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Interim Report

Modification Proposals P75 and P82

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I DOCUMENT CONTROL

a Authorities

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b Distribution

Organisation
BSC Panel
BSC Parties
BSC Agents
The Authority
National Electricity Consumers Council
Core Industry Document Owners
BSC Website

c Change History

- 0.1 Initial Draft
- 0.2 Final Draft incorporating comments of TLFMG (i.e. Modification Group)
- 1.0 Final Version incorporating comments of Head of Change Delivery

d Intellectual Property Rights and Copyright

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1 SUMMARY & RECOMMENDATIONS

This document is an Interim Report for Modification Proposals P75 and P82, both of which seek the introduction of zonal differentiation of transmission losses into the Balancing and Settlement Code (BSC).

1.1 Background: Modification Proposal P75

Modification Proposal P75 ('P75') was submitted on 5 April 2002 by Powergen. The Modification proposes that transmission losses should be allocated to 'generation' and 'demand' on a zonally differentiated basis, generation would be grouped by TNUos zone and demand by GSP Group. Whilst the BSC recognises that transmission losses could be allocated on a locational basis, the parameters to support this, the Transmission Loss Factors (TLFs), are currently set to zero. At present, allocation is on a uniform basis, with a defined split between 'generation' and 'demand'.

Under P75, a Transmission Loss Factor Agent (TLFA) would be appointed to calculate half-hourly TLFs on an ex-post basis using a 'fully marginal' methodology.

The Proposer believes that the introduction of such zonal differentiation of transmission Losses would more accurately target the cost of such losses on those market participants responsible for them, thus removing the inherent cross-subsidy that dampens cost signals in the current method of allocating losses. In the short-term, the Proposer asserts that the removal of such cross-subsidies would provide locational signals to help reduce overall transmission losses. In the long-term, the Proposer asserts that more efficient locational signals would encourage 'more optimal' siting of generation and demand.

ELEXON produced an Initial Written Assessment (IWA) recommending that P75 should be submitted to a 1-month Definition Procedure in order to identify the detail absent in the proposal and identify the issues that would need to be considered during an Assessment Procedure. The Panel endorsed ELEXON's recommendation on 18 April 2002, requesting that a Definition Report be presented at the 16 May 2002 Panel meeting. The Panel indicated that the Definition Procedure ought to be used to establish terms of reference for an Assessment Procedure and identify the issues that would need to be assessed.

A Modification Group, the Transmission Loss Factor Modification Group (TLFMG), was established to provide the appropriate expertise to take P75 forward. The TLFMG met twice, on 29 April 2002 and 7 May 2002, to consider the responses received to a consultation exercise undertaken and to establish the requirements of any future Assessment Procedure. On the basis of those requirements, primarily the need to tender for and obtain a modelling service to help assess the impact of P75 and run a seminar to raise industry awareness of P75, the TLFMG produced a Definition Report recommending a 6-month Assessment Procedure. At its 16 May 2002 meeting, the Panel agreed to submit P75 to a 6-month Assessment Procedure, with an Assessment Report scheduled to be presented at the 14 November Panel meeting. In addition, the Panel agreed to the TLFMG's recommendation to provide an Interim Report on 18 July 2002.

1.2 Background: Modification Proposal P82

Modification Proposal P82 ('P82') was submitted on 3 May 2002 by First Hydro Company. The Modification proposes the application of zonal differentiation of transmission losses on an average, as opposed to marginal, basis to generation and demand. The Proposer recommends grouping both generation and demand into zones based on GSP Groups. At present, allocation is on a fixed and uniform basis, aside a defined split between production and consumption. As mentioned previously,

whilst the Code recognises that transmission losses could be allocated on a locational basis, the parameters to support this, the Transmission Loss Factors (TLFs), are currently set to zero.

Under P82, a new BSC Agent would be appointed to calculate annual TLFs, on an ex-ante basis, using a methodology to be specified in the BSC.

The Proposer believes that the introduction of such zonal differentiation of transmission losses would introduce long-term signals for the siting of generation and demand by allocating losses in such a manner that does not unduly penalise individual BM Units. In addition, losses would be allocated only according to the degree to which individual BM Units give rise to losses.

ELEXON produced an IWA recommending that P82 should be submitted to a 6-month Assessment Procedure, and considered in parallel to P75 by the TLFMG given that the proposals seek to remedy the same perceived defect. The Panel, at its 16 May 2002 meeting, agreed to the recommendation and that an Assessment Report should be presented on 14 November 2002, with an Interim Report on 18 July 2002. Unlike for P75, ELEXON did not recommend a Definition Procedure because, whilst a number of the elements of P75 remained to be described, P82 provides a more comprehensive description of what is proposed.

1.3 Assessment Procedure: Progress to Date

To date, the full TLFMG has met four times as part of the Assessment Procedure for P75 and P82. Through those meetings, the TLFMG has achieved the following:

- ◆ a high level assessment of the two proposals (see Section 2 of this report);
- ◆ commissioned and received a High Level Impact Assessment (HLIA) from the BSC Central Service Agent against making BSC Systems capable of handling half-hourly variations in TLFs (see Section 3 of this report);
- ◆ produced a requirement specification and a recommended tender process for the modelling service that the TLFMG intend to obtain (see Section 4 of this report); and
- ◆ established the consultation requirements and an outline of the proposed seminar (see Section 5 of this report).

In addition to the full meetings of the TLFMG, two subgroups, composed of volunteers from the full group, met once each and achieved the following:

- ◆ a modelling subgroup developed an initial draft of the requirement specification for the modelling service; and
- ◆ a data subgroup established the details of the input data that would need to be made available to the provider of the modelling service and where and by whom that data is held.

The requirement specification developed by the modelling subgroup and finalised by the full TLFMG is attached as Annex 1 of this report.

Finally, the TLFMG came to the conclusion that modelling the interaction of the two proposals with BETTA would not be practical given the time available under the Assessment Procedure. Generating meaningful results would require a Scottish data set and the modelling of the Scottish transmission network. In addition, the TLFMG noted the observation made by the Authority representative at its meetings, that the *vires* of the BSC was limited to England and Wales. As a result, the TLFMG propose

giving no further consideration to any interactions with the Scottish network, beyond the interconnectors.

In addition to the work undertaken by the TLFMG, ELEXON produced a High Level Impact Assessment (HLIA) of the procurement of a new BSC Agent, which both proposals stipulate.

1.4 Recommendations

On the basis of the assessment undertaken thus far, the TLFMG invites the Panel to:

- (a) NOTE the contents of this Interim Report;**
- (b) NOTE the contents of the modelling service requirement specification attached as Annex 1 of this report;**
- (c) APPROVE, in accordance with BSC F2.6.8, the budgetary provisions to undertake the modelling; and**
- (d) AGREE to the TLFMG's proposal not to undertake any further assessment of the interaction of P75 and P82 with BETTA.**

2 ASSESSMENT

The assessment carried out by the TLFMG to date has had four aspects. First, the Applicable BSC Objectives were interpreted in relation to the two proposals. Second, a methodology for carrying out an impact assessment of the two proposals was agreed. Third, a high level assessment of some of the general principles embodied in the two proposals and their implications was carried out. Finally, the TLFMG focused on some more specific issues, to ensure that all elements included in the Terms of Reference for the Assessment Procedure set by the BSC Panel (available at www.elexon.co.uk), where possible, were covered.

In addition to the assessment carried out by the TLFMG, ELEXON produced a High Level Impact Assessment (HLIA), an initial estimate of the time and cost implications, of the procurement of a new BSC Agent to generate TLFs.

2.1 Interpretation of the Applicable BSC Objectives

The TLFMG first gave some consideration as to which of the Applicable BSC Objectives might be relevant in the context of the two proposals. The conclusion was that Objectives C3.3 (b), (c) and (d) were relevant:

- (b) The efficient discharge by the Transmission Company of the obligations imposed under the Transmission Licence.
- (c) Promoting effective competition in the generation and supply of electricity and (so far as is consistent therewith) promoting such competition in the sale and purchase of electricity.
- (d) Promoting efficiency in the implementation and administration of the balancing and settlement arrangements.

The TLFMG also considered what specific features might relate to the above objectives. This consideration took account of legal advice provided to the Panel in respect of the Applicable BSC Objectives (in a memo dated 7 March 2002) and resulted in the following conclusions:

Objective (b):

- ◆ Efficient operation of the Transmission System has three components:
 1. efficient despatch (i.e. least-cost use of generation to meet total demand, including losses), whether arranged by market participants or the System Operator;
 2. efficient conduct of operations and investment in the transmission system; and
 3. efficient location of demand and generation (so as to induce efficient investment in the transmission system).
- ◆ The primary measure of change in efficiency should be the likely impact on costs, both short term (despatch) and long term (investment). In this context, the impact on costs would be limited to avoidable costs and would exclude the sunk costs of existing producers, consumers and traders. Costs might include environmental costs.
- ◆ The other potential impact on efficiency is that arising from changes in demand and, hence, in benefits to consumers (i.e. 'consumer surplus'). In this case, efficiency increases if consumers consume more electricity than before, at a price no lower than the additional

(marginal) cost of producing it, or if consumers cut demand that they valued less than the marginal cost of production.

Objective (c):

- ◆ In the first instance, the TLFMG noted that, since competition is a tool that produces efficient outcomes, in practice they must mean the same thing. Hence, an outcome that does not promote efficiency cannot promote competition.
- ◆ The TLFMG also considered the concepts of 'discrimination', 'cross-subsidy' and 'predatory pricing'. In practice, it was considered that the interpretation of such concepts was that new arrangements should promote efficient new entry, or prevent inefficient exit from the market. Conversely, promoting inefficient competitors would be subsidisation, not competition.
- ◆ As per the advice to the Panel, implementation costs to participants would be considered against this Objective, in so far as potential barriers to entry may arise. However, since the number of competitors is not necessarily a measure of the degree of competition, the above points relating to efficiency would also need to be borne in mind, when considering the cost of the proposals to participants.
- ◆ The TLFMG noted the points made in the advice to the Panel, specifically that the scope of costs to be considered would be those costs relating to the generation, supply, sale and purchase of electricity. Other costs, such as those relating to distribution, could be noted, if necessary.

Objective (d):

- ◆ Noting the advice to the Panel in respect of this Objective, the TLFMG considered that the key issue in this context was the impact on ELEXON's costs for the implementation and administration of the BSC central systems.

2.2 Impact Assessment Methodology: Cost-Benefit Analysis

The approach that the TLFMG has agreed is to undertake some form of cost-benefit analysis. This approach entails establishing a 'net present value' of the proposed arrangements by applying some financial value to all costs and benefits. Various components of this analysis could then allow consideration of the above Applicable BSC Objectives, as follows:

- ◆ cost of implementing and administering central systems (i.e. the procurement of a new BSC Agent) or an alternative implementation approach (Objective (d));
- ◆ cost of implementing and administering participant systems and renegotiation of contracts (Objective (c));
- ◆ costs and benefits of changing the location of demand and generation. Short term costs or benefits would be associated with changes in patterns of output, interconnector flows and demand (Objective (b)). Long term costs or benefits would arise from changes in the location of generation capacity, interconnector capacity and demand, including changes in investment in generation and transmission (Objectives (b) and (c));
- ◆ costs and benefits arising from changing risk patterns due to the new arrangements (Objectives (b) and (c)); and
- ◆ costs and benefits arising from changes in overall emissions due to changes in the type of generation and the transportation of primary fuel (Objectives (b) and (c))

In order to provide an initial view of the potential short-term benefit to generation resulting from zonal differentiation, the TLFMG noted the work undertaken by NGC¹. This work suggested a benefit of some £3m per annum, due to the reduction of overall system losses, as a result of zonal differentiation. The TLFMG noted the following key assumptions that underpinned this work:

- ◆ the generation, demand and network data used in the study were the 2001/2 forecasts for the year 2003/04;
- ◆ the economic ranking order of generation (based on market reporting, intelligence and historic data) was modelled first without, and then with, adjustment for locational TLFs; and
- ◆ the TLFs used were the marginal zonal TLFs for peak demand that were published in National Grid's 2001/2 Seven Year Statement.

The short-term impact of applying the TLFs to generation was estimated in terms of the total reduction in variable transmission losses, with electricity priced at £20/MWh. It should be noted that this work was undertaken prior to the introduction of NETA.

2.3 High Level Assessment of General Principles

The TLFMG, with the Applicable BSC Objectives and the agreed impact assessment methodology in mind, carried out a high level assessment of three of the general principles embodied in the two proposals.

2.3.1 Generation of TLFs: 'Fully Marginal' versus 'Scaled Marginal' Methodologies

In the initial consideration of this aspect of the two proposals, no one present favoured a 'fully' marginal over a 'scaled' marginal approach to zonal differentiation of transmission losses. However, it should be noted that the Proposer of P75 was not present at the meeting.

The Proposer of P82, explained that she had recommended a scaled marginal approach so that heating losses (the variable component of transmission losses) would not be over-recovered.

The TLFMG noted the lack of support for a 'fully' marginal approach amongst those present at the meeting and recognised that the modelling work would enable some quantification of the relative impact of the two approaches.

2.3.2 Ability of Market Participants to Respond to 'Locational Signals'

A view was put forward as to why the demand-side ought to be excluded from any zonal differentiation of transmission losses. It was first suggested that the purchase was not a core activity for demand and that the cost of electricity was not a key determinant in the siting decisions of demand. As a consequence, the demand-side (i.e. domestic, commercial and industrial electricity consumers) would not respond to the locational siting signals resulting from zonal differentiation. Secondly, it was suggested that, should zonal differentiation be introduced, the current signal to load manage, primarily driven by Triad avoidance, could be reduced because sharpened locational signals might result in NGC attenuating the existing locational signals contained in their charging regime to compensate. Finally, it was noted that introducing zonal differentiation, given the uniform 'Use of System' charges incurred by suppliers in the same TNUoS zone, would not enhance competition in supply. Therefore, Applicable BSC Objective (c) would not be better facilitated by either P75 or P82 as they stand.

¹ The work was carried out in response to the Authority consultation document entitled 'Transmission Access and Losses under NETA: a Consultation Document' (May 2001) and subsequently reported in the Authority document entitled 'Transmission Access and Losses under NETA: Revised Proposals' (February 2002). Both documents are available on the Ofgem website (www.ofgem.gov.uk).

There was some support for the above views about demand and that such arguments could apply equally to CHP and renewable generators. These types of generators make siting decisions based on a specific set of factors, such as proximity to an energy source (e.g. wind-farms) or an industrial process (e.g. CHP), that inhibit their flexibility to respond to other locational signals.

However, the point was made that the same logic could equally be applied to any form of generation. For example, coal-fired plant needed to locate either close to its fuel supply (i.e. close to coalfields) or in area providing easy access to such a supply (e.g. a port).

The TLFMG was divided as to whether demand, CHP, or renewable generation were special cases regarding their ability to respond to locational signals.

One observation was that one should not presume that locational decisions were the only means to respond to locational signals. For example, being located in an unfavourable transmission loss zone might prompt a CHP plant to invest in increasing its efficiency. Similar opportunities to increase efficiency might exist for the demand-side. For example, in the case of an ex-post zonal differentiation scheme, those suppliers best able to manage the resulting commercial risk would be able to establish a competitive advantage. It was also noted that a distinction could be made between existing and future generation or demand.

Finally, it was pointed out that different treatment of transmission losses for generation and demand would create a distortion in the market. Furthermore, it was suggested that excluding demand from zonal differentiation would result in no signal for demand to locate close to generation.

The TLFMG was divided as to whether the Applicable BSC Objectives would be better facilitated if demand were excluded from zonal differentiation of transmission losses. As a consequence, the TLFMG concluded that appropriate consultation questions might shed further light on the responsiveness of various groups of market participants.

2.3.3 Phased Implementation of Zonal Differentiation

The TLFMG are currently considering three options for phasing in the implementation of either of the two approaches. This consideration is being given without prejudice to the overall assessment of the Modification Proposals themselves. These options may be summarised as follows;

- ◆ Application of a uniform scaling factor to the TLFs: this approach entails the application of a factor (beta) to the TLFs, which would reduce the degree of zonal differentiation. This factor would periodically be increased, ultimately reaching an enduring value, such that the full impact of the particular approach was enabled.
- ◆ Application of 'F' factors to individual BM Unit losses: this approach entails a pre-determined amount of a BM Unit's metered volume being exposed to uniform transmission losses and the remainder being exposed to a zonally differentiated TLF.
- ◆ Application of factors on the basis of new-build or incumbent status: this approach entails the use of some attenuating factor on individual TLFs to reduce the extent of any additional cost arising from the TLF for existing generation and demand.

The TLFMG's approach is to consider the costs and benefits of each of the above proposals and determine which, if any, better facilitate achievement of the Applicable BSC Objectives.

2.4 Specific Issues

The final element of the assessment carried out by the TLFMG was the consideration of issues arising from specific elements of the two proposals. The issues assessed were designed to cover, where possible, all elements of the TLFMG's Terms of Reference. The following subsections summarise the conclusions, if any, that the TLFMG reached on each of the issues.

2.4.1 Impact on the Market as a Whole

This particular aspect of the Terms of Reference included consideration of market length and impact on different market participant categories (both by location and by type). The TLFMG noted that consideration of market length was, essentially, a consideration of the perception of the differing risk associated with an ex-ante and an ex-post approach to zonal differentiation. Modelling is expected to yield some view as to what these risks might be and how they might compare. In addition, consultation should address the perceptions of participants in respect of the risk involved.

2.4.2 Accuracy of 'Locational Signal' versus Increased Cost/Complexity/Volatility

This issue will be a key determinant as to the relative merits of the two proposals. This consideration will extend both to the TLFs and to the consequent TLMOs.

2.4.3 Additional Risk Introduced and Potential for Mitigating Measures

The TLFMG consider that the risks fall into two main categories; short-term risks associated with the uncertainty of TLFs or TLMOs and long-term risks associated with changes in market participant behaviour. The potential mitigating measures were considered to be largely those of phased implementation and/or the smoothing of TLFs or TLMOs.

2.4.4 Proposed Zonal Groupings for Generation and Demand TLFs

The TLFMG noted that the use of TNUOS charging zones as zonal groupings for generation, as specified under P75, entailed reliance in the BSC on parameters that are external to the BSC and under a different governance regime. Notwithstanding this, the TLFMG will consider this further via the proposed modelling exercise.

2.4.5 Impact on the 45:55 Allocation of Losses between Generation and Demand

The TLFMG undertook an analysis of the two proposals and concluded that the current split would be retained under each proposal.

2.4.6 Interactions with Wider Issues

2.4.6.1 Interaction with Other Proposed Modifications to the BSC

The TLFMG have not identified any other Modification Proposals with which there is a potential interaction.

2.4.6.2 Factors Affecting the Siting Decisions of Generation and Demand

The TLFMG have recognised that such factors could contribute to the assessment of the two proposals and will seek participant views on this issue through consultation.

2.4.6.3 Interaction with Related Relevant Governance Structures

The TLFMG noted that, if zonal differentiation were introduced, NGC would review its 'Use of System' charging methodology in order to ensure that the overall locational signals to transmission users were not overstated.

2.4.6.4 Interaction with Relevant Major Industry Initiatives (including BETTA)

The TLFMG came to the conclusion that modelling the interaction of the two proposals with BETTA would not be practical given the time available under the Assessment Procedure. Generating meaningful results would require a Scottish data set and the modelling of the Scottish transmission network. In addition, the TLFMG noted the observation made by the Authority representative at its meetings, that the vires of the BSC was limited to England and Wales. As a result, the TLFMG propose giving no further consideration to any interactions with the Scottish network, beyond the interconnectors.

It was also recognised that the transmission access initiative might need to take due account of the losses regime in place at the time.

2.4.6.5 Experience of Other Markets with Relevant Transmission Loss Schemes

The TLFMG have gathered some information on how other markets deal with transmission losses and these will be used in the assessment, as appropriate.

2.5 HLIA of Procurement of a New BSC Agent

ELEXON produced a HLIA of the procurement of a new BSC Agent to generate zonally differentiated TLFs, which is stipulated under both proposals.

The HLIA estimates that the introduction of a new BSC Agent would require a formal and competitive procurement project. Typically, completion of such a project would take between 5 to 6 months. Depending on ELEXON's workload at the time, and hence the need or otherwise to out-source elements of the work, a budget of between £75k to £100k would be required for the project were either of the proposals approved.

3 IMPACT ON SYSTEMS

The Assessment Procedure will need to establish the impact of the two proposals on both the BSC Central Systems, including the impact of introducing a new BSC Agent, and Party systems.

3.1 Impact on BSC Central Systems

Having established that, at present, the BSC Central Systems can only support variation in TLFs by Settlement Day, the TLFMG requested an impact assessment from the BSC Central Service Agent for the introduction of the necessary functionality to support the variation in TLFs by Settlement Period required under P75.

The High Level Impact Assessment (HLIA) received from the BSC Central Service Agent, attached as Annex 2 of this report, indicates that introducing such functionality into the BSC Central Systems would require changes to the CRA, SAA and BMRA systems and flows. These changes are estimated to cost in the region of £230,100 (excluding VAT) and take 14 weeks to implement.

A comprehensive Detailed Level Impact Assessment (DLIA), covering all elements of both proposals, will be sought at a later stage in the Assessment Procedure.

3.2 Impact of New BSC Agent on BSC Central Systems

In addition to the development and operational costs of the new BSC Agent's systems, the impact of the introduction of such an agent on the existing BSC Central Systems will need to be established. The costs to be established include the following:

- ◆ the cost of assessing the impact of introducing the new BSC Agent on the BSC Central Systems; and
- ◆ the cost of any system development required from the BSC Central Service Agent to implement any consequential changes arising from the impact assessments, plus the ongoing operations cost for running those new functions.

3.3 Impact on Party Systems

The impact of the proposals on Party systems will be established through consultation later in the Assessment Procedure.

4 MODELLING TO SUPPORT ASSESSMENT

To support assessment of P75 and P82, ELEXON, on behalf of the TLFMG, is seeking to obtain a modelling service to model, amongst other things, the magnitude and variability of TLFs under each of the proposed schemes. Modelling is considered essential to gain an insight into the potential impact of the proposals on market participants and the market as a whole.

4.1 Requirement Specification

A requirement specification for the modelling service that ELEXON is seeking to obtain is attached as Annex 1 of this report.

4.2 Invitation to Tender Process

In order to meet the overall Assessment Procedure timetable, it has been necessary to set challenging timescales for the modelling activity (approximately four weeks of elapsed time). In the expectation that the core element of such a modelling package would be proprietary software, the judgement of the TLFMG is that the cost for the activity should fall below £100k. Having considered this advice, ELEXON has decided that an 'OJEC Notice' and subsequent procurement is not required and that it would be more appropriate to invite various interested parties to bid for this work.

ELEXON feels that given the complex nature of the requirement and the challenging timescales for delivery, it is appropriate to run an 'Invitation to Tender' (ITT) process and the TLFMG has given its support to this proposal. This involves the appointment of a Tender Evaluation Board and ELEXON has provisionally agreed with the TLFMG that the Tender Evaluation Board shall constitute three TLFMG members, the P75/P82 Lead Analyst and ELEXON's Change Delivery Commercial Planning Manager.

The main functions of the Tender Evaluation Board shall be to review and agree:

- ◆ the ITT Methodology;
- ◆ the Potential Bidders List;
- ◆ the Requirement Specification;
- ◆ the Invitation To Tender (incorporating the Requirement Specification);
- ◆ the Evaluation Criteria & Model; and
- ◆ the Tender Evaluation Report (including a recommendation for Award of Contract).

For budgetary and contractual reasons, it shall be ELEXON's responsibility to appoint the successful bidder based on the TEB's recommendations. The Tender Evaluation Report shall be presented to ELEXON's Chief Executive who shall then make the final decision as to which shall be the successful bidder.

With regard to the Potential Bidders' List, the TEB has considered the TLFMG's view that the modelling service could most efficiently be provided by load-flow modelling specialists, and has agreed that a Potential Bidders List should form the basis of those invited to tender. The shortlist itself, as agreed by the TEB, is as follows:

- ◆ Department of Electrical Engineering and Electronics, UMIST
- ◆ School of Engineering, University of Durham

- ◆ Department of Electronic and Computer Engineering, Brunel University
- ◆ PB Power Limited (Newcastle-upon-Tyne)
- ◆ Power Technologies International (Knutsford, Cheshire)
- ◆ NGC

The above parties have already been informed that an ITT will be issued for this work.

4.3 Budgetary Provision

On the basis of the TLFMG's judgement that the cost of the modelling service should fall below £100,000, the Panel is invited to agree to the necessary budgetary provision to cover the cost.

5 SEMINAR & CONSULTATION

To support the Assessment Procedure, the TLFMG intend to raise industry awareness of the two proposals, and their potential implications, and then undertake a consultation exercise to elicit industry opinion on the merits or otherwise of each proposal.

5.1 Seminar

The proposed seminar is currently scheduled for 24 September 2002, so that it may be informed by the results of the modelling service obtained by ELEXON. It is anticipated that the seminar will comprise the following key elements:

- ◆ An overview of the purpose of the seminar (i.e. to inform the consultation exercise);
- ◆ An overview of the modification procedure followed to date;
- ◆ A presentation on P75 by the Proposer (including Q & A);
- ◆ A presentation on P82 by the Proposer (including Q & A);
- ◆ An overview of the assessment carried out to date and any provisional conclusions;
- ◆ A series of short presentations on market participant perspectives (e.g. a vertically integrated player, an embedded generator, a CHP generator and a industrial customer);
- ◆ A general Q & A session.

5.2 Consultation

Having organised and conducted the seminar, the TLFMG will undertake a consultation exercise to elicit opinion on key aspects of the proposals and seek DLIA's from market participants to help gauge the potential impact of the proposals on industry.

ANNEX 1 – REQUIREMENT SPECIFICATION

See attachment.

ANNEX 2 – BSC CENTRAL SERVICE AGENT HLIA

<u>NETA Change Form</u>
Title: Introduction Of Zonal Transmission Losses.
Identified by: Powergen UK

Statement of requirement
Baseline affected: NETA Service Definition Baseline (V1.0)
Assumed changes over baseline: None
Description of Change: See attached original MP75.
Proposed solution: See attached original MP75.
Justification for Change: See attached original MP75.
Proposed changes to Service Levels: None
Proposed changes to the Agreement: None
Attachments/references: MP75.

To be completed by Logica		
	High Level Impact Assessment	Detailed Level Impact Assessment
Tick which stage is being completed:	✓	
Signed by Logica Contract Manager:		
Date:	24-Jun-2002	
HLIA category: Large		Price for DLIA: £12 800
If this is a Quotation, are consequential modifications needed to the DLIA? Yes/No.		

Logica's proposal
Logica's understanding of the requirement: Transmission Losses are currently allocated as zonal rather than on a uniform system-wide basis. This Modification aims to make Transmission Loss Factors (TLFs) vary by Settlement Period for each BM Unit (i.e. TLFij) rather than by Settlement Day for each BM Unit as is currently the case.

Logica's proposed design solution:

Database changes:

- removal of TLF column from BM Unit Detail
- creation of new TLF table

CRA

CRA-F032 Maintain Transmission Loss Factors: add explanation that TLF is specified for individual periods rather than date ranges.

6 Interface Requirements: update to reflect changes in flows as per CRA-Innn specific changes

CRA-I015 Issue BM Unit (etc) Data:

- remove TLFij from BM Unit Registration
- add sub group within BM Unit Registration: Date, plus 46 48 or 50 TLF values

CRA-I020 Issue Operations Registration Data

- remove TLFij from BM Unit Registration
- add sub group within BM Unit Registration: Date, plus 46 48 or 50 TLF values

CRA-I029

split into two. One (manual) will have Alpha, and the other (electronic) will have TLF: BM Unit Transmission Loss Details:

BM Unit ID

Date; TLF[1], ... TLF[46], (TLF[47], TLF[48], (TLF[49], TLF[50]))

(implementation: new electronic file loader to load TLF data)

appendix - Logical Data Model

- remove attribute TLF from BM Unit Detail
- add new table (Date; Period; TLFij) as child records of BM Unit

SAA

SAA-F007 (implementation: select TLFij from new TLF table for period specific value in place of BM Unit Detail)

SAA-I001 Receive Registration Data

- remove TLFij from BM Unit Registration
- add sub group within BM Unit Registration: Date, plus 46 48 or 50 TLF values (no implementation impact as shared database)

SAA-I014 (implementation: select TLFij from new TLF table for period specific value in place of BM Unit Detail)

appendix - Logical Data Model

- remove attribute TLF from BM Unit Detail
- add new table (Date; Period; TLFij) as child records of BM Unit

BMRA

BMRA-F003 (implementation: select TLFij from new TLF table for period specific value in place of BM Unit Detail)

BMRA-I001 Receive Registration Data

- remove TLFij from BM Unit Registration
- add sub group within BM Unit Registration: Date, plus 46 48 or 50 TLF values (implementation: change to load new structure into new TLF table)

appendix - Logical Data Model

- remove attribute TLF from BM Unit Detail
- add new table (Date; Period; TLFij) as child records of BM Unit

Manual changes: remove TLF handling

Testing		
Integration: TLF loaded into CRA. CRA publish to SAA & BMRA; SAA & BMRA calculations; SAA report - check computed values & reported TLF correct. BMRA: check computed results correct.		
System: functional testing of CRA loader & all reports functional testing of SAA calculation using TLF loaded by CRA & S014 reports functional testing of BMRA loader & calculation using loaded data		
Regression tests: update to tests which use non-zero TLF change in test cases to prove TLF works		
Consequential changes to Project Deliverables:		
CRA, SAA, BMRA		
CRA URS [CRA-I015, CRA-I020, CRA-I029, CRA-F032]		
SAA URS [SAA-I001, SAA-F007, SAA-I014]		
BMRA URS [BMRA-I001, BMRA-F003]		
IDD [Chapter 3, lxxx as per URS changes and spreadsheet]		
OSM, MSS		
Consequential impact on BSC Service Users or Other Service Providers:		
Testing strategy:		
<ul style="list-style-type: none"> • Testing will only be performed on our own system with external interfaces being simulated as necessary. No allowance has been made for testing with external systems. • No allowance has been made for ELEXON to witness testing. 		
Management plan for developing the Change:		
Project plan for developing the Change:		
The estimated time to complete the development of this change is 14 weeks.		
Method of deployment:		
Patch	Is a planned outage required? Yes	
Price for Design and Build:		
Item description:	Price (ex VAT)	Type of price:
CRA, SAA and BMRA changes.	£230 100	Fixed
Price for Operate and Maintain:		
Item description:	Price per month (ex VAT)	Type of price:
Operate	£0	Fixed
Maintain	£2 685	Fixed
If this is a DLIA or Quotation, is a price breakdown in the agreed format attached? Yes/No		

Terms attaching to the offer	
Validity period of offer: 30 days	Type of offer: Indicative
Assumed start date:	
Payment milestones: Logica will invoice 30% on receipt of Purchase Order or authorised start of work, 50% on completion of acceptance tests, 20% on deployment or one month after completion of acceptance tests, whichever is sooner.	
Document turnaround time: 5 days	
Impact on Service Levels: None	
Impact on performance of the System:	
Other terms:	
If this is a Quotation, is a draft contract amendment attached? Yes/No	
Responsibilities of ELEXON:	
<ul style="list-style-type: none"> For all DCRs which is subject to review, Logica shall provide one draft issue and a maximum of 5 working days has been allowed for ELEXON to review and comment on the updates. Comments will be addressed and the final issue will be provided. A maximum of 2 working days has been allowed for review confirmation and signoff by ELEXON. Within reasonable levels, ELEXON will make available appropriate staff to assist Logica during the development of this change. 	
Assumptions made by Logica:	
<ul style="list-style-type: none"> Price is for a separate patch to be deployed after Release 2. Price and duration assume that this change is developed in isolation and the effects of other changes are excluded. Price excludes provision for indexation of daily rates from 1st April 2003. Price is for creating DCRs, not a formal documentation issue. Deployment of any software on the Participant Test Environment is outside the scope of this impact assessment. It is assumed that TLFs will continue to be received by CRA from BSCCo, but that the interface will now be electronic reflecting the increase in volumes. It is assumed that where no TLF is available, the TLF will default to zero. It is assumed that if BMRA is to use TLF this will be provided to CRA before 2 p.m. the business day before the settlement day to which the data applies. An alternative would be to implement direct feed of TLM into BMRA if these details are deemed to come in late. 	
Options and alternatives:	