning Margin.</u></p> <p><u>For the avoidance of doubt, a Surplus of more than zero in an exporting zone indicates an excess of generation in that System Zone; and a negative Surplus in an importing zone indicates insufficient generation in that System Zone.</u></p>
<u>System Zone</u>	<p><u>A region of the NGC Transmission System within a described boundary, as further provided for in OC2.2.4, and the term "Zonal" will be construed accordingly.</u></p>
<u>Zonal System Security Requirements</u>	<p>That generation required, within the boundary circuits defining the <u>System Zone</u>, which when added to the secured transfer capability of the boundary circuits exactly matches the Demand within the <u>System Zone</u>.</p>

b) Extracts from OC2

OC2.1 INTRODUCTION

OC2.1.1 **Operating Code No. 2 ("OC2")** is concerned with:

- (a) the co-ordination of the release of **Gensets**, the **NGC Transmission System** and **Network Operators' Systems** for construction, repair and maintenance;
- (b) provision by **NGC** of ~~Generating Plant Demand Margins~~ the Surpluses both for ~~national and zonal groups~~ the NGC Transmission System and System Zones;
- (c) the provision by **Generators** of **Generation Planning Parameters** for **Gensets**, including **CCGT Module Planning Matrices**, to **NGC** for planning purposes only; and
- (d) the agreement for release of **Existing Gas Cooled Reactor Plant** for outages in certain circumstances.

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OC2.2 OBJECTIVE

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OC2.2.2 The objective of **OC2** is also to enable the provision by **NGC** of the Surpluses both for the NGC Transmission System and System Zones ~~Generating Plant Demand Margins~~ both for national and zonal groups.

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OC2.2.4 The boundaries of the System Zones will be determined by NGC from time to time taking into account the disposition of Generator's Power Stations within the System Zones. The location of the boundaries will be made available [to any User on request]¹. Any User may request that NGC reviews any of the System Zonal boundaries if that User considers that the current boundaries are not appropriate, giving the reasons for their concerns. On receipt of such a request NGC will review the boundaries if, in NGC's reasonable opinion, such a review is justified.

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¹ The mechanism has not yet been determined. Publishing on the Elexon website looks like a possibility.

OC2.4 PROCEDURE

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OC2.4.1.2.1 Yrs 3 to 5

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(b) Between the end of week 2 and the end of week 12**NGC** will be:

- (i) calculating total winter peak generating capacity assumed to be available to the **Total System** (taking into account the capacity which may be available from **External Interconnections**);
- (ii) calculating the total winter peak generating capacity expected from **Large Power Stations**, taking into account **Demand** forecasts and details of proposed use of **Demand Control** received under **OC1**, and an operational planning margin set by **NGC** (the "**Operational Planning Margin**");
- (iii) calculating the weekly peak generating capacity expected from **Large Power Stations** taking into account demand forecasts and details of proposed use of **Demand Control** received under **OC1**, and the **Operational Planning Margin** and **Zonal System Security Requirements**. The total weekly peak MW needed to be available is the "weekly total MW required".

The calculation under (iii) will effectively define the envelope of opportunity for outages of **Gensets**.

During this period, **NGC** may, as appropriate, contact each **Generator** who has supplied information to seek clarification on points.

(c) By the end of week 12**NGC** will:

- (i) having taken into account the information notified to it by **Generators** and taking into account:-
 - (1) **NGC Transmission System** constraints and outages,
 - (2) **Network Operator System** constraints and outages, known to **NGC**, and
 - (3) the **Output Usable** required, in its view, to meet weekly total MW requirements,

provide each **Generator** in writing with any suggested amendments to the provisional outage programme supplied by the **Generator** which **NGC** believes necessary, and will advise **Generators** with **Large Power Stations** of **Generating Plant Demand Margins** the Surpluses both for the NGC Transmission System and System Zones national and zonal groups, giving MW shortfalls and surpluses

and potential export limitations, on a weekly basis, which would occur without such amendments;

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- (f) Between the end of week 25 and the end of week 28

NGC will be considering the updated provisional **Genset** outage programme, together with the best estimate neutral weekly **Output Usable** forecasts supplied to it by **Generators** under (e) and their **Registered Capacity** and will be analysing **Operational Planning Margins** for the period.

- (g) By the end of week 28

NGC will:

- (i) provide each **Generator** in writing with details of any suggested revisions considered by **NGC** as being necessary to the updated provisional **Genset** outage programme supplied to **NGC** under (e) and will advise **Generators** with **Large Power Stations** of **Generating Plant Demand Margins the Surpluses** for **the NGC Transmission System and System Zones** national and zonal groups giving MW shortfalls and surpluses and potential export limitations on a weekly basis which would occur without such revisions; and

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- (i) By the end of week 42

NGC will:

- (1) provide each **Generator** in writing with details of suggested revisions considered by **NGC** as being necessary to the updated provisional **Genset** outage programme supplied to **NGC** and will advise **Generators** with **Large Power Stations** of **Generating Plant Demand Margins the Surpluses** for **the NGC Transmission System and System Zones** national and zonal groups giving MW shortfalls and surpluses and potential export limitations, on a weekly basis which would occur without such revisions;

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- (j) By the end of week 45

NGC will seek to agree a **Final Generation Outage Programme** for Year 3 to Year 5. If agreement cannot be reached on all aspects, **NGC** and each **Generator** will record their agreement on as many aspects as have been agreed and **NGC** will advise each **Generator** with **Large Power Stations** and each **Network Operator**, of **the Surpluses for the NGC Transmission System and System Zones Generating Plant Demand Margins for national and zonal groups** on a weekly basis which would occur in relation to those aspects not agreed. It is accepted that agreement of the **Final Generation Outage Programme** is not a commitment on **Generators** or **NGC** to abide by it, but **NGC** will be planning its **NGC Transmission System** outage programme on the basis of the **Final Generation Outage Programme** and if in the event the **Generator's** outages differ from those

contained in the **Final Generation Outage Programme**, or in any way conflict with the **NGC Transmission System** outage programme, **NGC** need not alter its **NGC Transmission System** outage programme.

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OC2.4.1.2.2 Yrs 1 and 2

- b) Between the end of week 10 and the end of week 12

NGC will be considering the updated proposed **Genset** outage programme together with the estimate of **Output Usable** supplied by **Generators** under (a) and will be analysing **Operational Planning Margins** for the period. Taking these into account together with **NGC Transmission System** constraints and outages and **Network Operator User System** constraints and outages known to **NGC**, **NGC** will assess whether the estimates of **Output Usable** supplied by **Generators** are sufficient to meet forecast **NGC Demand** plus the **Operational Planning Margin**.

- (c) By the end of week 12

NGC will:

- (i) notify each **Generator** in writing whether the **Output Usable** estimates are adequate for Years 1 and 2, weeks 1-52, together with suggested changes to its **Final Generation Outage Programme** where necessary and will advise each **Generator** with **Large Power Stations** of ~~Generating Plant Demand Margins~~ the Surpluses both for the NGC Transmission System and System Zones ~~national and zonal groups giving MW shortfalls and surpluses~~ and potential export limitations, on a weekly basis which would occur without such changes;

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(f) Between the end of week 34 and the end of week 39

NGC will be analysing the revised estimates of **Output Usable** supplied by **Generators** under (e) and will be analysing **Operational Planning Margins** for the period. Taking these into account together with **NGC Transmission System** constraints and outages and **Network Operator User System** constraints and outages known to **NGC**, **NGC** will assess whether the estimates of **Output Usable** supplied by **Generators** are sufficient to meet forecast **NGC Demand** plus the **Operational Planning Margin**.

- (g) By the end of week 39

NGC will:

- (i) notify each **Generator** in writing whether it accepts the **Output Usable** estimates for Years 1 and 2, weeks 1-52 and of any suggested changes to its **Final Generation Outage Programme** where necessary and will advise **Generators** with **Large Power Stations** of ~~Generating Plant Demand Margins~~ the Surpluses both for the NGC Transmission System and System Zones ~~national~~

~~and zonal groups, giving MW shortfalls and surpluses~~ and potential export limitations on a weekly basis which would occur without such changes;

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OC2.4.1.2.3

Yr 0

- (b) Between 1600 hours Wednesday and 1700 hours Friday

NGC will be analysing the revised estimates of **Output Usable** supplied by **Generators** under (a) and will be analysing **Operational Planning Margins** for the period. Taking into account **NGC Transmission System** constraints and outages and **Network Operator System** constraints and outages known to **NGC**, **NGC** will assess whether the estimates of **Output Usable** supplied by **Generators** are sufficient to meet forecast **NGC Demand** plus the **Operational Planning Margin**.

- (c) On Friday (by 1700 hours)

NGC will:

- (i) notify each **Generator** with **Large Power Stations** and **Network Operator**, in writing if it considers the **Output Usable** forecasts will give ~~MW shortfalls and surpluses~~ Surpluses and potential export limitations both for the NGC Transmission System and System Zones nationally and for zonal groups from the 8th week ahead to the 52nd week ahead;

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OC2.4.1.2.4

Programming Phase

- (d) By 1600 hours each Business Day

- (i) **NGC** will notify in writing (or by such electronic data transmission facilities as have been agreed with **NGC**) each **Generator** with **Large Power Stations** and each **Network Operator**, of **Generating Plant Demand Margins** the Surpluses both for the NGC Transmission System and System Zones nationally and zonal groups, giving MW shortfalls and surpluses and potential export limitations, for the period from and including day 2 ahead to day 14 ahead which it considers the **Output Usable** forecasts will give. The time of 1600 hours can only be met in respect of any **Generator** or **Network Operator** if all the information from all **Generators** was made available to **NGC** by 1100 hours and if a suitable electronic data transmission facility is in place between **NGC** and the **Generator** or the **Network Operator**, as the case may be, and if it is fully operational. In the event that any of these conditions is not met, or if it is necessary to revert to a manual system for analysing the information supplied and otherwise to be considered, **NGC** reserve the right to extend the timescale for issue of the information required under this sub-paragraph to each, or the relevant, **Generator** and/or **Network Operator** (as the case may be) provided that such information will in any event be issued by 1800 hours.

c) Other Changes

EXTRACT FROM BALANCING CODE No 1BC1.5 **INFORMATION PROVIDED BY NGC**

NGC shall provide data to the **Balancing Mechanism Reporting Agent** or BSCCo² each day in accordance with the requirements of the **BSC** in order that the data may be made available to **Users** via the **Balancing Mechanism Reporting Service** (or by such other means) in each case as provided in the **BSC**. Where **NGC** provides such information associated with the secure operation of the **System** to the **Balancing Mechanism Reporting Agent**, the provision of that information is additionally provided for in the following sections of this BC1.5. **NGC** shall be taken to have fulfilled its obligations to provide data under BC1.5.1, BC1.5.2, and BC1.5.3 by so providing such data to the **Balancing Mechanism Reporting Agent**.

EXTRACT FROM DATA REGISTRATION CODE**SCHEDULE 9**

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DATA SUPPLIED BY NGC TO USERS

(Example of data to be supplied)

CODE	DESCRIPTION
CC	Operation Diagram
CC	Site Responsibility Schedules
PC	Day of the peak NGC Demand Day of the minimum NGC Demand
OC2	<u>Generating Plant Demand Margins Surpluses</u> and OU requirements for each Generator over varying timescales Equivalent networks to Users for Outage Planning Negative Reserve Active Power Margins (when necessary)

² This is added on the presumption that additional data will be displayed on the Elexon website.