

## **Revisions to the Grid Code – Revised Planning Code Data (P2/5 Working Group)**

The aim of this note is to explain the rationale behind the changes to the existing Grid Code that National Grid has formulated based upon discussions at the P2/5 Working Group.

### **Background**

In autumn 2004, Ofgem launched a formal investigation into a DNOs licence compliancy, and also formally sought information from National Grid under the terms of their licence. The investigation covered four separate issues, one of which was Engineering Recommendation (ER) P2/5 compliance.

Ofgem concluded that there had been no licence infringement, but nevertheless they had some concerns that there does not appear to be clarity in relation to P2/5 and GB SQSS compliance across the network interface between National Grid and DNOs.

To resolve this issue on an enduring basis Ofgem indicated its preference for a mechanism by which it could be assured that companies are P2/5 and / or GB SQSS compliant at the interface.

At a DNO / National Grid workshop it was the unanimous view of all the network licensees that this issue was best dealt with by improving the clarity of information transferred as part of the annual exchange of planning data between DNOs and National Grid. In particular the Grid Code drafting should be modified to ensure clarity and sufficiency of data exchange between parties.

At the November 2005 GCRP meeting, it was agreed that a GCRP Working Group should be formed to review the data exchange processes and remove the scope for confusion.

### **Purpose and Scope of Working Group**

The paper presented to the GCRP recommending that the working group be formed with a remit to review the following areas:

- i. Review the scope of existing data exchange requirements of the Grid Code for determining the investment needs to meet their planning requirements e.g. assessment against security standards, P2/5 and GB SQSS.
- ii. Consider adequacy of existing requirements of the Grid Code, in particular, but not necessarily limited to, the treatment of the following areas: -
  - Summer and seasonal peak load levels and the appropriate statistical factors governing the forecasting of these quantities,
  - Treatment of interconnected GSPs and format of data provision,
  - Maintenance demand,
  - Maintenance windows,
  - Transfer capacity.
- iii. Determine what additional data exchange or process clarification is necessary to meet the objectives.

The working group consists of National Grid, Ofgem and DNO representatives.

## Brief Explanation of Changes

### *Summary of Working Group Discussions...*

For reference the high level decisions from the working group were as follows:

- The working group proposed to introduce a new Grid Code definition for 'Maintenance Period Demand', which will clarify the Maintenance Period Window, and what data submission was required for the Maintenance Period Demand. It is important to note that the purpose of this additional information is not to try to define the windows in which the maintenance must take place but rather to define data, responsibilities and a process demonstrating that the assets are maintainable in accordance with the GB SQSS.
- The working group has recommended that a new Grid Code definition for 'Demand Group' be introduced. This will regularise the format of data submitted for GB SQSS consideration and allow all information to be reviewed in appropriate context to the security assessment both DNOs and National Grid undertake e.g. removes ambiguity that can lead to differing dates and levels for connection peak demand being quoted at different grid supply points when they are part of an interconnected group (see Access Group note below).
- The Working Group suggested that the existing Demand Transfer provisions (PC.A.4.5) should be amended to clarify data and the process which should be followed when submitting Demand Transfer data to National Grid. This will include the requirement to provide demand data for all connection points at the time of the demand transfer to allow for a security assessment at the time of transfer.
- The Working Group also recommended that the existing Grid Code provision (DCR5.4) to be amended to clarify the process for the non-submission of data.

### *Further Proposals...*

#### **Access Group**

Since the Working Group last met National Grid has been drafting legal text to give effect to the Working Group recommendations. Through this drafting process the concept underlying that of a Demand Group has been thoroughly examined. As a result National Grid has concluded that given the objective of the Week 24/28 process the existing concept of a Demand Group as defined in the Grid Code is not the most effective solution. In its place National Grid has developed the model of an Access Group which has been defined as:

Either

- (i) A group of **Connection Sites** (or parts thereof) that run interconnected through a **User's System(s)** under intact network or **Planned Outage** conditions where simultaneous access to **NGET** circuits within such group of **Connection Sites** is restricted; and/or,
- (ii) A group of **Connection Sites** (or parts thereof) where a **User** declares a **Transfer Capacity** between those **Connection Sites** (or parts thereof) for the purposes of the **Planning Code**.

For the avoidance of doubt an **Access Group** may consist of **Connection Sites** (or parts thereof) owned by more than one **User**.

This definition is similar in nature to the definition previously drafted for a Demand Group; however the important difference is that the Access Group concentrates on the concept of agreeing **access** to Transmission owned equipment when there are dependencies on DNO owned equipment. This is an important distinction and as such National Grid believes that for ease of understanding a new defined term is appropriate. The use of the term Access Group is also necessary as a Demand Group is more of a dynamic concept that varies depending upon the fault and security criteria associated with the size of the associated demand. It is quite difficult to use this concept when it comes to defining the specifics of the data exchange between parties under the Grid Code. The Access Group concept potentially overcomes this problem, by defining the group of circuits to which access is required, and allowing the Demand Groups to be dynamically varied to assess the security levels.

### ***Other Proposals...***

In addition to the Access Group proposals, other proposals have been developed by a Working Group member and National Grid since the Working Group last met. These proposals would introduce: -

- (a) A mechanism by which National Grid may provide a detailed network model to DNOs being incorporated within the Grid Code.
- (b) A section within the Grid Code that highlights the ongoing process of discussion and agreement of data (that in practice takes place through the Joint Technical Planning Liaison Meetings) following the Week 24 [Week 28] submissions.
- (c) A mechanism through which National Grid is able to confirm the Single Line Diagram that is representative of the User's System through the Maintenance Period and other assessment periods.

Drafting for these proposals has also been drawn up; however the timescales in which these proposals are to be taken forward is yet to be agreed. The current position is that the proposals agreed at the Working Group are to be consulted upon once the Working Group is content with the detailed legal drafting. The Working Group may then decide whether to take forward the further proposals at the same time, or whether they would benefit from further industry discussion in which case it may be taken forward at a future date.

## **Summary of Changes contained within Legal Drafting**

### ***Changes Agreed by Working Group...***

In line with the above recommendations the following changes have been made:

#### **Maintenance Period Demand:**

##### ***Summary of Changes***

The changes that have been made reflect that Maintenance Period Demands need to be provided for each Transmission Circuit connecting the Transmission System to User System(s). It is anticipated that a Maintenance Period Demand would be submitted for each Connection Site where a circuit forming part of the GB Transmission System connects Demand at that Connection Site to the GB Transmission System. In addition where that Connection Point is part of a wider Access Group, in order for robust security studies to be undertaken, the Demand at each other Connection Point within the Demand Group must also be declared. This is important so that either the pattern of Demand following a fault in an interconnected network can be established.

The drafting also allows for two variations on a Maintenance Period Demand. The first would allow the DNO to submit a demand that is reflective of a peak across the entire maintenance season which runs from Week 13 to Week 43. The second would allow for the DNO to formalise a period that must be at least eight continuous weeks in duration and then declare the peak demand across this period. Where a maintenance period is declared by a User in accordance with the second of these two methodologies, the User must ensure that there are sufficient non-overlapping periods such that an assessment can be made of compliance within an Access Group against the GB SQSS over a three year cycle for the User's system.

## **Access Groups**

### ***Summary of Changes***

The Access Group definition has been revised to cater for two scenarios. The first is where a group of Connection Sites run interconnected under intact operational or planned outage conditions. The Access Group definition also applies to any group of Connection Sites between which a Demand Transfer is declared. Provisions have also been introduced to allow Users to declare in Week [6] the Connection Sites that form an Access Group, although after the initial submission of such data it is not envisaged that the composition of Access Groups will vary significantly over time.

## **Transfer Capacity**

### ***Summary of Changes***

The proposed changes have been designed to clarify that Transfer Capacity may be used by the User but that these must be: -

- Compliant with the provisions of the GB SQSS; and,
- That they must be available in Operational Planning and Control Phases where they are quoted; and,
- That where a Transfer Capacity is made up of a series of component Transfer Capacities the User must submit a breakdown of these component Transfer Capacities.

In addition the Demand at each Connection Point at the time the Demand Transfer is expected to be utilised must also be quoted. I.e. for first circuit outages the Demand would reflect the most onerous demand conditions that the Connection Sites would experience through the year (Connection Site peak), for Second Circuit Outages this would be the Maintenance Period Demand.

## ***Further Changes Developed following Working Group...***

### **Provision of Network Model by National Grid to DNOs**

#### ***Summary of Changes***

Introduction of new obligations to expand the data set National Grid will provide to the DNO should the DNO request a network model.

These changes represent the detail behind the proposal made to the working group by the WPD representative. The objective of the changes is to provide greater clarity to Users

regarding the nature of the Transmission System close to the point of connection to the GB Transmission System of a User's System.

## **Other Changes**

### ***Planning Liaison***

A new clause PC.7 has been added to the Planning Code. The purpose of this section is to recognise that one of the underlying purposes to the exchange of data through the Planning Code is to establish whether Connections Sites can be maintained in accordance with the GB SQSS. To establish this fact it may in some cases be necessary for there to be an ongoing dialogue between National Grid and Users such that data submissions may be discussed further and potentially modified as part of any agreements. The purpose behind PC.7 is to highlight this responsibility within the Grid Code.

### ***Single Line Diagram***

It is recognised that for complex interconnected networks it is necessary for NGET to model the user's system network to adequately assess security to GB SQSS. NGET will utilise information provided by users in the single line diagram and associated network data in order to model the user's network. NGET will assume that the user network will continue to be configured as per the single line diagram during the maintenance period unless otherwise notified by Users. This can be accomplished by Users resubmitting the correct time period, a revised single line diagram and associated data for use during the maintenance period. [Note: NGET does not have sufficient information or the right to reconfigure a user's network in order to assess security across the interface].

## **To Date**

- Working Group ongoing – the most recent meeting was held on 8<sup>th</sup> December 2006, next meeting is to be held on 22<sup>nd</sup> January 2007.
- Legal text is still being developed.
- Final report will go to the February GCRP.
- Minutes of meetings are available on the National Grid website (P2/5 Working Group) – hyperlink below...

<http://www.nationalgrid.com/uk/Electricity/Codes/gridcode/workinggroups/p25wg/>