

Single Electricity Market

Treatment of Losses in the SEM

Decision by the SEM Committee

8th August 2011

SEM-11-067

INTRODUCTION

In February 2011 the SEM Committee published its Terms of Reference for the impact assessment on the proposed splitting of the treatment of losses in the market schedule from that in the dispatch schedule (SEM-11-006). The initial impact assessment has now been carried out and the results considered by the SEM Committee. This paper outlines the background to this work, the interim decision of the SEM Committee with respect to the treatment of losses in the SEM and the next steps in this process.

BACKGROUND

The development of harmonised all-island transmission charges and losses arrangements was an objective stated in the original Single Electricity Market (SEM) high level design (AIP/SEM/42/05)¹. It was also stated as an objective that the harmonised transmission arrangements should provide locational signals to users that reflect the costs that they impose on the transmission system. The RAs initiated a review into all-island transmission loss adjustment factors (TLAFs) as part of a review of transmission network locational signals in January 2009 (SEM-09-001)² and the proposed decision paper published on 18th June 2010 (SEM-10-039)³. Following this period of public consultation by the Regulatory Authorities a public workshop followed in July 2010.

A decision paper was published on 24th September 2010 by the SEM Committee on all Island transmission loss adjustment factor (TLAF) arrangements (SEM-10-066)⁴ for the tariff year 2010/2011. The SEM Committee decided to implement compression of the existing TLAFs as an interim solution while an enduring solution for the treatment of losses in the SEM was developed. This paper also outlined the SEM Committee's intention to examine "splitting" as a preferred long-term solution for the treatment of TLAFs in the SEM. The concept of splitting involves treating transmission losses differently in the market schedule to their treatment in the actual dispatch schedule

The SEM Committee requested that the Regulatory Authorities (RAs), assisted by the Transmission System Operators (TSO's) would carry out an impact analysis into splitting and would report back to the SEM Committee outlining the results of the analysis.

An information paper on Terms of Reference for Impact Analysis on TLAF splitting was published on the 14th February 2011.

¹ [AIP/SEM/42/05](#)

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³ [SEM-10-039](#)

⁴ http://www.allislandproject.org/en/project_office_sem_publications.aspx?year=2010§ion=2

The splitting concept involves implementing different transmission loss signals in the SEM market schedule to those in the SEM physical dispatch schedule, ie separating the locational signal and cost recovery for transmission losses in the SEM market and their treatment in physical dispatch.

The SEM Committee provided guidance to the Regulatory Authorities with regard to splitting by stating in SEM-10-066 that, “the SEM Committee favours an efficient dispatch signal through TLAFs....,(and), in the market schedule, the SEMC favours and values stability (non-volatility).

The aim of the splitting analysis is to assess if the potential benefits and advantages of implementing splitting, as the long term solution for the treatment of transmission losses in the SEM, outweigh any potential costs and disadvantages of this approach. In order to assess this, the RAs have carried out this modelling project in conjunction with the TSOs and assessed the results of this modelling against the proposed set of measurement criteria.

While staying within the stated objectives of the harmonised all-island transmission charges and losses in the SEM High Level Design, the SEM Committee decided that the impact assessment for TLAf splitting would examine the case for splitting against the following four criteria

- Stability of the market schedule – how inframarginal rents (IMR) vary with loss factors.
- Efficiency of the dispatch schedule – how total production costs vary as loss factors move closer to real time.
- Impact on the all-island customer.
- Divergence between the market schedule and dispatch schedule – Dispatch Balancing Costs.

The modelling was carried out, for the unconstrained runs, using the RA’s validated Plexos model for 2009/10 with updated demand, generation and fuel costs assumptions made for each of the relevant years to be modelled. For the constrained runs an equivalent constrained model provided by the TSOs was used.

SEM COMMITTEE DECISION

Having considered the results of the initial impact assessment the SEM Committee is of the view that further in-depth consultation on these results is required. The SEM Committee will therefore publish, by early October 2011, a further detailed consultation paper on the topic. This will detail the results of the RAs’ impact assessment so far and invite comments from the industry on the results and the indicators which they outline. It will also include all of the modelled TLAfs used in the impact assessments so far to enable generators and others to

carry out their own modelling if so desired. In the meantime the SEM Committee has decided to continue the use of 'compressed TLAFs' i.e. the TLAFs produced for the year in question (1 October 2011 – 30 September 2012) using the TSOs' locational methodology, but compressed by a factor of 50%. The SEM Committee has taken this decision because, at this time, it is not convinced that splitting the treatment of losses in the market schedule and the dispatch can be considered without a detailed consultation and the opportunity for the industry to put forward their views with regard to splitting and the results of their own analysis. Notwithstanding this, the forthcoming consultation, which will last for 12 weeks, will consider the full range of options for TLAFs.

The SEM Committee has asked the TSOs to prepare operational TLAFs using the locational methodology for the period 1 October 2011 – 30 September 2012 and to compress these by 50%. These are due to be submitted to the RAs by 31 August 2011 and published on the AIP website shortly thereafter.

NEXT STEPS

- Final consultation approx 10 October 2011 – 10 January 2012.
- Further modelling by TSOs and RAs 10 October 2012 – 31 March 2012
- SEM Committee Final Decision on treatment of losses in the SEM – end May 2012
- TSO consultation on 2012 – 13 TLAFs – 1 June 2012 – 31 July 2012
- Publication by TSOs of TLAFs for 2012 – 2013 – 1 September 2012
- Application of enduring solution to TLAFs 1 October 2012