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EnergyAustralia®

10 February 2011

Mr Christiaan Zuur
Australian Energy Market Commission
PO Box A2449
Sydney South NSW 1235

Dear Mr Zuur,

Application of Dual Marginal Loss Factors Rule Change Proposal

I refer to the current consultation on Rule change "Application of Dual Marginal Loss Factors" (reference ERC0117). This Rule change proposal raises important issues relating to the calculation of intra-regional settlement residues in the National Electricity Market. These residues have historically had significant impacts on the network prices of EnergyAustralia's customers, as they offset regulated Transmission charges.

EnergyAustralia supports the Rule change as proposed by the AEMO. The principal reasons for this are as follows:

- The proposed Rule change will provide an improvement in the efficiency of operation of the National Electricity Market;
- The change is considered to be consistent with the National Electricity Objective; and
- The outcome should be a reduction in network charges to customers as a result of improved efficiency, that will benefit customers for whom transmission charges represent a large portion of their energy bill.

Our responses to the AEMC's issues for consultation are included overleaf.

If you have any questions in relation to this submission please contact Mr Robert Telford on (02) 9269 2136.

Yours sincerely,

CRAIG MOODY

Executive General Manager
System Planning & Regulation

Materiality and extent of the identified problem

To what extent is the identified problem causing, or is likely to cause, a material market impact?

AEMO's Rule change proposal and its supporting material have provided clear examples of situations where it would be appropriate to have two volume weighted marginal loss factors (MLFs). These situations arise at transmission network connection points that function both as a generator and as a load. This is particularly significant for water pumping stations located in the Snowy region, where the total generated and consumed electricity is highly variable depending on water availability and prevailing generation prices, and as a consequence, may also be close to parity.

The examples provided by AEMO demonstrate how a single volume weighted MLF can create distortions in the despatch of generation within the NEM. The distortion occurs because the MLF typically has a value significantly larger than 1.0 which acts to artificially lower the spot price of electricity. The NEM electricity purchasers pay less for electricity than they would have paid if the MLF had been a more typical value for a generator (0.95 - 0.98).

While a lower price of energy is generally a good thing, it is important that correct price signals are provided to ensure overall efficiency in the use of resources and the cost of delivered energy. In this case, the artificially lower price means there is less electricity flowing across boundaries, and lower intra-regional settlement residues. TNSPs use the revenue generated by intra-regional settlement residues to offset revenue they recover from end users. By reducing settlement residues artificially through less efficient despatch, customers within EnergyAustralia's area pay relatively more than they should under a more efficient model. We consider the impact on price to be material, particularly in the current environment of rising network charges.

We note that AEMO has implemented an interim measure of a single time weighted MLF for combined generator/load sites, that is subject to the 30% net energy balance condition being met. We note that Tumut Power Station is the first site to be subject to these arrangements. AEMO has demonstrated in its submission that this interim measure is likely to create market distortions as in some situations more expensive energy is dispatched ahead of cheaper energy. We are concerned that this interim measure results in unfavourable outcomes that are not consistent with the National Electricity Objective requirement for efficient investment and use of electricity services (particularly with respect to price). In our view, the interim measure does not improve the efficiency of despatch or outcomes for customers.

Will the identified problem primarily have a material impact through:

— over/under recovery of IRR?;

— changed operational and investment decisions for participants?; or

— any other avenue?

The most significant impact of a single volume weighted MLF for pumping stations is that in some circumstances the lowest cost source of generation may not be dispatched. This is concerning for the NEM as a whole, because it goes against the principles underlying the structure of the market. A pumping station with a single volume weighted MLF (and lower electricity bid prices) may be favoured by the NEM dispatch scheduling. In many circumstances it will only be given this priority due to the effect that a MLF has in lowering a generator's dispatch price. However the pumping station is not necessarily the least cost source of electricity to be dispatched. It is given a priority as a result of the MLF. This MLF becomes distorted when the net generation (ie. less consumption) volumes are less than 30% of generated energy.

Inefficient market dispatch has broad ranging implications as it will influence both the operational and investment decisions for market participants. In the short term, base load generators may reduce their dispatch price below cost in an effort to anticipate events where pumping stations are generating. In the long term, investment in certain types of generation may be reduced as a result of low market prices at times when pumping stations are generating.

The impact to EnergyAustralia specifically will be most felt as a result of significant under recovery of settlement residues. This is because the generator has a MLF value of well above 1.0, which is likely to result in reduced

wholesale spot price of electricity, which in turn creates an under-recovery of settlement residues which are used to offset transmission charges.

Moreover, the ensuing effect of variability in and material increases in transmission charges has the potential to affect the consumption and investment decisions of larger transmission and distribution connected customers, for whom the transmission charge represents a significant input cost.

AEMO's interim solution of a single time weighted MLF is also considered likely to influence the operational and investment decisions for market participants. This is because the dispatching of wholesale electricity could be adversely effected by time weighted MLFs that are higher than what they would be for a stand-alone generator.

What parties are most affected by the identified problem and the proposed Rule? How?

Are there any parties, other than hydroelectric Generators with pump storage, who are likely to be affected by the identified problem and proposed Rule change in the medium to long term?

The single volume weighted MLF for pumping stations can contribute to inefficient dispatch of wholesale electricity and negative impacts on transmission pricing.

TNSPs operate under revenue cap which means that any under recoveries in intra-regional settlement residues are made up via higher transmission prices in future years. While all users of electricity will experience these high prices, it is particularly the major users that experience the largest price increases. This is because major users are typically connected at higher voltages and transmission makes up a higher component of their overall network charges.

The time weighted MLF for the Tumut Power Station could potentially cause an inefficient dispatch of electricity in the NEM. For example, the Tumut generation could be dispatched ahead of cheaper base load electricity. This undermines the National Electricity Objective of efficient investment and operation, particularly with respect to pricing. Investors in new power generation project could defer investment as a result of distorted wholesale market price signals.

Larger network customers, connected to the transmission network or at higher voltage levels in the distribution network, are currently affected by the problem identified by the AEMC, both through materially increased network charges and through significant year-on-year variation in those charges as settlement residues fluctuate. The proposed Rule would benefit those customers.

Options to address the identified problem

Do any of the options listed above represent a viable and proportionate solution to the identified problem?

Are there any alternative options which have not been considered?

How are each of these options likely to affect participant behaviour?

The AEMO Rule change request considers a number of alternatives to dual MLFs for pumping stations. EnergyAustralia agrees with AEMO that introducing a single time weighted MLF for these sites is likely to create an inefficient dispatch of electricity. The alternative of dynamic loss factors would burden market participants with additional administration costs, given the complexities surrounding their calculation and implementation. Dual connection points and metering for pumping stations (and their equivalent) would require both a modification to the NER and additional participant costs to segregate connections and metering.

EnergyAustralia considers that the best solution to the identified problem is that the Rules be modified to allow pumping stations (and equivalent generators that satisfy the 30% NEB) to have two volume weighted MLFs, one for the times when the site is generating, and the other for when the site is a load.

Criteria for the application of options to address the identified problem

Do any of the criteria listed above present a viable solution as to how an alternative MLF methodology should be applied?
Do any of the criteria listed above represent a proportional response to the identified problem?
Are there any alternative criteria which have not been considered?
How are each of the criteria listed above likely to affect participant behaviour?

As part of its Rule change request, the AEMO recommended the Net Energy Balance (NEB) condition as the means of identifying sites that should have two MLFs. The NEB is the difference between the annual energy generated and consumed at a connection point, shown as a percentage of the total energy generated. AEMO has proposed that when the NEB is less than 30%, the site should have two volume weighted MLFs.

EnergyAustralia agrees with AEMO that using the 30% NEB is an appropriate and readily administered criterion for identifying generator/load sites that should have two MLFs. It is appropriate to use an identifier that recognises that as the site energy consumption approaches parity with the site generated energy, the MLF formula produces very high volume weighted MLF values.

In its consultation paper, the AEMC suggested a number of alternative criteria to the 30% Net Energy Balance. EnergyAustralia is of the view that a range for the NEB of 25% to 35% would not be advisable as this would exclude pumping stations (or equivalent sites) with NEB values of less than 25%. As a general principle, EnergyAustralia would propose that AEMO should not have the discretion on which method it uses to identify dual MLF sites, as this could create confusion among market participants in an area that is already relatively complex.

The AEMC consultation paper also suggests that all, or close to all connection points have dual volume weighted MLFs. EnergyAustralia does not support this proposition.

EnergyAustralia recommends that dual volume weighted MLFs only be allocated to a site in exceptional circumstances ie. for transmission connected locations where the 30% NEB condition is met. Allocating two MLFs to all sites that both consume and generate electricity would add a significant and unnecessary administrative burden and cost to NEM participants, particularly if applied to the much larger and growing number of distribution-connected sites with embedded generation.