# The Grid Code Under BETTA

### SP Transmission Response to the Ofgem/DTI Consultation

#### Summary

SP Transmission (SPT) welcomes the opportunity to comment on this Ofgem/DTI paper and their proposals for a GB Grid Code. This paper is part of an overall set of consultations on transmission arrangements, and our views are dependent upon progress in other related areas – in particular the SO-TO Code (STC) and the CUSC. We continue to support BETTA as part of a package including an appropriate licensing framework and division of responsibilities between the GBSO and Transmission Owners.

In this response, SPT will not make comments about specific points of drafting. These will be made in response to the proposed series of mini-consultations about the Grid Code. This response will cover general points of principle concerning the Grid Code.

Our main points may be summarised as follows:

- Ofgem/DTI have stated that the GB Grid Code will detail the technical requirements to support the design, planning and construction of both the transmission system and the individual user connections. The Grid Code is thus one of the key documents in assisting the TOs in their key duty to lead in the planning and development of the transmission system. Accordingly, each TO should have a licence obligation to have in force and to comply with the GB Grid Code.
- SPT accepts that actions under the GB Grid Code must be seen to be transparent and non-discriminatory, and thus it accepts that the relevant licence conditions on discrimination should remain under BETTA. Whether party to the Grid Code or not, the TOs will be able to take action either directly or indirectly to enforce relevant Grid Code standards. Through the licence conditions and involvement of the GBSO, such actions will be transparent. SPT therefore reject the Ofgem/DTI conclusion that TOs should not be party to the GB Grid Code
- Separation of the TOs from the Grid Code will lead to dual specification of the technical standards. This could lead to confusion, and become a potential cause of disputes between the TOs, the GBSO and Users.
- Efficient change management co-ordination of technical standards between the GB Grid Code and the STC will be vital to avoid having conflicting technical standards. The arrangements must allow for the full participation of the TOs in the change process, and must include formal participation of the TOs on the GB Grid Code Review Panel and additional measures to improve cross-code change processes involving the GB Grid Code.
- Proposals on the Governance of Electrical Standards will require to be modified to secure the full participation of the TOs.

- SPT has previously referred to difficulties with the ESQC Regulation in private correspondence and in the STC and CUSC responses and has welcomed discussion with the DTI and Ofgem on the matter. Furthermore, the BETTA model fails to provide an appropriate framework for Users and the TOs to co-operate. SPT would welcome further discussion on these matters.
- The process of moving from the Scottish Grid Code to the GB Grid Code changes must recognise the principle of non-retrospective changes, except where they are essential – as enshrined within the Scottish Grid Code and as de-facto accepted by NGC.
- The conclusion on communication requirements within the consultation paper does not recognise the requirements of the TOs to communicate with Users over safety matters.
- While the matter is not of direct interest to SP Transmission, our experience as the current grid operator in the South of Scotland, would lead us to suggest that the arrangement proposed in respect of generation (cascade hydro and the definitions of small, medium and large power station) are overly restrictive.

### **GENERAL COMMENTS**

#### Ofgem's Conclusions on TOs and the GB Grid Code

Ofgem/DTI conclude that it is neither necessary nor appropriate to require the Transmission Owners (TOs) to comply with the GB Grid Code, and that they will be obliged via their licence to be parties to the STC which will include obligations to undertake the activities that are necessary for the GBSO to deliver a service to Users.

If Ofgem/DTI persist with this approach, extreme care will have to be taken to ensure that this model does not compromise detailed technical processes, procedures and standards which affect both Users and TOs.

The consultation describes the role of the GBSO and the Transmission Owners thus: "the GB System Operator will rely on the transmission owners to provide the necessary transmission infrastructure"<sup>1</sup>, and that "the Transmission Owners will also be responsible for planning and developing the transmission network in their respective areas"<sup>2</sup>

"The GB Grid Code will detail the technical requirements to support the design, planning and construction of both the transmission system and the individual user connections"

<sup>&</sup>lt;sup>1</sup> Paragraph 4.4

<sup>&</sup>lt;sup>2</sup> Paragraph 4.6

These technical requirements include both specifications for the design of the transmission system as well as detailing data that must be exchanged between the transmission licensees and Users.

# The Role of the Grid Code

Thus, it is seen that the scope of the Grid Code is wider than that of a document which governs the technical interface between Users and the GBSO. The two existing Grid Codes are designed to permit the development, maintenance and operation of efficient, co-ordinated and economical transmission of electricity by the three existing transmission licensees.

Ofgem/DTI have decided that the TOs will lead planning and development of the transmission system. This is a decision that SP Transmission strongly endorses. However given that the Grid Code is one of the key documents in assisting the TOs in the discharge of this duty, it is inconsistent to then decide that the TOs should not play a key role in the formation of the Grid Code. Accordingly, each TO should have a licence obligation to have in force and to comply with the GB Grid Code.

There should be joint governance of the GB Grid Code, coupled with Standard Licence Conditions to have in force and to comply with a GB Grid Code, and to behave in a non-discriminatory manner. SP Transmission has no difficulty in respect of non-discrimination and the Grid Code.

#### **Prevention of Discrimination**

The one argument that Ofgem/DTI have advanced against this conclusion, is that were the TOs to be a party to the Grid Code, this could allow the TOs to take decisions as to whether to enforce non-compliance of an obligation by a User. SPT accepts that any actions by it under the Grid Code must be seen to be transparent and non-discriminatory. It is for this reason that SPT accept that the current licence obligations imposed on it in respect of non-discrimination and independence should remain.

As a substantive matter, SPT will retain an interest in many of the provisions of the Grid Code – for example matters relating to planning and safety. SPT will under BETTA require users to comply with the Grid Code, either directly or indirectly. There are two mechanisms available for this. Either SPT can require the GBSO to enforce the Grid Code via the STC, or SPT can act directly. Both mechanisms have the same substantive result. Both mechanisms would be transparent, given the involvement of the GBSO, either via the STC or in the Grid Code itself. The TOs would thus be unable to favour affiliated generation. There is thus no reason to exclude the TOs from the Grid Code.

## The Potential Consequences

A result of the separation of the Grid Code from the TOs is that technical standards will have to be specified twice, once in the GB Grid Code and once in the STC. This is in contradiction to the position taken by Ofgem/DTI over the Planning and Operational Standards. Work is currently being undertaken by the Transmission Licensees that should lead to a single set of GB Security and Quality of Supply Standards (albeit with regional variations), with which all the transmission licensees will have a licence duty to comply.

This dual specification of the technical standards applying to the GB Transmission System could lead to confusion. For example, when the TOs are designing new User connections, the TOs will refer to the standards detailed within the STC, while the Users will refer to the standards detailed within the GB Grid Code. If there is inconsistency between the two, this would become a potential area of dispute between a User and the TO via the intermediary of the GBSO who would be bound by both Codes. Similar difficulties could apply to the GBSO were the TO to design and build parts of the Transmission System to the STC technical standards. If these were different to the GB Grid Code, then the GBSO could find itself in breach of the Grid Code.

The net result is that consistency between the two documents – the STC and the Grid Code - will be a major concern. Appropriate and co-ordinated change management processes will be necessary.

# Change Management Co-ordination

It will thus be vital to have efficient change co-ordination between the GB Grid Code and the STC if the difficulties in having conflicting technical standards are to be avoided. In April this year, in a response to a DTI consultation paper, the ScottishPower group expressed major concerns regarding the governance of industry codes, including the inefficiencies arising from the fragmentation of governance, and the inability to consider holistically any proposed changes which impact on more than one code. The BETTA structure in general, and the arrangements for the Grid Code and the STC in particular exacerbate these concerns.

Ofgem/DTI have concluded that the introduction of BETTA per se will not justify the creation of additional measures to support cross-code change management. SP Transmission would argue that there is greater scope for industry fragmentation as a result of BETTA and the introduction of the split transmission licence and in particular the STC. It may prove worthwhile therefore to consider anew an overarching industry governance.

With particular reference to the GB Grid Code, there are specific concerns about the proposed processes which are detailed below.

### Identification of Cross Code Matters

The E&W Grid Code review process is much less formal than the change processes for either the CUSC or the BSC. There is not a formal process for a change request being made by either NGC or a User. There is not therefore an obvious trigger-point for an assessment to be made of whether a specific matter would have an impact upon the STC or not. Were the E&W review process to be carried into the GB Grid Code unchanged – important matters of common interest might not be identified in good time.

### Discussion of Cross Code Matters

If the TOs unaffiliated to the GBSO were not to be formally involved in the discussion of cross code issues, this would constitute discrimination against the non-affiliated TOs compared to the TO affiliated with the GBSO. It would be inappropriate as well as discriminatory to discuss GB Technical standards without the participation of the Transmission licensees who will have the primary responsibility for the design and construction of the GB Transmission System in Scotland. It would also constitute a loss of technical expertise to the whole industry from the non-affiliated TOs. Ofgem/DTI have noted the ongoing and increased co-operation between the two existing GB Grid Code Review Panels. In this the Scottish Transmission Licensees have played a full part in leading the technical debate over the requirements for windfarms. This technical input is at risk of being lost under the proposed model where the unaffiliated TOs are excluded.

#### Existing Arrangements

While Ofgem/DTI note the existing measures for cross-code changes, it is less clear that they have been properly tested in respect of E&W Grid Code changes. While there have been a number of resultant changes to the E&W Grid Code discussed because of changes introduced to either the BSC or the CUSC, SP Transmission are not aware of any changes introduced to either the BSC or the CUSC resulting from E&W Grid Code changes. The effectiveness of cross-code changes in respect of the Grid Code has therefore still to be properly tested.

#### Additional Measures

It is therefore important that measures are taken to enhance cross-code consistency. It is <u>essential</u> that there is

• Formal TO participation in the GB Grid Code Review Panel

Additional measures that could be taken, include, but are not limited to:

- The introduction of a more formal process in the review of the GB Grid Code, including formalising steps to identify whether the matter had cross-code implications
- Cross Code development of changes which would be facilitated by formal governance arrangements
- Co-ordinated consultation and submission of reports to the Authority.

## Governance of Electrical Standards

SP Transmission welcomes the statement by Ofgem that there may be a role for TOs to participate in the governance of electrical standards following submission of new proposals, which are likely to extend the governance of the Grid Code Review Panels to standards which are relevant to the planning and operation of the transmission system.

SPT does not understand the reasoning that leads to the conclusion that it is appropriate for the TOs to participate in the governance of electrical standards, but that it is not appropriate for the TOs to participate in the governance of the GB Grid Code.

Given the TOs lead role in planning the transmission system, it is essential that the TOs participate in the governance of the applicable standards at all level:- the licence security standards, the GB Grid Code and subsidiary electrical standards.

# Safety

In keeping with its emphasis on safety, SP Transmission welcomes early recognition in respect of safety practices and in the numbering and nomenclature of plant. This is an area which has yet to be discussed by the Transmission Licensees and Ofgem, and while unresolved causes SPT Transmission concern.

SP Transmission have previously referred to difficulties with the ESQC Regulations, both in private correspondence with DTI/Ofgem and in the CUSC and STC consultation responses. Under the BETTA model, transmission responsibilities will be split between the TO and the GBSO. The Regulations define both "owners" and "operators" of networks as "distributors" who will have a parallel set of duties and obligations under the Regulations. The difference between the BETTA model and the Regulations need to be critically assessed and if necessary the Regulations will need to be revised to recognise the two different roles.

A further problem with the BETTA model is that it fails to provide an appropriate framework for Users and TOs to co-operate. Under the Regulations,

Generators, distributors, suppliers and meter operators shall - .
(a) disclose such information to each other as might reasonably be required in order to ensure compliance with these Regulations; and
(b) otherwise co-operate amongst themselves so far as is necessary in order to ensure compliance with these Regulations.

The contractual framework proposed for BETTA seems to be inimical to such cooperation and the disclosure of information. For example, it is proposed that essential safety matters between Generators and TOs are no longer dealt with directly between the Generators and the TOs, but via a third party – the GBSO.

For example, matters relating to safety switching in Scotland are currently dealt with under the framework of the Scottish Grid Code, OC6 to which both Generators and

the existing Scottish Transmission Licensees are parties. Under the new proposed arrangements, safety switching will be dealt with in two documents – via the GB Grid Code, OC8 to which the Generator is party, and via the STC to which the Scottish TOs are parties. This approach will damage the co-operation required not only by good practice, but also by statute.

Further examples relate to matters such as site responsibility schedules, the exchange of safety rules between the parties, and exchange of names of authorised switching representatives.

Ofgem/DTI have stated in previous consultations that BETTA will not make any substantive change to existing levels of system safety.<sup>3</sup> To achieve this essential goal, safety must be dealt with in a single framework which encompasses both the TOs and the Users. At present the Grid Code is an essential mechanism in securing the safe operation of the transmission system, co-operation between industry participants, and securing compliance with the Regulations.

SPT would welcome further discussions on this point of important public interest.

# Harmonisation of the Existing Grid Codes

Ofgem/DTI have not laid out any general principles as to how issues arising from the harmonisation of the Grid Codes will be handled. There is some detailed work being carried out in the GB Grid Code Expert Group at the differences between the existing Scottish Grid Code provisions and the E&W provisions. While regional variations are being proposed for some of the provisions of the GB Grid Code, in the majority of cases the existing Scottish Grid Code have the potential to impact both Users and the TOs .While some of the changes may not be material, there is no framework being proposed for any changes which may have a material impact except the derogation route.

This is in contrast to the existing provisions in the Scottish Grid Code, and practice in the E&W code. In the Scottish Grid Code (Connection Conditions 1.3) there is the general statement that

"the Company shall not seek to impose retrospective changes on existing Users where these had not been required in the past, except where the Company can demonstrate a significant and detrimental impact on the Transmission System"

While there is no such general condition in the E&W Grid Code, it has been the practice in revising the Connection Conditions to allowing "carve outs" for preexisting plant. The principle of not applying changes retrospectively was stated by NGC on at least three occasions in their recent report to the Authority on consultation paper  $D/03^4$ .

<sup>&</sup>lt;sup>3</sup> STC Consultation June 2003, para. 5.81

<sup>&</sup>lt;sup>4</sup> "A Report to the Authority" by National Grid on 31st Oct 2003 on Grid Code Consultation on D/03. The statement ""...is not covered by the proposed Grid Code changes given the principle of not

Care must therefore be taken in harmonising the two Grid Codes. It should be recognised that the Scottish Grid Code caters for a network spanning three voltages, while the E&W Code caters primarily for 275kV and 400kV. The wholesale application of conditions from the E&W Code has the potential to cause difficulties.

In accordance with the established principles, there should be no retrospective changes imposed on either Users or the Grid System, unless there is a significant or detrimental impact on the Transmission system, or the changes are necessary for the functioning of the new BETTA arrangements.

### **Communication Requirements**

Ofgem/DTI conclude that the existing E&W communication requirements are appropriate for application in the GB Grid Code and that the responsibility for the provision of SCADA equipment will rest with the GBSO. This is appropriate in respect of the Ofgem model.

The conclusion that existing communication requirements are appropriate is premature. There are obvious missing requirements. For example, as the TOs will be responsible for safety switching, there will be a clear need for communications to be established between the TOs and the Users for this function to be carried out.

The role of the TOs in black start has yet to be fully discussed. This may require appropriate communication equipment to facilitate whatever role is assigned to the TOs under the black start arrangements. Additionally, the role of the TOs will need to be considered in respect of the appropriate Operating Code.

# **Balancing** Codes

The first GB Grid Code consultation raised the issue of whether it was necessary to include special provisions relating to the "group" despatch of cascade hydro plant. It is surprising that DTI/Ofgem are able to come to a conclusion on this issue before the long overdue consultation on small generators was published. It may be appropriate to revisit this conclusion in the light of that consultation and its responses.

NGC noted that for purposes of managing the system securely, charging, granting access, each element of plant should be treated individually. The Scottish Grid Operators are currently able to manage the system securely while treating the despatch as cascade hydro, and it would be disappointing were the GBSO to find difficulties in this matter. While the BSC currently provides for plant to apply to be a single BM Unit, because of the configuration of small hydro plant on the Scottish networks, the current BSC rules may not be rich enough to enable the proper consideration of cascade hydro groups. The proper course of action is for this matter to be considered in the small generators consultation.

applying changes retrospectively" occurs on p166 of the PDF file. Similar statements also appear on pages 260 and 274.

#### **Smaller Generators**

Ofgem recognise that some respondents have asserted that to have regional differences in technical requirements will amount to discrimination. In turn, SPT recognise that the networks have developed to accommodate the differing technical requirements, and that some differences may be required. Ofgem's proposals in respect of Small, Medium and Large Power Stations are clearly discriminatory. The suggestion that varying the definition of a large Power Station across GB, so that in Scotland its size is consistent with the existing central despatch levels, will minimise the necessary disturbance to the existing technical arrangements, is open to debate when the entire framework of the existing Scottish Grid Code is being replaced.