

National Grid Company plc
Grid Code Review Panel
21st November 2002
Operational Intertripping Schemes
Paper by National Grid Company

Introduction

1. At the last GCRP 5th September 2002 a query was made regarding the requirements for intertripping schemes.
2. This paper seeks to address the query by outlining the various requirements that exist for Intertripping Schemes and the issues that are addressed by the BSC Modification P87.

Intertrip Selection

3. Typically the requirement for an intertrip scheme at the design stage of a new or modified transmission connection may be driven by a number of factors, but essentially the majority fall within the following:
 - ∂ the requirement for only a two circuit generator connection for less than 1320MW
 - ∂ customer choice
 - ∂ to maintain the integrity of the Transmission system under outage conditions
 - ∂ protection of the distribution network
 - ∂ temporary connection conditions to allow early connection of a generator ahead of associated infrastructure reinforcement.
4. Where an intertrip scheme is identified the terms are agreed and form a condition of connection. The terms for application of the scheme, which usually include the obligation to arm and scheme details, are specified in the technical appendices, F3, of the relevant Bilateral Connection Agreement.

Intertrip Operation

5. The CUSC paragraph 2.7
 - “NGC and each User shall, as between NGC and that User, operate respectively the NGC Transmission System and the User System in accordance with the schemes set out in Appendix F3 to the Bilateral Connection Agreement”

requires the User to comply with the terms as agreed in their Bilateral Connection Agreement.

6. The Grid Code BC 2.10.2

“Such instructions or notifications may include...an instruction to switch into or out of service an Operational Intertripping Scheme”

allows for the use of intertripping schemes by National Grid.

BSC Modification P87

7. Since the introduction of NETA, the treatment of the reduction in output of an affected BM Unit, in the event that an intertripping scheme has operated, within the Balancing Mechanism has been addressed in the BSC Section Q 5.1.5 and 5.3 and the Grid Code BC2.5.2.3 that states;

” 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.”

8. Modification Proposal P87 was raised to remove undue market risk associated with the current arrangements for the operation of an intertripping scheme whereby a BM Unit may receive a ‘windfall gain’ and System Sell Prices may be set to extreme negative values.

9. A Grid Code consultation has been issued to address the consequential changes that would be required should Ofgem approve P87. It is not the intention at this stage to raise a change to the Grid Code to clarify the technical requirements for intertripping schemes.

Summary

10. There are a number of factors that give rise to a requirement for an intertripping scheme to be associated with a particular connection. Planning standards mainly drives these. It is not the case that all connections will have an operational intertripping scheme associated with the connection conditions.

11. The mechanism by which the intertripping schemes may be operated is defined in the individual Bilateral Connection Agreements, CUSC and the Grid Code.

12. BSC modification proposal P87 seeks to address the terms within the BSC which deals with the treatment in the Balancing Mechanism of the reduction in output of an affected generator as a consequence of an associated intertripping scheme operating.