2016 FORWARD LOOKING LOSS FACTOR METHODOLOGY REVIEW

FINAL REPORT AND DETERMINATION

Published: **8 February 2017**

AEMO
AUSTRALIAN ENERGY MARKET OPERATOR

EXECUTIVE SUMMARY

The publication of this Final Report and Determination (Final Report) completes the Rules consultation process conducted by AEMO to consider proposed changes to the Forward-Looking Loss Factor Methodology (Methodology) under the National Electricity Rules (NER).

AEMO's Issues Paper[1] identified what AEMO considered were the main issues with the Methodology and discussed corresponding amendments to:

- Increase transparency by consulting with industry on key inputs and assumptions used in the loss factor calculation.
- Conduct a backcast loss factor study at the end of each financial year.
- Apply a generation energy cap on forecast generation used in the loss factor calculation based on the five-year historical average.

After considering submissions to the Issues Paper and the Draft Report and Determination, AEMO has determined an amended Methodology with the following key changes:

- AEMO will publish a backcast loss factor study at the end of each financial year.
- AEMO will apply a generation energy cap to forecast generation modelled in the loss factor study based on five-year historical average generation.
- AEMO will use the Medium Term Projected Assessment System Adequacy (MT PASA) as a trigger for initiating discussions with participants, with the potential to use a revised generation profile for the loss factor study.

The amended Methodology is published with this Final Report.

[1] http://www.aemo.com.au/Stakeholder-Consultation/Consultations/Forward-Looking-Loss-Factor-Calculation-Methodology-Consultation-2016

CONTENTS

TABLES

FIGURES

1. STAKEHOLDER CONSULTATION PROCESS

As required by the National Electricity Rules (NER), AEMO has consulted with Registered Participants and other interested persons on revisions to the published Methodology (a combination of the methodologies referred to in clauses 3.6.1, 3.6.2 and 3.6.2A of the NER) that AEMO uses to calculate inter-regional and intra-regional loss factors.

The stages and timing for the completed consultation are shown in Table 1.

Table 1 Review timetable

Stage	Date
Issues Paper published	30 September 2016
Submissions due on Issues Paper	9 November 2016
Draft Report published	8 December 2016
Submissions due on Draft Report	23 December 2016
Final Report published	8 February 2017
Apply revised Methodology to 2017-18 MLFs	January – April 2017
Publish 2017-18 MLFs	1 April 2017

The publication of this Final Report marks the completion of the consultation.

2. BACKGROUND

2.1 NER requirements

The NER requires AEMO to calculate, for each financial year, inter-regional loss factor equations and intra-regional loss factors, and to publish the results by 1 April, prior to the start of the target year. The target year is the year for which the loss factors are being calculated. The NER[2] further requires AEMO to determine, publish and maintain in accordance with the NER consultation procedures:

- A methodology to determine the inter-regional (clause 3.6.1(c)) and intra-regional loss factors (clause 3.6.2(d)) to apply for a financial year for each transmission network connection point.
- A methodology for calculating average (intra-regional) transmission loss factors for proposed virtual transmission nodes (clause 3.6.2(g)).
- A methodology for forecasting, modelling and collecting forecast load and generation data for use in determining transmission loss factors (clause 3.6.2A(b)).

2.2 Role of marginal loss factors

Electrical energy losses occur due to the transfer of electricity through a network. The NER separates losses into two components[3]:

- Inter-regional losses, which are due to a notional transfer of electricity from the regional reference node (RRN) in one region to the RRN in an adjacent region.
- Intra-regional losses, which are due to the transfer of electricity between an RRN and transmission network connection points in the same region.

[2] Clauses 3.6.1(c) and 3.6.2(d)
[3] Clauses 3.6.1 and 3.6.2

Loss factors describe the marginal electrical energy losses associated with either inter-regional losses or intra-regional losses. They are both used in the central dispatch process to adjust the price of electricity at RRNs and connection points.

AEMO uses marginal costs as the basis for setting regional electricity prices in accordance with the NER. Marginal transmission electrical losses are the basis for referring these prices to electricity generation and consumption at different locations within regions.

Inter-regional loss factors are dynamic, determined by equations that calculate the losses between regions. Depending on region flows and demands, the inter-regional losses also adjust generating plant prices in determining the dispatch order of generation to meet demand.

2.3 Context of this consultation

The Methodology was originally published following stakeholder consultation in 2002, and its underlying principles have remained largely unchanged since then. While some improvements were made to the Methodology in 2014, AEMO considered that it required further amendments to better reflect present conditions characterised by steadily increasing changes in generation mix, network usage and consumer demand patterns.

The Methodology uses year-long historical demand and generation patterns as a starting point. The year from which the demand and generation profiles are chosen is known as the reference year, and is two years prior to the year in which the MLFs will apply (the target year).

From this starting point the demand profile is modified to reflect forecast electricity consumption in the target year. Committed generation plant is added, retiring generation plant is removed, and the balance of the mismatch between forecast demand and generation is met by scaling the historical generation pattern to meet demand.

This scaling process is known as ‘minimum extrapolation’ and is a relatively simple process based on the assumption that there is relatively little difference between the generation and demand patterns in the reference and target years.

Historically the largest differences between the demand and generation patterns between reference years and target years have tended to be temporary, for example the changes brought about by drought conditions in 2008. This meant the impact of these changes on the MLF calculation would be reversed in following years.

The year-on-year changes occurring in the NEM are becoming more pronounced, further these changes are not likely to be temporary[4]. The purpose of this consultation is make the minimum extrapolation more robust, and to better reflect conditions in the target year.

AEMO will review the performance of the revised methodology following its application in calculating the 2017-18 MLFs. In this review AEMO will consider if the minimum extrapolation process needs to be replaced with a different methodology, such as a probabilistic assessment similar to that used in the Electricity Statement of Opportunities (ESOO).

Before commencing this review, in early 2016, AEMO facilitated a number of meetings to discuss stakeholder views on the current Methodology. Three initial meetings were held in Sydney, Brisbane and Melbourne to discuss the current Methodology and investigate issues identified by stakeholders. These issues were further developed in a stakeholder workshop held via a video conference to discuss issues and possible amendments. The minutes of these stakeholder meetings can be found on AEMO’s website[5].

[4] As indicated in the 2016 National Transmission Network Development Plan (NTNDP), http://aemo.com.au/Electricity/National-Electricity-Market-NEM/Planning-and-forecasting/National-Transmission-Network-Development-Plan

[5] http://aemo.com.au/Stakeholder-Consultation/Consultations/Forward-Looking-Loss-Factor-Calculation-Methodology-Consultation-2016

2.4 First stage consultation

AEMO issued a Notice of First Stage Consultation and Issues Paper on 30 September 2016.

AEMO identified what it considered were the main issues with the Methodology and discussed corresponding amendments to:

1. Increase transparency by consulting with industry on key inputs and assumptions used in the loss factor calculation.
2. Conduct a backcast loss factor study at the end of each financial year.
3. Apply a generation energy cap on forecast generation used in the loss factor calculation, based on the five-year historical average.

AEMO received four written submissions to the First Stage Consultation[6].

2.5 Second stage consultation

AEMO issued a Notice of Second Stage Consultation on 8 December 2016, together with the Draft Report and a draft of the proposed amendments to the Methodology.

In summary, AEMO's responses to the issues raised in the first stage of consultation were:

1. Impact of applying a generation energy cap – AEMO will apply a generation energy cap to forecast generation modelled in the loss factor study. Applying a generation energy cap will result in forecast generation that is more representative of a generator's capability and, in turn, produce MLFs that are more likely to represent actual marginal losses in the power system. The generation energy cap will be based on five-year historical average generation.
2. Removing outliers in historical generation – AEMO will remove outliers from the five-year historical average used to determine the generation energy cap.
3. Use of MT PASA to identify outages in generation forecasts – AEMO proposes not to use MT PASA in the MLF calculation process to model forecast generation availability.

3. SUBMISSIONS RECEIVED IN RESPONSE TO THE DRAFT DETERMINATION AND REPORT

AEMO received two written submissions to the Second Stage Consultation[7] from ERM Power and Stanwell.

ERM Power and Stanwell were generally supportive of AEMO's proposed changes to the Methodology; however, they made additional submissions on three of the key issues for further consideration by AEMO:

- Use of MT PASA in the MLF calculation process.
- Exclusion of outliers in the generation energy capping process.
- MLF backcasting study.

Appendix A contains a summary of all other supplementary issues and comments noted in submissions, together with AEMO's responses.

[6] Copies of all written submissions have been published on AEMO's website: http://aemo.com.au/Stakeholder-Consultation/Consultations/Forward-Looking-Loss-Factor-Calculation-Methodology-Consultation-2016

[7] Copies of all written submissions have been published on AEMO's website: http://aemo.com.au/Stakeholder-Consultation/Consultations/Forward-Looking-Loss-Factor-Calculation-Methodology-Consultation-2016

3.1 Use of MT PASA in the MLF calculation process

3.1.1 Issue summary and submissions

In the Draft Report and Determination, AEMO proposed not to use MT PASA in the MLF calculation process, to model generation availability, due to limitations in modelling outages 18 months in advance. ERM Power and Stanwell were concerned with this position and argued that MT PASA should at least be used as a trigger, through identifying discrepancies between historical data and expected generation in the target year, for reviewing forecast generation availability. ERM and Stanwell believed this process would increase generation forecast accuracy by using readily available information in MT PASA to model significant generation outages.

3.1.2 AEMO's assessment

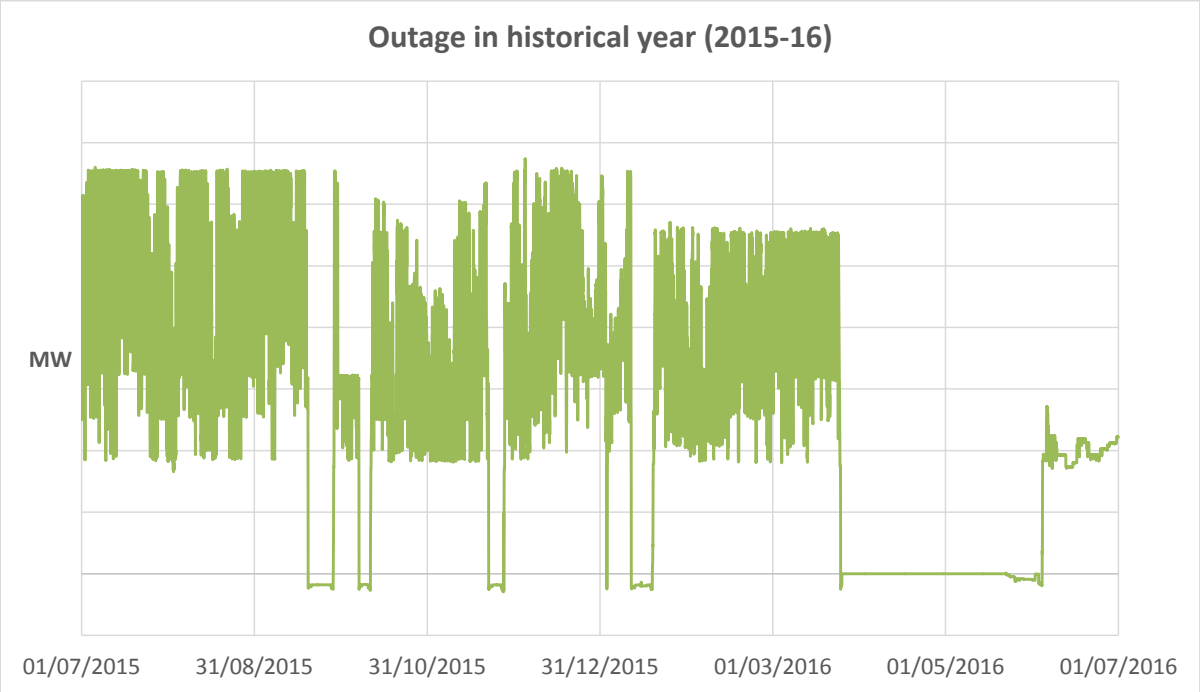
AEMO agreed with ERM and Stanwell that MT PASA was an effective tool for identifying significant generator outages that would impact generation forecast accuracy in the MLF calculation. However, AEMO maintained that data obtained from MT PASA should not be automatically used prescriptively. MT PASA will only be used after careful consideration on a case by case basis.

AEMO considered how MT PASA might be applied in the MLF calculation under two different scenarios:

1. A significant outage in the historical year compared to no outage in the corresponding period in MT PASA in the target year.
2. No outage in the historical year compared to a significant outage forecast in the corresponding period in MT PASA in the target year.

Examples of these two scenarios are shown in Figures 1 and 2 below.

Figure 1 Significant outage in historical year compared to no outage forecast in the target year



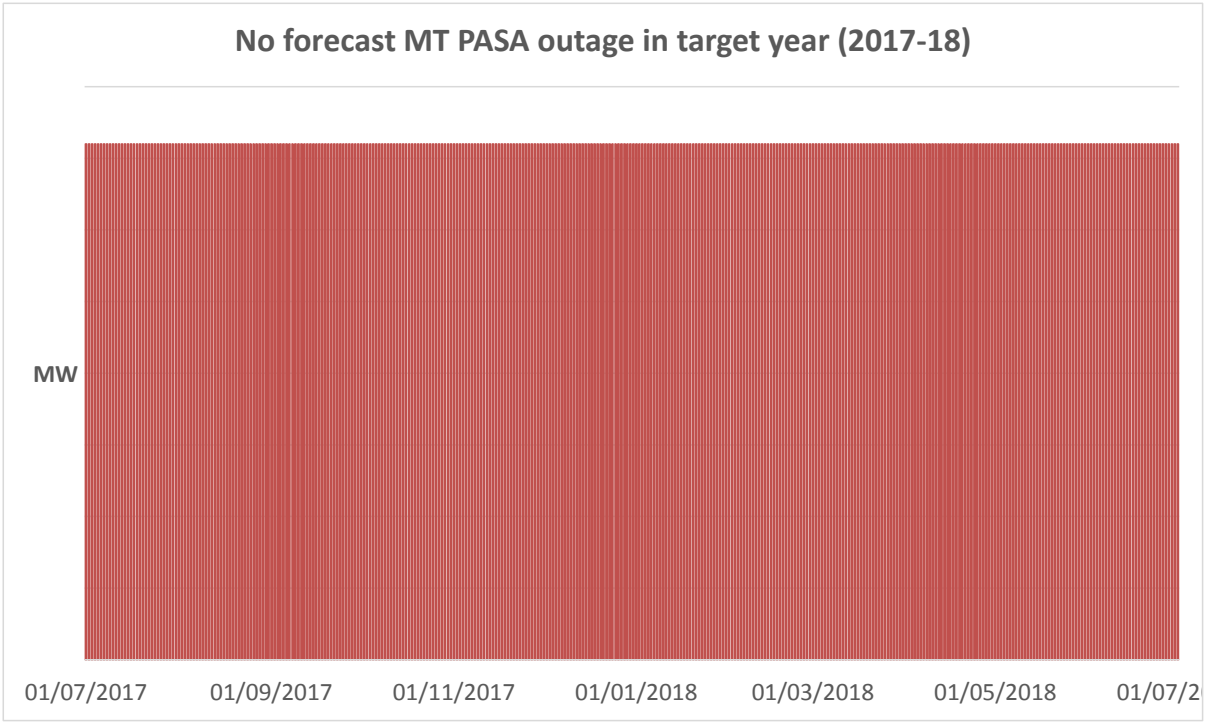
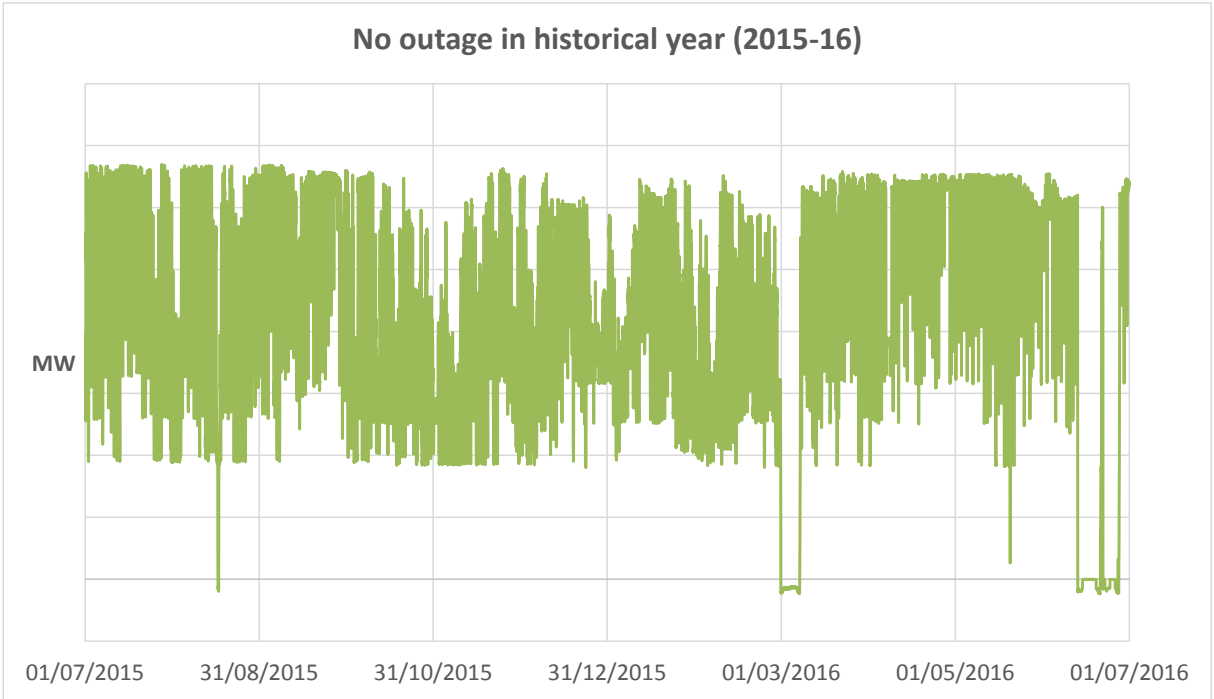
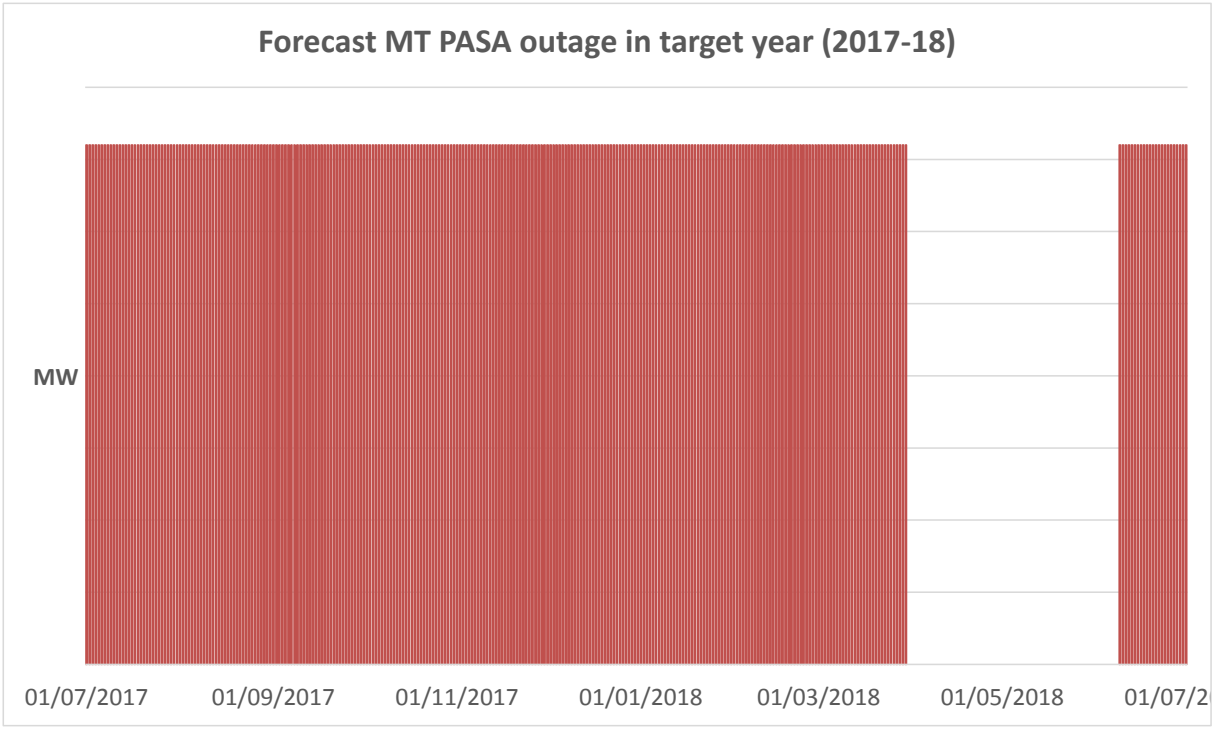


Figure 2 No outage in historical year compared to significant outage forecast in the target year





Under scenario 1, AEMO will backfill significant historical outages greater than 30 continuous days. Under scenario 2, AEMO will model significant forecast outages greater than 30 continuous days in the target year. By modelling significant outages advised through MT PASA, AEMO is attempting to best replicate available energy in the future while minimising changes to the historical profile.

Both methods aim to make the forecast generation profile more representative of the expected generation in the target year. The decision to accept a modified historical profile will be made on a case by case basis and outages will no longer be limited to forced outages, as previously required in clause 5.5.6 of the Methodology.

Clauses 5.4.6 and 5.5.6 already allow AEMO to modify historical generation profiles, in conjunction with affected participants, if the reason for change is based on physical circumstances other than maintenance. The changes proposed are to:

- State that AEMO will examine MTPASA and initiate a discussion with participants if there is an outage longer than 30 days in the reference year that is not represented in MT PASA during the target year, and vice-versa.
- Allow forecast availability changes due to maintenance under clause 5.4.6.

3.1.3 AEMO's conclusion

AEMO has modified clause 5.5.6 of the Methodology to state that AEMO will use MT PASA as a trigger for initiating discussions with participants, with the potential to use a revised generation profile. AEMO will use the most recent MT PASA data, as of 15 January, to determine the need for revising a generation profile.

AEMO removed the word "forced" from clause 5.5.6 of the Methodology and modified clause 5.4.6 to ensure reductions in unit capacity will not be limited to reductions due to maintenance.

3.2 Exclusion of outliers in the generation energy capping process

3.2.1 Issue summary and submissions

In the Draft Determination, AEMO proposed that historical years considered as outliers will be excluded from the five-year average when determining the generation energy cap. If a year was to be excluded, AEMO proposed to substitute energy from a prior year to maintain the five-year average. Stanwell argued that this method introduces unnecessary complexity and that it would be simpler if the outlier was removed without replacement.

3.2.2 AEMO's assessment

AEMO accepts that Stanwell's suggestion to remove an outlier without replacement will reduce complexity. In making this assessment AEMO considered replacing data from the outlier year with data more than five years old does not materially increase the accuracy of the generation energy cap, but does increase the complexity of the calculation.

AEMO will apply the following criteria:

- If no outliers: use five-year historical average.
- If one outlier: use four-year historical average, excluding the outlier year.
- If two outliers: use three-year historical average, excluding both outlier years.

AEMO notes that it would be rare to have two historical outliers and this hasn't been observed to this point.

3.2.3 AEMO's conclusion

AEMO has amended clause 5.5.2 of the Methodology to describe the method of excluding historical outliers as outlined above.

3.3 MLF backcasting study

3.3.1 Issue summary and submissions

In the Draft Determination, AEMO proposed to conduct a MLF backcasting study within six months following the end of each financial year. AEMO proposed to publish backcast MLF results on a sub-regional basis rather than by connection point. In their submission to the Draft Determination, ERM Power asked AEMO to reconsider publishing backcast MLFs by connection point, in the interest of increasing transparency with stakeholders.

3.3.2 AEMO's assessment

AEMO proposed to conduct a backcast MLF study each year to identify issues with the MLF Methodology that could be addressed to increase accuracy. The current AEMO process is resource-intensive, and extending the study to each connection point may not be warranted. AEMO believes that publishing backcast MLFs by sub-region currently provides enough information to identify issues with the Methodology, and there does not appear to be justification to put a large amount of resources into publishing by connection point for no observable improvement in the stated aim.

However, if backcasting by sub-region is no longer sufficient in identifying issues with the Methodology, then AEMO would be open to reconsidering its position.

3.3.3 AEMO's conclusion

AEMO will conduct a MLF backcasting study within six months following the end of each financial year, and publish backcast MLFs on a sub-regional basis.

4. OTHER AMENDMENTS

4.1 Method for calculating average transmission loss factors for Virtual Transmission Nodes

As part of this Rules consultation, AEMO has amended the Methodology to include the procedure for calculating average transmission loss factors for each Virtual Transmission Node (VTN). See clause 5.6.2 and Appendix E.

4.2 Dual MLFs – Net Energy Balance

AEMO has amended clause 5.6.1 of the Methodology to further clarify the Net Energy Balance (NEB) calculation, and has provided a worked example in Appendix D. There is no change to the application of the NEB.

4.3 Minor amendments

In addition to the amendments made to address the matters discussed in this Final Report and in the Draft Report, AEMO has made a small number of minor drafting changes throughout the Methodology, primarily to more closely reflect NER terminology and definitions.

5. FINAL DETERMINATION

Having considered the matters raised in submissions and at forums, AEMO has determined and published the amended Methodology for Calculating Forward Looking Transmission Loss Factors (incorporating the methodologies required under clauses 3.6.1(c), 3.6.2(d), 3.6.2(d1), 3.6.2(g) and 3.6.2A(b) of the NER) in the form of Attachment 1. The amended Methodology will take effect on 3 February 2017.

Attachment 1 – Forward Looking Loss Factor Methodology.

This has been published as a separate document on AEMO's website with this report. Two versions of this document have been provided - a change marked version of the existing published Methodology and a clean version.

APPENDIX A. SUMMARY OF SUBMISSIONS AND AEMO RESPONSES

No.	Consulted Person	Category	Issue	AEMO Response
	Stanwell	Transparency of process	Stanwell welcomes AEMO's acknowledgement that the proposed generation caps are to be published alongside the first run of the indicative extrapolation data. This enables participants to check the cap to confirm that it is feasible at the same time as checking the generation data. Once published and confirmed by a participant, there should be no increase to the cap without prior confirmation from the participant. Without such proactive confirmation, there is a risk that a revised cap is unachievable and therefore the corresponding generation forecast is rendered moot through the production of unfeasible outcomes.	The generation energy cap will only change for significant changes in supply or demand, as explained in the equation in clause 5.5.2 of the revised Methodology. AEMO will advise participants if the generation energy cap is to be changed and re-publish indicative generation extrapolation data. Note that AEMO recently re-published indicative extrapolation data following the announced retirement of Hazelwood PS. AEMO corrected the generation energy cap equation in clause 5.5.2 of the final Methodology after discussions with stakeholders. Also, for clarity, the term "% generation retired" is renamed "% generation change" and "% demand increase" is renamed "% demand change".
	Stanwell		As an example, Stanwell Power Station (SPS) was initially modelled as having a generation cap of 8.85TWh and a modelled output of 8.83TWh. After accounting for the announced Hazelwood Power Station closure, SPS was subsequently attributed a revised generation cap of 9.28TWh and modelled generation of 9.51TWh. If the increase in forecast generation between modelling runs from 8.83TWh to the cap of 9.23TWh resulted in an unachievable outcome for SPS, further modelling runs would be required to shift the excess generation from SPS to another site. If this modelling transferred too much generation to other sites, then further modelling would be required.	AEMO agrees that the generation energy cap for SPS increased from 8.85 TWh to 9.28 TWh after accounting for the closure of Hazelwood PS. For this reason, AEMO re-published the 2017-18 indicative generation extrapolation, because the closure of Hazelwood PS increased the modelled generation for remaining power stations. Participants were given the opportunity to advise AEMO if the revised generation forecast is not representative of a generator's capability. If this is the case, participants can submit a revised generation profile to AEMO as per clause 5.5.6 of the Methodology. Note that generation will not be increased beyond the generation energy cap as proposed in this consultation. The energy cap will only change following significant changes in supply/demand.
	Stanwell		Stanwell's response to the last consultation was to request further transparency of the buffer used in the calculation process. The buffer is defined as "the factor to account for variations from the five year average and/or conditions where insufficient generation exists". AEMO has responded by stating: "The buffer is used to account for unforeseen circumstances. The buffer value will be published along with the indicative extrapolation results." Stanwell requests further explanation of the buffer.	The "buffer" factor is designed to minimise the amount of generation energy capping to ensure the supply/demand balance can be achieved. After discussing this issue, Stanwell understands about the need for a buffer but the reason for it needs to be better explained. AEMO will provide justification for determination of the buffer factor in the published 2017-18 MLF report.

No.	Consulted Person	Category	Issue	AEMO Response
	Stanwell		Stanwell notes in the Draft Determination that the example of Torrens Island Power Station used a buffer of 10 per cent. There is no indication of what the 10 per cent buffer represents, how it was calculated or what discretion AEMO has in setting this value. It is unclear whether the same buffer used for all generators is in the same year or region. Unexplained factors as large as 10 per cent or higher render almost meaningless participants' detailed consideration of the methodology.	The buffer factor is evenly applied to all dispatchable generation in the NEM. For the 2017-18 MLF calculation, the generation energy cap applied to all generators was based on a buffer of 10%. AEMO looked at the 1.65 standard deviation, to determine historical outliers, as a % of the five-year average generation for each power station. In most cases the results are > 10%, which shows that the generation extrapolation process must allow for this variability in the energy capping process. AEMO will provide justification for the determination of the buffer factor in the published 2017-18 MLF report.
	ERM Power	Backcast loss factors	ERM Power remains concerned that AEMO continues to indicate it will only publish the backcasting study outcomes on an electrical sub-region basis rather than on a connection point basis. In the interest of transparency, the backcasting study outcomes need to be published on a connection point rather than electrical sub-region basis. We ask that AEMO reconsider its decision with regard to this.	AEMO proposed to conduct a backcast MLF study each year to identify issues with the MLF Methodology that could be addressed to increase accuracy. The current AEMO process is resource-intensive, and extending the study to each connection point may not be warranted. AEMO believes that publishing backcast MLFs by sub-region currently provides enough information to identify issues with the Methodology, and there does not appear to be justification to put a large amount of resources into publishing by connection point for no observable improvement in the stated aim. However, if backcasting by sub-region is no longer sufficient in identifying issues with the Methodology, then AEMO would be open to reconsidering its position.
	ERM Power	Generation energy cap for forecast generation	ERM Power is concerned by AEMO's intention to use only a single reference year to represent the output of solar PV and wind generation in the analysis year. Reliance on only a single reference year to represent outputs from solar PV and wind generators could possibly result in errors in the marginal loss factor (MLF) calculation, and these errors could be minimised by using a 5 year multi-year averaged outcome to represent solar PV and wind farm output.	AEMO completed a study substituting 12 month historical generation for average wind generation and comparing it to published/backcast MLFs for 2015-16 and 2014-15. The results are mixed, with minor improvements in accuracy of MLFs for some wind farms, neutral change for a number of wind farms, and decreased accuracy in MLFs for other wind farms. As currently, there is no clear trend showing consistent improvement across most wind farms in MLFs by using average wind generation, AEMO proposes not to incorporate this into the MLF study at this stage. AEMO will continue to review the accuracy of wind generation each year and is in principle willing to adopt the use of average wind generation in the MLF calculation should an average overall increase in accuracy in MLFs be observed.
	Stanwell		With the further explanations provided by AEMO in the Draft Determination, Stanwell now supports the generation cap approach to calculating Marginal Loss Factors (MLFs). It is simple, transparent and will produce reasonable results.	AEMO will apply the generation energy cap as part of the Methodology. The 2017-18 MLF calculation will reflect this.

No.	Consulted Person	Category	Issue	AEMO Response
	Stanwell		Stanwell does not support the removal of outliers (outlier method) as an augmentation to the generation cap approach as described in the Draft Determination. Although the outlier method may produce a more representative forecast in some cases, it also introduces complexity. For example, what if the previous year to be substituted for the outlier is also an outlier? It is unclear what decision AEMO would make in this circumstance. If the outlier method is to be retained, it may be simpler, more transparent and provide a better forecast if the outlier is removed without replacement.	To reduce complexity, AEMO agreed to accept Stanwell's suggestion of not substituting the energy when a year is determined to be an outlier. AEMO will apply the following criteria: • If no outliers: use 5-year historical average. • If one outlier: use 4-year historical average, excluding the outlier year. • If two outliers: use 3-year historical average, excluding both outlier years (note that this would be rare and hasn't been observed to this point).
	Stanwell		The National Electricity Rules (NER) requirement to not remove the most current year is also problematic to the application of the outlier method. It is inconsistent to remove an outlier if it is one of the four earlier years in the five year sample but not to remove it if it is the most recent year.	AEMO continues to support the view that the most recent year of historical data should not be subject to the outlier determination. The most recent year would be more representative of the expected generation trend in the target year, and should be retained to give a high weighting to most recent data. AEMO noted that if the most recent historical year contained a major plant outage, the generation profile may potentially be modified under clause 5.5.6 of the Methodology. This would occur prior to the determination of outliers.
	ERM Power	Use of MT PASA	The improvement proposed by ERM Power [in the submission to the Issues Paper] was the use of planned outages as advised in the MTPASA process, in place of historical outages from the reference year. The proposal was for AEMO to have a process to review and compare outages from the reference year with outages currently submitted in the MTPASA for the analysis year and when a variance was observed, AEMO would initiate discussions with the responsible participant to improve the forecast production for the analysis year.	AEMO agreed that using MT PASA as a trigger for initiating discussions with participants under clause 5.5.6 of the Methodology would result in improvements to the MLF process. The decision to modify a historical profile will be on a case by case basis. AEMO will modify clause 5.5.6 of the Methodology to indicate that AEMO will check historical generation profiles with MT PASA to improve generation forecast accuracy. The trigger for initiating discussions with participants would be a continuous outage (either historical or forecast) of > 30 days. Outages will no longer be limited to forced outages.
	ERM Power		Unit outages can vary considerably between years, particularly for single and two-unit power stations, or for units returning from periods of temporary mothballing.	AEMO will change the Methodology, as indicated above, to allow AEMO to use MT PASA as a check to trigger discussions with participants under clause 5.5.6.
	Stanwell		Stanwell believes MT PASA could be used in conjunction with the five year historical average to produce a better generation cap. Rather than using MT PASA to set the level of forecast generation as implied by AEMO in the Draft Determination, MT PASA could be used to set the cap. The cap could be defined as: *the maximum of MT PASA and the five year historical generation cap* This approach would provide an enhanced forecast without the need to adjust historical data for outages.	AEMO will not use MT PASA as a prescriptive formula in the generation energy cap determination process. AEMO will modify clause 5.5.6 of the Methodology to indicate that AEMO will check historical generation profiles with MT PASA to improve generation forecast accuracy.

No.	Consulted Person	Category	Issue	AEMO Response
	Stanwell		AEMO states that, "*MT PASA does not necessarily reflect future outages.*" This statement is true in the same manner that AEMO's demand forecasts may not necessarily reflect future demand. MT PASA is the best forecast of the future outages of individual power stations and its use as part of the cap methodology would greatly increase the accuracy of the MLFs.	AEMO will modify clause 5.5.6 of the Methodology to indicate that AEMO will check historical generation profiles with MT PASA to improve generation forecast accuracy.
	Stanwell		AEMO has published a table comparing the expected number of outage days (taken from a snapshot of MT PASA) with the actual number of outage days. Stanwell notes the table shows only those units where the difference between forecast and actual outage days is greater than ten. As only seven units out of 356 scheduled units met the criteria, it appears that that MT PASA does provide a very accurate forecast for the vast majority of generating units.	AEMO will modify clause 5.5.6 of the Methodology to indicate that AEMO will check historical generation profiles with MT PASA to improve generation forecast accuracy.
	Stanwell		Of the "large" discrepancies noted by AEMO in the outage data, four appear to relate to major commercial decisions around mothballing or retirement at the following power stations – Tarong Unit 4, Northern Unit 2, Morwell Unit 2 and Meadowbank. The snapshot of MT PASA reveals that these decisions were not known in advance by the participants or AEMO and that the MLF calculation for these units is likely to have been "inaccurate" regardless.	AEMO will modify clause 5.5.6 of the Methodology to indicate that AEMO will check historical generation profiles with MT PASA to improve generation forecast accuracy.
	ERM Power	Market Design Issues	ERM Power is concerned by AEMO's statements in section 4.4 of the Draft Determination that seem to indicate that it has stepped away from the proposal for an ongoing improvement process and that any further improvement steps will need to be initiated by participants.	AEMO's intention in the Draft Determination was to indicate that AEMO would not pursue any of the market design issues as presented in the Issues Paper, as part of this 2016 consultation. However, that does not preclude their consideration for future MLF improvements and consultations.
	ERM Power		Appendix B to the original issues paper contained other issues raised by participants during the successive roundtables and workshop, and we believe that AEMO should continue to discuss outcomes from the changed process for FY2017/18 and progress and report on the improvement concepts as contained in Appendix B for future consideration.	AEMO will continue to pursue improvements to the MLF process after this consultation is complete. AEMO is willing to work with participants to identify issues and will commit to holding a workshop with participants in the second half of 2016 to discuss ongoing improvements.