

DEFINITION REPORT for Modification Proposal P216 'Audit of LLF Production'

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This document has been distributed in accordance with Section F2.1.10 of the Balancing and Settlement Code.¹

P216 seeks to provide additional assurance to the industry and the BSC Panel that the Line Loss Factors (LLFs) they are approving are accurate and consistent with the methodology published. P216 proposes that this assurance is achieved through the auditing of these methodologies and the use of spot checks on the allocation of the correct Line Loss Factor Classes (LLFCs) to Metering Systems. P216 further seeks to ensure that Line Loss Factors are not changed part way through a year.

MODIFICATION GROUP'S RECOMMENDATIONS

The P216 Modification Group invites the Panel to:

- **AGREE that P216 should proceed to the Assessment Procedure;**
- **AGREE the Assessment Procedure timetable such that an Assessment Report should be completed and submitted to the Panel for consideration at its meeting of 14 February 2008; and**
- **AGREE any amendments to the Modification Group Terms of Reference for the Assessment Procedure.**

¹ The current version of the Code can be found at <http://www.elexon.co.uk/bscrelateddocs/BSC/default.aspx>.

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SUMMARY OF IMPACTED PARTIES AND DOCUMENTS

As far as BSCCo has been able to assess, the following parties/documents would be impacted by P216.

Please note that this table represents a summary of the results of BSCCo's initial assessment as contained in the P216 Initial Written Assessment (IWA). A full impact assessment will be undertaken during the Assessment Procedure

Parties	Sections of the BSC	Code Subsidiary Documents
Distribution System Operators <input checked="" type="checkbox"/>	A <input type="checkbox"/>	BSC Procedures <input checked="" type="checkbox"/>
Generators <input checked="" type="checkbox"/>	B <input checked="" type="checkbox"/>	Codes of Practice <input type="checkbox"/>
Interconnectors <input type="checkbox"/>	C <input type="checkbox"/>	BSC Service Descriptions <input type="checkbox"/>
Licence Exemptable Generators <input checked="" type="checkbox"/>	D <input type="checkbox"/>	Party Service Lines <input type="checkbox"/>
Non-Physical Traders <input type="checkbox"/>	E <input checked="" type="checkbox"/>	Data Catalogues <input type="checkbox"/>
Suppliers <input checked="" type="checkbox"/>	F <input type="checkbox"/>	Communication Requirements Documents <input type="checkbox"/>
Transmission Company <input type="checkbox"/>	G <input type="checkbox"/>	Reporting Catalogue <input type="checkbox"/>
Party Agents	H <input type="checkbox"/>	Core Industry Documents
Data Aggregators <input type="checkbox"/>	I <input type="checkbox"/>	Ancillary Services Agreement <input type="checkbox"/>
Data Collectors <input type="checkbox"/>	J <input type="checkbox"/>	British Grid Systems Agreement <input type="checkbox"/>
Meter Administrators <input type="checkbox"/>	K <input checked="" type="checkbox"/>	Data Transfer Services Agreement <input type="checkbox"/>
Meter Operator Agents <input type="checkbox"/>	L <input type="checkbox"/>	Distribution Code <input checked="" type="checkbox"/>
ECVNA <input type="checkbox"/>	M <input type="checkbox"/>	Distribution Connection and Use of System Agreement <input checked="" type="checkbox"/>
MVRNA <input type="checkbox"/>	N <input type="checkbox"/>	Grid Code <input type="checkbox"/>
BSC Agents	O <input type="checkbox"/>	Master Registration Agreement <input type="checkbox"/>
SAA <input type="checkbox"/>	P <input type="checkbox"/>	Supplemental Agreements <input type="checkbox"/>
FAA <input type="checkbox"/>	Q <input type="checkbox"/>	Use of Interconnector Agreement <input type="checkbox"/>
BMRA <input type="checkbox"/>	R <input type="checkbox"/>	BSCCo
ECVAA <input type="checkbox"/>	S <input type="checkbox"/>	Internal Working Procedures <input checked="" type="checkbox"/>
CDCA <input type="checkbox"/>	T <input type="checkbox"/>	BSC Panel/Panel Committees
TAA <input checked="" type="checkbox"/>	U <input type="checkbox"/>	Working Practices <input checked="" type="checkbox"/>
CRA <input type="checkbox"/>	V <input type="checkbox"/>	Other
SVAA <input type="checkbox"/>	W <input type="checkbox"/>	Market Index Data Provider <input type="checkbox"/>
Teleswitch Agent <input type="checkbox"/>	X <input type="checkbox"/>	Market Index Definition Statement <input type="checkbox"/>
BSC Auditor <input checked="" type="checkbox"/>		System Operator-Transmission Owner Code <input type="checkbox"/>
Profile Administrator <input type="checkbox"/>		Transmission Licence <input type="checkbox"/>
Certification Agent <input type="checkbox"/>		
Other Agents		
Supplier Meter Registration Agent <input checked="" type="checkbox"/>		
Unmetered Supplies Operator <input type="checkbox"/>		
Data Transfer Service Provider <input type="checkbox"/>		

1 EXECUTIVE SUMMARY

The key conclusions of the P216 Modification Group ('the Group') are outlined below.

The Group:

- **CONFIRMED** that, at a minimum, high level principles for LLF methodologies should sit under the BSC, as the main purpose of LLFs is for adjustment of metered volumes under the BSC in Settlement;
- **CONSIDERED** that detailed processes would be needed for each of the audits proposed by P216, for the assignment of LLFCs (and LLFs) for new connections during the year and for the subsequent actions arising from when an audit is failed;
- **AGREED** the analysis to be conducted as part of the Assessment of P216 regarding the impact of inaccurate LLFs on Settlement and Parties; and
- **AGREED** that the remaining areas of the Terms of Reference should receive consideration as part of an Assessment Procedure.

A description of the Modification Proposal as developed by the Group is provided in Section 2. Further information regarding the Group's discussions of the areas set in the P216 Terms of Reference relating to the Definition Procedure can be found in Section 3, with the remaining areas for the Assessment Procedure set out in Section 4. A copy of the Group's full Terms of Reference is contained in Appendix 1, whilst a summary of the responses to the Definition Procedure consultation can be found in Appendix 2.

No impact assessment was commissioned during the Definition Procedure. For the results of BSCCo's initial assessment of the impacts of the proposal, please refer to the P216 IWA.

2 DESCRIPTION OF MODIFICATION

2.1 Context

2.1.1 Line Loss Factors

Site Specific Line Loss Factor Classes (LLFCs) represent an estimate of the electrical losses on the distribution network for a particular MSID (Metering System Identifier) between the metering point and the connection to the boundary of the Transmission System for the following year. Site Specific LLFCs are often used for larger customers whose sites are connected at higher voltages (most extra high voltage (EHV) sites) and often vary by Settlement Period. Site-specific LLFs are normally calculated using load flow engineering analysis.

Generic LLFCs (and their associated LLFs,) represent an estimate of the average of the total losses on the distribution network for a particular class of customer/connection voltage between the metering point and the connection to the boundary of the Transmission System for the following year. Generic LLFs also often vary by Settlement Period.

LLFs are required, by Distribution Licences, to represent an accurate reflection of the actual losses on the line. The methodologies used in calculating Line Losses used are published by Licensed Distribution System Operators (LDSOs) in their Use of System Charging Statements (sometimes referred to as "Condition 4A Statements"²).

² Links to the UoS Charging Statements for the seven existing DNOs (Distribution Network Operators) are available in the references section of this document (6.2). Please note that IDNOs (Independent DNOs) are also required to publish their LLF methodologies.

2.1.2 Line Loss Factors in the Balancing and Settlement Code (BSC)

Settlement is based on electricity volumes at Transmission System Boundary Points and Grid Supply Points (GSPs); LLFs are used within Settlement to scale a metered volume (measured within a Distribution Network) to provide an equivalent volume at the relevant GSP or Transmission System Boundary Point, this scaled volume is then used in Settlement.

Currently the Imbalance Settlement Group (ISG) and Supplier Volume Allocation Group (SVG) approve LLFs (having delegated authority from the Panel) for use in Settlement for Central Volume Allocation (CVA) and Supplier Volume Allocation (SVA) respectively. Prior to the approval of LLFs, checks are undertaken to ensure completeness and for comparison with previously submitted LLFs. These checks are described in more detail in the P216 IWA.

2.1.3 Previous Consideration of LLF Approval

Concerns have previously been raised at the SVG and ISG on the approval of LLFs for use in Settlement. In particular concerns were expressed regarding the perceived 'rubber stamping' of submitted LLFC values (and their associated LLFs) and whether the ISG/SVG had the relevant expertise/experience to approve the exact figures for LLFs.

A meeting was held in May 2004 with an ISG member, LDSOs and ELEXON to discuss the authorisation processes for CVA LLFs. This resulted in a review of the LLF approval process in 2004.

A paper was presented to the April 2005 Panel (91/012) which explained the current BSC obligations for submitting LLFs for approval. The Panel noted that an Ofgem review of the existing processes would be taking place, and that the Panel paper would be submitted to Ofgem for consideration as part of the review.

One outcome of this review was the agreement that LDSOs would publish their current LLF methodologies as part of their Use of System Charging Statements from April 2006, with a note that their LLF calculation methodology is not subject to Authority approval.

2.2 Modification Proposal

P216 was raised on 30 July 2007 by Smartest Energy ('the Proposer'). P216 seeks to provide additional assurance and controls over the calculation and application of LLFs in both the SVA and CVA Settlement processes.

P216 suggests that additional assurance should be provided regarding the accuracy and correct application of LLFs by:

- (a) removing the option to change existing LLFs mid year;
- (b) determining rules, which LLF methodologies must follow;
- (c) requiring the submission of the methodology used to calculate an LLF when a new/revised LLF is submitted;
- (d) auditing the LLFs submitted for approval to confirm that they have methodologies consistent with these rules (determined as per (b));
- (e) auditing the calculation of the LLFs submitted to confirm that it is consistent with the methodology submitted; and
- (f) following the approval of LLFs by ISG/SVG, conducting spot checks to ensure that the correct LLFC is being assigned at Metering System level.

The modification indicates that, where an LLF fails to comply with one of the above audits, the LLF should not be approved and that only approved LLFCs (and their associated LLFs) should be used within Settlement.

P216 suggests that a Modification Group should further consider:

- who should conduct the audits described above, with either ELEXON, the Technical Assurance Agent (TAA) or a new BSC Agent suggested;
- the process for rejecting LLFs and any associated default rules;
- the rules which LLF calculation methodologies must follow; and
- to what extent inaccurate LLFs might impact GSP Group Correction Factor.

ELEXON noted that the scope and aim of the audits described above would also require further definition to clarify the approach that will be undertaken and to aid the assessment of P216.

3 AREAS RAISED BY THE TERMS OF REFERENCE

This section outlines the conclusions of the Modification Group regarding those areas set out in the P216 Terms of Reference in respect of the Definition Procedure.

3.1 Rules for LLF Methodologies

3.1.1 Modification Group's Initial Discussions

3.1.1.1 *BSC Scope*

The Group considered that as the primary use of LLF values sits within the BSC (for the adjustment of metered volumes); it is relevant for rules for LLF methodologies to also be included under the BSC.

The Group noted that:

- LDSOs bill Suppliers for Distribution Use of System (DUoS) charges on unadjusted metered volumes from Settlement (or EACs/AAs). These volumes do not take account of LLFs; and
- Ofgem do not approve the current LLF methodologies, although they are published by LDSOs as part of their Use of System Charging Statements.

3.1.1.2 *Placement within the BSC*

The Group confirmed that the placement of rules/principles for LLF methodologies within the BSC (i.e. whether they should sit in the BSC itself or within the Code Subsidiary Documents) was appropriate but would need to be further considered in the Assessment Procedure. The level of detail that was required within the BSC and Code Subsidiary Documents should be established by the Group as part of the Assessment Procedure.

3.1.1.3 *Single Methodology*

The Group agreed that moving towards a single methodology for calculating LLFs would constitute a significant volume of work in the short term. However, several group members felt that this approach would be justified, due to the long term benefits for the transparency of LLF calculation, and potentially due to the reduced time and cost of auditing one methodology compared to many. One LDSO Group member believed that many LDSOs have little vested interest in the calculation themselves, and that if there is to be a single methodology it may be a more efficient solution to ask ELEXON to undertake the calculations opposed to LDSOs. Another LDSO Group member highlighted that accuracy of Settlement data is of high importance to LDSOs, as it feeds into the reported losses calculation, which has an impact on the incentive scheme relating to losses targets set by Ofgem. Therefore, they believed that LDSOs are incentivised in this way to produce accurate LLFs.

The Group noted that there were historically fourteen LDSOs, owned by seven different groups, covering the fourteen GSP Groups. In addition there are four licensed IDNO (Independent Distribution Network

Operators). From the preliminary results of an Ofgem Review of LLF methodologies (see Appendix 2); the Group noted that there were three different methodologies used to calculate LLFs for generic LLFCs (the most commonly used methodology being one developed by EA Technology). One LDSO member of the Group believed that, even though there were a number of different methodologies, these methodologies used the same general principles but with different computing platforms.

The Group agreed that the concept of a single methodology should be discussed further in the P216 Assessment Procedure. A decision on whether a single methodology should be constructed for the P216 solution itself would need to be made early on in the Assessment Procedure; otherwise the solution should seek to accommodate different methodologies. The Group noted that, in progressing P216, it may be possible to facilitate a move towards a single methodology without mandating it.

3.1.2 Views of Respondents to Definition Procedure Consultation

3.1.2.1 Methodology rules under the BSC

The majority of respondents agreed that some form of methodology should sit under the BSC (with some respondents highlighting that, without this, it would be difficult to audit the methodologies under the BSC, as proposed by P216). Several respondents felt that only a very high level set of rules should sit under the BSC, and a minority felt that no rules regarding LLF methodology were needed within the BSC as the existing governance arrangements were adequate.

3.1.2.2 Single Methodology

The majority of respondents supported the idea of a common methodology, and all but 1 respondent felt that the concept of a single methodology for calculating LLFs should be considered further, particularly with regard to undertaking a cost benefit analysis.

Those who supported a single methodology were split as to how this should be implemented, with 2 respondents suggesting a single date should be used (to avoid uncertainty) and 3 suggesting that, given the significant volume of work needed, a single methodology should be phased in over time. One respondent commented that several years of work may be needed to move to a single methodology. Another respondent suggested that P216 could focus on providing additional assurance (through the audits proposed in P216) and just make it possible to move towards a single methodology at a later date, rather than try to move to a single methodology as part of the modification.

3.1.2.3 Central Calculation

One respondent queried whether it would be better to calculate all of the LLFs centrally (e.g. by BSCCo), if there was to be a single methodology.

3.1.3 Modification Group's Conclusions

3.1.3.1 Single Methodology

The Group agreed that the concept of a single methodology to calculate LLFs should be considered further at the start of the Assessment Procedure. The Group noted that a considerable volume of work would be needed to determine the requirements of a single methodology, including a detailed assessment of all the existing methodologies. Therefore, a decision on whether or not to pursue a single methodology would need to be made early in the Assessment Procedure, as an extended Assessment Procedure timescale would be needed if this were to be done. The Group believed that the Panel would require an interim report, if a single methodology was to be constructed as part of the P216 Assessment Procedure.

3.1.3.2 Methodology rules under the BSC

The Group agreed that some form of rules for LLF methodologies would be needed if an audit of LLF methodologies were to be conducted, as proposed in P216. The Group noted that this form of rules could range from:

- a set of high level 'common principles' to be complied with by all LDSOs; or
- all of the various current methodologies to be included in the BSC; or
- a single common methodology setting out in detail how LLFs should be calculated for all GSP Groups.

The Group agreed that these options should be considered further in the assessment of P216.

3.1.3.3 Central Calculation

The Group agreed that the idea of calculating LLFs centrally should be considered during the Assessment Procedure, when a decision on whether or not to pursue a single methodology has been made. The Group noted that this would be an Alternative to the Proposed Modification as the concept of a single, central calculation is not suggested within the Proposed Modification.

3.2 Grid Supply Point Group Correction Factor (GSPGCF)

3.2.1 Modification Group's Initial Discussions

3.2.1.1 Impact of Inaccurate LLFs on GSPGCF

The Group agreed that inaccurate LLFs would impact GSPGCFs, although it was felt that other factors (e.g. Profiling, and Large Erroneous EAC/AAs, vacant sites and problems with Energisation Status) could also be impacting GSPGCF to a greater extent. It was further observed that theft could also impact GSPGCF but the scale of any impact is not understood. The Group agreed that analysis of the impact of inaccurate LLFs should be considered under the Assessment Procedure of P216. The Group noted that it was difficult to determine whether a LLF was 'inaccurate', especially for generic LLFCs, due to the inherent problems in determining the losses associated with a particular metering point or site.

The Group also noted that Distribution Losses represent around 7% of the total energy based upon the information published by Ofgem on High Voltage (HV) and Low Voltage (LV) Distribution Losses (as a proportion of the units distributed)³.

It was noted that from November 2007 SVA LLFs could be submitted with values less than 1 (with the implementation of CP1189 'Change to allow SVA Line Loss Factors less than one'; and that approximately 25% of the current CVA LLFs are less than 1 (as CVA LLFs less than 1 are already allowed).

The Group noted that there are different levels of analysis that could be undertaken as part of the Assessment Procedure. A relatively simple form of analysis might be a consideration of the changes to GSPGCF if LLFs are assumed to be accurate within a percentage (e.g. if LLFs were accurate to within $\pm 10\%$, then how would GSPGCF differ if LLFs are assumed to be at the top or bottom of this range). In considering this option the Group noted that it would be possible to use the losses data published by Ofgem in deciding what percentages would be sensible to use. A more in depth form of analysis could be the recalculation of all non-site specific LLFs in a GSPG using an alternative methodology (e.g. one currently used in a different GSPG). The Group agreed that this option would be a significant undertaking and likely to be time consuming, expensive and reliant on an LDSO undertaking the calculation.

One Group member noted that the 'right' value for an LLF is difficult to determine, and that analysing the differences between different methodologies may not help in understanding the true impact of inaccurate

³ This data is provided in Attachment 1. These figures are calculated by the LDSOs using final reconciliation run data from Settlement.

LLFs on GSPGCF. One Group member noted that, because the 'right' value is hard to determine, it would be difficult for a Supplier to raise a query on the accuracy of a particular LLF with Ofgem. Querying a single LLF to Ofgem also seems a significant step, when a process could be constructed at a BSC level.

One member suggested that a paper exercise, comparing the published LLF methodologies may be useful. Another member felt that looking at the Annual Demand Ratio (ADR) may also be helpful in considering the impact of inaccurate LLFs.

The Group noted that the intention of P216 is to increase the level of assurance around the production of LLFs and that this in itself is likely to increase accuracy over time.

3.2.1.2 Losses accounted for within LLF calculations

The Group's views were split as to whether LLFs are (and should be) a representation of the technical (physical) losses on a line or the actual losses on the line (the sum of the technical losses and other factors, e.g. theft, inaccurate EACs and Long Term Vacant Sites). The Group felt that this issue should be considered during the Assessment Procedure.

3.2.1.3 Definition Procedure Analysis

At the request of the Group, ELEXON provided feedback at the second meeting, on the analysis carried out by ELEXON regarding GSPGCF inaccuracies. ELEXON confirmed that the values of GSPGCF by GSP Group are routinely monitored and that various graphs with associated commentary on these values are provided to the Panel (and ISG and SVG) via the Trading Operations report⁴. Any significant changes in GSPGCF are investigated and findings provided (where relevant). This report also contains a graph of Annual Demand Ratios (ADRs) over the previous 12 months.

ELEXON confirmed that a detailed investigation into ADRs was undertaken in 2004. This work analysed the trends in ADRs and their causes⁵. Regarding LLFs, it was recommended that the governance and controls should be investigated and SVG agreed that ELEXON should discuss the calculation of LLFs with Ofgem. This was done and ELEXON informed the SVG that Ofgem's review would start in 2005. One outcome of this review was that LDSOs agreed to publish their LLF calculation methodology (see section 2.1.3).

3.2.1.4 Assessment Procedure Analysis

The Group agreed that it would be useful to consider the types of MSIDs that are grouped into the same LLFCs, to consider how well defined the LLFC groupings are, as part of the Assessment Procedure; and in addition, some analysis should be conducted to analyse how GSPGCF is impacted by changing the LLF values by various percentages. The Group stated a preference that for measuring the Settlement impact it should be reported in MWh. The Group considered that although this information would not provide details of the materiality of existing inaccurate LLFs, it would provide an indication of the potential impact of inaccurate LLFs on Settlement.

The Group confirmed that it would be useful to ask participants, as part of the Definition Procedure Consultation, whether there are other ways to analyse the impact of inaccurate LLFs on GSPGCF during the Assessment Procedure.

3.2.2 Views of Respondents to Definition Procedure Consultation

3.2.2.1 Defect

The majority of respondents agreed that there was a defect, because they felt that the calculation of LLFs was not transparent enough and that the potential materiality of inaccurate LLFs on Parties was significant. One respondent believed that the materiality of this issue could not be defined until there was greater

⁴ A link to the August 2007 Trading Operations Report is provided in the references section.

⁵ Links to SVG papers which describe this analysis in more detail are available in the references section.

transparency over the calculation of LLFs. Several Supplier respondents indicated that they would welcome a greater understanding of the LLF methodologies.

Those respondents, who felt that there was no defect, highlighted that LLF methodologies are currently published as part of the LDSOs' Use of System Charging Statements and that the perceived inaccuracies in LLF calculations are unproven. One respondent noted that if a party had an issue with a particular LLF it could raise this with Ofgem.

One respondent suggested that to address the perceived lack of transparency over LLFs, ELEXON could facilitate educational workshops, where LDSOs would provide parties further information on the currently published methodologies.

3.2.2.2 *Impact of Inaccurate LLFs on GSPGCF*

Respondents suggested the following ways of analysing the impact of inaccurate LLFs on GSPGCF:

- Complete a paper comparison of the current LLF methodology statements;
- Model the real fluctuations in LLFs;
- Calculate how percentage changes in LLFs will impact GSPGCF to ascertain the potential impact of inaccurate LLFs on GSPGCF;
- Construct a portfolio of scenarios where LLFs would only be recalculated for a representative number of sites/customers within a GSPG. This could be a more efficient use of time/resource rather than re-calculating all the LLFs in a GSP using a different methodology; and
- Remove the known issues (e.g. EAC/AA and Energisation Status, Long Term Vacant sites, etc) and consider what error is left in GSPGCF.

One respondent queried whether or not it was possible to know what the 'correct' LLF value for an individual MSID should be.

3.2.2.3 *Losses accounted for within LLF calculations*

There was a mixed response from industry (including LDSOs) with regard to what LLF calculations actually represent (whether technical (electrical) losses or all losses (including, for example, theft and other issues)).

A majority of responses indicated that they believed all losses were included in LLF calculations, although 2 respondents highlighted that they thought only technical losses were calculated and one respondent noted that there is a split between site specific LLFs (which represent technical losses only) and general LLFs (which represent all losses).

In terms of what LLFs should represent, there was a slight majority of respondents who considered that all losses should be incorporated in the calculation. The minority thought that LLFs should only represent technical losses, although one LDSO noted that it may not be possible to calculate technical losses for all sites, in particular LV sites where it is very difficult to undertake load flow analysis. Several participants highlighted that it needs to be established whether LLFs represent technical losses only, or all losses.

3.2.2.4 *Definition Procedure Analysis*

Respondents indicated that the following areas could be further defined before the Assessment Procedure:

- the impact of the proposed audits on Independent Network Distributors (IND);
- the process for applying default LLFs during the year;
- consideration of how Meter Technical Code (MTC) and Profile Class (PC) are assigned by the Supplier (to allow the MPAN to be traded correctly); and
- a cost benefit analysis of the audit processes proposed.

3.2.2.5 Assessment Procedure Analysis

Respondents indicated that the following areas should be considered as part of the Assessment Procedure:

- an audit of LLFC allocation;
- the use of default LLFs;
- the potential discrimination that exists between the treatment of errors in losses for Half Hourly (HH) and Non Half Hourly (NHH) MSIDs, where GSPGCF only applies to NHH settlement quantities;
- impact of non technical losses on LLFs; and
- the impact of inaccurate technical losses on GSPGCF.

3.2.3 Modification Group's Conclusions

3.2.3.1 Defect

The Group noted that some respondents had queried the potential materiality of inaccurate LLFs. Therefore, the Group agreed that it would be important to undertake analysis to provide an indication of the size of the potential materiality as part of the Assessment Procedure.

The Group considered the idea of educational workshops to provide Suppliers with a greater understanding of LLF methodologies. The Group felt that, although these would be useful, they would not provide the additional assurance that LLFs are being calculated correctly. ELEXON highlighted that while they would be happy to host and facilitate workshops, they do not have the required expertise to explain LLF calculation methodologies, and therefore Distributor representatives would be required at these workshops. It was noted that an overview of these methodologies presented by willing LDSO representatives would benefit the Modification Group at the start of the P216 Assessment Phase and LDSO members kindly agreed to seek volunteers to provide this to the Group.

3.2.3.2 Impact of Inaccurate LLFs on GSPGCF

The Group noted that they had previously suggested carrying out the following analysis during the Assessment Procedure:

- analyse how changes in the LLF values impact Settlement (volumes and GSPGSCF) and Parties; and
- analyse the number and types of MSIDs in the existing LLFC groupings.

The Group noted that, while analysing how changes in LLFs (by a set percentage) would impact GSPGCF would not provide the actual materiality of inaccurate LLFs (as the inaccuracy is not quantifiable), it would provide an idea of the potential impact of inaccurate LLFs on settlement. The Group felt that this would be useful as if the potential materiality is significant, this may justify additional assurance over the calculation of LLFs.

The Group discussed the concept of modelling the real fluctuations in LLFs and, noting the comment that it is difficult to establish the 'correct' LLF value. The Group concluded that this analysis would be difficult and time consuming to undertake, as a large enough sample (to be representative of all LLFs) would be needed.

The Group noted that the key aim of P216 is to improve transparency in the calculation of LLFs, rather than prove the impact of inaccurate LLFs on settlement. In light of this aim, the Group felt that more extensive analysis (e.g. considering a representative portfolio of scenarios, or performing calculations to remove known issues from the GSPGCF to ascertain what error could be attributed to inaccurate LLFs) was unnecessary and that P216 could be justified if there potential for a significant impact on the BSC should LLFs be inaccurate. The Group felt that the potential impact could be established using relatively simple analysis of the impact of different LLF values (using set percentages) on GSPGCF.

3.2.3.3 Losses accounted for within LLF calculations

The Group noted the differing interpretations as to what LLF calculations are meant to represent in the consultation responses. The Group also considered that technical losses would potentially be very difficult to calculate for generic LLFCs (as opposed to site specific LLFCs). The Group agreed that theft is less likely for EHV sites (due to the amount of power associated with these sites and the safety impact of tampering with such installations), and so it is understandable that site specific LLFs (which are more likely to be HH) represent technical losses only, and that there may be a natural split here. One member felt that it was discriminatory to have a HH/NHH split and that losses due to theft should be split evenly across the market, not focused on NHH (through the application of GSPGCF).

The Group concluded that it would be useful to review the current LLF methodologies to understand their differences and whether these methodologies seek to calculate technical only losses or all losses. The Group agreed that this analysis should be undertaken at the start of the Assessment Procedure.

3.2.3.4 Definition Procedure Analysis

The Group agreed that the impact of P216 on IDNOs (as well as vice versa) would need to be considered, and that it would be best to do this as part of the Assessment Procedure. The Group were unsure of whether IDNOs are required to publish their methodologies.

The Group noted that a cost benefit analysis and consideration of default LLFCs (and LLFs) are already included in the Assessment Procedure Terms of Reference and felt that assessment would be the best time to consider these areas in more detail.

The Group agreed that the issue of Suppliers assigning Meter Technical Codes (MTCs) and PCs was outside the scope of P216, and noted that work had already been undertaken under the MRA to improve the data quality associated with MTCs. LDSOs have introduced enhanced MTC validation which prevents Suppliers using invalid MTC combinations during the Change of Supplier process.

3.2.3.5 Assessment Procedure Analysis

The Group noted that the Assessment Procedure Terms of reference already included a requirement for the Group to consider how an audit of LLFC allocation would work, and the use of default LLFs.

The Group agreed that the potential discrimination between the application of GSPGCF for HH and NHH measurement quantities is out of the scope of the defect stated in P216. The Group noted that this would require changes to the way that GSPGCF is calculated or assigned.

The Group agreed that they would gain a greater understanding of the impact of non technical losses on LLFs and the impact of inaccurate technical losses on GSPGCF, through GSPGCF analysis as described above in section 3.2.3.2. Furthermore, by reviewing the various LLF methodologies in more detail, which will be undertaken as part of the Assessment Procedure, would also provide a better view of the make up of losses.

3.3 Scope and Aims of the audits suggested

3.3.1 Modification Group's Initial Discussions

The Group discussed the Modification Proposal and noted that P216 intends to provide additional assurance to participants by the proposed six processes described in section 2.2 a) – d). The Group discussed the following areas, all of which will require detailed consideration under the Assessment Procedure.

3.3.1.1 Audit Depth/Approach

The Group noted that a different audit approach might be taken for different types of LLF, and that in general more assurance is likely to be needed for larger volume sites. For example, all CVA LLFCs (and LLFs) might be checked; where as only a sample of SVA LLFCs (and LLFs) would be checked. Furthermore, the

Group agreed that similar divisions might be relevant for HH compared to NHH LLFs or site specific LLFs versus generic LLFs.

3.3.1.2 *Timing*

The Group agreed that the most suitable timing for processes (c), (d) and (e) (as described in section 2.2) is likely to be prior to the annual submissions, this would mean that checks are undertaken in the late Autumn/Winter, so that the annual submissions can be approved prior to the current LLF revision date of 1 April. The Group noted that this is likely to mean that submissions need to be made earlier than currently.

Some members of the Group felt that ELEXON is likely to be best placed to undertake audit (e).

The Group thought that audit (f) was more likely to take place during the course of the year.

3.3.1.3 *Reporting*

The Group noted that all reports resulting from the audits should be directed to the Panel. However, it was likely that the confirmation of a passed audit would be directed to the ISG/SVG, who have the delegated Authority for approval of the LLFs. A failed audit might be directed to the Performance Assurance Board (PAB).

3.3.1.4 *Default Rules*

The Group agreed that a process for applying agreed default LLFCs (and LLFs) for values associated with a failed audit would need to be developed during the Assessment Procedure. The Group noted that this process may include the use of default values until the new LLFC (and LLFs) has been approved. As part of the Assessment, the Group will determine whether or not default LLFs would improve or worsen the accuracy and transparency of LLF values.

3.3.1.5 *New Connections/Metering System Identifiers (MSIDs)*

The Group noted that the introduction of new LLFCs may be needed during the course of the year. Taking into account that the Modification Proposal suggests that existing LLFs should not change mid-year, the Group noted that a process would be needed for introducing new LLFCs (and associated LLFs) for new connections between annual submissions. One Group member considered that this might include the use of default or temporary LLFs until the next annual submission.

3.3.1.6 *Retrospectively Applied LLFs*

The Group noted that currently there are occasions where LLFs are approved retrospectively. The Group would consider this issue whether or not this approach should continue under P216, as part of the Assessment Procedure. One member felt strongly that this should not be allowed under P216.

3.3.2 *Views of Respondents to Definition Procedure Consultation*

3.3.2.1 *Default Rules*

Several respondents noted that the way default LLFCs (and LLFs) could be applied would need to be clearly explained.

3.3.2.2 *Mid year changes to LLFs*

One respondent felt that LLFs should be allowed to change mid year, as changes to the distribution network, would change the actual losses incurred.

3.3.3 Modification Group's Conclusions

3.3.3.1 *Default Rules*

The Group agreed that default rules would need to be clearly explained and agreed that it will be best to do this as part of the Assessment Procedure, when the detail of the processes and timings for the suggested audits is agreed.

3.3.3.2 *Mid year changes to LLFs*

The Group noted that the requirement to prevent mid year changes to LLFs was part of the P216 Proposed Modification. Therefore, the issue of allowing mid year changes would be considered as part of the Assessment Procedure as a potential Alternative Modification.

4 RATIONALE FOR MODIFICATION GROUP'S RECOMMENDATIONS TO THE PANEL

The Modification Group believes that the Proposed Modification is now sufficiently defined, such that the areas raised by P216 may be fully assessed, in order to establish whether it would better facilitate the achievement of the Applicable BSC Objectives. The Group confirmed that they believe they have addressed all of the P216 Definition Terms of Reference. The Group therefore recommends that P216 should proceed to the Assessment Procedure in order to consider the following remaining areas of the Terms of Reference (where the Group has suggested clarifications to the Terms of Reference, these clarifications are included in brackets):

- who (e.g. an existing or new BSC Agent/service provider or ELEXON) should conduct each of the audits and checks described in P216 and to whom reports should be provided to;
- the detailed scope, approach and timing for each of the checks described in P216 and how these could be changed in the future;
- the procedure to be followed if an LLF fails one or more of these audits, including any default rules;
- the rules/principles to be included in the BSC which LLF methodologies must comply with, and the level of detail that these rules should go into (the Group agreed that what LLFs represent (i.e. the actual or technical losses on a line) should be defined, potentially as part of these rules);
- any changes needed to the process for new LLFs being approved during the course of the year;
- the differences between SVA and CVA LLFs and whether the differences identified lead to variances in audit approach;
- any interaction with approved Modifications, such as P197 ('SVA Qualification Processes Review') and P207 ('Introduction of a new governance regime to allow a risk based Performance Assurance Framework (PAF) to be utilised and reinforce the effectiveness of the current PAF'); and
- whether the perceived risk to Settlement justifies the impact/cost of providing each of the suggested audits (cost/benefit analysis) (the Group agreed that undertaking analysis to see how changes in the LLF values impact Settlement (volumes and GSPGCF) and Parties would be useful in considering this).

In addition, the Modification Group proposes that the following items are added to the Terms of Reference for the Assessment Procedure:

- conclude whether a single LLF methodology should be determined;
- analyse the number and types of MSIDs in the existing LLFC groupings; and

- consider the impact of P216 on Independent Distributor Networks and the calculation of LLFs for by the operators of these networks.

The Group invites the Panel to agree the above Terms of Reference for the Assessment Procedure, subject to any amendments proposed by the Panel.

The Group estimates that assessment of P216 will require:

- 7 Modification Group meetings;
- 1 industry consultation;
- 1 BSC Agent impact assessment;
- 1 Party/Party Agent impact assessment;
- 1 Core Industry Document Owner impact assessment;
- 1 BSCCo impact assessment; and
- 1 request for Transmission Company analysis.

The Group therefore recommends a 4-month Assessment Procedure timetable for P216. The Proposed assessment approach is:

- Analysis of the methodologies and GSPGCF analysis (meetings 1 and 2)
- Construct detailed processes for the proposed audits (meetings 3 and 4)
- Construct the Requirements Specification, with options for an Alternative (meeting 5)
- Consultation and Impact Assessment (4 weeks including the Christmas period);
- Consider Impact Assessment (cost/benefit considerations) Consultation Response and the Applicable Objectives (meetings 6 and 7);
- Write the Assessment Report and agree conclusions.

Details of the proposed timetable are shown in Appendix 4.

5 TERMS USED IN THIS DOCUMENT

Other acronyms and defined terms take the meanings defined in Section X of the Code.

Acronym/Term	Definition
ADR	Annual Demand Ratio: ADR is a measure of the variation between the total annual profiled Non Half Hourly (NHH) consumption and the total annual metered NHH consumption (as deduced from GSP Group Takes and HH consumption).
CVA	Central Volume Allocation
GSP	Grid Supply Point
GSPGCF	Grid Supply Point Group Correction Factor
ISG	Imbalance Settlement Group
LDSO	Licensed Distribution System Operator
LLF	Line Loss Factor
LLFC	Line Loss Factor Class

PAB	Performance Assurance Board
SVA	Supplier Volume Allocation
SVG	Supplier Volume Allocation Group
TAA	Technical Assurance Agent

6 DOCUMENT CONTROL

6.1 Authorities

Version	Date	Author	Reviewer	Reason for Review
0.3	24/09/07	Ysanne Hills	Justin Andrews	For peer review
0.4	27/09/07	Ysanne Hills	P216 MG	For Modification Group review
0.5	02/10/07	Ysanne Hills	Justin Andrews	For technical review
0.5	02/10/07	Ysanne Hills	David Jones	For quality review
1.0	05/10/07	Change Delivery		For Panel decision

6.2 References

Ref.	Document Title	Owner	Issue Date	Version
1	Trading Operations Report (presented to the August 2007 Panel)	ELEXON	August 2007	1.0
2	SVG Paper SVG/38/480	ELEXON	22/03/04	1.0
3	SVG Paper SVG/40/011	ELEXON	21/05/04	1.0
4	NEDL Use of System Charges Statements http://www.ceelectricuk.com/lib/liDownload/550/NEDL%20-%20July%202007%20-%20Condition%20%20Statement%20-%20Final.pdf?CFID=235229&CFTOKEN=62005211	CE Electric	July 2007	
5	YEDL Use of System Charges Statements http://www.ceelectricuk.com/lib/liDownload/552/YEDL%20-%20July%202007%20-%20Condition%20%20Statement%20-%20Final.pdf?CFID=235229&CFTOKEN=62005211	CE Electric	July 2007	
6	Central Networks East Charging Statement http://www.eon-uk.com/downloads/CNEastUoScharging_statement_April_2007final.pdf	Central networks	April 2007	
7	Central Networks West Charging Statement http://www.eon-uk.com/downloads/CNWestUoScharging_statement_April_2007.pdf	Central Networks	April 2007	
8	London Network Charging Statement http://www.edfenergy.com/hold/regulatory/downloads/edfenergynetworks-lpn-chargesforuse-elecdisysyst-011007.pdf	EDF Energy	October 2007	
9	East of England Network Charging Statement http://www.edfenergy.com/hold/regulatory/downloads/edfenergynetworks-eppn-chargesforuse-elecdisysyst-011007.pdf	EDF Energy	October 2007	
10	South East England Network Charging Statement http://www.edfenergy.com/hold/regulatory/downloads/edfenergynetworks-spn-chargesforuse-elecdisysyst-011007.pdf	EDF Energy	October 2007	

11	Scottish Hydro Electric Power Distribution Charging Statement http://www.scottish-southern.co.uk/SSEInternet/index.aspx?id=654	<u>Scottish & Southern Energy</u>	July 2007	
12	Southern Electric Power Distribution Charging Statement http://www.scottish-southern.co.uk/SSEInternet/uploadedFiles/About_Us/Our_Businesses/Energy_Systems/SEPD/Contract_Management/Charging_Statements_and_Look_Up_Tables/SEPDDUoSCharges0708v15310707pdf.pdf	<u>Scottish & Southern Energy</u>	October 2007	
13	SP Distribution Charging Statement http://www.scottishpower.com/uploads/C4AStatementSPDistributionAugust07.pdf	Scottish Power	August 2007	
14	SP Manweb Charging Statement http://www.scottishpower.com/uploads/C4AStatementSPManwebApril2007final.pdf	Scottish Power	April 2007	
15	United Utilities' Use of System Charges Statements http://www.unitedutilities.com/resources/files/1421_United%20Utilities%20Licence%20Condition%204A%20Statement%20(Use%20of%20System%20Charges)%202006-07.pdf	United Utilities	April 2006	
16	WPD South West Charging Statement http://www.westernpower.co.uk/servercode/showdocument.asp?ID=272	Western Power Distribution	April 2007	
17	WPD South Wales Charging Statement http://www.westernpower.co.uk/servercode/showdocument.asp?ID=271	Western Power Distribution	April 2007	

APPENDIX 1: PROCESS FOLLOWED

Copies of all documents referred to in the table below can be found on the [P216 page of the BSC Website](#).

Date	Event
30/07/07	Modification Proposal raised by Smartest Energy
09/08/07	IWA presented to the Panel
03/09/07	First Definition Procedure Modification Group meeting held
06/09/07	Second Definition Procedure Modification Group meeting held
12/09/07	Definition Procedure Consultation issued
18/09/07	Definition Procedure consultation responses returned
21/09/10	Third Definition Procedure Modification Group meeting held
11/10/07	Definition Report presented to the Panel

MODIFICATION GROUP MEMBERSHIP

Member	Organisation	03/09/07	06/09/07	21/09/07
David Jones	ELEXON (Chairman)	✓	✓	✓
Ysanne Hills	ELEXON (Lead Analyst)	✓	✓	✓
Colin Prestwich	SmartestEnergy (Proposer)	✓	✓	✓
Glenn Sheern	E.ON UK	✓	✗	✗
Maurice Smith	Campbell Carr	✓	✓	✗
María Isabel Liendo	Scottish Power Energy Networks	✗	✓	✗
James Evans	British Energy	✓	✓	✓☎
Rosie McGlynn	EDF	✓	✗	✓
Andrew Manning	npower	✗	✓☎	✗
Andrew Neves	Central Networks	✓☎	✗	✓
Eric Graham	Independent	✗	✗	✗
Nigel Lloyd	Western Power Distribution	✓	✓☎	✓☎

Attendee	Organisation	03/09/07	06/09/07	21/09/07
Shantok Karavadra	ELEXON (Lawyer)	✓	✗	✓
Justin Andrews	ELEXON (DA)	✓	✓	✓
Keith Banwaitt	ELEXON (Operational SVA)	✓	✗	✗
Roger Harris	ELEXON (Operational CVA)	✓	✗	✗
Simon Polley	Ofgem	✓	✗	✓

Attendee	Organisation	03/09/07	06/09/07	21/09/07
Mark Field	npower	✓	✗	✓
Jill Ashby	Gemserv	✗	✗	✗
David Lewis	EDF	✗	✓	✗
Robert Arden	Campbell Carr	✗	✓	✓

MODIFICATION GROUP TERMS OF REFERENCE

Modification Proposal P216 will be considered by a new Modification Group, the P216 Modification Group, comprised of members of the Volume Allocation Modification Standing Group (VASMG), Governance Standing Modification Group (GSMG), Settlement Standing Modification Group (SSMG) and at least 1 Distribution Company Representative in accordance with the following Terms of Reference.

P216 – Audit of LLF Production Definition Procedure Terms of Reference

The Modification Group will carry out a Definition Procedure in respect of Modification Proposal P216 pursuant to section F2.5 of the Balancing and Settlement Code.

The Modification Group will produce a Definition Report for consideration at the BSC Panel Meeting on 11 October 2007.

The Modification Group shall consider and/or include in the Definition Report as appropriate:

- the scope and aims of each of the audits suggested;
- how inaccurate LLFs might impact on GSP Group Correction Factor, how significant any impact is for Settlement and the appropriateness of assessing this issue under P216;
- whether the rules for LLF methodologies should be Code defined (and constructed by the Modification Group as part of the Modification) or approved and amended from time to time by, for example, a Panel Committee; and
- confirm that the audits proposed are within the scope of the BSC, as opposed to any other governance arrangements.

APPENDIX 2: OFGEM REVIEW OF LLF METHODOLOGIES

Loss Adjustment Factor Methods		
DNO	Generic	Site Specific (EHV Customers)
CE	EA Technology	Electricity industry methodology using specific load flow models
CN	Classed upon exit points	Special assessment
EDFE	EA Technology	Substitution method
SP	Detailed network studies by external consultants	Electricity industry method, using recognised planning tools
SSE	EA Technology	Network modelling and power flow analysis
UU	EA Technology	Electricity industry method, using recognised planning tools - IPSA (Interactive Power System Analysis)
WPD	EA Technology	Individual LAFs are calculated for each half hour using individual customer's half hourly load profiles at the appropriate voltage level. Mean LAFs are then allocated to different tariff periods

APPENDIX 3: OFGEM COMPILED LOSSES PROPORTIONS FOR 1998/9 TO 2003/4

This data is attached in a separate document, Attachment 1.

APPENDIX 4: RESULTS OF DEFINITION PROCEDURE CONSULTATION

12 responses (representing 38 Parties and 5 non-Parties) were received to the P216 Definition Procedure consultation.

A summary of the consultation responses is provided in the table below (where relevant, bracketed numbers represent the number of Parties and non-Parties represented by respondents).

Q	Consultation question	Yes	No	Neutral
1.	Do you have a view on the perceived defect, with regard to either the transparency of Line Loss Factor (LLF) calculations or the materiality of inaccurate LLFs which P216 seeks to address?	<p>6 respondents (18 Parties + 4 non-Parties) agreed that there is a defect with regard to transparency or the materiality the settlement error associated with inaccurate LLFs.</p> <p>2 respondents (15 Parties + 0 non-Parties) felt more analysis was needed before the defect is proved.</p> <p>3 respondents (5 Parties) disagreed, and indicated that they didn't believe there was a defect, as there is no proven materiality and LLF methodologies are published.</p> <p>1 respondent (1 non-Party) did not provide comment.</p> <p>There was a strong Supplier LDSO split in the responses to this question.</p>		
2.	What do you believe LLFs currently represent? For example the technical losses associated with a site, a representation of the total losses apportioned to that site, or another definition.	A summary of the responses received is included in section 3.2.2.3.		
3.	What do you believe LLFs <u>should</u> represent?	A summary of the responses received is included in section 3.2.2.3.		
4.	Do you believe that P216 requires any further definition? If so in which area?	<p>In summary respondents suggested that the following areas should receive further consideration:</p> <ul style="list-style-type: none"> the impact of the proposed audits on IDSOs (Independent Distributors); the process for applying default LLFs during the year; consideration of how Meter Technical Codes and Profile Classes are assigned by the Supplier (to allow the MPAN to be traded correctly); and cost benefit analysis of the audit processes. 		
5.	Do you support the principle of P216 that because LLFs are primarily used within the BSC for settlement purposes, the LLF methodologies should sit under the BSC?	6 respondents (18 Parties + 4 non-Parties) indicated that LLF methodologies should sit under the BSC (with several indicating that the rules for LLF methodologies should be relatively high level.		

Q	Consultation question	Yes	No	Neutral
		<p>4 respondents (18 Parties + 0 non-Parties) felt that LLF methodologies shouldn't sit under the BSC, or that only very high level principles should be included.</p> <p>1 respondent (2 Parties) was unsure.</p> <p>1 respondent (1 non-Party) did not provide comment.</p>		
6.	Do you believe that a solution which requires a common LLF methodology across all GSP Groups should be considered as part of the Assessment Procedure for P216?	<p>6 respondents (15 Parties + 4 non-Parties) agreed that a common methodology could have benefits.</p> <p>4 respondents (14 Parties) agreed that a common methodology should be considered further in the Assessment Procedure.</p> <p>1 respondent (9 Parties) felt that a common methodology shouldn't be considered further.</p> <p>1 respondent (1 non-Party) did not provide comment.</p>		
7.	If yes to question 6, how do you believe the change over from the existing multiple methodologies to one methodology should be achieved (e.g. phased in over time or on a particular change over date)?	A summary of the responses received is included in section 3.1.2.2.		
8.	Do you have any suggestions on how the impact of inaccurate LLFs (on Settlement and Parties) can be determined during the Assessment Procedure?	<p>In summary respondents suggested the following types of analysis:</p> <ul style="list-style-type: none"> Complete a paper comparrison of the current LLF methodologies; Model the real fluctuations in LLFs; Calculate how percentage changes in LLFs will impact GSPGCF to ascertain the potential impact of inaccurate LLFs on GSPGCF; Consider a portfolio of scenarios so, rather than re-calculate all LLFs in a GSP using a different methodology, re-calculate the LLFs only for a representative portfolio of sites within a GSPG; Remove the known issues (e.g. EAC/AA and Energisation) and consider what error is left in GSPGCF. <p>One respondent queried whether or not it is possible to know what the 'correct' LLF value for an individual MSID should be.</p>		
9.	Are there any issues not identified in this report that you believe should be considered	In summary respondents suggested that the following areas should be considered during the		

Q	Consultation question	Yes	No	Neutral
	during the Assessment Procedure, should the Panel agree to submit P216 to the Assessment Procedure?	Assessment Procedure: <ul style="list-style-type: none"> • an audit of LLFC allocation; • the use of default LLFs; • the potential discrimination between HH and NHH losses (technical losses for HH but all losses for NHH); • impact of non technical losses on LLFs; and • the impact of inaccurate technical losses on GSPGCF. 		
10.	Are there any further comments on P216 that you wish to make?	In summary respondents commented on the following areas: <ul style="list-style-type: none"> • Consideration of whether the calculation of LLFs should be completed centrally if a single methodology is to be used; • Further consideration should be given to allowing LLFs to change mid-year; • Significant work would be needed to create a single methodology, and so it might be beneficial to focus on the proposed audit processes for the purposes of P216 Assessment and leave the governance and single methodology questions for another modification. • Educational workshops may be useful to aid Suppliers understanding of the current LLF methodologies. • Other issues have a greater impact on GSPGCF (e.g EAC/AA) 		

Full copies of the consultation responses are attached as a separate document, Attachment 2.

APPENDIX 5: RESULTS OF IMPACT ASSESSMENT

No impact assessment was commissioned during the Definition Procedure. BSCCo's initial assessment of the impacts of P216 can be found in the P216 IWA, and a full impact assessment will be undertaken during the Assessment Procedure.

APPENDIX 6: COSTS FOR PROGRESSION**ESTIMATED COSTS OF PROGRESSING MODIFICATION PROPOSAL⁶**

Please note: these costs are for the Assessment Procedure only. The estimated costs for the Definition Procedure were provided in the Initial Written Assessment and were approximately £16,000 in total.

Meeting Cost	£ 3,500
Legal/Expert Cost	£ 8,000
Impact Assessment Cost	£ 12,000
ELEXON Resource	130 man days £ 40,000

⁶ Clarification of the meanings of the cost terms in this appendix can be found on the BSC Website at the following link:
http://www.elexon.co.uk/documents/Change_and_Implementation/Modifications_Process_-_Related_Documents/Clarification_of_Costs_in_Modification_Procedure_Reports.pdf

APPENDIX 7: PROPOSED ASSESSMENT PROCEDURE TIMETABLE

