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Submitted by email to enrgy.forecasting@aemo.com.au

Wednesday 22/05/2018

RE: Reliability Forecasting Methodology Issues Paper April 2019

Dear Ms Falcon,

ENGIE appreciates the opportunity to comment on the Reliability Forecasting Methodology Issues paper.

ENGIE has had on-going participation in the AEMO planning and forecasting forums. These forums are considered effective in sharing information, knowledge and facilitating participant interaction and feedback. ENGIE complements AEMO on establishing and facilitating these forums.

ENGIE is a member of The Australian Energy Council (AEC) and supports comprehensive submission by the council to this review. This submission focusses on additional issues, the relationship between the USE (unserved energy) and LOLP (loss of load probability), the ability to replicate modelling by participants and plant reliability statistics.

1) Relationship between the USE and LOLP

Information provided in the consultation paper and the May 2019 addendum effectively illustrates the principles of using the LOLP as a parameter to determine the precise timing of the reliability gap. Engie understands the challenge of interpreting very unevenly distributed USE modelling output to determine periods of high risk of load shedding.

Risk of load shedding is effectively represented as probability of load shedding and the proposed LOLP technique appears pragmatic.

Engie agrees with the criteria outlined by AEMO for a reliability measure to be stable, consistent, explainable and reasonable.

The proposed threshold level applied to working days is 5% LOLP and for non-work days is 2% LOLP. The LOLP refers to the probability of shedding any amount of load and is not directly related to the USE reliability setting of 0.002%. The chosen probabilities appear out of context as there is no evidence provided to support that such levels are consistent with the 0.002% USE reliability standard.

Unfortunately, the May 2019 addendum doesn't clarify how the 5% and 25 LOLP levels were chosen and how they are consistent with the 0.002% reliability standard.

Consequently, these LOLP levels fail to meet the "explainable" criteria stipulated for such a metric.

Since the LOLP trigger will serve to impose a constraint on the market and will increase costs to consumers, it is imperative that the LOLP levels are effectively selected so that the reliability standard is over delivered which means it is uneconomic.

AEMO is urged to provide details of derivation of the LOLP levels, using statistical analysis to ensure that they are economically efficient and consistent with the reliability standard.

2) Modelling replication by participants

Commercial performance of participants will be impacted by the reliability obligations. It is important that participants have full knowledge of the methodologies used to model and determine their obligations.

Analysis is an important part of participants assessment of their potential liabilities and opportunities. It therefore imperative that AEMO provides a full set of assumptions and modelling configuration files to enable participants to reproduce AEMO results, and to analyse their own scenarios.

On occasions AEMO released modelling data files to participants as part of the eSOO process which had issues that crippled participant ability to replicate AEMO results. Whilst this was quite undesirable, at the time it didn't have direct financial impacts on participants.

The importance of the modelling has increased since the process drives the retailer reliability obligations and impacts commercial outcomes.

AEMO is urged to make all the detailed modelling input and configuration data available to participants. This data must be thoroughly tested prior to its release to ensure that it is fit for purpose.

3) Dispatchable generator availability

AEMO proposes to adjust collected forced outage data from generators to better capture recent plant performance in the reliability modelling.

Forced outages are random by definition and the more reliable the plant is, the less likely they are to occur and therefore fewer samples are available in a given time frame. It is therefore challenging to calculate the expected forced outage rate over shorter time frames in a way that is statistically sound.

The proposed process as described in section 3.4.1 runs the risk of introducing additional variability into the reliability modelling process. This is due to the very short sampling period proposed which is most likely going to deliver higher variability of statistical parameters. When used in the Monte Carlo modelling, these parameters are likely to over-estimate the outage rates and hence unserved energy.

To produce statistical parameters that are fit for purpose in reliability modelling, AEMO must use established statistical methods to determine the confidence intervals of estimated parameters, and only make a change to the sampling interval where statistical evidence supports such an approach (ie Using the null hypothesis test to determine that the estimated average failure rates are, in fact, different). The statistical methodology and analysis must be documented, independently audited and made available to participants.

ENGIE trusts that the comments provided in this response are of assistance to AEMO in its Reliability Forecasting Methodology. Should you wish to discuss any aspects of this submission, please do not hesitate to contact me by telephone, 0417343537.

Yours sincerely,

David Hoch
Regulatory Strategy and Planning Manager