



December 2002

MODIFICATION REPORT
MODIFICATION PROPOSAL P105 –
Introduction of Zonal Transmission
Losses on a Marginal Basis without
Phased Implementation

Prepared by ELEXON on behalf of the Balancing
and Settlement Code Panel

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I DOCUMENT CONTROL

a Authorities

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b Distribution

Name	Organisation
Each BSC Party	Various
Each BSC Agent	Various
The Gas and Electricity Markets Authority	Ofgem
Each BSC Panel Member	Various
Energywatch	energywatch
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d References

- Reference 1 Joint Assessment Report (Version 1.0, 8 November 2002):
- 'Modification Proposal P75 – Introduction of Zonal Transmission Losses'
 - 'Modification Proposal P82 – Introduction of Zonal Transmission Losses on an Average Basis'

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1 SUMMARY AND RECOMMENDATIONS

1.1 Recommendation

On the basis of the analysis and assessment undertaken in respect of this Modification Proposal, and the resultant findings of this report, the Balancing and Settlement Code Panel ('the Panel') recommends that:

Modification Proposal P105 should not be made.

In the event that the Authority determines that Modification Proposal P105 should be made, the Implementation Date should be 1 April 2004, where an Authority determination is received by 17 January 2003¹. Where an Authority determination is received after this date, but before 31 March 2003, the Implementation Date should be 1 October 2004.

The Authority notes that Modification Proposal P105, Modification Proposal P75 (Proposed and Alternative) and Modification Proposal P82 (Proposed and Alternative) are mutually exclusive.

1.2 Background

Modification Proposal P105 'Introduction of Zonal Transmission Losses on a Marginal basis without Phased Implementation' ('P105') was submitted by Powergen on 24 October 2002. P105 proposes the introduction of geographic differentiation of Transmission Loss Factors (TLFs) calculated on a marginal basis, without phased implementation. An identical proposal was considered as a potential alternative to Modification Proposal P75 ('Introduction of Zonal Transmission Losses') (P75) during the Assessment Procedure considering that proposal. The Alternative Modification which was agreed on in the P75 Assessment Procedure was identical to P105 but included phased implementation.

The joint Assessment Report (Reference 1), containing the analysis and recommendation of the Transmission Loss Factor Modification Group (TLFMG) in respect of Modification Proposals P75 and P82, can be found on the BSC Website (www.elexon.co.uk).

BSCCo produced an Initial Written Assessment (IWA) of P105, presented to the Panel on 14 November, which recommended that P105 be submitted to the Report Phase and that P105 should not be made. The Panel agreed with this recommendation on the basis that all the impacts and issues associated with P105 had already been thoroughly assessed and considered by the TLFMG during the P75 Assessment Procedure.

1.3 Rationale for Recommendations

On 12 December 2002, having reviewed the consultation responses received during the Report Phase, the Panel confirmed its provisional recommendations made against the IWA.

The Panel agreed with BSCCo's recommendation in the IWA, and determined that P105 should be submitted to the Report Phase with a provisional recommendation to the Authority that it should not be made. The majority of the Panel agreed that all issues associated with P105 and Proposed Modification P105 itself, including the proposal itself, had already been considered and assessed at by the TLFMG. A majority of the TLFMG had been of the opinion that phased implementation was necessary to better

¹ Please note that, in draft Modification Report, the Implementation Date of 1 April 2004 was proposed to be contingent on receipt of an Authority determination by 17 January 2003 rather than 31 December 2002. The change was made proposed to provide the Authority with further time to reach a determination on P105.

facilitate achievement of the Applicable BSC Objectives. Competition would be promoted by a smooth transition to zonal differentiation of transmission losses and protection of forward contracts made prior to its introduction.

During the Report Phase, a draft Modification Report containing the Panel's provisional recommendations was issued for consultation on 22 November, with a deadline of 2 December for responses. Sixteen responses, representing 52 Parties and 4 non Parties, were received.

Twelve responses, representing 26 Parties and 4 non Parties, supported the Panel's provisional recommendations on the Proposed Modification. Two respondents, representing 24 Parties, disagreed with the Panel's recommendation and 2 respondents, representing 2 Parties, made no comment on the recommendation.

On 12 December 2002, the Panel considered the consultation responses received.

2 INTRODUCTION

This Report has been prepared by ELEXON Ltd., on behalf of the Panel, in accordance with the terms of the Balancing and Settlement Code ('the Code'). The Code is the legal document containing the rules of the balancing mechanism and imbalance settlement process and related governance provisions. ELEXON is the company that performs the role and functions of the BSCCo, as defined in the Code.

This Modification Report is addressed and furnished to the Gas and Electricity Markets Authority ('the Authority') and none of the facts, opinions or statements contained herein may be relied upon by any other person.

An electronic copy of this document can be found on the BSC Website (www.elexon.co.uk).

3 HISTORY OF PROPOSED MODIFICATION

P105 was submitted by Powergen on 24 October 2002. BSCCo produced an IWA and presented it at the Panel meeting held on 14 November 2002. The Panel agreed and submitted P105 to the Report Phase with a recommendation that I should note be made. P105 was issued for consultation on 22 November 2002, with the deadline for responses on 2 December 2002.

A draft P105 Modification Report was issued for consultation on 22 November 2002, with a 2 December 2002 deadline for responses. Sixteen responses, representing 52 BSC Parties and 4 non Parties, were received. The Panel considered the draft report and consultation responses at its 12 December 2002 meeting and unanimously confirmed its provisional recommendation that the Proposed Modification should not be made.

4 DESCRIPTION OF PROPOSED MODIFICATION

P105 proposes the allocation of transmission losses to BM units on a differential rather than a uniform basis.

Under the proposed arrangements, a new BSC Agent, the Transmission Loss Factor Agent (TLFA), would run a load flow model to calculate marginal TLFs on an ex-ante basis. The methodology used to

perform such a calculation would be incorporated in the Code to ensure robust change management. The resulting TLFs, applicable for a month, would then be applied by the SAA to BM Units deemed to be 'generation' grouped by TNUoS Zone and those deemed to be 'demand' grouped by GSP Group.

The following key features of the arrangements are specified in the proposal:

1. the Transmission Loss Factor Methodology (TLFM) would be defined within the Code;
2. the TLFM would be 'fully marginal' (i.e. any form of 'scaling' to attenuate the factors is explicitly ruled out);
3. a DC load flow model would be run by the TLFA to derive marginal TLFs;
4. the network configuration data entered into the model would be representative of an 'intact' network;
5. 'explicit mapping rules' would be established and applied to convert metered volumes into 'nodal' metered volumes for the purpose of modelling;
6. conversion of 'nodal' TLFs to zonal TLFs would be achieved through 'volume-weighted' averaging;
7. conversion of half-hourly zonal TLFs to monthly zonal TLFs would be achieved through 'time-weighted' averaging;
8. the zonal TLFs generated would be applicable for a month and calculated on an ex-ante basis using actual demand and generation data from the corresponding month in the previous year;
9. for purposes of allocating zonal TLFs to BM Units, 'generation' would be grouped by TNUoS Zone and 'demand' by GSP Group; and
10. P105 explicitly excludes the possibility of phased implementation over time. This is the sole difference between this proposal and P75 Alternative Modification.

5 RATIONALE FOR PANEL RECOMMENDATIONS

The Panel agreed with BSCCo's recommendation, and determined that P105 should be submitted to the Report Phase with a provisional recommendation to the Authority that it should not be made. The majority of the Panel agreed that all issues associated with P105 and Proposed Modification P105 had already been considered and assessed at by the TLFMG. A majority of the TLFMG had been of the opinion that phased implementation was necessary to better facilitate achievement of the Applicable BSC Objectives. This was because competition would be promoted by a smooth transition to zonal differentiation of transmission losses and protection of forward contracts made prior to its introduction.

Whilst formulating its recommendations, the Panel noted that a large majority of respondents to the P75 Assessment Procedure consultation supported phased implementation of zonal differentiation of transmission losses (where such a scheme introduced).

6 LEGAL TEXT TO GIVE EFFECT TO THE PROPOSED MODIFICATION

6.1 Proposed Modification: Conformed Version

Attached as Annex 2 to this Report.

6.2 Proposed Modification: Clean Version

Attached as Annex 2 to this Report.

7 ASSESSMENT

BSCCo produced an IWA of P105 which identified the main impacts and issues associated with the proposal to be as follows:

- Sections E ('BSC Agents') , T ('Settlement and Trading Charges'), V ('Reporting') and Annex X-1 ('General Glossary') of the Code would be impacted;
- three of the existing BSC Agents (CDCA, CRA and SAA), their systems and key elements of the supporting documentation (i.e. Service Descriptions and User Requirement Specifications) would be impacted;
- a number of Code Subsidiary Documents (BSCP 01, BSCP 15, BSCP 42, the NETA Data File Catalogue, the Reporting Catalogue and the Interface Definition Document) would be impacted;
- a suite of Code Subsidiary Documents would need to be created for the TLFA (i.e. a BSCP detailing its actions and interactions with Parties and existing BSC Agents, a Service Description and a User Requirement Specification);
- a requirement on NGC to provide the TLFA with appropriate network configuration data to run its 'load flow model';
- ELEXON's market monitoring system (TOMAS) would need to be updated to replicate changes to the existing BSC Agents' systems and flows and to accept any new reporting from the TLFA;
- a requirement on ELEXON to procure and establish a contractual relationship with a new BSC Agent whose purpose is the calculation of zonal TLFs (i.e. TLFA) would be introduced;
- a potential requirement for the Panel to determine certain prerequisites for the production of zonal TLFs (e.g. the distribution of the zones and the 'explicit mapping rules' referred to in P105);
- a potentially significant impact on various BSC Party systems and procedures (e.g. risk management, power pricing and billing); and
- a differential financial impact on BSC Parties depending on the location of their BM Units within England and Wales.

The initial assessment concluded that the issues and impacts associated with P105 would be virtually identical to those associated with Alternative Modification Proposal P75. Moreover, those impacts and issues have already been thoroughly analysed and debated during the P75 Assessment Procedures.

8 SUMMARY OF REPRESENTATIONS

8.1 Report Phase Consultation

This draft Modification Report was issued for consultation on 22 November, with responses due by 2 December 2002. Sixteen responses were received (52 Parties and 4 non Parties). This section provides a summary of those responses, which are attached in full as Annex 1.

Twelve responses (26 Parties and 4 non Parties) supported the Panel's provisional recommendations on the Proposed Modification. Two respondents (24 Parties), disagreed with the Panel's recommendation and 2 respondents (2 Parties), made no comment on the recommendation.

Twelve respondents indicated that they supported the Panel's provisional recommendation that P105 should not be made, and the rationale for that recommendation. Four of those respondents expressed the opinion that were P105 introduced, phased implementation would be essential to smooth the transition from uniform to differential allocation of transmission losses and to protect existing forward contracts. One of the supporters of phasing commented that they would have supported P105 were phased implementation included (i.e. the scheme embodied in Alternative Modification Proposal P75).

Respondents supporting the Panel's provisional recommendation, re-iterated arguments made and issues raised in their responses to the P75 Assessment Procedure consultation. However, the following new points were made:

- no cost-benefit analysis of P105 has been undertaken;
- P105 appears inconsistent with Ofgem's desire for 'shallow connections';
- relationship between Ofgem's consultation on zonal differentiation of losses and its power to decide whether or not P105 should be made constitutes 'abuse of the regulatory process';
- monthly TLFs would result a volatile locational signal; and
- risk that the costs associated with re-allocated losses would be passed on to consumers.

Two respondents indicated that they disagreed with the Panel's provisional recommendation that P105 should not be made. Both stated that, in their opinion P105, better facilitate achievement of the Applicable BSC Objectives. One of those respondents stated that P105 would improve efficiency, promote competition and remove the inherent cross-subsidy contained in the current methodology for the allocation of transmission losses. The other respondent was of the opinion that a marginal zonal losses scheme, without phased implementation, would be required. Not only would a marginal scheme provide the best locational signals, the respondent believes the use of a 0.5 scaling factor would overstate the level of fixed losses on the Transmission System. Phased implementation would delay full realisation of the benefits resulting from P105 and would not be required because the possibility of zonal transmission losses has been known to both investors and market participants alike since 1990.

One respondent made no comment and one suggested several amendments to the proposed legal text which have either been clarified as unnecessary or included where appropriate. The changes made are correction of typographical errors, refinements to the definitions of nodal TLFs and electrical parameters cited in the legal text.

Two respondents noted that, in their opinion, P105 should never have been raised because P105 and the associated issues had already been considered adequately under the P75 Assessment Procedure.

ANNEX 1 – REPRESENTATIONS

See attachment 1

ANNEX 2 – 'CLEAN' LEGAL TEXT (PROPOSED MODIFICATION)

See attachment 2

ANNEX 3 – ‘CONFORMED’ LEGAL TEXT (PROPOSED MODIFICATION)

See attachment 3

