Modification Proposal

MP No: 75
(mandatory by BSCCo)

Title of Modification Proposal *(mandatory by proposer)*:

Introduction Of Zonal Transmission Losses

Submission Date *(mandatory by proposer)*: 5 April 2002

Description of Proposed Modification *(mandatory by proposer)*:

The modification proposes that transmission losses are allocated on a zonal rather than on a uniform system wide basis. Currently under Section T2 of the BSC, Transmission Loss Factors (TLF_{ij}) for all BMUs in all settlement periods are set to zero.

It is proposed that a Transmission Loss Factor Agent (TLFA) be appointed to calculate zonal marginal TLFs for each BMU in a given settlement period. Initially NGC would fulfil this role, however BSCCo could, in principle, choose to carry out this activity in-house or procure such a service from a third party other than NGC. TLFs would be calculated in accordance with the Transmission Loss Factor Methodology (TLFM), which would be set out in detail under the BSC. The methodology for deriving TLFs would be a marginal loss approach the exact form of which would be defined by the Modification Group. A suggested approach is summarised as follows:

- Demand and generation would be determined for all nodes on the system for each settlement period on an ex post basis.
- A load flow model would be run to determine how a small increment of demand is met by a suitable increase in generation spread across all nodes.
- Nodal marginal loss factors would then be derived by repeating this process for each node.
- These would then be grouped into the current TNUoS zones for generators and GSP Groups for demand. *(The Modification Group may wish to consider whether other zonal groupings are more appropriate).*
- The resulting zonal marginal TLF data would be submitted to BSCCo by the TLFA as soon as practicable and preferably in time for the Initial Settlement Run. There would be no scaling of these factors.
- Transmission Loss Multipliers (TLMs) would then be calculated in accordance with Section T2.3.1 of the BSC.

Although this proposal preserves the full marginal loss signals from the network modelling, adjustments ($TLMO^{+}_{j}$ and $TLMO^{-}_{j}$) under T2.3.1 ensure Transmission Loss Multipliers (TLM_{ij}) recover the correct volume of total system losses in each settlement period. In addition, to ensure suppliers can manage the customer billing implications of this proposal implementation before 1 April 2003 is <u>not</u> advised.

<u>Governance of future changes to Transmission Loss Factor Methodology (TLFM)</u>

Given the commercial importance of transmission losses, changes to TLFM would only be permitted by means of a modification proposal. As such changes could only be proposed according to the 'normal' modification rules by energywatch, market participants or NGC. This together with incorporation of the TLFM within the BSC will ensure a rigorous appraisal of any future proposed changes to the losses regime.

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Description of Issue or Defect that Modification Proposal Seeks to Address *(mandatory by proposer)*:

Currently the cost of transmission losses is not accurately targeted at BSC Parties that are to a greater or lesser extent contributing to those losses. The proposal addresses this defect.

By introducing a zonal differentiation in the allocation of losses the proposal will provide appropriate locational signals to parties which will help reduce overall transmission losses in the short-term and encourage more optimal siting of generation and demand in the longer-term. Adoption of a marginal approach ensures that robust economic signals are provided to relevant users.

The current uniform approach to allocation of transmission losses fails to provide appropriate cost signals. It effectively provides hidden cross-subsidies for northern generation and southern demand, whilst unfairly placing additional costs on southern generation and northern demand. The industry has been aware of this long-standing distortion at the heart of electricity trading arrangements, from the inception of the England and Wales Electricity Pool. Indeed OFFER in its 1989 Annual Report stated that their should be locational pricing for the use of NGC's transmission system and made it clear that it envisaged transmission losses should include locational signals.

In 1997 the Pool Executive Committee approved a scheme for the zonal allocation of the cost of transmission losses. Although the project was shelved in the run up to NETA, Ofgem made clear that the issue would be revisited after NETA implemetation. The subject has also been discussed at length in various Ofgem Transmission Access and Losses consultation documents dated December 1999, May 2001 and February 2002.

Impact on Code *(optional by proposer)*:

Changes to Section T2 of the BSC.

Impact on Core Industry Documents *(optional by proposer)*:

Not known.

Impact on BSC Systems and Other Relevant Systems and Processes Used by Parties *(optional by proposer)*:

Likely to impact on supplier's customer billing systems.

Impact on other Configurable Items *(optional by proposer)*:

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Justification for Proposed Modification with Reference to Applicable BSC Objectives *(mandatory by proposer)***:**

The proposal more accurately targets the cost of transmission losses. In so doing it removes the cross-subsidies inherent in the current method for allocation of transmission losses between BSC participants, and hence helps ensure effective competition in the generation and supply of electricity.

The short-term effects are likely to be a reduction in the overall cost of system losses, although the longer-term efficiency gains in terms of influencing the locational patterns of generation and supply are likely to be more significant. Overall, this should assist the Transmission Company in the efficient, economic and co-ordinated operation of the Transmission System.

Details of Proposer:

Name: Peter Bolitho

Organisation: Powergen UK plc

Telephone Number: 024 7642 5441

Email Address: peter.bolitho@pgen.com

Details of Proposer's Representative:

Name: Peter Bolitho

Organisation: Powergen UK plc

Telephone Number: 024 7642 5441

Email Address: peter.bolitho@pgen.com

Details of Representative's Alternate:

Name: Paul Jones

Organisation: Powergen UK plc

Telephone Number: 024 7642 4829

Email Address: paul.jones@pgen.com

Attachments: No