

**THE NATIONAL GRID COMPANY plc**

**THE GRID CODE**

**A REPORT TO THE AUTHORITY PURSUANT  
TO PARAGRAPH 2 OF CONDITION 8A  
OF THE TRANSMISSION LICENCE**

**DEFINITION OF NGC DEMAND AND NATIONAL DEMAND**

6<sup>th</sup> August 2001

1. Paragraph 2 of Condition 8A of the Transmission Licence granted to the National Grid Company plc ("NGC") provides that NGC shall, in consultation with authorised electricity operators liable to be materially affected thereby, periodically review the Grid Code and its implementation. That paragraph also requires NGC, following such review, to send to the Authority:-
  - (a) a report on the outcome of such review;
  - (b) any proposed revisions to the Grid Code as NGC (having regard to the outcome of such review) reasonably thinks fit for the achievement of the objectives set out in sub-paragraph 1 (b) of Condition 8A 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 NGC in the course of the review) arising during the consultation process and subsequently maintained.
2. NGC has just completed a review of the Grid Code. This review relates to the Grid Code definitions of the terms 'NGC Demand' and 'National Demand'. Attached as Appendix A are the proposed revisions to the current Grid Code Glossary and Definitions and Planning Code (shown in typed form with the deletions crossed through and additions double underlined).
3. The proposed changes to the Grid Code were discussed at the Grid Code Review Panel in May 2001 and it was agreed that NGC should issue a Consultation Paper.
4. NGC, in accordance with its obligations under its Transmission Licence, consulted those authorised electricity operators listed in Appendix B by circulating to them Consultation Paper B/01, which was dated 29<sup>th</sup> May 2001 and which contained the proposed amendments to the Grid Code. A copy of Consultation Paper B/01 is attached to this Report as Appendix C. NGC also placed a copy of the Consultation Paper on its website to ensure its wide availability.
5. Comments were invited from all such authorised electricity operators by 29<sup>th</sup> June 2001. NGC has received responses from 6 authorised electricity operators. NGC has responded to each of them and no further changes were identified as a result of the responses.

6. The proposed revisions to the Grid Code are, as indicated above, set out in Appendix A to this Report. By way of summary, the proposed changes are described below :-

#### Background

- 6.1 The Grid Code contains many references to the term 'NGC Demand', which is the demand estimate used by NGC both in long term and short term planning (down to operational timescales). The current definition of NGC Demand has been in the Grid Code since 1990, but it was developed slightly to reflect new terminology during the work on the NETA Grid Code and incorporated only the minimum changes necessary for NETA.
- 6.2 Subsequent examination of the definition has revealed that it is, particularly with the new terminology, unclear in certain areas, is open to interpretation and as a consequence is not entirely appropriate when applied to demand forecasts in longer term planning timescales.
- 6.3 National Demand, although referred to in the Grid Code less frequently, has a fixed relationship to NGC Demand and its definition follows a similar form. Both definitions currently make reference to "Demand on the Total System". This has led to some problems of interpretation due to uncertainty in practice about whether this term takes account of exports to External Systems.
- 6.4 It is proposed that the definitions of both terms are amended to clarify the meaning, using similar format, so that the differences between the two demand figures can be more readily identified.
- 6.5 It should be noted that the proposed amendments to the definitions of these terms will not affect the demand forecasts attributed to these terms i.e. the magnitude of NGC Demand and National Demand forecasts will continue unchanged.

#### The Proposed Changes

- 6.6 It is proposed that the definitions of both NGC Demand and National Demand follow a common format, avoid reference to "Demand on the Total System" and clearly indicate those factors included and excluded. It is also proposed that two changes are made in the Planning Code to ensure that imports across Embedded External Interconnections are taken account of in a manner which is consistent with the proposed definitions of the two demand terms.
- 6.7 The Appendix to this paper comprises the proposed new wording of the definitions of NGC Demand and National Demand and of the proposed modifications to the Planning Code, with changes from the existing definitions shown by way of strikeout and underlining.
7. As indicated above, having regard to the outcome of the review described in this Report, NGC proposes the revisions to the Grid Code set out in Appendix A, which revisions we reasonably think fit for the achievement of the objectives referred to in sub-paragraph (b) of paragraph 1 of Condition 8 of the Transmission Licence. In view of this, NGC would be grateful if the Authority would approve the revisions pursuant to paragraph 3 of Condition 8A of the Transmission Licence.
8. Given the logistic exercise of organising replacement pages to reflect the changes required by your letter of approval, I would be grateful if you would contact me prior to

issuing any letter specifying an effective date, in order to seek to ensure that the date is consistent with any other Code changes which may then be approved or be close to being approved.

SIGNED BY

For and on behalf of The National Grid Company plc  
6<sup>th</sup> August 2001



## Appendix A

### Extracts from the Glossary and Definitions (GD)

<b>National Demand</b>	<p><del><b>Demand on the Total System less:-</b></del></p> <p><del>(a)the output of <b>Medium Power Stations</b> and <b>Small Power Stations</b>;</del> and</p> <p><del>(b)the <b>Demand</b> being taken by <b>Station Transformers</b> and <b>Pumped Storage Units</b>;</del> and</p> <p><del>(c)exports from the <b>NGC Transmission System</b> across <b>External Interconnections</b>.</del></p> <p>The amount of electricity supplied from the <b>Grid Supply Points</b> plus:-</p> <ul style="list-style-type: none"><li>• that supplied by <b>Embedded Large Power Stations</b>, and</li><li>• <b>NGC Transmission Losses</b>,</li></ul> <p>minus:-</p> <ul style="list-style-type: none"><li>• the <b>Demand</b> taken by <b>Station Transformers</b> and <b>Pumped Storage Units</b>'</li></ul> <p>and, for the purposes of this definition, does not include:-</p> <ul style="list-style-type: none"><li>• any exports from the <b>NGC Transmission System</b> across <b>External Interconnections</b>.</li></ul>
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<p><b><u>NGC Demand</u></b></p>	<p>(a)The amount of electricity to be supplied from the <b>Grid Supply Points</b> and to be supplied by <b>Embedded Large Power Stations</b> plus <b>NGC Transmission System Losses</b> less the output of directly connected <b>Medium Power Stations</b> and directly connected <b>Small Power Stations</b>; or which may also be expressed as</p> <p>(b)<b>Demand</b> on the <b>Total System</b> less the output of <b>Medium Power Stations</b> and <b>Small Power Stations</b>.</p> <p>The amount of electricity supplied from the <b>Grid Supply Points</b> plus:-</p> <ul style="list-style-type: none"> <li>• that supplied by <b>Embedded Large Power Stations</b>, and</li> <li>• exports from the <b>NGC Transmission System across External Interconnections</b>, and</li> <li>• <b>NGC Transmission Losses</b>,</li> </ul> <p>and, for the purposes of this definition, includes:-</p> <ul style="list-style-type: none"> <li>• the <b>Demand</b> taken by <b>Station Transformers</b> and <b>Pumped Storage Units</b>.</li> </ul>
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## Appendix A

### Extracts from the Planning Code (PC)

PC.A.4.2.3 All forecast **Demand (Active Power)** and **Active Energy** specified in PC.A.4.2.1 shall:

- (a) be such that the profiles comprise average **Active Power** levels in 'MW' for each time marked half hour throughout the day;
- (b) in the case of PC.A.4.2.1(a), (b) and (c), be that remaining after any deductions reasonably considered appropriate by the **User** to take account of the output profile of all **Embedded Small Power Stations** and **Embedded Medium Power Stations** and **Customer Generating Plant**; and imports across **Embedded External Interconnections**.
- (c) in the case of PC.A.4.2.1(a) and (b), be based on **Annual ACS Conditions** and in the case of PC.A.4.2.1(c) and the details of the annual **Active Energy** required under PC.A.4.2.1 be based on **Average Conditions**.

PC.A.4.3.2 All forecast **Demand** specified in PC.A.4.3.1 shall:

- (a) be that remaining after any deductions reasonably considered appropriate by the **User** to take account of the output of all **Embedded Small Power Stations** and **Embedded Medium Power Stations** and **Customer Generating Plant** and imports across **Embedded External Interconnections** and such deductions should be separately stated;
- (b) include any **User's System** series reactive losses but exclude any reactive compensation equipment specified in PC.A.2.4 and exclude any network susceptance specified in PC.A.2.3;
- (c) in the case of PC.A.4.3.1(a) and (b) be based on **Annual ACS Conditions** and in the case of PC.A.4.3.1(c) be based on **Average Conditions**.



**Appendix B**  
**Consultation Paper B/01**



### APPENDIX C

## AEO Distribution List for Consultation Paper B/01

Accord Energy Limited  
AES (for Barry Ltd + Fifoots Point Ltd + Partington Ltd + Drax Ltd)  
AES Indian Queens Power  
Alcan Aluminium UK Ltd  
Allied Steel & Wire  
Aquila Energy Supplies Ltd  
Atlantic Energy (UK) plc  
Barking Power  
BNFL + Magnox Electric Ltd  
BOC Limited  
BP Chemicals Ltd  
British Energy Generation Ltd  
British Energy Investment (no 2) Ltd  
British Energy Retail Markets Ltd  
British Gas Plc  
British Gas Trading Ltd  
British Steel plc  
Celtpower Ltd  
Cinergy Global Power (UK) Ltd  
Commercial Electricity Supplies Ltd  
Conoco Global Power (UK) Limited  
Corby Power Ltd  
Coryton Energy Co Ltd  
Cottam Development Centre  
Damhead Creek Ltd  
Derwent Co-Generation Limited  
East Midlands Electricity  
Eastern Electricity (distribution)  
Eastern Energy Ltd  
Economy Power Ltd  
Edison First Power Ltd  
Electricite de France  
Electricity Direct (UK) Ltd  
Energy Power Resources Limited  
Enfield Energy Centre Ltd  
Enron Direct Ltd + Enron Gas & Petrochemical Trading  
Enron Teesside Operations Ltd  
Fellside Heat & Power Ltd  
First Hydro Company  
Great Yarmouth Power Limited  
Heartlands Power Ltd  
Humber Power Ltd  
ICI Chemicals & Polymers Ltd  
Impkemix Energy Ltd  
Independent Energy UK Ltd  
Innogy + NP (Cogen Trading) Ltd  
Keadby Development Ltd  
Keadby Gen Ltd + HE Cogen Ltd + HE Energy Ltd  
Lakeland Power Ltd  
London Electricity plc  
London Energy Company Ltd  
MANWEB plc  
Marubeni Europower Ltd  
Medway Power Ltd  
Midlands Electricity plc  
Midlands Power (UK) Ltd  
Norsk Hydro (UK) Ltd  
Northern Electric Distribution Ltd  
Northern Electric Supply Ltd  
Norweb (supply)  
NORWEB plc (distribution)  
Pentex Oil and Gas Ltd  
PowerGen UK plc + PowerGen CHP Ltd  
Railtrack plc  
Regional Power Generators Limited  
Renewable Energy Co  
Rocksavage Power Company Ltd  
Saltend Cogeneration Co Ltd  
Scottish and Southern Energy plc  
Scottish Power plc  
Seabank Power Ltd  
SEEBOARD plc (distribution)  
SEEBOARD plc (supply)  
Shell Power Ltd  
Slough Energy Supplies Ltd  
South Coast Power Ltd  
South Wales Electricity plc  
South Western Electricity plc  
Southern Electric  
Southern Energy UK Generation Ltd  
Spalding Energy Company Ltd  
Sutton Bridge Power Ltd  
Teesside Power Ltd  
TXU Europe  
TXU Europe Merchant Generation + Peterborough Power Ltd + Anglian Power Generators + Shotton CHP Ltd + Citigen (London) Ltd  
UK Electric Power Ltd  
UKAEA  
Unit Energy Limited  
Wainstones Power Ltd  
Yorkshire Electricity Group plc (distribution)  
Yorkshire Electricity plc (supply)