Beta Approach: Phased Implementation of Transmission Loss Factors.

It is proposed that the effect of the new transmission loss factors (TLFs) is phased in gradually over several years. This would be achieved by the addition of a scaling factor, β, into the losses equations in section T.2.3.1 of the BSC as indicated below.

The effect of the scaling factor would be to adjust the ratio of losses recovered by TLFs to those recovered by the existing method. The value of β would ramp up over time from 0 to 1 (in the case of P75) or from 0 to 0.5 (in the case of P82)[1] thus phasing in the full effect of the TLFs over time. The scaling factor, β, would be the same value for all participants. The ramp rate and time taken to completely phase in the TLFs would need to be determined by the modification group based on the expected impact of any changes to TLFs.

The scaling factor, β, would also need to be included in the equations for $TLMO^+$ and $TLMO^-$ to ensure that the correct overall volume of losses is recovered.

Section T.2.3.1 of BSC with proposed changes shown in bold red.

2.3.1 In respect of each Settlement Period, for each BM Unit, the Transmission Loss Multiplier shall be calculated as follows:

(a) for all BM Units belonging to Trading Units which in the Settlement Period are delivering Trading Units:

$$TLM_{ij} = 1 + \mathbf{b} * TLF_{ij} + TLMO^+_j$$

(b) for all BM Units belonging to Trading Units which in the Settlement Period are offtaking Trading Units:

$$TLM_{ij} = 1 + \mathbf{b} * TLF_{ij} + TLMO^-_j$$

where:

$$TLMO^+_j = -\{\alpha\,(\Sigma^+ QM_{ij} + \Sigma^- QM_{ij}) + \Sigma^+ (QM_{ij} * \mathbf{b} * TLF_{ij})\}/\,\Sigma^+ QM_{ij}$$; and

$$TLMO^-_j = \{(\alpha-1)(\,\Sigma^+ QM_{ij} + \Sigma^- QM_{ij}) - \Sigma^- (QM_{ij} * \mathbf{b} * TLF_{ij})\}/\,\Sigma^- QM_{ij}$$; and

Σ^+ represents the sum over all BM Units belonging to Trading Units that are delivering Trading Units in the Settlement Period;

Σ^- represents the sum over all BM Units belonging to Trading Units that are offtaking Trading Units in the Settlement Period.

As an alternative, the scaling factor β could be included in the methodology for calculation of the TLFs and administered by the Transmission Loss Factor Agent (TLFA) with the same overall effect. This would avoid a change to the existing systems.

[1] P82 already advocates the use of a scaling factor to ensure that only the variable element of transmission losses is recovered by TLFs. The same scaling factor could therefore provide the functionality required by the P82 proposal as well as for this proposed phasing option.

Justification with reference to Applicable BSC Objectives

BSC Objective (c): Promoting effective competition in the generation and supply of electricity.

Both modification proposals seek to promote effective competition by allocating the costs of losses to those BM Units that give rise to those losses and by providing long term locational signals. This proposed phasing option is consistent with these aims.

This phased implementation option will alleviate the initial impact of the new Transmission Loss Factors and provide a predefined transition to the new Transmission Loss Factors allowing all participants reasonable time to manage any risks associated with this transition.

Since the proposed phased implementation is a simple ramping up over time of TLFs to their full effectiveness, this option would not impose any additional risk management burden on participants and therefore would not result in any artificial competitive distortion.

This option will also preserve the intended locational allocation of the costs of losses and associated long term signals during the implementation phase and thus promotes competition equally to all participants.

BSC Objective (d): Promoting efficiency in the implementation and administration of the balancing and settlement arrangements.

This option provides a simple, straightforward and predetermined phased implementation of transmission losses that is efficient in terms of central and participant systems requiring little or no change to software.

The option does not result in any additional ongoing administrative burden either centrally or on participants nor does it impose any additional risk management burden on participants.