The National Grid Company plc

GRID CODE REVIEW PANEL

REVIEW OF BC2 DRAFTING

Introduction

1. Following a period of operational experience under NETA, a number of issues have arisen which suggest that review of the BC2 drafting in some areas would be beneficial. This paper describes these areas and suggests solutions.

The Issues

A) Joining/Leaving Balancing Mechanism

2. BC2.5.5 was introduced into the Grid Code shortly before NETA Go-Live. This paragraph deals with "small" BM Units (i.e. <50MW) joining or leaving the Balancing Mechanism and ensures that correct obligations are imposed in respect of the use of EDL. In addition, the paragraph indicates that, on leaving, any defaulted Physical Notification data will be disregarded.

3. A User has pointed out that the addition of this paragraph has led to some inconsistencies with other paragraphs in BC2, specifically BC2.5.2. This paragraph requires Synchronising/Desynchronising at times consistent with those implied by a Physical Notification. Although it can be argued that "small" BM Units which have left the Balancing Mechanism will be exempt from this requirement due to the disregardment of their Physical Notifications, clarification is considered desirable.

4. It is proposed that BC2.5.5 is modified as shown below:-

BC2.5.5 In the event that a **BM Participant** in respect of a **BM Unit** with a **Demand Capacity** with a magnitude of less than 50MW or comprising **Generating Units** and/or **CCGT Modules** at a **Small Power Station** notifies **NGC** at least 30 days in advance that from a specified **Operational Day** it will:

(a) no longer submit **Bid-Offer Data** under BC1.4.2(d), then with effect from that **Operational Day** that **BM Participant** no longer has to meet the requirements of BC2.5.1 nor the requirements of CC6.5.8(b) in relation to that **BM Unit**. Also, with effect from that **Operational Day**, any defaulted **Physical Notification** and defaulted **Bid-Offer Data** in relation to that **BM Unit** arising from the **Data Validation, Consistency and Defaulting Rules** will be disregarded and the provisions of BC2.5.2 will not apply;

(b) submit …….

B) Demand "Start Up" for High Frequency

5. BC2.5.2 currently only provides for Synchronising and De-Synchronising to be carried out in relation to a Physical Notification, a Bid-Offer Acceptance, the operation of an intertrip scheme or Low Frequency Relay Operations. Contracts are being developed to cater for the switching in of Demand in response to high frequency. As this represents

a "Synchronisation", this would not currently be permitted by the Grid Code. It is proposed that BC2.5.2.3 is amended to read:-

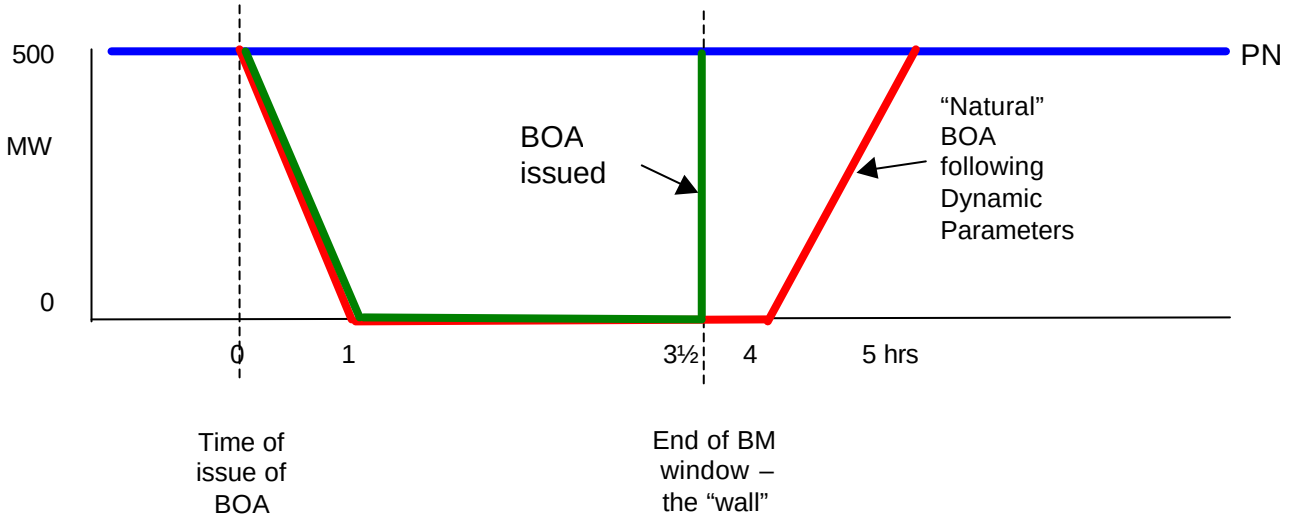
BC2.5.2.3 **BM Participants** must only **Synchronise** or **De-Synchronise BM Units** at the times indicated to **NGC** (within a tolerance of +/- 5 minutes) or unless that occurs automatically as a result of intertrip schemes or **Low Frequency Relay** operations or in accordance with an **Ancillary Services Agreement**. For a **BM Unit** in relation to which the intertrip has been instructed to be switched into service under BC2.10 in order to protect the **NGC Transmission System**, if it is **De-Synchronised** due to an operation of the intertrip that is not due to a fault at the **BM Unit** then a **Bid-Offer Acceptance** will be treated as having been issued. This will reflect the operation of the intertrip in order to form the **Bid-Offer Acceptance** data to be given to the **BMRA** under the **BSC**.

C) "Beyond the Wall"

6. As the Balancing Mechanism "Window" is limited to 3½ hrs, then this is the maximum duration of any Bid-Offer Acceptance. Problems arise when the Dynamic Parameters of a particular BM Unit are such that a "closed" Bid-Offer Acceptance would cover a period of more than 3½ hrs. This gives rise to a Bid-Offer Acceptance containing an instantaneous change to PN at the “wall”. A simple example will help to illustrate the point.

7. Consider a 500MW exporting BM Unit, with MZT = 3 hrs. Run up and Run down rates implying 1 hr to shut down, 1 hr to run up. The BM Unit submits a “Flat” PN of 500MW. A Bid-Offer Acceptance is issued to shut the machine down.

(Diagram below needs to be in colour)



8. If no subsequent Bid-Offer Acceptance is issued, then at the end of the 3½ hr period, the BM Unit will be left “out of balance” as it will be unable to return to its PN until 1½ hrs later. This situation is not ideal, as it makes BM Participants reluctant to operate openly in the submission of their data.

9. A solution to this issue is being sought, taking account of the likely shortening of Gate Closure time to 1hr. Once a firm proposal has been developed, the Grid Code will be

reviewed to establish if any changes would be beneficial. This will then be the subject of a further paper to the GCRP.

The Way Forward

10. Members of the Grid Code Review Panel are invited to consider the issues raised above and note that, following discussion at the GCRP meeting, National Grid intends to issue a Grid Code consultation paper.