



7 November 2016

Mr James Lindley
Manager Systems Performance and Commercial
Australian Energy Market Operator
GPO Box 200
Melbourne VIC 3001

Dear Mr Lindley

RE: Forward Looking Loss Factor Calculation Methodology Consultation 2016

ERM Power Limited (ERM Power) welcomes the opportunity to respond to the Australian Energy Market Operator's Issues Paper for the Forward Looking Loss Factors Calculation Methodology Consultation published September 2016.

About ERM Power Limited

ERM Power is an Australian energy company operating electricity sales, generation and energy solutions businesses. The Company has grown to become the second largest electricity provider to commercial businesses and industrials in Australia with operations in every state and the Australian Capital Territory. A growing range of energy solutions products and services are being delivered, including lighting and energy efficiency software and data analytics, to the Company's existing and new customer base. ERM Power also sells electricity in several markets in the United States. The Company operates 497 megawatts of low emission, gas-fired peaking power stations in Western Australia and Queensland.

General comments

ERM Power acknowledges the work undertaken by AEMO during 2016 with regard to improving both the accuracy and the transparency for the calculation of forward looking transmission loss factors in the NEM. We believe the roundtables and workshop conducted by AEMO has led to a range of ideas being considered for implementation which over the long term will lead to improvements in the calculation methodology.

Nominated transparency improvements

ERM Power believes increased transparency in AEMO forward looking Marginal Loss Factor (MLF) calculation process is a necessary step in allowing participants to better understand the outcomes from the process and also ensure that participants are assured an accurate outcome is occurring.

ERM Power supports the proposed changes with regard to promoting greater transparency and consultation with Participants for key input assumptions, in particular the nominal monthly generation output for all generators prior to AEMO commencing calculation modelling. In preparing this data it would be helpful if AEMO included the generator outage data included in the assumptions (on a number of days in any month basis) as forecast generator outages can have a large impact on the MLF outcomes.

We also agree that the overall regional forecast and connection point forecasts should not normally form part of the input assumptions consultation. Notwithstanding, we would recommend that for ease of access, links to the relevant data be included in the AEMO assumptions report. .

ERM Power supports the proposal to bring forward the publication of the Draft MLFs by 1 March instead of the current 1 April each year as this allows additional time for participant analysis and questions prior to publication of the Final MLFs. Currently there is only a short time period between publication of the Draft and Final MLFs for participants to raise concerns or questions.

We also support AEMO's proposal to publish a summary of expected changes in the next year's vs current year MLFs during January each year.

ERM Power strongly supports the proposal for a routine yearly backcast review of the calculation using actual connection point demands and generation outputs. Routine backcasting reviews demonstrate to participants that AEMO's forward looking methodology accurately reflects the actual marginal losses of the system. It also highlights that an error in the methodology is present if the backcasting study provides outcomes which are inconsistent with the forward looking outcomes.

We are concerned however, that the Issues Paper indicates that: *The backcasting study uses historical demand and generation measured at connection points as an input to the minimal extrapolation process. This results in conditions very close to historical snapshots of the power system with only small amounts of generation scaling required.*¹ Given that the backcasting study uses historical demand and generation output, we are uncertain as to why any generation scaling would be required to meet the actual demand profile. AEMO should explain the requirement for these small amounts of generation scaling in greater detail.

ERM Power is also disappointed that AEMO has chosen only to publish the backcasting study outcomes on an electrical sub-region basis rather than on a connection point basis. We believe the backcasting study outcomes need to be published on a connection point rather than electrical sub-region basis if AEMO intends to meet participant's requirements for improved transparency in this area. As suggested during the workshop, participants are happy to submit a rule change request if AEMO believes there is any impediment in the rules to prevent this from occurring.

Methodology design issues

We welcome AEMO's decision to move to implement possible improvements in the calculation methodology for FY17/18 with further improvements foreshadowed for FY18/19. Whilst AEMO may consider the improvements to be only marginal, from a participant's perspective, inaccuracies of as little as 0.5 to 1.0% in MLF can result in very meaningful changes in settlement outcomes.

The proposal to implement an energy limit on dispatchable generation based on a 5-year historical average from the information provided by AEMO, seems to be an easily implementable first-step improvement in the methodology. Additionally, another complementary improvement would be the implementation of an energy floor, based on the same 5 year average to cater for years when demand is actually forecast to decrease, or generator output in a year has been significantly impacted by major unit outages.

¹ AEMO Issue Paper September 2016 - Forward Looking Loss Factors Calculation Methodology Consultation page 6

Whilst ERM Power supports this energy limit concept we do not believe there is a need to include a specific term for retired generation (*Genret* %)² in the energy limit equation. Simply because a generating unit retires does not result in a uniform increase across the output of all remaining generators and this should be left for the normal supply/demand balancing in the methodology.

Whilst we agree that energy limits should not be imposed on solar PV and wind generators, it remains uncertain from the Issues Paper if the wind and solar PV profile will be based on one single reference year or an average of a 3 to 5 year period to account for the normal variations in output from these generation sources. Participants at the workshops indicated that reliance on only a single reference year to represent outputs from solar PV and wind generators could possibly result in errors in the MLF calculation. Errors could be minimised by the use of a multi-year averaged outcome.

The other easily implementable area that ERM Power believes could be considered for the FY17/18 calculation is the use of planned outages as advised in the MTPASA process, in place of historical outages from the reference year. Unit outages between years, particularly for single and two unit power stations can have a significant impact on MLF outcomes, and not just that power station, but all other power stations connected within the same electrical sub-region. AEMO should adjust a power station's nominal energy output to reflect the inclusion or non-inclusion of a planned outage for the calculation year. This information input should be sourced from the MTPASA data and if necessary confirmed with the respective power station registered participant.

Ongoing improvement cycle

ERM Power believes any improvements implemented for FY17/18 are only a first step in achieving much needed improvements in accuracy and transparency in the AEMO forward looking MLF calculation process. Appendix B contains other issues raised by participants during the successive roundtables and workshop and we believe that AEMO should continue to process and report on these concepts for future consideration.

Please contact me if you would like to discuss this submission further.

Yours sincerely,

[signed]

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² *Genret*_% = Retired generation in Target Year as a % total NEM generation (%) - AEMO Issue Paper September 2016 - Forward Looking Loss Factors Calculation Methodology Consultation page 8