

REQUIREMENTS SPECIFICATION for Alternative Modification P198 'Introduction of a Zonal Transmission Losses Scheme'

Prepared by: P198 Modification Group

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Losses from the Transmission System ('transmission losses') can be considered to comprise two elements: fixed losses and variable losses. Currently, the costs of both fixed and variable losses are recovered from BSC Parties on a non-locational basis.

Proposed Modification P198 seeks to allocate the costs of variable losses to Parties on a 'zonal' locational basis, according to the extent to which each Party is estimated to give rise to them. The solution for Proposed Modification P198 is based closely on previous Modification Proposal P82. It involves the calculation of one Adjusted Annual Zonal Transmission Loss Factor (TLF) value per TLF Zone for each BSC Year, with no phased implementation. TLF Zones would be based on Grid Supply Point (GSP) Groups, and the TLFs would be calculated on an annual ex-ante basis for each forthcoming BSC Year. All BM Units within a Zone would receive the Adjusted Annual Zonal TLF for that Zone in every Settlement Period of the applicable BSC Year.

Two potential options for an **Alternative Modification P198** are currently being considered as follows:

- 1) An annual ex-ante calculation of four Adjusted Seasonal Zonal TLFs for each TLF Zone, one for each BSC Season in the BSC Year. All BM Units within a Zone would receive the Adjusted Seasonal Zonal TLF value for that Zone in every Settlement Period of the applicable BSC Season (i.e. there would be four different TLF values per BM Unit in a BSC Year); and
- 2) A linear phased implementation of zonal TLFs over the first four BSC Years of the scheme, such that TLFs are applied at 20% of their full value in BSC Year 1, 40% in BSC Year 2, 60% in BSC Year 3, 80% in BSC Year 4, and 100% in BSC Year 5 and all subsequent years.

One or both of these options may form the final Alternative Modification to P198. Note that option 2) could be combined with either Annual or Seasonal TLFs.

BACKGROUND AND PURPOSE OF IMPACT ASSESSMENT

An impact assessment has already been undertaken in respect of Proposed Modification P198. This specification sets out the difference in requirements for the two potential options for an Alternative Modification, and supports additional impact assessments by BSC Agents, BSC Parties and BSCCo. For clarity, where possible the same section headings have been used as in the Proposed Modification Requirements Specification. Where the requirements for a particular section are unchanged, they are not repeated in this document and a reference is provided to the Proposed Modification Requirements Specification.

Respondents are requested to only identify any impacts or lead time arising from the two potential Alternative options which are additional to those already identified for Proposed Modification P198. Respondents are requested to detail the impacts of each potential Alternative option separately.

Any queries regarding the impact assessment requirements should be addressed to Kathryn Coffin (020 7380 4030), e-mail address kathryn.coffin@elexon.co.uk.

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SUMMARY OF IMPACTED PARTIES AND DOCUMENTS

As far as BSCCo has been able to assess, the following parties/documents are potentially impacted by Modification Proposal P198.

Please note that this table represents a summary of the full initial assessment results contained in Section 6.

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

*New document/role introduced by P198

1 BACKGROUND

For an explanation of the allocation of transmission losses under the current Code baseline, please refer to the Requirements Specification for Proposed Modification P198 (Reference 1).

2 SUMMARY OF PROPOSED MODIFICATION SOLUTION

A high-level overview of the solution for Proposed Modification P198 is set out below. Note that these requirements are identical to those set out in the Proposed Modification Requirements Specification.

- 1) An electrical model of the Transmission System (a 'Load Flow Model') would be built, containing 'Nodes' to represent points where energy flows on or off the Transmission System. Each Node on the Transmission System would be identified by the Transmission Company, and would be allocated to a specific Zone on the transmission network on the basis of a 'Network Mapping Statement' maintained by BSCCo. The TLF Zones would be set by the Panel, based on the geographical areas covered by Grid Supply Point (GSP) Groups. Since there are currently 14 GSP Groups, there would therefore be 14 TLF Zones.
- 2) TLFs would be calculated on an ex-ante basis (i.e. forecasted) for each BSC Year, using Metered Volumes and Network Data for Sample Settlement Periods from a preceding 12-month period (the 'Reference Year'). The required Metered Volumes and Network Data would be provided by the Central Data Collection Agent and the Transmission Company respectively.
- 3) Prior to the start of each BSC Year (1 April – 31 March), the Load Flow Model would be run by a Transmission Loss Factor Agent ('the TLFA') to calculate how an incremental (or 'marginal') increase in generation or demand at each individual Node would affect the total losses from the Transmission System. The output of the Load Flow Model would be a TLF value for each Node in each of the Sample Settlement Periods. Positive TLF values would be produced for Nodes where an incremental increase in generation (or reduction in demand) had the effect of decreasing total transmission losses. Negative TLF values would be produced for Nodes where an incremental increase in generation (or reduction in demand) had the effect of increasing total transmission losses.
- 4) The TLFA would average these raw Nodal TLFs across all the Nodes in each TLF Zone by 'volume-weighted' averaging, to give 14 Zonal TLF values for each Sample Settlement Period (one per TLF Zone). The TLFA would then convert these to Annual Zonal TLFs by 'time-weighted' averaging.
- 5) The TLFA would adjust the Annual Zonal TLFs by a scaling factor of 0.5 such that the volume of energy allocated via the TLFs was comparable to the volume of variable losses calculated by the Load Flow Model.¹ These 14 Adjusted Annual Zonal TLFs (one per TLF Zone) would be made publicly available by BSCCo no less than three months prior to their use in the TLM Settlement calculation for the applicable BSC Year.
- 6) Each BM Unit would be allocated to a specific TLF Zone by BSCCo on the basis of the Network Mapping Statement. Using this mapping, the TLFA would determine the TLF value to be applied to each BM Unit in the TLM Settlement calculation for the applicable BSC Year. This BM Unit-Specific TLF would be the Adjusted Annual Zonal TLF value for the Zone in which the BM Unit was located. All BM Units within a Zone would therefore receive the same single TLF value (the Adjusted Annual Zonal TLF for that Zone), for every Settlement Period within the applicable BSC Year. A positive TLF value would increase the value of TLM used to scale a BM Unit's Metered Volume (a benefit to generators and disadvantage to Suppliers), whilst a negative TLF value would decrease the value of TLM (a benefit to Suppliers and disadvantage to generators).

¹ Such scaling is necessary due to the square load relationship of heating losses to power (i.e. they increase in proportion to the square of the current). Without the scaling, the zonal TLFs would recover more than the actual level of variable losses.

- 7) The BM Unit-Specific TLFs calculated by the TLFA would be registered in BSC Systems by the Central Registration Agent (CRA), and would be used by the Balancing Mechanism Reporting Agent (BMRA) and the Settlement Administration Agent (SAA) within the Balancing Mechanism Reporting Service (BMRS) and Settlement calculations respectively.
- 8) The remaining 'fixed' element of transmission losses would continue to be allocated to Parties on a non-locational basis through the TLMO, and the overall 45:55 allocation of total transmission losses to generation and demand would be retained.

Under Proposed Modification P198, there would be no phased implementation or 'hedging' of exposure to the new zonal TLFs, which would therefore take full effect from the first Settlement Period of the first BSC Year of the scheme.

3 SUMMARY OF ALTERNATIVE MODIFICATION SOLUTION

Two options are being considered for an Alternative Modification as set out below. One or both of these options could form a final Alternative Modification for P198.

Potential Alternative Option 1 (Seasonal TLFs)

Under this option the TLFA would calculate Nodal TLFs and Zonal TLFs in the same way as for the Proposed Modification, but would time-weight by BSC Season rather than BSC Year to calculate a set of 4 **Seasonal Zonal TLFs** for each TLF Zone – one for each BSC Season in the BSC Year. These Seasonal Zonal TLFs would be multiplied by the same 0.5 scaling factor as under the Proposed Modification, to create a set of 4 **Adjusted Seasonal Zonal TLFs** per TLF Zone (i.e. 56 Adjusted Seasonal TLFs in total for the BSC Year across all 14 Zones). All BM Units within a Zone would receive the Adjusted Seasonal Zonal TLF value for that Zone in every Settlement Period of the applicable BSC Season (i.e. there would be 4 different TLF values per BM Unit in the BSC Year).

Potential Alternative Option 2 (Linear Phasing)

Under this option TLF values would be phased in linearly over the first four BSC Years of the scheme, such that they were applied at 20% of their full value in BSC Year 1, 40% in BSC Year 2, 60% in BSC Year 3, 80% in BSC Year 4, and 100% in BSC Year 5 and all subsequent years. This scaling would be undertaken by the TLFA as part of its annual calculation of TLFs.

Please note that this potential Alternative option could be combined with either Adjusted Annual Zonal TLFs or Adjusted Seasonal Zonal TLFs.

4 SCOPE OF ALTERNATIVE MODIFICATION SOLUTION

Each potential Alternative option would require only minor changes in requirements from the Proposed Modification. This specification therefore focuses only on the amended requirements.

Respondents to this impact assessment are requested to only identify any impacts or lead time arising from the two potential Alternative options which are additional to those already identified for Proposed Modification P198. Since one or both potential Alternative options may form part of a final P198 Alternative Modification, respondents to this additional impact assessment are requested to provide separate costs and lead times for each option.

5 DETAIL OF ALTERNATIVE MODIFICATION SOLUTION REQUIREMENTS

5.1 Transmission Loss Factor Agent

The requirements regarding the TLFA procurement, Service Description and User Requirements Specification under either potential Alternative option would be identical to those set out in the Proposed Modification Requirements Specification.

5.2 Determination of Nodes

The determination of Nodes under either potential Alternative option would be identical to those set out in the Proposed Modification Requirements Specification.

5.3 Determination of TLF Zones

The determination of TLF Zones under either potential Alternative option would be identical to those set out in the Proposed Modification Requirements Specification.

5.4 Network Mapping Statement

Potential Alternative Option 1 (Seasonal TLFs)

The requirements regarding the content, development and maintenance of the Network Mapping Statement under this potential Alternative option would be identical to those set out in the Proposed Modification Requirements Specification with the following exception:

- For any new BM Unit registered following the initial determination of the Adjusted Seasonal Zonal TLFs for a BSC Year, the TLFs applied to that BM Unit within that BSC Year would be the four Adjusted Seasonal Zonal TLF values for the Zone in which the BM Unit was located (i.e. one for each BSC Season in the BSC Year).

Potential Alternative Option 2 (Linear Phasing)

The requirements regarding the content, development and maintenance of the Network Mapping Statement under this potential Alternative option would be identical to those set out in the Proposed Modification Requirements Specification.

5.5 Load Flow Model

5.5.1 Load Flow Model Specification

Potential Alternative Option 1 (Seasonal TLFs)

The requirements regarding the Load Flow Model Specification under this potential Alternative option would be identical to those set out in the Proposed Modification Requirements Specification with the following exception:

- The Load Flow Model specification would detail that the Nodal TLFs produced by the Load Flow Model would be converted to Adjusted Seasonal Zonal TLFs by the TLFA.

Potential Alternative Option 2 (Linear Phasing)

The requirements regarding the Load Flow Model Specification under this potential Alternative option would be identical to those set out in the Proposed Modification Requirements Specification.

5.5.2 Load Flow Model Reviewer

The requirements regarding the Load Flow Model Reviewer under either potential Alternative option would be identical to those set out in the Proposed Modification Requirements Specification.

5.5.3 Escrow Arrangements

The requirements regarding the TLFA escrow arrangements under either potential Alternative option would be identical to those set out in the Proposed Modification Requirements Specification.

5.6 Derivation of TLFs by TLFA

5.6.1 Input Data for TLFA Calculation

The Load Flow Model input data requirements under either potential Alternative option would be identical to those set out in the Proposed Modification Requirements Specification.

5.6.2 Calculation of TLFs by TLFA

a) Nodal TLFs

The calculation of Nodal TLFs under either potential Alternative option would be identical to that set out in the Proposed Modification Requirements Specification.

b) Volume-Weighted Averaging

The conversion of Nodal TLFs to Zonal TLFs (TLF_{zj}) by volume-weighted averaging under either potential Alternative option would be identical to that set out in the Proposed Modification Requirements Specification.

c) Time-Weighted Averaging

Potential Alternative Option 1 (Seasonal TLFs)

For each Reference Year the TLFA would be responsible for calculating four Seasonal Zonal TLF (TLF_{zs}) values for each Zone, by 'time-weighted' averaging in accordance with the following calculation (to be specified in the Code):

For each BSC Season within the Reference Year, and for each TLF Zone:

$$TLF_{zs} = \sum_p ((\sum_s TLF_{zj} / S_p) * J_p) / \sum_p J_p$$

where:

TLF_{zj} is the Zonal TLF for each Sample Settlement Period

S_p is the number of Sample Settlement Periods for a Load Period

J_p is the total number of Settlement Periods falling within the Load Period

\sum_s is summation by Sample Settlement Periods within a Load Period

\sum_p is summation by Load Period within the BSC Season in the Reference Year.

The BSC Seasons are defined in Section K of the Code and are:

BSC Spring: 1 March – 31 May inclusive;

BSC Summer: 1 June – 31 August inclusive;

BSC Autumn: 1 September – 30 November inclusive; and

BSC Winter: 1 December – 28 February inclusive (or 29 February in a leap year).

Potential Alternative Option 2 (Linear Phasing)

This potential Alternative option would make no difference to the time-weighted averaging element of the TLF calculation.

d) Scaling Factor Adjustment

Potential Alternative Option 1 (Seasonal TLFs)

For each forthcoming BSC Year, the TLFA would be responsible for determining four Adjusted Seasonal Zonal TLF (ATLF_{Zs}) values for each Zone, by multiplying the Seasonal Zonal TLFs by a scaling factor of 0.5 to ensure that the volume of energy allocated via the TLFs was comparable to the volume of variable losses calculated by the Load Flow Model.

The Code's calculation for ATLF_{Zs} would therefore be:

$$\text{ATLF}_{Zs} = \text{TLF}_{Zs} * 0.5$$

Potential Alternative Option 2 (Linear Phasing)

Under this potential Alternative option, the TLFA would be required to apply an additional scaling factor (the '**beta factor**') to the TLF values such that they were applied at less than their full value for the first four BSC Years of the scheme.

If Annual Zonal TLFs were used, the calculation of Adjusted Annual Zonal TLFs would be as follows:

$$\text{ATLF}_{Zy} = \beta * (\text{TLF}_{Zy} * 0.5)$$

If Seasonal Zonal TLFs were used, the calculation of Adjusted Seasonal Zonal TLFs would be as follows:

$$\text{ATLF}_{Zs} = \beta * (\text{TLF}_{Zs} * 0.5)$$

The value of β would be:

Applicable BSC Year 1	0.20
Applicable BSC Year 2	0.40
Applicable BSC Year 3	0.60
Applicable BSC Year 4	0.80
Applicable BSC Year 5 onwards	1.

5.7 Determination of BM Unit-Specific TLFs

Potential Alternative Option 1 (Seasonal TLFs)

For each BSC Year, there would be four TLF values applicable to each BM Unit: one for each BSC Season in the year. The value of TLF_{ij} for each BM Unit which was used in the calculation of TLMO^{+/-} and TLM in a particular Settlement Period would be the prevailing Adjusted Seasonal Zonal TLF (ATLF_{Zs}) for the Zone in which the BM Unit was located (determined by the TLFA on the basis of the Network Mapping Statement).

The TLFA would be responsible for sending the following output data to BSCCo:

- Four Adjusted Seasonal Zonal TLF values for each TLF Zone; and
- Four Adjusted Seasonal Zonal TLF values for each BM Unit.

The other output data requirements would be unchanged from those set out in the Proposed Modification Requirements Specification.

Potential Alternative Option 2 (Linear Phasing)

As for the Proposed Modification and Potential Alternative Option 1, the TLF value to be applied to each individual BM Unit in the applicable period would be the TLF value for the Zone in which the BM Unit was located.

However, under this potential Alternative option the TLF value(s) for each BM Unit in the first four years of the scheme would have been scaled down to less than their full value by the TLFA, using the β factor.

5.8 Derivation of TLMs

5.8.1 Approval of TLFs by Panel

The requirements for the Panel endorsement of TLFs would be identical to those set out in the Proposed Modification Requirements Specification.

5.8.2 Registration of BM Unit-Specific TLFs for BSC Year

Potential Alternative Option 1 (Seasonal TLFs)

BSCCo would send the four Adjusted Seasonal Zonal TLF values for each BM Unit to the CRA for registration in Central Systems.

The CRA would be responsible for registering these values and reporting them to BSCCo, the Transmission Company, the BMRA and SAA as set out in the Proposed Modification Requirements Specification. BSC Systems would therefore need to contain the functionality to hold four seasonal TLF values per BM Unit for a BSC Year, and to recognise which of these Adjusted Seasonal Zonal TLF values was applicable to the BM Unit in a given Settlement Period throughout the year.

Potential Alternative Option 2 (Linear Phasing)

There would be no difference in the registration requirements for TLF values under this potential Alternative option, since the TLF values would already have been scaled down by the TLFA prior to their receipt by the CRA.

5.8.3 Validation of BM Unit-specific TLFs for BSC Year

The validation requirements under either potential Alternative option would be unchanged from those set out in the Proposed Modification Requirements Specification.

5.8.4 Use of TLFs in Settlement for BSC Year

Potential Alternative Option 1 (Seasonal TLFs)

As for the Proposed Modification, the TLM and TLMO calculations under this option would be unchanged from those currently set out in the Code. However, the SAA would be responsible for applying the correct Adjusted Seasonal Zonal TLF value for a BM Unit in each Settlement Period.

Potential Alternative Option 2 (Linear Phasing)

There would be no difference in requirements under this potential Alternative option, since the TLF values would be scaled down by the TLFA prior to their registration and use in BSC Systems.

5.9 Derivation of TLFs for New BM Unit Registrations

Potential Alternative Option 1 (Seasonal TLFs)

Under this potential Alternative option the treatment of new BM Unit registrations throughout a BSC Year would be identical to that set out in the Proposed Modification Requirements Specification, with the following exception:

- For any new BM Unit registered following the initial determination of the Adjusted Seasonal Zonal TLFs for a BSC Year, the TLFs applied to that BM Unit within that BSC Year would be the four Adjusted Seasonal Zonal TLF values for the Zone in which the BM Unit was located (i.e. one for each BSC Season in the BSC Year).

5.10 BM Unit Deregistrations

The requirements regarding BM Unit deregistrations under either potential Alternative option would be identical to those set out in the Proposed Modification Requirements Specification.

5.11 Retrospective Recalculation of TLFs

The requirements regarding the retrospective recalculation of TLFs under either potential Alternative option would be identical to those set out in the Proposed Modification Requirements Specification.

5.12 Data Publication

5.12.1 BMRS

a) TLFs

Potential Alternative Option 1 (Seasonal TLFs)

Under this potential Alternative option, the BMRA would be responsible for applying the correct Adjusted Seasonal Zonal TLF value for a BM Unit in each Settlement Period within the derived data calculations on the BMRS. It would therefore need to be able to handle TLF values which changed by season, rather than only once per year.

Potential Alternative Option 2 (Linear Phasing)

There would be no difference in requirements under this potential Alternative option, since the TLF values would have been scaled down by the TLFA prior to their use in the BMRA calculations.

b) ETLMOs

Potential Alternative Option 1 (Seasonal TLFs)

The ETLMO values used by the BMRA are determined by the Panel for each BSC Year. There are currently two annual values: ETLMO⁺ and ETLMO⁻. In each Settlement Period, ETLMO⁺ is applied to all BM Units in delivering Trading Units whilst ETLMO⁻ is applied to all BM Units in offtaking Trading Units.

Currently, since TLF is zero, the ETLMOs are based on actual TLMOs from the previous year. Under the Proposed Modification, BSCCo would develop a revised methodology for the calculation of ETLMO^{+/-} to incorporate the existence of non-zero TLFs. The revised values of ETLMO^{+/-} would still be annual values, reflecting the annual TLF calculation under the Proposed Modification.

However, under this potential Alternative Modification, there would be four values of ETLMO^{+/-} per BSC Year – one per BSC Season, reflecting the seasonal TLF calculation under this option. BSCCo would be responsible for developing a revised methodology for calculating these values and sending them to the BMRA.

Potential Alternative Option 2 (Seasonal TLFs)

Under this option, the revised ETLMO calculation produced by BSCCo would also need to take into account the use of the β factor in the TLF calculation (i.e. it would need to recognise the scaling down of TLF values in the first four BSC Years of the scheme).

5.12.2 BSC Website

Potential Alternative Option 1 (Seasonal TLFs)

The publication requirements for this option would be the same as set out in the Proposed Modification Requirements Specification, except that there would be four TLF values published for each TLF Zone (one per BSC Season).

Potential Alternative Option 2 (Linear Phasing)

The publication requirements for this option would be the same as set out in the Proposed Modification Requirements Specification, except that the published TLF values would represent the scaled down values in the first four BSC Years of the scheme.

5.12.3 Ad-Hoc Data Requests

The requirements regarding ad-hoc data requests under either potential Alternative option would be identical to those set out in the Proposed Modification Requirements Specification.

5.13 Implementation Options

As for the Proposed Modification, the Implementation Date of any P198 Alternative Modification would be tied to Parties' contractual rounds (i.e. a 1 October or 1 April implementation).

6 ESTIMATED IMPACT OF ALTERNATIVE MODIFICATION ON SYSTEMS, PROCESSES AND DOCUMENTATION

For clarity, this section lists only the impacts of the potential Alternative options which are different from the Proposed Modification. The full impacts of the Proposed Modification can be found in the Proposed Modification Requirements Specification.

Potential Alternative Option 1 (Seasonal TLFs)

The difference in impacts of this potential Alternative option compared with the Proposed Modification are expected to be:

- An annual ex-ante calculation of four Adjusted Seasonal Zonal TLF values per BM Unit by the TLFA;
- An annual registration of four Adjusted Seasonal Zonal TLF values per BM Unit by the CRA, plus ad-hoc registrations for any BM Units registered part-way through a year;
- The ongoing use of the correct Adjusted Seasonal Zonal TLF value for each BM Unit in a given Settlement Period by the SAA; and
- An annual calculation of four seasonal values of ETLMO⁺ and ETLMO⁻ per BSC Year by BSCCo, and the ongoing use of these values in BMRS calculations by the BMRA.

In addition, Parties who have their own systems to monitor the Settlement calculations may need to amend these to take account of TLFs which vary by BSC Season rather than by BSC Year.

Potential Alternative Option 2 (Linear Phasing)

The difference in impacts of this potential Alternative option compared with the Proposed Modification are expected to be:

- A revised annual calculation of TLF values by the TLFA, using the β scaling factor such that the TLFs are set to less than their full value in the first four BSC Years of the scheme.

In addition, Parties who have their own systems to monitor the Settlement calculations may need to amend these to take account of the use of the β factor in the TLF calculation (i.e. in order to recognise the scaling down of TLF values in the first four BSC Years of the scheme).

7 DEVELOPMENT PROCESS

For the purposes of the impact assessment, respondents should assume that any P198 Alternative Modification would be implemented as a stand-alone development project managed by BSCCo.

8 TERMS USED IN THIS DOCUMENT

For an explanation of all other capitalised terms which are not defined in Section X of the Code, please refer to the Proposed Modification Requirements Specification.

Term	Definition
Adjusted Seasonal Zonal TLFs	Seasonal Zonal TLFs, adjusted through a scaling factor to ensure that the volume of energy allocated via TLFs is comparable to the volume of variable losses calculated by the Load Flow Model.
'Beta' (β) Factor	A scaling factor used to achieve a phased implementation of zonal TLFs, by scaling down the TLF values in the first four BSC Years of the scheme such that they gradually increase to their full value in the fifth BSC Year.
Seasonal Zonal TLFs	Zonal TLFs for each Sample Settlement Period, converted to figures for each BSC Season by 'time-weighted' averaging.

9 DOCUMENT CONTROL

9.1 Authorities

Version	Date	Author	Reviewer	Reason for Review
0.1	30/05/06	Kathryn Coffin	Sarah Jones, John Lucas, Tom Bowcutt	For technical review
1.0	30/05/06	Kathryn Coffin	BSC Agents, BSC Parties, Party Agents, Core Industry Document Owners, Transmission Company, BSCCo	For impact assessment

9.2 References

Ref.	Document Title	Owner	Issue Date	Version
1	Requirements Specification for Proposed Modification P198 'Introduction of a Zonal Transmission Losses Scheme' ELEXON - Modification Proposal 198	BSCCo	13/02/06	1.0

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