CAP170 - Associated Grid Code Changes

Introduction

1. CUSC Amendment Proposal 170 (Category 5 System to Generator Operational Intertripping Scheme)[1] seeks to introduce commercial arrangements for the arming and disarming of a newly defined category of intertrip within the System to Generator Operational Intertripping Scheme – 'Category 5 Intertripping Scheme'. The CUSC Amendment also describes the mechanism for the administration of associated payments.

2. CAP170 was raised by National Grid in response to Ofgem's open letter on 'Managing Constraints on the GB Transmission System'[2]. In their letter Ofgem's requested National Grid to undertake an immediate and urgent review of the commercial and charging arrangements in order to facilitate a more effective management of constraint costs. Ofgem noted that forecast constraint costs were heavily influenced by transmission outages as part of the investment programme to increase network capacity. This is particularly true at derogated transmission boundaries which require significant periods of extended outage to allow the necessary reinforcement to work towards making the boundaries compliant and the use of intertrips is a necessary rather than an occasional tool in order to maximise flows across the boundary.

3. Ofgem's has requested that any industry code amendment(s) deemed necessary to alleviate the concerns raised, regarding the management of constraints on the GB Transmission System, were to be proposed by the end of February 2009 and for the amendment(s) to be progressed for implementation prior to the forthcoming charging year i.e. April 2009.

4. CAP170 will be presented to February 2009 CUSC Amendment Panel meeting at which National Grid will request that 'urgent status' is assigned to the proposal such that the timelines specified in Ofgem's open letter may be met.

5. It has been identified that CAP170 will require changes to the Grid Code such that the Code refers to the new category of intertrip within the System to Generator Operational Intertrip Scheme.

Background

6. An Operational Intertrip is utilised by National Grid (in their role as GB System Operator (GBSO)) to operate and manage the GB Transmission System. The System to Generator Operational Intertrip is a specific type of Operational Intertrip.

7. The associated scheme, introduced by CAP076 (Treatment of System to Generator Intertripping Scheme), currently classifies four different categories of intertrips, formally defined in the Grid Code, which are utilised by National Grid to manage specific risks on the GB Transmission System. Section 4 (Balancing Services) of the CUSC specifies the commercial arrangements for the arming and disarming of the System to Generator Operational Intertripping Scheme and describes the mechanism for the administration of associated payments.

Proposal

8. It is proposed to introduce a new category into the System to Generator Operational Intertrip Scheme – 'Category 5 Interpping Scheme' which will be specified in the Grid Code. A Category 5 Intertripping Scheme would be applied to intertrips capable of being armed with respect to a derogated non-compliant transmission boundary, which are not captured by categories 1-4.

9. A derogated non compliant transmission boundary would be defined as a boundary on the GB Transmission System which is subject to an Authority approved derogation to the GB Security and Quality of Supply Standards.

[1] https://www.nationalgrid.com/uk/Electricity/Codes/systemcode/Panel/2009_current/11/
[2] http://www.ofgem.gov.uk/Markets/WhlMkts/EffSystemOps/SystOpIncent/Documents1/20090217Managing%20constraints.pdf

10. The proposal would apply to existing generation which has an intertrip capable of being armed in respect of such a boundary, as well as being capable of being applied as a condition of connection to new connections with respect to such boundaries.

Way Forward
National Grid invites the GCRP to:

- note the CUSC Amendment Proposal (CAP170) and the interaction between the two proposals.

- agree that the timeline for progressing the Grid Code proposal will align with the CUSC Amendment Proposal (CAP170).

- agree that the proposal should proceed directly to industry consultation (consultation period in line with CAP170).

- note that the proposal will be submitted to the Authority at the same time as CAP170.

- note the interactivity with Grid Code Consultation Document F/08 (Grid Code Requirements for System to Generator Operational Intertripping Scheme).

Appendix A – Proposed Grid Code Changes

Glossary and Definitions Changes

GLOSSARY AND DEFINITIONS

Amend the existing definitions of 'System to Generator Operational Intertripping' and 'System to Generator Operational Intertripping Scheme' as follows:

System to Generator Operational Intertripping	A **Balancing Service** involving the initiation by a **System to Generator Operational Intertripping Scheme** of automatic tripping of ~~the **User's**~~ circuit breaker(s) resulting in the tripping of **BM Unit(s)** or (where relevant) **Generating Unit(s)** comprised in a **BM Unit** to prevent abnormal system conditions occurring, such as over voltage, overload, **System** instability, etc, after the tripping of other circuit-breakers following power **System** fault(s).
System to Generator Operational Intertripping Scheme	A **System** to **Generating Unit** or **System** to **CCGT Module Intertripping Scheme** forming a condition of connection and specified in Appendix F3 of the relevant **Bilateral Agreement**, being either a **Category 1 Intertripping Scheme, Category 2 Intertripping Scheme, Category 3 Intertripping Scheme**, ~~or~~ **Category 4 Intertripping Scheme** or **Category 5 Intertripping Scheme**.

Insert the following new definitions:

Category 5 Intertripping Scheme	A **System to Generator Operational Intertripping Scheme** which is:- (i) capable of being armed in respect of a **Derogated Non-Compliant Transmission Boundary**; and (ii) does not fall within the definition of a **Category 1 Intertripping Scheme**, **Category 2 Intertripping Scheme**, **Category 3 Intertripping Scheme** or **Category 4 Intertripping Scheme**.
Derogated Non-Compliant Transmission Boundary	A boundary on the **GB Transmission System** which is the subject of a **GB SQSS Derogation**.
GB SQSS Derogation	A direction issued to **NGET** by the **Authority** relieving **NGET** from obligations under the **Security and Quality of Supply Standard**.

Appendix B – Existing Categories of System to Generator Operational Intertripping Scheme

Category 1 Intertripping Scheme	A **System to Generator Operational Intertripping Scheme** arising from a Variation to Connection Design following a request from the relevant **User** which is consistent with the criteria specified in the **Security and Quality of Supply Standard.**
Category 2 Intertripping Scheme	A **System to Generator Operational Intertripping Scheme** which is:- (i) required to alleviate an overload on a circuit which connects the **Group** containing the **User's Connection Site** to the **GB Transmission System**; and (ii) installed in accordance with the requirements of the planning criteria of the **Security and Quality of Supply Standard** in order that measures can be taken to permit maintenance access for each transmission circuit and for such measures to be economically justified, and the operation of which results in a reduction in **Active Power** on the overloaded circuits which connect the **User's Connection Site** to the rest of the **GB Transmission System** which is equal to the reduction in **Active Power** from the **Connection Site** (once any system losses or third party system effects are discounted).
Category 3 Intertripping Scheme	A **System to Generator Operational Intertripping Scheme** which, where agreed by **NGET** and the **User**, is installed to alleviate an overload on, and as an alternative to, the reinforcement of a third party system, such as the **Distribution System** of a **Public Distribution System Operator**.
Category 4 Intertripping Scheme	A **System to Generator Operational Intertripping Scheme** installed to enable the disconnection of the **Connection Site** from the **GB Transmission System** in a controlled and efficient manner in order to facilitate the timely restoration of the **GB Transmission System.**