

4th February 2011

Australian Energy Market Commission
PO Box A2449
Sydney South NSW 1235

Submission lodged online at: www.aemc.gov.au
Project Ref: ERC0117

Submission to: Consultation Paper - Application of Dual Marginal Loss Factors

Snowy Hydro appreciates the opportunity to respond this is Rule change. For ease of reference, our submission responds sequentially to each of the questions raised in the AEMC Consultation Paper.

Executive Summary

Snowy Hydro conditionally supports the proposed Rule change subject to several conditions as outlined in this submission.

It is important to note that static marginal loss factors (MLF) for generators and loads are an integral feature of the Australian National Electricity Market. This critical market design feature means that by definition the single MLF for a load or generator does not precisely represent actual transmission losses for transporting electricity to consumers. This is a fact that applies to all generators and loads and is not confined to only pump storage generators.

In recent financial years the main cause of high MLF calculations for Lower Tumut power station has been changed generation and consumption patterns due to severe drought conditions. With current La Nina weather patterns which are associated with wetter climatic conditions, this historical unusual generation and consumption pattern is unlikely to be repeated in the near future.

Snowy Hydro conditionally supports the Rule change provided a number of conditions are met. Firstly, the 30% net energy balance trigger represents a reasonable trigger that has already been subjected to rigorous consultation. We believe this trigger level should not be re-opened for debate. Finally, the application of dual static marginal loss factors would only be needed if Lower Tumut experiences another extreme 1 in 100 year drought. With an overall wetter weather pattern, the prospect of continuous year on year drought conditions and therefore higher pumping energy consumption year on year is very small. Hence, our support for the Rule change is conditional upon AEMO applying different inputs to the MLF methodology in circumstances where historical generation and/or consumption patterns are not representative of future expectations.

Snowy Hydro believes the materiality of any inefficient market impact for Lower Tumut due to the different MLF methodologies is very low. Lower Tumut is an energy limited power station which would typically generate when the opportunity cost of not generating is highest. The difference in the MLFs calculated for this power station using different methodologies varies

in the range of 2 to 3%. This relatively small difference has an insignificant influence on our operational and investment decisions for this plant. Furthermore, many variable factors go into Snowy Hydro's decision making process in ascertaining whether to operate this power station in pump mode. The Marginal Loss Factor is an insignificant factor in this decision making process.

Question 1: Materiality and extent of the identified problem

The Commission has invited comments on to what extent is the identified problem causing, or is likely to cause a material market impact.

Snowy Hydro believes the materiality of any inefficient market impact is very low. Lower Tumut is an energy limited power station. The power station's historical generation output has typically being around 480,000 MWh per annum. Being energy limited, the incentive is to generate at periods where the opportunity cost of not generating is highest. The difference in the Marginal Loss Factors calculated for this power station using different methodologies is in the range of 2 to 3%. This relatively small difference has very insignificant influence on our operational and investment decisions for this plant.

In the pumping mode of operation, Lower Tumut has historically only pumped less than 180,000 MWh of energy per annum. Many variable factors go into Snowy Hydro's decision making process in ascertaining whether to operate this power station in pumping mode. The Marginal Loss Factor is also very insignificant factor in this decision making process.

Intra-regional settlement residues

Snowy Hydro believes AEMO has over estimated the impact of different marginal loss factors on intra-regional settlement residues. In incidences where Lower Tumut was the marginal generator in the NSW, the actual level of MLF applied to this generator would have a negligible influence on the regional reference price. Hence, the quantum of intra-regional residues in periods where Lower Tumut is the marginal generator is not a function of MLFs.

We also note that the "Actual IRR" in Table 2 would have included actual bidding behaviour by generators trying to manage market risk from factors such as high demand and/or tight supply, network outages, and network constraints. These behaviours in the face of tight supply and demand balances, network and outage constraints would not have changed regardless of what MLF methodology was applied to Lower Tumut.

Question 2 – Options to address the identified problem

The Commission has invited comment on the options to address the identified problem.

Snowy Hydro strongly agrees with the Commission that any proposed solution must be proportional to the materiality of the identified problem.

AEMO has listed a number of alternative methodological approaches for consideration. These included:

1. a single time weighted averaging methodology;
2. a dynamic loss factor methodology; and
3. dual connection points and metering.

Snowy Hydro believes the single time weighted averaging methodology has provided a reasonable solution when the net energy balance is less than 30%. We believe the materiality of the identified problem is small and therefore believe that this is a viable option to the proposed solution of dual MLFs when the net energy balance is less than 30%.

Snowy Hydro does not support the option of dynamic loss factors. We agree with AEMO's assessment that this option is complicated and represents a significant shift to the existing NEM design. Static marginal loss factors are an integral feature of the NEM and represent approximate transmission losses for all generators and loads. Hence, if there was a view to moving to dynamic loss factors, it would be applicable to all generators and loads and not just pump storage generators.

Dynamic loss factors would also have significant negative implications for dispatch, pricing, and settlement as generators and loads would not know ahead of dispatch what their offer or bid at the Regional Reference Node would be. This is likely to lead to very conservative contracting behaviour and hence a reduction in overall contract volume and liquidity. Given most energy is transacted in the Contracts market such an outcome would be inefficient.

Snowy Hydro believes that it is not feasible to reconfigure the metering of Lower Tumut station so that there are separate pump and generation connection points for that station. We believe dual connection points and metering represents a disproportionate and inefficient response to the identified problem.

Question 3 – Criteria for application of options to address the identified problem

The Commission has invited comment on the criteria for the application of an alternative MLF methodology.

Snowy Hydro supports AEMO's recommendation for the 30% net energy balance criteria. This 30% criteria has already been consulted on in AEMO's Forward Looking Marginal Loss Factor methodology in 2008. In that consultation process no respondents objected to this threshold level. We don't believe that there is any reasonable logic to re-open this debate on the threshold level.

In AEMO's Attachment B to their Rule change request, the use of dual volume weighted MLFs when the net energy balance of 30% criteria is met results in almost identical settlements to the current Rule compliant use of a single volume weighted MLF. This strongly supports the use of this threshold level as being the most appropriate criteria for an alternative MLF methodology.

AEMO discretion in the application of alternate inputs into the MLF calculations

AEMO uses a full financial years worth of generation and consumption to calculate MLFs. This means that the data for the calculation of the forward financial year is almost 2 years out of date.

Historical generation and consumption may not be representative of future generation and consumption (particularly for energy limited and pump storage generators) and therefore the future calculated MLF may be an inaccurate approximation of losses. This represents a situation where we believe some AEMO discretion is warranted in the application of key inputs such as generation and pumping electricity consumption in the MLF calculations.

Snowy Hydro advocates that pump storage Generators must have the ability to demonstrate to AEMO that effectively the prior 2 years of historical data will be unrepresentative of future generation and consumption patterns. AEMO should have the discretion to apply alternate generation and pumping consumption inputs into the MLF methodology where it can be reasonably demonstrated that historical data would be unrepresentative of future generation/consumption expectations. Snowy Hydro has reviewed AEMO's methodology for calculating Forward Looking Loss Factors and reviewed the draft of the proposed Rule and believes that nothing prevents AEMO from applying a different set of generation and consumption data.

Conclusion

Snowy Hydro appreciates the opportunity to respond to this consultation. Please contact me on (02) 9278 1862 if you would like to discuss any issue associated with this submission.

Yours sincerely,



Kevin Ly
Manager, Market Development & Strategy