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22 May 2019

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**Reliability Forecasting Methodology**
**used to establish the**
**Retailer Reliability Obligation**

Major Energy Users Inc (MEU) is pleased to provide its thoughts in response to the Issues Paper released to discuss the Reliability Forecasting methodology to be used to establish the Retailer Reliability Obligation (RRO).

The MEU was established by very large energy using firms to represent their interests in the energy markets. As most of the members are located regionally and are the largest employers in these regions, the MEU is required by its members to ensure that its views also accommodate the needs of their suppliers and employees in those regional areas. It is on this basis the MEU and its regional affiliates have been advocating in the interests of energy consumers for over 20 years and it has a high recognition as providing informed comment on energy issues from a consumer viewpoint with various regulators (GMRG, ACCC, AEMO, AEMC, AER and regional regulators) and with governments.

The MEU is a member of the AEMO Forecasting Reference Group and as such has a reasonable understanding of the issues facing AEMO in the establishment of a methodology to identify the T-3 and T-1 reliability gaps that will be used to assist in the incentivisation for investment in new "reliable" generation assets and increase demand side participation in the electricity market and then for allocation of the costs inherent in providing services to ensure that reliability in each region meets the Reliability Standard.

It is essential to note that currently, consumers are relatively accepting of their current levels of reliability of their electricity supplies, but are very outspoken that the prices they have to pay for electricity are excessive. It is also important to note that

the unreliability seen in the market is primarily driven from within the distribution networks, and that is where a step increase in reliability would be best provided, rather than in the wholesale market. However, the MEU does note that the wholesale market is required to meet the Reliability Standard of unserved energy (USE) in each region not exceeding 0.002% on average each year. The MEU recognises that AEMO is required to use the current Reliability Standard as the basis of the RRO calculation.

However, because the main causes of outages occur other than in the wholesale market, the MEU considers that AEMO should not introduce a model for identifying any reliability gap that has excessive conservatism built into it – if anything, to avoid increased costs on consumers, AEMO should focus on minimising any conservatism in identifying the reliability gap, as this will result in the overall lowest cost to consumers when assessing the minimal improvement in reliability of delivered electricity that might result from this conservatism.

As an over-arching observation, the MEU considers that AEMO has developed an approach to identifying the reliability gap that is both too complex and is too conservative.

The MEU considers that the AEMO approach is too complex and that the approach developed by ERM Power to identify the reliability gap (and explained at the 9 May forecasting workshop and more comprehensively outlined in its response to the Issues Paper) is much less complex than the AEMO approach and much more understandable in how the reliability gap is quantified. The MEU considers that the ERM approach should be closely examined by AEMO and that AEMO implements the concept into the model that AEMO uses to calculate the reliability gap value.

The MEU notes that forecasting is not an exact science and that whatever AEMO calculates, is more likely to be wrong than right. But with the decision to impose considerable cost and very high penalties on retailers through the RRO based on AEMO forecasts, it is imperative that the AEMO forecast must be made as accurate as possible.

The MEU, along with other stakeholders, is very concerned that the AEMO approach has too much conservatism built into the various elements that are to be inputted into its model. What is even more concerning is that this conservatism is cumulative so that the final outcome is much more conservative than the conservatism used at each stage.

Excessive conservatism in the forecast can only lead to increased retailer prices offered to end users of electricity. The MEU points out that, if at T-3 a reliability gap is declared and the amount is based on excessive conservatism being used, retailers will be obliged to implement and pay for unnecessary reliability products that will have to be paid for. Effectively, conservative forecasts will ultimately increase the costs retailers will require consumers to pay. A clear example of this

conservatism is where the AEMO approach uses a different threshold for the LOLP calculation between the T-3 and T-1 such that the T-3 outcome is more conservative than the calculation at T-1 and the result will be that retailers will be obliged to procure a greater amount or potentially more expensive reliability products than would be the case at T-1, all other aspects being the same.

The MEU is both concerned at both the level of conservatism included at each stage and of the cumulative effect of these conservative assumptions and inputs. The issue of conservatism must be given much more analysis and inputs must be based on reality. The high costs and penalties that are embedded in a failure to meet the RRO will require retailers (and end users that opt in) to take action at T-3 in order to be prepared for T-1. This means that the reliability gap value identified at T-3 will have a greater impact on the costs that consumers ultimately incur will be generated at T-3 and that the T-1 reliability gap forecast will primarily drive the methodology for cost allocation purposes.

The MEU sees that the AEMO approach builds in conservatism at:

- The assessment of the forecast demand.
  - While the RRO is payable against the 50% PoE (effectively a 1 in 2 year) peak demand, the AEMO approach uses the weighted average of 10%, 50% and 90% traces. It is not clear why a weighted average of the three forecasts provides a better forecast for the reliability gap than the 50% PoE alone[1], but it does increase the potential that a higher value of the reliability gap might eventuate, especially if there is less of a differential between 90% PoE and 50% PoE forecasts than between 10% PoE and 50% PoE forecasts, which seems to have been the case in the past. This inconsistency has the potential to result in a more conservative assessment
  - AEMO proposes to use historic traces to develop the RRO and to scale up these traces to develop the durations for the reliability gap. The MEU considers that if historic traces are to be used, they should be based on actual periods of peak demand that occur in the past (eg following the AEMO process for allocating transmission charges in Victoria based on the top 10 days of peak demand). This is more likely to be representative of high demand shapes than scaling up an entire year where the peak demand in that year is a long way below what might be being forecast for the gap.
- LOLP calculation.
  - The selection of 2% and 5% as thresholds are arbitrary and appear to be very low

[1] Noting that 50% PoE is what the RRO is based on

- As noted above, there is a more conservative outcome used for T-3 than T-1 inflating the risk further out hen decisions are being made for expenditure on reliability products

- Demand side participation.

  - AEMO has decided that it will only incorporate 50% of the historically identified demand side participation impact, but provides no support for this conservative amount
  - AEMO assumes that the higher the forecast temperature, the less consumers will respond to pricing signals but in the Forecasting Reference Group discussions there was significant discussion about "saturation" effects on the ability to forecast peaks. In this regard, the MEU points to the risk that as demand increases, the risk of load shedding in the distribution networks due to rating issues, implies that temperature and peak demand lose some correlation when high ambient temperatures apply.
  - The MEU notes that there is currently a rule change process in train that seeks to increase demand side responsiveness by allowing aggregators of DSR to bid into the market. The MEU considers that this rule change will result in a considerable increase in DSR but by using historical traces, this effect is not included, understating the benefit of DSR in managing peak demand.
  - End users (residential and business) are increasingly taking control of their electricity needs because of the high cost of electricity. The MEU is not convinced that, based on the evidence provided at Forecasting Reference Group meetings, historic data is reflecting the high rate of change that are being driven by consumers to reduce their exposure to the high prices resulting in a number of additional changes (eg network tariff changes, network driven load shedding, virtual power plants based on aggregation of batteries, etc)

- Supply side participation

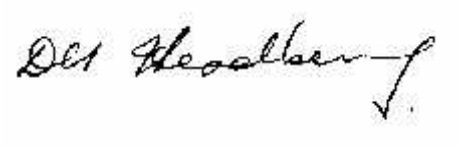
  - AEMO takes a conservative view on when new generation enters the market. For example at T-3 new entrant generation is not included but which could be in the market at T-1. This would imply that the decisions made at T-3 will be based on a conservative analysis compared to the assessment which allocates the costs
  - Generator forced outage rates based on the recent year activities do not necessarily reflect long term outage rates and therefore skew the assessment.

As can be seen, the MEU is very concerned that AEMO has developed a very conservative approach to its model for forecasting the reliability gap and that the

model is unnecessarily complex. The outturn of this is that consumers will incur unnecessary increased costs in the supplies for their electricity

The MEU is happy to discuss the issues further with you if needed or if you feel that any expansion on the above comments is necessary

Yours faithfully



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