GBSO Utilisation of Physical Notification Information

Introduction

1. Under BC1 of the Grid Code, at 11.00 each day BM Units and Generating Units (as defined in BC1) are obliged to provide NGET with their best estimate of expected power output (i.e. Physical Notifications) for each Settlement Period of the following Operational Day. At Gate Closure the Physical Notifications for the relevant Settlement Period become firm.

2. This information is used to develop strategies for real time balancing and managing transmission system constraints. Without it the electricity market will receive inaccurate indications of demand and supply imbalance and National Grid would have to resort to strategies for real time operation based on worst case scenario assessments leading to less economic and efficient operation of the GB Transmission System.

Utilisation of PN Data

3. National Grid uses the difference between the forecast of system demand and the Physical Notifications (PNs), aggregated on a national basis, to calculate the National Indicated Imbalance on a Settlement Period basis which is used as an indicator to the electricity market of short term supply and demand imbalance. This information, along with forecasts of Maximum Export Limits, is used by National Grid to develop strategies for managing system imbalance which are continuously refined as real time is approached and the level of uncertainty decreases. These strategies include decisions on taking actions which need to be taken well ahead of real time like warming plant. Hence if the PN data is not representative of the output it could lead to expensive actions being taken unnecessarily or risks to system security if generation is not available when required.

4. The PNs are also used on an individual basis to assess critical system boundaries for constraints on generation and develop strategies for economic and efficient management of power flows across theses boundaries. For these assessments it is necessary to determine the type of constraint i.e. thermal or stability and the limiting flow across the boundary. These parameters cannot be derived from predictions of total flows in or out of the boundary based on the difference between the aggregated PNs and demands within the boundary. It is necessary to determine the flow on each individual circuit lying within and crossing the boundary. This requires predictions of generator output (from PNs) at Grid Entry Points and User System Entry Points where the Generating Unit is Large or where the User System parallels the GB Transmission System.

5. PNs are essential for economic and efficient operation of the power system. Without knowing the Generators estimate of output, the GBSO would tend to make pessimistic assumptions to maintain a safe and secure system, which is likely to result in less economic and efficient operation than would otherwise be the case.