Major Energy Users Inc.

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The Chair

AEMC Reliability Panel
PO Box A2449
Sydney South NSW 1235

By direct lodgement

Review of the System Restart Standard
REL 0057

The MEU has reviewed with interest the Issues Paper released by the Reliability Panel (RP) regarding the System Restart Standard. The MEU has followed the debate about this issue since AEMO identified in 2013 that SRAS was increasing significantly in price although the most recent cost has fallen significantly due to some key changes in requirements.

The MEU makes the observation that there appears to be little science in identifying the timeframes for resupply after a region goes "black". The MEU is unaware of how the existing standard was developed other than it might have been carried over from the approach used by one or more of the previous vertically integrated regional supply authorities. The MEU considers that the RP has an obligation to apply more science to developing the timeframes for the SR standard so they reflect the NEM as it currently stands.

The likelihood of the NEM going "black" is quite remote, although there are times that parts of the NEM do lose supply and need to be restarted. The restart of the elements of the NEM are most commonly through supply from an adjacent network so the need for SRAS is even more remote. This means that the SRAS should be considered to be a form of insurance against a low probability high cost incident. The question then becomes what should be the cost to insure against the potential of catastrophic failure within the NEM.

The time to restart becomes a major aspect of the cost to provide SRAS and the this RP Issues Paper is aimed at assessing what time frames should be built into the new standard that balances the cost of the insurance against the cost that consumers might incur when and if there is a loss of supply on a regional basis[1].

[1] All system restart subnetworks are based on regional boundaries except that South Queensland and North Queensland are both subnetworks in Queensland region for system restart assessments

AEMO has recently completed the most comprehensive assessment of the value of customer reliability (VCR) undertaken in the NEM, and from this has identified what values different consumers place on the loss of their supply. The MEU considers that the VCR should be used as part of the basis for assessing the different costs for varying timeframes to resupply after an element of the NEM has gone "black".

The MEU also notes that the reliability standard for the NEM is based on the amount of unserved energy. The current standard for a region (of 0.002%) is based on a long term average of the loss of supply in relation to total demand in a region. This also needs to be included into the assessment of the timeframes for resupply.

The MEU accepts that the AEMC has previously determined that resupply to a subnetwork cannot be assumed to come from an adjacent subnetwork. This is a very conservative view as, so far the MEU understands, the NEM has not experienced a region wide outage. As a region wide outage could have occurred under the electricity supply arrangements prior to the establishment of the NEM[2] and even further back when the regions were all fully independent (ie there was no interconnection between regions), it would be valuable to identify when the last region wide outage occurred and the region had to restart under local generation. Such an assessment is very important as this provides a guide to the amount of "insurance" that would have to be paid between instances of consecutive region wide black outs. This is the value that needs to compared to the cost to consumers of the loss of supply.

This duration that a restart should be allowed to take is driven by the amount of unserved energy that would occur between regional black outs. If the reasonable amount of unserved energy over the long term is 0.002%, then the amount of unserved energy from a regional blackout should be averaged over the time between each regional blackout. This provides a guide to the amount of time that should be allowed to resupply the region.

The MEU notes that generators are just as impacted by a regional blackout as consumers, as the generators are not able to make sales. In a competitive environment, when there is a shortage, sellers incur the costs of resupply, not the consumers that are the buyers. However, the current arrangements impose the costs of SRAS onto both generators and consumers on a 50/50 basis. As it is generators that are the providers of SRAS, then making generators responsible for the costs would be an appropriate method for allocating the costs of SRAS. As it stands, the relatively few generators that can provide SRAS offer their services in an environment of low competition. As these SRAS generators are also likely to be owned by generators that need the service to restart, the MEU is concerned that under the current cost allocation arrangements, there is an ability by the generators to game the system[3].

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[2] Prior to the NEM, NSW and Victoria were connected and so was SA connected to Victoria

[3] Providers for SRAS are a monopoly in Tasmania and highly concentrated in Queensland and SA.. In Tasmania for example. In 2012/13 HT charged $10.2m for SRAS and, on the basis of 50%

The MEU recognises that times for restart in a region may vary dependent on the region (and its subnetworks in Queensland) and the locations of generators with restart facility. Yet these variations are not addressed in the Issues Paper other than highlight there maybe differences.

The MEU considers that there is missing some very important information which is essential for sensible decision making. The MEU considers the RP should seek information from AEMO about what restart times are possible throughout the NEM (eg are there variations between regions and subnetworks?). When this information is provided, this will provide some clarity on what is possible and will the possibility of setting arbitrary timeframes.

For example, if there was a region wide blackout of Queensland, there is an assumption that QNI will not be available to restart Queensland. While the MEU does not know with detail where the black start generation in Queensland is located, it is likely that this would be located in southern/central Queensland, where most other generation is located. This means that the restart of far north Queensland will take considerable time to achieve. In contrast, in Victoria, it is likely that a restart of the entire region will take much less time, especially as it is unlikely that both Heywood[4] and all of the multiple connections between NSW and Victoria will not be serviceable.

The MEU questions whether a "one size fits all" approach to setting the restart standard is either practical or is commercially sensible.

The MEU notes that the Issues Paper implicitly assumes that the current standard is correct and seeks reasons to diverge from this standard; this assumption is inherent in the questions posed. The MEU considers that this is not the most appropriate approach and that the issues noted above need to be assessed in more depth rather than assuming what currently applies should be used as the benchmark unless there is a reason to change.

The MEU is also concerned that the Issues Paper seeks input on whether to impose requirements on AEMO that might not be technically possible or commercially sensible. For example Q2.2 asks whether the standard should impose a requirement for a minimum number of SRAS providers, based on a perception for need of diversity of generation and even to maintain confidence for generators. The MEU considers that such a question belies the relative rarity of the occurrence. Using the insurance example in a comparative sense, it implies that AEMO might be required to pay the equivalent of two insurers to provide

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being paid by generators, HT would pay $5.1m but electricity consumers would also contribute $5.1m, so HT would be $5.1m better off. The only control on the continued escalation of the prices offered for SRAS is either regulation of some sort or ensuring there is significant competition. The planned closure of generation in SA will decrease the numbers of SRAS providers in that region.

[4] The MEU understands that DC links are not able to provide restart services but once there is a frequency set in both regions connected, the DC links can be used to increase supply

insurance against the likelihood and that this would be good for the insurance industry!

The MEU considers that the RP should seek advice from AEMO about what it considers is the most appropriate manner to address the concerns raised in the Issues Paper. As the Issues Paper is lacking in hard information, the AEMO advice should be made public so that all stakeholders have much better information to provide their input into the debate. As it stands, the MEU considers that there is so much unknown about the issues raised by the RP, that they are unable to provide informed input..

Overall the MEU considers that addressing the issue by combining a number of different approaches might result in driving down these burgeoning SRAS costs to more sensible levels. The MEU considers that:

1. Some relaxation of the standards to reflect reality is necessary to address what is really a remote possibility
2. There is implemented some sensible upgrade work on interconnectors to prevent a cascade of power loss across regions
3. Imposing all of the commercial obligations onto those generators which are beneficiaries of the recovery after a network goes “black”
4. Recognizing that it is the owners of the generators which provide SRAS are also those that will benefit from the recovery as it will allow their non-black start generators to recommence supply.

These are some preliminary thoughts and reflect a consumer view on the issue. Should you wish to discuss these observations or related aspects, please contact the undersigned on (03) 5962 3225 or at davidheadberry@bigpond.com .

Yours sincerely

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