18 July 2019

Mr Andrew Splatt
Australian Energy Market Commission
Sydney, Australia

Submitted online.

Dear Mr Splatt,

National Electricity Amendment (Transmission Loss Factors) Rule

ENGIE Australia & New Zealand (ENGIE) appreciates the opportunity to comment on the transmission loss factor consultation paper. ENGIE is a member of the Australian Energy Council (AEC), supports the AEC's submission, and makes the following additional comments.

In summary, ENGIE does not support the Adani Renewables rule change proposal as it fails to support efficient dispatch in the National Electricity Market (NEM). ENGIE suggests that the application of a dynamic loss factor should be assessed in terms of economic efficiency, compatibility with five-minute settlement and to provision to participants of an option to more effectively manage their electrical losses and output.

Question 1: Identifying the problem

A key NEM design element is the price setting mechanism based on cost of marginal generation which includes marginal loss factors (MLF). To move away from marginal to average loss factors would compromise economic efficiency of the dispatch process. The application of MLFs is especially important given the NEM network topology of being "long and skinny" and having a wide range of MLFs from one end of the network to another.

The current approach to annual calculation of the MLFs is a simplification. Some parties have raised the issue of inaccurate MLFs not being fit for purpose in the changed technology mix of the NEM. Whilst this assertion is yet to be qualified, it appears logical that modelling assumptions regarding generating patterns spanning an entire year cannot accurately predict generating patterns of intermittent generation which is highly correlated within technology classes. However, this does not justify implementation of the proposed rule. It would seem preferable to consider the application of multiple MLFs over the year or ultimately calculating the loss factor dynamically could readily address the inaccuracy concerns. This would seem simpler to administer and would increase dispatch efficiency and efficiency of price setting all at the same time.

The distribution of the intra-regional settlement residue (IRSR) could be altered to return some of the over-recovery of losses to generators (i.e. the actual losses are approximately 50% of the marginal losses). Provided this was done on an ex-post basis and not at the time of dispatch, economic efficiency of the dispatch process would be maintained. However, there are two concerns with this approach as follows:

- the MLFs impact in locational decisions would be compromised and lead to a loss of economic efficiency; and
- since customers pay the pool price set by marginal generation which includes MLFs, they pay a higher price than if the average losses were used to set the marginal price. The distribution of the IRSR in part compensates customers for the use of MLFs in spot price setting. Returning some of the revenue to generators is likely to weaken locational signals and distort dispatch outcomes. In addition, there is a question of equity should generators receive half of the IRSR.

Question 2: Proposed assessment framework

ENGIE agrees with the proposed assessment framework including the impact on investments, efficient market operation and risk management of changing intra-regional loss factors.

Question 3: Changing the transmission loss factor framework

The application of MLFs are fundamental to the calculation of a marginal price and economically efficient dispatch in the NEM.

Nonetheless, the rapid and decentralised introduction of distributed intermittent renewable generators warrants a review of the MLF methodology. At the same time, it is imperative that any potential changes to the treatment remain technology neutral.

It should be noted that the NEM was designed with variable or potentially dynamic loss factors. Due to the initial mis-interpretation of design by the then market operator, limited computer power and

compressed implementation timeframe, the MLFs were left as fixed on an annual basis in the interim. Once the market was running, market operator consulted on a system change to move to dynamic loss factors. By that time participants became accustomed to the fixed MLF arrangements and would have had to modify their IT systems to accommodate a more granular or dynamic MLF. At that time, the incremental costs didn't outweigh benefits.

The situation is very different now with the adoption of the five-minute settlements process and the rapid introduction of short lead time intermittent renewable generators and consequently the MLF methodology needs to be reassessed.

The AEMC is urged to provide analysis of the multiple MLFs approach and five-minute dynamic loss factors in terms of cost, dispatch efficiency and risk management to inform stakeholders in their assessment of various approaches.

A further proposal for the AEMCs consideration

Project proponents are currently exposed to risks of MLF changes without an ability to influence them. Variations in MLFs impact project economics. It should be possible for transmission/distribution service providers to offer firm access and a hedge against the MLF for the agreed life of the project as part of the connection agreements. Project proponent would then have a choice of taking a risk on MLFs changing or locking them in for a certain price. If additional projects subsequently choose to locate in the same transmission/distribution area, these projects would need to fund the payout of the MLF hedge to contracted generators. Essentially this would follow the "causer pays" principle. Alternately the network service provider could offer to augment the network to provide additional firm access and fixed loss factors to the new entrant.

ENGIE considers the potential hedging of MLFs a second order issue to firm access arrangement and suggests such a mechanism be best addressed as part of the Coordination of Generation and Transmission Investment (COGATI) review as an element of the firm access arrangements.

Conclusion

In conclusion, ENGIE supports the following:

- the application of MLFs in the dispatch process and price setting;
- the examination of a more granular MLF over the year (time of day, day of week, seasonal) or possibly dynamic loss factor application if economically justified;
- the examination of an MLF hedging arrangement with Transmission or Distribution Service providers (TNSP/DNSP) be included in the scope of the COGATI review; and
- maintaining a technology neutral approach when calculating MLFs

ENGIE trusts that the comments provided in that this response are of assistance to the AEMC consultation process. Should you wish to discuss any aspects of this submission, please do not hesitate to contact me on, telephone, 0417 343 537.

Yours sincerely,

David Hoch
Regulatory Strategy and Planning Manager